active design Group engineering dpc

EXCELLENCE IN STRUCTURAL DESIGN AND ENGINEERING

RELEVANT EXPERIENCE

292 Fifth Avenue Hotel, New York

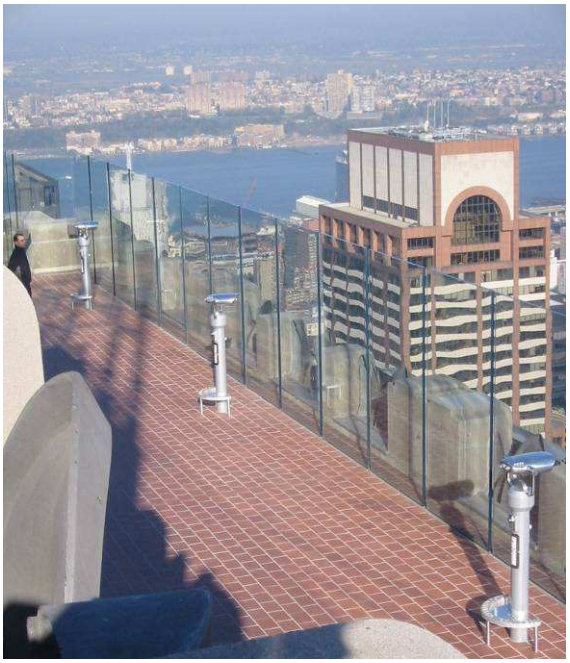
A 21-story hotel building with two below-grade level is located in midtown New York City. Concrete flat plate floor slabs are employed throughout to achieve high ceilings. The gross construction area of the building is approximately 104,000 square feet. The building will house a 4-star hotel with more than 200 rooms. The façade system consists of window wall and modular brick. The structural system is flat-plate concrete floors with shear walls around the elevator core and the stairs.

LOTUS 315, EAST ORANGE, NEW JERSEY

A 300,000 sf, 7-story residential development with curvilinear design by the design firm INOA. A large retail component is located on the ground floor. The concrete flat plate floor slabs follow the contour with each floor offset individually. The green roof over the parking deck in the rear follows similar amorphous layout.

258 S HARRISON ST, E ORANGE, NJ

A 220,000 sf, 17-story residential building with an 81,000 SF integral parking and green roof structure on a sloping site. Concrete flat plate floor slabs are employed throughout to achieve high ceilings. Round sloping columns support the tiered façade at the front and rear elevations of the building.



TOP OF THE ROCK
ROCKEFELLER CENTER OBSERVATION DECK
New York, New York

ADG provided structural engineering services for this prestigious project, which consisted of renovations throughout the historic 70-story building at Rockefeller Center. Work included the extension of four elevators by raising their motors two floors and the re-support of eight existing elevators in place while reworking their supports. New escalators were installed to provide access to the roof and an elevator bulkhead was extended to allow a fifth elevator to be raised. Structural supports were provided for 9 foot high cantilevered glass panels around the perimeter of each of three rooftop terraces. Mechanical and electrical equipment was relocated throughout the space. A new three-story atrium was created, extending from the Concourse to the Mezzanine Level. The atrium featured a self-supporting curved floating stair and two shuttle elevators. The project also entailed the demolition and reconstruction of a 10,000 gallon water tank and the provision of new dunnage support framing associated with the tank.

THE VENETO

250 East 53rd Street, New York, New York

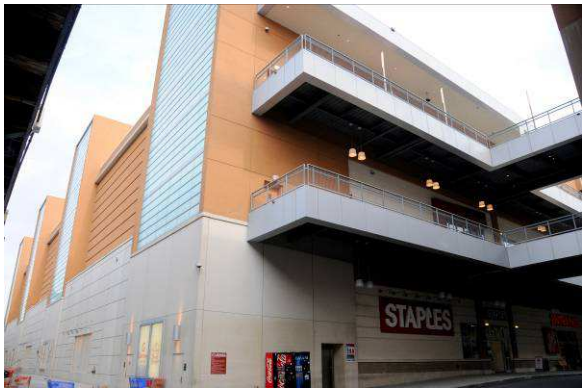
ADG provided complete Structural Design and Engineering Service for this project, which consists of a new 31-story flat-slab concrete framed luxury residential condominium building located at 250 East 53rd Street in New York City. A special feature of the design was the inclusion of provisions within the building for a future New York City subway station to serve the long-anticipated Second Avenue Subway line.

5-05 48th AVENUE
Long Island City, Queens, NY

The project is located at 5-05 48th Avenue in Long Island City, Queens, New York. The site has a footprint totaling 33,000 square feet and it is largely surrounded by adjacent building structures on the north and east sides of the Project. The design includes two (2) buildings totaling 160,000 square feet housing 118 residential condominium units. Building A, an 8-story structure of 142,000 square feet contains 102 units while Building B, a 5-story structure of 18,000 square feet contains 16 condominium units.

IRONSIDE, NEWARK, NJ

The six-story warehouse building was built in 1906 as a freight delivery and terminal facility for Central Railroad of NJ. It was connected to an elevated railroad track that entered the building on the 2nd Floor. The new Owner decided to convert this facility onto a Class A office and retail hub between Newark Penn Station and the Prudential arena in downtown Newark. Large sections of the existing concrete façade is removed to incorporate large window units on the office floors and the concrete façade is almost completely removed at the retail levels. New penthouse floor is added, new stair and elevator cores and a new two-story atrium space. The new building will have a commercial and retail area of over 450,000 sf. ADG provided structural engineering services.



GATEWAY CENTER AT BRONX TERMINAL MARKET

Bronx, New York

One of the most respected development firms in the northeast commissioned ADG and other Consultants to develop plans for the construction of a new mixed-use destination retail center in the Bronx. The site is near the Harlem River and was historically home to numerous heavy warehousing and distribution facilities, including railroad sidings and loading docks serving those buildings. The new 2,000,000 square foot complex includes 'big-box' retailers, pedestrian plazas, connecting elevated bridges and a multi-level parking structure.

COLUMBUS TOWERS COMPLEX

Jersey City, New Jersey

ADG's work on Columbus Towers included comprehensive Structural Design and Engineering services for a 35-story concrete residential tower (42,000 m^2), a 7-story concrete parking structure (33,000 m^2) with a recreational facilities on its roof, including a swimming pool, and an adjoining 3-story steel-framed office building (3,400 m^2).

The Venetian Plaza

Brooklyn, New York

The Venetian Plaza is located at 431 Avenue P in the Borough of Brooklyn, NY. It is a high-end luxury residential condominium development with a total area is approximately 150,000 square feet. It comprises six stories above grade and two Cellar levels.

“TEAR DROP” MONUMENT

Bayonne, New Jersey

ADG is performing structural design services for the “Tear Drop” Monument located at The Peninsula at Bayonne Harbor in Bayonne, New Jersey. The monument comprises an approximately 100 foot high sculpture mounted on a pedestal that is approximately 60 feet wide at its base. Many international craftsmen and Engineers are helping facilitate the installation of the monument, formally entitled "To the Struggle Against World Terrorism" and designed by sculptor Zurab Tsereteli. The monument has been donated by the artist and the Russian people to the United States.

ELEMENT BY WESTIN

311 West 39th Street, New York, New York

This new 39-story hotel building, with two below-grade levels, is located near the famous Times Square in New York City. The gross construction area of the building is approximately 164,000 square feet. The building will house a 4-star Element by Westin hotel with more than 400 rooms. The façade system consists of window wall and modular brick. The structural system is flat-plate concrete floors with shear walls around the elevator core and the stairs.

HAMPTON INN, HOLIDAY INN & CANDLEWOOD SUITES
339-343 West 39th Street, New York, New York

The complex comprises 32-story to 36-story adjoining hotel buildings with one below-grade level. Located near Manhattan's Times Square, the gross construction area of the building is 224,000 square feet. These three distinct hospitality brands offer a total of more than 500 rooms. Typical floor construction system is concrete flat-plate, with shear walls at the core providing a lateral bracing system. The structure sits on 400-ton mini-caisson foundations. ADG was initially directed to perform a Value Engineering Review of the structure as originally designed by others. ADG was subsequently asked to redesign the structural system to incorporate our innovative Value Engineering concepts. Coordinating closely with the Architect and the other Design Consultants, ADG was readily able to develop an elegant and cost-effective structural design.

VERTICAL EXPANSION, 1211 AVENUE OF THE AMERICAS

New York, New York

A complex and sophisticated renovation and expansion program was undertaken at an existing midtown Manhattan tower to provide state-of-the-art television studio and broadcast facilities. A tall vertical addition above one portion of the building provided the necessary volume. Independent access and circulation was provided by a new elevator in a distinctive glass-enclosed shaftway. ADG developed not only the structural engineering solutions required for the building shell modifications, but also supplied the support schemes for massive new heating and cooling equipment and emergency back-up power generators.

TWO NORTHSIDE PIERS AT 164 KENT AVENUE
Brooklyn, New York

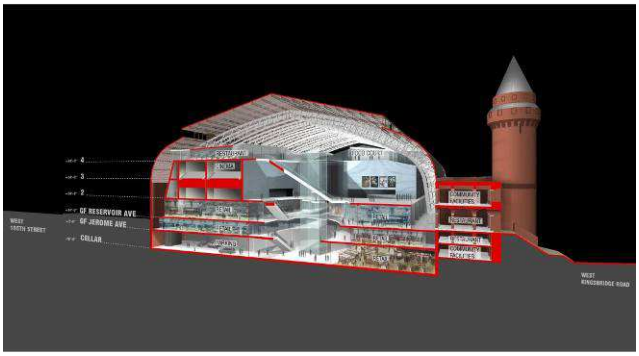
This project consists of three new residential towers: two 30-story buildings and one 40-story building. The approximate gross floor areas of the 30-story towers are 225,000 square feet each and the 40-story tower contains approximately 300,000 square feet.

CNN STUDIO, 1271 AVENUE OF
New York, New York

The CNN Studio at 1271 Avenue of the Americas in New York City posed a unique challenge for ADG's Engineers. Studio space requirements dictated the removal of an existing column at the Ground Floor of an 8-story building. A standard transfer system was not possible without overloading the adjacent columns and footings. Remedial reinforcement work at the floor below was also not possible, due to the presence of critical equipment serving an adjacent 48-story office tower. Any disruption at all to the mechanical systems on the floor below was not acceptable. Engineers at ADG developed a unique double-transfer system to resolve these issues. The upper column is picked up at the Second Floor framing and the load is transferred via two end posts to a second set of transfer girders underneath the First Floor that returns all the load back to the original column below.

Sounds confusing? Not so, says Joseph Lieber, the Principal-in-Charge of this project. Two 30-inch deep plate girders below the Second Floor straddle the column to be removed. The girders were hydraulically jacked up and locked into place. Then, the lower set of plate girders was installed, again straddling the column. Two new end posts were installed to complete the load path. The intermediate section of the column inside the studio space was then cut and removed.

The system is entirely symmetrical, but to prevent any unbalanced loads, four sets of "weak" shear connections at the ends of the transfer girders prevent any rotation of the transfer system but do not allow gravity loads to shift to the existing columns on the sides.

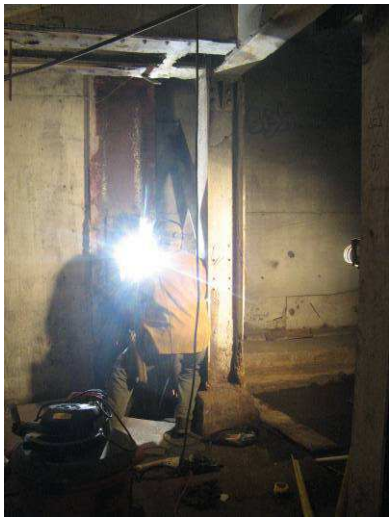


KINGSBRIDGE ARMORY ADAPTIVE REUSE

Bronx, New York

A century-old Armory in New York City's northernmost borough was found to be the perfect candidate for an exciting conversion to retail and entertainment uses. ADG performed extensive investigation and due diligence work during the initial stages of the design effort. Research revealed that a number of innovative and original structural steel fabrication and erection techniques had been employed by the original designers in the early twentieth century. The structure's multiple designations as an Historic Landmark mandated that proper strategies be developed to safeguard and preserve certain significant elements.

The development program entailed the insertion of multiple new levels within the huge open space comprising the original military Drill Hall. ADG adopted a variety of material selections and structural systems to assist in breathing new life into the formerly derelict monument.



COLUMBIA UNIVERSITY – OPH CHILLER PLANT

New York, New York

ADG contributed to many aspects of a major reconfiguration and upgrade program for a complex multi-functional mechanical plant for the University's New York City campus. Key features of the project include the design of new foundation systems for massive pieces of equipment within the shells of existing buildings, the design of an entirely new interior mezzanine structure and the design of pipe supports and hoist beams to serve the new equipment. Three separate buildings were integrated into the new facility, and ADG designed a variety of large dunnage structures as well as alterations to the structural framing of the existing buildings.

DOUBLETREE HOTEL AT 8 STONE STREET

New York, New York

This project in downtown Manhattan is a new 43-story Hotel Building, with two below-ground levels, located at 8 Stone Street in New York City. A 4-star DoubleTree Hotel with 424 rooms and restaurants in the building. Typical floor construction is a concrete flat-plate system with core shear walls functioning as the lateral system. The structure sits on 400-ton caisson foundations.











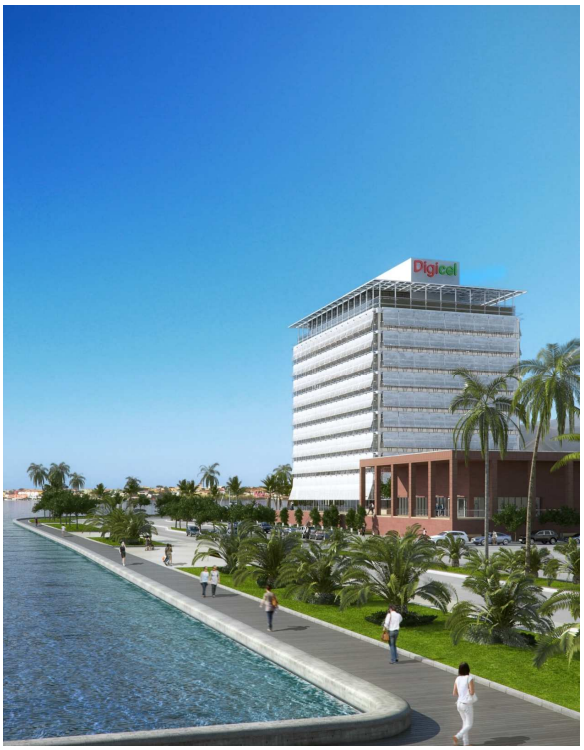





RECONSTRUCTION OF THE MARCHE DE FER (IRON MARKET)

Port-au-Prince, Haiti

The city's Iron Market served as a retail hub for more than a century. The original components were prefabricated in France and assembled locally into two sheds flanking a central Clocktower featuring four minaret-like towers. Fire destroyed the North Market shed in 2008 and after the earthquake of 2010 severely damaged the South Market shed, ADGI was authorized to begin work on the $12 million restoration in March of that year. Extensive field investigation and a careful evaluation of the complex suggested a project approach which required the design of a new North Market. ADG designed IBC 2006 upgrades for the project, including diagonal rod bracing and supplemental anchorage details for the columns. Close inspection of salvageable original materials allowed the project's historic character to remain. Cast-iron coupons were taken to the U.S. for testing. ADG's responsive style allowed on-time Project completion, with an inauguration held on January 11, 2011.



DIGICEL DOWNTOWN DEVELOPMENT

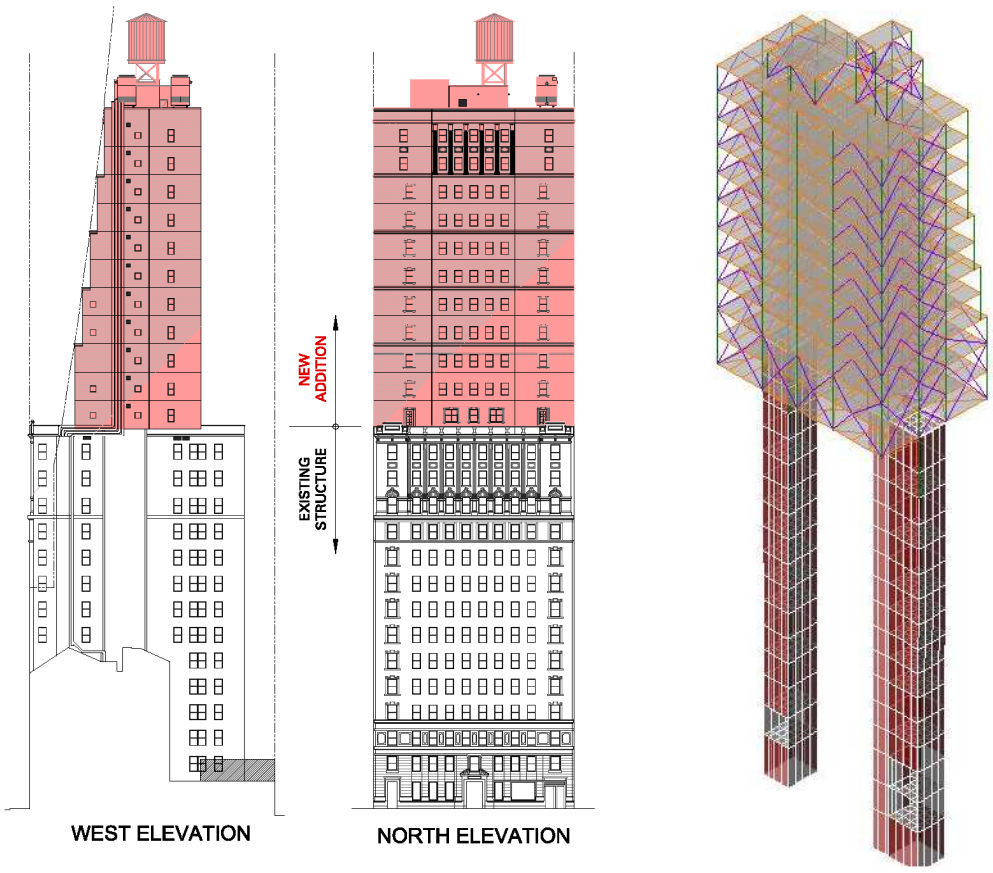
Kingston, Jamaica

The Digicel Downtown Development project in Kingston, Jamaica is intended to follow a Master Plan for a complex of buildings and gardens comprising three parts: Digicel corporate facilities, a hotel or other commercial building and an entrance plaza. The Digicel corporate buildings occupy the first third of the site facing out onto the waterfront. An eighteen-story tower standing on a white stone plinth houses office accommodation, call center and training facilities, etc., with views out across the bay to the south and west. A separate two-story building houses the switch / battery / UPS and the staff canteen, all kept at the lower level for ease of access and servicing.

Planned hotel buildings will be about six stories high, positioned along the east side of the site to enclose an entrance space at the front of the Digicel tower, making a proper entrance to the Digicel building and setting it up as the most important building on the site. To be clad in red sandstone, surrounded by dark green trees, the ensemble structure will feature the Digicel colors. The future entrance plaza will provide an entrance space appropriate to the size of the Digicel tower. The plaza is conceived as a garden, entered through a large gate at the city end of the site, with a long shallow pool down the middle. The pool will be used to collect rainwater and will provide water for fire-fighting. The Digicel tower will be reflected in the water, and to either side will be lawns and rows of trees for shading.

Project Statistics

Digicel Tower	18 stories	13,500 m2 (145,314 sq. ft.) gross area
Future IT & Catering Bldg.	2-3 stories	2,500 m2 (26,910 sq. ft.) gross area
Future Hotel or Other Commercial Bldg.	5-6 stories	10,000 m2 (107,640 sq. ft.) gross area
Basement Car Park	1 story	10,500 m2 (113,022 sq. ft.) gross area
TOTAL		36,500 m2 (392,886 sq. ft.) gross area



30 E. 60th Street, New York, NY

12 STORY ADDITION ON TOP OF EXISTING 15 STORY BUILDING

ADG provided Structural Engineering Services for 12-story steel structure addition on top of an existing 15-story occupied commercial building in midtown New York City. The new 12 story addition of 45,000 SF building is supported only by two concrete towers within the light wells of the existing building and is supported by new foundations independent of the existing building. Vertical post-tensioning and rock anchors are used to control the horizontal movement of the building.

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NJ PUBLIC HEALTH ENVIRONMENTAL AND AGRICULTURAL LABORATORY

West Trenton, New Jersey

The laboratory is located on a 16-acre parcel at the New Jersey State Police Headquarters Campus and has a gross floor area of approximately 250,000 square feet. This $100 Million facility serves as the primary research and analysis operation for the State's Health Department. As such, the facility is used to analyze suspicious substances for all types of events, including those thought to be used as terrorist weapons.

LEXINGTON HOUSE HOTEL

New York, New York

ADG created the structural design for the new Lexington House Hotel, located at 517-521 Lexington Avenue in New York City. The 25-story Hotel is positioned amidst numerous other prestigious hotels on the east side of Manhattan's midtown district. The structural material of choice was reinforced concrete. Because of the building's double-level Basement, situated adjacent to existing Subway tunnels and facilities, extensive coordination with the Metropolitan Transit Authority was required.