

CIVIL ENGINEERING

Responsibility to Community.



CIVIL ENGINEERING

At KC Engineering and Land Surveying, P.C. (KC), our interdisciplinary team ensures responsible solutions tailored to planning challenges and specific clients' needs.

Our civil engineering services include site grading, drainage, and earthwork; pavement evaluation and design; soil erosion and sediment control plans; drainage structures design; utilities engineering, including water and sewer systems; stormwater management; roadway and site lighting; civil site plans, subdivisions, and site layouts; parking lot design; and permitting, cost estimation, and specifications.

KC closely adheres to new building code requirements, including all applicable international and state building codes. Our civil engineering group provides these services for roads and highway projects, as well as residential, commercial, industrial, institutional, and mixed-use projects.

KC's civil engineering group brings together many talented engineers ready to develop drainage plans and design sewer and stormwater systems. KC fully understands the New York State Department of Environmental Conservation's (NYSDEC's) stormwater treatment and compliance requirements and has prepared Stormwater Pollution Prevention Plans (SWPPPs) for projects of all sizes. Our solutions pursue the lowest impact and operating cost while meeting permit requirements. We also provide construction phase stormwater management compliance inspections and recommendations to maintain permit compliance in dynamic construction environments.

KC's traffic engineering experience includes the formulation and presentation of traffic impact statements, operational analysis, level-of-service (LOS) calculations, signal design and operational assessment, safety studies, implementation, and maintenance. Our engineers effectively and efficiently plan, design, and oversee intersection improvements, parking facilities, maintenance and protection of traffic plans, highways, utility relocations, site lighting, driveways and other roadways, curbs, and sidewalks so that the outcomes not only provide for smooth transitions but also for economically-functional results.

Services

- Code Compliance
- Community Liaising
- Drainage & Sewer System Design
- Environmental Engineering
- Geotechnical Engineering
- Highway Design
- Intersection Improvements
- Lighting Design (Security / Site / Street / Tunnel)
- Permitting Support
- Parking Facilities Design
- Roadway Design
- Traffic Engineering
- Site Development
- Stormwater Management
- Utility Design & Relocation
- Value Engineering Support
- Wastewater Treatment
- Water Supply



Route 9D Pedestrian Improvements, Wappingers Falls, NY | KC prepared a preliminary Engineer's Report to assist the Village of Wappingers Falls with receiving this NYSDOT Transportation Alternatives Program (TAP) funded project, which featured safety enhancements for pedestrian and multimodal traffic users on Route 9D. The project included traffic calming features, sidewalk improvement, crosswalks, and new pedestrian / street lighting. New LED lighting fixtures were selected to provide pedestrian scale lighting that also allowed the Village to phase out existing and costly cobra head lighting above.



NY-27 at Barnes Road Reconstruction, Brookhaven, NY

This project constructed a new diamond interchange including ramps and ancillary facilities to improve safety and mobility. Work included development of traffic counts, forecast data, and project scoping and design alternatives and capacity and accident analyses. As a subconsultant, KC assisted with the Project Scoping Report / Final Design Report (PSR / FDR) by designing speed memos and performing flood plain, crash, and pavement analyses. KC also provided surveying services, including right-of-way (ROW) mapping research and development of a ROW base map.



The KC civil engineering group consists of a team of skilled professionals dedicated to providing responsive and quality service to our clients.

Highway Garage, Phases I and II, Wappingers Falls, NY

| After providing civil engineering and surveying services for the construction of the highway garage for the Village of Wappingers Falls, KC provided environmental engineering services for the 0.9-acre Highway Garage site. KC's services consisted of a Phase I Environmental Site Assessment (ESA) and a Phase II Subsurface Investigation (SI) including a geophysical survey; advancement of soil borings; installation of temporary groundwater monitoring wells and soil vapor probes; and collection of soil, groundwater, soil vapor, and air samples. KC's findings were documented in a Phase II Subsurface Investigation Report.



Baseline Data Collection Services, Sullivan County, NY

| This project involved baseline data collection for current air quality, current noise environment, and current water quality testing assessments for the area surrounding a 22,400 HP solar titan 130E turbine-driven gas compressor unit and associated infrastructure. KC developed a work plan that included defining the specifics regarding sampling locations for water, noise, and air. The water sampling was performed based on permitted access and review of any existing studies of prevailing groundwater movements as well as surface water directional flows. Noise testing was performed throughout the seasons to account for vegetation and the prevalence of outdoor activity at different times of the year. Air monitoring was performed at the location identified in the work plan. Current weather condition data was logged as well. KC cataloged and compared data to EIS reports, and data was added to future GIS models.





Haggerty Plaza Mechanical and Electrical Design, New Paltz, NY | KC was selected as a subconsultant to provide mechanical and electrical engineering design services for the reconstruction of the Haggerty Plaza at SUNY New Paltz's main student center. The reconstruction consisted of replacing the pavers, installing lighting, and installing a green area with irrigation. KC provided design services

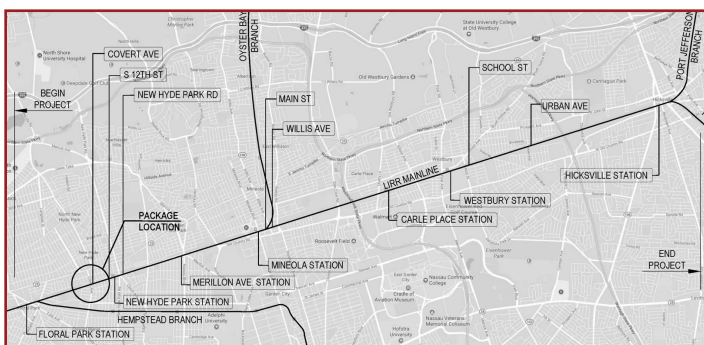
for the electrical systems including lighting and controls for the new plaza as well as mechanical design services for the installation of plumbing and irrigation components. KC interfaced with the Ulster County Department of Health to design and locate the backflow prevention device used in the irrigation system. KC also provided calculations to ensure the water flow to the irrigation system was sufficient.



NYCCT Design of Replacement Boilers, New York, NY | KC was retained to assist with the design of replacement boilers for New York City College of Technology's (NYCCT) Namn Hall. The existing boilers used to heat the entire building were beyond their useful life and in need of replacement. KC resized the replacement boilers and provided the design of replacement piping systems for the new equipment. KC also provided designs and specifications for ancillary equipment for the new boiler system including piping expansion joints, vibration isolators, stationary floor supports, and flexible connections, as well as other miscellaneous features. All features were designed to withstand pressures of 100 PSI and temperatures of 350 degrees Fahrenheit.

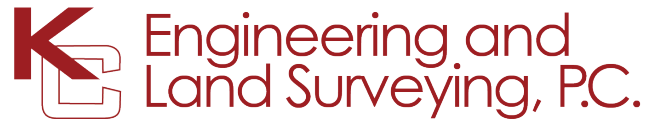
Greentree Vacation Homes Pavement Evaluation, Monticello, NY | The Greentree Vacation Homes community retained KC to evaluate their aging private roadway network to identify areas of pavement that were showing signs of degradation for repair or replacement to optimize their investment and extend the life of their roads.

The Homeowners Association also requested KC evaluate the overall drainage conditions of the site and identify portions of the project that were inadequately sized or causing damages to their infrastructure. KC performed a drainage analysis to determine if the existing piping could handle adequate flows and, where necessary, to size a replacement pipe.



MTA-LIRR 3rd Track Expansion, Long Island, NY | The project scope included installation of a third track within the existing LIRR ROW, elimination of seven street-level grade crossings, station improvements and modifications, and related improvements to railroad infrastructure, including signal, power, and communication systems.

As a subconsultant, KC was responsible for providing civil design services, including civil design of roadways, parking, and pedestrian facilities.



Diversified. Multidisciplined.

KC Engineering and Land Surveying, P.C. (KC) is a diversified, multidisciplinary consulting engineering firm. Since 1983, KC has provided our public and private sector clients with a comprehensive range of professional services using only the latest technical equipment. The corporate headquarters of the firm is located in New York City with a branch office in Newburgh, NY. KC has extensive experience with government agencies, municipalities, and private clients; a diverse, professional staff; and an impeccable record of services rendered.

New York City

7 Penn Plaza, Suite 1604
New York, NY 10001-3976
(212) 947-4945

Hudson Valley

15 Governor Drive, Second Floor
Newburgh, NY 12550
(845) 931-2900

 kcepc.com

 facebook.com/kcepc

 twitter.com/kcengineeringpc

 linkedin.com/company/kcepc

