

Kermit W. Hua PE, PTOE  
Principal, KWH Enterprise, LLC



With 14 years of experience, Mr. Hua has managed and performed numerous traffic analyses and studies for both public and private clients. He specializes in many aspects of transportation planning and traffic engineering, including corridor study, environmental impact study, master plan, traffic impact analysis, traffic signal design, roadway design, parking study, bicycle and pedestrian facilities, traffic calming, public outreach, and geographic information system (GIS). He is also an IMSA (International Municipal Signal Association) certified Traffic Signal Inspector.

## EDUCATION

Master of Science, Transportation Engineering,  
University of Cincinnati, Cincinnati, Ohio, 1999

Bachelor of Engineering, Construction Management  
and Engineering, Tsinghua University, Beijing, China,  
1993

## REGISTRATIONS

Professional Engineer #22263, State of Connecticut

Professional Engineer #1422, Professional Traffic  
Operations Engineer

## PROFESSIONAL ASSOCIATIONS

Member, Institute of Transportation Engineers

## PROJECT EXPERIENCE

### Bicycle / Pedestrian Studies

Shoreline Greenway Trail, East Haven to Madison,  
Connecticut\*

*This study reviewed various alignment options for a 22-mile stretch of the Shoreline Greenway multi-use trail between East Haven and Madison, Connecticut. Mr. Hua evaluated crossings and routing options for on-road segments of the trail. Roadway traffic volumes, speeds, sight distances, accident records, and vertical and horizontal alignments were examined to identify suitable roadways for pedestrian and bicycle traffic.*

Bikeway Studies, North Kingstown and Narragansett,  
Rhode Island\*

*Engineer responsible for document research, field inventory, traffic accident analysis, and report drafting of two bikeway studies in the State of Rhode Island. The projects mainly involved reusing abandoned railway right-of-way for bikeway*

*purposes. The studies also explored the safety issues and proposed preliminary geometric improvements at street crossings along the future bikeways.*

Bikeway Design, Willimantic, Connecticut\*

*Engineer responsible for preparing construction plans for converting an existing abandoned railway to a bikeway. Mr. Hua was involved in the alignment layout of the bikeway as well as the designs for pavement marking and signing of the project.*

### Bicycle and Pedestrian Paths

New London Vista Walkway, New London,  
Connecticut\*

*Traffic engineering task leader responsible for traffic analysis and traffic signal design portions of this project. The proposed multi-use walkway will link downtown New London with the waterfront, transportation center, and many cultural, educational and recreational landmarks in the city.*

### Parking Facility Planning and Design

Parking Study for Long Wharf Theatre, New Haven,  
Connecticut\*

*Parking Task Leader responsible for data collection, parking analysis and the drafting of a final report for this project. The study focused on the availability of theatre parking in its surrounding area when Long Wharf Theatre is relocated to the former Coliseum site in downtown New Haven. The study examined the parking availabilities at 23 parking facilities within a ten-minute walking distance of the future theatre site while accounting for the competing parking needs of other planned developments nearby. Shared parking arrangements and safe pedestrian access to parking facilities were also focuses of this study.*

### Roadways

Route 17/Interstate 86 Upgrade (PIN 9066.92),  
Broome County, New York\*

*Traffic Engineer responsible for traffic engineering analysis in the preliminary design to upgrade a 10-mile (16 km) section of Route 17 to Interstate standards for conversion to I-86. Alternatives to address non-standard features at Interchanges 67 and 68 will be developed as a part of this project. Guide rail, sign upgrades and ROW fencing*

\* denotes projects completed with other firms



requirements will be addressed throughout the project corridor. Specific aspects of the project include photogrammetric mapping, ROW survey, preparation of a Design Report/Environmental Assessment, and public outreach meetings and hearings.

**Route 7/Route 15 Interchange, Norwalk, Connecticut\***

Responsible for traffic engineering analysis for the redesign of this \$90 million interchange on behalf of the Merritt Parkway Conservancy during its ongoing discussions with the Connecticut Department of Transportation. The interchange project will provide improved connections between the historic Merritt Parkway and Route 7, which links I-95 to downtown Norwalk and other communities to the north in Fairfield and Litchfield Counties. Stantec prepared an alternative "cloverleaf" design for the interchange that would maintain the historic and scenic characteristics of the Parkway, limit impacts to wetlands and the Norwalk River, provide improved traffic movement, and reduce construction cost.

**Broad Street Reconstruction and Streetscape Improvements, Manchester, Connecticut\***

Traffic task leader responsible for capacity analysis and traffic signal design related to this streetscape improvement project. The traffic design recognizes the developmental potential of the corridor and its physical constraints as well as the aesthetic aspiration of the community. It will improve the quality of traffic movements along the corridor and involve minimal property impact.

**Route 28 Preliminary Design, Pittsburgh, Pennsylvania\***

Traffic Engineer responsible for designing and analyzing proposed intersections of Route 28 ramps and the 31st Street Bridge in the City of Pittsburgh. The work involved using Synchro and SimTraffic software to analyze various improvement scenarios for the three closely-spaced intersections and recommending options that would minimize encroachment into existing hillside and property taking.

**Traffic Impact Assessments**

**Metropolitan Business Academy, New Haven, Connecticut\***

Project Manager for a traffic study related to the relocation of Metropolitan Business Academy, an inter-district magnet high school that emphasizes the development of entrepreneurial and business skills, to its new location along Route 1 in New Haven, Connecticut. The project included an extensive outreach process involving residents from the

Wooster Square neighborhood and addressed specific traffic issues raised by the public.

**Bishop Woods School, New Haven, Connecticut\***  
Project Manager for a traffic study that examined the impact of the reconstruction of Bishop Woods School, which will more than double its size to 80,000 SF and enroll up to 540 pre-kindergarten to eighth-grade students after the construction. The traffic study for this project analyzed the operation of adjacent intersections, evaluated various site access options, and addressed safety issues raised by area residents.

**Eli Whitney Technical High School, Hamden, Connecticut\***

Traffic Engineering Task Leader for the expansion of this technical high school. The traffic study prepared for this project examined the incremental traffic impact of the expansion on the adjacent residential neighborhood and stop-controlled intersections.

**Gilmartin Elementary School, Waterbury, Connecticut\***

Project Manager for a traffic study related to the reconstruction of Gilmartin Elementary School, which will enroll 550 pre-kindergarten to fifth-grade students after the construction. Traffic impact at adjacent unsignalized intersections, school zone signing, and driveway sight distances were the main elements in the study.

**North Main Street Elementary School, Waterbury, Connecticut\***

Traffic Engineering Task Leader for the new 78,000 SF school located in a residential area of Waterbury. Off-site traffic impact and on-site traffic circulation and pedestrian movement were all important considerations in the traffic study prepared for this project.

**Roberto Clemente School, New Haven, Connecticut\***

Traffic Engineering Task Leader for the reconstruction of Roberto Clemente School, which will serve approximately 560 pre-kindergarten to eighth-grade students after the construction. The project involved the preparation of a traffic study and coordination with City traffic planners and ConnDOT District 3 permit engineers in devising optimal access options and on-site circulation patterns for the school.

\* denotes projects completed with other firms

Woodbridge Village, Woodbridge, Connecticut\*  
*Traffic Engineering Task Leader for the development of this multi-use active adult community located in Woodbridge, Connecticut. Mr. Hua was responsible for traffic and parking analyses as well as traffic-related coordination with Town and State agencies and helped secure a State Traffic Commission (STC) certificate for the project. Stantec provided site layout design, civil and traffic engineering, and landscape architecture services. The development consists of the construction of 134 residential town homes and flats; 12,000 SF of retail space; and 4,000 SF of restaurant space, all centered around a traditional New England town green.*

New Rowe Residences, New Haven, Connecticut\*  
*Traffic Engineering Task Leader for a 104-unit apartment development located next to Yale New Haven Hospital. The analysis prepared for this project examined the traffic impact at 22 nearby signalized intersections along Route 34, a main access corridor in the area. The traffic study considered the impact from a number of other major hospital-related projects in the background condition of the analysis.*

River House and River House North, Fairfield, Connecticut\*  
*Task Leader for the traffic engineering components of these two mixed-use developments along Kings Highway East (Route 1) in Fairfield, Connecticut. The work involved the preparation of traffic studies and coordination with Town and State review agencies on site access requirements on this busy regional corridor.*

Day Kimball Hospital Plainfield Outpatient Center, Plainfield, Connecticut\*  
*Project Manager responsible for the development of a traffic impact analysis for the proposed outpatient center, which will be combined with existing hospital facilities at the site to create an outpatient medical office campus serving Northeast Connecticut. Mr. Hua also worked closely with the project architect, landscape architect and site engineer in preparing a State Traffic Commission (STC) application for this development.*

Garden Court, North Stonington, Connecticut\*  
*As a traffic consultant to the Town of North Stonington Planning and Zoning Commission, Mr. Hua assessed the traffic impact of a developer's plan to construct a 408-unit residential development, Garden Court, near Exit 93 of I-95. Mr. Hua prepared an independent traffic study, reviewed traffic and engineering submissions by the developer, and presented the findings and review comments at regular commission meetings and public hearings.*

Long Island Jewish Medical Center, Queens, New York\*

*Mr. Hua served as a traffic engineer for the environmental assessment statement that evaluated the impacts of the hospital's modernization and expansion plan.*

Christopher Columbus Family Academy, New Haven, Connecticut\*

*Traffic Engineering Task Leader for the reconstruction of Christopher Columbus Family Academy in New Haven, Connecticut. As part of the traffic study, six area intersections and the need for a new traffic signal were evaluated. Additionally, separate school bus and parent drop-off zones were proposed to minimize vehicular and pedestrian conflicts and traffic impacts in the vicinity of the school.*

Norwalk Company, Norwalk, Connecticut\*

*Mr. Hua served as the Project Manager of a Traffic Impact Study for a proposed mixed-use building in the historic South Norwalk district. The eight-story building will include 147 condominium units, 3 artist lofts, 24,000 square feet of retail space, and a 287-space parking garage. Stantec analyzed the traffic operations at intersections adjacent to the sites, reviewed the accident records, and proposed site layout options and remediation measures that would minimize the traffic impact of the project. Mr. Hua's experience in addressing complex urban traffic problems enabled him to provide unique perspectives and solutions that satisfied both the development needs and the requirements of review agencies.*

Beecher School, New Haven, Connecticut\*

*Traffic Engineering Task Leader for the preliminary layout plans and traffic impact study for the reconstruction of Beecher School, a pre-kindergarten to eighth grade school in New Haven, Connecticut. Stantec examined various traffic circulation and parking alternatives of the site, paying special attention to separate and accommodate the various traffic streams at the school: school buses, parent drop-off vehicles, pedestrian traffic, and delivery trucks. The traffic study analyzed the operations of four adjacent intersections, examined the accident patterns on area streets, and evaluated the traffic impact of the school reconstruction.*

Brookfield High School, Brookfield, Connecticut\*

*Prepared a traffic impact study for the expansion of Brookfield High School. Existing and proposed traffic conditions at nearby intersections were analyzed to evaluate the qualities of traffic flows. Traffic accident records for area roadways were analyzed to identify possible safety*



concerns. In addition, the adequacies of traffic movements and sight line distances at school driveways were field-checked according to State Department of Transportation requirements.

**Cooperative Arts and Humanities High School, New Haven, Connecticut\***

Served as the traffic-engineering consultant for the selection of a new school site. Analyzed the traffic impacts of 40 possible site locations/configurations for the future high school. Parking, school bus loading and circulation, area transit service, and existing intersection traffic conditions were used as the criteria to evaluate and rank the feasibilities of the sites. After selection of the site, Mr. Hua prepared a traffic study that evaluated the traffic impact of the school on 13 downtown intersections.

**Clinton Avenue School, New Haven, Connecticut\***

Performed a traffic impact study for the expansion of Clinton Avenue School. Traffic safety and quality of traffic flows on area streets are critical issues for the site that is located in a well-developed residential part of New Haven. The levels of service at both signalized and unsignalized intersections were analyzed to identify the impacts of the additional traffic resulting from the school expansion. Off-site traffic improvements were recommended as a result of the study to ensure the safe operation of the school.

**The Learning Corridor, Hartford, Connecticut\***

Responsible for off-site traffic analysis and traffic signal design for the 16-acre complex of public magnet schools in downtown Hartford. Mr. Hua also worked closely with the site civil engineers to resolve driveway access issues that are typical in built-up downtown areas.

**Commercial Developments, Various Locations, Connecticut, Massachusetts, Illinois and Indiana\***

Responsible for preparing traffic impact studies, traffic signal designs, site construction documents, and off-site roadway and intersection improvement plans for commercial developments, including Target stores, Kohl's department stores, Jewel/Osco stores, Walgreens pharmacies, CVS pharmacies, and Town Fair Tire stores.

**Traffic Signals and Signage**

**Traffic Signal Designs for Fairfield Metro Center, Fairfield, Connecticut\***

This on-going project involves designing traffic signal improvements at eleven intersections for the proposed Fairfield Metro Center, a joint effort by the State of

Connecticut, Town of Fairfield, and developer Black Rock Realty LLC that encompasses a new train station, a 1,500-space commuter parking lot, and one million square feet of office and commercial developments. Mr. Hua is the Project Manager responsible for traffic signal design and reviewing traffic impact reports prepared by another consultant.

**Traffic Signal Equipment Inventory Study, New Haven, Connecticut\***

Project Engineer for building a database of over 200 traffic signal controllers in the City of New Haven to facilitate signal maintenance for staff at the City Traffic and Parking Department. Mr. Hua performed the majority of the fieldwork that involved detailed inventories of all signal equipment at intersections and inside controller cabinets. He also worked closely with programmers to tailor the database software to the City's specific needs.

**Traffic Signal Designs, Torrington, Connecticut\***

Engineer responsible for updating traffic signal plans for signals in Torrington. The effort mainly involved fine-tuning traffic signal phasing and timing to meet the changes in traffic volumes.

**Traffic Signal Designs, Meriden, Connecticut\***

Engineer responsible for conducting capacity analysis and preparing traffic signal plans for signals along East Main Street in Meriden. The purpose of the project was to improve progression of through traffic on East Main Street. As a result of the project, new timing and phasing schemes and additional signal heads were proposed along the corridor, especially at the two intersections of East Main Street and I-91 ramps. Mr. Hua worked closely with the electrical engineers who implemented the new signal designs.

**Transportation Planning**

**Stamford Transportation Center, Stamford, Connecticut\***

Traffic Engineer on a comprehensive Master Plan for the Stamford Transportation Center. The project will recommend specific and actionable improvements to the configurations of the transportation center and the surrounding area to improve the operation of rail, bus, shuttle, private vehicle, parking and pedestrian services at this multi-modal gateway to the city.

\* denotes projects completed with other firms



*The transportation center has played a critical role in establishing Stamford as an attractive location for the financial services industry and multinational corporations. At the same time, the developments in downtown Stamford and its north end in the past decade have put considerable strain on the transportation center, despite the city's many infrastructure improvements. In addition, a number of major private developments adjacent to the center and in the south end of the city are currently under construction or in planning stages, which will add additional traffic load to area roadways.*

*The traffic engineering objective of the study is to maximize the efficiency of traffic circulation on roadways surrounding the transportation center to support the traffic growth from new developments. The ongoing traffic analysis is examining 25 intersections in the study area under four scenarios. The analysis considered the traffic impact from over 14 large-scale developments in the city and the diversionary impact of roadway projects. The work is being closely coordinated with city staff, the development community, ConnDOT, Metro North, CTTRANSIT, and the operators of shuttles, taxis, and the train station.*

**Route 34 Municipal Development Plan, New Haven, Connecticut\***  
*As a subconsultant to The Cecil Group, Mr. Hua served as the Project Manager for the development of transportation improvements for the Route 34 Municipal Development Plan. Work included the development of improvement options and public outreach that involved many stakeholders and advocacy groups.*

**Expanded Moynihan/Penn Station Redevelopment Project, New York, New York\***  
*Mr. Hua prepared intersection traffic analyses for the Draft Supplemental Environmental Impact Statement (DSEIS) for this redevelopment project. The project consists of relocating Madison Square Garden into the historic Farley Post Office Building; building a new Penn Station to serve intercity and suburban commuter rail services; and the development of more than 8.5 million square feet of office, residential and retail floor space.*

**Environmental Assessment for Proposed TBTA Crossing Charge Increases, New York, New York\***  
*Mr. Hua conducted traffic analyses for over 30 intersections in Manhattan and Queens that can potentially be impacted by bypass traffic as a result of the proposed toll increases at the Triborough Bridge and Tunnel Authority (TBTA) facilities. The primary objective of this study is to determine whether a*

*toll adjustment at the TBTA facilities may have a significant adverse impact on the environment, including traffic operations and air quality, and thus require the preparation of an environmental impact statement under the State Environmental Quality Review Act (SEQRA).*

**Route 7 and Route 202 Curb Cut and Access Management Plan, New Milford, Connecticut\***  
*Project Manager for an access management plan for the Route 7 and Route 202 corridors in New Milford, Connecticut. The plan aimed to preserve the quality of traffic flow, maintain property access, and limit driveway-related traffic conflict along these two major corridors. As a component of the project, the installation of sidewalks and the designation of a bikeway route in the area were also evaluated. Under the guidance of the project steering committee, Mr. Hua led the public participation process that involved the Town Planning and Zoning Commissions, area merchants and other interested parties.*

**Route 9A - Lower Manhattan Redevelopment Project, New York, New York\***  
*Mr. Hua served as a traffic engineer in the transportation planning and analysis work for a full range of alternatives for Route 9A (West Street) in front of the WTC site. The transportation component of the project considered various bypass routes and street closure scenarios directed at assessing traffic circulation in Lower Manhattan.*

**Downtown Bridgeport Comprehensive Plan, Bridgeport, Connecticut\***  
*Stantec was the transportation subconsultant to Phillips Preiss Shapiro Associates, Inc. (PPSA) on this project. Mr. Hua was responsible for transportation planning, analysis, and project coordination. The transportation part of the study examined the conditions of roadway, pedestrian and transit systems in the area and assessed the magnitude of potential traffic impacts from planned developments in the city.*

**Queen Street Area Traffic Study, Newtown, Connecticut\***  
*Project Manager for a traffic study for the HVCEO and the Town of Newtown that focused on intersection improvements, traffic calming and pedestrian safety for the Queen Street area in Newtown, Connecticut. Specific traffic calming measures and intersection improvement schemes were recommended after an extensive public participation process.*

\* denotes projects completed with other firms



**Transportation and Pedestrian Master Plan for Central Norwalk, Norwalk, Connecticut\***

*Assistant Project Manager for a plan to provide detailed recommendations regarding transportation and pedestrian improvements in Central Norwalk. The study analyzed the traffic impacts of development that is expected to be realized over the next 20 years and devised appropriate roadway improvement strategies and pedestrian circulation improvements. The scope of Stantec's service included data collection, travel forecast, pedestrian/bicycle access review, traffic analysis, and public outreach. A main component of the project involved building a detailed and flexible traffic model to analyze the effects of various development and improvement scenarios.*

**Downtown Traffic Circulation Study, New Haven, Connecticut\***

*Responsible for proposing and analyzing new traffic circulation patterns in the downtown New Haven area. The project aimed to improve the efficiency and safety for all modes of transportation on downtown streets by proposing new traffic circulation patterns and improvements to intersections and traffic signals. The project involved close coordination with the City officials and incorporated inputs from major stakeholders in the area, including Yale University, City residents, and merchants.*

**Route 13 Corridor Study, Wallops Island, Virginia\***

*Responsible for traffic volume projection, intersection capacity analysis, and traffic safety analysis parts of the project. The segment of Route 13 included in the study runs through the whole length of Wallops Island north of the Chesapeake Bay Bridge/Tunnel. The purpose of the study was to propose preliminary roadway and intersection improvements to accommodate future traffic flow and improve roadway safety along this vital corridor of tourism and agricultural businesses in the Commonwealth of Virginia.*

**I-84 Deficiency/Needs Study, Connecticut\***

*Responsible for research, traffic capacity analysis, traffic accident analysis, and document drafting for the study that analyzed the roadway segments and ramps of I-84 in the western part of Connecticut. The study recommended additional lanes and major ramp improvements to accommodate future-year traffic volumes.*

\* denotes projects completed with other firms