







PBK Corporate + Commercial

Performance Inspired Design

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Our vast resources and holistic approach springs from the broad array of interconnected disciplines within our firm. Our offices are staffed with the expertise of some of the world's top individual specialists by discipline and by market.

PBK is an multi-national architecture and engineering practice with a significant portfolio of corporate, commercial, hospitality, municipal, education and healthcare design work. The firm has been providing professional planning and design services for more than 36 years and has established a strong reputation for its unique approach to performance-based design, client collaboration and responsive customer service. The firm's design approach strives to facilitate effectively a collaborative, consensus-generating process that produces customized, purposespecific building environments that enhance enduser performance and maintains strict control of the client's budget and schedule objectives.

Focused Expertise

As the market continues to adjust to the remnants of a historically-significant economic recession, building owners are looking to make smarter, more informed decisions about the best use of their properties to maintain a competitive advantage. Our staff of highly qualified programmers, plan-

ners, architects, engineers, and designers seek to maximize value for owners by facilitating a collaborative process between owners, architects, engineers and contractors to deliver the best combination of functionality, work efficiencies, economic viability and culture-specific design solutions.

Professional Culture

The cornerstone of our business philosophy can be summed up in three words: unparalleled customer service. Every aspect of our firm - from selection of personnel, to construction administration services – is strategically aligned to respond to the specific needs of our clients. Regardless of building type and/or geographic location, PBK ensures a world-class level of service to each client we serve and is delivered consistently throughout each encounter. We believe our track record for realizing and successfully achieving our client's aspirations within their design, budget and schedule objectives is unmatched in the industry.



Whatever a project's size or budget, we strive for simple, environmentally responsible designs, elegantly executed. By elevating problem solving to an art form, we create places that improve how people work, play, heal, discover and learn – places that improve performance.

Design Philosophy

Through unique opportunities and on-going relationships that have evolved from working with a variety of clients in diverse industries, we are committed to creating performance inspired design solutions that make a positive impact on people's lives and embrace sustainable design, innovation and building performance. Each project is approached individually, without preconceptions, and designed to accommodate the needs and objectives for each client we serve, always with the goal of achieving design excellence. We listen carefully to the client's needs, to articulate existing variables, and to use the potential of those variables to arrive at the appropriate design solution. We believe that truly listening to clients and responding to their needs - instead of to our own preconceptions – leads to performance inspired design. Whatever the scope, one single point of contact manages all our global services for each client we serve.

Corporate + Commercial Focus

PBK has successfully planned and design facilities for many Fortune 500 and industry-leading companies. Our passion is to collaborate with our strategic planning and architectural design teams to develop comprehensive, targeted responses to corporate real estate needs.

Our corporate and commercial planning and design experts work with clients to understand their business strategies and goals, organizational culture and desired image. We draw on our experience with past clients and knowledge of current industry best practices and trends to create the highest quality corporate and commercial environments. We design environments that are purposely planned to be flexible to accommodate shifts in business and changes in physical facility requirements. We help our clients ensure that they will be able to easily sub-divide, sell, lease or add space as needed.





ARCHITECTURAL DESIGN

PBK incorporates architectural design as both an art and a science. We are concerned about the craft of putting buildings together, combining form and function that align with programmatic and financial requirements with an overriding focus of achieving design excellence. A client's mission is a forceful determinant of building form, and building organization should grow directly from patterns of use. A building can and should express the values and aspirations of its users. At PBK, design is not an abstract exercise in combining shapes, forms, and materials. It's a problem-solving effort for people

- Conceptual Design
- Schematic Design
- Stacking Diagrams
- Departmental Adiacencies
- Building Code Analysis
- Agency Review and Approvals
- Design Development
- Construction Documents
- Construction Observation
- Bidding & Negotiations
- Existing Building Survey

- 3-Dimensional Renderings • 3-Dimensional Animations
- Models
- Cost Estimating
- Existing Site Survey
- Zoning/Public Agency Representation
- Phased Expansion Planning
- Urban Design
- Site Design

INTERIOR DESIGN

Our clients compete in every industry throughout the world. They are large and small, established and fast-growing. What they share is a desire to excel and a conviction that great workplace planning and design can help. A well-planned building or work environment allows a company to optimize space use while improving communication and productivity, ultimately helping it attract and keep its most important resource: people. Because we have completed such a wide range of projects for the world's leading companies, our clients benefit from the company we keep

- Space Planning
- Interior Design
- Prelease Services
- Workplace Strategies
- Design Standards
- Furniture Planning, Design, Guidelines and Standards
- Lighting and Fixture Design
- Artwork Program Branding, Signage and Graphic Design
- Cost Analysis

SERVICES

MEP ENGINEERING

We also provide comprehensive mechanical, electrical and plumbing/ fire protection engineering design services to a wide range of clients in diverse industries. From training environments to hi-tech mission critical and commercial facilities, our engineers focus on optimized system performance, reliability, flexibility and ease of maintenance. Our integrated approach goes beyond the traditional MEP approach by holistically integrating the architectural and building systems design to optimize building performance, occupant comfort, sustainability, and life cycle costs.

Mechanical

- HVAC Design
- Chilled Water Systems
- Life-Cycle Cost Analysis
- Demand Control Ventilation
- Hot Water Systems
- Steam Generation & Distribution Systems
- Acoustically-Sensitive Design

Electrical

- Medium Voltage Distribution
- Photometric Analysis
- Low Impedance Grounding Systems

- Transient Voltage Surge **Protection Systems**
- Daylight Harvesting

Plumbing

- Domestic Hot Water Systems
- Storm Water Systems
- Sanitary, Waste and Ventilation Systems
- Gas Distribution Systems
- Water Treatment Systems
- Fire Sprinkler Systems
- Rain Harvesting Systems

CIVIL ENGINEERING

PBK offers seasoned civil design professionals with expert knowledge of utility and infrastructure design. Our in-house network of engineers and planners has grown organically over the last two decades and is organized to provide the power of extraordinary thought leadership, expertise and international experience combined with the insight of local knowledge. We provide comprehensive land + site development services that create authentic, context-inspired places. To ensure long-term economic growth and sustainability, we integrate the built environment with natural systems to the benefit of both. Our plans articulate clear land use visions that inspire and endure over time.

Land / Site Development

- Feasibility Studies
- Land Planning
- Utility Districts

Storm Water Management

- Detention / Retention
- Storm Sewers
- Storm Water Quality
- Storm Water Pump Stations

Transportation

Roads / Paving / Parking

Special Services

- Feasibility Studies
- Construction Management
- LID (Low Impact Development)

PRK

- Facilities & Planning
- Environmental

Public Works

- Water Production Treatment
- Water Distribution
- Wastewater Treatment & Collection
- Lift Stations
- Hydraulics & Hydrology



ADDITIONAL IN-HOUSE SERVICES





























As companies face new delivery challenges, PBK provides experienced, analysis-based advice along with justification for decisions big and small, strategic or tactical. No other firm can provide the same degree of expertise and know how.

PLANNING

- Campus Master Planning
- Conceptual Master Planning
- Environmental Conservation
- Ecological Asset Management
- Campus Planning
- · Feasibility Studies
- Land Development Planning
- Land Use Analysis
- Land Use Planning
- Site Analysis
- Site Planning
- Site Design
- Site Selection
- Strategic Development Planning
- Safety and Security Planning

FACILITY CONSULTING

Facility Condition Assessments

- Document existing conditions
- · Recommend solutions to extend life or replace
- Prioritize scope-of-work based on need
- Budgeting

Facility Management Tools

- Customized to your requirements
- Annual contract for repair & maintenance needs
- 24 hour/365 day emergency response

Forensic Investigations

- Destructive core sampling
- Moisture analysis
- Thermal "infrared" analysis
- Wind up-lift resistance analysis
- Drainage evaluations
- Wall cavity investigations
- Diagnostic water testing

Building Envelope Consulting

Roofing Services









TECHNOLOGY

- Integrated Cabling System Design
- Voice-Over IP Design
- Data Network Design
- Security System Design
- Access Control/Intrusion Detection Systems
- Telephone Intercom Systems
- Master CCTV Time and Program Control Systems
- Technology Master Plans
- Instructional Technology Visioning
- Card Reader/ Biometric Access Systems

SUSTAINABLE DESIGN

- Sustainable Planning
- Performance Studies and Standards Development
- Organizational and Strategic Planning
- Sustainable Guidelines
- · Energy and Daylight Modeling
- Stakeholder and Occupant Engagement
- Existing Buildings Assessment
- Climate Action Planning
- Ecological Analysis
- Sustainable Education
- Post-Occupancy Evaluations
- Climate Consulting
- Solar and Radiance Analysis
- Return on Investment (ROI) Analysis
- LEED Consulting and Certification

VIZ LAB

Strategic Planning and Visualization

- Strategic Planning
- Renderings & Animations

Interactive Design and Communications

- Interactive Presentations
- Augmented Reality Presentations

Project Applications

- Project Benchmarking
- Enhanced Project Workflows

Technology Research + Development

- Project Integration
- BIM CAVE Technology















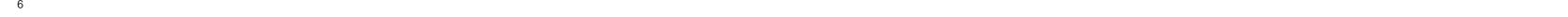
















PBK's design solutions for leading corporations and developers are program-driven to support all identified functional and operational goals. Our corporate/commercial design professionals have extensive experience in understanding and translating business plans and management strategies into supportive facilities solutions.

The key to designing and building successful corporate architecture is understanding the goals and objectives of the individuals and the corporation that will occupy and utilize the facility. Understanding interior planning efficiencies is critical in the base building design. Understanding a corporation's culture and organizational structure, as well as its strategic goals is critical. In an owner-occupied building, flexibility, functionality, connectivity and maximizing density are all important factors. The quality of the work environment has a direct impact on work productivity.

The backbone of PBK's corporate and commercial services are industry specialist that have the proven ability to serve real estate needs with a comprehensive project integration and management system. PBK's workplace environments are designed to meet the wide variety of requirements of today's corporate, institutional, medical, and industrial organizations. Our expertise in the design of office buildings is recognized as a leader with over 4,000,000-square-feet of construction on a diverse range of building types in the past five years. This comprehensive portfolio includes

significant high-rise, mid-rise, and campus style structures that have won numerous design awards and industry recognition.

Areas of focused expertise in which PBK delivers outstanding value include:

- Adaptive Reuse
- · Amenity Environments (Fitness, Cafe, etc.)
- Change Management
- Conference/Learning Centers
- Control Centers
- Corporate Campus Facilities
- Executive Briefing Centers
- · Facilities Assessment
- Headquarters
- Industrial/Manufacturing Facilities
- Interiors/Workplace Assessment and Design
- Mergers and Acquisitions
- Mission Critical Facilities
- Office Buildings
- Programming
- Strategic Master Planning
- Trading Floors





Solutions for the Future of Business

Today corporations and developers are competing in every industry throughout the world. They are large and small, established and fast-growing. What they share is a desire to excel and a conviction that great workplace planning and design can help. A well planned building or work environment helps a company optimize space use while improving communication and productivity and helping it attract an d keep its most important resource: people.

Our goal is to serve as a single design resource to corporations whether regionally focused or operating on a national or global scale. Increasingly, companies want to work with firms that can deliver integrated services and serve as a "single source" for all their real estate and facility solutions. We have grouped our services into multidisciplinary teams of corporate specialists that provide integrated or stand-alone strategic planning, architecture, engineering, interior design, graphic design, master planning, landscape architecture, laboratory planning, and program management for every type of corporate facility. Our list can be expanded to meet any corporation's needs by providing comprehensive solutions for the future of business.

Corporate/Commercial Industry Benchmarking

PBK manages a benchmarking database that tracks qualitative and quantitative metrics on new workplace drivers and trends. Additionally, we maintain a comprehensive benchmarking database by facility and space types that allows users to have comparative information on all PBK projects. This information is offered to our clients industry specific business intelligence that supports their business objectives.

Sustainability

PBK has long been an advocate of sustainability and has developed a deep foundation and expertise in providing sustainability designed solutions. We create exceptional environments that meet the world's most complex planning and design challenges. Sustainability is integrated into all PBK's architectural, engineering, interior design and consulting solutions – it's just an essential element of good design.

PBK provides sustainable solutions throughout the life cycle of a built environment, from planning and strategy through design and construction, and into operations, maintenance and occupancy. We can provide the most long-term value and impact when we are involved in the actual performance of those environments. Our goal is to help clients improve their business results while moving the world toward a low-carbon future in a way that enhances the quality of people's lives.

RECENT EXPERIENCE

Confidential Global Energy Company Ohio Refining Division **New Administration Office** Building Canton, Ohio

Confidential Global Energy Company Illinois Refining Division **New Administration Office** Building (LEED Certified) and Maintenance Building

Robinson, Illinois Confidential Global Energy Company Louisiana Refining Division **New Administration Office** Building

Garyville, Louisiana

Confidential Global Energy Company

Texas City Refining Division New Administration Office

- Building Security Control Center and Lab **Building Addition**
- New Maintenance Office Building and Machine/Fab Shop Texas City, Texas

Confidential Global Energy Company **Detroit Refining Division** Master Plan and New Administration Building Detroit, Michigan

Confidential Global Energy Company Marine Shore Based Improve-Catlettsburg, Kentucky Confidential Global Energy

Company **Business Continuity Facility IAH** Airport Houston, Texas

Confidential Global Energy Company **Headquarters Campus**

Montgomery County Hospital District Conroe, Texas

Speedway LLC **Enon Campus** Enon. Ohio

MillerCoors R&D Laboratory Fort Worth, Texas

Administration Office Building Tomball, Texas

Administration Office Building Dickinson, Texas

Port of Texas City Security Administration Building and **Incident Command Center** Spring, Texas

Fort Worth, Texas

Intel Corporation A4 Campus Renovations and Campus Repositioning Austin, Texas

Intel Corporation 4B Lab Expansion

> AN4 Data Center Office Prototype Austin, Texas

> > Bimbo Bakeries

Dallas, Texas

Cassidy Turley

Houston, Texas

Houston, Texas

Corporate Offices

Gainer-Donnelly-Desroches

Two Riverway Offices

Time Warner Cable

Corporate Offices

UHY Advisors, LLC

Corporate Headquarters

United Space Alliance, LLC **Corporate Office Renovations**

Zukowski, Bresenhan & Sinex

and Lab Consolidations

Austin, Texas

Houston, Texas

Houston, Texas

Corporate Offices

Corporate Offices

Lubrizol **Pipeline Control Center** Finley, Ohio Austin, Texas

New Administration Building

Chesapeake Energy Corporation Fox Creek Control Building

Houston, Texas







In order to conduct and accomplish a comprehensive facility assessment, we implement a core set of procedures as part of a process that is tailored to meet the needs of each client.

PBK has over 30 years of experience assessing existing facilities and projects through all phases from design development to construction. Our facility assessment and feasibility studies were initially developed for clients in 1985. This eventually led to PBK's Continuing Maintenance Programs and Master Plans, which have been identified to remedy the issues discovered in facilities assessment reports.

For leading companies and institutions, PBK provides integrated architectural and engineering design services to create high-performance, cost-effective environments that promote sustainability and wellness.

The Facility Consulting team has a broad base of experience, from sport complexes to laboratories and educational facilities to commercial, offices and mission critical facilities. Our experience spans master plans of more than 1-million square-feet to tenant fit-outs of a few thousand square feet.

We provide services for any stage of a project — from feasibility and concept studies to full design and construction services — whether it be for new construction, renovations or expansions. PBK's Facility Consulting Division is also very adept at coordinating specialty consultants in conducting a building condition analysis for existing buildings and organizing the data in an easy-to-follow report for the client. We provide on-site services during construction administration, as well as post occupancy services such as warranty phase, and on-call storm recovery and emergency services.

PBK is committed to creating performance inspired design solutions that make a positive impact on people's lives and embrace sustainable design, innovation and building performance.



MARKET FOCUS

Corporate + Commercial Education Civic + Government Sports Healthcare PBK's Facility Consulting professionals ensure proper design, construction and coordination between various building envelope components. Our services assist in preventing water and air from penetrating the building envelope, as well as moisture condensation within. We focus on ensuring that each system is addressed in respect to material durability, system maintenance, thermal performance, moisture/air protection and code compliance.

During an assessment, we utilize multiple "in-house" consultants (architects, engineers and exterior envelope specialists) to provide the client with comprehensive solutions. PBK brings a powerful combination of design expertise — a thorough understanding of a local building procedures, and an intimate knowledge of how to successfully execute complex projects.

Our unique culture coupled with our signature collaborative process are consistently leveraged to guide the optimal creation, modernization, addition, or retrofit of a building to best express our client's mission and values.



Tailored Software

Our team understands the needs of each company is different, therefore, PBK has developed a structure that is 100% customized to each organization. More often than not our team will provide our Facilities Condition Assessment results through Microsoft Access because it is compatible with most of our clients' existing applications. We find this application to be extremely user friendly and easy to learn. To ensure that every client has full understanding of the software and can readily view and access all pictures and files, our team will happily demonstrate the functionality of the platform at no additional cost to the client. If a different software platform is requested, our team is happy to accommodate your







Performance Planning

PBK Facilities Division has completed numerous assessments through the years and has proven to be extremely reliable and diligent at exceeding clients' needs. Benefits clients can achieve with PBK's unique assessment process and planning services include:

- ✓ Proactively eliminate "maintenance by crisis," which is more expensive and time consuming.
- √ Save money by developing an organized budgeted approach to facility maintenance and rehabilitation.
- ✓ Establish specific maintenance programs for:

e. Air-conditioning

water systems)

(treatment of chilled

- a. Roofing
- b. Asphalt paving
- c. Glazing
- d. Site and drainage
- ✓ Determine whether corporate standards are needed, such as:
- a. Construction and materials standards for new construction.
- b. Operations standards for users (principals and custodians)

- ✓ Identify need for specific studies, such as:
- a. Energy conservation analysis
- b. Indoor Air Quality
- c. Campus fencing policies
- d. Maintenance reporting procedures
- ✓ Establishes corrective programs necessary for code conformance, such as:
- a. Health c. Americans with Disabilities Act
- d. Life Safety
- ✓ Identifies areas which will require cooperation from local governments for remedies, such as:
- a. Drainage problems caused by off-site maintenance of storm drainage systems.
- b. Traffic hazards c. Utility availability
- ✓ Improves morale and communications between building owner, stakeholders, endusers and maintenance personnel.

"We measure our success by the number of facilities we prevent from failing, not by the number we replace."

> Todd Spore, President. PBK Facility Consulting









The Facility Assessment Process

PBK's Facility Consulting professionals ensure proper design, construction and coordination between various building envelope components. Our services assist in preventing water and air from penetrating the building envelope, as well as moisture condensation within. We focus on ensuring that each system is addressed in respect to material durability, system maintenance, thermal performance, moisture/air protection and code compliance.

During an assessment, we utilize multiple "in-house" consultants (architects, engineers & exterior envelope specialists) to provide the client with comprehensive solutions.

Approach to Facility Assessments

The following step-by-step descriptions of the basic procedures PBK implements to accomplish a comprehensive assessment of facilities. From the data collected, we will develop and prioritize "scope of work" recommendations and provide cost estimates for each recommendation. We will then develop a user-friendly, working database to track each campus' needs and assist the client's staff in maintaining and preparing a detailed Capital Improvement Program.

STEP 1: Doing Our Homework (Collecting Data)

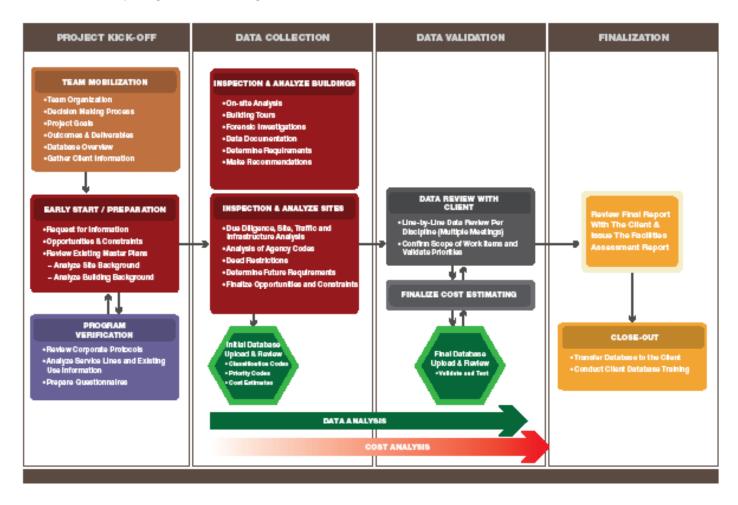
"How can the facility better serve its end users?"

PBK's Facility Consulting professionals will prepare a detailed questionnaire that will be distributed to the company's administration and facility maintenance personnel. Questionnaires will also be distributed for the client's end-users. The questionnaires are meant for gathering what the end-users (executives, managers and staff) are needing in the workplace.

The executed questionnaire will be collected, assembled, and analyzed by PBK's team of architects, engineers, and our in-house Facility Consultant Division specialist. Our firm will then coordinate with the administration and prepare a master schedule in order to review each facility with knowledge-in-hand of the existing problem areas.

Going in with a Plan

Before conducting facility walk-throughs, PBK's Facility Consulting personnel will meet with company representatives to review all available floor and site plans of existing facilities. Copies will be made available for team members to study and use while conducting the walk-throughs. A thorough understanding of the existing building from the ground up allows for critical gathering of information, which will assist in updating the client's existing information.







STEP 2: Facility Condition — Analysis, Review and Update Existing Assessment "What is the current condition of the facility — including what is below the surface?"

PBK is a full service multi-disciplined firm that will analyze every building system in your organization. During the walk-through, our team of in-house experts and consultants will examine and document the condition of the facilities from the ground up, and inside out: from the parking lots, site drainage and plumbing, structure, exterior walls, windows, doors, and finishes, to the roofs.

Building forensic services we conduct during an assessment, include, but are not limited to, destructive core sampling, moisture analysis, thermal "infrared" analysis, wind up-life resistance analysis, drainage evaluations, wall cavity investigations and diagnostic water testing.

The Facility Condition Index (FCI) is used throughout the facility condition assessment industry as a general indicator of a building's health. The FCI is calculated by dividing the Facility Condition Repair Cost by the Replacement Value. As a rule of thumb, an FCI of 10% or less is considered Excellent, 11%-30% is Very Good, 31%-45% is Good, 46%-59% is Average, and 60% or more is considered Poor.						
0.00	0.00%	\$0.00				
4,736,947.22	100.00%	\$4,736,947.22				
2,640,215.30	100.00%	\$2,640,215.30				
0.00	100.00%	\$0.00				
69,527.10	100.00%	\$69,527.10				
3,713,177.30	50.00%	\$1,856,588.68				
413,851.76	25.00%	\$103,462.94				
	dividing the Facility Condition Repair Cost d Excellent, 11%-30% is Very Good, 31%- 0.00 4,736,947.22 2,640,215.30 0.00 69,527.10 3,713,177.30	dividing the Facility Condition Repair Cost by the Replacement Value of Excellent, 11%-30% is Very Good, 31%-45% is Good, 48%-59% is 0.00 0.00%-4,736,947.22 100.00%-2,840,215.30 100.00%-2,840,215.30 100.00%-2,840,215.30 100.00%-2,840,215.30 100.00%-3,713,177.30 50.00%-3,713,177.30 50.00%-3				

RITY MP TOTAL	0.00	0.00 0.00% 4,736,947.22 100.00% 2.640.215.30 100.00%			
RITY 1 TOTAL	4,736,947.22				
RITY 2 TOTAL	2.640.215.30				
RITY 2.1 TOTAL	0.00	100.00%			
RITY 2.2 TOTAL	Prioritized Work Items	100.00%	\$69,5		
RITY 3 TOTAL	3,713,177.30	50.00%	\$1,856,5		
RITY 4 TOTAL	413,851.76	25.00%	\$103,4		
ITY CONDITION REPAIR COST (SUM OF (PRIORITY TOTAL X LIFE EXPECTANCY))					
ITY REPLACEMENT VALUE (SQ.FT. X REPLACEMENT COST + 15.5% SOFT COSTS): 79,828 SQ. FT. @ \$165					
LITY CONDITION INDEX					

FACILITY CONDITION INDEX (FCI)

- The FCI is the comparative industry indicator / benchmark used to calculate the relative physical condition of a facility
- It is expressed as a ratio of the cost of remedying existing deficiencies and capital renewal requirements to the current replacement value
- The FCI value is a snapshot in time of the buildings health

STEP 3: Review & Implementation

"Which corrections need immediate attention and how much will it cost?"

Data gathered from all disciplines will then be organized into a thorough Facility Assessment with photographs of each item. This Facility Assessment will be a user-friendly tool that details the condition of each building, code violations, and note potential work items. Each item will have a recommendation for correction and an associated cost so facility personnel

can assess and prioritize each need. Our team will work with company facilities staff when creating this assessment to ensure the document leaves "no stone unturned."

Our philosophy is that a Facility Condition Assessment should be a user-friendly living document and serve as a master maintenance list. The document serves as the "road map" for a sensible, ongoing facility upkeep and maintenance program that guarantees a wise and efficient use of company funds.

We will work with the client to update the Assessment at appropriate times. As work items are completed they can be noted in the

Assessment to show facility improvement, and, of course, future items can be added as the client's portfolio grows, thus fulfilling the foundation for a Master Plan.

Initial database upload with a customizable classification code, priority code, source code and cost estimates

CLASSIFICATION CODE INDEX								
ACO	Acoustical Treatment	EDF	Elec Drinking Fountain	LTG	Lighting	SGN	Building Signage	
ADA	Accessibility	EG	Emergency Generator	MBTB	Markerboard/Tackboard	SOF	Exterior Soffit	
ADD	Building Addition	ELE	Electrical	MECH	Mechanical	SP	Site Paving / Sidewalks	
AV	Audio/Visual Sound	EQ	Misc Equipment	MISC	Miscellaneous	STR	Structural/Foundation	
BLC	Bleachers	ES	Exterior Soffit	MW	Millwork	SU	Site Utilities	
BLD	Window Blinds	FA	Fire Alarm System	PA	Public Address	SWR	Shower	
CNPY	Covered Walkway Canon	FLR	Flooring-Carpet, Tile, etc	PGE	Playground Equip	TECH	Technology	
CLG	Ceiling	FSPR	Fire Sprinkler	PLB	Building Plumbing	TP	Toilet Partition	
CLK	Clock	GRP	Building Graphics	PTG	Painting	WDW	Window	
CODE	Code Compliance	HDW	Hardware	REN	Renovation	WRE	Wall Repair-Exterior	
CWK	Casework	HVAC	Heat, Vent & Air	RFM	Roof Maintenance	WRI	Wall Repair-Interior	
DC	Display Case	INT	Interior Finish	RFR	Roof Replacement	WS	Waterproofing Sealant	
DR	Door	IRR	Irrigation	SD	Site Drainage			
EA	Educational Adequacy	LOC	Locker	SEC	Security / Surveillance			
ED	Electrical Distribution	LS	Life Safety	SF	Site Fencing			





As part the firm's process of continuous improvement, we have developed a highly efficient process and tools that help us manage projects of any size and scope throughout the world. Our goal is to link team members in real time through effective interactive communications and work tools that leverage individuals, reduce required travel and fosters collaboration.

We Are a Firm With No Walls

PBK utilizes sophisticated technology that fosters dynamic, real-time, high-def video collaboration among multi-office project teams while reducing the company's overall environmental footprint.

Our technical competence is demonstrated in proven project experience and a working knowledge of industry standards and required codes worldwide. Our knowledge of product innovations and partnerships with leading technology companies allows us to offer clients the latest tools used in real-time collaboration between teams in different locations.

Telepresence places PBK teams at the center of the collaboration and video experience, empowering them to work together in new ways to transform business, accelerate innovation, and do more with less.

Building Information Modeling

Building on a decades of hands-on experience in Building Information Modeling (BIM), PBK is committed to creating value for our clients through innovative and fully integrated design solutions. Today, PBK is utilizing BIM cloud services, the next generation of BIM that virtually connects anyone, anywhere, at any time. Our architectural and engineering teams can access intelligent, model-based workflows through a broad range of cloud-based services within PBK's cloud-based platform – that provide mobility, accessibility, and virtually infinite collaboration capability.

PBK's BIM platform helps our multi-discipline design and construction teams improve project efficiency by optimizing performance and response-time of visualizations and simulations to create unprecedented data rich models.

Our clients are experiencing the benefits of BIM that extend long past the completion of a project - including improved constructability, better-performing buildings and more efficient project delivery. They have also included:

- Construction cost savings as high as 21%*
- Schedule compression as high as 6 months*
- Energy reductions of 26% compared to the ASHRAE 90.1 standard
- * relative to original design estimates

TOOLS, RESOURCES +
TECHNOLOGY

PBK VIZ LAB

Smart Visualization Solutions



The PBK Viz Lab creates exceptional realism in visual renderings and animations in order to provide advanced options for building design evaluation. Visualization solutions offered by PBK include:

- ► High-end Renderings & Animations
- ▶ Interactive Presentations
- ► Augmented Reality Presentations

Visualization Services

PBK proudly introduces our Viz Lab design team - a team of highly talented creatives who utilize smart visualization and modeling technologies to provide dynamic, real-time project visualizations that enable our clients to see life-like images of their projects before construction begins. PBK's Viz Lab team integrates the strategic, conceptual and functional components of facility planning and design that can be applied to any building and space type. The process developed for our visualization services focuses on helping clients achieve a clearer perspective of their project so they can make intelligent, well informed decisions for building character and space utilization.



In response to the increasing importance of Digital Modeling and Visualization in the A/E/C industry, PBK offers clients first-hand access to sophisticated technologies that produce complex visualization projects in a cost-effective and timely manner.

Project Applications

Beyond the realm of traditional BIM services, the Viz Lab has the capability to produce smart data applications (Apps) that foster enhanced client communications and highly efficient project workflows. With a growing demand for quality, speed of delivery and lower project costs, mobile project Apps provide better workflow processes for improved collaboration between the design and client teams. These tools facilitate information sharing across owners, architects, engineers, interior designers, contractors, facility managers and other project team members. Because each team member can access and share the same data, Viz Lab's mobile Apps assist in uniting design and construction teams into a focused, more unified entity.

Technology Research and Development: BIM CAVE

Additionally, the Viz Lab team utilizes new technologies and has developed viable workflows to push the envelope of technology within the industry. Our desire to bring value to our client's projects has inspired us to invest in "BIM CAVE" technology, which is an acronym for Building Information Modeling Computer-Aided Virtual Environment. The firm's BIM CAVE studio is centrally housed in our San Antonio office and provides the Viz Lab team with integrated technology to view Revit, Navisworks, 3ds Max, and unreal models at full scale, and can also become a 'fly on the wall' to view and look for interferences inside walls, above ceilings, etc. The BIM CAVE has proven to foster team collaboration in a unique and immersive environment and can simulate a variety of scenarios from construction scheduling to project visualization.