
JAMES ROY MURRAY III, P.E.

Education

BSCE, Texas A&M University, 1985

Professional License and Certifications

Registered Professional Engineer, Maryland (No. 17665), 1990

Registered Professional Engineer, Texas (No. 73860), 1993

Professional Affiliations

National Society of Professional Engineers

Texas Society of Professional Engineers

Professional Experience

Mr. Murray has over 27 years experience in civil and environmental permitting, design and construction including municipal solid waste landfills and associated systems, liner systems, leachate collection systems, utilities, roadways, hydrologic analysis and hydraulic design including open channel systems, storm drainage pipe systems, culverts, bridges, basins, and other systems for the conveyance and control of stormwater. Mr. Murray also has extensive experience in landfill design, operation and construction having served for over a decade as a consultant preparing landfill expansion permit applications. Mr. Murray has served as an expert witness and provided legal support for landfill permits. Mr. Murray also served as an engineer for several landfill facilities in Texas. Responsibilities included project management of permit amendments and modifications, compliance and construction. Selected projects representative of Mr. Murray's experience include:

Landfill Design/Permit Application

- Project Manager for the preparation of a vertical and horizontal expansion permit application for a landfill in Hutto, Texas.
- Design Engineer for the preparation of a 500-acre greenfield site permit application for a landfill in Laredo, Texas.
- Design Engineer and project manager for the preparation of a horizontal and vertical expansion permit application for a landfill in League City, Texas.
- Design Engineer and project manager for the preparation of a horizontal and vertical expansion permit application for a landfill in Brownsville, Texas.
- Project Manager for the preparation of a 30 foot vertical expansion permit application for a landfill in Converse, Texas.
- Project Manager for the preparation of a 700 acre horizontal expansion permit application for a landfill in Converse, Texas.
- Design engineer and project manager for a grit trap waste permit application at a waste water treatment facility in Victoria, Texas.

- Design Engineer and project manager for the preparation of design plans and technical specifications for an 11-acre landfill disposal cell for a landfill in Hutto, Texas.
- Project manager for the preparation of design plans and technical specifications for a 5-acre landfill disposal cell for a landfill in Austin, Texas.
- Project manager for the preparation of design plans and technical specifications for a 2-acre landfill disposal cell for a landfill in Hardin County, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for a 9-acre landfill disposal cell for a landfill in Kingsville, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for a 2-acre landfill disposal cell for a landfill in Hardin County, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for a 7-acre landfill disposal cell for a landfill in Austin, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for a 6-acre landfill disposal cell for a landfill in Brownsville, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for a 14-acre landfill disposal cells for a landfill in Austin, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for a 12-acre landfill Pre-Subtitle D final cover for a landfill in Austin, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for a 13-acre landfill Pre-Subtitle D final cover for a landfill in Austin, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for a 22-acre landfill disposal cell for a landfill in Jaltipan, Vera Cruz.
- Design Engineer and project manager for the preparation of design plans and technical specifications for an 8-acre landfill disposal cell for a landfill in Brownsville, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for two 14-acre landfill disposal cells for a landfill in San Antonio, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for a 7-acre landfill disposal cells for a landfill in Austin, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for a 9-acre landfill disposal cell for a landfill in Austin, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for two 8-acre landfill disposal cells for a landfill in Brownsville, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for an 11-acre Type I and a 5.4-acre Type IV landfill disposal cells for a landfill in Kingsville, Texas.
- Design Engineer and project manager for the design and preparation of construction plans, specifications, and construction documents for temporary external embankment and top dome surface erosion and sediment controls for a landfill in Brownsville, Texas.
- Design Engineer and project manager for the design and preparation of construction plans, specifications, and construction documents for final cover maintenance plans for a landfill in Austin, Texas.
- Design Engineer for the design and preparation of construction plans, specifications, and construction documents for temporary stormwater facilities associated with three 8-acre low level radioactive material disposal cells in Fernald, Ohio.

- Project Manager for the preparation of detailed construction phasing plans for a landfill in Carson City, Nevada.
- Project manager for the preparation of design plans and technical specifications for a 0.9-acre leachate evaporation pond and 105 feet of leachate forcemain for a landfill in Lacy Lakeview, Texas.
- Project manager for the preparation of design plans and technical specifications for a 1.8-acre leachate evaporation pond for a landfill in La Gloria, Texas.
- Project manager for the preparation of design plans and technical specifications for a 0.7-acre leachate evaporation pond and 370 feet of leachate forcemain for a landfill in Hutto, Texas.
- Project Manager and Design Engineer for the preparation of construction plans for a 35-acre landfill cell, and leachate forcemain system for a landfill in San Antonio, Texas.
- Design Engineer and project manager for the preparation of design plans and technical specifications for two one-acre leachate evaporation ponds and 4,000 feet of leachate forcemain for a landfill in Brownsville, Texas.
- Design Engineer for the leachate distribution and storage facilities for a landfill in San Antonio, Texas.
- Design Engineer and project manager for the preparation of design plans for a 10-acre industrial waste landfill cap for an industrial waste site in Travis County, Texas.
- Design Engineer and project manager for the preparation of Site Operating Plans in accordance with the TCEQ Site Operating Plan call-in for seven (7) landfills in Texas.
- Design Engineer for the preparation of permit plans, specifications, and design report for a landfill expansion in Nantucket, Massachusetts.
- Project Manager for the preparation of a variety of landfill design and permit modifications. These included the design of alternate liner systems, alternate final cover system, leachate collection systems, leachate evaporation ponds, site stormwater drainage systems, site roadways and facility designs, site sediment and erosion control systems, gas monitoring systems, groundwater monitoring systems, liner construction, final cover construction, site operating plans, and other environmental protection and monitoring plans.

Construction Quality Assurance

- Certifying engineer for a 5-acre Type IV cell for a landfill in Austin, Texas.
- Certifying engineer for a 9-acre Subtitle D cell for a landfill in Kingsville, Texas.
- Certifying engineer for a 6-acre Subtitle D cell for a landfill in Brownsville, Texas.
- Certifying engineer for a 7-acre Type IV cell for a landfill in Austin, Texas.
- Certifying engineer for a 14-acre Subtitle D cell for a landfill in Austin, Texas.
- Certifying engineer for a 13-acre Subtitle D and Pre-Subtitle D final cover for a landfill in Austin, Texas.
- Certifying engineer for a 12-acre Pre-Subtitle D final cover for a landfill in Austin, Texas.
- Certifying engineer for two 1-acre leachate evaporation ponds for a landfill in Brownsville, Texas.
- Certifying engineer for a 5-acre Subtitle D cell for a landfill in Kingsville, Texas.
- Certifying engineer for a 6-acre Type IV cells for a landfill in Austin, Texas.
- Certifying engineer for a 6-acre Type IV cells for a landfill in Austin, Texas.
- Certifying engineer for a 5-acre Type IV cells for a landfill in Austin, Texas.

- Certifying engineer for a 3-acre Subtitle D cell for a landfill in Hutto, Texas.
- Certifying engineer for an 11-acre Subtitle D cell for a landfill in Kingsville, Texas.
- Certifying engineer for a 7-acre Subtitle D cell for a landfill in Hutto, Texas.
- Certifying engineer for three 8-acre Subtitle D cells for a landfill in Brownsville, Texas.
- Certifying engineer for a 9-acre Subtitle D cell for a landfill in Austin, Texas.
- Certifying engineer for a 4-acre Type IV cell for a landfill in League City, Texas.
- Certifying engineer for a 7-acre Subtitle D cell for a landfill in Austin, Texas.
- Certifying engineer for a 6-acre Subtitle D cell for a landfill in Sherman, Texas.
- Certifying engineer for two 5-acre Type IV cells for a landfill in Austin, Texas.

Hydrologic Analysis

- Project Manager for the study of the ultimate development condition of the 93 square mile drainage area for a Bayou in Houston, Texas. Study included modifying the current FEMA hydrologic model (HEC-1) to reflect the impact of the ultimate developed condition on the drainage basin hydrologic characteristics. These included the ultimate developed effect on rainfall loss rates, time of concentrations, basin storage volumes, bayou storage characteristics, off channel detention effects, and other hydrologic variants. This study was prepared as a guide for determining future basin improvements and to serve as the basis for a Conditional Letter of Map Revision from FEMA. The study also included the design of 4 regional stormwater detention basins.
- Project Engineer for the study of a 3,798-acre drainage area in Boling, Texas. The drainage area was modeled for the 25 and 100-year, 24 hour storm events, utilizing the Clark Unit Hydrograph Technique for design storm hydrographs and rainfall loss rates. This study was utilized to determine the effects of severe storm events on the site and as the basis for designing channel improvements, culverts, bridges, and other drainage systems included in the project.
- Project Manager for the hydrologic analysis of 6 drainage basins ranging in size from 33 acres to 426 acres for a landfill in Converse, Texas. The drainage areas were modeled for the pre-developed, current, and post-development conditions for the 25 and 100-year, 24-hour storm events, utilizing the Rational Method for drainage areas less than 200 acres and the Soil Conservation Service method for design storm hydrographs and rainfall loss rates. Once the design peak flows were determined, 3 stormwater detention ponds were designed to attenuate the peak 25-year, 24-hour storm from the developed condition to the lesser of the pre-developed or current conditions.
- Project Manager for a Conditional Letter of Map Revision from FEMA for a 845 acre landfill in Angleton, Texas.
- Design Engineer for a landfill final cover and perimeter drainage system for a landfill near Carlsbad, New Mexico.

Hydraulic Design

- Project Manager for the hydraulic design and preparation of permit and construction plans for over 12,000 linear feet of drainage channels and over 24 single and multiple barrel culverts for a landfill in Converse, Texas.
- Project Manager on the hydraulic analysis of over 23 miles of bayou in Houston, TX. The study initiates the bayou's confluence with Buffalo Bayou and proceeds upstream through 49 bridges through a variety of improved and non-improved channel sections.
- Project Manager on the design of a 60,000 gallon per minute stormwater pumping station for Fort Bend Levee Improvements District No. 7 in Sugarland, Texas.
- Project Manager on the planning and design of roadways and their associated stormwater systems. These systems included the layout of piped storm drainage systems including a variety of stormwater inlets, manholes, outlet structures. These conduits included reinforced concrete pipe, corrugated metal pipe, and various plastic pipes, all ranging in size from 8" to 72" in diameter. Also designed culvert ranging in size from single barrel 24" pipes to multiple barrel 8'x8' box culverts. A partial list of Mr. Murray's roadway and associated stormwater system design includes the following:
 1. Willow Hills Subdivision - Anne Arundel County, Maryland
 2. Yorktown Manor Subdivision - Prince George's County, Maryland
 3. Bishops Bequest Subdivision - Prince George's County, Maryland
 4. Bel Air Estates Subdivision - Prince George's County, Maryland
 5. Summerfield Subdivision - Prince George's County, Maryland
 6. Churchill's Choice Subdivision - Prince George's County, Maryland
 7. Clayton's Bend Subdivision - Sugarland, Texas
 8. Lackland City Subdivision - San Antonio, Texas
 9. Ventura Subdivision - San Antonio, Texas
 10. Heritage Park Subdivision - San Antonio, Texas
 11. Lackland City Subdivision - San Antonio, Texas
 12. Collington Corporate Center - Prince George's County, Maryland
 13. Chesapeake Centre - Anne Arundel County, Maryland
 14. Westinghouse ATL - Anne Arundel County, Maryland
 15. Largo Town Center - Prince George's County, Maryland
 16. La Cantera, Fiesta Texas Theme Park - San Antonio, Texas

Expert Witness and Legal Support

- Provide expert witness services in an administrative hearing in support of a 499-acre greenfield landfill permit amendment in Laredo, Texas. Mr. Murray provided testimony in support of many aspects of the proposed facility's location and design. This included testimony on traffic, flood plains, landfill layout, stormwater analysis and design, landfill gas monitoring system, leachate collection system, and site operating plan.

- Provide expert witness services in an administrative hearing in support of a 373-acre landfill expansion permit amendment in Hutto, Texas. Mr. Murray provided testimony in support of many aspects of the proposed facility's location and design. This included testimony on surrounding land use, traffic, flood plains, landfill layout, stormwater analysis and design, landfill gas monitoring system, leachate collection system, and site operating plan.
- Provide expert witness services in an administrative hearing in support of a landfill expansion permit amendment in Austin, Texas. Mr. Murray provide expert witness support for the landfill stormwater analysis and design.

Publications and Presentations

- Murray, J. R., "Manual De Protocolo De Construccion Nuevos Rellenos Sanitarios Con Revestimientos Compuestos (Construction of New Sanitary Landfills with Composite Liners)", Comision Centroamericana de Ambiente Y Desarrollo and United States International Development (USAID), November 30, 2010.
- Murray, J. R., "Manual De Protocolo De Operacion Nuevos Rellenos Sanitarios Para Desechos Solidos (Inspection Protocol for Construction and Operation of Landfills, Operation of New Sanitary Solid Waste Landfills)", Comision Centroamericana de Ambiente Y Desarrollo and United States International Development (USAID), September 2011.