



 **LANZO**
COMPANIES

PRESIDENT'S MESSAGE

Lanzo Companies is a proven family-run business and your interest is greatly appreciated. We invite you to explore our signature projects and discover how the Lanzo team has successfully met the most challenging requirements for tough infrastructure work.

Our firm was founded over 45 years ago and today we remain a leader in civil construction, trenchless technology, treatment plants, road construction and tunneling projects. We are well-positioned to deliver all the products and services necessary to assist your organization, company or government with its emerging infrastructure requirements. Our clients return to Lanzo for its reputation to deliver projects on schedule, within budget and with a level of quality exceeding all requirements and expectations.

Lanzo Companies continues to evolve with new advanced techniques that meet the ever changing construction needs of the public and private sectors. Over the years our skilled workforce has grown in size and professional diversity. Lanzo can provide the planning, engineering, surveying, construction management and technologies required for today's challenging projects.

Our company is built on a proud legacy of successful infrastructure work along with a commitment to continual improvement of our products and services. Please contact our company representatives to learn more about Lanzo's experienced team of professionals and the innovative construction technology they employ.

*– Giuseppe "Joe" D'Alessandro
President, Lanzo Companies*

LANZO SAFETY INITIATIVES

A strong commitment to public, environmental and employee safety is a critical component of the Lanzo legacy. Our company works each day to ensure that important safety initiatives are in place which minimize risk while managing the unique conditions found at respective project jobsites. Our safety programs do not simply adhere to OSHA rules and regulations, they also keep safety awareness at the forefront of our employees' daily routine.

A construction site can be a fast-paced, dangerous place. All Lanzo team members receive ongoing safety training that encourages communication and accountability. Certified Lanzo Field Inspectors manage safety meetings, enforce policy, investigate jobsite incidents and work proactively to prevent accidents. Our safety team organizes training courses regarding First Aid, CPR, Blood Borne Pathogen, Advanced MOT, Confined Space and the OSHA 30 Hour Construction Program.

These safety initiatives, combined with Lanzo's quality control program, ensure projects are completed with a level of professionalism that exceeds client expectations.



CIVIL CONSTRUCTION

- DESIGN BUILD
- CONSTRUCTION MANAGEMENT
- ROAD and HIGHWAY
- SITE WORK / CIVIL CONSTRUCTION
- MARINE and SUBAQUEOUS CONSTRUCTION
- MICRO TUNNELING
- SLIPLINING
- DIRECTIONAL DRILLING
- TUNNELING
- DREDGING



Lanzo has the Equipment, Personnel and Experience Required to Oversee, Manage and Complete Complex City, County, State and Federal Infrastructure Projects on Time and Within Budget.





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MIAMI DADE EFFLUENT OCEAN OUTFALL

The construction of a 120" diameter treated effluent pipeline near Virginia Key, Florida was a defining project for Lanzo Construction. The new discharge pipeline was designed to meet the most stringent environmental concerns in an area of endangered sea grass and turtle nestings. The installation of this critical ocean outfall required that Lanzo draw on decades of specialty construction experience to successfully complete this difficult offshore project.

The replacement outfall parallels an antiquated 90" diameter pipeline and extends approximately 4400 linear feet to connect with an existing 120" pipeline that discharges 3 miles from the Florida coast. This complex sanitary relief project for the Miami-Dade Water and Sewer Department was completed on time and under budget in an extraordinary jobsite.



MDWASD S-633 PHASE 2 Ocean Outfall

Engineer: Hazen and Sawyer Environmental Engineers and Scientists

MARATHON, FL SEWAGE AND WATER COLLECTION SYSTEMS

Lanzo Construction installed new AirVac Vacuum sewage collection and onsite storm water collection systems for the City of Marathon, Florida. All work was performed along a public right of way in residential neighborhoods and required pavement restoration and final overlay of the existing roads. Maintenance of traffic was critical to the success of this project because much of the vacuum main was installed in the travel lanes of Overseas Highway (US1), the only road in or out of the Florida Keys.

Construction required excavation with heavy duty trenching equipment in cap rock formations throughout the neighborhoods bordering the Marathon Airport. The vacuum mains were constructed similar to gravity mains with a designed slope and grade. The AirVac installation included 87,160 linear feet of 4" to 10" PVC DR21 vacuum mains and 460 vacuum valve collection pits. The drainage system required the installation of 306 Nyloplast catch basins and 43,232 liner feet of perforated 18" HDPE drainage pipe installed in exfiltration trenches. Nineteen gravity drainage wells of various diameters from 8" up to 24" casings with concrete control

structures and 1800 linear feet of custom curb were also installed.

In an effort to accommodate the unique needs of residents, the city requested that we accept and install minor modifications to the design system in the form of Resident Change Orders. These changes required an elevated level of coordination between the design engineer and Lanzo field personal. The residents were allowed to relocate a proposed lateral and clean out or move a main into the roadway to preserve their landscaping and driveways.



Engineer's Project #: SA5
Engineer: The Weiler Engineering Corp. Owner: City Of Marathon

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CIVIL
CONSTRUCTION





MIAMI WATER MAIN REPLACEMENT AND REHABILITATION

An emergency was declared by the City of Miami when a 48" water main burst in the late afternoon on Wednesday, May 4, 2011. Video of the break was broadcast on the local Six O'Clock News programs showing a yellow school bus engulfed in a sink hole that had been created by the massive flow of water from the damaged pipe. The broadcast also showed that the roadway was beginning to collapse.

Miami Dade Water & Sewer (MDWAS) made an emergency call to Lanzo Construction Company and the contractor responded immediately to the scene. The Lanzo team worked through the first night to determine the problem and contain the situation. Two Lanzo crews continued for days with alternating shifts to keep work running around the clock. Within a week the road and water main were back in full service.

Some of the City of Miami's aging infrastructure dates back more than 60 years, as it does in many communities throughout the United States. Pipes installed as water mains, force mains and

gravity sewers are often breaking under the slightest pressure or failing from fatigue after years of service. Though most of these questionable pipelines are already under design review for replacement or rehabilitation, many have been placed on the back shelf of priorities as budgets have tightened. Lanzo's successful response to the Miami emergency demonstrated the contractor's familiarity and experience with aging pipelines and other critical civil underground construction projects.



NSF 61 Sequential Carbon Fiber Internal Wrap
Owner and Engineer: Miami-Dade Water and Sewer Department

CITY OF HOLLYWOOD 60 INCH FORCE MAIN EMERGENCY

Exploratory geotechnical drilling for submerged soil samples punctured a 60" force main at the City of Hollywood, Florida Beach Maintenance Facility. Lanzo Construction was asked by the city to work under critical time constraints and difficult conditions to perform an emergency repair on this damaged ocean outfall pipe.

The project needed to be expedited and delay was not an option. Lanzo quickly assembled its team of professional divers, pipe cutting technicians and specialized crane operators. Lanzo Construction Company began work at the jobsite within 24 hours of receiving notice to proceed from city engineers.

The first phase of construction required exposing the pipe to learn the true nature of the damage. The Lanzo team coordinated with the City of Hollywood staff to determine the most expeditious way to successfully complete the emergency repair. The project required exacting workmanship from Lanzo's field-tested professionals to prevent further damage to this

critical pipeline and the surrounding environment. All work related to the inspection, removal and replacement of the pipe was completed in cold water with very high turbidity levels and poor visibility.



60 Inch Force Main

Owner: City of Hollywood, FL Department of Public Services



STRUCTURAL / PLANT CONSTRUCTION

- REVERSE OSMOSIS WATER TREATMENT
- LIME SOFTENING WATER TREATMENT
- SEQUENTIAL BATCH REACTOR WASTEWATER TREATMENT
- EXTENDED AERATION WASTEWATER TREATMENT
- REUSE WATER TREATMENT
- STORM WATER, WASTEWATER, AND BRINE WELL DISPOSAL SYSTEMS
- ODOR CONTROL TREATMENT
- PRIMARY SEDIMENTATION TREATMENT
- BIOLOGICAL TREATMENT



Lanzo is Recognized as the Leader in Construction of Water and Sewage Treatment Systems, Design Build and Construction Management.





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CORAL SPRINGS WATER TREATMENT PLANT CONSTRUCTION

The Design / Build project consisted of Water Treatment Plant (WTP) improvements including a New Reverse Osmosis production facility. The membrane water treatment capacity exceeded 8.1 million gallons per day including membrane bypass capacity of 1.3 mgd. Part of the effort was detailed design, permitting services, and injection well construction including associated civil-site work, electrical power facilities/systems, instrumentation and control facilities/systems. The Lanzo Team presided over the planning, design and construction of sand strainers, cartridge filters, membrane feed pumps, membrane train systems, transfer pump stations, chemical storage/ feed systems, degasifiers, diesel engine generators sets, civil site work, piping and building construction.

The R/O process offers a “greener” methodology without reliance on lime, an undesirable material which is becoming difficult to dispose of. The process includes cycling water pulled out of the ground through the plant with “reject water” being deep well injected beneath the existing aquifer facilitating the natural regeneration of water for future utilization.

The project also included addition of a 2.4 million gallons per day (mgd) package - type wastewater treatment plant and appurtenances, along with the demolition of existing plants “A” and “B”. Facilities included a biological reactor basin, secondary clarifier, RAS and WAS conveyance, aerobic digestion, a pumping station, elevated walkways and instrumentation control systems.



SD WWTP S - 811 CLARIFIER ADDITIONS & IMPROVEMENTS

This project included a Critical Path consisting of several time sensitive additions and improvements to a vital Wastewater Treatment Facility in the heart of Miami Dade's South District.

The complex construction sequence included the installation and tie in of Large Diameter (54", 60", 72", 96", 108") Cylinder pipes, relocation of several Ductile iron force main trunk segments, Structural Cured in Place Lining of pressure rated 54" Clarifier interconnection manifold piping, installation of turbine meters and vaults; all on a very tightly coordinated schedule.

This turnkey effort included construction management of all phases of Lanzo capabilities including Structural/ Plant, Civil Construction and Trenchless Technologies.





TRENCHLESS TECHNOLOGIES

- CURED-IN-PLACE-PIPE LINING ASTM F1216 & ASTM F1743
- LANZO CITYLINER - MOBILE WET OUT EQUIPMENT
- NON-STYRENATED "GREEN" RESINS
- NSF 61 WATER MAIN REHABILITATION
- UV CURED REINFORCED FIBERGLASS LINERS
- LATERAL LINING
- LATERAL REINSTATEMENT & SEALING
- SEQUENTIAL CARBON FIBER STRUCTURAL REHABILITATION
- MANHOLE REHABILITATION
- INTERNAL VIDEO INSPECTION "CCTV"
- ISO 9002 CERTIFIED SUPPLIERS
- QA / QC INCLUDING THIRD PARTY TESTING OF ALL MATERIALS INSTALLED
- PIPELINE CLEANING
- 50 YEAR SERVICE LIFE
- 5 YEAR WARRANTY ON ALL FURNISHED MATERIALS & WORKMANSHIP







MIAMI GARDENS FORCE MAIN PIPELINE REHABILITATION

As the size of our communities grow each day, so does the increasing risk of infrastructure failure. Most existing infrastructure was designed to handle the capacity of much smaller populations. Lanzo Companies is often asked to perform rehabilitation or emergency repair on these aging systems. We completed just such a project for the City of Miami in 2011 with the rehabilitation of an old 72" force main pipeline in Miami Gardens. This unique canalside repair required the sliplining of more than 8000 linear feet of prestressed concrete cylinder pipe with 63" high density polyethylene liner (HDPE).

Lanzo's construction team fused the sectioned HDPE tube into 2000 linear foot strings and pulled each into the concrete pipe. A sliplining project requiring this diameter and length of fused HDPE had never been attempted anywhere in the world. The insertion was uniquely accomplished by floating the long strings of fused pipeline in the canal adjacent to the embankment and excavation area. The project was made more difficult because all construction needed to be completed within a very narrow project window of only 90 days.

The failure of the old 72" pipe was a great concern to Miami Gardens residents. They feared that a pipeline break would create

a critical environmental hazard with waste contaminating the neighborhood. To accommodate the sliplining, flow from the 72" force main was diverted to a smaller adjacent pipe. This raised concerns about pipeline stress on the temporary flow and lessened the time available for repairs by Lanzo to the larger force main. The Miami Gardens sliplining project was unique in its construction methods, limited by its available schedule and challenging in every phase. To date this remains the largest singular use of HDPE slipline technology in the world.

MDWAS 72" Emergency Force Main Repair Slipline
Owner: Miami-Dade Water & Sewer Department

UNIQUE UV-CURED CIPP SEWER REPAIR FOR CITY OF DOVER

Lanzo Lining Services installed 5000 linear feet of Cured-In-Place-Pipe (CIPP) for the City of Dover, Delaware. The Division Street Interceptor Project rehabilitated many of downtown Dover's trunk transmission and residential collection sewers with a unique UV-cured inline tube. The installation used UV technology to significantly expedite construction and reduce traffic disruptions. Additionally, the UV application, unlike typical water and heat processes, produced no complaints about Styrene emissions from local residents.

This complex project was performed in two phases to allow nearby Wesley College to minimize road closures during critical class schedules. Regardless of these jobsite concerns, the Division Street Interceptor Project was completed on time and under budget. The Lanzo team relied on years of CIPP experience to complete the downtown Dover project, the first large sewer trunk UV-cured lining application in the U.S. on pipes with diameters ranging in size from 8" to 30".



Engineer: Del-DOT "Delaware Department of Transportation"
Owner: City of Dover, Delaware





GREENTOWN
CASINO

Infrastructure Repair and Rehabilitation

LANZO
Lining Services, Inc.

EXTRAORDINARY DOWNTOWN DETROIT SEWER PROJECT

Detroit's Greektown area was an integral part of the city's downtown renewal efforts in the 1970s. The Greektown project included the development of Trappers Alley as an enclosed brick mall. The history of this small downtown lane dates to the fur trading days of the eighteenth century.

Designers of this centerpiece project did not consider the 100 year old transition sewer that lay approximately twenty feet below this passageway. The enclosed lane and its buried pipeline soon intersected a newly constructed casino and restaurant complex. Numerous complaints, reported backups, odor issues and flow restrictions. After routine cleaning and plumbing efforts failed, Cured-In-Place-Pipe (CIPP) became the most accessible solution short of excavating the antiquated sewer.

The casino management required that the pipeline's rehabilitation not interfere with gaming and hotel operations. This structural rehabilitation, with an inline transition and multiple service connections required around the clock construction . Additionally, concerns about styrene emissions caused from the CIPP process

needed to be mitigated. Lanzo addressed this concern by using a unique styrene-free resin that remained virtually odor-free during exotherm curing.

Lanzo Lining Services completed the Greektown Casino and Hotel project in only 2 days with no interruption of facility services.



Engineer: Dover Environmental

Owner: Greektown Casino

LANZO HISTORY

Lanzo Companies is a family-owned group of businesses consisting of Lanzo Holdings, Lanzo Construction, Lanzo Structural/Plant and Lanzo Trenchless Technologies. Quirino "Gary" D'Alessandro founded Lanzo Construction in Roseville, Michigan in 1968. Today, Lanzo Companies is counted among North America's most reputable firms for civil construction, construction management, structural and plant construction, and trenchless technologies.

As the company's reputation grew, so did exciting new opportunities. Over time, Lanzo was awarded underground civil utility projects in Texas, North Carolina and Florida. In 1980, Lanzo Companies incorporated and established a permanent office in Florida to better service that state's southeast coast.

In 1992, Hurricane Andrew caused catastrophic damage in Dade County, Florida. Lanzo responded quickly by adapting its operations to provide disaster recovery and rehabilitation of critical infrastructure. Lanzo reconstructed portions of the historic US-1 roadway in West Palm Beach for the Florida Department of Transportation and replaced drainage and water lines in congested areas throughout the hard hit area.

To meet the emerging need for the rehabilitation of older and damaged pipelines, Lanzo Companies formed Lanzo Lining Services in 1993. Renamed Lanzo Trenchless Technologies, it is now among a handful of companies qualified to install the widest application range of Cured-In-Place-Pipe, sequential carbon fiber wrap, structural polyurea and other trenchless rehabilitation methods. The firm has completed projects totaling more than nine million linear feet of lining in pipes ranging from 4" to 144" in diameter and established itself as one of North America's top pipe lining firms.

Today, the D'Alessandro family and our employees continue to build an ever stronger foundation for our company's proud legacy.

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