



Filing Receipt

Filing Date - 2025-01-29 02:49:14 PM

Control Number - 54713

Item Number - 86

**SOAH DOCKET NO. 473-23-22448.WS
PUC DOCKET NO. 54713**

PETITION BY RATEPAYERS	§	BEFORE THE STATE OFFICE
APPEALING THE WATER RATES	§	
ESTABLISHED BY WESTWOOD	§	OF
SHORES MUNICIPAL UTILITY	§	
DISTRICT	§	ADMINISTRATIVE HEARINGS

REBUTTAL TESTIMONY

OF

RICARDO RODRIGUEZ, P.E.

**ON BEHALF OF
WESTWOOD SHORES MUNICIPAL UTILITY DISTRICT**

EXHIBIT MUD 3

JANUARY 29, 2025

**SOAH DOCKET NO. 473-23-22448.WS
PUC DOCKET NO. 54713**

**REBUTTAL TESTIMONY OF RICARDO RODRIGUEZ, P.E.
WITNESS FOR WESTWOOD SHORES MUNICIPAL UTILITY DISTRICT**

TABLE OF CONTENTS:

I.	INTRODUCTION AND BACKGROUND	3
II.	PURPOSE OF TESTIMONY	5
III.	CONCLUSION	14

ATTACHMENTS:

Exhibit RR-1	Résumé
--------------------	--------

**SOAH DOCKET NO. 473-23-22448.WS
PUC DOCKET NO. 54713**

**REBUTTAL TESTIMONY OF
RICARDO RODRIGUEZ, P.E.
WITNESS FOR WESTWOOD SHORES MUNICIPAL UTILITY DISTRICT**

I. INTRODUCTION AND BACKGROUND

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND CURRENT EMPLOYMENT POSITION.

A. My name is Ricardo “Rico” Rodriguez, P.E. I am President of Civil Grade Engineers (“CGE”). My business address is 710 N. Post Oak Road, Suite 510, Houston, Texas 77024.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I received the degree of Bachelor of Science in Civil Engineering from the University of Houston in 2003. I immediately began working for a large civil engineering firm and specialized in water, sewer, and drainage engineering with a specific client focus on municipal utility districts. I received my license to practice as a professional engineer in 2007 and have maintained active status continuously since then. In 2013, I left the firm where I began my career as a civil engineer to start my own civil engineering firm, Civil Grade Engineers.

Q. WHAT ARE YOUR RESPONSIBILITIES IN YOUR CURRENT POSITION?

A. In my role as President of Civil Grade Engineers, I am responsible for the overall business management and leadership of Civil Grade Engineers as well as serving as District Engineer for several municipal utility districts. My duties include management of a team of engineers, providing technical guidance to the engineers who execute the work of the firm and also provide consulting expertise directly to boards of the MUDs we serve.

1 **Q. PLEASE EXPLAIN YOUR EXPERIENCE WORKING ON WATER AND**
2 **WASTEWATER SYSTEMS.**

3 A. As a professional engineer for MUDs I have developed plans and specifications for new
4 systems as well as rehabilitation and expansion of existing systems. Elements of water
5 systems that I have direct experience with include water wells, ground storage tanks,
6 hydropneumatic tanks, booster pumping stations, water plant control systems, disinfection
7 treatment systems and networks of water distribution pipelines and related appurtenances.
8 Elements of wastewater systems that I have direct experience with include wastewater
9 treatment plant facilities including headworks, primary screening systems,
10 aeration/digestion facilities, sludge thickening facilities, clarifiers/settling facilities,
11 sludge removal and final effluent testing requirements. I also have direct experience
12 designing and maintaining wastewater collection systems including wastewater pipe
13 networks, manholes, lift stations and related appurtenances. In addition to technical design
14 and maintenance, I also have experience with permitting regulations for public drinking
15 water systems and permitting regulations for discharges of municipal wastewater treatment
16 systems.

17 **Q. PLEASE EXPLAIN YOUR RELATIONSHIP TO WESTWOOD SHORES**
18 **MUNICIPAL UTILITY DISTRICT (THE “DISTRICT”).**

19 A. I serve as the consulting engineer to the District. My engagement with the District started
20 in February of 2022 and continues today. My role as consulting engineer includes
21 providing technical guidance and recommendations to the board of directors on matters
22 related to the District’s water and wastewater systems.

1 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE PUBLIC**
2 **UTILITY COMMISSION OF TEXAS OR THE TEXAS COMMISSION ON**
3 **ENVIRONMENTAL QUALITY?**

4 A. No.

5 **Q. WHAT EXHIBITS HAVE YOU PREPARED IN SUPPORT OF YOUR**
6 **TESTIMONY?**

7 A. My resume is attached as Exhibit RR-1.

8 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

9 A. I am testifying on behalf of Westwood Shores Municipal Utility District.

10 **II. PURPOSE OF TESTIMONY**

11 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

12 A. To provide background on the board's decision regarding infrastructure, operation, and
13 maintenance needs of the District.

14 **Q. WHAT DOCUMENTS DID YOU REVIEW IN PREPARATION FOR YOUR**
15 **REBUTTAL TESTIMONY?**

16 A. Previous monthly engineering reports prepared by CGE and presented to the directors at
17 their regular board meetings. I also reviewed old drafts of planning materials related to
18 budgets and bond authorization elections.

19 **Q. PLEASE DESCRIBE THE WATER AND WASTEWATER SYSTEMS FOR THE**
20 **DISTRICT.**

21 A. The general condition of the District's water and wastewater systems is poor. Most of the
22 components of the systems have exceeded their life expectancy and need significant
23 rehabilitation or replacement. In addition to being in poor condition, several major

1 components are undersized and inadequate to serve the District. Some examples of poor
2 conditions are as follows:

3 At the wastewater treatment plant, the aeration basin is heavily silted and needs to
4 be cleaned. The wastewater treatment process is severely hindered in this current
5 condition. The TCEQ has cited the district for permit violations where total suspended
6 solids have exceeded the authorized permit limit. This will continue to be a significant
7 challenge until the plant can be cleaned and have reduced inflows of silt and sediment. The
8 sludge drying beds are not operable due to failed valves and possibly failed pipes. The
9 wastewater treatment plant cannot currently operate both clarifiers at the same time
10 because a special splitter box needs to be designed and constructed that will allow for use
11 of both units at the same time. The return activated sludge pumping station does not have
12 a backup pump in operation. There is a great amount of silt entering the wastewater
13 treatment plant. This is an indication that the sanitary sewer collection system is failing in
14 many places and allowing dirt and sediment to enter the collection system. Attempts to
15 enter the sanitary sewer collection system with a camera at several of its most critical
16 locations have proven to be very difficult due to the unique location of many of the
17 manholes. Many of the manholes are constructed in creek beds and/or in the middle of a
18 heavily wooded forest, and the lids are 5 feet or greater in height above the ground level or
19 buried under years of forestation growth and are unlocatable. Traditional means and
20 methods to survey the condition of the sewer system are not feasible. Several of the lift
21 stations only have one pump. State rules require that a lift station have at least two pumps
22 for redundancy and reliability. The pumps inside several of the lift stations are too small
23 to handle the amount of flow that enters the station. The control panels on most of the lift

1 stations have exceeded their life expectancy and need to be replaced. Many of the lift
2 stations don't have adequate safety covers over the wet wells.

3 At Water Plant No. 1, the motor control center has exceeded its life expectancy and
4 replacement parts are difficult to procure. The roof on the ground storage tank has
5 significant rust (oxidation) and needs to be recoated to stop continued degradation of its
6 structural integrity. The booster pumps are leaking and need to be repaired. The location
7 of the water supply lines into the ground storage tank were poorly designed and need to be
8 reconnected on the opposite side of the tank, away from the pump suction line to improve
9 water circulation through the tank and prevent water from becoming stagnant and forming
10 disinfection byproducts. The disinfection and treatment process needs to be further
11 improved to reduce the formation of disinfection byproducts upstream of the ground
12 storage tank.

13 The water distribution system does not have sufficient isolation valves. Many of
14 the valves noted on record drawings are either not locatable or not functioning. The state
15 regulations require that all dead-end waterlines be flushed periodically to maintain
16 regulatory water quality standards. Many dead-end lines do not have flushing valves which
17 makes complying with the rule impossible. The distribution system is also undersized in
18 multiple locations and the system would be unable to maintain adequate water pressure
19 during an emergency fire operation.

1 **Q. IN 2022, WHAT ISSUES HAD YOU IDENTIFIED REGARDING**
2 **INFRASTRUCTURE NEEDS FOR THE DISRICT? PLEASE DESCRIBE IN**
3 **DETAIL.**

4 A. Water Plant 1: The plant was offline because the water wells were producing very poor
5 water quality and a filter system was needed to treat the well water. The facility had no
6 freeze protection. The majority of the facility had exceeded its life expectancy.

7 Water Plant 2: Condition of the facility was adequate, but the ground storage tank
8 is too small. The water plant needs a second ground storage tank to be built to meet state
9 requirements. The LAS system (disinfection) was not operational. The facility had no
10 freeze protection.

11 Water Distribution System: The District's ability to thoroughly flush the system
12 when responding to water quality issues was greatly hindered due to lack of valves, lack
13 of flushing points and inadequate water supply. The system needs more valves, more
14 flushing points and a greater supply of water in order to adequately perform normal
15 flushing activity. The diameter of many of the waterlines are undersized for their intended
16 use. Many of the pipes and fittings have exceeded their life expectancy.

17 Wastewater Treatment Plant: A significant amount of sludge and sediment had
18 accumulated in all the basins. The automated bar screen was not functioning. Only one
19 clarifier was operational. Only one RAS pump was operating. The sludge drying beds
20 were in disrepair and not functional. The facility did not have a non-potable process water
21 system. One of the aerator paddle wheels was not operational. A splitter box does not exist
22 that would allow operation of both clarifiers at the same time. Sludge was backflowing
23 through a floor drain into an abandoned control room.

1 Lift Stations: Several lift stations had failed and were operating on rented, mobile
2 diesel-powered pumping systems. Many of the lift stations did not have adequate safety
3 or security measures in place. Most of the equipment had exceeded life expectancy and
4 needed to be replaced.

5 Wastewater Collection System: Several sanitary sewer overflows had been reported
6 which is an indication that the pipes may have failed and/or roots had penetrated into the
7 system and causing blockages. A condition assessment and survey of all the manholes and
8 televising of all the sewer pipes is needed to properly identify and quantify a sewer pipe
9 rehabilitation scope of work. Thereafter, rehabilitation of significant portions of the sewer
10 collection system will need to be constructed.

11 Other General Issues related to infrastructure needs included a lack of or
12 insufficient record drawings or O&M manuals for facilities and a lack of financing ability
13 / capacity to finance capital improvement projects. The district did not have funds available
14 for infrastructure projects nor did it have authority to issue bonds to finance projects.

15 **Q. HOW DID YOU OR YOUR TEAM RECOMMEND ADDRESSING THESE**
16 **ISSUES?**

17 A. To the extent possible, utilize the limited existing bond funds (2020) to finance
18 construction of items originally listed in the bond issue request approved by the TCEQ,
19 including a filter system, drilling of an additional water well and limited lift station
20 rehabilitation. Otherwise, use tax or rate revenue to cash-fund critical infrastructure needs.
21 We also recommended holding a bond authorization election.

1 **Q. WHAT WAS YOUR ESTIMATE OF THE COSTS THAT THE DISTRICT WOULD**
2 **INCUR TO ADDRESS THESE ISSUES?**

3 A. Capital requirements for needed critical improvements that could be reasonably
4 constructed in the next 10 years were around \$15 million dollars.

5 **Q. HOW MANY OF THESE PROJECTS HAS THE DISTRICT STARTED SINCE**
6 **2022?**

7 A. The aeration filter system has been constructed at Water Plant 1 and Water Well 2 has been
8 completed. Two lift stations have been improved. At the wastewater treatment plant,
9 partial sludge removal has been completed, but the contractor was unable to fully clean the
10 basins due to lack of funding from the District. The nonfunctional automated bar screen
11 was removed and replaced with a non-automated static bar screen. Regarding the water
12 distribution system, a valve survey has been completed but the deficiencies have not been
13 addressed due to lack of funding. Regarding the sanitary sewer collection system, limited
14 televising of the pipes was attempted, but it was unsuccessful because significant amounts
15 of roots and debris prevented equipment from entering the pipes. Many manholes were
16 unable to be located and/or accessed.

17 The District held a bond authorization election in November of 2023 which failed
18 and another bond authorization election in May of 2024, which passed.

19 **Q. WHICH PROJECT(S) HAS THE DISTRICT BEEN UNABLE TO ADDRESS?**

20 A. With the exception of the answer to previous question, no other capital improvement
21 projects have been able to proceed due to lack of funding.

1 **Q. IN 2022, WHAT ISSUES HAD YOU IDENTIFIED REGARDING OPERATION**
2 **AND MAINTENANCE ISSUES FOR THE DISTRICT?**

3 A. In general, in 2022, it was evident that there had been inadequate preventative maintenance
4 performed on the District's assets over a period of many years. In addition, many
5 temporary "band-aid" repairs had been made on many of the systems. Some examples
6 include, several lift stations had temporary plywood boards placed over the wet wells to
7 reduce risk of someone accidentally falling in. Most of the lift stations had temporary ropes
8 tied to the pumps in lieu of permanent chains that could be used to hoist the pumps out for
9 service. Several of the lift stations only had 1 replacement pump installed when 2 pumps
10 are required. Several of the replacement pumps were too small for the intended application.
11 Old and failed lift station pumping equipment had not been removed from the lift station
12 facilities. Replacement equipment was gerrymandered into place around the old existing
13 equipment. The suction pipes on the main lift station (No. 19) failed and the pumps are
14 using temporary rubber suction hoses (in lieu of permanent steel pipes) for suction
15 conveyance. At the sewer plant, one of the aerator paddle wheels was not operating and
16 was disrupting the treatment process while it was left in place inoperable. The working
17 paddle wheel was temporarily secured in place with ropes in lieu of permanently welded
18 steel supports. Water Plant 1 had temporary blowers and bleach pumps connected to the
19 ground storage tank to attempt to treat well water. A temporary water supply line was
20 connected to the access manway hatch on the ground storage tank. A survey of all the water
21 isolation valves, flushing, valves and sanitary manholes and sewer pipes was also needed.

1 **Q. HOW DID YOU OR YOUR TEAM RECOMMEND ADDRESSING THESE**
2 **ISSUES?**

3 A. Recommended the District procure preventative maintenance services from the operator
4 and, as funds allowed, begin addressing many of the temporary “fixes” that were in place.

5 **Q. WHAT WAS YOUR ESTIMATE OF THE COSTS THAT THE DISTRICT WOULD**
6 **INCUR TO ADDRESS THESE ISSUES?**

7 A. The operator at the time (Inframark) prepared and presented a draft preventative
8 maintenance schedule with an annual budget of \$130,860. Capital needs for other urgent
9 repairs and needs were around \$2 million.

10 **Q. HOW MANY OF THESE PROJECTS HAS THE DISTRICT STARTED SINCE**
11 **2022?**

12 A. Since 2022, the District has twice procured the services of a new operator. I believe in
13 their Request for Proposal, the Board of Directors specifically requested preventative
14 maintenance be included in the operator services. The District has rehabilitated two lift
15 stations, repaired the aeration paddle wheels, and, at the water plant, removed the
16 temporary blowers, bleach injectors and supply line into the manway hatch. A water valve
17 survey has been completed.

18 **Q. WHICH PROJECT(S) HAS THE DISTRICT BEEN UNABLE TO ADDRESS?**

19 A. Repairs to water valves have not been completed. Survey of sanitary manholes and sewer
20 pipes has not been completed. Lift stations that were not rehabilitated, still need to be
21 rehabilitated.

1 **Q. WHAT ISSUES HAS THE DISTRICT FACED SINCE THE BOARD ADOPTED**
2 **THE RATES IN DECEMBER 2022?**

3 A. The District still faces operation and maintenance challenges due to the existing
4 infrastructure's very poor condition. In addition, since 2022, there have been multiple
5 complete failures of various components of the systems that have needed costly emergency
6 repairs. Those failure include the following:

7 Three manholes have completely failed. Two sanitary sewers have failed.
8 Numerous sanitary sewer overflows have occurred due to lift station pumps inadequate
9 ability to handle the flow or blockages in the sewer pipes. Several lift stations were flooded
10 during two heavy rain events. One sanitary sewer aerial crossing of a creek lost its pipe
11 support due to erosion of the creek bed around the pipe support. Water quality from the
12 wells has changed dramatically and required emergency upgrades to the treatment system
13 to better handle the treatment process. Fluctuations in electrical supply to all of the
14 facilities have caused electrical components to fail, often during heavy rain/wind storm
15 events (WP1 ATS, BP2 motor, soft starter, control board on generator at WWTP, LS 19
16 generator). Wind storms have caused trees to fall and damage several facilities (LS24
17 Horsehoe No. 2, LS 17 Huntington, WWTP driveway).

18 **Q. HOW DID YOU OR YOUR TEAM RECOMMEND ADDRESSING THESE**
19 **ISSUES?**

20 A. We recommended the District explore and pursue all possible avenues to fund needed
21 infrastructure improvements. The District requested (and received) authorization from
22 TWDB to repurpose some existing bond funds to use the money on needed improvements.

1 **Q. WHAT WAS THE ESTIMATE OF THE COSTS THAT THE DISTRICT WOULD**
2 **INCUR TO ADDRESS THESE ISSUES?**

3 A. The District held a bond authorization election in November of 2023 and proposed \$15
4 million authorization to finance a limited number of capital projects that could be
5 reasonably completed within the next 10 years. The bond election failed.

6 **Q. HOW MANY OF THESE PROJECTS HAS THE DISTRICT STARTED?**

7 A. Limited lift station improvements project is authorized to the extent existing CWSRF funds
8 are available. Limited improvements at Water Plant 1 are authorized to the extent existing
9 DWSRF funds are available.

10 **Q. WHICH PROJECT(S) HAS THE DISTRICT BEEN UNABLE TO ADDRESS?**

11 A. Everything else.

12 **III. CONCLUSION**

13 **Q. DO YOU HAVE ANY CONCLUDING THOUGHTS?**

14 A. The District's inability to finance needed improvements puts the water and wastewater
15 systems in jeopardy and poses a significant public health and safety issue.

16 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

17 A. Yes.



22 Years of Experience

Education

B.S., Civil Engineering
(with Honors), University
of Houston

Registration

Professional Engineer,
Texas No. 100246

Affiliations

Association of Water
Board Directors (AWBD),
Member and Official
Ambassador

Harris-Brazoria County
MUD 509, Board
President

RICARDO (RICO) RODRIGUEZ, PE

President, Civil Grade Engineers

Rico Rodriguez, Founder and Principal of Civil Grade Engineers, is a driven professional who knows how to get the job done. His strong work ethic and process-oriented mindset have led him to become the go-to engineering solution for many municipalities, water districts, and municipal utility districts (MUD) within the Houston area.

Rico's career began as a project manager providing utility planning and design for regional water authorities and MUDs, followed by expanded leadership into senior project management as a **District Engineer** for expansive developments in the five county Greater Houston Region. As **District Engineer**, he led projects from development through design to completion with work that encompassed paving, grading, drainage, water line and sanitary sewers. His clear communication skills and desire to hold client interests as his own greatly benefited clients and public agencies. Rico became known as a successful liaison throughout the development process, available for calls and questions every step of the way.

Today, Rico leads Civil Grade Engineers with his specialized senior-level knowledge and direct involvement in each project. He has a knack for client development and interaction, successfully communicating with various points of contact within an organization and developing steadfast relationships. Rico is known for his dependability and availability to clients. Driven by integrity, Rico is committed to a project until it's done, and he has made himself an integral part of project solutions, willing to interface with clients mid-project and fix problems even when they aren't his own. His professional ethics of working hard for clients drive him as Owner of Civil Grade, keeping each client's best interests in mind along the way.

DISTRICT MANAGEMENT EXPERIENCE

- **Westwood Shores MUD** – In 2022, Civil Grade Engineers were engaged as the **District Engineer**. As part of his duties as District Engineer, Rico has assisted in engaging additional consultants including an attorney, operator and bookkeeper to act on behalf of the District. Financially, Rico was involved with commissioning the completion of a water and sewer rate study to be adopted that will generate revenue to maintain and operate the District's infrastructure and help service existing debt. Rico and the Civil Grade team are managing TWDB's Drinking Water State Revolving Fund (\$1.4 million) and Clean Water State Revolving Fund (\$1.56 million). Civil Grade Engineers has also overseen the drilling and implementing of an aeration and filtration system for Water Well No. 1 and have drilled Water Well No. 2. As **District Engineer**, Rico has provided a digitized map of the District's water and sanitary sewer system and created an online interactive map highlighting priority locations for hydrant repair. The team has also completed required TCEQ inspections on a 500,000-gallon ground storage tank and two, 20,000-gallon hydropneumatic tanks.
- **Northgate Crossing MUD No.2** – In 2015, Civil Grade Engineers were engaged as the **District Engineer**. Northgate MUD No.2, also hired a new operator at the time, Hays

Ricardo (Rico) Rodriguez, PE

Utility South, which is why today Civil Grade and Hays Utility have such a great working relationship, especially with Client Services Manager, Mike Potter. Together Hays Utility and Civil Grade embarked on an facilities inventory and audit for ALL facilities, and collaborated with the Operator to identify potential weaknesses. It was here they prioritized improvements into low, medium and high, and then developed a CIP. As part of his duties as **District Engineer**, Rico collaborated with the District's financial advisor to discuss the financial position of the district and funding options available. Perhaps most notably as **District Engineer**, after his assessment of the Wastewater Treatment Plant, Rico devised a plan to increase the capacity of the plant without having to build additional infrastructure. **As another cost savings to the District**, when it was discovered that per TCEQ rules, the District was required to build an elevated storage tank, Rico and his team at Civil Grade prepared, submitted and obtained approval of an elevated storage tank waiver. This eliminated capital expense of having to build a tower and the lifetime expense of maintaining such facility. Civil Grade developed a phased approach allowing the district to save money by incrementally identifying pipes that needed CCTV review. Rico's other efforts as **District Engineer** included working with Hay Utility South to execute a consumer water meter audit and rehabilitation, planning efforts for future Water Plant No.3, worked with the TWDB and NHCRWA to analyze a water reuse program, and coordinate the Parks Bond planning efforts to enhance the look of the district, thus enhancing property values.

- **Pin Oak Enclave, Fort Bend MUD 37/185** – Totaling 26 acres with 62 residential lots, Rico's responsibilities included preparation of a drainage impact study; design of a lift station; design of water, sewer, drainage, detention, and roadways; and completion of a MUD annexation and developer reimbursement agreement.
- **Harris County MUD No. 132*** – Totaling 1,115 acres with single-family and commercial this MUD was developed in the 80's so the average age of the district's infrastructure is at least 35 years old. Rico **served as District Engineer** and developed, maintained and executed the District's CIP. He prepared engineering reports and gave presentations/updates to the Board of Directors on a monthly basis. In addition, Rico monitored water and wastewater capacity commitments

and ensured compliance with TCEQ rules and regulations for public water systems. He also reviewed various commercial development construction plans.

- **Fort Bend MUD No. 185 (King Lakes)*** – Totaling 250 acres of single-family development, Rico was involved in this project from inception through development. He **served as District Engineer** and Project Manager. Two water plant expansions and wastewater treatment plant expansion were required throughout the development of this District. Rico led efforts to make these projects a success, including creation of engineering construction plans, bid documents, and construction contracts. He designed the concept for drainage impact analysis and directed a team in preparation of the report. In addition, he coordinated with state, county and city officials for approval of proposed development, as well as various team groups to acquire engineering data (i.e. survey, hydraulics and hydrology, traffic, platting, etc.). Rico delivered the project within budget and timeframe, created and maintained construction progress/budget reports, and created and monitored internal accounting budgets for issuing client invoices. He also prepared monthly engineering reports and delivered presentations/updates to the Board of Directors. Rico prepared bond and surplus fund applications for approval by TCEQ and maintained compliance with rules and regulations of expenditures of future District funds.
- **Brazoria County MUD 34 (Southern Trails)*** – Totaling 500 acres, Rico **served as District Engineer** and Project Manager for management responsibilities, including engineering plans, bid, construction, team leadership, coordination, and board reporting. He was involved in this project from inception through development of the first five sections, and he also coordinated preparation of a drainage impact analysis.

Serving as District Engineer, for MUDs within the five county Greater Houston Region, Rico Rodriguez provides senior-level engineering solutions and direct interaction on projects. He has extensive experience as District Engineer and will be the single point-of-contact from planning through design and completion.

Ricardo (Rico) Rodriguez, PE

- **Terrace at Pecan Grove, Pecan Grove MUD** – Totalling 22 acres with 92 residential lots, Rico's responsibilities included design of water, sewer, drainage and roadways, along with completion of a MUD annexation and developer reimbursement agreement.
- **Right Choice Emergency Room, Harris County** – Rico designed a detention pump station and site civil infrastructure.
- **Bridgeland, Multiple Districts*** – Totalling 12,000 acres, Rico served as Project Engineer and authored engineering reports for creation of 10 Municipal Utility Districts and 2 Water Control and Improvement Districts that served the master planned community. He created the master water and master wastewater facilities layout for Bridgeland, authored a report that describes the methodology and concept for the master facilities layout, and also authored an engineering report for the first District to be granted Road Powers by the State of Texas. In addition, Rico created a financial model for proper accounting of shared facility costs for each District's pro-rata share of master planned facilities.
- **Generation Park, Harris County MUD No. 424, 425, 426, 427*** – Approximately 3,000 acres of proposed commercial and industrial development, Rico served as Project Manager and created a master water and master wastewater facilities layout for this project. He led efforts to acquire easements from the City of Houston through the Joint Referral Committee (JRC).
- **Cypress Hill MUD 1 (Cypress Landing / Cypress Landing Park*)** – Totalling 200 acres of single-family development, Rico served as Project Manager and engineered a plan to design and construct a 3-mile offsite force main, a 2-mile offsite waterline, and a 0.50-mile offsite drainage channel, all through existing communities, in an effort to bring utility service to this community. He acquired numerous offsite utility easements, some of which involved condemnation proceedings. Rico also designed the concept for drainage impact analysis and directed the team in report preparation of report. Rico maintained proper documentation for future bond sales and aided the district engineer in preparation of bond reports. Rico also provided overall project management services.
- **Fort Bend MUD 185 (Marshall Oaks)*** – Totalling 66 acres of single-family redevelopment, Rico served as Project Manager and engineered the plan to maintain continuous utility service to existing residents while simultaneously redeveloping the community. His involvement from inception through development included project management responsibilities, team and stakeholder coordination, budgeting, scheduling, and monthly board reporting.
- **Patients Emergency Room, Chambers County** – Rico designed a detention pump station and site civil infrastructure.
- **North Fort Bend Regional Water Authority*** – Rico served as Project Manager for design of Segments 0 and 4, consisting of 48-inch diameter and 24-inch diameter waterlines.

**Experience Prior to Civil Grade Engineers*