



SOQ 22-011 - ROUTINE
ENGINEERING SERVICES FOR
DRAINAGE PROJECTS

Jefferson Parish Government



400 Poydras Street Suite 1170 New Orleans, LA 70130



March 17, 2022

Jefferson Parish Technical
Evaluation Council
Building 200 Derbigny Street
Suite 4400
Gretna, LA 70053

RE: Statement of Qualifications from persons or firms interested in providing routine engineering services for Drainage Projects in Jefferson Parish for a two year period. Resolution 138811.

Dear Jefferson Parish Technical Evaluation Council:

IMS Engineers, Inc., is interested in providing routine engineering services for Drainage Projects in Jefferson Parish and is pleased to present to you our Statement of Qualifications in response to Resolution 138811.

For over 26 years now, IMS has helped to move people and communities forward by delivering proven solutions to everyday opportunities and challenges our clients face. Through hard work, partnerships and commitment, we have established ourselves as a firm of choice for excellence and quality service.

Our work history includes providing a full complement of consulting engineering, construction management and operation services for drainage, wastewater and water resource projects to serve the needs of our public, private-sector and clients throughout the nation. We have worked with Jefferson Parish on projects for more than 10 years and look forward to continued partnerships.

As the enclosed TEC Professional Services Questionnaire illustrates, our multi-disciplined team offers extensive drainage and wastewater experience and an unmatched commitment to getting jobs done on time and within budget. Thank you for the opportunity to submit our Statement of Qualifications. Should you have any additional questions, please feel free to contact me directly, at 504.561.7399 or rlhill@imsengineers.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rod L. Hill'.

Rod L. Hill, P.E.
President/Chief Operating Officer



FIRM HISTORY

Founded in 1996, IMS Engineers, Inc., is a full-service consulting engineering, management and operations firm assisting public and private clients to improve the environment and public infrastructure. Our service sectors include planning, civil and environmental engineering, transportation, structural, water and wastewater and a cadre of other design engineering and construction phase services. Our clients include local, state and federal government agencies, education institutions as well as industries ranging from locally-owned businesses to Fortune 500 companies.

IMS has established itself as the firm of choice for excellence, quality service, and precision. The professionals at IMS work closely with our clients to eliminate the technical challenges they face. We have experience in planning, water/wastewater engineering, civil and environmental engineering, street and drainage design, transportation, aviation services, structural design and review, project management, and so much more. We have clients in Jefferson Parish and the city of New Orleans, along with major cities in the Southeast and Southwest regions of the United States.

KEY PERSONNEL

Our Principal:

Name:	Louisiana PE Number	Years of Experience in Discipline:
Rod L. Hill, P.E.	29204	28

Professional(s) In Charge of Project:

Name	Role	Louisiana PE No.	Years of Experience
Larry Harper, P.E.	Project Manager	36872	39

Registered Louisiana (Civil) PE with a minimum five years' experience:

Name	Louisiana PE No.	Years of Experience
Rod L. Hill, P.E.	29204	28
Larry Harper, P.E.	36872	39
Tommy J. Avant, P.E.	34226	32

1. PROFESSIONAL TRAINING AND EXPERIENCE

in relation to type of work required for routine engineering services

Our engineers hold Professional engineering (P.E.) licenses in Louisiana and several states across the country. Additionally, our engineers have various experiences with drainage projects in Louisiana and worked on similar projects for clients. We specialize in directing rainwater runoff from roads, controlling irrigation and flooding, or diverting sewage and pollution away from water sources. For over 15 years we had prime contracts with Corps of Engineers for U.S. government. We employ state-of-the-art technologies to evaluate and select the most cost-effective drainage solutions.



The TEC Professional Services Questionnaire provides further in-depth details and supportive examples of the experience and training of both our firm and individual staff members in relation to drainage projects.

2. CAPACITY FOR TIMELY COMPLETION

of newly assisted work considering the factors of type of routine engineering task, current unfinished workload, and person or firm's available professional and support personnel

NEW WORK

Currently no new work.

UNFINISHED WORKLOAD

West Bank Mississippi River Levee Bike Path (from Klein St. to Douglas Avenue) - estimated finish: June 2020

IMS recognizes the importance of providing quality service on schedule and within budget. Our top priority is to exceed our clients' expectations on each and every project. As a result of these standards, we have a 98% client retention rate, exceeding industry standards for the past 26 years. Thus, we stand ready to commit all necessary resources to ensure that your drainage projects assigned to us are given the time and attention needed to bring them to a successful, timely closure within budget and without compromising quality.

3. LOCATION OF THE PRINCIPAL OFFICE

where work will be performed

Address

400 Poydras Street
Suite 1170
New Orleans, LA 70130

Phone

504.561.7399



Registration Status

IMS Engineers, Inc., is licensed to do business in the State of Louisiana and is registered with the Louisiana Professional Engineering and Land Surveying Board License No. 2662.

4.ADVERSARIAL LEGAL PROCEEDINGS

between the Parish and person or firm performing professional services

IMS Engineers, Inc., has not been involved in any litigation, nor has it been disqualified by any agency, including, but not limited to, Jefferson Parish, Louisiana.

5.PRIOR SUCCESSFUL COMPLETION OF PROJECTS

of the type and nature of routine engineering services, as defined, for which firm has provided verifiable references

The following projects are representative of our related work. A brief description of each project is included in section L of the TEC Professional Services Questionnaire.

CLIENT	DESCRIPTION	REFERENCE
<i>Jefferson Parish</i>	<i>Conducted hydraulic analysis of five major drainage canals in the Nine Mile Point basin in Jefferson Parish, Louisiana to determine their current storm capacity with the goal of recommending improvements that will accommodate 10-year storm capacity needs.</i>	<i>Clinton Hotard (504) 736-6751</i>
<i>City of New Orleans</i>	<i>Provided design and construction engineering services to assist the city of New Orleans with a Capital Street Improvement project; among other things, subsurface drainage and water and sanitary sewer installation.</i>	<i>Donnye L. Brady, DPW (504) 658-8000</i>
<i>City of Shreveport</i>	<i>Provided all the necessary engineering and surveying services needed to make drainage improvements along an approximately 1550 LF stretch of airport.</i>	<i>Patrick Furlong (318) 973-5552</i>
<i>City of Memphis</i>	<i>Hydrology for both basins including Data and Information Compilation; Hydraulic Modeling for 51 Catch Basin including local flooding analysis; estimation of costs for Point Church.</i>	<i>Matt Wolfe, ETI (901) 758-0400</i>
<i>State of Mississippi</i>	<i>As a sub-consultant to AMEC Inc., IMS conducted dam breach analysis for 10 dams in Mississippi. The work consisted of data collection, field surveying, dam break analysis and flood routing, and preparation of inundation maps.</i>	<i>Andrew Clevenger (504) 736-6751</i>



6.SIZE OF FIRM

considering the number of professional and support personnel required to perform the type of routine engineering task, including project evaluation, design, drafting of technical plans, development of technical specifications and construction administration.

IMS Engineers, Inc., is a multi-disciplined engineering, consulting and management firm employing a staff of 55 professionals in the area of civil, structural, transportation and environmental engineers, surveyors, planners, and construction inspectors.

DISCIPLINE	NO. OF EMPLOYEES
Administrative	8
Civil Engineers	12
Construction Inspectors	10
Electrical Engineer	1
Engineer Intern	2
Professional Land Surveyor	1
Estimators	2
Land Surveyor	2
Mechanical Engineers	2
Environmental Engineers	3
Structural	5
Graduate Engineer	2
Project Managers	4
Clerical	1
TOTAL:	55

TABLE 2. Additional Support Staff

TASK	NO. OF EMPLOYEES
CADD Technicians	6
	6



7.PAST PERFORMANCE on Parish Projects

IMS Engineers, Inc., opened its New Orleans office nearly 18 years ago, and has since worked with Jefferson Parish on four improvement projects as prime. IMS is in good standing on all of them as illustrated below.

No.	Project Name	Project Number Year Awarded	Current Status
1	Lapalco Headstart Construction	Resolution: 115094	Completed in January 2012, on time and within budget.
2	West Bank Mississippi River Levee Bike Path (from Klein St. to Douglas Avenue). 81110	Resolution: 113554	The project is on schedule and will be completed within budget.
3	Nine Mile Point Drainage Improvements	Resolution: 119811	The project was completed on time and within budget.
4	Parish Street Improvements South New Orleans Division 041510	Resolution: 115094	The project was completed on time and within budget.

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

Routine Engineering Services for Drainage Projects in Jefferson Parish for a two-year period.
Resolution Number: 138811

B. Firm Name & Address:

IMS Engineers, Inc.
400 Poydras Street
Suite 1170
New Orleans, LA 70130

C. Name, title and contact information of Principal, as defined in Section 2-926 of the Jefferson Parish Code of Ordinances, who is a registered, licensed architect, professional engineer, or surveyor in the State of Louisiana:

Rod L. Hill, P.E.
President
400 Poydras Street
Suite 1170
New Orleans, LA 70130
504.561.7399 (Phone)
rlhill@imsengineers.com (e-mail)

D. Name and contact information of employee who is a registered and licensed architect, professional engineer, or surveyor in the State of Louisiana in the applicable discipline. A subcontractor may be substituted here only if the advertised Project requires more than one discipline.

Rod L. Hill, P.E.
President
400 Poydras Street
Suite 1170
New Orleans, LA 70130
504.561.7399 (Phone)
rlhill@imsengineers.com (e-mail)

E. Please provide the number of employees whose primary function corresponds with each category:

<u>8</u> Administrative	<u>2</u> Estimators	<u> </u> Specification Writers
<u> </u> Architects (Licensed)	<u> </u> Geologists	<u>5</u> Structural Engineers
<u> </u> Chemical Engineers	<u> </u> Geotechnical Engineers	<u>2</u> Graduate Engineers
<u>12</u> Civil Engineers	<u> </u> Interior Designers	<u>4</u> Project Managers
<u>10</u> Construction Inspectors	<u> </u> Landscape Architects	<u>1</u> Clerical
<u> </u> Ecologists	<u>2</u> Land Surveyor	<u> </u> Grant/Funding Specialist
<u>1</u> Electrical Engineers	<u>2</u> Mechanical Engineers	<u> </u> Sanitary Engineers
<u>2</u> Engineer Intern	<u>3</u> Environmental Engineers	
<u>1</u> Professional Land Surveyors		<u> </u> TOTAL

F. Is this submittal by a JOINT-VENTURE? Please check: YES _____ NO x

If marked "No" skip to Section I. If marked "yes" complete Sections G-H.

TEC Professional Services Questionnaire

G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.

1.

2.

**H. Has this JOINT-VENTURE previously worked together? Please check:
YES _____ NO _____**

I. List all subcontractors anticipated for this Project. Please note that all subcontractors must submit a fully completed copy of this questionnaire, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1.		
2.		
3.		

J. Please specify the total number of support personnel that may assist in the completion of this Project:

TEC Professional Services Questionnaire

K. List the professional in charge, key persons, specialists, and individual consultants anticipated for this Project and provide their relevant information below. If necessary, please attach additional documentation (i.e. resume) that demonstrates the employment history and experience of the Firm's key persons that may assist in the completion of this Project. Please attach additional pages if necessary.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Rod L. Hill, P.E.
President & Chief Operating Officer (COO)

Project Assignment:

Principal-in-Charge

Name of Firm with which associated:

IMS Engineers, Inc.

Years' experience with this Firm:

26

Education: Degree(s)/Year/Specialization:

M.S. Civil Engineering, (1995) University of Mississippi
B.S. Mathematics/Pre-Engineering, (1993) Jackson State University

Active registration: Year first registered/discipline:

2000 / Louisiana P.E. No. 29204

Other experience and qualifications relevant to the proposed Project:

Gabon Wastewater and Sewer System Improvements - Gabon, Africa
Wallace Force Main – Shreveport, LA
City of Shreveport Consent Decree Program - Shreveport, LA
East Bank Wastewater Treatment Plant - New Orleans, LA
Canton Municipal Utilities - Nissan Water and Wastewater - Canton, MS
Trahon-Big Creek Wastewater Treatment Plant Improvements - Jackson, MS
Savanna Street Wastewater Treatment Plant Improvements - Jackson, MS
Section 592 Waterline Improvements – Jackson, MS

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Tommy J. Avant Corporate Vice President of Engineering
Project Assignment:
Project Engineer
Name of Firm with which associated:
IMS Engineers, Inc
Years' experience with this Firm:
22
Education: Degree(s)/Year/Specialization:
B.S. Civil Engineering, (1989) Mississippi State University
Active registration: Year first registered/discipline:
2008 / Louisiana P.E. No. 29204
Other experience and qualifications relevant to the proposed Project:
East Bank Wastewater Treatment Plant, Flood Protection System - New Orleans, LA Atchafalaya Basin Flood System – New Orleans, LA Two Low Drop Grade Control Structures – Vicksburg, MS Flood Retarding Structure – Vicksburg, MS Three Low Drop Grade Control Structures – Vicksburg, MS 17 Riser Pipe Grade Control – Vicksburg, MS Jefferson County Water and Wastewater Improvements – Fayette, MS 54-inch Water Express Main – Jackson, MS Canton Municipal Authority Water and Wastewater Improvements – Canton, MS

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Bernard LeBlanc, P.E. Vice President of Transportation
Project Assignment:
Project Manager
Name of Firm with which associated:
IMS Engineers, Inc.
Years' experience with this Firm:
20 years
Education: Degree(s)/Year/Specialization:
M.S. Civil Engineering Structural, (2001) University of Mississippi B.S. Civil Engineering, (1999) University of Mississippi
Active registration: Year first registered/discipline:
2011 / Louisiana P.E. No. 36105
Other experience and qualifications relevant to the proposed Project:
Harris County Flood Control – Houston, TX Atchafalaya Basin Flood System – New Orleans, LA Eastbank Wastewater Treatment Plant – New Orleans, LA Jefferson County Water and Wastewater Improvements – Fayette, MS 54-inch Water Express Main – Jackson, MS Canton Municipal Authority Water and Wastewater Improvements – Canton, MS

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Christopher Harris, P.E. Project Manager
Project Assignment:
Project Manager
Name of Firm with which associated:
IMS Engineers, Inc.
Years' experience with this Firm:
13 years
Education: Degree(s)/Year/Specialization:
M.S. Mechanical Engineering, (2006) University of Alabama in Huntsville B.S. Physics, (2004) Tougaloo College
Active registration: Year first registered/discipline:
2013 / Louisiana P.E. No. 38406
Other experience and qualifications relevant to the proposed Project:
Atchafalaya Basin Flood System – New Orleans, LA Eastbank Wastewater Treatment Plant – New Orleans, LA Jefferson County Water and Wastewater Improvements – Fayette, MS 54-inch Water Express Main – Jackson, MS Canton Municipal Authority Water and Wastewater Improvements – Canton, MS

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Desi Steffen
Project Assignment:
Project Engineer
Name of Firm with which associated:
IMS Engineers
Years' experience with this Firm:
1
Education: Degree(s)/Year/Specialization:
B.S Architectural Engineering (1996) University of Texas
Active registration: Year first registered/discipline:
Other experience and qualifications relevant to the proposed Project:
Bear Branch Emergency Action Plan (EAP) – Williamson County, Texas Eckerd Commercial Development – Williamson County, Texas A.W. Grimes Boulevard (Phase 1 & Phase 2) Drainage Improvements – Williamson County, Texas AAA Feasibility Study(s), Site Plan, SWPPP, WQ – Harris County, Texas Greens Bayou Flood Study – Harris County, Texas

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Harris County Channel 146 Improvements Location: Harris County, Texas Owner Contact: Greg DiCioccio, PM (Maintenance)	IMS was selected by HCFCDD to evaluate and redesign the replacement of intermediate storm water drainage ditch "Channel 146" also known as "White Heather Ditch", the approximately 60-foot wide, 1.5-mile-long concrete lined ditch is in needed of repair and restoration. IMS' scope of work during Phase I – Preliminary Engineering includes a detail assessment and evaluation with H&H Modeling of the existing and proposed ditch improvement; as well as, the preparation of a basis of engineering design report (EDR) and 30% level of completion plan set of the recommended redesign ditch. The final improvements will provide a lower water-level surface elevation along the ditch during design flood events that in turn will allow for area wide drainage improvements to proceed within the southwest Houston and Harris County neighborhoods served by the ditch.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Ongoing	\$1.3M	TBD

PROJECT NO. 2

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Nine Mile Point Drainage Study Location: Jefferson Parish, LA Owner Contact: Mr. Clinton Hotard 504-736-6751 (phone)	IMS conducted hydraulic analysis of five major drainage canals in the Nine Mile Point basin in Jefferson Parish, Louisiana to determine their current storm capacity with the goal of recommending improvements that will accommodate 10-year storm capacity needs. The more defined scope is as following: 1. Data Collection and Preliminary Model Run, where the channels were analyzed using a HEC-RAS model with geospatial data. 2. Survey of all canal cross sections and bridge structures. IMS conducted a cross section survey of creeks downstream of the dams with appropriate elevations and geospatial orientation; identify top of weir and dam structures; and locate all structures, such as bridges, culverts and pipes that intersect with the creek/stream. 3. Final Model Analysis using the survey information. 4. Recommendations to improve the capacity of the canals. 5. Work out Opinion Probable Costs.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Completed: 2015	\$298K	\$298K

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Airport Ditch Drainage Improvements Location: City of Shreveport Owner Contact: Mr. Patrick Furlong: 318-673-6000 (phone)	IMS provided all the necessary engineering and surveying services needed to make drainage improvements along an approximately 1550 LF stretch of Airport from Valley View west to the railroad just east of Mansfield Road. The scope of work also included the preparation of plats for all the required drainage and construction servitudes	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Completed: 2013	\$151,820	\$151,820

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Stream Trench Drainage Study Location: Lake Charles, Louisiana Owner Contact: Dan O'Dell, Project Manager CITGO Petroleum Corporation 337.708.6329 (phone)	IMS was hired by CITGO to evaluate the existing steam trench system and its ability to convey storm water via the existing RCP storm water collection system. IMS utilized StormNET to perform hydrologic analyses and evaluate the system's capabilities. Recommendations were made to manage flows more efficiently by rerouting flows through the trenches in order to prevent further flooding.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Completed: 2009	\$30K	\$30k

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>NRCS Dam Breach Analysis</p> <p>Location: Mississippi (Statewide)</p> <p>Owner Contact: Mr. Andrew Clevenger 615-333-0630 (phone)</p>	<p>As a sub-consultant to AMEC Inc., IMS conducted dam breach analysis for ten (10) dams in Mississippi. The work consisted of data collection, field survey, dam break analysis and flood routing, and preparation of inundation maps. Specific tasks included:</p> <p>Data Collection: IMS reviewed available data such as built-plans, hydraulic data of floodwater retarding structures, and channels. IMS created geo spatial data using HEC-GeoRAS. Dam Breach Analysis and Flood Routing: IMS used HEC-RAS to develop peak breach discharge, breach hydrograph, and flood routing of the breach hydrograph. The peak breach discharge was quantified based on TR66 guidelines and the breach hydrograph was developed based on standard hydraulic engineering practices.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Completed: 2010	\$400K	\$95K

PROJECT NO. 6		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Byram-Clinton Corridor Regional Infrastructure Improvement Program</p> <p>Location: Hinds County, Mississippi</p> <p>Owner Contact: Honorable Darrel McQuirter, Supervisor 601-973-5552 (phone)</p>	<p>IMS is providing program management, engineering, and technical services for Hinds County, Mississippi as a part of the Byram-Clinton Corridor Regional Infrastructure Services Program.</p> <p>As part of corridor planning and design, IMS undertook hydraulic modeling and storm drainage design components. IMS team members performed hydrologic and hydraulic analysis, cross drain design, and storm drain system design; and developed plans and profiles as well as the erosion and sediment control plan. IMS also prepared cost estimations for this component.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Ongoing	\$99M	\$49.5M

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Point Church Basin Drainage Master Plan Location: Memphis, Tennessee Owner Contact: Matt Wolfe ETI International 901-758-0400 (phone)	IMS in association with ETI is currently working to prepare a drainage master plan for the Point Church Basin. The following is the scope of tasks being performed: Hydrology for both basins including Data and Information Compilation; Hydraulic Modeling for 51 Catch Basin including local flooding analysis; Estimation of costs for the proposed or identified works; Preparing Master Plan report including assumptions, maps and planning-level cost analysis for recommended improvements; and Public Outreach to inform and update the public about the study.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Ongoing	TBD	\$130K

PROJECT NO. 8		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Homedale, Milne, Center & Walker Street Improvements Location: New Orleans, Louisiana Owner Contact: Ms. Donnye L. Brady City of New Orleans, DPW 504-658-8000 (phone)	IMS provided design and construction engineering services to assist the city of New Orleans with a Capital Street Improvement project that involved the reconstruction of 4,000 Lf of street along Homedale (Canal to West End), Milne (Homedale to Florida), Center (33rd to Tacoma) and Walker (Marshall Foch to Orleans). Design features included, among other things, subsurface drainage and water and sanitary sewer installation.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Completed: 2016	\$3.5M	\$3.5M

TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
USACE, Vicksburg District Flood Project Location: Vicksburg, Mississippi Owner Contact: Mr. Charles Fulghum 601-631-5564	IMS provided planning and engineering design services for the U.S. Army Corps of Engineers (USACE) Vicksburg District. The services consisted of designing flood control structures, channels, levees/embankment dams, weirs and drainage structures. Drainage Structures (Pipes and Culverts): The IMS team designed seventeen (17) Riser Pipe Spillways as a part of the project. The designs consisted of single and double riser pipes and conduits with the capacity to maintain the water surface to prevent flooding. Riser pipe diameters ranged from 3.5 ft. to 7.5 ft. and conduit diameters ranged from 2 ft. to 4 ft.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Completed: 2008	N/A	TBD

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Gabon Stormwater Management Program Location: Democracy, Gabon - West Africa Owner Contact: Mr. Mohamad El-Hadi melhadi@bechtel.com (e-mail)	IMS provided engineering services to include: (1) stormwater drainage analysis and design; (2) green infrastructure design, (3) water collection systems design; and (4) overall infrastructure improvements for the City of Democracy in Libreville, Gabon. IMS conducted drainage system planning and design for the 1,000-acre project area. IMS conducted hydrologic and hydraulic analysis (using HydraFlow and StormNET) to determine hydraulic gradient lines and project flow routing. IMS conducted calculations to assess drainage capacities, and design discharges at critical locations. The major emphasis of the drainage system design is to recycle stormwater for irrigation purposes; in response to this priority, IMS designed several retention ponds for the area. IMS also designed a wetlands shelf as a part of the project.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Completed: 2014	\$2M	\$2M

