New York State Certified
Service-Disabled Veteran-Owned Business

Summer 2022

HE | Hayduk Engineering, LLC

NEWSLETTER

IN THIS ISSUE

Hayduk Engineering has been voted a winner in the category of **Best Engineering Firm** by the Long Island Business News Reader Rankings for the 3rd year in a row!

We are proud to announce that Hayduk Engineering has been named to the Zweig Group's "**Hot Firms**" list for 2022. We were ranked the 46th fastest growing business in the Architecture, Engineering, and Construction industries, in both the United States and Canada.

Northport VA Medical Center Wastewater Treatment Plant Upgrades

▶ Several years ago, the Northport Veterans Affairs Medical Center (VAMC) wastewater treatment plant (WWTP) was issued an Order on Consent from the New York State Department of Environmental Conservation (DEC) due to repeated violations of the facility's State Pollutant Discharge Elimination System (SPDES) permit for exceeding Total Nitrogen in the effluent discharge. Accordingly, the Department of Veterans Affairs solicited proposals from engineering consultants to address the issues and Hayduk Engineering (HE) was ultimately retained to perform engineering services for the facility.

Continued on page 2

The Northport VAMC was constructed in the mid-1920's and originally featured a 956 bed hospital and supporting facilities. The campus has since grown significantly. The Northport VAMC features its own water supply and water storage tower, WWTP, Fire Department, and Police Department.

The facility was originally serviced by a trickling filter WWTP, a reliable but antiquated technology. Sometime later in the 1970's the trickling filter process was demolished and an extended aeration WWTP was constructed. The extended aeration plant was later modified to feature denitrification filters (later demolished) and then ultimately was modified to feature a Modified Ludzack-Ettinger (MLE) process with a current design flow capacity of 350,000 gallons per day, average daily flow.

HE was first tasked with completing a Comprehensive Performance Evaluation (CPE) in accordance with United States Environmental Protection Agency (EPA) requirements, to determine the factors inhibiting the plant's performance and to make recommendations for improvements. The CPE determined that the primary issues were related to the existing aeration system, the lack of an effective preliminary treatment system, and a baffle wall between process zones that allowed for short circuiting of wastewater through the process tanks.

Continued on page 3

Northport VA Medical Center... continued

The $2.2+ million upgrades project includes the replacement of the existing out-of-service influent screen with a new mechanically cleaned fine screen, emptying and cleaning of the process tanks, installation of new fiberglass baffle walls to properly segregate the anoxic and aeration zones, replacement of all submerged fine bubble diffused aeration system piping and components, replacement of the existing aeration blowers with several new duty and standby blowers, new stainless steel air distribution piping, new fixed dissolved oxygen probes and controllers in the aeration zones, new variable frequency drives, a new internal recycle pumping system, and electrical improvements to the motor control center. As a separate task order, HE also designed a new Micro-C 2000 chemical storage and dosing system.

The project was complicated by the need to maintain flows during construction, requiring one process train to be shut down at a time while maintaining the treatment process. In addition, the VAMC campus experiences significant infiltration and inflow to their sanitary sewer collection system which is nearly 100 years old. During the Spring and Summer months, the WWTP experiences much higher flows than in the other seasons of the year.

The project is currently in the final stages of construction, and it is anticipated that all improvements will be completed before the end of 2022. ■

Congratulations to our very own Stephen G. Hayduk, P. E. who was honored with the Long Island Business News Lifetime Achievement Award on June 16, 2022 at the Crest Hollow Country Club in Woodbury, NY. Well deserved, we are proud to call you our boss!

On Friday, August 5, 2022 Hayduk Engineering held its first annual Family Picnic at Heckscher State Park. Our staff and their families enjoyed a beautiful (but hot!) day of activities, food, and fun. Activities included giant jenga, cornhole, volleyball, softball, horseshoes, and we even held a raffle. Congratulations to all the raffle prize winners, including Tim Moy who won $1,000 cash! Thanks to all who came and enjoyed the day with us.

NYS Route 17 PEL Study

► New York State Route 17 is a major highway that extends for 397 miles through the Southern Tier and Downstate regions of New York. It is the longest State route in New York and is the second longest highway of any kind besides the NYS Thruway. It is considered one of the most scenic touring roads in the region, as it winds through the Catskills mountain range in NY for a large segment of the highway.

In 2019, the New York State Department of Transportation (NYSDOT) retained the services of WSP, our client, to complete a Planning and Environmental Linkage (PEL) Study. A PEL is a collaborative and integrated approach to transportation decision-making that considers not only transportation planning issues, but also environmental, community, and economic project goals. This integrated approach occurs early in the transportation planning process and saves review time and redundancies that separate project environmental studies and transportation planning studies provide. This project is the first implementation of the PEL project approach in NYSDOT history.

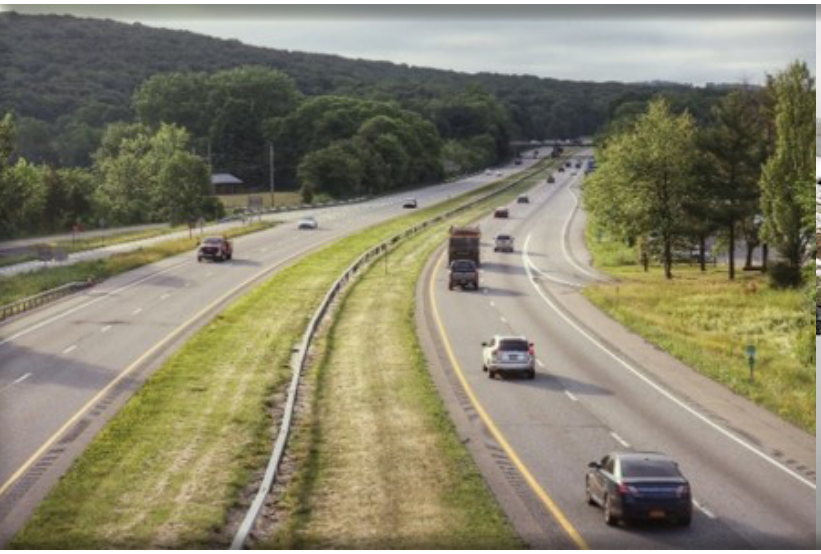
The NYS Route 17 PEL Study project evaluated the existing vehicular capacity and compared proposed preliminary alternatives to provide sustainable capacity improvements along a 25-mile section of NYS Route 17, between Exits 135 and 102 in Orange and Sullivan Counties. The new Legoland amusement park was also considered in the study due to its location along Route 17 within the study corridor.

Hayduk Engineering (HE) had a prominent role on this project along with the WSP team. The HE Team performed the following tasks and documented the findings, which were incorporated within the final PEL Study report:

- Provided radar analysis of traffic to determine the existing mainline speed limit and existing operating speeds (85th percentile speeds) for comparison to the posted speed limit.

Continued on page 6

- Performed a travel speed and delay study along the entire 25- mile project corridor.
- Obtained the functional classification of the roadway.
- Confirmed existing vehicular access control (i.e., full control, partial control, or uncontrolled) regarding:
  - **a**. Proper treatment for commercial driveways
  - **b**. Conformance with NYSDOT "Policy and Standards for Entrances to State Highways"
  - **c**. Verified that the proper treatment existed for the crossroad end of interchange ramps were in compliance with the NYSDOT Highway Design Manual Chapter 6 requirements.
  - **d**. Conformance with AASHTO's "Policy on Design Standards" for the Interstate System.
- Determined the existing condition and roadway cross section construction of all abutting and intersecting adjacent highway segments at all project interchanges.
- Determined the pavement and shoulder conditions within the project limits.
- Evaluation of each design alternative and the null alternative for recommended guide rail and drainage improvements. We provided a general assessment of drainage conditions within the project limits, including the evaluation of existing culverts and other drainage features, within and immediately adjacent to the project limits for their general condition and documented the results. HE identified and documented all existing non-standard guide rail applications. We also Identified all utilities, and the respective utility facility owners, within the project's existing right of way.
- Preliminary construction cost estimates for proposed design alternatives at several of the exit/entrance ramps within the 25-mile long project limits.



The WSP team was recognized by the Institute of Transportation Engineers (ITE) New York Upstate Section with the Transportation Project of the Year Award in September. Congratulations to the team! ■

OTHER COMPANY NEWS

WE'RE HIRING!

Hayduk Engineering is seeking to fill a limited number of key management-level and senior engineering positions in our Transportation and Wastewater Engineering Divisions, as well as mid-level civil engineering positions and bridge and tunnel inspection positions. Please contact Stephen A. Hayduk, P.E. at sah@haydukengineering.com for more information.

NEW HIRES

Jude Vallon
Assistant Team Leader

RECENT CONTRACT DESIGNATIONS

PRIME
Suffolk County DPW - SD 28 Fairfield at St. James Sewage Treatment Plant Evaluation and Rehabilitation – Wastewater engineering services.

PRIME
Case Management - Mattituck Hotel
– Site/civil engineering services, wastewater engineering services.

PRIME
Town of Smithtown - Long Beach Road Reconstruction
– Construction administration services.

SUB
NYSDOT - Design Services for NY 27 Sunrise Highway Oakdale Merge
– Highway engineering services.

SUB
MTA/TBTA - Verrazano-Narrows and Robert F. Kennedy Bridges Biennial Inspections
– Bridge and tunnel inspection services.

SUB
NYS Thruway Authority - Construction Inspection Term Contract (I-95)
– Construction inspection services.