



February 11, 2014

City of Hallandale Beach, Planning and Zoning Division
400 South Federal Highway
Hallandale Beach, Florida 33009

Subject: Consultant Review of Variance – 2000 South Ocean Drive

To Whom it May Concern:

As requested, Chen Moore and Associates has completed a consultant review of the subject variance. Our findings are below in a similar format as required for a commission report as requested. Attached to this document are a map of the subject property and the firm and individual qualifications as requested.

Summary:

An application for variance in regards to construction seaward of the Coastal Construction Control Line (CCCL) dated September 11, 2013 was submitted to the City of Hallandale Beach, by the applicant, B & H Fort Lauderdale Beach, LLC. The proposed construction is located at 2000 South Ocean Drive, for a proposed site redevelopment to include a 38 story condominium building. The consultant retained to review this variance recommends approval of a variance to Section 8-75(b)(3)(a), a limitation in the code requiring structures to be built landward of the Coastal Construction Control Line (CCCL). A condition of approval is the issuance of a permit from the Florida Department of Environmental Protection (FDEP) for construction seaward of the CCCL.

Analysis:

The proposed construction is located at 2000 South Ocean Drive, for a proposed site redevelopment to include a 38 story condominium building. All construction in Florida is governed by the Florida Building Code (FBC) with local restrictions as adopted.

The Coastal Construction Control Line (CCCL) is defined as a landward boundary set for the protection of the beach-dune system which is subject to severe fluctuations based on a 100-year storm surge, storm waves, or other predictable weather events (Florida Statutes, Ch. 161). In order to construct facilities seaward of the CCCL, a permit must be obtained from the Florida Department of Environmental Protection (FDEP). The CCCL has changed over time, but it is generally defined as:

"We are diverse and highly motivated professionals building solutions for you with a passion. Because we believe."

BROWARD
500 West Cypress Creek Road – Suite 630
Fort Lauderdale, Florida 33309
Telephone: (954) 730-0707
Fax: (954) 730-2030

MIAMI-DADE
155 South Miami Avenue – PH 2A
Miami, Florida 33130
Telephone: (786) 497-1500
Fax: (786) 497-2300

PALM BEACH
500 Australian Avenue South – Suite 530
West Palm Beach, FL 33401
Telephone: (561) 746-6900
Fax: (561) 746-8333

TREASURE COAST
510 SE Dixie Highway
Stuart, FL 34996
Telephone: (772) 919-7018
Fax: (772) 919-7019

GAINESVILLE OFFICE
14 E University Avenue – Suite 206
Gainesville, FL 32601
Telephone: (352) 374-1997
Fax: (352) 244-0875



- the landward limit of storm-induced erosion (where upland elevations are substantially greater than the 100-year still water level)
- the landward limit of a 3.0 foot wave propagating at the 100-year stillwater level (where upland elevations are low and profile inundation occurs)
- at the landward limit of overwash (in instances where the profile is not inundated but where wave overtopping and sediment deposition occur), or
- at the landward toe of the coastal barrier dune structure impacted by, but not destroyed by, erosion accompanying the 100-year stillwater level and storm waves.

The Coastal Construction Control Line (CCCL) is a delineation of jurisdiction, not prohibition. The CCCL permit from FDEP addresses building siting and beach/dune protection issues. It is also important to reiterate that the City is responsible for the enforcement of the FBC, while the administration of the CCCL is by the FDEP.

Therefore, notwithstanding the existing requirements of the FBC and other permit requirements, and noting the FDEP's role in approvals of construction seaward of the CCCL, the provision of Section 8-75(b)(3)(a) is essentially a site planning restriction. The current site use is for the Regency Health Spa/Hotel facility with associated parking and swimming pool. The proposed build-out is consistent with the property directly to the south, which is Parker Plaza, a luxury condominium complex located at 2030 South Ocean Drive, and directly to the north, which is a luxury condominium complex, located at 1980 South Ocean Drive. These buildings all have generally the same setback from the coastline keeping the context of the proposed building to the beach consistent. Additionally, as noted in the application, there is an existing wall which shares a common border with the walls on the properties immediately to the north and south.

In regards to the Community Rating System (CRS), which impacts flood insurance, construction seaward of the CCCL is not a qualifying restriction. The 2006 CRS Manual governs the current program. Under this program, any variance given will prorate the points awarded for the CCCL restrictions. Currently, the City only receives 219 points from Activity 430 (2012 CRS report) which is where the additional restriction of the CCCL would be credited. The City of Coral Springs, which has no properties impacted by the CCCL, scored 217 points. From this, we can infer that little impact will be felt under the current manual. Moving forward, the CRS program does not prohibit such construction when FDEP grants a permit (2013 CRS Manual). Based on this, the City of Hallandale Beach's CRS program will not be detrimentally affected by this project.

Proposed Action:

The variance requested had been evaluated under the technical conditions of Section 8-74(e)(6). The applicant has agreed to meet the requirements of FBC Section 3109 and all other applicable codes. Additionally, the review by the FDEP for the CCCL will include remaining technical conditions as required.



Per Section 8-74(e)(9), the variance may only be granted under certain provisions. As a result of the aforementioned codes and permitting requirements, the determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense; create nuisances; cause fraud on or victimization of the public; or conflict with existing local laws or ordinances, as required under Section 8-74(e)(9)(b)(3).

Construction seaward of the CCCL requires permit approval by the FDEP, which was submitted by the applicant and deemed complete on September 16th, 2013 by FDEP, and is pending approval. Per Section 8-74(e)(7), it is recommended that the issuance of this permit be a condition in the granting of this variance.

Therefore, we recommend approval of the requested variance to Section 8-75(b)(3)(a) with the aforementioned condition.

Attachment(s):

Chen Moore and Associates (CMA) is a licensed engineering business in Florida. Originally founded in 1986, CMA has provided water resources consulting for a wide variety of municipalities. CMA manages the Community Rating System (CRS) program for the Cities of Coral Springs and Wilton Manors and has consulted to numerous additional cities for FEMA concerns, including the Town of Lauderdale-by-the-Sea, the City of Pompano Beach and the City of West Palm Beach. Additional information can be found about CMA at www.chenmore.com.

The individuals that prepared this assessment include:

- Peter Moore, P.E., F. ASCE, LEED AP: Peter is serving at the principal-in-charge for this project and is applying his nearly ten years as a City Engineer and experience in the FEMA Community Rating System (CRS) program.
- Jason McClair, P.E., CFM, LEED AP: Jason is serving as the senior engineer guiding the review of the interpretation of the FIRM with his experience in stormwater modeling coastal communities such as Pompano Beach, Hollywood and Lauderdale-by-the-Sea (LBTS). Jason is a FEMA Certified Floodplain Manager (CFM).
- Joel Bownsey: Joel is serving as the planning technician for this variance review utilizing his experience in similar reviews under the Town Engineer contract for LBTS.
- Cristobal Betancourt, RLA: Cris leads the firm's landscape architecture and planning practice and lends his 18 years of experience as required.
- Derrick Smith, LEED AP: Derrick manages the CRS program for the City of Coral Springs and was the firm's representative on the Local Mitigation Strategy initiative, lending experience as required.

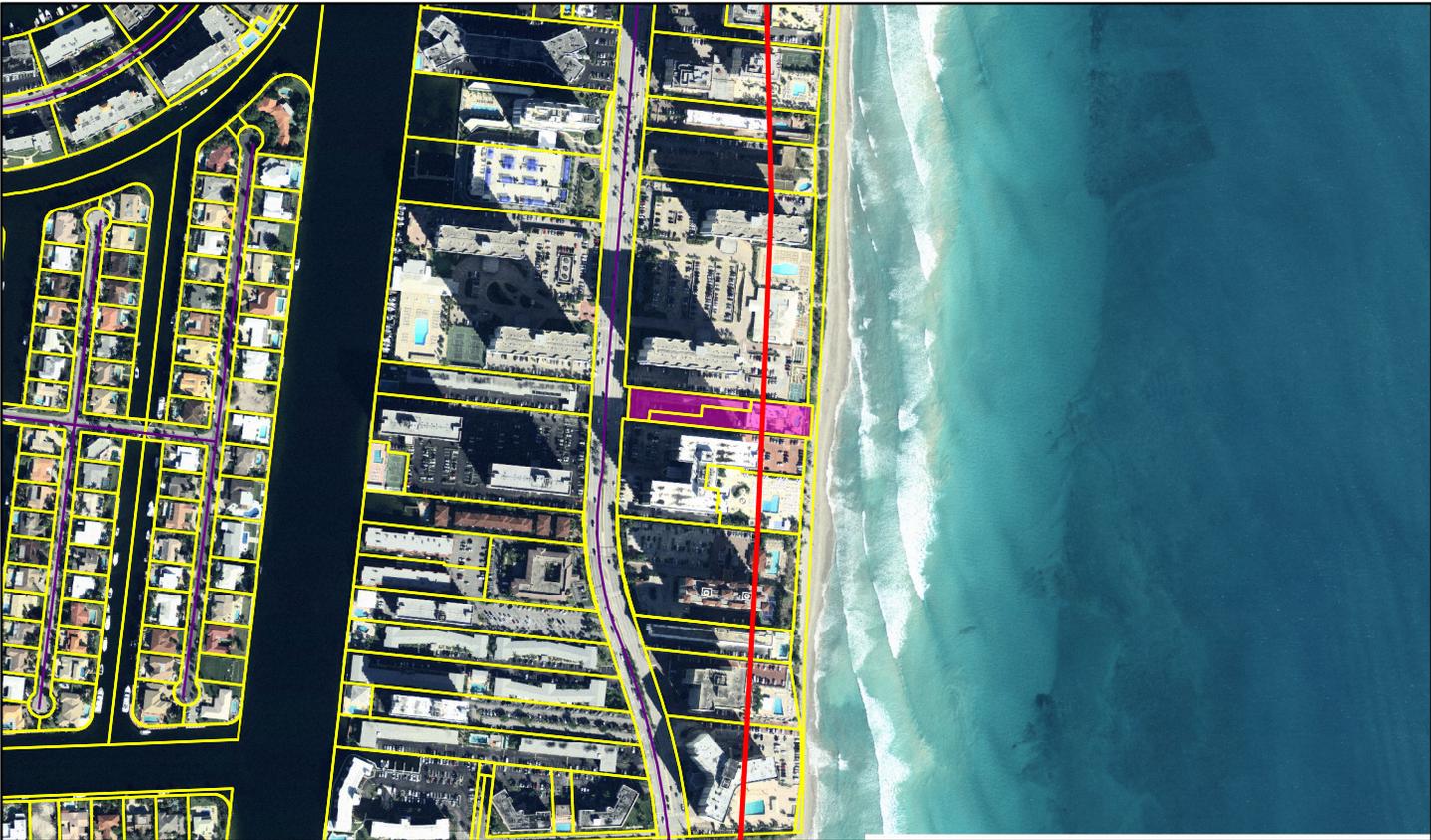


We are prepared to attend any public hearing to assist on this matter. Should you have any questions, please do not hesitate to contact me at my office at (954) 730-0707x1002, my cell phone at (954) 818-9552 or send me an electronic message at pmoore@chenmoore.com.

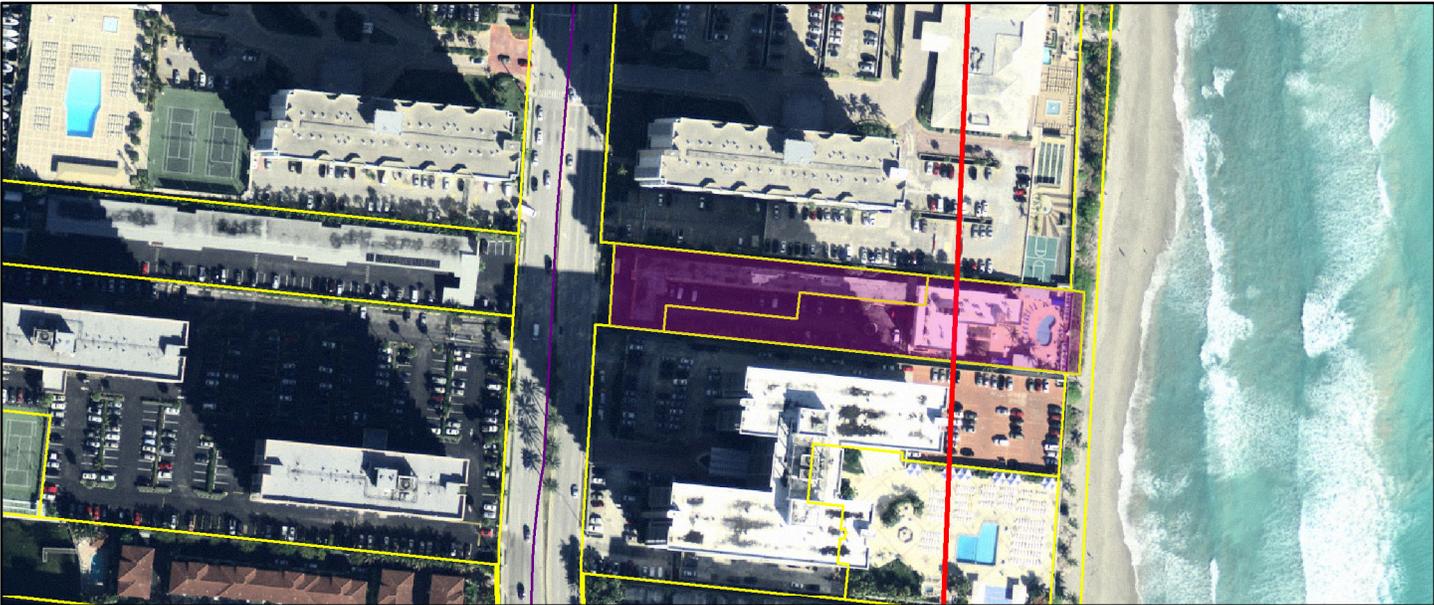
Respectfully submitted,

A handwritten signature in blue ink, consisting of a stylized 'P' and 'M' followed by a long horizontal line.

CHEN MOORE AND ASSOCIATES
Peter M. Moore, P.E.
President



Area Map



2000 S Ocean Drive, Hallandale Beach, FL

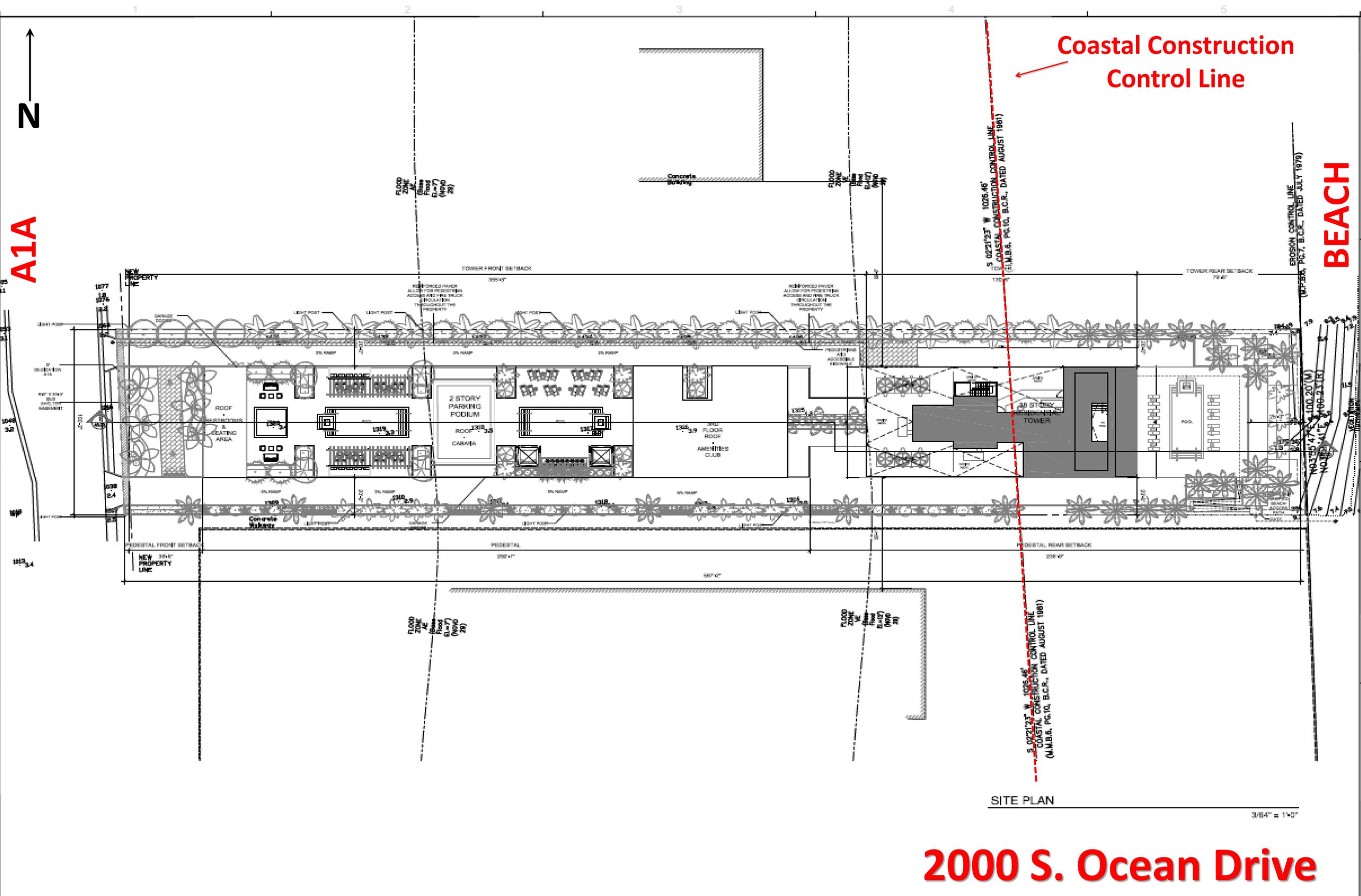
Legend

- CCCL
- Parcel Lines
- 2000 S. Ocean Drive



A1A

N



SITE PLAN

3/64" = 1'-0"

2000 S. Ocean Drive

REVISIONS / SUBMISSIONS	
△	DRC - 07/22/13
△	P&Z - 11/27/13
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△	
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1310

1310

2000 S OCEAN DR
2000 S OCEAN DR
HALLANDALE BEACH / FL 33009

SITE PLAN

B&H
FORT LAUDERDALE FL

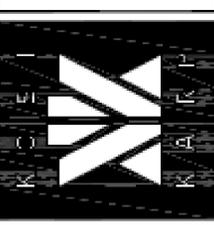
U.C. # AR1012578

ARCHITECTURE
INTERIOR DESIGN
PLANNING

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DRAWN BY:

CHECKED BY:

DATE: 08/13

A2.00

*Peter Moore, P.E., LEED AP
President and CEO*

Education

Bachelor of Science, Civil Engineering, University of Florida, 1997
Master of Engineering, Civil Engineering, University of Florida, 2004

Registration

Professional Engineer, Florida, 58709, 2002

Professional Affiliations

American Society of Civil Engineers
Florida Engineering Society
Florida Stormwater Association
National Society of Professional Engineers

Certifications

Certified Stormwater Inspector
LEED Accredited Professional

As the President of the firm, Mr. Moore is ultimately responsible for all day to day operations of the firm. Mr. Moore works as the Client Project Manager for work in Broward County, Pompano Beach and Deerfield Beach and continues to be involved in the successful completion of projects. These projects include sanitary collection improvements, pump station rehabilitation, transportation engineering enhancements, water and reclaimed water consulting along with all other phases of civil engineering design and neighborhood improvements. Additionally, Mr. Moore serves as the Assistant City Engineer for the City of Coral Springs and is the spokesperson for the City's Engineering Division. Finally, Mr. Moore serves on the firm's QA/QC Committee ensuring the consistency of the quality product throughout the firm.

Project Experience

Stormwater Master Plan. Chen Moore and Associates (CMA) is preparing a Stormwater Master Plan (SWMP) for the entire City of Pompano Beach limits, which encompass approximately 24.6 square miles. The City operates and maintains its own stormwater facilities within City right-of-way and properties to provide flood control and water quality treatment within the City limits. Existing drainage facilities within the City include catch basins, manholes, control structures, gravity pipes, outfalls, and canals that connect to the Intracoastal Waterway.

The purpose of this SWMP is to identify any deficiencies in the existing stormwater management system in regards to flood control and water quality treatment. The SWMP will allow the City to understand the necessary drainage improvements over the next few years and to budget accordingly. CMA will recommend system improvements to meet regulatory Level of Service (LOS) criteria in regards to peak flood stage, peak discharge, and water quality. Within the SWMP, CMA will provide recommendations for improvements to the system that will eliminate or reduce the ponding currently encountered within right-of-way areas during or after rainfall events. The SWMP will define the existing stormwater management system; summarize the results of the stormwater model for the existing conditions; prioritize the proposed improvements to the stormwater management system; and provide an estimated cost to construct these upgrades to the stormwater management system.

As part of this project, CMA will assist the City with the documentation of how the Floodplain Management Plan was prepared per the requirements of FEMA. The SWMP will be configured to address the relevant FEMA requirements related to Floodplain Management, including Activity 510 – Floodplain Management Planning, Activity 530 – Flood Protection, and Activity 540 – Drainage System Maintenance. CMA will submit the Floodplain Management Plan to FEMA for review.

Lauderdale-By-The-Sea Stormwater Master Plan. Chen Moore and Associates completed the Stormwater Master Plan for the Town of Lauderdale-by-the-Sea. Like other coastal communities in South Florida, the Town of Lauderdale-By-The-Sea is fully developed with chiefly residential properties mixed with commercial properties. The project area includes approximately 640 acres of land which are separated into 1,618 properties, which encompasses approximately 1.5 square miles of land area. The Town of Lauderdale-By-The-Sea maintains its own stormwater facilities. Existing drainage facilities within the Town include catch basins connected by pipe of various materials and sizes to either exfiltration trench or positive outfalls

into the Intracoastal Waterway and canals. Private drainage systems also discharge into the Intracoastal Waterway and canals. Unpaved swales are found within right-of-way areas for additional stormwater storage.

Broadview Park Neighborhood Improvement Program-Broward County. The Broadview Park Neighborhood Improvement Program (BPNIP) was the last of the Neighborhood Infrastructure Improvements projects to be carried out by Broward County in the unincorporated areas. Chen Moore and Associates was selected as the prime consultant for the Basis of Design Report (BODR) and to design and administer the construction of improvements to subsequent bid packages. The three Bid Packages address water, sanitary sewer and drainage improvements, while introducing sidewalks and enhancing the community's roadway and landscape.

The first two Bid Packages included replacing an entire existing water system, as it was formerly a private utility, and constructing three new lift stations, thousands of linear feet of gravity sewer, force mains, drainage improvements, roadway restoration and new sidewalks. The gravity sewer system was designed using a GIS capacity analysis tool that calculated and summarized the flow rates for each parcel in the service area. GIS was utilized during construction to track resident complaints, track the work that had been completed and estimate the Contractor's variance from the original schedule. The third Bid Package addressed the sanitary sewer and drainage improvements, as well as improvements to the community's sidewalks, roadway and landscape.

BCWWS WWED UAZ. UAZ 307 / 315-Broward County. The Broward County UAZ 307 / 315 Utilities project included replacing existing water main and providing sanitary sewer for County Service Areas in the City of Dania Beach, near Griffin Road and Ravenswood Road. The main technical components included replacing a 12-inch water main on Ravenswood Road, replacing the residential water distribution system, providing sanitary sewer to connect existing septic tanks and rehabilitating and installation of new lift stations and force main. In order to achieve the necessary information, site visits concentrated on contacting residents to determine the location of existing tanks. A great deal of coordination was required to accommodate developer projects, tie into County projects, and obtain easements for crossing private properties. A total of 20,000 linear feet of water main replacement, three lift stations and 14,000 linear feet of sanitary sewer, which will tie in over 400 parcels, were designed for this project. Chen Moore and Associates is also performing construction administration for this project.

UAZ 303,314 and 318. The Broward County UAZ 303,314 and 318 project was part 1 of what was projected to be an \$8.8 million project replacing existing water and providing sanitary sewer for County Service Areas in the City of Dania Beach, just east of State Road 7, north and south of Griffin Road. The main technical components included replacing water mains on County roads, replacing the residential water distribution system, providing sanitary sewer systems to eliminate existing septic tanks, and rehabilitating or installing new lift stations. GIS was used to keep track of all ongoing projects, log pertinent site information, determine the projected flow rates, track questions from residents of the area and track responses from utility companies regarding their existing facilities. The design of these improvements began in January 2009 and UAZ 303 has been completed. The other portions have been put on hold pending County funding.

UAZ 316. The Broward County UAZ 316 project is part 2 of the estimated \$8.8 million project servicing Broward County utility zones in the City of Dania Beach which includes replacing existing water and providing sanitary sewer just east of State Road 7, and south of Griffin Road. The main technical components include replacing water mains, replacing the residential water distribution system, providing sanitary sewer systems to eliminate existing septic tanks and rehabilitating or installing new lift stations. The design of these improvements have been designed 90% and are awaiting funding for completion and construction.

The Central County Neighborhood Improvement Project (CCNIP)-Broward County. The CCNIP is the second of three neighborhood infrastructure improvements projects carried out by Broward County in the unincorporated areas. The project included improvements to the drainage, water, sewer, and roadway systems. Chen Moore was selected to be the design engineer for four bid packages under this neighborhood improvement program, including the Franklin Park, Washington Park, St. George West and St. George East neighborhood areas. Under the CCNIP project, Chen Moore and Associates was responsible for managing the design, permitting, and construction administration of these bid packages. Chen Moore and Associates was also part of a team of engineers that completed the basis of design report (BODR), and served as the project reviewer that made recommendations resulting in substantial savings to the project's budget.

*Jason McClair, P.E., CFM,
LEED AP
Vice President of
Operations/Branch Manager –
Fort Lauderdale*

Education

Bachelor of Science, Civil
Engineering, University of
Florida, 1996

Registration

Professional Engineer,
Florida, 56962, 2001

Professional Affiliations

American Public Works
Association

American Society of Civil
Engineers

Broward County Gator Club

Florida Engineering Society

National Society of
Professional Engineers

University of Florida Alumni
Association

Certifications

SewerCAD Master Modeler
(Haestad Methods)

WaterCAD Master Modeler
(Haestad Methods)

ICPR Modeler (Streamline
Technologies)

Radiation Safety Officer
(Troxler)

Nuclear Density Gauge
Operator (Troxler)

Certified Floodplain Mapper
FDOT AP

Advanced Work Zone Traffic
Control (FICE)

Mr. McClair is a senior civil engineer with experience in utility infrastructure design, regulatory permitting, geotechnical engineering, and computer aided flow modeling for stormwater collection, water distribution, and sanitary transmission systems. He is currently the project manager for the Fort Lauderdale-Hollywood International Airport Stormwater Master Plan Update and the Pompano Beach Stormwater Master Plan.

Project Experience

Fort Lauderdale-Hollywood International Airport Stormwater Master Plan Update Under Phase 1 of this project, BCAD retained Chen Moore and Associates (CMA) to update the FLL Stormwater Master Plan (SWMP), which was completed by a previous consultant in 2001. CMA reviewed the data and analysis from all prior reports, converted the existing stormwater model from SWMM to ICPR, and updated the ICPR model with any new system data and new projects provided by BCAD. CMA updated the existing conditions stormwater model and created the future conditions stormwater model to assess alternative drainage improvements needed to achieve required and desired Levels of Service (LOS) for various storm events. The stormwater model was used to run rainfall scenarios for the comparison of pre-development (existing) conditions versus post-development (future) conditions from a water quantity (runoff) and water quality (storage) perspective. The stormwater model was used to analyze the performance of the existing Primary Stormwater Management System (PSMS). Phase 1 for this project included the following work items:

- Review and verify of earlier work by other consultants during 2001-2005
- Convert previous SWMM stormwater model to ICPR model
- Obtain updated topographic data for TIN development
- Calculate updated hydrologic parameter for drainage basins
- Conduct analysis of various system improvement alternatives
- Prepare Stormwater Master Plan Update

The purpose of Phase 2 is to provide routine updates to the stormwater model(s) based on progress design drawings of the South Runway Expansion Project and the associated future development, including but not limited to, terminal and gate area improvements. The existing stormwater model created during Phase 1 includes design assumptions based on preliminary planning documents for the South Runway Expansion Project.

The updates to the stormwater model during Phase 2 will be based on progress design submittals for the South Runway Expansion Project and approved design plans for other new development at FLL, which will enhance the accuracy of the stormwater model. Phase 2 for this project includes the following work items:

- Prepare a Stormwater Capital Improvement Plan for FLL
- Certify existing permits at FLL
- Provide ongoing stormwater permitting assistance to BCAD
- Ongoing coordination with the design team for South Runway Expansion Project
- Complete drainage review of various developments throughout FLL
- Develop drainage design standards manual
- Prepare application package for stormwater conceptual permit for FLL

City Engineer-Wilton Manors. Since 2007, Chen Moore and Associates has served as the City Engineer for Wilton Manors. In addition to managing the day-to-day engineering needs of the City, the firm has provided Construction Engineering and Inspection Services (CEI) and Construction Administration (CA) for several Local Agency Program (LAP) projects in conjunction with the Florida Department of Transportation. In addition, the firm provides compliance for the City's NPDES, CRS and backflow preventer maintenance programs.

Lift Station Improvement Program-Pompano Beach. CMA is responsible for managing the planning and design of the City's Lift Station Rehabilitation Program. The previous lift station improvement projects for the City of Pompano Beach include the following: **LS 2, 3, 4 & 11 Rehab or Replacement.** CMA was contracted by the City of Pompano Beach to continue with the Harbor Drive Improvement Project, which includes the rehabilitation of seven lift stations and the construction of new force mains which will connect each lift station into the sanitary pressure network for the City of Pompano Beach. Each of these lift stations previously repumped into an adjacent manhole located within the service area of another lift station. The outgoing force main from each of these lift stations was rerouted to connect directly to the new force main located along Harbor Drive. CMA is the prime consultant responsible for the design, permitting, and construction administration for the rehabilitation of existing Lift Station 2, Lift Station 3, Lift Station 4, Lift Station 11, and Lift Station 12.

Lift Station #11 Rehabilitation. CMA was contracted to design, permit and coordinate the rehabilitation of Lift Station 11 (new numbering) in Pompano Beach. Lift Station 11 previously acted as a master pump station and is currently operating over capacity. It has three vertical shaft pumps, housed in a concrete masonry block building. This project involved upgrading and replacing the existing pump and control panel components as necessary, as well as verifying whether the existing generator will continue to operate under the proposed pumps.

Lift Station #110 Rehabilitation. CMA was contracted by the City of Pompano Beach to design the rehabilitation of lift station 110. This lift station serves an area of approximately 100 acres consisting of commercial and industrial properties. It is currently a duplex lift station. The upgrades included replacing the existing pumps and control panel to handle increased flows. CMA was responsible for the design, permitting and construction administration.

Lift Station #24. CMA was contracted by the City of Pompano Beach to design the rehabilitation of Lift Station 24 serving the barrier island of the City between Intracoastal Waterway and Atlantic Ocean. The proposed improvements included the installation of new force main, the replacement of an existing water main, and the rehabilitation of an existing lift station. Lift Station 24 previously repumped into an adjacent manhole within the service area of another lift station. The outgoing force main was rerouted to connect directly to the existing 24-inch force main within the City's backbone force main network. The submersible pumps at Lift Station 24 had to be upgraded due to the higher connection pressure encountered at the backbone force main. Under this contract, CMA also developed a computer model of the City's force main network using the SewerCAD software to allow analysis of the pressures within the network.

Lift Station #102. CMA provided record drawings, coordinated survey services, prepared design plans, coordinated and completed permit applications, and provided construction and inspection services for Lift Station 102.

Lift Station #21. CMA was responsible for the design, permitting and construction administration for the relocation of the existing LS 21 (master pump station) serving a majority of the City's barrier island. After completing the Basis of Design Report, CMA proposed a variety of options to handle the approximately 3,500 GPM existing flow and conducted follow-up odor studies for specific design purposes. The design options included in-line booster and submersible pumps with variable frequency drives and liquid and vapor phase treatments. Additional concerns included odor control, dewatering contamination and electrical supply and generation. The final design option (approved in Oct. 2007) was different from the recommended "hybrid" design in the BODR in that the design only involved a submersible lift station coupled with biological vapor phase odor control and strategic chemical liquid phase odor control (no in-line booster station involved). The estimated construction cost for the final, approved design option is about \$3.06 million (versus \$3.25M stated in the BODR for the hybrid in-line booster / submersible station, which was later increased to \$4.31M for various reasons).

Lift Station #44.-Chen Moore and Associates will prepare design plans and technical specifications for proposed modifications to lift station 44.

Cristobal A Betancourt, RLA
Director of Planning and
Landscape Architecture

Education

Bachelor of Science,
Landscape Architecture,
Cornell University, 1995

Registration

Registered Landscape
Architect, Florida,
LA6666941, 2008
Registered Landscape
Architect, New Jersey,
AA000949, 2006
Registered Landscape
Architect, New York, 001959,
2005

Professional Affiliations

American Planning
Association

American Society of
Landscape Architects

East Stuart Main Street
Design Committee

Florida Recreation and Park
Association

Florida Network of Research,
Science, and Technology
Parks

International Society of
Arboriculture

National Association of
Industrial and Office Parks

Urban Land Institute

Certifications

Council of Landscape
Architectural Registration
Board

Mr. Betancourt is Chen Moore and Associates' Director of Landscape Architecture and Planning. He has experience providing planning and landscape architecture design solutions for public and private sector clients. Mr. Betancourt provides a full range of services starting with due diligence and master planning culminating in detailed site design. He is well versed in the use of low-impact development techniques applied to site planning.

Project Experience

Westside Park Baseball Field. Chen Moore and Associates is providing design, permitting and construction engineering inspection services for the conversion of an existing football field to one little league baseball field and one practice baseball field for the City of Deerfield Beach Parks and Recreation Department. The project is located in Westside Park, which is a 15 acre park located south of Hillsboro Boulevard, offering two lighted basketball courts, a football field with concession stand, two lighted tennis courts, a full service recreation center, full size gym, picnic areas and a newly renovated playground. CMA is responsible for providing survey, geotechnical, engineering, landscape architecture, MEP and structural engineering services. The scope of the project includes the layout of the baseball fields with supporting services such as lighting, dugouts, scoreboards and irrigation. The project also includes general improvements to the park around the baseball fields including better pedestrian access, ADA parking and sidewalk improvements, native landscaping, outdoor seating areas and stormwater improvements. The project is located in an underserved community of Deerfield Beach and will provide access to improved parks and recreation services for the community.

BT-646 Housing Design at FAU. CMA provided landscape architecture services for FAU's new 600 bed residence hall located in the southeast region of the Boca Raton Campus. The project is pursuing LEED silver certification through the USGBC. The program budget is \$41 million and includes the design of a 7 story residence facility, a dining facility, and the creation of a 360 space parking lot. CMA was tasked with developing the site plan which includes volleyball and basketball courts, seating areas, open play areas for impromptu activities, bicycle parking and storage for 225 bicycles, signage, pedestrian circulation, seating walls, decorative paving, pedestrian lighting, landscape, and irrigation design.

Mullins Park Pathways. CMA developed a master plan for a new pathway system for Mullins Park in the City of Coral Springs. CMA is providing final design and construction administration. The project requires the development of paving, grading, and landscape plans for DRC approval and permitting through the Sunshine Water Control District and SFWMD. The pathways are made of a flexible surface to prevent injuries for pathway users. The layout required that the path be developed sensitively through the park to connect to existing features, such as baseball fields, children's play areas, other existing sports fields and to limit disturbance to existing mature canopy trees.

Fort Lauderdale Beach Park. The purpose of this project was to provide the restoration and enhancement of the City-owned 6.5-acre "South Beach" parking lot, located along SR A1A, south of Las Olas Boulevard. The scope of work includes bringing the parking lot into ADA compliance per requirements of consent decree, replacing a deteriorating low profile wall

and sidewalk approximately 2100 feet in length, replacing existing lighting with turtle-compliant fixtures, and designing additional landscaping. Chen Moore and Associates prepared the required DRC submittal, which included all required public purpose approvals, as well as a conceptual layout of a new entrance at the southern end of the parking lot. This project was a joint effort between various City departments, including the City of Fort Lauderdale Beach Community Redevelopment Agency and Parking Services.

SE 15th St Boat Launch & Marine Complex. As part of its general civil engineering contract, CMA was asked to design and permit upgrades to the parking lot located at 1784 SE 15th Street. The property covers approximately 29,000 SF and has two boat ramps, a marina and the police water unit building. The parking lot currently provides 58 parking spaces for vehicles with attached boat trailers only, one of the spaces being handicap accessible. The scope of services includes removing the existing fixed docks and replacing them with new floating concrete docks for City use and proposing drainage and lighting upgrades to bring the lot up to City Code compliance. Chen Moore and Associates was responsible for the site layout, DRC and P&Z approvals, permitting as well as for coordinating with all other disciplines.

Miami Gardens YMCA/FC Barcelona Soccer Field. CMA worked with Borrelli Architects to design the demolition, earthwork, paving, grading, drainage, landscape architecture and irrigation plans for a park master plan that included professional level soccer field, a baseball field and a multi-purpose field (flag football and soccer) within the existing property adjacent to the existing YMCA Miami Gardens facility located in Miami Gardens. The scope included final design for the professional level soccer field including the earthwork and mainline drainage noted above. Services include government permitting with PERA (formerly DERM) and Miami Gardens, bidding assistance, construction observation and closeout services.

Downtown Coral Springs Streetscaping. CMA has been contracted by the City of Coral Springs to assist the Coral Springs CRA in the planning, design, permitting and construction support of various streetscaping improvements in Downtown Coral Springs. As the prime consultants, CMA is providing civil engineering, landscape architecture, environmental permitting and construction engineering and inspection services for the project. The project includes implementing Complete Street concepts for NW 31st Court, NW 94th Avenue and NW 32nd Street. Additionally, CMA is implementing the culvert inc of the canal along NW 31st court to provide space for a linear park, currently called the "Art Walk", which is an important pedestrian connection between the downtown pathways project and The Walk development. Finally, the project includes the implementation of turn lanes along Sample Road, median improvements in Sample Road and minor improvements to adjacent alleyways and pedestrian pathways. Overall, the project will improve the walkable nature of Downtown Coral Springs, while tying together various aesthetic elements in advance of the City Hall project sited adjacent to them projects. The project is in the conceptual design phase and is slated for construction in 2014.

Pompano Beach Municipal Golf Course. Working as a subconsultant to Greg Norman Golf Course Design, CMA provided landscape design documents for the redesign of a public 18-hole golf course operated by the City of Pompano Beach. The design concept included the removal of numerous exotic invasive plant species to be replaced with native plant species to improve the general environmental health of the property. The design is required to conform with City of Pompano Beach Tree Protection and Mitigation standards and required coordination with the Federal Aviation Administration.

Mr. Betancourt worked on the following project while with another firm:

Oceanfront Park. Ocean Front Park was complete renovation of Boynton Beach's only park with beach front access. This park was originally constructed in the early 1980's with little to any improvements since. The goal was to provide an amenity that would set the standard for all other park redevelopment within the City limits, while withstanding the harsh conditions of the Florida coast. The decaying wooded substructure and recycled plastic boardwalk were completely replaced with a combination of decorative stamped concrete and ipe wood. These contrasting elements and colors anchor whimsical shade sails which provide much need relief from the harsh Florida sun. Turtle friendly lighting and native landscaping complement the native surroundings for residents and visitors.

Joel Brownsey
Associate Planner

Education

Bachelor of Arts, Urban Planning, State University of New York at Albany, 2002
Associate of Science, Surveying and Mapping, University of New Hampshire, 2000

Professional Affiliations

American Society of Civil Engineers

Certifications

Stormwater Management Inspector
MOT Workzone Traffic Control: Intermediate Level

Mr. Brownsey has over 11 years of experience in the Civil Engineering field where he has worked alongside engineers in a variety of disciplines such as site design, utility infrastructure design, and surveying. His experience in south Florida to date includes detailed design work on two neighborhood right of way infrastructure improvement projects for the City of Miami Beach, and on several Engineering projects for the City of Fort Lauderdale. He also provides technical solutions for the Fort Lauderdale and Miami Beach offices.

Project Experience

Lauderdale-by-the-Sea Town Engineer. Chen Moore and Associates is the Town Engineer for the Town of Lauderdale-by-the-Sea, providing technical support to all engineering related matters. One of the main priorities is reviewing and approving engineering plan submittals for site plan review and engineering permits. This requires ensuring all submittals comply with Town ordinances and all County, State and Federal regulations regarding site development.

Reviews include general site conditions, water, sewer, paving, drainage, appropriate permit calculations, NPDES permitting and compliance, traffic analysis and proper coordination with surrounding municipalities.

Several studies have been made and recommendations have been given to the town on a variety of topics including:

- Stormwater study for flooding prevention
- NPDES compliance study and report
- MS4 annual report
- Parallel, angled and valet parking specifications
- Drive-through restaurant requirements
- Structural beautification features
- Streetscape improvements for El Mar Drive
- General engineering details and specifications
- Turtle compliant street lights
- GIS map production
- Archiving digital record drawings
- Sewer design for Palm Club

Pompano Beach Stormwater Master Plan . Chen Moore and Associates prepared Stormwater Master Plans (SWMP) and Stormwater Master Plan Updates for various municipalities throughout South Florida, including the City of Pompano Beach, the Town of Lauderdale-By-The-Sea, and the City of Hollywood. The purpose of these SWMPs was to identify any deficiencies in the existing stormwater management systems in regards to flood control and water quality treatment. To assess this, existing information was gathered including previous master plans, atlases, permits, reports and studies; digital stormwater atlas in GIS; LIDAR data for the creation of a TIN surface model; resident complaints regarding flooding; and Client Staff observations regarding flooding. The SWMPs allow the municipalities to understand the necessary drainage improvements over the next few years and to budget accordingly. As part of each SWMP, CMA recommended system improvements to meet regulatory Level of Service (LOS) criteria in regards to peak flood stage, peak discharge, and water quality. Within the SWMPs, CMA provided recommendations for improvements to the system that will eliminate or reduce the ponding currently encountered within

right-of-way areas during or after rainfall events. The SWMPs defined the existing stormwater management system; summarized the results of the stormwater model for the existing conditions; prioritized the proposed improvements to the stormwater management systems; and provided estimated costs to construct these upgrades to the stormwater management systems.

As part of these documents, CMA assisted the Client with the documentation of how the Floodplain Management Plan was prepared per the requirements of FEMA under the CRA program and complied with the requirements of FDEP under the SRF program.

Stormwater Utility Fee Assessment-Phase I. The City of Coral Springs intends to establish a Stormwater Utility, which will be directly responsible for the operations and maintenance of the City's stormwater management system. The City needs to establish the Stormwater Utility along with the associated revenue source via City Ordinance. The purpose of the Stormwater Utility is to focus on improving City's ability to meet a variety of stormwater management objectives, which include the following tasks:

- Capital Improvement Projects for Improved Flood Control
- Capital Improvement Projects for Water Quality Treatment
- Operations and Maintenance of Existing Stormwater Infrastructure
- Enhanced Maintenance for Improved Flood and Pollution Control
- Regulation and Enforcement Activities
- MS4 Permit Compliance
- System Planning

CMA completed this Stormwater Utility Fee Assessment to provide the basis for the establishment of the Stormwater Utility by the City. In general, the primary purpose of this Stormwater Utility Fee Assessment is to estimate the impact of stormwater runoff from each parcel within the City on the needs of the City's stormwater management system. This analysis allowed the City to fairly establish the stormwater utility fee structure which is correlated to the impact of stormwater runoff from each parcel. For example, parcels with high impervious ground coverage generate more stormwater runoff, which must be handled by the City's stormwater management system. CMA completed the necessary analysis to provide a numerical correlation of the impact of each parcel on the stormwater management system. This analysis allowed City to set the stormwater utility fee structure which based on the expected stormwater runoff to be generated from each parcel. CMA also reviewed the budget necessary for the Stormwater Utility to appropriately operate and maintain the existing stormwater management system and to implement any future infrastructure improvements necessary to provide adequate flood control and water quality treatment.

**Derrick Smith, LEED AP
Construction Project
Administrator**

Education

Bachelor of Science, Building
Construction Management,
University of Florida, 2005

Professional Affiliations

American Society of Civil
Engineers

Member of the University of
Florida Chapter of Beta
Theta Pi

Student Chapter of the
Associated Builders and
Contractors

University of Florida Alumni
Association

Certifications

NPDES Inspector
Asphalt Paving Level I
Earthwork Construction
Inspection Level I
Concrete Field Inspector
Specifications

Mr. Smith's role at Chen Moore and Associates is to serve as a Construction Project Administrator and Engineering Inspector for the City of Coral Springs. Mr. Smith has over 7 years of experience as construction project administrator. His duties include program management of various municipal and commercial buildings. Mr. Smith ensures that projects are finished on time and under budget often providing cost effective solutions to contractors on behalf of the project owner. This includes analyzing change order requests to ensure cost accuracy and constructability.

Project Experience

Stormwater Utility Fee Assessment-Phase I. The City of Coral Springs intends to establish a Stormwater Utility, which will be directly responsible for the operations and maintenance of the City's stormwater management system. The City needs to establish the Stormwater Utility along with the associated revenue source via City Ordinance. The purpose of the Stormwater Utility is to focus on improving City's ability to meet a variety of stormwater management objectives, which include the following tasks:

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Downtown Coral Springs Streetscaping. Chen Moore and Associates has been contracted by the City of Coral Springs to assist the Coral Springs CRA in the planning, design, permitting and construction support of various streetscaping improvements in Downtown Coral Springs. As the prime consultants, CMA is providing civil engineering, landscape architecture, environmental permitting and construction engineering and inspection services for the project.

The project includes implementing Complete Street concepts for NW 31st Court, NW 94th Avenue and NW 32nd Street. Additionally, CMA is implementing the culverting of the canal along NW 31st court to provide space for a linear park, currently called the "Art Walk", which is an important pedestrian connection between the downtown pathways project and The Walk development. Finally, the project includes the implementation of turn lanes along Sample Road, median improvements in Sample Road and minor improvements to adjacent alleyways and pedestrian pathways.

Overall, the project will improve the walkable nature of Downtown Coral Springs, while tying together various aesthetic elements in advance of the City Hall project sited adjacent to them projects. The project is in the conceptual design phase and is slated for construction in 2014.

Pompano Beach Stormwater Master Plan. Chen Moore and Associates prepared Stormwater Master Plans (SWMP) and Stormwater Master Plan Updates for various municipalities throughout South Florida, including the City of Pompano Beach, the Town of Lauderdale-By-The-Sea, and the City of Hollywood. The purpose of these SWMPs was to identify any deficiencies in the existing stormwater management systems in regards to flood control

and water quality treatment. To assess this, existing information was gathered including previous master plans, atlases, permits, reports and studies; digital stormwater atlas in GIS; LIDAR data for the creation of a TIN surface model; resident complaints regarding flooding; and Client Staff observations regarding flooding. The SWMPs allow the municipalities to understand the necessary drainage improvements over the next few years and to budget accordingly. As part of each SWMP, CMA recommended system improvements to meet regulatory Level of Service (LOS) criteria in regards to peak flood stage, peak discharge, and water quality. Within the SWMPs, CMA provided recommendations for improvements to the system that will eliminate or reduce the ponding currently encountered within right-of-way areas during or after rainfall events. The SWMPs defined the existing stormwater management system; summarized the results of the stormwater model for the existing conditions; prioritized the proposed improvements to the stormwater management systems; and provided estimated costs to construct these upgrades to the stormwater management systems.

As part of these documents, CMA assisted the Client with the documentation of how the Floodplain Management Plan was prepared per the requirements of FEMA under the CRA program and complied with the requirements of FDEP under the SRF program.

Broadview Park Neighborhood Improvement Program - Bid Pack 4. The Broadview Park Neighborhood Improvement Program (BPNIP) was the last of the Neighborhood Infrastructure Improvements projects to be carried out by Broward County in the unincorporated areas. Chen Moore and Associates was selected as the prime consultant for the Basis of Design Report (BODR) and subsequent bid packages. The fourth Bid Package addressed the sanitary sewer and drainage improvements, as well as improvements to the community's sidewalks, roadway and landscape.

Proposed FEMA Flood Maps-Analysis & Response. FEMA assisted the City of West Palm Beach and the County at large in reviewing the preliminary flood maps issued by FEMA. The review included mapping changes throughout the County, performing GIS analysis of affected properties, reviewing FEMA model parameters, reviewing C-51 model parameters, reviewing existing LIDAR and DEM topographic data and performing hydrologic modeling of certain portions of the City.

Lauderdale-By-The-Sea Stormwater Atlas. Chen Moore and Associates provided GIS services to the Public Works Department for mapping the drainage system. All surface features were visited and GPS coordinates were taken and linked to a digital photo. The program supported the MS4 Permit requirements issued by the Florida DEP. The final delivery included printed drainage maps and digital GIS files.