

**INSIDE THIS ISSUE**

Board Message

2022 Conference Highlights

2022 Bowl-a-Thon

Luncheon: New Location!

Luncheon Recaps

Elections

Job Postings

# Palm Beach Branch QUARTERLY



# PALM BEACH BOARD MESSAGE:

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Greetings ASCE Palm Beach Branch!

It's been an active year so far getting back to in-person events and seeing everyone again. This past quarter we got together for a summer social, held the annual Bowl-a-Thon, and got together at the annual ASCE Florida Conference in Orlando. In May, students submitted their designs for the bridge competition, and the winners were invited to attend the annual conference. The annual conference was a great event, and we welcome our new Florida president, Dave Crombie. A special thank you goes out to Tzufit Boyle for her service as president this past year.

We've also partnered with Rohi's Readery in West Palm Beach to volunteer at local STEM events. In August, children learned about asphalt by making their very own chocolate asphalt. At a second event, children learned and developed home-made water filtration systems to improve water quality. There are more events coming this fall at Rohi's Readery, so if anyone is interested in getting involved please reach out to Phoebe Cuevas-Molina.

Currently we are gearing up for our officer installment for the 2022-2023 year. We appreciate the involvement and partnership from Teresa Chapman who was our past-president and from Marly Trier who was our president. Marly is beginning a new chapter in her career as she moves to the Space Coast! We wish her the best in her endeavors. Looking forward, we are wrapping up voting for our future secretary and will hold our officer installment at our October meeting.

In the fall the ASCE Palm Beach Branch is preparing to organize a beach clean-up in November, so save the date for November 19th! We will also be participating in the Engineering Family Fun Day. There is much more left to this year, let's make it great!

Sincerely,

Your ASCE Palm Beach Branch Board

# 2022 ASCE CONFERENCE HIGHLIGHTS

The ASCE annual conference was held in Orlando, Florida in July. Links to the Certificates, Handouts, and Photos are provided on the Palm Beach Branch website. Highlights from this year's conference are shared below.



- [Certificates](#)
- [Handouts](#)
- [Photos](#)



# 2022 BOWL-A-THON

The ASCE Palm Beach Branch hosted its' annual Bowl-a-Thon in July. A special thank you goes out to all of our Gold and Silver sponsors!



**Kimley»Horn**

Expect More. Experience Better.

**cma**

chen moore and associates

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Palm Beach Branch

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SPECIAL THANKS TO **GOLD SPONSORS**

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**ASCE**  
FLORIDA SECTION  
Palm Beach Branch

2022 ANNUAL SCHOLARSHIP  
BOWL-A-THON  
SPECIAL THANKS TO **SILVER SPONSORS**



# MONTHLY LUNCHEONS: NEW LOCATION!

We are holding our monthly luncheon's in person at the SWA Multi-purpose building. Please see below for how to enter from High Ridge Rd. We look forward to seeing you at our next luncheon!



# CORROSION IN CONCRETE

## UNDERSTANDING THE PROBLEM AND DEVELOPING SOLUTIONS

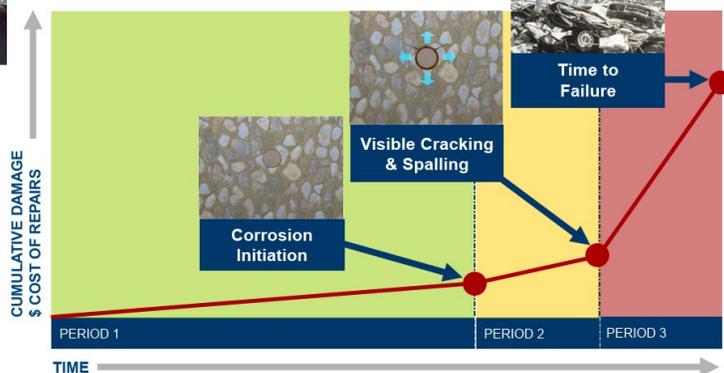
Structural Technologies develops and integrates cutting-edge technology and design support services to make structures stronger and last longer—including developing strategies for protecting commercial and public infrastructure. Our team of subject matter experts will host an educational lunch and learn at our facility and deliver course material on solutions for controlling corrosion in reinforced concrete and steel infrastructure. Our planners will coordinate lunch and tailoring the presentation to meet your needs.

### Corrosion of Steel in Concrete

Corrosion is the #1 cause of concrete failure.



Corrosion Life Cycle



### Frank Dressman | Corrosion Solutions Manager for the Southeastern US

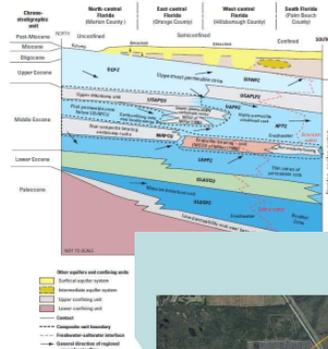
Frank has worked with consulting engineers in Marine and Port, Industrial, Distributed Energy, Transportation and Commercial fields for more than 8 years throughout the US, and some parts of South America. Frank has collaborated on the design and implementation of solutions for structural and corrosion repair and control systems for many owners and design engineers. Structural Technologies has provided solutions for corroding reinforcing steel and submerged steel structures in a variety of settings and conditions. Frank has given technical presentations and question and answer sessions all over the US in the offices of many major and regional engineering firms, ports (including Port of New Orleans, ASPA, JaxPort, Port Tampa, etc.) and worked closely on projects involving many types of structural and corrosion problems and severities on a variety of transportation and marine structures.

# ADAPTING TO RISING SALINITY IN THE FLORIDAN AQUIFER

Jason Lee, P.E. presented on the Town of Jupiter's analysis and approach to plan for future facility improvements in order to maintain service of the existing Reverse Osmosis system and maintain treatment capacity.

## The UFA in South Florida

- Confined Carbonate Aquifer
- Top of Aquifer Between ~800 ft and 1100 ft.
  - ~ 500-700 feet thick brackish water zone
  - Artesian with Static WL's +20-30 Feet ALS.
- Brackish Water Quality
  - Chloride Concentration ~500-8000mg/L



## FAS Wellfield Expansion



**Legend**

- Modified Locations of Proposed FAS Wells
- Location of Existing FAS Wells
- Model-Predicted Drawdown in FAS with Currently Permitted 16 FAS Wells Pumping 18.5 MG (1-ft C)
- Model-Predicted Drawdown in FAS with 18 FAS Wells Pumping 18.5 MGD (1-ft C)

0 2,600 5,200 Feet



## Jason Lee, P.E. | Kimley-Horn

Jason graduated from Florida Atlantic University in 2003 with a Bachelor of Science in Mechanical

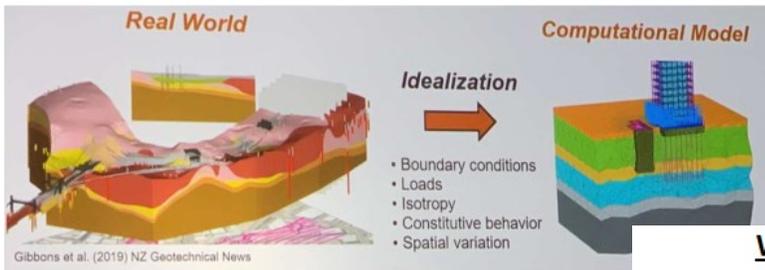


Engineering and has been with Kimley-Horn and Associates for over 18 years. Jason has extensive experience throughout Southeast Florida including evaluation, design, permitting, and construction oversight of various components throughout potable water systems. Much of Jason's experience is tailored toward rehabilitation and replacement of groundwater supply wells, raw water transmission, lime softening, membrane treatment, and supporting processes. Jason resides in Wellington Florida with his wife and three kids.

# FOUNDATION DESIGN CHALLENGES FOR BASEMENTS IN SATURATED COASTAL PLAINS

Excavations through granular soils face challenges, one is handling groundwater table that may, (i) create uplift pressure on the excavation bottom, and (ii) develop hydrostatic lateral pressures along basement walls during excavation; if these situations are not handled properly, failures may occur with substantial property damage and high costs involved.

## Geotechnical Parameters and Soil Profile

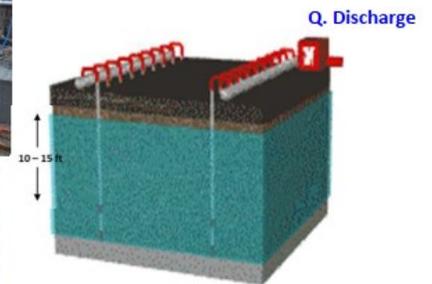


## Well Point and Sheet Pile Wall Systems

**This is Our Challenge!**



## GWT-Drawdown Simulation



**Jose Gomez,  
PE, D.GE, F.ASCE**

Mr. Gomez is a geotechnical - chief engineer at Intertek-PSI and consultant within USA and overseas; he is based in Palm Beach County and has over 40 years of varied and extensive experience in a wide range of geotechnical and civil engineering consulting services for studies, designs, project layouts and construction supervisions and several hundred projects since 1980, including hydroelectric, irrigation, transportation and port projects in Colombia. This experience has been extended to USA since 2008. He's very familiar with a variety of geology and residuals soils in central and South America. These projects usually faced excavations and slope stability analysis, dam design, stabilization measurements, shallow and deep foundation designs, ground improvement systems, deep watering systems, and bulkhead designs, including forensic and value engineering.

Mr. Gomez has been adjunct professor on speaker during the last 30 years of his career, at Javeriana University, Colombia, Old Dominion University, Norfolk, VA, and at University of Miami, Coral Gables, FL. He holds FL, VA, NC, PR, and GA PE licenses and the National Engineering Council License, Columbia, SA.

# YOUNG MEMBER LEADERS PRESENTATIONS

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**We are looking for presenters for our future  
Young Member Leaders Presentation Series!  
Interested in presenting?**

Contact Cristina Caceres at  
[Cristina.Caceres@kimley-horn.com](mailto:Cristina.Caceres@kimley-horn.com)

or Nick Bragaia at  
[Nick.Bragaia@ghd.com](mailto:Nick.Bragaia@ghd.com)

# 2022-2023

## ASCE Palm Beach Branch Elections

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This year the ASCE Palm Beach Branch will be holding an election to determine who will fill the Secretary position on the Executive Board.

We had requested candidates to submit resumes to run for the upcoming Secretary position.

A link is provided for [Secretary's Responsibilities](#)

Voting will be during September. The installation of the winning candidate will take place at our officer installment in October.



Thank you for your participation in this election process and we greatly appreciate your support to ASCE Palm Beach Branch!

# PALM BEACH COUNTY ENGINEERING & PUBLIC WORKS DEPARTMENT, TRAFFIC DIVISION

- **Project Coordinator I** – search for Project Coordinator I in the Engineering and Public Works/Traffic Engineering Department

[Job Opening - PBCJobs \(palm-beach.fl.us\)](#)

Performs entry-level engineering work in the coordination of Palm Beach County (PBC) Engineering and Public Works Traffic Engineering projects. Prepares traffic signal plans for construction by County Traffic Operations and outside contractors utilizing computer-aided drafting and design (CADD). Designs signal plans of intersections including traffic volumes, signal heads, signs, signal phasing diagrams, pole tabulations, pavement markings, signing plans and geometric plans. Requires the ability to interpret construction plans, provide cost estimates, and read as-built signal and lighting plans. Reviews signal and lighting plans as required to ensure plans are in compliance with PBC standards and requirements. Administers construction projects and participates in field measurements and inspections.

**QUALIFICATIONS:**

**Bachelor's Degree in Civil Engineering. Equivalency: Unrelated Bachelor's Degree in a related Engineering field AND one (1) year of experience in traffic signal/lighting design or writing engineering specifications.**

- **Professional Engineer**- search for Professional Engineer in the Engineering and Public Works/Traffic Engineering Department

[Job Opening - PBCJobs \(palm-beach.fl.us\)](#) [Job Opening - PBCJobs \(palm-beach.fl.us\)](#)

Coordinate traffic signal modifications and traffic control system facilities with consultants and other agencies. Review all traffic signalization and street lighting plans and interact with consultants. Review and approve traffic signal project scope and fee. Provide review comments on traffic signals and control systems on road construction, permit, Florida Department Of Transportation and municipal projects. Prepare costs estimates for capital improvement projects. Make recommendations for traffic signal modification. Review traffic signal shop drawings for construction projects. Answer questions from public and all staff. Guide professional and technical subordinate staff. Assist Director and managers in performing other duties that require high level of responsibility and decision making as requested.

**QUALIFICATIONS:**

**Licensed as a Professional Engineer (P.E.) in the State of Florida OR a Bachelor's Degree in Civil/Traffic/Transportation Engineering or closely related field; minimum of four (4) years of experience in professional traffic engineering. Equivalency: Master's Degree in Civil Engineering and two (2) years of related experience.**

**Necessary Special Requirement: Licensed as a P.E. in the State of Florida or the ability to obtain licensure by endorsement within 11 months of hire.**

# PALM BEACH COUNTY ENGINEERING & PUBLIC WORKS DEPARTMENT

## ROADWAY PRODUCTION DIVISION

ASCE

ISSUED: 8-22-22

CLOSES: OPEN

**Re-advertised**Position: **PROFESSIONAL ENGINEER**

Salary: \$81,533 Annually, negotiable depending on qualifications  
 Department: Engineering and Public Works/Roadway Production  
 Location: 2300 N. Jog Road, WPB  
 Hours: 8:00 A.M. to 5:00 P.M., Monday - Friday

Plans, coordinates, reviews and approves the work of professional and technical staff in the Roadway Production Division. Conducts special engineering studies involving road alignment, roads and drainage, and design projects. Coordinates design field adjustments as needed during construction of Palm Beach County (PBC) roads, bridges, pathways and drainage improvements to reduce construction costs, eliminate or reduce construction conflicts. Prepares cost estimates for roadway design and for construction of roadways, bridges, pathways and drainage projects. Prepares reports and recommendations for the consideration of administrative superiors, boards, and committees. Provides professional guidance and direction to developers and consultants who seek advice or guidance for the proper development of their projects. Reviews Land Development permit applications for utilities and right-of-way. Reviews and approves construction shop drawings for non-standard construction items on PBC roads. Reviews and comments on or approves designs and construction plans done by Engineering Consultants for roads, bridges, pathways and drainage improvements in relation to Federal, State, County and project specific standards and criteria, and field conditions. Supervises professional and technical staff in the preparation of plan designs, cost estimates and specifications, traffic signal timing, sequences, geometric alignments and computations, and in the review of zoning petitions, site plans and various permit applications. Requires both independent professional judgment and decision-making of considerable difficulty.

The Palm Beach County Board of County Commissioners provides an excellent benefits package, including medical, dental and life insurance as well as vacation and sick leave, tuition reimbursement and participation in the Florida Retirement System.

**QUALIFICATIONS:**

Licensed as a Professional Engineer (P.E.) in the State of Florida OR a Bachelor's Degree in Civil Engineering; minimum of four (4) years of experience in professional engineering with emphasis on roadways and highways. Equivalency: Related Master's Degree and three (3) years of related experience.

**Necessary Special Requirement:** Licensed as a P.E. in the State of FL OR ability to obtain State of FL P.E. licensure within 11 months of hire.

**PREFERENCE FOR EXPERIENCE:** As a P.E. in the State of FL working on roadways and highways; in structural and/or drainage design; working with local government agencies or Florida Department of Transportation (FDOT); working with FL Green Book, FDOT Standard Specifications for Road and Bridge Construction, FDOT Roadway and Traffic Design Standards, and/or American Association of State Highway and Transportation Officials (AASHTO) Green Book.

**NOTE:** It is not necessary to submit another application for this position if you applied 3/7/22 – 4/1/22 or 4/4-8/22.

Visit [www.pbcgov.jobs](http://www.pbcgov.jobs) for job description and to apply online. May upload any Veteran's Preference documentation to online application (No e-mail applications/resumes accepted). **Online Applications are accepted until filled. EO/AA M/F/D/V, Drug Free Work Place; All employees of Palm Beach County may be required to work before, during and/or after a natural or man-made disaster or hurricane.**

# CHEN MOORE AND ASSOCIATES



## CAREER OPPORTUNITIES



Chen Moore and Associates, Inc. (CMA) has employment opportunities for civil engineering staff in our West Palm Beach office. Candidates should be able to efficiently plan and organize workload, demonstrate success working with a team of professionals, a commitment to quality, good communication skills, and a positive work ethic. The engineer(s) will work in the design team for a variety of infrastructure improvement projects.



### NOW HIRING

- Project Engineer
- Senior Civil Engineer/Project Manager

visit and apply at [chenmoore.com/careers](https://www.chenmoore.com/careers)



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- Flexible Work Schedules
- Work-From-Home Flexibility
- Continuing Education
- Mentorship Program
- Professional Societies
- Community Engagement
- Cellular Phone

# IS YOUR COMPANY HIRING?

**Post your open positions on the  
ASCE website and newsletter!**

**Cost: \$50 per job posting, free for  
municipalities. Please make checks  
payable to 'ASCE Palm Beach Branch'**

**Contact Marly Trier at  
[Marlena.Trier@jacobs.com](mailto:Marlena.Trier@jacobs.com) for more information**

# 2021 PALM BEACH BRANCH BOARD



Pictured left to right: Teresa Chapman (Past President), Phoebe Cuevas Molina (Vice President), Marly Trier (President), Kaitlin Townsend (Secretary), and Justin Tagle (Treasurer).

## 2021-2022 Branch Officers

### PRESIDENT

**Marly Trier, MS, P.E.**  
P: 262-355-5329  
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### VICE PRESIDENT

**Phoebe Cuevas Molina, P.E.**  
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cuevas-  
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### TREASURER

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### SECRETARY

**Kaitlin Townsend, P.E.**  
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### PAST PRESIDENT

**Teresa Chapman**  
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Palm Beach Branch

**Palm Beach Branch  
P.O. Box 20456  
West Palm Beach, FL  
33416**

Please verify/update your  
mailing/email  
information with

**ASCE National  
Headquarters**

at

1-800-548-2723 (ASCE)

or

[http://www.asce.org/  
membership](http://www.asce.org/membership)

## 2021-2022 Committee Chairs

### YOUNG MEMBERS

**Cristina Caceres, E.I.**  
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**Nick Bragaia, P.E.**  
[nick.bragaia@ghd.com](mailto:nick.bragaia@ghd.com)

### NEWSLETTER EDITOR

**Teresa Chapman**  
[teresa.chapman@fitechinc.com](mailto:teresa.chapman@fitechinc.com)

### SOCIAL MEDIA

Open

### WEBMASTER CHAIR

**Justin Tagle, P.E.**  
P: 561-358-6400  
[jtagle@chenmoore.com](mailto:jtagle@chenmoore.com)

### MEMBERSHIP

### CHAMPION

Open

### EWRI

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**Sayed Hajj, Ph.D., P.E., P.H.**  
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**Emily McBryan, P.E.**  
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**Vijay Mishra, P.E.**  
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### GEOTECHNICAL INSTITUTE

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**Andrew Nixon**  
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**Jose Gomez, P.E.**

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**Vijay Mishra, P.E.**

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### LEGISLATIVE BREAKFAST

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**Justin Tagle, P.E.**

[jtagle@chenmoore.com](mailto:jtagle@chenmoore.com)

### COMMUNITY

### OUTREACH

**Paula Fonseca, P.E.**  
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### K-12 OUTREACH

**Emily McBryan, P.E.**  
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[emcbryan@collectivewater.com](mailto:emcbryan@collectivewater.com)  
**Cristina Caceres, E.I.**

### SCHOLARSHIP

### PROGRAM CHAIR

**Nick Musick**  
[Nmusick@chenmoore.com](mailto:Nmusick@chenmoore.com)

### FAU ASCE STUDENT

### CHAPTER PRESIDENT

**Zach Farmer**

### FAU STUDENT

### OUTREACH

**Nitesh Goli, E.I.**  
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### FAU FACULTY

### ADVISOR

**Dr. Frederick Bloetscher**  
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**Dr. Yan Yong**  
[yongy@fau.edu](mailto:yongy@fau.edu)

## 2022-2023 Florida Section

### PRESIDENT

**Dave Crombie, P.E.**  
[dcrombie@HNTB.com](mailto:dcrombie@HNTB.com)

### PRESIDENT-ELECT

**Kathleen Ruvarac, P.E.**  
[kathi.ruvarac@wsp.com](mailto:kathi.ruvarac@wsp.com)

### TREASURER

**Patrick Kaimrajh, P.E.**  
[pkaimrajh@chenmoore.com](mailto:pkaimrajh@chenmoore.com)

### PAST PRESIDENT

**Tzufit Boyle, P.E.**  
[tzufit.boyle@gmail.com](mailto:tzufit.boyle@gmail.com)

### DISTRICT I

### VICE PRESIDENT

**Javier Manso, P.E.**  
[javier.manso@hdrinc.com](mailto:javier.manso@hdrinc.com)

### REGION 5

### GOVERNORS

**Robert L. Jackson, P.E.**  
[Robert.Jackson@haskell.com](mailto:Robert.Jackson@haskell.com)

**Marta Alonso, P.E., ENV SP**  
[malonso@hazenandsawyer.com](mailto:malonso@hazenandsawyer.com)

### EXECUTIVE DIRECTOR

**Judy Nichols**  
[judy@fla-asce.org](mailto:judy@fla-asce.org)

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Florida Section at:  
[www.fla-asce.org](http://www.fla-asce.org)