

Submitted to:

Department of Administration
Purchasing Division, Building 15
2019 Washington Street East
Charleston, WV 25305 - 0130

Submitted by:

GAI Consultants, Inc.
500 Summers St., 3rd Floor
Charleston, WV 25301
304.926.8100
gaiconsultants.com



gai consultants



Expression of Interest
**Architectural / Engineering
Services Parking Lot Redesign
1900 Kanawha Boulevard, East**

Charleston, West Virginia
March 1, 2011

RECEIVED

...transforming ideas into reality 2011 MAR -1 PM 12:00

March 1, 2011

Department of Administration
General Services
Building 1 Room MB60
Charleston, West Virginia 25305-0123

Attn: Krista Ferrell

RE: Expression of interest for architectural and engineering services to evaluate and redesign East Main Campus parking lots

Dear Ms. Ferrell:

The architectural/engineering services for the evaluation and redesign of the East Main Campus parking lots located at the WV State Capital Complex is critical to maintaining and improving the access and infrastructure for the ongoing development of the complex. **More than ever, efficiency and quality are critical for design and construction documents.** To meet these criteria, the WV Division of General Services (WVDGS) will benefit from teaming with a seasoned consulting design and construction monitoring firm, one that intimately understands the many complex facets of project design and administration, and is also keenly familiar with all State, Federal, and Local regulations for transportation and development projects.

GAI Consultants, Inc. (GAI) is pleased to submit this Expression of Interest to provide the consulting services to provide facility evaluation, construction drawings, preparation of bidding and contract documents, participate in the evaluation of bids and to observe the construction activities. Our proposal describes GAI's project approaches, professional qualifications, past performances, and additional information to meet and exceed the WV Division of General Services' needs and requirements. **GAI can begin work immediately on the evaluation and redesign of the East Main Campus parking lots in order to meet the budget and schedule of the WVDGS.**

Although many companies often make claims of superiority, we firmly believe that GAI is uniquely qualified to help you complete the design and construction of the project.

A Project-Tested Team – Outstanding Qualifications/Intimate Project Knowledge

GAI is well-established in the transportation, civil engineering and landscape architecture/land development fields, and is very familiar with Federal, State and Local regulations and the unique site conditions the project presents.

GAI feels confident our recent experience with other State, Local, and Private clients in the Transportation and Site Development industries providing small scale to large scale projects ranging from parking lots and access roads as described above to major four-lane roadway and interchange designs and construction monitoring makes us superior to provide the services as requested.

March 1, 2011

A Sensible Project Approach with No Learning Curve

- **Efficient and Effective Project Management:** GAI is experienced in handling various projects of both large- and small-scale and provides the necessary knowledge into effective communication and submittal requirements demanded by the WVDGS.
- **Technical and Experienced Staff:** Our design staff is experienced in handling various large- and small-scale projects for State, Local and Private Clients. GAI is committed to providing the most technical and experienced staff possible to perform the contract responsibilities to provide a high quality product. Our multi-disciplined staff allows GAI to provide all the services required by the WVDGS.

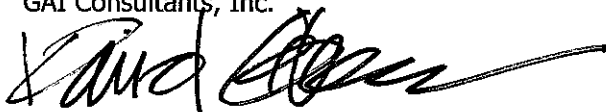
We're in Your Backyard

GAI is a full-service organization with a large staff of design, environmental and cultural resources professionals. All of our proposed project team has experience on similar projects and are quite familiar with the needs and requirements such a project can have and can facilitate the schedule needs for the projects. All work will be managed and produced from our office in **Charleston, West Virginia.**

We Deliver!

GAI is committed to meeting the needs and goals and enjoys a reputation for meeting client schedules and deadlines, controlling budgets, developing innovative approaches, and meeting regulatory deadlines and standards. We are committed to providing the most highly competent and dedicated professionals to these projects. We look forward to enthusiastically serving the WVDGS on this project. We thank you for the opportunity to present our credentials in this submission.

Sincerely,
GAI Consultants, Inc.



David Gilmore, RLA
Land Development Services Manager

letter of transmittal

GAI Consultants, Inc. - Charleston
500 Summers Street, 3rd Fl
Charleston, WV 25301
T 304.926.8100 | F 304.926.8180
www.gaiconsultants.com



gai consultants

To: Department of Administration
General Services
Building 1 Room MB60
Charleston West Virginia 25305

Date: **March 1, 2011**

Attn: **Krista Ferrell**

Re: **East Main Campus Parking Lot Redesign**

We are sending you the materials listed below:

Copies	Dated	Description
5	March 1, 2011	Expression of interest for architectural and engineering services to evaluate and redesign East Main Campus parking lots

cc: _____ Remarks: _____

Signed: 
Name: **David Gilmore, RLA,**
Title: **Land Development Services Manager**



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
GSD116434

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
**KRISTA FERRELL
 304-558-2596**

**RFQ COPY
 TYPE NAME/ADDRESS HERE**

GAI Consultants, Inc.
 500 Summers Street, 3rd Floor
 Charleston, WV 25301

**DEPARTMENT OF ADMINISTRATION
 GENERAL SERVICES
 BUILDING 1 ROOM MB60
 1900 KANAWHA BOULEVARD, EAST
 CHARLESTON, WV
 25305-0123 304-558-2317**

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
02/02/2011				

BID OPENING DATE: **03/01/2011** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		906-07		
<p>A&E SERVICES: REDESIGN OF EAST CAMPUS PARKING LOTS</p> <p>EXPRESSION OF INTEREST (EOI)</p> <p>ARCHITECTURAL/ENGINEERING SERVICES</p> <p>THE WEST VIRGINIA DIVISION OF PURCHASING FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF GENERAL SERVICES, IS SOLICITING FOR EXPRESSIONS OF INTEREST TO PROVIDE ARCHTETURAL AND ENGINEERING SERVICES TO EVALUATE AND REDESIGN THE AREAS OF THE EAST MAIN CAMPUS PARKING LOTS PER THE ATTACHED SPECIFICATIONS.</p> <p>TECHNICAL QUESTIONS CONCERNING THIS SOLICITATION MUST BE SUBMITTED IN WRITING TO KRISTA FERRELL IN THE DIVISION OF PURCHASING VIA MAIL AT THE ADDRESS SHOWN IN THE BODY OF THIS EOI, VIA FAX AT 304-558-4115, OR VIA EMAIL AT KRISTA.S.FERRELL@WV.GOV. DEADLINE FOR ALL TECHNICAL QUESTIONS IS FEBRUARY 15, 2011 AT THE CLOSE OF BUSINESS. ANY TECHNICAL QUESTIONS RECEIVED WILL BE ANSWERED BY FORMAL ADDENDUM TO THIS EOI ISSUED BY THE PURCHASING DIVISION.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</p> <p>NOTICE</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE 304.926.8100	DATE March 1, 2011
TITLE Land Development Services Manager	FEIN 25-1260999	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

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2

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LINE	QUANTITY	UQP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>A SIGNED EOI MUST BE SUBMITTED TO:</p> <p>DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE EOI SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE EOI MAY NOT BE CONSIDERED:</p> <p>SEALED EOI</p> <p>BUYER: KRISTA FERRELL-FILE 21</p> <p>EOI. NO.: GSD116434</p> <p>EOI OPENING DATE: MARCH 1, 2011</p> <p>EOI OPENING TIME: 1:30 PM</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR EOI:</p> <p>----- 304.926.8180 -----</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY):</p> <p>----- David Gilmore -----</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE 304.926.8100	DATE March 1, 2011
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CONCEPT

What sets GAI apart?

At GAI Consultants, Inc. (GAI) our goal is to deliver for you – a project that draws award winning reviews and provides the highest quality experience for your client and key stakeholders.

By avoiding costly delays and frustrating glitches, we are better able to assist our clients in the development process and support project buy-in from financial partners, local governments, and involved communities. Whether developing former brownfield sites, urban in-fills, or raw land, our experienced professionals are known for smoothly navigating the compliance and development process. We respect our clients' time, money, and resources as if they were our own. With this philosophy, we increase value in every project we do.

GAI offers better client service and talent than the best firms. They are also a local firm that understands the client's needs and is more accessible. On the client's riverfront project, they have gone the extra mile."

~Dave Molgaard,
 Charleston City Manager

A Unique Opportunity Realized

As available land for parking and development becomes harder to find and more costly to develop, the quality and relationship of the spaces where people live, work and play have taken on an increased role of importance over the last decade. These issues, when coupled with emerging trends such as sustainable design practices, make selecting the right consultant even more important. We feel that GAI Consultants is unmatched in experience and talent in this arena, and will ensure the success of the WV Capital East Main Campus parking lot project.



The entire Haddad Riverfront project was ambitious and the aggressive schedule and poor spring weather only compounded the difficulties. The coordination efforts and willing attitude of GAI brought everything together like we seldom see on projects.

~ Michael J. Grant

The GAI philosophy that supports the design process begins as an exercise in problem definition. Identifying constraints and opportunities evolves from a variety of physical and nonphysical conditions, and most importantly...**the needs of the Client**. The ability to creatively combine these factors is the key to the project's success. Of utmost importance to the success of your project is the ability to engage the General Services Division and its representatives at every stage of the design process. The GAI design team will accomplish this by establishing an open and transparent dialog from the outset of the project to the drafting of the construction plans. This active dialog ensures that as the design effort progresses, the Client is able to respond to the concepts and ideas presented before the process moves forward.

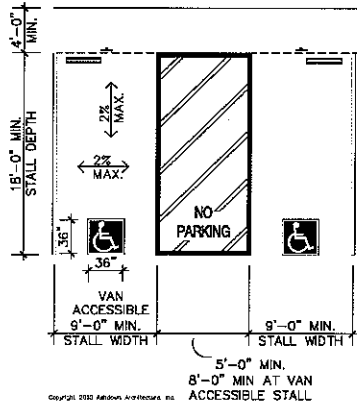
GAI Consultants Inc. brings an intimate understanding of the complexities of site and utility design, as well as bidding assistance and comprehensive construction management services. GAI has worked with a number of State agencies and municipalities across the United States in many different capacities ranging from master planning and public involvement to construction documentation and administration. GAI also has an intimate understanding of permitting issues as illustrated by Erie East Side Access Highway for PennDOT and various WVDOT projects, and right-of-way issues as part of the Westmoreland Heritage Trail. We are experts in site, storm water, transportation engineering and utility design, having worked on literally 100's of site development and parking lot designs across the United States as evidenced by the selected project profiles we have included in this proposal.





Experience Matters

When approaching a project of this magnitude, you want a team of professionals that are experienced and can manage the project with a holistic approach. GAI has an extensive site planning, construction documentation and



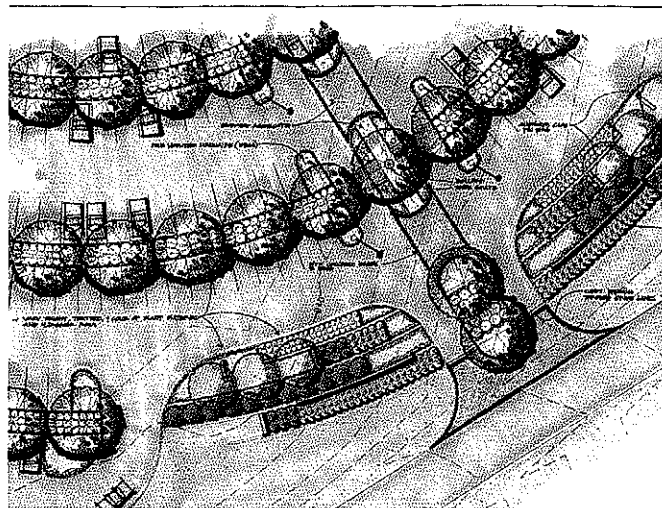
administration background, and looks forward to applying our current knowledge and expertise to any project that the General Services Division wishes to undertake. In addition to our unmatched site design experience, GAI has an extensive knowledge of construction administration that will help to create a practical approach to anything we design. We are confident that the design team that we have assembled will be unmatched in experience, talent and drive to fulfill the Division of General Services' vision for success.

Components for Success

One of several things that make GAI the right choice for this assignment is the broad range of service types that our team can offer. To ensure a successful project outcome, we must first identify the constraints and opportunities that are presented by the project. Whether they are physical constraints or related to permitting, our team has the luxury of being able to draw insight from recognized experts in the fields of vehicular and pedestrian circulation, cultural resources, landscape architecture, biology, ecology, and site utilities. The principal design team members have extensive experience with regard to projects of this type, providing an insight, knowledge and design ability that no other team can match.

- + **David Gilmore, RLA, ASLA.** Mr. Gilmore will serve as the overall project manager, overseeing scheduling, personnel, design and client communication. The central focus of his practice is on the continued development of the firm's site design and landscape architecture projects throughout the eastern United States, while providing landscape architectural support to all of GAI's offices and clients.
- + **James A. Hemme, PE, LRS.** Mr. Hemme specializes in site engineering, planning, permitting and stormwater management, with emphasis on stormwater and infrastructure design. He brings a multi-disciplinary background to projects that enable him to see the "big picture" of what will be needed to take a project from start to finish.
- + **C. Elwood Penn, IV, PE.** Mr. Penn specializes in project management and administration in the areas of highways, land development, and utilities. He is experienced in developing environmental impact statements

and assessments in accordance with National Environmental Policy Act (NEPA) regulations. Mr. Penn has been responsible for environmental assessments, site investigations, location studies, and preliminary and final designs for numerous transportation, infrastructure and land development projects in Virginia and West Virginia.





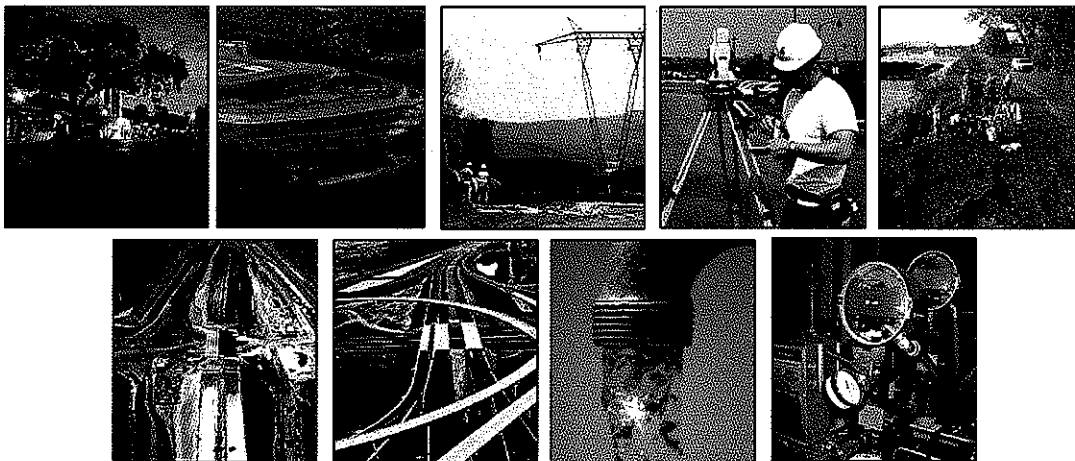
- + **Mark D. Young, PE.** Mr. Young specializes in preparing preliminary and final contract plans and documents, including right-of-way plans, horizontal and vertical geometry, traffic control, permitting, drainage, erosion control, and specifications and bid documents for highways, bridges, abandoned mine lands, and site development.
- + **Mark D. Shawl, RLA, LEED AP.** Mr. Shawl specializes in all aspects of landscape architectural design. His experience includes, but is not limited to construction document and technical specification preparation, site analysis, schematic design, construction administration, master and land-use planning (parks, recreational, residential, institutional, and commercial), streetscape and municipality improvements, greenway trail design, and graphic presentation drawings.
- + **Charles F. Straley, PE** Civil engineering with an emphasis in geotechnical engineering, including all aspects of subsurface exploration, laboratory testing, foundation and embankment design, slope stability, material and construction specifications, and construction administration, management and monitoring.
- + **Joseph A. Prine, PE.** Mr. Prine has a wide variety of experience in environmental engineering, civil engineering, site development, streetscape, and planning projects while at GAI and through previous employments. He has worked with private developers, architects, municipalities and governmental agencies. He has also contributed to planning and design in several community improvement and streetscape projects.

Our team's goal is to meet the needs of the State of West Virginia Division of General Services while keeping construction costs low and remaining sensitive to the surrounding environment. In addition to economics and practicality, the projects should create a connection to the surrounding natural environment.

Full Service Capabilities

We are a One Stop Shop. Our multi-disciplined capabilities mean clients can form a single partnership to shepherd their entire project to completion. GAI is one of the few engineering and environmental consulting firms nationwide with an in-house cultural resources team. This strong background in historic preservation better equips GAI with the tools to address any client concern.

We take a proactive approach to every project, working to identify issues and finding solutions before they turn into costly problems. We approach our work from the contractor's perspective, finding as many ways to assist them in the building process as possible. As a result, our work is highly constructable, efficient and cost-effective. Our clients are highly valued partners – our goal is to make working with us the easiest and smoothest process that you've experienced with an engineering firm.





Service Briefs





Land Development Service Brief

Overview

Land development involves the integration of a variety of activities that include: Economic Feasibility, Master Planning, Engineering and Environmental Analysis, Legal Issues, Financing, and Marketing.

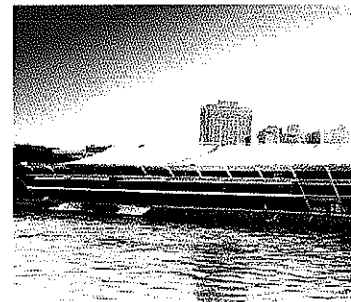
Without effective guidelines and long-term planning, development becomes haphazard and risky, reactive only to short-term needs. Success is largely dependent upon early planning and engineering studies that provide insight into the best possible use, reuse, or development of properties.

Project Experience

Since 1958, GAI Consultants, Inc. (GAI) has worked extensively with developers, private industry, and government agencies on planning and developing projects for the commercial, residential, industrial, and recreational markets.

- Regional shopping malls
- Industrial parks
- Commercial office sites
- Recreational parks
- Residential subdivisions
- Recreational and resort communities
- Marinas
- Higher Education
- Healthcare
- Airports

In the present economic climate, our clients are faced with escalating project costs due to rising real estate value, diminishing availability of desirable sites, growing environmental concern and increasing construction cost. All of these factors along with changes in real estate tax laws make obtaining financing for a development project an almost insurmountable task. However, GAI's development professionals are experts who keep abreast of changes in regulations. Also, we can analyze project/site feasibility to provide cost-effective strategies for many kinds of projects, even major projects involving infrastructure that must be completed under time-sensitive schedules.



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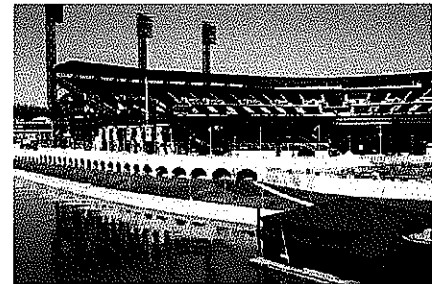
Civil Engineering Planning and Development Services

- Site selection
- Permit acquisition
- Economic feasibility studies
- Facilities planning and design
- Environmental assessments
- Wetland delineation
- Archaeological studies
- On-site and off-site traffic impact assessments
- Roadway design
- Foundation investigations
- Code impact assessments
- Hydrologic and hydraulic studies
- Storm-water management
- Site lighting
- Land use studies
- Landscape architecture
- Erosion and sedimentation control
- Utility assessments and rehabilitation
- Surveying, construction layout, and as-builts
- Materials testing
- Construction documentation
- Construction cost estimates
- Construction monitoring
- Construction management
- Structural and non-structural alternative analyses

We provide engineering services for all project phases—planning, permitting, design, and construction. Our complete services, tailored to the client's needs, range from site selection and feasibility studies, through developing master plans and preparing detailed design drawings and specifications, to construction management. We provide project planning and coordination to help our clients obtain the necessary construction approvals, and we render construction planning/management and quality assurance services to fulfill project requirements.

GAI's planning and development services are provided by an experienced staff of land use planners, site engineers, landscape architects, traffic engineers, roadway and drainage engineers, structural and soils engineers, utility designers, and environmental specialists.

Through our many years of experience in site development work, we have developed the expertise to evaluate the cumulative impact of topographic, hydrologic, geologic, environmental, and geographic factors on a site. Of equal importance is our staff's appreciation of the impact that the non-engineering aspects of site development—social, economic, and legal—can have on a project's success.



Support Services

The successful, cost-effective outcome of a site planning and development project requires the support of several engineering service groups and the interaction of various engineering disciplines.

- Transportation engineering
- Geotechnical engineering
- Structural engineering
- Environmental engineering
- Environmental sciences

The blending of our academic training with our experience in research and practical engineering provides a unique background for the solution of complex site development problems involving structural analysis, load determination, structural reliability, soil-structure interaction, and storm-water management.

Basic physical principles combined with innovative engineering ideas help our clients preserve aesthetics and enhance the environment as they go about the business of shaping tomorrow's surroundings.



Planning and Site Design Service Brief

Overview

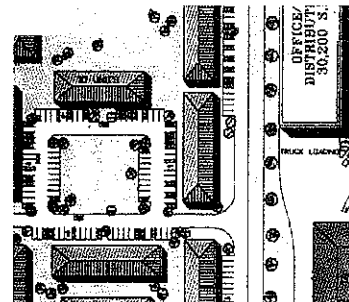
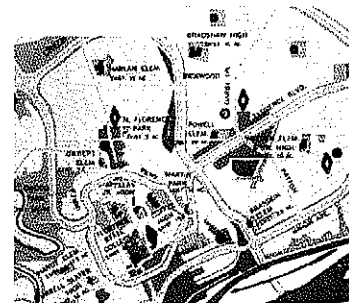
GAI Consultants, Inc. (GAI) provides a full complement of comprehensive urban and site planning and design services. We have a solid core of professional planning personnel with expertise in a wide range of planning and growth management applications, grantsmanship, and plan implementation processes.

Our corporate culture fosters a stable, talented and service-oriented staff to provide integrated strategies and solutions to meet project-specific needs and to help solve neighborhood, community and regional development issues, and to provide a strong sense of community.

Our Planning Services Include:

- Comprehensive planning and urban design
- Community planning and redevelopment
- Land use and development regulations
- Due diligence and land use entitlements
- Master plan and site selection studies
- Corridor alternatives analyses
- Developments of regional impact
- Project development and environmental studies
- Historic architecture analysis and community
- Design standards
- Public participation, visioning and consensus building

We provide our clients with a comprehensive understanding and efficient approach to their program with our in-house civil, landscape architecture, transportation, structural, survey, and CEI capabilities.



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Comprehensive Planning

Comprehensive planning includes all phases of information gathering, analysis, and documentation including:

- Database development for land use, economic, facility conditions, housing and demographic, and transportation analyses
- Opportunity/obstacle identification including blight, facility needs, land use suitability, and land development potential analyses
- Evaluation of plan alternatives including resolution of conflicts, consensus building, and impact analysis related to social, political, environmental, economic, and physical issues
- Plan implementation including the organization and development of governmental growth management tools. These include growth management plans, land development regulations, and architectural and engineering guidelines

GAI's comprehensive planning team has been instrumental in helping federal, state, county, and city governments meet the growing needs of their constituencies. Our planning services promote a safe and orderly economic development.

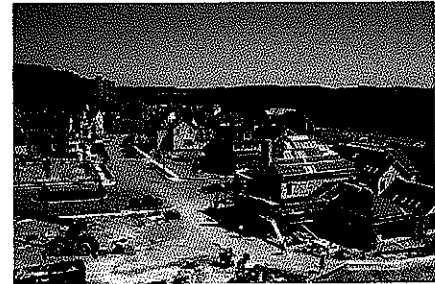
Urban Planning and Design

Urban planning and design services focus on the community, neighborhood, and site-specific levels. Streetscaping, area redevelopment, land use and development controls, and special-use developments are all important aspects of our services. These types of planning services include:

- Evaluation and review of development controls
- Preparation of urban streetscape programs
- Preparation of transportation improvements, and utility and infrastructure corridor studies
- Alternatives analyses, project development, and environmental studies
- Preparation of environmental assessments and studies

GAI's team approach is comprehensive and includes expertise in planning, engineering, construction, and surveying. With these capabilities our clients receive responsible, economically feasible solutions. Our team members are also experienced in architectural design, landscape design, and funding grantsmanship. We have solutions to meet site-specific needs and to help solve regional development issues.

These solutions meet criteria including: legal constraints, social sensitivity requirements, economic requirements, and optimization of the development potential of existing and future communities and neighborhoods.



Site Planning and Design

GAI has experience in site planning for individual, public, and private developments. We frequently team with financial consultants for complete site development feasibility analysis. This work usually includes a market analysis, market strategy, and growth strategy. Our comprehensive list of services includes:

- Development of regional impact studies
- Site development feasibility analysis
- Zoning analysis and change consultation
- Site selection studies, engineering and environmental evaluations, and master planning
- Site planning, layout, and design
- Eminent domain technical services for property analysis, cost-to-cure analysis as a result of public condemnation proceedings, and expert witness testimony

Public and private site development demands the full optimization of investment capital and strict attention to detail in permitting, site layout design, circulation, site egress and ingress, and surrounding land use development. GAI's team achieves these goals with reliable planning and design solutions.

Within these three planning service areas, GAI's process provides thorough and economical solutions for land use, growth management, and capital investment challenges faced by federal, state, county, and municipal agencies and private developers.





Site Development Service Brief

Overview

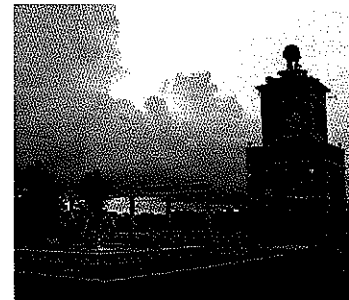
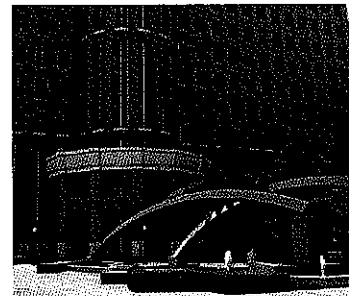
Critical to a project's viability, public resistance, environmental issues, local zoning issues, site topography and regulatory hurdles cause Land Development to be a challenging industry. From environmental impacts and public review to a variety of technical constraints, permitting and plan approval can hinge on any number of preliminary planning and design considerations. Furthermore, failure to anticipate problems can result in substantial and even insurmountable delays in a project's timetable and its economic viability.

GAI Consultants, Inc. (GAI)'s primary focus is producing superior projects on time and on budget. Our experience includes dozens of land development and redevelopment projects on residential, commercial, industrial and mixed-use properties. From conceptual site design through final construction, we not only know the process, we possess the needed experience to help you succeed. Through the interaction of our various engineering disciplines, we are able to provide comprehensive services for every phase of each project. These include:

- Land surveying
- Feasibility studies
- Facilities planning and design
- Land use studies
- Master planning
- Landscape architecture
- Permit acquisition
- Impact fee studies
- Traffic impact assessments
- Site design
- Stormwater management systems
- Streetscape design
- Subdivision design
- Roadway and infrastructure design
- Construction layout surveying
- Utilities assessments, rehabilitation and design
- Water and sewer design
- Construction documentation and monitoring

We base our understanding and appreciation of land development potential on the knowledge of the local development climate and work experience in the area.

To help you achieve your goals, GAI employs professional engineers, environmental scientists, planners, registered land surveyors and field technicians who are all supported by expert technicians and state-of-the-art CADD systems. GAI makes meeting your needs our top priority.





Traffic Engineering Studies & Design Service Brief

Overview

GAI Consultants, Inc. has provided superior traffic engineering services for numerous clients and projects for the last three decades. Our clients include local, state, and federal governmental agencies as well as firms and institutions in the private sector.

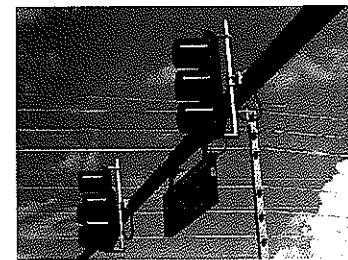
Blending professional training with our experience in research and practical engineering results in a unique background for the successful completion of projects ranging from preparing routine traffic engineering designs to solving complex traffic problems.

Traffic Engineering Services

- Traffic impact studies
- Parking studies
- Corridor accident & safety studies
- Roundabout justification studies
- Signal warrant analyses
- Signal timing
- Prepare plans and specifications
 - Traffic signalization
 - Signal interconnection
 - Highway signing
 - Highway lighting
 - Traffic control during construction
 - Pavement marking
- Estimates of probable construction cost
- Traffic sign inventory

We have extensive experience in both urban and rural settings, from systems planning through project studies. GAI engineers perform access management level of service studies and site impact analyses.

GAI's engineers keep abreast of the latest developments in transportation engineering through physical and online research. We continually update our technical training through professional societies, technical seminars and informal in-house training.



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Stormwater Management/Drainage Engineering Service Brief

Overview

GAI Consultants (GAI) understands that land development and highway construction must meet the new and changing Phase II stormwater management criteria for construction and post construction activities.

Our team of experienced stormwater management professionals have established a four-step process that will expedite the permitting process and identify the most cost-effective, post-construction stormwater pollution prevention technology.

Four Steps to Effective Stormwater/Drainage Management

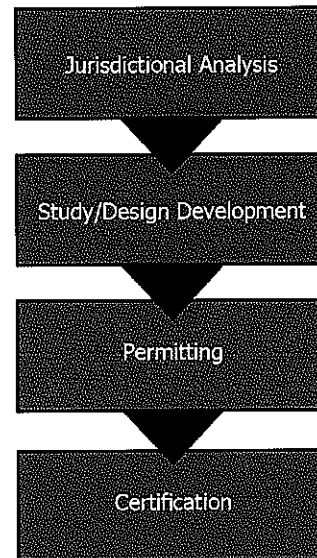
Jurisdiction Analysis. Our team researches and identifies applicable codes, regulations, and requirements associated with the jurisdictional agencies.

Study/Design Development. Our experience includes engineering design of:

- Retention and detention systems
- Collection systems, including curb and gutter, sewer inlets, piping systems and roadway ditches
- Bridge hydraulic design
- Floodway studies including floodplain compensation or no-rise certification
- Cross drain design
- Wetland mitigation
- Best Management Practices (BMP) treatment systems including ponds, wetlands, filtration, and open channels.

Permitting. GAI uses proven, standardized application procedures and formats that prevent deficiencies and facilitate quick permit approvals. Our team works with the authorities throughout the process to prevent any permitting delays.

Certification. Upon a successful permitting process and construction, GAI thoroughly reviews the project to assure all design elements are completed properly and that the project is officially certified by the appropriate compliance jurisdictions.





Utility Design Coordination - Design Projects Service Brief

Overview

A massive network of overhead and underground utility systems for electric power, telecommunications, water and sewer, cable television, petroleum and natural gas lines crisscross our environment and occupy a significant amount of space within the Right-of-Way. As a result, each new construction project, whether it is a road, a bridge, a building, or a development, requires meticulous attention to new utility systems, and those already in place and in potential conflict.

GAI Consultants (GAI) assists clients in addressing utility conflicts by providing a unique service which takes the guess-work out of the liability and destructive consequences of cutting or disrupting existing utility services in and around new construction projects.

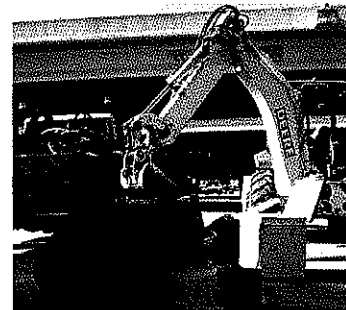
To aid utility owners and design project managers/clients in cost effectively relocating or upgrading their respective systems, our utility coordination team concentrates on effective communication, scheduling and follow-up.

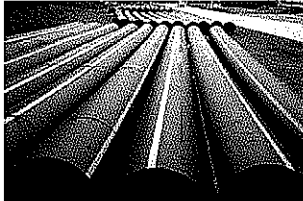
GAI's Utility Coordination team includes professionals whose background, experience and knowledge cover a comprehensive range of engineering disciplines encompassing civil/site, traffic, transportation, structural and utility engineering, land planning, and eminent domain technical services.

Due to our thorough approach, GAI successfully reduces the risk of liability, decreases utility relocation costs, and aids providers in maintaining superior service to their customers.

- **Permitting**
Our utility permit preparation process includes existing site or construction plan review, documentation preparation, and follow-up.
- **Certification**
GAI thoroughly reviews the proposed utility relocations and adjustments to certify that all design elements have been properly addressed, and all Agreements are in-place. We make sure the Utility Work Schedules are complete and acceptable, and that the utility work is coordinated with the proposed construction schedule.

Research and planning are the keys to avoiding costly utility conflicts. GAI's utility coordination teams know how to bridge the communication gap between utility companies and property owners during the design process. Our utility design coordination keeps projects on schedule.





Water & Sewer Service Brief

Overview

Critical to a project's viability, public resistance, environmental issues, local zoning issues, site topography and regulatory hurdles cause Land Development to be a challenging undertaking. From environmental impacts and public review to a variety of technical constraints, permitting and plan approval can hinge on any number of preliminary planning and design considerations. Furthermore, failure to anticipate problems may result in substantial and even insurmountable delays in a project's timetable and its economic viability.

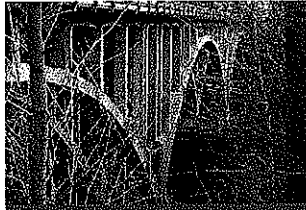
At GAI, our focus is to produce quality projects on time and on budget. Our experience includes dozens of land development and redevelopment projects on residential, commercial, industrial, and mixed-use properties. From conceptual site design through final construction, we know the process and have the experience to help you succeed. Through the interaction of our various engineering disciplines – we are able to provide comprehensive services for every phase of each project, including:

- Land surveying
- Feasibility studies
- Facilities planning & design
- Land use studies
- Master planning
- Landscape architecture
- Permit acquisition
- Impact fee studies
- Traffic impact assessments
- Site design
- Stormwater management systems
- Streetscape design
- Subdivision design
- Roadway and infrastructure design
- Construction layout surveying
- Utilities assessments, rehabilitation, and design
- Water and sewer design
- Construction documentation and monitoring

At GAI, we base our understanding and appreciation of land development potential on the knowledge of the local development climate and work experience in the area.

- To help you achieve your goals, GAI employs professional engineers, environmental scientists, planners, registered land surveyors and field technicians who are all supported by expert technicians and state-of-the-art CADD systems. GAI makes meeting your needs our top priority.





Geotechnical Service Brief

Overview

Since 1958, GAI Consultants, Inc. (GAI) has provided geotechnical engineering services. Using the principles of engineering geology, soil and rock mechanics, and foundation engineering enhanced by practical experience, our engineers and geologists assist clients with projects that involve managing the earth's materials and geologic processes.

Project Capabilities

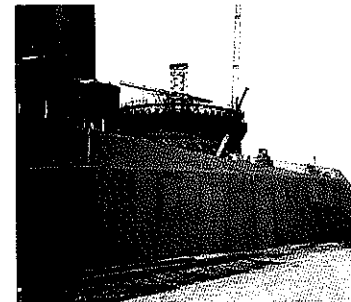
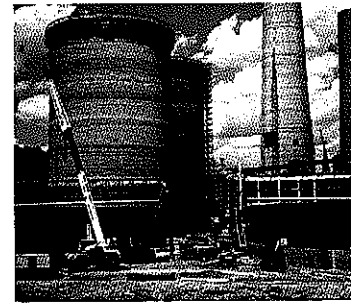
Geotechnical investigations are necessary preludes to the sound, economical planning, and design of:

- Buildings
- Industrial plants
- Community and recreational developments
- Dams
- Highway and bridges
- Tunnels
- Soil and rock slopes
- Retaining structures
- Commercial developments
- Waste disposal areas
- Facility additions
- Transmission lines
- Environmental site remediation

Geotechnical Engineering Services

GAI's geotechnical engineering services include:

- Geologic studies and reconnaissance
- Subsurface explorations
- Foundation recommendations, design, and research
- Subsidence studies and remediation
- Slope stability analysis and design
- Earthfill and rockfill dam evaluation and design
- Geosynthetic materials design
- Tunnel analysis and design
- Earth and rock retaining structure design
- Mine fire abatement
- Mining engineering
- Instrumentation and monitoring
- Foundation research
- Materials testing



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Subsurface Explorations

An initial review of a site's geology and a site reconnaissance can reveal poor soil conditions, potential mine subsidence, karst conditions, expansive materials, and slope stability problems. Our staff uses this information to plan and conduct a subsurface investigation so they can develop recommendations for foundation design or site utilization. An investigation includes determining soil, rock, and ground-water conditions beneath a site and identifying design elements needed to minimize a project's impact on the environment.

Support is provided by our in-house materials and chemical laboratories, which are equipped to identify and determine fully the engineering parameters of soil and rock.

Engineering Analyses

Once GAI determines a site's geology and subsurface conditions, we correlate field and laboratory test data. Our staff selects engineering parameters to use in analyses that may include:

- Bearing capacity
- Settlement potential
- Slope stability
- Subsidence potential
- Seismic response
- Soil-structure interaction
- Dewatering requirements
- Foundation and structural vibrations
- Excavation support requirements

Recommendations and Design

Using the results of the analyses, GAI can provide geotechnical recommendations or complete design services for appropriate foundation types, foundation elements, site preparation and grading, and construction procedures.

Also, we have extensive experience in identifying appropriate borrow sources for materials used in the construction of earthen structures, and clay caps and liners for landfills.

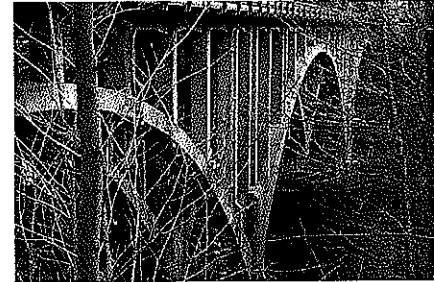
Construction Monitoring and Testing

Besides our ability to provide analysis and design services, we are experienced in using detailed quality control procedures to monitor the construction of all types of earthen structures and foundations.

As a matter of routine, GAI performs pile, pier, or plate load-testing, vibration monitoring, and pre-blast or pre-driving surveys of facilities near a project to determine the presence of pre-construction damage.

Foundation Research

Over the years, GAI has amassed formidable experience in the full-scale load-testing of foundations, calibrating analytical models to the results of full-scale load tests, and developing computer programs for designing foundations efficiently. We have conducted numerous state-of-the-art studies and prepared design manuals on a variety of geotechnical topics for many clients.



Clients

GAI has provided geotechnical engineering services to clients who include:

- Electric utilities
- Metals and mining companies
- Local, state, and federal governments and agencies
- Highway departments
- Manufacturers
- Developers
- Architects





Landscape Architecture Service Brief

Overview

GAI Consultants, Inc. (GAI) performs various landscape architecture services for a wide range of project types in order to assist our clients, and provide them with individual design solutions that exceed their expectations.

GAI's team of professional landscape architects work on a wide range of project types to achieve a balance between the constructed and natural environment. Projects range from the site design for a small, urban park to a regional study of native ecosystems. Landscape architects often work as an integral part of a comprehensive GAI design team with other disciplines. This comprehensive approach is used in: land development, highway corridor studies, recreational and resort communities, municipal and comprehensive planning studies, environmental studies and mitigation design, urban design and neighborhood beautification plans.

Benefits of Landscape Architecture Services

For both public and private sector projects, landscape architecture design provides tangible benefits to the client. These advantages include:

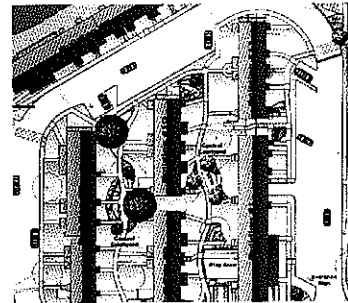
- A more aesthetic project and a greater return on investment through site amenity design features
- Lower site development costs through site analysis and site-sensitive design

GAI creates unique, individual design solutions for the client, which can help a project achieve a higher profile and stand out among the competition. Our team of land planners and landscape architects promote both site-appropriate and sustainable design through the use of innovative techniques such as GIS mapping of natural systems, the use of Traditional Neighborhood Development (TND) concepts, and the use and promotion of native plant materials.

Our Landscape Architecture Designers contrive the themes and the guides for the creation of active and passive landscape spaces. First, we begin by attaining a comprehensive understanding of our client's needs, goals and specific site opportunities. Then, armed with this insight and our internal resources, we achieve the "conceptual intent" of the landscape space. Lastly, we redefine the concept and transform it into Landscape Design.

Communicating and presenting concepts and themes are essential tasks which, as a result, lead to making interaction with our clients and other project related disciplines the most indispensable step towards the final creation of the Landscape Design Construction Documents. Through maintaining contact and understanding the project goals, we stay on task and on budget.

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Landscape Architecture Services

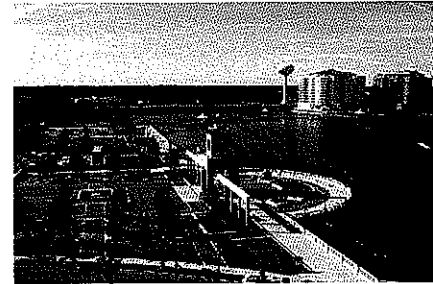
GAI provides both stand-alone landscape architecture services as well as any required support services for a wide array of project types including:

- Site analysis
- Site layout and grading plans
- Landscape design
- Community master plans
- Hardscape design and construction detailing
- Streetscape design
- Wetland mitigation design
- Park and recreation planning
- Urban design studies
- Waterfront design
- Golf course design and resort planning
- ADA design
- Visual impact/viewshed studies
- Historic landscape studies
- Redevelopment planning
- Forest conservation plans
- Land use studies
- Campus planning
- Project signage and thematics
- Irrigation design
- Regional planning studies
- Beautification plans
- Rail-to-trail conversions
- Greenbelt protection plans
- Design guidelines and ordinances
- Master planning
- Conceptual design/design development
- Construction plans/cost estimates
- Presentation graphics
- Public involvement and consensus building
- Bid specification packages
- Bid services
- Construction assistance services
- Maintenance guidelines

For each new opportunity, our mission continues to be creating enriching and extraordinary spaces where communities can live, work, and participate in recreational activities. By considering implementation and maintenance throughout the design, we ensure lasting quality.

We also provide in-house planning and design support to other GAI professionals in the areas of storm-water management facilities, road alignment, environmental studies, and construction cost estimates.

Local, state, and federal regulatory agencies have recently placed an increased emphasis on sustainable design concepts promotion as part of the land development process. These may range from large-scale initiatives such as the 1991 Intermodal Surface Transportation Enhancement Act (ISTEA) which seeks to promote alternative transportation methods, greenways, and highway beautification, to small-scale local initiatives such as tree preservation and hillside protection ordinances. By keeping up with these recent trends, GAI's landscape architects work with review agencies and the public to ensure cost-effective design solutions for the client that also satisfy public-issue concerns.

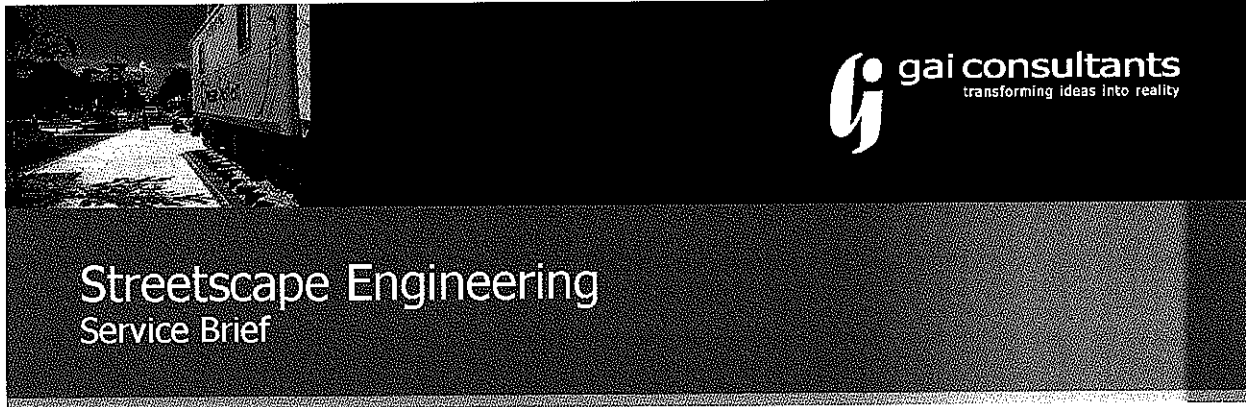


GAI utilizes computer technology programs designed to assist landscape architecture and land use planning studies, including:

- GIS for land use and natural systems mapping
- CADD for landscape and hardscape construction design
- Computerized landscape specification and cost estimating software
- 3-D terrain modeling capability
- Plant materials and landscape product databases

By combining the latest technology with a hands-on, pro-active approach to project design and management, GAI's team of landscape architects promote wise stewardship of natural resources and achieve the client's goals and objectives.





Streetscape Engineering Service Brief

Overview

Streetscape Engineering has become a critical ingredient in the revitalization of our nation's urban centers. Streetscape Engineering includes analyzing, evaluating, and designing vehicular and pedestrian traffic systems, creating park-like landscaping and amenities, accommodating Utility System improvements and relocations, and creating aesthetically pleasing signage and lighting. With these improvements, urban environments have been transformed into attractive, livable places to shop, conduct business, and enjoy cultural events.

GAI Consultants, Inc. (GAI) has an exceptionally remarkable performance record for helping cities revitalize their urban cores thereby helping to promote economic rejuvenation and reduce crime. For more than two decades, GAI has provided streetscape planning, engineering, and construction management to cities throughout Florida. As a result, GAI has established a proven urban revitalization program that incorporates the following essential elements.

- Concept development
 - R/W utilization studies
 - Infrastructure needs assessment
 - Level of treatment/budgeting
 - Planned adjacent improvements coordination
 - Public involvement
 - Graphic imaging
- Construction documents
 - Detailed field survey
 - Utility coordination/upgrades
 - Plans and specifications
 - Maintenance of business plan
 - Permitting
 - Cost estimating
- Construction phase services
 - From part-time monitoring to full-time construction management
 - Post construction maintenance plan



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Surveying Service Brief

Overview

GAI Consultants, Inc. (GAI) offers a full range of surveying services to meet the land documentation needs of public and private land owners, developers, and government agencies. Our surveying services are comprehensive, covering almost all surveying applications.

Boundary Surveys

Boundary surveys are developed for a wide range of uses. These include: land title/ownership purposes; real estate financing; as-built delineations; insurance purposes; real estate appraisal and sales; encroachment delineation; boundary line dispute resolutions; subdivision plats; condominium plats; and rezoning/ variance purposes.

Construction Surveys

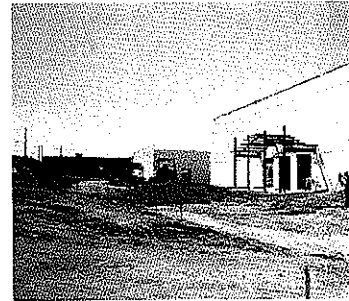
Construction surveys can save valuable time and cost in the field. Surveys conducted on site during the initial stages of construction preparation are critical to establish location (horizontal) and elevation (vertical) placement of designed improvements. Our survey teams have saved our construction/contracting clients thousands of dollars in potentially damaging lost time and litigation liability.

Control Surveys

Control surveys employ a series of grid lines and points to accurately pinpoint physical features. The process consists of establishing horizontal and vertical control points to develop a series of independent triangulation measurements. This network is then verified and compared to develop reliable and accurate control grids.

Design Surveys

Design surveys provide the foundation upon which all design for manmade improvements must rely on for design development. Boundary lines' location, topography, site physical features (rock outcroppings, trees, etc.), as well as any on-site buildings, utilities, encroachments, and easements are recorded. From this foundation design plans can be effectively produced. The GAI surveying team has developed design surveys for all types of design assignments including bridges, highways, buildings (residential, commercial, industrial, institutional), utilities (electric power, gas, water, sewer, cable TV, phone) and transportation facilities (airports, railroad, truck and bus facilities).



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Hydrographic Surveys

GAI has the trained staff, equipment, and experience to survey bridge structures, lake and river shore lines, ocean tide lines/elevations, and wetland mitigation areas.

Topographic Surveys

Topographic surveys incorporate ground run, aerial, tree, utility location, wetland, floodplain and hydrographic surveying and mapping. GAI uses state-of-the-art field equipment, electronic record recorders and computer mapping technology to produce accurate topographical mapping documents for use in design development, storm-water management, and construction.

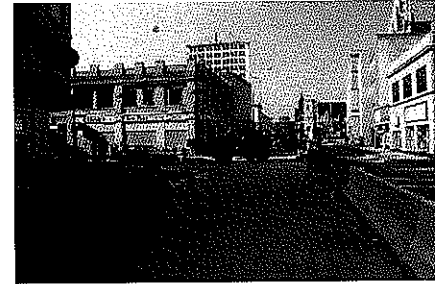
Wetland Mitigation Surveys

Wetland mitigation surveys include not only wetland delineation but also surveys for plant identification, planting, construction staking, fill material calculations, and storm-water management. GAI's wetland mitigation surveys support both wetland creation and enhancement projects.

Specialized Surveys

GAI's survey teams' specialized surveys include a wide range of applications. These include archaeological, cultural/historical, utility location, legal determination, and eminent domain technical services support.

GAI can assemble an experienced, fully equipped survey team to handle almost any survey project assignment. In addition to our field survey crews, our in-house mapping specialists use an extensive library of computerized mapping software including Terramodel, Arc-Info, GRASS, Microstation and AutoCAD. GAI has the experience, the assembled team, and the organization for quick response. Our company is committed to satisfying each client's individual survey needs.



Global Positioning System (GPS)

GAI employs state-of-the-art GPS equipment for horizontal and vertical control surveys. GAI operates Trimble 5700 Series Global Positioning System Total Stations that are accurate to within two centimeters on the horizontal axis and three centimeters on the vertical axis. GAI also employs a mobile Real-time Kinematic (RTK) System that permits instant gathering and processing of information from either known or established points. By combining GPS technology with conventional survey methods, GAI saves the client time and money by eliminating the need to double back survey control networks to assure a closed survey. GPS technology also allows the surveyor to reference a global datum to assure control points can always be easily recreated if destroyed.





Construction Engineering and Inspection Service Brief

Overview

The Construction Engineering and Inspection (CEI) industry is based on client service, construction integrity, and on-time/on-budget project completion. Without reliable CEI services, the client is without protection. GAI Consultants, Inc. is dedicated to safeguarding our clients' interests and the construction integrity of their projects.

Our CEI team consists of highly skilled construction engineers, resident engineers, and construction technicians with experience inspecting large, multi-phased construction projects. Our project portfolio ranges from major bridge replacements to roadway widening projects. For new construction and enhancement projects, GAI's CEI team has the reliable experience to provide client protection throughout the construction process.

Our services include:

- Pre-Construction Services
- Pre-Construction Conference Implementation
- Construction Engineering and Inspection Services
- Project Management/Contract Administration
- Post-Construction Services

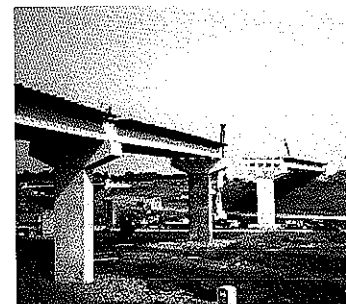
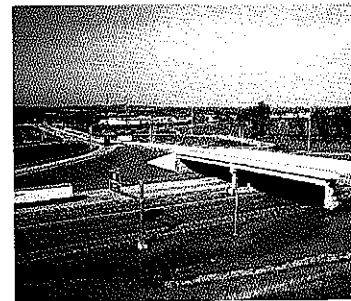
Pre-Construction Services

In this phase, our team carefully evaluates the project's specialized needs and cost-efficiently tailors staff and resources to provide for a high quality product.

Pre-Construction Conference Implementation

We develop a comprehensive meeting to create a project team, and set the tone of cooperation and communication throughout construction. This meeting includes: the owner/client, the selected contractor and his subcontractors, local utility companies, governmental units, GAI and, the owner/client representative.

At this meeting, the team outlines communication methods, establishes processes for change orders and construction pay requests, and



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sets milestone production completion dates.

A successful pre-construction conference enhances project performance, communication, and budget and schedule outcomes.

Construction Engineering and Inspection Services

CEI services encompass the entire production process. It is the daily monitoring of the construction program and includes inspecting workmanship, testing construction material quality, and monitoring on-site construction safety for workers and the general public. It also involves implementing public information processes to ensure that the public as well as all governmental agencies, contractors, and the owner/client are kept well informed.

Project Management/Contract Administration

Project management/contract administration means effectively maintaining progress reports, quantity surveys, supplier/construction material deliveries, shop drawing review and plan interpretation, pay request administration, and resolving claims, disputes, and liability issues.

This work element provides the protection the client needs to ensure his project is accomplished in a

professional and appropriate manner with minimal or no construction delays, cost overruns, and/or safety violations.

Post-Construction Services

Post-construction services deliver thorough, concise reports on the work effort's overall performance. The post construction services include a full inspection of the project in relation to the goals and objectives established at the pre-construction conference.

GAI is proud of its performance in the CEI services industry. Our success is based on repeat business, which provided comprehensive CEI services for over \$175 million in construction over five years.





Brownfields Service Brief

Overview

A brownfield site is an abandoned industrial or commercial facility where expansion or redevelopment is hampered by real or perceived environmental contamination. Remediating brownfields is a challenging undertaking as permitting, public resistance, and environmental issues impact a project's commercial success.

GAI helps private and public sector clients turn potential liabilities into invaluable assets with its full range of environmental site assessment and remediation services and planning and development studies. We evaluate the cumulative impact of topographic, hydrologic, geologic, environmental, and geographic factors on a site, along with social, economic, and legal impacts.

Environmental Site Assessment and Remediation

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires buyers and lenders to exercise "due diligence" to discover on-site liabilities prior to purchasing commercial or industrial property. Failure to show due diligence may result in the purchaser becoming financially responsible for a costly cleanup. GAI can assist in addressing these liabilities through:

- Phase I environmental site assessments
- Phase II site investigation/characterization
- Development of cost-effective remedial solutions that help protect human health and the environment while permitting site reuse
- Risk assessments
- Design and oversight of Phase III remediation where contamination is found

Planning and Development

GAI's professionals have worked extensively with developers, private industries, redevelopment authorities, and government agencies on the planning and design of development projects on brownfield sites. These projects include:

- Regional shopping malls
- Industrial parks
- Commercial office sites
- Recreational parks
- Residential subdivisions



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Phase I Site Assessment

The first step in determining the environmental condition of a property is through a Phase I environmental site assessment. In 1993, the American Society for Testing and Materials (ASTM) developed a standard practice for Phase I assessments. Completion of this assessment in accordance with the ASTM standard is considered due diligence.

Phase II Site Investigation

If it is determined during the Phase I assessment that conditions may exist that could have environmental impacts, a Phase II site investigation is proposed. GAI will custom design a Phase II site investigation for each project. These investigations can include soil and ground-water sampling and analyses, building material analyses, and testing of other identified conditions. The Phase II investigation is designed with the Phase III remediation task in mind and should define the extent and degree of contamination encountered.

Phase III Site Remediation

GAI can also design and oversee the Phase III remediation of a site where contamination is found. The remediation method is chosen based on the contaminants, the site conditions, the contaminations' extent, degree, and location; and many other factors. GAI recommends the best remedial solution that allows for the protection of human health and the environment while permitting site reuse.

Many states have brownfield programs that have specific guidelines for conducting these investigations. GAI is actively involved with these programs in Pennsylvania, Indiana, and Ohio, and we monitor these programs as they develop in many other states. Our investigations are tailored to meet our clients' specific needs.

Development of Brownfield Sites

The most significant factors that differentiate the reuse of industrial properties from other site development activities are the need to determine the cause of contamination and who is liable to clean up environmental contamination from previous use. These factors are significant because of their effects on costs, time delays, and potential liabilities. Many brownfield property owners are reluctant to offer such properties for sale or reuse since they may be liable for costly cleanup responsibilities.

GAI's development professionals are experts who keep abreast of changes in regulations for the redevelopment of contaminated property. We analyze project and site feasibility to provide cost-effective strategies for many kinds of projects including reusability of existing structures or equipment at the site, access to transportation and utilities, and local interest in site development.

Summerset at Frick Park

Comprehensive planning, design, and permitting for a 713-unit, multi-phased residential development on an abandoned slag heap.

- 2002 ESWP, Project of the Year Award - Environmental Reclamation Category

Work Tasks

- Field Survey
- Permitting
- Mass Earthwork
- Drainage
- Revegetation
- Air Monitoring
- Geotechnical Studies
- Environmental Studies
- Construction Monitoring



Edgewood Towne Centre

Comprehensive site planning and development for reuse of former railway signaling and traffic control device manufacturing facility.

- 1998 ACEC, Engineering Excellence Award

Work Tasks

- Environmental Overview
- Alternative Site Plans
- Transportation System Plans
- Erosion Control Plan
- Stormwater Management Plan
- Utilities Location
- Permitting
- Community Involvement
- Health and Safety Training
- Risk Analysis

Chisman Creek Superfund Site

Converted a National Priorities List ash site to a recreational complex, saving more than \$1 million relative to the EPA's Record of Decision.

- 1998 ACEC, Engineering Excellence Award

Work Tasks

- Field Investigations
- Groundwater Modeling
- Treatability Study
- Site Remediation Design
- Health and Safety Training
- Risk Analysis





FIRM QUALIFICATIONS

GAI is an 800-person, employee-owned, multi-discipline engineering and environmental consulting firm, serving our clients worldwide in the energy, transportation, real estate, water, municipal, government, and industrial markets from offices throughout the Northeast, Midwest, and Southeast United States. This section provides further information regarding the firm and presents our overall landscape design capabilities.

Services Offered:

Environmental Engineering and Studies; Civil Engineering; Land Development; Transportation Engineering and studies; Geotechnical Engineering; Structural Engineering; Cultural Resources; Construction Engineering & Inspection; Surveying; GIS; Landscape Architecture; Electrical Engineering; Mechanical Engineering; Water Resources Management.

Markets Served:

Energy, Transportation, Real Estate, Water, Municipal, Government, Institutional, and Industrial.

Founded:

October 1958, Pittsburgh, PA; consolidated in 2003

Staff:

Over 800 employee's corporate-wide

Revenue:

Over \$70 million annually

Ownership:

100 percent Employee-owned (ESOP) firm with a 7-member board

Vision:

The Company of Choice... *Transforming Ideas into Reality*©

Mission:

To Continue Growing as an Integrated Consulting Firm, Creating Value for Our Clients and Employees

Core Values:

- + Honest, Fair, and Ethical Behavior
- + Quality Work Culture
- + Company Loyalty and Support
- + Equal Employee Opportunities
- + Mutual Employee Respect

Awards (www.gaiconsultants.com/awards):

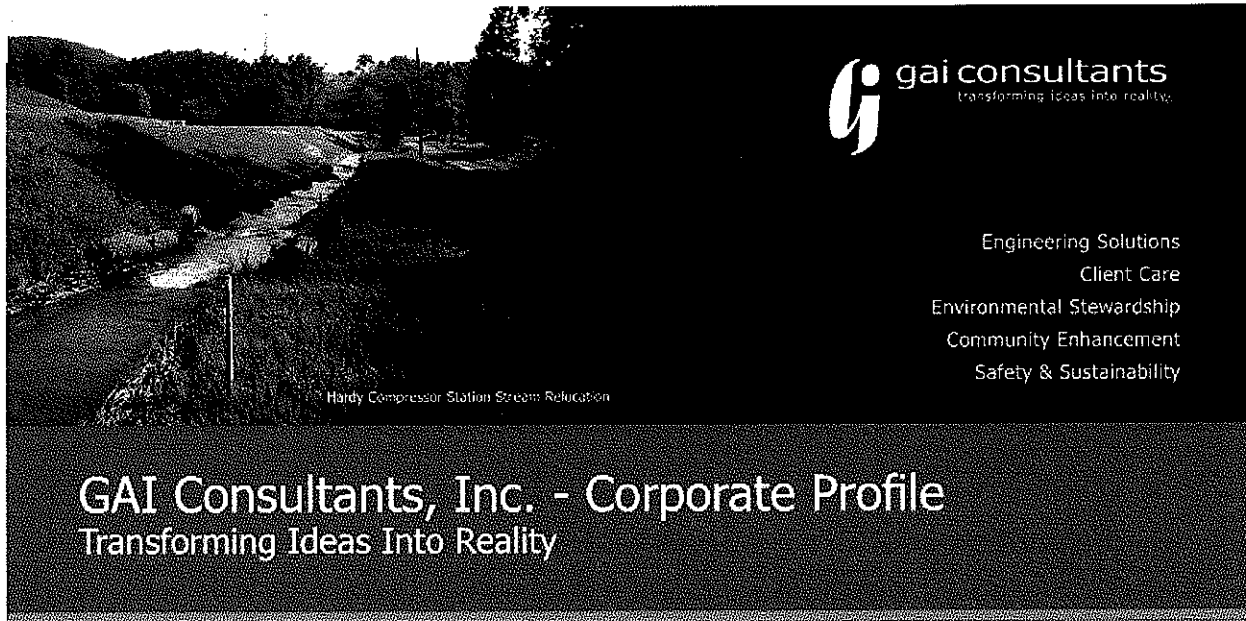
- + 56 Engineering Excellence Awards
- + Top 500 Design Firms - Engineering News-Record (ENR) Magazine: 2006, 2007, 2008, and 2009
- + Top 200 Environmental Firms - Engineering News-Record (ENR) Magazine: 2008

Website: www.gaiconsultants.com



Office Brief





- Engineering Solutions
- Client Care
- Environmental Stewardship
- Community Enhancement
- Safety & Sustainability

Hardy Compressor Station Stream Relocation

GAI Consultants, Inc. - Corporate Profile

Transforming Ideas Into Reality

Who We Are

GAI Consultants, Inc. is a 700-person engineering and environmental consulting firm with over 50 years of experience delivering innovative engineering solutions. Through engineering expertise and a broad, deep knowledge of regulatory processes, we transform ideas into reality with solutions that make a real difference to our clients... solutions in energy, transportation, real estate, water, municipal, government, industry, healthcare, and institutions.

Our People

We carefully listen to our clients' goals and concerns. Our people focus on management and completing projects with a clear, straightforward approach. With a practiced staff of engineers, scientists, and other professionals, GAI approaches every endeavor with enthusiasm and integrity. Throughout each stage of every project, our leaders direct us in maintaining high ethical standards and observing stringent safety measures. And because we carefully match our staff credentials to meet our clients' needs, we build productive and effective relationships.

Our Communities

GAI is committed to helping the communities we live in grow and develop. We strongly encourage all employees to become active volunteers in our communities. Some of the organizations we work with on a regular basis include the Department of Transportation's Adopt-a-Highway program, the American Red Cross, the American Heart Association, Homes for Our Troops, and Habitat for Humanity. Many GAI employees serve as volunteers in their local churches, schools, and sport activities, planning commissions, or zoning boards. Many offer their professional engineering and environmental experience to help with community projects.

Our Clients

Our clients are highly respected global companies, local firms, and federal and state agencies. They build roads and bridges, transmission lines, power plants, convention centers, distribution centers, and industrial facilities in both major metropolitan districts and rural areas nationwide and abroad. They challenge us with high-profile projects that demand some of the best and brightest technical expertise available.

And getting the job done right takes a sincere respect for our clients. Our project teams take you and your project seriously. Your challenge becomes ours. Your solution is a result of our loyalty.

From environmental regulations to roadway and bridge design to land development, our culture and no-nonsense approach continue to draw our clients faithfully back to us. More than 80% of our clients have built a long-lasting working relationship with us because they trust we will meet and deliver on our promises.

Our Commitment

Our Mission is to operate consistently, allowing our clients to benefit their communities' health and safety with the assurance that their projects will endure and withstand the test of time. We have one measure of success: our clients' satisfaction.

Our vision for the future is to build upon over 50 years of success, to grow responsibly as a healthy, profitable engineering consulting firm, to anticipate the needs of our clients by keeping up with changing and improving technologies, and to fully support our staff, so they can deliver on our promises to our clients.





- Engineering Solutions
- Client Care
- Environmental Stewardship
- Community Enhancement
- Safety & Sustainability

GAI-Charleston Office Brief

GAI-Charleston

The City of Charleston, located at the confluence of the Elk and Kanawha Rivers, is West Virginia's largest city and state capital. Three major interstates converge in the city's center, placing Charleston within a day's drive of 60 percent of the U.S. population. Downtown and riverfront improvement projects attract visitors to the Capitol Complex, the Kanawha State Forest, and other educational and recreational areas.

Since 1985, GAI-Charleston has provided award-winning consulting services in mine land reclamation and mine drainage engineering. We continue to deliver innovative engineering solutions in transportation, land development, and energy markets, with a particular specialization in landscape architecture and LEED design. GAI-Charleston's premier teams of professionals serve a wide range of clients, including local developers, state government agencies, and large corporations.

General Services

- + Environmental Engineering, Permitting and Mitigation
- + Transportation and Traffic Engineering, Planning & Design
- + Geotechnical and Structural Engineering
- + Mechanical and Electrical Engineering
- + Water/Wastewater Engineering/Utility Management
- + Land Development, Landscape Architecture and Planning
- + Cultural Resources Management
- + Surveying/Geographic Information Systems (GIS)
- + CEI/CMS/Materials Testing
- + Utility Coordination/Eminent Domain
- + LEED Design and Greenhouse Gas Consulting

Specialty Services

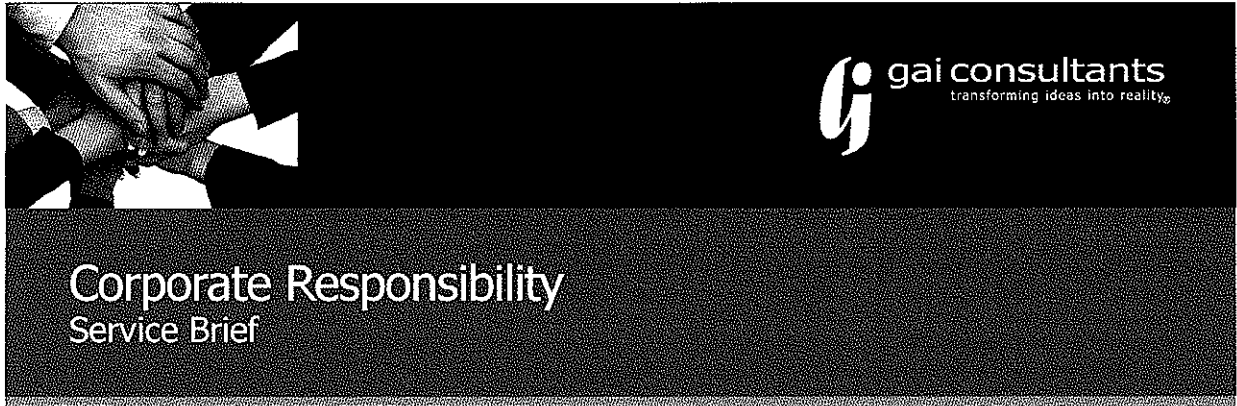
- + Grant-writing, Asset Management & Valuation Studies
- + Computer Programming & Web Site Development
- + Graphic Design, Video Production, & Public Outreach

Transforming ideas into reality for over 50 years, GAI is a 700-person, employee-owned, multi-discipline engineering and environmental consulting firm, serving our clients worldwide in the energy, transportation, real estate, water, municipal, government, institutional, and industrial markets from offices throughout the Northeast, Midwest, and Southeastern United States.

GAI Consultants, Inc.
 500 Summers Street, 3rd Floor
 Charleston, WV 25301
 304.926.8100

*For more information on GAI Consultants, Inc.,
 please visit www.gaiconsultants.com.*





Corporate Responsibility Service Brief

Overview

Our Mission is to continue growing as an integrated consulting firm, creating value for our clients and employees. A Guiding Principle for GAI Consultants, Inc. is to uphold sustainable business practices. The Vision of our internal Sustainability Committee is to provide an employee-driven, coordinated approach to sustainable business practices that have long-lasting, positive effects on our clients, our employees, and our environment. We have been in business for more than 50 years because we have earned the trust and loyalty of our clients. To preserve and enhance our commitment to our stakeholders, we dedicate ourselves to:

Quality services that meet or exceed our Client's expectations

- On time
- Within budget
- Clear communications
- Quality assurance/quality control throughout
- Innovative and cost-effective project delivery based on Client criteria

Dedicated and empowered employees

- Safe, efficient, and productive employee working environments
- Respect for diverse origins and opinions
- On-going training and career development
- Care for the whole employee and their families

Environmental stewardship

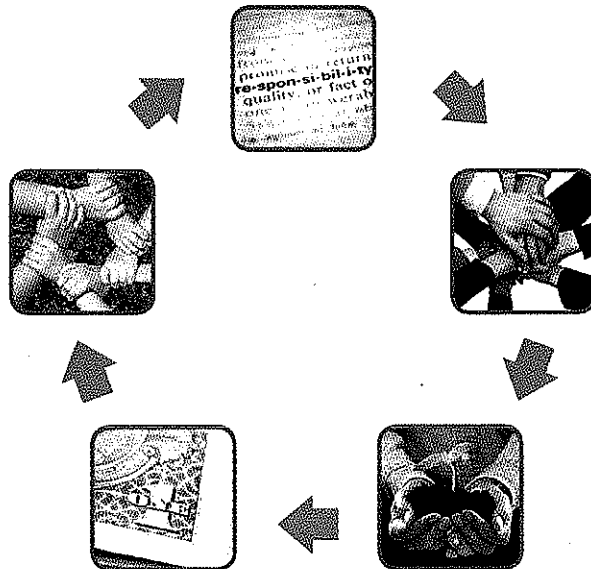
- Emphasis on all aspects of energy efficiency
- Attention to recycling and resource conservation

Profitability

- Transparent billing and accounting
- Strong management control procedures
- Responsible compensation and benefits
- Management succession planning

Community support

- Encouragement for employee volunteerism
- Educational outreach to schools and institutions



Adopted by GAI Consultants, Inc. Executive Staff and CEO, January 12, 2010.





Local Government Service Brief

Overview

GAI Consultants, Inc. (GAI) understands that community projects are uniquely challenging, as they typically strive to integrate the built environment with existing natural and cultural resources in order to meet the future needs of a community while still honoring its past. Adding to project complexity are diverse public opinions that must be addressed to produce the best outcome.

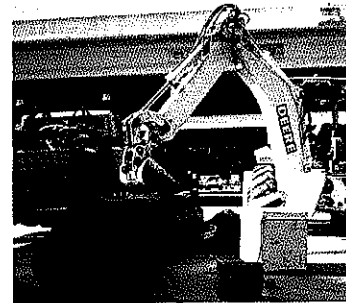
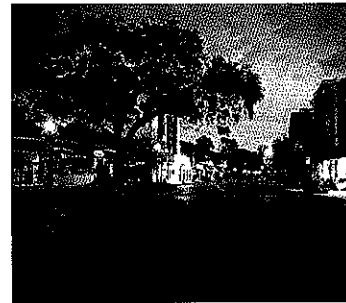
GAI is prepared to meet the challenges of your community project. We provide a spectrum of solutions for your needs in a timely, cost-effective, comprehensive and friendly manner.

Engineering Solutions

Local zoning issues, site topography and regulatory hurdles can cause community projects to be challenging. From environmental impacts and public review to a variety of technical constraints, permitting and plan approval can hinge on various preliminary planning and design considerations. Failure to anticipate problems can result in substantial delays in a project's timetable, affect public support and decrease its economic viability.

GAI's primary focus is producing superior projects that are both cost- and time-effective. Our experience includes hundreds of community development and redevelopment projects in residential, commercial, industrial and mixed-use areas. From conceptual site design through final construction, we know the process and possess the required experience to transform your community's ideas into reality. Through the interaction of our various engineering disciplines, we provide comprehensive services including:

- Land surveying
- Site selection and design
- ADA compliant design
- Permit acquisition
- Site lighting
- Economic feasibility studies
- Facilities planning and design
- Environmental assessments
- Hydrologic and hydraulic studies
- Water, wastewater and stormwater system management and design
- Construction cost estimates, documentation, management and monitoring
- Structural and non-structural assessments
- Utility assessments and coordination
- Materials testing



www.gaiconsultants.com

transforming ideas into reality





Environmental Stewardship

Since the enactment of the National Environmental Policy Act (NEPA), the Resource Conservation Recovery Act (RCRA), the Clean Water Act and other significant environmental measures in the 1960s and 1970s, GAI has worked closely with its clients to provide practical, cost-effective solutions to environmental challenges. Our skilled staff can identify your project needs, provide environmental site assessments, and ensure regulatory compliance, while adhering to the principles of good environmental stewardship. Further, our application of state-of-the art computer and GIS technology provide comprehensive environmental analysis and management. Our services include:

- NPDES and 404/401 permits
- Oil spill modeling/SPCC plans
- Utility line permits and applications
- Stormwater management planning
- Erosion and sedimentation control
- Phase I and II environmental assessments
- Soil and groundwater remediation design and oversight
- Air, water, solid and hazardous waste compliance
- Hazardous waste management
- Remediation investigations and feasibility studies
- Environmental assessments of streams and wetlands
- Rare, threatened and endangered species studies

Cultural Resources Preservation

Since 1974, GAI has been a leading provider of cultural resources services. Our diverse professional staff offers experience in historic archaeology, prehistoric archaeology, urban archaeology, soil science, and has extensive training in historic preservation and federal law. Our staff resources firm-wide allow us

to respond to our clients' needs promptly and efficiently. GAI's Cultural Resources Group is a full-service division with experience in both architectural history and archaeology. Our services include:

- Phase I archaeology surveys
- Mitigation measures for cemeteries and other resources
- Public outreach programs and interpretation
- Quantitative analysis and statistics
- Phase II site evaluations
- Historical, archival and deed research
- Database design and management (GIS/GPS)
- Phase III data recovery, treatment and mitigation plans
- Historic architectural and landscape studies
- Assessment studies
- Archaeological and historic preservation plans
- Geomorphology/pedology studies
- Cultural heritage preservation

Community Enhancement

GAI offers services related to parks and other similar community projects which typically involve substantial public participation. Gas prices, concerns about health and fitness, and other quality of life issues are increasing the public's demand for walkable communities with nearby parks, trail systems, and other recreation opportunities. GAI not only can provide the technical services to support these important trends, but we are also able to facilitate community participation that considers alternatives, resolves issues of concern and generates support for such projects. Our services include:

- Feasibility studies
- Land use studies



- Master planning
- Landscape architecture
- Park and trail system design
- Innovative stormwater solutions
- Streetscape design
- Utilities rehabilitation and design
- Construction permit acquisition
- Public meetings
- Design charettes
- Media contact and releases
- Workshops and open houses
- Presentation graphics
- Consensus building forums
- Public presentations
- Public hearings

Analytical Tools

GAI relies on the best available technology to analyze data and produce outstanding results for community projects. Two of our most important technologies are Geographical Information Systems (GIS) and Global Positioning Systems (GPS). GIS is a computer based system used to capture, store, analyze, manage and display referenced information geographically. GIS allows large quantities of data to be synthesized in a structured and efficient manner, resulting in high quality, easy to follow maps and graphs. GPS is a valuable field survey tool that uses a constellation of Medium Earth Orbit Satellites to transmit signals that enable GPS receivers to determine their precise location, speed, direction and time.





GAI's Planned Project Administration Process

Overview

The Transportation Group in GAI's Pittsburgh office is changing. Over the last few years, the group has been restructuring to enhance and promote quality and professionalism in the performance of our professional services for clients. Through strategic hiring and by promoting from within, the group's project management positions have been assigned to individuals who are knowledgeable technically, and who understand the importance of providing our clients with quality services and delivering project documents on time and within budget. GAI is committed to empowering these individuals to be creative and "think outside of the box" in their project management efforts.

A successful project planning process begins during the Statement of Interest stage, when the most critical decision is made: Identifying the Team. Assembling a solid design team to support the needs of the project and to meet or exceed the client's expectations is the foundation for quality engineering and timely project delivery. These are a few of the highlights of GAI's project planning process:

- **Accomplished Project Manager:** Assigning a project manager that can provide a substantial technical contribution to the project, and that has a proven reputation for providing effective leadership, motivation, and encouragement to his/her staff, is the backbone of a successful project.
- **Competent Task Managers:** As a project leader and team builder, the project manager selects the appropriate staff to manage specialty tasks associated with the project.
- **Quality Sub-Consultants.** Hiring the right sub-consultants to fill key roles, and continuing to use firms that have met or exceeded GAI's and the client's expectations in the past, facilitates development of a strong project team.

GAI continues the project planning process immediately upon receiving notice to proceed, and takes the following key steps to identify and establish administrative procedures for executing the project.

1. **Project Management Plan (PMP):** The Project Manager prepares a PMP that describes the sequence of major project activities from project inception through completion for design and construction.
2. **Project Specific Quality Assurance Plan (PSQAP):** The Project Manager prepares a PSQAP to establish quality assurance and the checking procedures that will be conducted throughout the duration of the project.
3. **Project Kick-Off Meeting.** The Project Manager holds a project kick-off meeting with the design team and the client. Perhaps the most critical of all meetings, the project kick-off meeting is the Project Manager's opportunity to promote confidence in the project team by exhibiting a well-organized plan for project execution. This is also an opportunity to identify the client's expectations, develop the project schedule, communicate the PMP and PSQAP procedures, more clearly define the roles of all team members, discuss ("rocks in the road") potential problems and identify possible contingency solutions. At this meeting, the project contract and budgets are thoroughly reviewed, and communication and correspondence plans are discussed. In addition, adherence to GAI's document, e-mail, and electronic file control and records management procedures is emphasized, and a schedule for future meetings is developed.



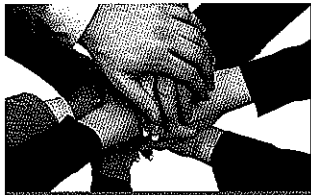


4. **Accurate Project Data Determination.** The project team begins building the project's foundation, consistent with the project-specific scope of our services, by obtaining accurate survey of the project site, conducting thorough property and right-of-way searches, investigating existing utility locations and right-of-way status, and conducting environmental assessments. These are four of the most critical elements to the success of any project, and are essential to the development of practical and economical designs.
5. **Design Criteria Development.** The project team establishes the project design parameters, investigates right-sizing and smart-transportation measures, and gets concurrence from the client, before proceeding with design. This essential process enhances matching client expectations and reduces the potential for unnecessary rework.
6. **Internal Constructability Review.** The Project Manager investigates constructability issues prior to the Design Field View Submission, and GAI has several knowledgeable engineers with many years of construction experience. Detecting constructability issues at the preliminary design stage lessens the chance of pursuing a potentially flawed design concept.
7. **Schedule Maintenance.** The Project Manager develops a comprehensive project schedule that includes a logical sequence of tasks, task durations, and internal quality assurance, agency, and client reviews. This action is paramount to meeting project goals. Project delays that cannot be controlled are always possible, but it is the team's objective to initiate a recovery plan, if needed, to deliver submissions and construction documents on time. GAI's goal is to meet or beat project milestone dates.
8. **Project Budget Monitoring.** The Project Manager is always aware of the budgetary challenges GAI's clients face. Consequently, GAI is committed to completing scopes of services within the agreed upon design budget. GAI strives to include right-sizing and smart-transportation elements in our designs that help us adhere to fixed construction budgets.
9. **Quality Assurance/Quality Control.** The entire project team is responsible for every submission, report, specification, and calculation undergoing quality-assurance review(s) in accordance with the PSQAP. Adherence to providing documentation, organizing filing procedures, and following records management procedures provides for seamless retrieval of project documents when required.
10. **Client Responsiveness.** As a contributing partner, GAI takes ownership of each project along with the client. Thus, being responsive to client needs in a prompt and professional manner builds and strengthens our relationship with them. If a project manager is unavailable for any reason, a contact is assigned in his/her absence to address the client's needs.



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GAI's Project Delivery System for Design Projects

Overview

GAI is structured to demonstrate quality and professionalism in all that we do. Through strategic hiring and by promoting from within, project management positions are assigned to individuals who are knowledgeable technically, and who understand the importance of providing our clients with quality services and delivering project documents on time and within budget. GAI is committed to empowering our Project Managers to "think outside of the box" in their project management efforts and be responsive to our client's needs.

GAI makes a significant investment in management and leadership programs, and offers GAI University courses designed to help promising individuals reach their fullest potential. The Management and Leadership Skills Class coaches potential leaders in developing problem-solving and conflict-resolution techniques. GAI's Project Management Workshop and Advanced Project Management Training programs provide a comprehensive, in-depth study of project management at GAI.

A successful planning process for design projects begins with the most critical decision: Identifying the Team. Assembling a solid design team to support the needs of the project and to meet or exceed the client's expectations is the foundation for quality engineering and timely project delivery. Every GAI team comprises the following professionals:

- **Accomplished Project Manager:** GAI assigns seasoned project managers, who remain with their assignments to completion, and who have the ability to provide substantial technical knowledge to the project. Their contribution to the project also includes a proven reputation for providing effective leadership, motivation, and encouragement to the staff. This is the backbone of a successful project.
- **Competent Task Managers:** The project manager is a project leader and team builder, and understands the need to select the appropriate staff to manage specialty tasks associated with the project. Qualified task managers are appointed by the project manager to guide specialty teams and strengthen the core management structure.
- **Quality Sub-Consultants.** GAI teams with competent and skilled sub-consultants, when appropriate, to fill key project roles and assist GAI's in-house staff. GAI uses firms that meet or exceed GAI and client expectations, and this facilitates development of a strong project team. Many of our sub-consultants have partnered with GAI before, providing a seamless complement to the team.

Immediately upon receiving authorization to proceed, the project team follows GAI procedures for project development, as described below. These activities identify and establish administrative procedures for managing and executing the project.

1. **Project Work Plan:** The Project Manager prepares a work plan that identifies the sequence of major project activities from project inception through completion for design and construction.
2. **Project QA/QC Plan:** The Project Manager selects a QA/QC level for the project that considers the complexity of the project, and any risks or uncertainties identified with the project. GAI's benchmark for ascribing an appropriate level of quality control ranges from project reviews, internally and with the client at specific stages, to preparation of a Project Specific Quality Assurance Plan (PSQAP).
3. **Project Kick-Off Meeting.** The Project Manager holds a project kick-off meeting with the design team and the client. The most critical of all meetings, it is the Project Manager's opportunity to promote confidence in the project team by exhibiting a well-organized plan for project execution and discussing the client's expectations. The project schedule is developed, the work plan and quality control procedures are





communicated, and the roles of all team members are clearly identified. "Rocks in the road" and potential problems are discussed to identify possible contingency solutions. At this meeting, the project contract and budgets are thoroughly reviewed, and communication and correspondence plans are discussed.

4. **Project Records Management:** Adherence to GAI's document, e-mail, and electronic file control and records management procedures is emphasized at the beginning of the project, and throughout.
5. **Accurate Project Data Determination.** The project team builds the project's foundation, consistent with the scope of its services, by obtaining accurate information about the project site, especially survey, right-of-way, utilities, and environmental impacts. These are the four most critical elements to the success of any design project, and are essential to the development of practical and economical designs.
6. **Design Criteria Development.** The project team establishes the project design parameters, investigates right-sizing measures, and gets concurrence from the client, before proceeding with design. This essential process enhances matching client expectations and reduces the potential for unnecessary rework.
7. **Internal Constructability Review.** The Project Manager investigates constructability issues, consulting with seasoned engineers that have construction experience. Detecting constructability issues at the preliminary design stage lessens the chance of pursuing a potentially flawed design concept.
8. **Schedule Maintenance.** The Project Manager develops a project schedule that includes a logical sequence of tasks, task durations, and internal quality assurance, agency, and client review(s). This action is paramount to meeting project goals. In the event of a delay, it is the team's objective to initiate a recovery plan, if needed, to deliver submissions and construction documents on time. GAI's goal is to meet or

beat project milestone dates.

9. **Project Budget Monitoring.**

The Project Manager is always aware of the budgetary challenges GAI's clients face. By determining effective procedures for performing the work, the Project Manager is able to keep the project on track. Consequently, GAI is committed to completing scopes of work within agreed upon design budgets.

10. **Quality Assurance/Quality Control.** GAI's entire project team is responsible for every submission, report, specification, and calculation undergoing quality-assurance review(s) in accordance with the quality control measures established for the project. Adherence to providing documentation, maintaining organized files, and following records management procedures provides for seamless retrieval of project documents and keeps the team focused.

11. **Client Responsiveness.** As a contributing partner, GAI takes ownership of every project along with the client and is responsive to their needs. GAI knows that responding promptly and in a professional manner builds and strengthens client relationships, and other members of the GAI project team stand ready to address client needs when the Project Manager is unavailable.

12. **Client Follow-Up.** GAI's managers are encouraged to seek feedback from our clients to gauge what went right or wrong throughout the project delivery process. This information is shared with all GAI project managers in a formal "lessons learned" coaching session.



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GAI Professional and Staff Resources

Archaeologist		25
Architectural Historian		9
Biologist		7
CADD Technician	✦	54
Civil Engineer	✦	55
Construction Inspector	✦	41
Construction Manager		22
Electrical Engineer		7
Environmental Engineer		33
Environmental Scientist		32
Foundation/Geotechnical Engineer		14
GIS Specialist		11
Geologist		7
Land Surveyor	✦	23
Landscape Architect	✦	6
Mechanical Engineer		10
Planner: Urban/Regional		3
Structural Engineer		36
Technician / Analyst		157
Transportation Engineer	✦	21
Water Resources Engineer		9
Other Employees		224
Total		806



Pittsburgh & Charleston Offices



✦ Staff Resources expected to be used for the Charleston Complex Access Road and Utility Upgrades

GAI Team Member	Project Role
David Gilmore, RLA, ASLA	Overall Project Manager, Lead Landscape Architect
C. Elwood Penn, PE	Assistant Vice President, Transportation/Civil Engineer
James A. Hemme, PE, LRS	Senior Engineering Manager, Site/Civil Engineer
Mark D. Young, PE	Engineering Manager, Transportation/Civil Engineer
Mark D. Shawl, RLA	Landscape Architect
Joseph A. Prine, PE	Engineering
Charles F. Straley, PE	Geotechnical Engineering





Work Plan

Scope of Services

The following Scope of Work is based upon our years of experience in working with clients to provide comprehensive civil and site design, landscape architecture and engineering services. It is intended to be used as an example to show the stages involved in the development of a typical project of the nature stated in the RFQ.

Phase I: Project Initiation

Task 01: Pre Planning Meeting / Initial Site Visit / Establish Goals and Objectives

Initial Stakeholder Meetings:

GAI will facilitate an initial programming meeting to introduce our firm to the core team and project representatives. This meeting will serve to establish regular monthly meeting dates or as required, review the scope of work, review the design objectives, discuss issues in a preliminary fashion to develop a sense of steering committee familiarity with study area, design issues and concepts, and finalize any logistics in the preparation of the design.

Initial Site Visit:

The GAI team will undertake an initial site visit with the General Services Division core team. This initial walk - through will improve the Team's understanding of the project needs and the issues surrounding the development of the East Main Campus parking lots and will enable the Team to better communicate with the Core Team and other interested parties.

Following the site visit, the GAI Team will conduct a kick-off meeting with the Core Team. The intent of this meeting will be to:

- + Gain an in depth understanding of project mission and short and long-term goals for the redesign of the East Main Campus Parking Lots
- + Define the project schedule, including:
 - Milestone dates
 - Core Team meeting dates
- + Begin to assemble and evaluate existing available data for the full range of planning issues and identify any significant lack in key data requirements
- + Confirm and identify roles of the team members
- + Establish the framework and general strategy regarding methods of presenting the research and other efforts of the GAI Team's to The General Services Division
- + Establish communication protocols and review the elements to be included in the project web site
- + Establish the decision making approval process for the project

Phase II: Due Diligence / Programming

Task 02: Programming

Prior to beginning the site evaluation, the GAI Team proposes to conduct one (1) Vision Session with Core Team. This facilitated work session is structured to be a highly participative meeting in which various representatives can explore critical aspects of the General Services Division's needs.



The purpose of this meeting is to:

- + Review goals, objectives, and elements of the General Services Division.
- + Review all available mapping and pertinent studies from the Owner in digital format.
- + Identify cultural considerations
- + Identify utility considerations
- + Identify ADA considerations
- + Identify storm water considerations
- + Identify potential opportunities: constraints and issues

This phase of work will establish the framework for developing physical planning concepts. We go to great lengths to avoid preconceptions, challenge our own assumptions, and look with a fresh and inquisitive eye at each individual project. **We take nothing for granted**, making each planning effort a search for appropriate guidelines that accurately reflects the current and future trail needs of the facility.

During the first weeks of any study, GAI will review and analyze all available data, including the information gathered during the kickoff meeting. This information will include review of existing previous studies as well as any additional planning objectives identified in the vision session.

The following major program elements will be identified:

- + Identification and location of major vehicular circulation patterns and entrance nodes / conflicts.
- + Identification and location of major pedestrian circulation patterns and entrance nodes / conflicts.
- + Identification and location of major utility corridors.
- + Identification and location of specimen trees and vegetation to remain undisturbed.
- + Identification and general location of major facility types, interesting natural features, cultural and historic attributes, and other unique locations.
- + Identification of potential minor facilities.
- + Identification of ADA compliance issues.
- + Identification of storm water issues and considerations

Task 03: Data Collection and Evaluation

GAI Consultants will obtain available mapping (aerial photography, city topography, USGS topographic mapping, etc.) and previous planning studies/documents from the General Services Division. We will contact various utility companies and authorities in the area to obtain information concerning existing utility infrastructure and general right of way issues as needed. We will analyze obtained data, mapping, and interview relevant utility personnel.

Review of Relevant Reports:

The GAI Team will review all relevant previous planning studies that have been conducted by General Services Division including but not limited to:

- + Master Plan
- + Current development proposals
- + Zoning Ordinance
- + Development Guidelines for the Study Area

Transportation & Infrastructure:

- + An inventory of existing roadway conditions will be compiled by GAI from existing data to establish baseline conditions of the study area transportation network. This roadway inventory will include number of travel lanes, pavement/shoulder widths, pavement conditions, railway crossings, speed limits, functional classifications, and intersection control features.
- + Transportation linkages, parking availability and access, vehicular and pedestrian and circulation routes.



- + An inventory of existing infrastructure conditions will be compiled by the GAI team from existing data to establish baseline conditions of the study area in regards to infrastructure.

Phase III: Site Analysis

Task 04: Site Analysis

The GAI team will perform the necessary analysis of the base map data collected and shall determine the appropriate location for the proposed use areas included in the project scope. Our analysis will include a review of the provided base mapping, and a site visit and walkover by team members, including the Project Manager. Additional information provided by the Owner will also be reviewed if applicable for the preparation of the design development drawings.

GAI Consultants anticipates the following as necessary elements to be researched and analyzed for the subject property:

Physical Attributes

- + Hydrology
- + Floodplain
- + Topography & Slope Aspect
- + Soils
- + Geology

Biological Attributes

- + Wildlife
- + Vegetation
- + Wetlands

Cultural Attributes

- + Adjacent & Intrinsic Land Use
- + Land Use Regulation (Federal, State, Local)
- + Infrastructure and Utilities
- + Perceptual Qualities: Visibility, Views, Noise and Site Amenities
- + Historical Quality
- + Existing Structures

Phase IV: Design and Final Evaluation Report

Task 05: Conceptual and Master Plan Design

Conceptual Planning:

After the collected data has been analyzed and the appropriate elements for the presentation have been determined, GAI will develop a conceptual design (design development) for the subject property that will address the primary functions of the scope of work. This concept plan will be presented to you for review and consideration. Your comments will then be integrated into the final construction drawing.



Master Plan:

After the Owner and various stakeholders have reviewed and commented on the conceptual plans, the design will be modified accordingly to produce a final master plan. We understand that during the design development stage this will be a fluid process.

GAI Consultants will prepare the final master plan and presentation drawings which will convey the team's objectives in a clear and imaginative manner. A color rendered final master plan as well as digital files will be presented and become the property of the Owner.

Preliminary Cost Opinion Preparation:

A preliminary cost opinion reflecting quantities and unit rates derived from the graphic plan shall be submitted.

Task 06: Final Evaluation Report

- + Summary of the planning process
- + Summary of the site analysis
- + Existing conditions
- + Utilities
- + Stormwater
- + Vehicular and pedestrian circulation
- + ADA requirements
- + Cost analysis
- + Recommendations
- + Cost Opinion
- + Locations for expanding, converting to parking spaces vs. recommended areas for development
- + Phasing (immediate, near-term, and long-term).
- + Implementation plan with preliminary budget.
- + Timetable and performance benchmarks
- + Relevant tables, charts, graphics, sketches, and appendices as needed.
- + Opportunities for potential future development of key areas.
- + Pedestrian and vehicular circulation, linkages and parking facilities.
- + Final graphic and design portions of the plan
- + Representative maps, charts, and graphs will be created to graphically represent the collected information.
- + Incorporate plans, sections, perspectives and other supporting graphics.
- + Submit plan to General Services Division for final approval





Phase V: Construction Drawings

Task 07: Construction Package

GAI shall prepare a construction package for all projects under contract. The construction packages shall reflect and refine the design elements arrived at during the design development phase. Although the number of sheets and titles will vary depending on the types of projects being developed, we anticipate the following drawings to be included in the document set:

- + Cover Sheet
- + Existing Conditions Plan
- + Erosion and Sediment Control Plan
- + Demolition Plan
- + Proposed Site Plan
- + Dimension & Layout Plan
- + Site Grading & Drainage Plan
- + Lighting & Utility Plan
- + Landscape Plan
- + Plant Schedule & Lighting / Site Amenity Schedule
- + Site Construction Details
- + Planting Details
- + Miscellaneous Details

Project Manual:

A technical project manual shall be developed consisting of the following items:

- + Invitation to Bid
- + Instructions to Bidders
- + Standard Terms and Conditions
- + Unit Price Bid Form/Proposal
- + Technical Specifications Section

Final Cost Opinion Preparation:

A final cost opinion reflecting quantities and unit rates derived from the construction documents shall be submitted. Base bid delineation with alternates shall be prepared if necessary.

Task 08: Bidding Assistance and Construction Administration

Potential Contractor List:

GAI shall provide a list of potential contractors and meet with the Owner to determine who they would like to receive bids from.

Legal Advertisement:

GAI shall the assist the General Services Division in writing and placing an invitation for bid advertisement.



Pre – Bid Meeting:

GAI shall conduct a pre-bid meeting and answer Bidder's technical questions. Applicable addenda shall be prepared and issued based on comments received.

Bid Review:

GAI shall assist the Owner in reviewing bids received and assist in awarding the contract to the lowest qualified bidder. For purposes of this proposal we have assumed helping the General Services Division fill out the required contract information but the State shall ultimately be responsible for overall contract preparation and issuance.

Construction Administration:

GAI shall assist the Owner as needed in performing construction administration and monitoring during site construction. We recommend that GAI be involved with:

- + Performing a pre-construction meeting with the selected contractor;
- + Review and approval of shop drawings;
- + Perform weekly site visits and conduct progress meetings to confirm progress and compliance with construction documents and specifications;
- + Preparation and distribution of meeting minutes;
- + Pay request review and approval;
- + Change order review and preparation;
- + Final site inspection / punch list development; and
- + Project close-out.

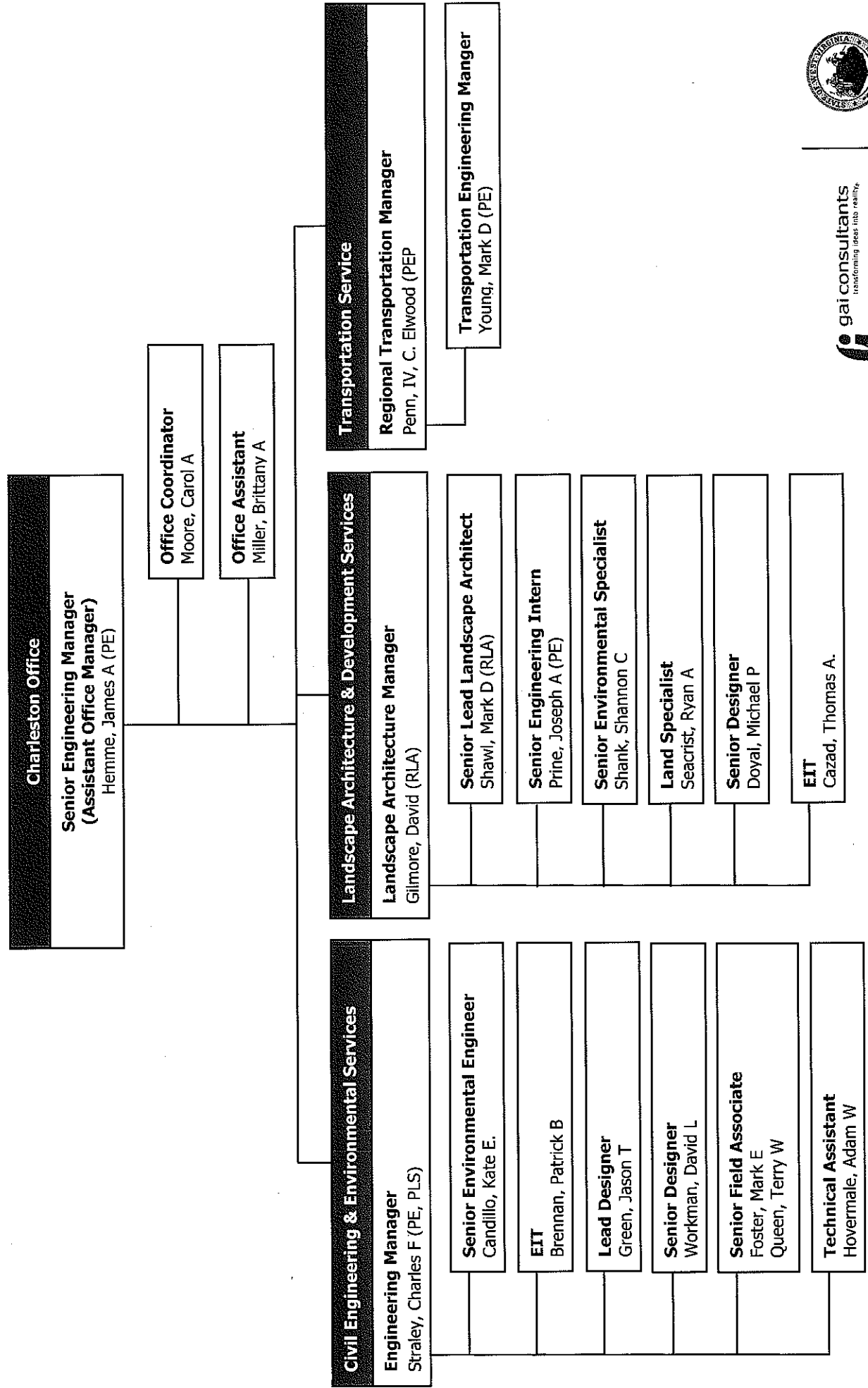
Task 09: Construction Monitoring

At the owner's request, GAI can provide full or part time construction monitoring services consisting of soil compaction testing, concrete sampling and testing, aggregate sampling and testing and other services on an as requested basis. For purposes of this proposal we have assumed that the contractor will be responsible for hiring their own third party testing agent for daily testing. GAI will perform periodic "checks" of the contractor's results should any be in question and for determining consistency.





PROJECT ORGANIZATION





Key Leadership



David Gilmore, RLA, ASLA
Land Development Services Manager

Mr. Gilmore joined GAI Consultants in 2005 to manage the firm's land development and landscape architectural services. The central focus of his practice is on the continued development of the firm's site design and landscape architecture projects throughout the eastern United States, while providing landscape architectural support to all of GAI's offices and clients. He will serve as the overall project manager for the project overseeing scheduling, personnel, design and client communication.

Prior to joining GAI Consultants, Mr. Gilmore worked for a multi-disciplinary A&E firm in Charleston, South Carolina, providing architectural, engineering, landscape architectural design services. While working in South Carolina, Mr. Gilmore was involved with campus master designs for many colleges and universities, large downtown streetscapes and subdivision layout and design. Mr. Gilmore later worked with a landscape architectural and design firm in Charlottesville Virginia, where he continued his professional development working on a wide range of projects for both the public and private sector. After returning to West Virginia in 1991, Mr. Gilmore has been in private practice specializing in site design, land planning, streetscapes and parks and recreational design for numerous public and private clients in West Virginia and Eastern United States.

Mr. Gilmore currently serves as the Corporate Practice Area Leader for Landscape Architecture services for GAI Consultants. In this role, he coordinates projects and marketing activities for all of GAI's offices throughout the region. He maintains professional registrations in West Virginia, Pennsylvania, Ohio, Indiana, Maryland, North Carolina, Virginia and Kentucky. In this capacity, Mr. Gilmore brings 22 years of experience on a diverse range of projects covering all aspects of landscape architectural design in both the public and private sector. Mr. Gilmore's experience includes but is not limited to Public outreach and programming, construction document and technical specification preparation, site analysis, schematic design, construction administration, master and land use design (riverfronts, resorts, parks, recreational, residential, industrial, and commercial), streetscape and municipality improvements, landscape and hardscape design, and graphic presentation drawing.



James Hemme, PE, LRS
Environmental Services Manager

Mr. Hemme specializes in site engineering, planning, permitting and stormwater management, with emphasis on parks and recreation areas and infrastructure. He brings a multi-disciplinary background to projects that enables him to see the "big picture" of what will be needed to take a project from start to finish. Mr. Hemme is competent in general civil engineering, geotechnical engineering, environmental disciplines including NEPA compliance, and transportation services. He has worked extensively with private developers, architects, municipalities and government agencies.

Mr. Hemme volunteered his time and knowledge to assist with preparation of the Greater Charleston Greenway Initiative by the West Virginia Land Trust Company in Charleston, West Virginia. Mr. Hemme is a current volunteer with the Riverside South Committee promoting riverfront improvements along the south side of the Kanawha River.

Relevant recent experience includes: engineering manager and engineer of record for the Charleston Riverfront Improvements; site engineer for the National Youth Center for Science Education master plan development, a proposed 110 acre sustainable education development endeavor on the banks of the Blackwater River; and project manager for the award winning Kanawha Trestle Rail Trail Master Plan.

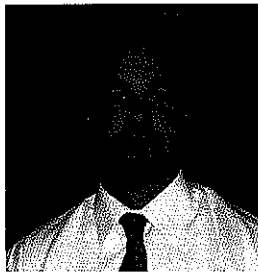


C. Elwood Penn, IV, PE
Assistant Vice President / Regional Transportation Services Manager

Mr. Penn specializes in project management and administration in the areas of highways, land development, and utilities. Mr. Penn is also experienced in developing environmental impact statements and assessments in accordance with NEPA regulations.

Mr. Penn has over 25 years experience in the consulting engineering business and has managed a wide range of size and types of projects including land development, highway, utilities, mine reclamation, and environmental projects.

Mr. Penn is also very active in the engineering community, having served as the President of the West Virginia Society of Professional Engineers (WVSPE) and the Charleston Branch of the American Society of Civil Engineers (ASCE). He currently serves on the Board of Directors for both the American Council of Engineering Companies of WV (ACEC of WV) and WVSPE.



Mark D. Young, PE
Engineering Manager / Transportation Services Manager

Mr. Young specializes in project management and design in the areas of highways and land development. Mr. Young is also experienced in planning and developing environmental impact statements and assessments in accordance with NEPA regulations.

Mr. Young has over 13 years experience in the consulting engineering business and has managed a wide range of size and types of projects including land development, highway, and projects similar to the project advertised.

Mr. Young is a registered engineer in West Virginia, Kentucky, Ohio, Pennsylvania, and Indiana and has been involved with extensive training in regards to project management and has successfully applied these principles to multiple projects while with GAI and previous employers.

Mr. Young is also very active in the engineering community, currently serving as the Vice-President of the West Virginia YMF of American Society of Professional Engineers (WVYMF ASCE) and as one of six transportation directors for the American Council of Engineering Companies of West Virginia (ACEC of WV).



Mark D. Shawl, RLA, LEED AP
Lead Landscape Architect

Mr. Shawl has 16 years of experience on a diverse range of projects encompassing all aspects of landscape architectural design in both the public and private sector. Experience includes, but is not limited to: project management, construction document and technical specification preparation, site analysis, schematic design, construction administration, master & land-use planning (parks, recreational, residential, institutional, commercial), streetscape and municipality improvements, landscape and hardscape design, graphic presentation drawing. He is also knowledgeable with low-impact development with respect to stormwater and site construction.

He is also knowledgeable with low-impact development with respect to stormwater and site construction.





Charles F. Straley, PE, PS

Engineering Manager / Geotechnical & CMS Services Manager

Mr. Straley has a wide variety of experience civil engineering with an emphasis in geotechnical engineering, including all aspects of subsurface exploration, laboratory testing, foundation and embankment design, slope stability, material and construction specifications, and construction monitoring.

Mr. Straley has over 25 years experience in the consulting engineering business and has managed a wide range of size and types of projects including civil, geotechnical, mine reclamation, and environmental projects.



Joseph A. Prine, PE

Senior Project Engineer

Mr. Prine has a wide variety of experience in environmental engineering, civil engineering, site development, streetscape, and planning projects while at GAI and through previous employments. He has worked with private developers, architects, municipalities and governmental agencies. He has substantial experience in site engineering, and storm water management. He has worked on various construction project sites including landfills, abandoned mines, and industrial and commercial facilities. Some of his environmental engineering projects include; Phase 1 reports, environmental monitoring, permitting, and design. Some of his civil engineering/site design projects include; design of storm water management systems, earth work estimating, water and sewer line extensions, design of both large and small sites ranging in size 1 to 40 plus acres, assisting in the preparation of design/construction plans, reports, and cost estimates for projects, and highway/roadway design. He has also contributed to planning and design in several community improvement and streetscape projects.



Resumes





David Gilmore, RLA

Land Development Services Manager

Education

BSLA, College of Agriculture & Forestry, 1988 West Virginia University

Professional Affiliations

American Society of Landscape Architects, ASLA
WV Chapter of American Society of Landscape Architects
Council of Landscape Architectural Review Board, CLARB

Professional Development

WVASLA State Licensing Board Member, 2003-2006
Past President, WVASLA
Executive Committee Member, WVASLA
Chairman, WVASLA Licensing and Sunset Review Committee
Judge, Senior Design Awards, West Virginia University
Harvard Leadership Training
GAI Leaders to Watch
GAI University Advanced Project Management Training

Registrations

American Society of Landscape Architects
Council of Landscape Architectural Registration Board Certified
West Virginia Professional Landscape Architect No. 247
Indiana Professional Landscape Architect No. LA 20700137
Pennsylvania Professional Landscape Architect No. LA 002737
Ohio Professional Landscape Architect No. LA 0801200
Kentucky Professional Landscape Architect No. LA 768
Maryland Professional Landscape Architect No. 3574
North Carolina Professional Landscape Architect No. 1632

Awards

- Merit Award (WVASLA): 'Hyper' Employee Plaza, Main Entrance Improvements
Client: Dupont Company
- Merit Award (WVASLA): Florida Street Revitalization Master Plan
Client: West Side Neighborhood Association
- Honor Award (PAAIA): National Youth Science Camp Master Plan
Client: National Youth Sciences Foundation

Professional Experience

Mr. Gilmore joined GAI Consultants in 2005 to manage the firm's land development and landscape architectural services. The central focus of his practice is on the continued development of the firm's site design and landscape architecture projects throughout the eastern United States, while providing landscape architectural support to all of GAI's offices and clients. He will serve as the overall project manager for the project overseeing scheduling, personnel, design and client communication.





Prior to joining GAI Consultants, Mr. Gilmore worked for a multi-disciplinary A&E firm in Charleston, South Carolina, providing architectural, engineering, landscape architectural design services. While working in South Carolina, Mr. Gilmore was involved with campus master designs for many colleges and universities, large downtown streetscapes and subdivision layout and design. Mr. Gilmore later worked with a landscape architectural and design firm in Charlottesville Virginia, where he continued his professional development working on a wide range of projects for both the public and private sector. After returning to West Virginia in 1991, Mr. Gilmore has been in private practice specializing in site design, land planning, streetscapes and parks and recreational design for numerous public and private clients in West Virginia and Eastern United States.

Mr. Gilmore currently serves as the Corporate Practice Area Leader for Landscape Architecture services for GAI Consultants. In this role, he coordinates projects and marketing activities for all of GAI's offices throughout the region. He maintains professional registrations in West Virginia, Pennsylvania, Ohio, Indiana, Maryland, North Carolina, Virginia and Kentucky. In this capacity, Mr. Gilmore brings 22 years of experience on a diverse range of projects covering all aspects of landscape architectural design in both the public and private sector. Mr. Gilmore's experience includes but is not limited to Public outreach and programming, construction document and technical specification preparation, site analysis, schematic design, construction administration, master and land use design (riverfronts, resorts, parks, recreational, residential, industrial, and commercial), streetscape and municipality improvements, landscape and hardscape design, and graphic presentation drawing.

Mr. Gilmore was recently honored by being 1 of 16 people chosen to be included in the inaugural class of GAI's "Leader's to Watch" program. He has also completed the companies Harvard Leadership Training program as well as GAI Universities Advanced Project Manager Training. Mr. Gilmore is also very active in the Landscape Architecture community, having served as the past president of the West Virginia Chapter of the American Society of Landscape Architects (WVASLA) and the State Licensing Board from 2000-2003. Mr. Gilmore also remains active with the WVU School of Landscape Architecture and has won multiple awards from the West Virginia Chapter of the American Society of Landscape Architects for his work.

Representative Professional Experience

Streetscape / Urban Revitalization:

- Baker Street Transit Center, Fort Wayne, IN
- Dupont Road, Fort Wayne IN
- Charleston Riverfront Park, Charleston, WV
- City of Charleston Gateway Development, Charleston, WV
- Kanawha Boulevard Streetscape, Charleston, WV
- Lewisburg Streetscape, Lewisburg, WV
- Court Street Overlook, Charleston, WV
- Pennsylvania Street, Carmel, IN
- St. Albans Master Plan, St. Albans, WV
- St Albans Phase I, St. Albans, WV
- St. Albans Phase II, St. Albans, WV
- Pennsylvania Avenue Gateway, Charleston, WV
- Florida Street Revitalization Master Plan, Charleston, WV





- Williamson Master Plan, Williamson, WV
- MacCorkle Avenue Greenspace Improvements, Kanawha City, WV
- Kanawha Valley Rapid Transit Shelter/Plaza Design, Charleston, WV
- City of Charleston Storm Water Manual, Charleston, WV
- John Adams Middle School Rain Garden Design, Charleston, WV

Parks & Recreation:

- East End Community Recreational Skate and Water Park, Charleston, WV
- Meadowlark Park, Fostoria Ohio
- WV State Capital Grounds Boat Access Ramp, Charleston, WV
- Charleston Riverfront Park, Charleston, WV
- Court Street Overlook, Charleston, WV
- Shoenbaum Performance Stage, Charleston, WV
- Stonewall Jackson State Park Master Plan, Roanoke, WV
- Berry Hills Country Club Master Plan, Charleston, WV
- Twin Falls State Park, Twin Falls, WV
- Dow Heritage Park, Charleston, WV
- Charleston Area Medical Center General Division Employee Park, Charleston, WV
- Dupont 'Hyper' Plaza, Belle, WV
- Ohio to Erie Trail, Multiple Counties, OH
- Coonskin Park, Charleston, WV

Hospitals / Institutional / Campus Planning:

- National Youth Science Camp , Davis, WV
- Huntington East Middle School, Huntington, WV (**LEED Project**)
- Edgewood Elementary School of the Future, Charleston, WV
- Dow South Charleston Plant, WV
- Beckley Federal Courthouse Security Upgrades, Beckley, WV
- Bible Center Campus and Wayfinding Plan
- Charleston Area Medical Center Memorial Park, WV
- King's Daughters Medical Center, Ashland, KY
- WVU Gateway Study, Morgantown, WV
- Morgan County Courthouse, Berkeley Springs, WV
- Raleigh County Courthouse, Beckley, WV
- Town of Fayetteville Cemetery Master Plan, Fayetteville, WV
- Trinity Lutheran Church Columbarium Master Plan, WV
- First Presbyterian Church Columbarium Master Plan, WV
- Elkview Baptist Church, Elkview, WV
- St. Timothy Lutheran Church, Charleston, WV
- St. John's Baptist Church, Spencer, WV
- Yeager Airport Master Plan, WV
- The Church of Jesus Christ of Latter-Day Saints, Multiple Projects / Multiple States
- Marshall University Dormitory / Alumni Center, Huntington, WV
- West Virginia University Dormitory, Evansdale Campus, WV
- West Virginia University Dormitory, Downtown Campus, WV
- Potomac State Dormitory, Potomac, WV





Development / Site Planning:

- Edgewood Elementary Access Road
- Huntington East Middle School, Huntington, WV (**LEED Project**)
- Edgewood School of the Future, Charleston, WV
- Chesapeake Energy Regional Headquarters Master Plan, Charleston, WV (**LEED Project**)
- Chesapeake Energy Field Office, Mount Morris, PA
- Chesapeake Energy Field Office, Jane Lew, WV
- Chesapeake Energy Field Office, Honey Branch, KY
- Cheat Landing Office Park, Morgantown, WV
- The Villages at Cheat Landing, Morgantown, WV
- Morgan County Courthouse, Berkeley Springs, WV
- Raleigh County Courthouse, Beckley, WV
- The Pines Country Club Land-use Study, Morgantown, WV
- Stonegate at Cranberry, Cranberry Township, PA
- Bloomingdale Land-use Study, Hurricane, WV
- Ridge Run @ North Camp, Wisp Ski Resort, Deep Creek, MD
- Cambridge Place Office Park, Bridgeport, WV
- Stonewall Jackson State Park Masterplan, Roanoke, WV
- Land-use Study / Development Alternatives, Aspen Corporation, Lewisburg, WV
- Commerce Park Mixed-use Development Masterplan, Huntington, WV
- Fort Boreman Mixed-use Development Masterplan, Parkersburg, WV
- Wilkerson Dental Office, Charleston, WV
- Ocean Isle Beach Resort Masterplan, Ocean Isle, SC
- 5/3 Bank, Cross Lanes, WV
- Banc One, Teays Valley, WV

Residential Planning & Landscape Design:

- < 500 Projects



James A. Hemme, PE, LRS

Senior Project Manager

Education

B.S. Civil Engineering 1989, West Virginia University Institute of Technology
Marshall University Graduate College, Environmental Engineering Coursework

Registrations/Certifications

West Virginia Professional Engineer No. 12195
Kentucky Professional Engineer No. 25437
Ohio Professional Engineer No. 72851
Indiana Professional Engineer No. 10809277
Pennsylvania Professional Engineer No. 75494
New York Professional Engineer No. 85794
West Virginia Licensed Remediation Specialist No. 003

Relevant Training/Courses

OSHA 40 hour Hazwoper Training
NICET 1 Geosynthetics Installation Inspection (expired)
Nuclear Density Gage Training, DOT and NRC (expired)
MSHA Safety Training (expired)

Summary

Mr. Hemme specializes in site engineering, including planning, permitting and stormwater management, with emphasis on parks and recreation areas and streetscapes. He brings a multi-disciplinary background to projects and this enables him to see the "big picture" of what will be needed to take a project from start to finish. Mr. Hemme is also competent in geotechnical engineering, environmental disciplines including NEPA compliance, and transportation services. He has worked extensively with private developers, architects, municipalities and government agencies.

Mr. Hemme has worked on landfills, quarries, mines, industrial, and commercial sites and facilities. He has performed numerous Phase 1 Environmental Site Assessments (ESAs) providing solid waste, industrial waste, and Erosion and Sediment (E&S) control permitting. Mr. Hemme designs storm water management systems, site developments ranging from 1 acre to over 60 acres in size, and wetland mitigation areas. He prepares geotechnical reports, flood plain modeling, highway and roadway designs, right-of-way plans, detailed construction plans, and cost estimates for projects ranging from \$10,000 to over \$2 million in construction cost.

Mr. Hemme volunteered his time and knowledge to assist with preparation of the Greater Charleston Greenway Initiative by the West Virginia Land Trust Company in Charleston, West Virginia. He authored the analysis section of the report and peer-reviewed the entire document. Mr. Hemme is a current volunteer with the Riverside South Committee, which is working with the Charleston Land Trust to beautify and possibly promote pedestrian access on the south side of the Kanawha River. He has developed schematic plans and reviewed narratives for inclusion into several progress updates to the Land Trust.

Professional Experience

Civil Engineering and Permitting

- Site Design for over 100 different projects throughout West Virginia, Ohio, Kentucky and Pennsylvania. NEPA compliance for wetlands, streams, cultural resources, and endangered species. Phase 1 Environmental Site Assessments for a wide range of facilities.
- Designed over 50 stormwater management systems including run-on and run-off control utilizing ditches, berms, sumps, sediment ditches, storm sewers, culverts, drop structures, ponds, energy dissipaters, etc. Work included technical specifications, cross sections, profiles, site grading detail development and hydrologic and hydraulic modeling.





- Prepared over 50 detailed Erosion and Sediment (E&S) Control Plans for various sites throughout West Virginia, including coal mines, quarries, highways, landfills and site developments. Work included technical specifications, re-vegetation plans, temporary control details and sequencing plans.
- Prepared numerous National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit Applications for sites throughout West Virginia and Ohio.
- Prepared a complete set of construction plans and specifications consisting of a detailed grading plan, a storm sewer system consisting of 34 drop inlets and over 3,800 feet of piping, and parking lot layout.
- West Virginia State College. Design of a revised stormwater system around the student union to help alleviate basement flooding issues.
- Town of Buffalo. Phase I storm sewer design and construction administration for over 2,000 ft. of storm sewer with discharge to the Kanawha River, that included permitting work with the Corps of Engineers.
- Analyzed various culvert scenarios consisting of modeling existing culverts and potential new corrugated metal pipe, steel pipe, concrete pipe and concrete box culverts to prevent upstream flooding from fill placement for Marietta Industrial Enterprises, Parkersburg, West Virginia.
- Designed an extensive stormwater management system consisting of several thousand feet of ditch and storm sewers, and two sediment ponds designed to limit inflow to pre-existing conditions for the 2-, 10-, 50-, and 100-year storm events for Hanover County Sanitary Landfill, Virginia.
- Melinda Street Stormwater Improvements. Underground stormwater detention system and storm sewer improvements design for the City of Parkersburg, West Virginia.

Site Development and Planning

- Coldwater Creek Distribution Center in Parkersburg, West Virginia. Wetland mitigation for a 7.5-acre area that required a detailed planting plan, pavement design and an engineers' cost estimate.
- Ft. Boreman Development in Parkersburg, West Virginia. Utility master planning, site preparation, roadway design, permitting, and stormwater management for the proposed 170-acre Fort Boreman mixed-use development near Martown Road interchange off U.S. Route 50 in Parkersburg.
- Chesapeake Energy Regional Headquarters in Charleston, West Virginia (LEED Project). Chesapeake Energy Field Offices in Jane Lew, West Virginia; Mount Morris, Pennsylvania; and Honey Branch, Kentucky.
- The Pines Country Club in Morgantown, West Virginia.
- Dow Chemical South Charleston Plant Entrance, Parking and Pedestrian Improvements in West Virginia.
- Tamarack Phase 2 Expansion in Beckley, West Virginia.
- Morgan County Courthouse Replacement in Berkeley Springs, West Virginia. Greenbrier County Courthouse Annex and Expansion in Lewisburg, West Virginia.
- Marshall University Clinical Outreach and Education Center, Huntington, West Virginia.
- Cheat Landing Office Park in Morgantown, West Virginia. The Villages at Cheat Landing in Morgantown, West Virginia
- Almost Heaven Habitat for Humanity, South Fork Crossing Subdivision, Pendleton County, West Virginia.
- Stonegate at Cranberry Development in Cranberry Township, Pennsylvania.

Parks and Recreation Areas

- April Dawn Sprayground and Park in Huntington, West Virginia. Lead Engineer for the continued development of the park consisting of an in-ground computer controlled fountain covered by suspended concrete pavers, a unique "Teays Valley Monster" concrete dragon over 8'-tall integrated into the design with slide and cool steam nostrils and a special soft surface design. The project won awards from the West Virginia Sections of the American Society of Landscape Architects and the American Consulting Engineers Council.
- Rotary Park Improvements Project in Huntington, West Virginia. Lead Engineer responsible for new parking areas, unique picnic shelter, utilities, and a new entrance that blended with existing facilities.
- Golf Club House and Lodge Site Development at Stonewall Jackson State Park in West Virginia. Project Manager for infrastructure including site design of the 100+-room lodge, parking, sewage lift station, extensive landscaping, and all aspects of construction administration.
- Cedar Creek State Park Camp Ground Expansion, Glenville, West Virginia. Dow Heritage Park in Charleston, West Virginia. Fort Boreman Historic Park in Parkersburg, West Virginia.





Streetscape and Trails

- Kanawha Trestle and Rail Trail Master Plan. Project Manager and Lead Engineer responsible for development. The plan covered the existing CSX trestle crossing the Kanawha River in Charleston and approximately 2 miles of Norfolk and Southern rail corridor through the West Side of Charleston.
- Project Manager or Design Engineer on multiple streetscape projects throughout West Virginia including Phase 1 Florida Street Streetscape, and Washington Street East Phase 2 and Pennsylvania Avenue streetscapes in Charleston, West Virginia.
- North Bend Rail Trail. Prepared construction documents to repair flood damage to almost 50 miles of trail.
- Florida Street Master Plan for the City of Charleston, West Side Neighborhood Association.
- City of Richwood, West Virginia Streetscape Master Plan and Phase 1 Construction.
- City of Charleston East End Design Cheret and "Think Tank" Design Cheret.

Waste Water and Potable Water Design

- National Radio Astronomy Observatory. Designed unique, non-mechanical, award-winning treatment system that uses no electricity and treats the entire campus wastewater load.
- Manufactured Housing Development Waterline Replacement. Designed over 5 miles of water line within an existing 1000+-unit manufactured housing development.
- Huttonsville Correctional Facility. Provided retrofit design for temperature, grease and trash issues.
- Anthony Correctional Center. Designed package water treatment plant for correctional facility.
- St. Mary's Correctional Facility. Retrofit design to address trash and grease issues.
- Pocahontas County Landfill. Modular trickling sand filters with aeration pond and polishing wetland.
- Multiple Landfills. Pre-treatment system design to remove high BOD levels prior to WWTP.
- Storage Tank Design. Multiple bolted or welded steel tanks primarily for leachate storage.

Abandoned Mine Land (AML) Reclamation and Acid Mine Drainage (AMD) Treatment

- Richard Mine Acid Mine Drainage. Treatment Alternatives Report, Monongalia County, West Virginia.
- Richard Mine Flow Monitoring Study. Design, installation, full time flow monitoring and reporting for a 1 year period on drainage from a substantial AMD discharge.
- East Branch Raccoon Creek Acid Mine Drainage (AMD) Treatment Design for the Ohio Department of Natural Resources.
- Vens Run Landslide Reclamation No. 2 Design and Permitting in Harrison County, West Virginia.
- Whites Run Reclamation Permitting in Randolph County, West Virginia.

Project Awards

National Radio Astronomy Observatory (NRAO) Wastewater Treatment Plant Design, West Virginia ACEC Gold Award, Project Manager

Florida Street Streetscape Masterplan, West Virginia ASLA Honor Award, Senior Engineer

DuPont Hyper Plaza Design, West Virginia ASLA Honor Award, Senior Engineer

Kanawha Trestle Rail Trail Masterplan, West Virginia ASLA Merit Award and West Virginia ACEC Silver Award, Project Manager

April Dawn Park Sprayground "Teays Valley Monster," West Virginia ASLA Honor Award and West Virginia ACEC Gold Award, Senior Engineer

Coldwater Creek Distribution Center Site Preparation, West Virginia ACEC Gold Award, Project Manager





C. Elwood Penn, IV, PE

Managing Officer / Assistant Vice President

Education

B.S. Civil Engineering, 1985 Virginia Polytechnic Institute and State University

Professional Affiliations

National Society of Professional Engineers
American Society of Civil Engineers
West Virginia QBS Council
International Right of Way Association
American Society of Highway Engineers (ASHE)

Registrations

Professional Engineer, West Virginia, Virginia, Maryland, Arkansas, North Carolina, Ohio, and Kentucky

Professional Experience

Highway

- *U.S. Route 60 - Shrewsbury to Cedar Grove, Kanawha County, West Virginia.* Project Manager for the preparation of an Environmental Assessment and Design Report, for 3.2 miles of U.S. Route 60 in Kanawha County, West Virginia. The project consisted of studying alternative alignments for the upgrade of the existing two-lane roadway to four lanes and upgrading the design speed to a minimum 60 m.p.h. The environmental analysis for the project consisted of the management, coordination, data collection, and technical studies necessary to conform the applicable sections of the Federal Highway Administration Guideline (23 CFR 771) and FHWA Technical Advisory T-6640.8A; FHWA Guidelines on noise (23 CFR 772) and air quality (23 CFR 770); Section 106 of the National Historic Preservation Act; Section 404 of the Clean Water Act; and the policies and procedures of the State of West Virginia, and the Department of Transportation, Division of Highways. The design report studied three alternative alignments. A high cut, railroad, the Kanawha River, and numerous commercial and residential structures close to the existing alignment bound the proposed corridor. The scope of services provided included coordination with local Economic Development organizations, public meetings, drainage design, and access studies to properties. The estimated construction cost of the studied alternatives ranged from \$60-\$90 million.
- *Rivesville - I-79 Connector, Marion County, West Virginia.* Project Manager for the preparation of an Environmental Assessment and Design Report for 3.5 miles of four-lane partially controlled access highway on new alignment. The project included a major bridge over the Monongalia River, improvements to the existing Fort Pricketts I-79 Interchange, and a bike trail. Other features of the project included an interchange with U.S. 119 in the Rivesville vicinity, the need to give design consideration to the possibility of connecting the roadway to a western bypass of Fairmont, West Virginia in the future, and A "Media Tour", in which television and newspaper reporters were given a tour of the proposed alignment. The environmental analysis for the project consisted of the management, coordination, data collection, and technical studies necessary to conform the applicable sections of the Federal Highway Administration Guideline (23 CFR 771) and FHWA Technical Advisory T-6640.8A; FHWA Guidelines on noise (23 CFR 772) and air quality (23 CFR 770); Section 106 of the National Historic Preservation Act; Section 404 of the Clean Water Act; and the policies and procedures of the State of West Virginia, and the Department of Transportation, Division of Highways. The environmental Assessment also included a Phase II Cultural Resource study and a Primary Roosting Tree Study for the Indiana Bat. This project was approximately 90% completed when WVDOT put it on hold.
- *Monongahela River Bridge and Approaches, Marion County, West Virginia.* Project Manager for the preparation of construction plans and right of way plans for 1.1 miles of four-lane partially controlled access highway on new alignment. The projects included a major river crossing of the Monongahela River and a modified cloverleaf interchange with U.S. Route 19. This project was approximately 60% completed when WVDOT put it on hold.



- *I-40 Widening, Pulaski County, Arkansas.* Project Manager for the preparation of construction plans for the widening and reconstruction of interstate I-40 between I-430 and I-30. The total project length was 6.5 miles. The project included: reconstruction of the existing roadway to meet present ASSHTO standards; widening of the existing roadway from 4 lanes to 6 lanes; the replacement of two overpass structures (Crystal Hill Road and Highway 107); the replacement of two mainline structures (Levy Interchange); the addition of a new ramp and the relocation of one ramp at the Levy Interchange; and the design of over 1000' of retaining walls to minimize the need for additional right-of-way. The existing high volume of traffic required maintaining two lanes of traffic in each direction at all times. The need to maintain two traffic lanes in each direction also required staged construction of the bridges and additional analysis of the structures. The scope of services provided also included coordination with the Union Pacific Railroad and drainage design. The project construction cost was approximately \$57 million. At the time, this was the largest construction project ever awarded by the Arkansas Highway and Transportation Department.
- *U.S. Route 58 - Danville Bypass, Pittsylvania County, Virginia.* Project Manager/Engineer for preliminary studies and final design engineering services to the Virginia Department of Transportation for the preparation of construction and right-of-way plans. The project was 7.6 miles in length on new location and had a construction cost of approximately \$55 million. The Danville Bypass is a four-lane divided highway and includes a cloverleaf interchange, a diamond interchange, a trumpet interchange, railroad relocation, 14 bridges and a major river crossing. The scope of work also included hydraulics, stormwater management, utilities, geotechnical, traffic signals, lighting, signing, public involvement, and value engineering. This project won the 2005 ACEC of Virginia Engineering Excellence Award, Grand Award for Transportation.
- *Route 219, Monroe and Greenbrier Counties, West Virginia.* Project Engineer for the preparation of a Design Report for the upgrade of 45 miles of a two-lane rural roadway from Lewisburg, West Virginia to Peterstown, West Virginia. Responsibilities included development of alternative alignments including improvements to existing alignment (included vertical and horizontal alignment improvements as well as pavement widening), relocations and bypasses around towns and communities, and for the geometric layout of over 135 miles of alternatives alignments using In-Roads software. Also participated in preparation of engineering and environmental inventories, a purpose and needs document, and license plate surveys and traffic forecasts for Lewisburg, Fairlea, Ronceverte, Peterstown and Rich Creek.
- *I-664, Chesapeake, Virginia.* Project Engineer for the preparation of construction and right of way plans and documents for a 4-mile section of interstate highway on new alignment. The project included 3 interchanges (2 diamond and 1 partial cloverleaf) and reconstruction of approximately 12 miles of state roads and city streets. The scope of services included roadway design, right-of-way plans, DRD (Digital Roadway Design), traffic control, signing, hydraulics, storm water management, public participation, and estimates. Coordinated work with sub-consultant, surveyor, and Virginia Department of Transportation.
- *Charles Town Bypass, Jefferson County, West Virginia.* Staff Engineer for 7 miles of limited access roadway. Responsibilities included geometric design, interchange design, right-of-way plans, and estimates. Contract called for the construction of two lanes with design made for future widening to four lanes.
- *Corridor G, Boone County, West Virginia.* Staff Engineer for 2 miles of 4-lane roadway. Responsibilities included geometric design, right-of-way plans, and estimates.
- *Loudenville - Cameron E. B. Route 25, Marshall County, West Virginia.* Staff Engineer for 0.5 miles of 2-lane roadway. Responsible for complete civil design including geometric calculations, intersection layout, right-of-way plans, maintenance of traffic plans, and estimates.
- *Variform Access Road, Berkeley County, West Virginia.* Staff Engineer for access road to manufacturing facility. Responsible for complete civil design including geometric calculations, railroad crossings, and estimates.
- *East Hardy High School Access Road, Hardy County, West Virginia.* Staff Engineer for roadway relocation necessitated by building of new high school responsible for geometric design.
- *Route I-64, Raleigh County, West Virginia.* Staff Engineer for new interstate project. Responsibilities included joint layout.
- *Route I-64, I-70, I-77, Numerous counties in West Virginia.* Staff Engineer for the design of crack and seat with overlay interstate rehabilitation plans. Responsible for site evaluation and complete contract plans.
- *Flood Relief Work, Numerous counties in West Virginia.* Staff Engineer for the design for rehabilitation projects after flood in winter 1985. Responsible for site evaluation and complete contract plans.

Bridge Replacement





- *Chamberlayne Parkway Bridge, Richmond, Virginia.* Project Engineer for bridge replacement project over railroad. Responsible for complete civil design including geometric calculations, right-of-way plans, and estimates. Participated in public information meeting. Coordinated work with structural sub-consultant.
- *First Street Bridge, Richmond, Virginia.* Project Engineer for the Location Study for a bridge replacement project over a railroad. Four alternatives were evaluated. One of the alternatives was on the existing alignment and the other three on new alignments. Alternatives were compared on the basis of cost, new right-of-way required, impact to homeowners, businesses, cemetery and existing utilities, and environmental concerns including clean-up of illegal dump sites and a closed landfill site.
- *Worthington Creek Bridge, Wood County, West Virginia.* Staff Engineer for the civil design on a bridge replacement project over a stream. Responsible for complete civil design including geometric calculations, right-of-way plans, maintenance of traffic plans, and estimates.
- *Carpenters Addition Bridge, Mineral County, West Virginia.* Staff Engineer for the civil design on a bridge replacement project over a railroad. Responsible for complete civil design including geometric calculations, right-of-way plans, maintenance of traffic plans which included detour, estimates, and coordination with the local district office and school officials in determining the requirements for the design of a detour to accommodate school buses. Final detour design also included an at-grade railroad crossing.
- *Sully Truss Bridge, Randolph County, West Virginia.* Staff Engineer for civil design for bridge replacement project over stream on federal land. Responsible for complete civil design including geometric calculations, right-of-way plans, maintenance of traffic plans, and estimates.

Utilities

- *Rivanna Water Study, Albemarle County, Virginia.* Project Engineer for a location study for 7 miles of 30-24 inch water main. Three alternatives were evaluated. All alternatives were evaluated on the basis of cost, right-of-way required, impact to traffic during construction, and impact to existing utilities and wetlands. The pipeline had to meet requirements of five separate agencies. These five agencies were The Rivanna Water and Sewer Authority, who was building the pipeline; Albemarle County, who was to be served by the pipeline; The City of Charlottesville, who governed two parks and several streets that were to be impacted; The University of Virginia, for possible easements across their property; and The Virginia Department of Transportation, for coordination with future roadway projects, required easements, and possible roadway impacts.
- *Chesterfield Water Study, Chesterfield County, Virginia.* Project Engineer for a location study for 10 miles of 36-16 inch water main. Five alternatives were evaluated for 7 miles of the pipeline. All alternatives were evaluated on the basis of cost, right-of-way required, impact to traffic during construction and impact to existing utilities and wetlands. The pipeline had to meet requirements of Chesterfield County and the Virginia Department of Transportation.
- *Hopkins Road Water, Chesterfield County, Virginia.* Project Engineer for the design of 3 miles of 24-16 inch water main. Responsible for complete civil design including horizontal and vertical alignment, easement plats, details, and specifications. Also was responsible for preparing monthly progress reports.
- *Prince George Water Study, Prince George County, Virginia.* Staff Engineer for the study of necessary water improvements. Responsibilities included projecting population growth and water demands.
- *Gilman Tract Sewer Study, Henrico County, Virginia.* Staff Engineer for the study of necessary sewer improvement for development project. Responsibilities included projecting future flows.

Land Development

- *Sinclair Broadcast Tower, Putnam County, West Virginia.* Project Manager for the site investigation and layout plans for the construction of an approximately 1000' television broadcast tower for WCHS-TV. Responsibilities included managing surveying, geotechnical, and site development efforts, coordination with tower designer and, investigation of potential conflicts with existing utilities. Investigations of the preliminary site chosen by client determined that it would be too costly to provide the necessary access therefore the tower was built at an existing tower site.
- *Oak Lake Business Center, Chesterfield County, Virginia.* Project Engineer for the design of a 200-acre business development. Responsibilities included design of 1 mile of 4-lane access road, drainage design, and storm water management including pond design. Also was responsible for correspondence with Chesterfield County and Virginia Department of Transportation officials.
- *Wella Manufacturing Facility, Henrico County, Virginia.* Project Engineer for the design of manufacturing facility. Responsible for complete site plans which included a parking lot, drainage structures, and storm water management pond.





- *Staunton Knights Inn, Augusta County, Virginia.* Project Engineer for design of motel site. Responsible for complete design of site plans which included an access roadway, parking lot, drainage structures, storm water management pond, utilities, and erosion and sediment control devices.
- *Fox Ridge Apartments, Montgomery County, Virginia.* Project Engineer for the design of apartment development. Responsibilities included drainage design and preparation of storm water management plan. Showed existing pond upstream and development of these apartments decreased peak flows and therefore no detention was required.
- *Lexington Arbogate Inn, Rockbridge County, Virginia.* Project Engineer for design of motel site. Responsible for complete design of site plans which included a parking lot, drainage structures, utilities, and erosion and sediment control devices.
- *Greystone Apartments, Richmond, Virginia.* Project Engineer for the design of apartment development. Responsible for revising plans to comply with H.U.D. regulations. Responsible for revising grading plans, drainage design, and erosion and sediment control devices.
- *Hunters Green Subdivision, Chesterfield County, Virginia.* Project Engineer for the design of residential subdivision. Responsible for roadway design, drainage design, and erosion and sediment control plans.
- *Hidden Valley Subdivision, Chesterfield County, Virginia.* Project Engineer for the design of residential subdivision. Responsible for roadway design, drainage design, and erosion and sediment control plans.
- *Timbercrest Subdivision, Henrico County, Virginia.* Project Engineer for the design of residential subdivision. Responsible for roadway design, drainage design, and erosion and sediment control plans.
- *Foxfield Town Houses, Henrico County, Virginia.* Project Engineer for the design of residential town house development. Responsible for complete design of site plans which included a roadway, parking lot, drainage structures, and erosion and sediment control devices.
- *Waldon Pond, Lynchburg, Virginia.* Project Engineer for the design of an apartment development. Responsible for site plans which included a parking lot, drainage structures, utilities, and erosion and sediment control devices.
- *Millboro, Bath County, Virginia.* Staff Engineer for flood plain study for development project. Responsible for determining flood plain after proposed development occurred.
- *Hopewell Plaza, Hopewell, Virginia.* Project Engineer for preparing a feasibility study and design of park area. Feasibility study responsibilities included determining impact of development on existing utilities. Responsible for design of utility relocation plans.

Miscellaneous

- SPCC Plans – Numerous Counties in West Virginia, Virginia, and Kentucky - Responsible Engineer for the review of over 4,000 Spill Prevention, Control and Countermeasure (SPCC) plans for Equitable Gas well and tank sites.
- Landfills - Numerous counties in Virginia - Staff Engineer responsible for miscellaneous design.

Summary

Mr. Penn specializes in project management and administration in the areas of highways, land development, and utilities. Mr. Penn is also experienced in developing environmental impact statements and assessments in accordance with NEPA regulations.





Mark D. Young, PE

Transportation Services Manager

Education

B.S. Civil Engineering 1998, West Virginia University Institute of Technology

Registrations/Certifications

Professional Engineer, West Virginia, Kentucky, Indiana, Ohio, Pennsylvania, North Carolina

Relevant Training/Courses

Advanced Project Management Training

National Environmental Protection Act (NEPA) Training

National Highway Institute (NHI) Course No. 130055, Safety Inspection of In-Service Bridges

ASFE Fundamentals of Professional Practice

Right of Way Training

Hydraulics I and II: Hydraulics and Hydrology, Hydraulics III: Computer Applications

Advanced Inroads

Right of Way Plans: Courthouse to Statehouse

Affiliations

American Council of Engineering Companies (ACEC) West Virginia, Transportation Committee Director

American Society of Civil Engineers (ASCE), West Virginia Younger Members Forum, President

American Society of Highway Engineers

Transportation and Development Institute

Society of American Military Engineers

Mountain Mission Incorporated (Non-Profit), Board Member

Summary

Mr. Young specializes in preparing preliminary and final contract plans and documents, including right-of-way plans, horizontal and vertical geometry, traffic control, permitting, drainage, erosion control, and specifications and bid documents for highways, bridges, abandoned mine lands, and site development.

Professional Experience

Transportation

- MSI Bridge Replacement, Engineer for Developed Alternative Alignments and Preliminary Plans, Vandergrief Borough for Westmoreland County.
- Eramet Bridge Rehabilitation, Manager for project development, temporary traffic control and construction contract documents for Eramet Marietta, Marietta, Ohio.
- King Coal Highway, Lead Engineer/Engineering Manager for highway layout and design, drainage, resource coordination. Joint Public/Private endeavor for development of Area. Mingo County, West Virginia for the West Virginia Department of Transportation, Division of Highways.
- Lincoln County Road Relocation, Project Manager for development of roadway relocation plans, right of way exchange plans, and West Virginia Department of Transportation, Division of Highways permit for construction, Columbia Natural Resources, Lincoln County, West Virginia.
- Lincoln County Road Widening, Project Manager for obtaining the appropriate permits from the West Virginia Department of Transportation, Division of Highways to allow road widening of an existing roadway for the purpose of delivering equipment for a compressor station, Columbia Natural Resources, Lincoln County, West Virginia.
- Pennsylvania Street, Lead Engineer, Task Manager for urban multilane roundabout design for two intersections of an urban roadway upgrade project, City of Carmel, Indiana.





- Willowood Bridge Replacement, Lead Engineer for highway layout and design, right-of-way layout and descriptions, drainage, resource coordination, and permits. Summers County, West Virginia for the West Virginia Department of Transportation, Division of Highways
- Romney Bridge Replacement, Lead Engineer for highway layout and design, right-of-way layout and descriptions, drainage, resource coordination, and permits. Hampshire County, West Virginia for the West Virginia Department of Transportation, Division of Highways.
- Bellepoint Bridge Replacement, Senior Engineer for roadway design, utility coordination, plan preparation. Summers County, West Virginia for the West Virginia Department of Transportation, Division of Highways
- Veteran's Memorial Bridge at Bellepointe, Senior Engineer for Roadway design, plan preparation and presentation. Summers County, West Virginia for the West Virginia Department of Transportation, Division of Highways.
- Martinsburg Bypass/Raleigh Street Connector Design Study, Lead Engineer, alignment layout study, estimate and report preparation, Berkeley County, West Virginia for the West Virginia Department of Transportation, Division of Highways.
- West Virginia Route 9, Project Engineer, highway layout and design, R/W layout and descriptions, quantities and cost estimates, drainage, resource coordination, and NPDES application. Berkeley County, West Virginia for the West Virginia Department of Transportation, Division of Highways.
- T.A. Shuman Bridge, West Virginia Route 7, Engineer for highway layout and design, bridge design, R/W layout, quantities, cost estimates, drainage, and resource coordination. Wetzel County, West Virginia for the West Virginia Department of Transportation, Division of Highways.
- US 35 EIS Wetland and stream delineation for US 35. Public meetings participant for the West Virginia Department of Transportation, Division of Highways.
- Nimmo Parkway, Drainage design for 1.5 miles of urban four-lane roadway for the town of Chesapeake, Chesapeake, Virginia.
- Checked and revised right-of-way plans, cemetery verification for West Virginia Department of Transportation, Division of Highways.

Inspection, Bridge / Structural

- Silver Memorial Bridge Inspection, Lead Inspector and Inspection team member for six-year bridge inspection program. Mason County, West Virginia for West Virginia Department of Transportation, Division of Highways.
- Williamstown-Marietta Bridge Inspection, Lead Inspector and Inspection team member for six-year bridge inspection program. Wood County, West Virginia for West Virginia Department of Transportation, Division of Highways.
- Brookfield Power – Hawks Nest Surge Basin, inspected surge basin for settling, Fayette County, West Virginia
- Eramet Bridge, visual and in-depth inspection of Eramet Railroad/Vehicular Bridge crossing four-lane divided Ohio Route 7 for Eramet, Marietta, Ohio.
- Kopperston Coal Conveyor, inspected coal conveyor system over public roads, Boone and Lincoln Counties, West Virginia for Norfolk Southern Corporation.

Site Development

- Nellis Complex, major storm water crossing in compliance with applicable environmental standards for development of coal facilities for Coal River Energy, Boone County, West Virginia.
- Hampshire County Courthouse, storm water layout and design for annex renovation for Silling Associates, Hampshire County, West Virginia.
- Marion County Visitors Center, site development layout review and revisions including contract documents, Marion County, West Virginia for the West Virginia Department of Transportation, Division of Highways.
- Mountain Mission Incorporated, site layout and storm water management, Charleston, West Virginia.
- Charleston Mountain Mission Church, developed two parking lot designs and provided storm water management control, Charleston, West Virginia.
- Eastover Medical Park, Site development engineering including layout, grading and drainage, erosion and sediment control, and utilities, Charlotte, North Carolina.
- New South East Elementary School. Site development engineering including layout, grading and drainage, erosion and sediment control, stormwater ponding, and utilities, Matthews, North Carolina.





- Celebrate Virginia, Drainage design for 3.5 mile of rural four-lane highway for commercial and Industrial Development, Fredericksburg, Virginia.
- Sam's Service Center, site development engineering, layout and design, Vienna, West Virginia.
- Bridgeway Technology Center, site layout, grading and drainage, erosion and sediment control, sedimentation pond, utility coordination, City approval and permitting, Suffolk, Virginia.
- Wal-Mart Supercenter, stormwater management plan including watershed delineation, preliminary stormwater design, Best Management Practice (BMP) detention pond, and quantity and quality design guides. Site design including lot layout, grading and drainage, and utility layout and coordination, Tabb, Virginia.
- Volvo Business Park, task manager for engineering, erosion and sediment control, grading and drainage, and site layouts, Chesapeake, Virginia.

Abandoned Mine Lands (AML)

- Route 60 Drainage, reclamation and control of outflow from abandoned mines including upgrade of storm system to carry flow, Fayette County, West Virginia for the West Virginia Department of Environmental Protection, Abandoned Mine Lands.
- Richard Mine Acid Mine Drainage, report and recommendations, quality control/quality assurance for report and development of alternatives for Monongalia Conservation District and Natural Resources Conservation Service, Monongalia County, West Virginia.
- Heizer Creek, quality control/quality assurance for construction documents and permit applications for work within West Virginia Division of Highways right-of-way for the West Virginia Department of Environmental Protection, Abandoned Mine Lands.
- Wolfpen, quality control/quality assurance for construction documents for the West Virginia Department of Environmental Protection, Abandoned Mine Lands.
- Allen Creek – Slab Fork, limited coal evaluation for West Virginia Division of Highways proposed West Virginia Route 121 project for Trumbull Corporation, Raleigh County, West Virginia.

Industrial / Chemical

- Project Coordinator for small projects for The Dow Chemical Company facilities in West Virginia. The work included job starts and closures, resources coordination, engineering estimates, job tracking, client coordination meetings, planning and forecasting for the chemical plants.



Mark D. Shawl, RLA, LEED® AP

Lead Landscape Architect

Education

B.S. Landscape Architecture 1994, College of Agriculture and Forestry, West Virginia University

Registrations/Certifications

Professional Landscape Architect, West Virginia No. 316, North Carolina No. 1051, South Carolina No. 812
Leadership in Energy and Environmental Design (LEED) 2.0 Accredited Professional, U.S. Green Building Council

Affiliations

American Society of Landscape Architects, ASLA
WV Chapter of American Society of Landscape Architects

Summary

Mr. Shawl specializes in all aspects of landscape architectural design with 14 years experience working on a diverse range of projects in both the public and private sectors. His experience includes, but is not limited to, project management, construction document and technical specification preparation, site analysis, schematic design, construction administration, master and land-use planning (parks, recreational, residential, institutional, commercial), streetscape and municipality improvements, landscape and hardscape designs, and graphic presentation drawings. Mr. Shawl has provided residential planning and landscape design services for over 50 projects.

Professional Experience

Streetscape / Urban Revitalization

- Richland County Gateway Revitalization, Columbia, South Carolina
- Tuckaseegee Road Streetscape, Charlotte, North Carolina
- Troutman Pedestrian Corridor Study, Troutman, North Carolina
- Little Sugar Creek Greenway, Charlotte, North Carolina

Parks & Recreation

- Burke County Regional Park, Burke County, North Carolina
- Manchester Soccer Complex, Rock Hill, South Carolina
- Cane Creek Park Phase 2, Union County, North Carolina
- Jessie Helms Park, Union County, North Carolina
- Triad Park Phase 5 and 7, Guilford County, North Carolina
- Gayle Community Park, Chester County, South Carolina
- U.S. Fish and Wildlife Service – Waccamaw National Wildlife Refuge, Georgetown, S.C.
- Paramount Parks Master Planning, NC, VA, OH, CA
- Paramount Parks Carowinds, Animation Station, Charlotte, North Carolina
- Paramount Parks Carowinds, Stealth Coaster, Charlotte, North Carolina
- Salisbury Community Park Greenway, Salisbury, North Carolina
- Jack D. Hughes Park Master Plan/Phase 1, Pineville, North Carolina





Institutions

Hospitals

- Friendship Baptist Church Phase 2, Charlotte, North Carolina
- Bible Center Church Master Plan and Bible Center Church Phase 1, Charleston, West Virginia
- Trinity Lutheran Church Columbarium Master Plan
- First Presbyterian Church Columbarium Master Plan
- The Church of Jesus Christ of Latter-Day Saints, Multiple Projects

Schools and Universities

- North Carolina Arboretum Baker Exhibit Center, Asheville, North Carolina
- Western Carolina University Tennis and Softball Center, and Western Carolina University Infrastructure Improvements, Cullowhee, North Carolina
- Winston-Salem State University Central Quad, Winston-Salem, North Carolina
- North Carolina Central University Pearson Cafeteria, Durham, North Carolina
- Duke University Central Water Plant, Site Design, Durham, North Carolina
- Fairmont State University Inner Campus Renovations, Fairmont, West Virginia
- Capitol High School Athletic Facilities Improvements, Charleston, West Virginia
- University High School, Morgantown, West Virginia
- Moorefield Intermediate School, Moorefield, West Virginia
- Mountain State University Health Sciences Center, Beckley, West Virginia
- Marshall University Dormitory / Alumni Center
- West Virginia University Dormitory, Evansdale Campus
- West Virginia University Dormitory, Downtown Campus
- Potomac State Dormitory
- West Virginia State Student Housing, Institute, West Virginia

Hospitals

- Tazewell Community Hospital Master Plan, Tazewell, Virginia
- Four Seasons Wellness Center, Tazewell, Virginia
- Cabell County EMS Facility, Huntington, West Virginia

Development / Site Planning

- Yeager Airport Master Plan
- Cheat Landing Office Park and The Villages at Cheat Landing in Morgantown, West Virginia
- The Pines Country Club, Morgantown, West Virginia
- Stonegate at Cranberry, Cranberry Township, Pennsylvania
- Chesapeake Energy Regional Headquarters in Charleston, West Virginia and Field Offices in Jane Lew, West Virginia; Mount Morris, Pennsylvania; and Honey Branch, Kentucky
- Shawnee Point Mixed-Use Residential Master Plan, Lake of Egypt, Illinois
- Whitehall Retail Development and Stonecrest Development, Charlotte, North Carolina





Charles F. Straley, PE, PLS

Engineering Manager / Geotechnical & CMS Services Manager

Education

B.S. Civil Engineering 1986 University of Akron
M.S. Geotechnical Engineering 1988 University of Akron

Professional Affiliations

American Society of Civil Engineers
National Society of Professional Engineers
Kanawha Valley Mining Institute

Registrations

Professional Engineer, West Virginia, Ohio, Kentucky, Indiana, Virginia (pending)
Professional Licensed Surveyor, West Virginia

Certifications

Troxler Certified
10-Hour OSHA Trained
40-hour Health and Safety Trained
8-hour Supervisor Health and Safety Trained

Professional Experience

Construction Administration/Management

- Managed construction management and certification for the new landfill cell for FGD disposal at the John Amos Power Plant in Putnam County, West Virginia. Closure activities included grading subgrade, leachate management and transmission, PVC liner and storm water management for a 22 acre cell. Project completed over two construction seasons.
- Performed construction management and certification for the closure of the municipal solid waste Berkeley County Landfill in Berkeley County, West Virginia. Closure activities included regrading waste, leachate management and transmission, gas management and cover consisting of 125,000 square yards of HDPE geomembrane. Project completed over two construction seasons.
- Performed construction management and certification for the closure of the municipal waste landfill Mingo County Landfill in Mingo County, West Virginia. Closure activities included regrading waste, leachate management, gas management, and 41,500 square yards of HDPE geomembrane.
- Professional engineer construction manager and administration for the mine seal and drainage collection for an abandoned mine project in Pomeroy, Ohio. Ohio Department of Natural Resources
- Design, construction monitoring, and construction administration for two lake dredging projects. Activities included subsurface investigation, regulatory approvals, construction drawings, technical specifications, construction troubleshooting, cost estimating, daily reports, and client interaction. West Virginia Division of Natural Resources: Tomlinson Run State Park and Kanawha State Forest
- Project manager for a storm sewer control project in Putnam County. The project included the design of a combination of channels, box culverts, and gabion retaining structures. Provided construction administration services and oversight of construction monitoring services. Putnam County Office of Planning and Infrastructure
- Responsible for design of The Storm Sewer Project, Phase I, in the Town of Gauley Bridge in Fayette County, West Virginia. The purpose of the project was to collect and convey storm water through the project area to minimize impacts from localized flooding. Performed the construction monitoring and administration for the construction of the project. Town of Gauley Bridge



- Inspected, evaluated and designed repair alternatives for Spruce Island and Sand Run Dams in Tucker County, West Virginia. Design included evaluation and improvement of slope stability for both earthen embankments, improvements to inlet and outlet works, and the geometry of the spillways. Permit applications for both dams were prepared. Performed the construction administration and certification of the completed repairs. Timberline Association

Construction Monitoring

- Assistance with construction monitoring in Scott Depot, Morgantown and Summersville, WV. K-Mart Corporation; West Virginia Solid Waste Management Board; and Norco Construction
- Construction monitoring for excavation and backfill of contaminated soils under health and safety conditions. Arco Chemical Corporation and ITT
- Construction monitoring of a fly ash disposal area, an emergency exit from a reclaim hopper and an artificial wetlands. Pennsylvania Electric Company
- Construction monitoring, moisture testing and density testing of a 250,000-cu-yd fly ash highway embankment. Installation and monitoring of pneumatic piezometers, horizontal slope inclinometers, and vertical settlement stations. Duquesne Light Company
- Design of and preparation of construction documents for a 600,000 cubic yard failed coal slurry impoundment. Activities included site grading, subsurface investigation, hydraulics and hydrology analysis, road re-design, preparation of drawings and technical specifications, engineering cost estimate and pre-bid meeting presentation. Periodic site visits during construction were provided. West Virginia Department of Environmental Protection, Abandoned Mine Lands

Landfill Design

- Closure design for an eleven acre municipal solid waste landfill. Grading, slope stability analyses, cap design, leachate collection, leachate treatment, and construction document preparation were major aspects of the project. WVDEP - Office of Waste Management
- Managed and performed the certification for a 2.25 acre expansion to a MSW landfill cell with a composite liner and C&D with a clay liner including leachate collection and detection systems. Conducted weekly site meetings. S&S Grading, Inc.
- Participation in the preliminary and final site planning design for a landfill expansion in Morgantown, WV. West Virginia Solid Waste Management Board

Dam Design and Inspection

- Performed periodic dam inspection and certification for three earthen dams at Blackwater Falls and Cacapon State Parks in West Virginia. WVDNR - Parks and Recreation
- Project manager for the preparation of construction documents for a earthen dam. Project includes evaluation of existing drainage structures, stormwater routing analysis, design of earth embankment, and design of an principle and emergency spillway. Lake Chaweva Homeowners Association
- Inspected, evaluated and designed repair alternatives for Spruce Island and Sand Run Dams in Tucker County, West Virginia. Design included evaluation and improvement of slope stability for both earthen embankments, improvements to inlet and outlet works, and the geometry of the spillways. Permit applications for both dams were prepared. Timberline Association
- Evaluated, inspected, and designed the rehabilitation for a concrete hydroelectric dam in Luray, Virginia. Dam rehabilitation included the replacement for a fish ladder.
- Evaluation of stability and rehabilitation of an existing water retention structure located adjacent to the Ohio River. Arco Chemical Corporation
- Performed annual dam inspection and certification for a 15-foot high earthen dam in Monroeville, Pennsylvania. Belmont Ridge Development
- Performed inspection of galleys of the concrete Lake Lynn Dam in Lake Lynn, Pennsylvania. Allegheny Power Systems





- Project manager for the preparation of a floodplain permit for a pond constructed within the 100-year floodplain of the Ohio River. Preparation of permit consisted of preparing hydrology/hydraulic calculations to determine if the pond altered the routing of a 100-year storm.
- Project manager for the preparation of construction documents for two lake dredging projects in West Virginia. Design included providing a dredging scheme, disposal site design, a water handling plan to maintain stream flow, and providing a sediment control plan for both the dredging operations and the disposal site. Provided construction administration service and oversight of construction monitoring service. WVDNR - Parks and Recreation Division

Summary

Civil engineering with an emphasis in geotechnical engineering, including all aspects of subsurface exploration, laboratory testing, foundation and embankment design, slope stability, material and construction specifications, and construction administration, management and monitoring.





Joseph A. Prine, PE

Senior Engineering Intern

Education

- A.S. Drafting and Design, 2001 West Virginia University Institute of Technology
- A.S. Civil Engineering Technology, 2001 West Virginia University Institute of Technology
- B.S. Engineering Technology w/ Civil Emphasis, 2001 West Virginia University Institute of Technology
- M.S. Various Courses in Engineering Management, Currently Attending Marshall University

Registrations

Professional Engineer - WV
NICET Certified, Engineering Technology, #103538

Professional Development

OSHA 40 hour Hazwopper Training
OSHA 10 hour Construction Industry Training Program

Awards

First Coalition Force Design Team - Commander, Tallil Air Base, Iraq

Professional Experience

Mr. Prine has a wide variety of experience in environmental engineering, civil engineering, site development, streetscape, and planning projects while at GAI and through previous employments. He has worked with private developers, architects, municipalities and governmental agencies. He has substantial experience in site engineering, and stormwater management. He has worked on various construction project sites including landfills, abandoned mines, and industrial and commercial facilities. Some of his environmental engineering projects include; Phase 1 reports, environmental monitoring, permitting, and design. Some of his civil engineering/site design projects include; design of stormwater management systems, earth work estimating, water and sewer line extensions, design of both large and small sites ranging in size 1 to 40 plus acres, assisting in the preparation of design/construction plans, reports, and cost estimates for projects, and highway/roadway design. He has also contributed to planning and design in several community improvement and streetscape projects.

Representative Project Experience:

Environmental Engineering

- WVAML – Wolfpen Landslide, Charleston, WV
- WVAML – Heizer Creek Landslide, Poca, WV
- WVDOC - Anthony Correctional Center – Package Water Treatment Plant, Neola, WV
- WVDOC - Huttonsville Correctional Center – Waste Water Treatment Plant, Huttonsville, WV
- Richard Mine AMD Flow Monitoring Study, Morgantown, WV
- American Electric Power – John Amos FGD Landfill Construction Monitoring, Winfield, WV
- WVDOH – Romney Bridge, Romney, WV
- WVDOH – King Coal Highway (US 52), Logan County, WV
- Spill Prevention Control and Containment (SPCC) Plans, CSX Railroad National Contract
- Facility Response Plans (FRP) Plans, CSX Railroad National Contract
- Rockport Terminal Tampa, FL Storm Water Management Redesign, CSX Railroad
- Oil Discharge Contingency Plans for State of Virginia, CSX Railroad National Contract
- Facilities upgrade design for Homeland Security, CSX Railroad National Contract
- Redesign of CSX Railroad Waste Water Treatment Plant, Clifton Forge, VA
- Environmental Emergency Responder to Train Derailment, Handley, WV





- Site Monitoring and Cap Design for Remediation Site, Huntington, WV
- QA/QC for Installation of New Groundwater Monitoring Wells, Scary Creek, WV
- Brownfield Way Ground Water Monitoring Reports, South Charleston, WV
- Nicholas County Landfill- Design and Permitting New Landfill Cells, and General Site Engineering
- Melinda Street Storm Water Improvements, Parkersburg, WV

Land Development / Site Planning

- Chesapeake Energy Field Office, Mansfield, Pennsylvania
- Huttonsville Work Release Camp – Site Design & Permitting, Huttonsville, WV
- Chesapeake Energy Regional Headquarters, Charleston, West Virginia (**LEED Project**)
- Chesapeake Energy Field Office, Mount Morris, Pennsylvania
- Chesapeake Energy Field Office, Honey Branch, Kentucky
- Detailed Site Design Aspen Village, Davis, WV
- Ft. Boreman Development–Master Plan Site Preparation and Roadway Design, Parkersburg, WV
- Golf Club House and Lodge Site Development, Stonewall Jackson State Park, WV
- Family Carpet Plaza–Site Design & Permitting, Parkersburg, WV
- Storm Water Detention System – Melinda St., Parkersburg, WV
- Site Design for Schools Hannan, Wahama, New Haven, and Pt. Pleasant, Mason County, WV
- Design of Storm Water Management System, Western Management, Parkersburg, WV
- Preparation of Detailed Erosion and Sediment Control Plans
- Preparation of NPDES Construction Stormwater Permit Applications
- Sugar Grove Site Design, Habitat for Humanity, WV
- Starlite Industrial Park, OH
- Great Lakes Truckland Site Improvements, Cross Lanes, WV

Streetscape and Trails

- City of Mount Hope Streetscape, WV
- City of Charleston, East End Design Charrette, WV
- Florida Street Master Plan for the City of Charleston, West Side Neighborhood Association, WV
- City of Richwood, West Virginia Streetscape Master Plan and Phase 1 Construction



Relevant Experience





References

Andrew N. Blackwood, Ed.D, Executive Director
National Youth Science Foundation
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Charleston, West Virginia 25333
304.552.1171

David D. Molgaard, Charleston City Manager
City of Charleston
PO Box 2749
Charleston, West Virginia 25330
304.348.8014

Chris Knox, Charleston City Engineer
City of Charleston
105 McFarland Street
Charleston, West Virginia 25301
304.348.8014

Mary Jean Davis, Charleston City Council
City of Charleston
PO Box 2749
Charleston, West Virginia 25330
304.348.8014

Tom Potts, Principal
Silling Associates
405 Capitol Street
Upper Atrium
Charleston, WV 25301
304.346.0565

Shawn Casey, Vice President, Land
Triana Energy
500 Virginia Street East
Charleston, West Virginia 25301
304.380.0133





Project Profiles

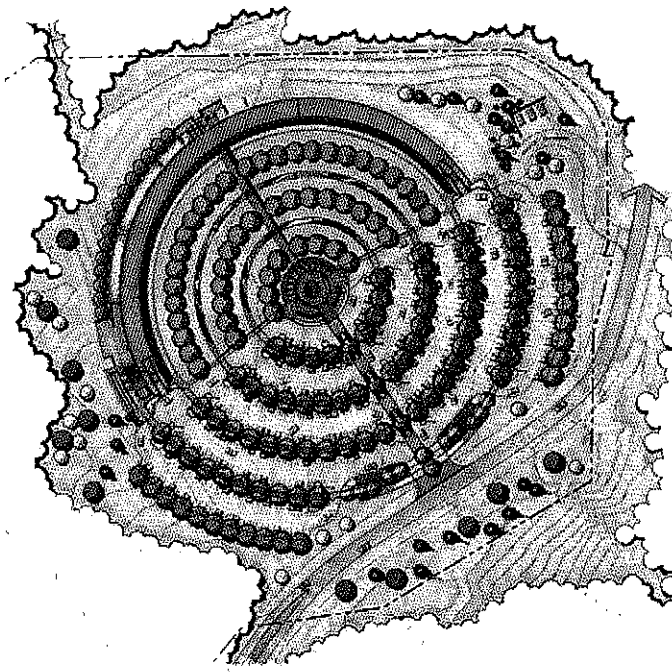




Land Development
 Landscape Architecture and Engineering

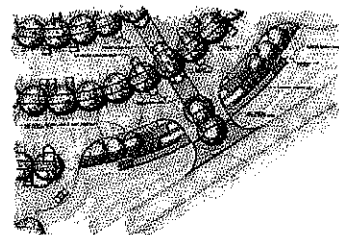


Chesapeake Energy Eastern Division Headquarters
 Charleston, West Virginia



GAI Project Manager:
 David Gilmore, ASLA, CLARB
 Project Team:
 GAI Consultants, Inc. (Prime)
 Client:
 Elliott + Associates Architects
 Client Contact:
 Bill Yen
 405.232.9554
 Project Cost:
 \$35 Million
 Completion Date:
 2009

#E070497



Brief Project Description

GAI Consultants, Inc. (GAI) was contracted by Elliott and Associates Architects to provide site design services for Chesapeake Energy's Regional Headquarters. The project included preliminary site layout, coordination of subsidence investigation, grading, storm water, utilities, landscaping, and signage. Also included in the project tasks was obtaining permitting through West Virginia Department of Environmental Protection and Army Corp of Engineers. In addition to the permitting, the building and site were designed using the LEED (Leadership in Energy and Environmental Design) rating system to attain a silver or gold designation. The site LEED elements included capturing rainwater for reuse to supplement the site irrigation system, and minimizing site footprint. The site supports a 4-story 121,000-square-foot building that contains 366 offices, an employee cafeteria, and a 6,500-square-foot fitness center.

Work Tasks/Services

- Preliminary site layout
- Coordination of subsidence reports
- Grading
- Storm water design
- Coordination of lighting and irrigation design
- Utility design
- Landscaping/signage design
- Permitting (WVDEP, Corps of Engineers)
- Assist in LEED requirements

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

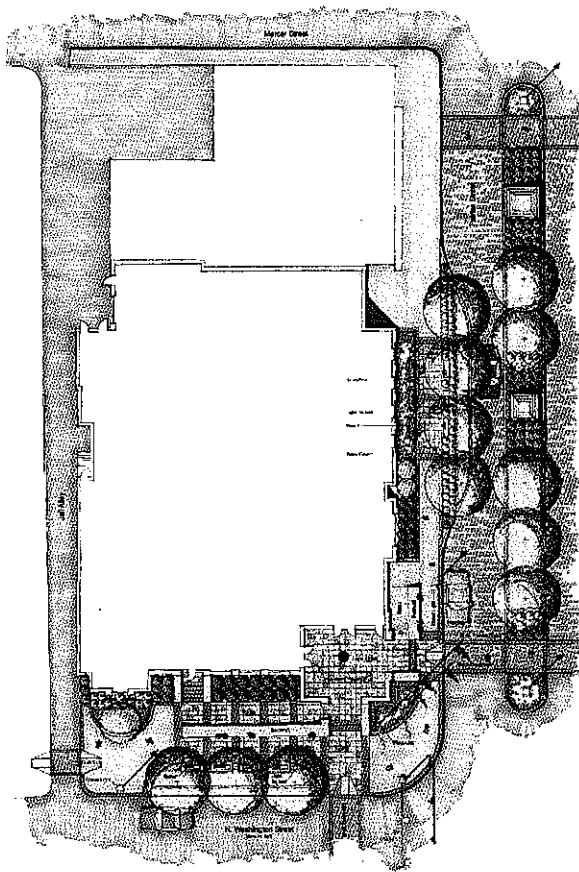




Land Development
 Landscape Architecture and Engineering



Morgan County Courthouse
 Morgan County, West Virginia



Brief Project Description

GAI Consultants, Inc. (GAI) was contracted by Silling Associates Architects to provide site design services for the new Morgan County Courthouse located in historic Berkeley Springs, West Virginia. The project included preliminary site master planning, utility design, grading, and site drainage. Also, included in the tasks was coordination of site design with a streetscape plan that had been initiated prior to the start of GAI's site design. The site supports a three story, 13,415-square-foot courthouse building that will support many of Morgan County's judicial offices including Magistrate Court, Family Law Court, and Circuit Court.

GAI Project Manager:
 David Gilmore, ASLA, CLARB
 Project Team:
 Silling Associates Architects (Prime)
 GAI Consultants, Inc. (Subconsultant)
 Client:
 Morgan County
 Client Contact:
 Tom Potts, AIA
 304.346.0565
 Project Cost:
 \$12 Million
 Completion Date:
 2009

#E080211

Work Tasks/Services

- Preliminary master planning and design
- Coordination of utilities
- Utility design
- Grading
- Site drainage
- Landscaping/site amenities
- Coordination of design with local streetscape committee

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

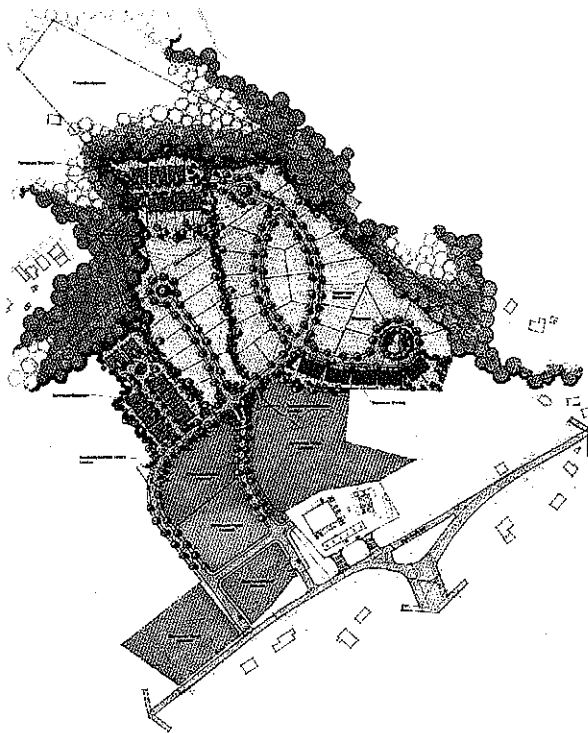




Land Development Landscape Architecture and Engineering



Cheat Landing Office Park Land-Use Study Monongalia County, West Virginia



GAI Project Manager:
David Gilmore, ASLA, CLARB
Project Team:
GAI Consultants, Inc. (Prime)
Client:
Blue Ridge Development
Client Contact:
Karl Barth
304.594.9320
Completion Date:
2010

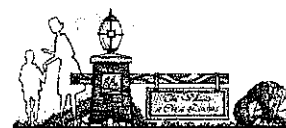
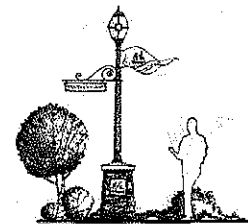
#E070584

Brief Project Description

GAI Consultants, Inc. (GAI) was contracted by Blue Ridge Development to provide a land-use study and master plan drawing for a 36-acre parcel in Monongalia County, West Virginia. The development included retail, office space and mixed-use residential. The plan also included design of the way-finding signage and preliminary engineering for site development.

Work Tasks/Services

- Land-use/master plan development
- Design of way-finding signage
- Preliminary engineering
- Presentation drawings/marketing



For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.





Land Development
 Permitting and Design



Edgewood Elementary Access Road
Kanawha, West Virginia



Brief Project Description

GAI Consultants, Inc. (GAI) provided design and permitting for a proposed access road that will serve a new elementary school planned by Kanawha County Schools. Based on preliminary road routing, GAI performed a Phase 1 environmental survey to identify all environmentally sensitive areas. GAI mapped existing stream/wetland information and revised the proposed alignment to minimize potential environmental impacts due to road construction. In addition, GAI worked with the architects in order to coordinate relocation of an existing gas transmission line adjacent to the project.

Work Tasks/Services

- Civil/site design
- Landscape architecture
- Geotechnical analysis
- Structural analysis
- Permitting
- Phase 1 environmental survey

Lasting Benefits

GAI's approach assisted the Kanawha County School Board in taking an environmentally- friendly approach to development of this access road.

GAI Project Manager:
 David A. Gilmore, RLA, ASLA
 Project Team:
 GAI Consultants, Inc. (Prime)
 Client:
 ZMM Architectctcs
 Client Contact:
 Mary Jo Cleland
 304.342.0159
 Completion Date:
 November 2011

#E101303.00

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

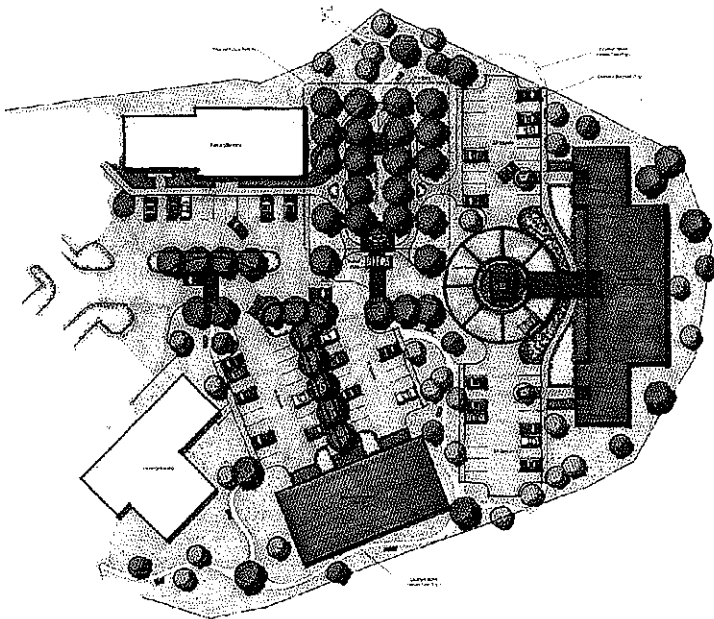




Land Development
Landscape Architecture and Engineering



Cambridge Place Office Park Study
Bridgeport, West Virginia



GAI Project Manager:
David Gilmore, ASLA, CLARB
Project Team:
GAI Consultants, Inc. (Prime)
Client:
Mason Dixon Energy, Inc.
Client Contact:
Gregory Zerke
304.842.9550
Completion Date:
2010

#E060683

Brief Project Description

GAI Consultants, Inc. (GAI) was contracted for landscape architecture and site planning services by Mason Dixon Energy for the Phase II of it's Cambridge Place Office Park in Bridgeport, West Virginia. The project scope included wayfinding and landscape improvements for the entire office park, future building, vehicular and pedestrian circulation and parking layout scenarios for Phase II and a fitness trail around the perimeter of the park.

Work Tasks/Services

- Program development
- Site analysis
- Conceptual planning
- Final master plan

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

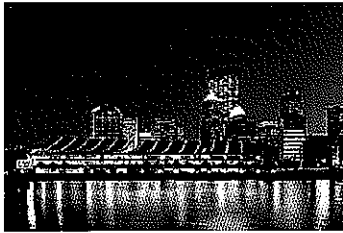
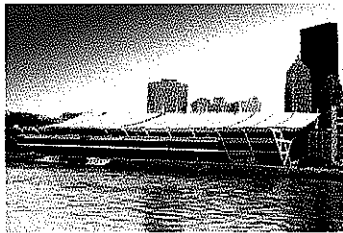




Land Development
 Utility Design Services



David L. Lawrence Convention Center
 City of Pittsburgh, Pennsylvania



Brief Project Description

GAI Consultants, Inc. (GAI) created the site plan utility design for a water supply to the new David L. Lawrence Convention Center (Expansion), to include permit and design of new separate storm and sanitary sewers for the new building and streetscape.

The Fort Duquesne Boulevard roadway infrastructure project at the David L. Lawrence Convention Center required special designs and details with respect to vaults and utility conflicts with proposed water lines, sewer lines, and appurtenances for a new convention center.

Work Tasks/Services

- Civil Engineering and Permitting
- Project management
- Field survey
- Erosion control plans
- Permitting
- Permits processing
- Hydraulic river modeling
- Storm and Sanitary Sewers
 - Utility and water supply design
 - Storm and sanitary sewer separation
 - Erosion and sediment control
 - River wall penetration design
 - Environmental permitting
 - Hydrologic and hydraulic investigations
- Roadway Improvements
 - Preliminary Erosion and Sediment Control Plans and permits
 - Separate water distribution system replacement plan and profile
 - Structural and hydraulic analysis of existing sewer system

Value Added Innovations

Design and permits for separate sewers reduced combined sewer overflows to the Allegheny River.

GAI Project Manager:
 Anthony F. Morrocco, P.E.
 Project Team:
 GAI Consultants, Inc. (Prime)
 Client:
 DMJM Harris
 Client Contact:
 John S. Prizner
 412.395.8888
 Completion Date:
 2002

#C990327

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

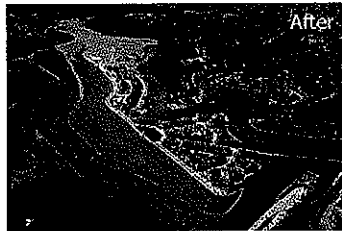
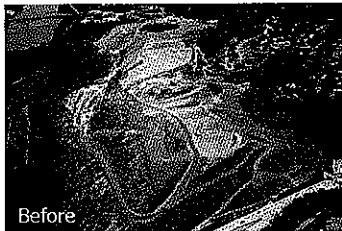




Land Development
 Site Development Services



Summerset at Frick Park
 Pittsburgh, Pennsylvania



GAI Project Manager:
 Jeffrey A. Parobek, P.E.
 Project Team:
 GAI Consultants, Inc. (Prime)
 Client:
 Urban Redevelopment Authority
 City of Pittsburgh
 Client Contact:
 Joseph Popchak
 412.255.6590
 Completion Date:
 Buildout - 2012

#C970125 #C000112 #C000486



Brief Project Description

Nine Mile Run, a onetime riverside slag dump bordering the main access highway to Pittsburgh's eastern suburbs, is being transformed into Pittsburgh's largest and most noteworthy residential development since World War II, Summerset at Frick Park. Upon completion, the \$269 million, multiphase project will include a total of 713 housing units on 230 acres. Remediation of the site will benefit the City through tax revenues and elimination of potential liability, the environment through restoration of Nine Mile Run, and the community through aesthetic improvements, new housing, and recreational opportunities. We are proud to be part of this collaborative effort among the URA, Summerset Land Development Associates, and numerous community groups.

Work Tasks/Services

- Surveying
- Grading
- Health and safety plan development
- Risk assessment
- Geotechnical investigation
- Aesthetic pile plank retaining wall design
- Public involvement program
- Environmental/hazardous materials assessment
- Roadway and bridge design
- Permitting
- Construction management and monitoring
- Air and water quality assessment
- Traffic studies
- Master-plan development
- Historic structure evaluation
- Infrastructure design
- Seep abatement plan development
- Building demolition plans and specifications
- Act 2 clearance coordination with the Pennsylvania Department of Environmental Protection
- State and federal funding application assistance

Value Added Innovations

- Public/community involvement
- Seep mitigation
- Brownfield remediation
- Financial assistance/support
- Accelerated permitting
- Saved cost of importing soil by using existing soil during Phase I
- Use of water quality storm sewer manhole structures

Major Accomplishments

- 2002 Awards of Distinction, Engineer's Society of Western Pennsylvania, Project of the Year, Environmental Category
- 2003 Governor's Award for Environmental, Excellence in the Land Use Category
- 2003 Pennsylvania ACEC Diamond Award for Engineering Excellence

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.





Land Development
 Residential Development Services



Washington's Landing
 Pittsburgh, Pennsylvania



GAI Project Manager:
 Jeffrey A. Parobek, P.E.
 Project Team:
 GAI Consultants, Inc. (Prime)
 Client:
 Urban Redevelopment Authority
 of Pittsburgh
 Client Contact:
 Marino J. Marangoni, Jr.
 412.255.6580
 Completion Date:
 1995

#C940375

Brief Project Description

GAI Consultants, Inc. (GAI) provided site evaluation, planning, design, and permitting for the Washington's Landing housing development located on the western bank of the Allegheny River. The prior Herr's Island, a former industrial site, has been transformed into Washington's Landing, a 42-acre high-quality, multi-use development only two miles from Pittsburgh's Golden Triangle.

Work Tasks/Services

- Field survey
- Permitting
- Roadway and infrastructure design
- Specialty paving
- Site grading and drainage
- Sewage facilities planning module
- Geotechnical investigation
- Wetlands investigation
- Traffic control
- Erosion control
- Construction monitoring

Value Added Innovations

The Urban Redevelopment Authority of Pittsburgh received the 1997 Phoenix Award, Public Project Category for Washington's Landing development

Lasting Benefits

Pittsburgh has won national acclaim for its brownfield projects, such as Washington's Landing, the South Side Works, and the new residential neighborhood sited on a slag heap, Summerset at Frick Park

For more information on GAI Consultants, Inc, please visit www.gaiconsultants.com.

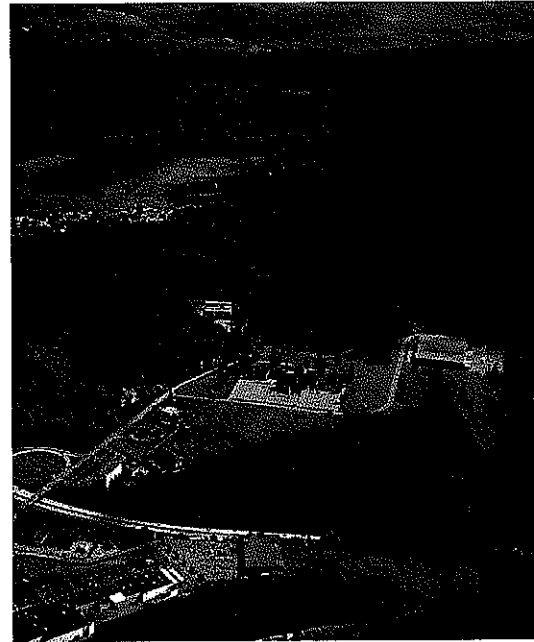
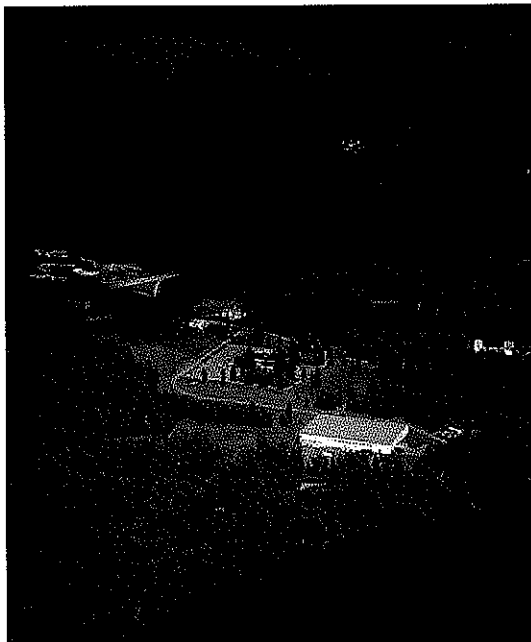




Land Development
 Planning & Design of Public Infrastructure



Three Springs Business Park
 Weirton, West Virginia



Brief Project Description

GAI Consultants, Inc. (GAI) performed concept planning and design of public infrastructure, streets and utilities, for a 100-acre industrial park in the City of Weirton. The industrial complex was being built in an area that included reclaimed surface coal mines. Work included design of a 14-inch water line extension and an off site sanitary sewer line extension to serve the project site. The construction project had several sources of funding that created challenges during the construction management phase.

Work Tasks/Services

- Conceptual design
- Property surveying and mapping
- Environmental assessment
- Archaeological investigation
- Geotechnical investigation
- Master plan development
- Subdivision plans
- Stormwater management
- Permitting
- Roadway design
- Utilities design and coordination
- Sanitary and storm sewer design
- Water main design
- Construction monitoring and management
- Plans review

GAI Project Manager:
 Anthony Morrocco, P.E.

Project Team:
 GAI Consultants, Inc. (Prime)

Client:
 Business Development Corporation of
 the Northern Panhandle

Client Contact:
 Marvin Six
 304.748.5041

Completion Date:
 September 1996

#C940506

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

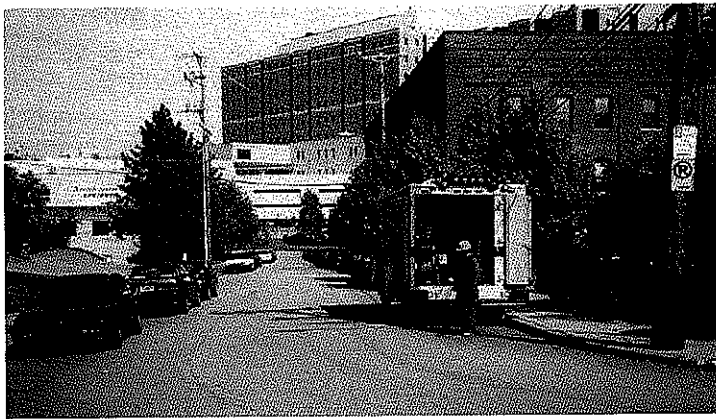




Land Development
 Sewer Evaluation Services



City of Pittsburgh Sewer Evaluation
Allegheny County, Pennsylvania



GAI Project Manager:
 Jeffrey Parobek, PE
 Anthony F. Morrocco, PE

Project Team:
 GAI Consultants, Inc. (Prime)

Client:
 City of Pittsburgh
 Water & Sewer Authority

Client Contact:
 David Troianos
 412.255.8870

Construction Cost:
 \$3 Million

Completion Date:
 1994-1999

Brief Project Description

GAI Consultants, Inc. (GAI) performed an investigation into the capacity and condition of several sewers within the City of Pittsburgh. Sewers were internally inspected by use of either video camera or by sending a diver into the pipe. Sewers investigated included: Dinwiddie Street 36" combination sewer, Carnegie Mellon 72" combination sewer, California Avenue 36" combination sewer, Ellsworth Morewood 15" combination sewer, and Merchant Street 60" combination sewer.

#C920381

Work Tasks/Services

- Field surveys
- Site investigations (internal TV inspections, residential user survey, flow meter monitoring, utility and geotechnical investigations, dye testing)
- Hydrologic and Hydraulic (H&H) investigations
- Hydrologic model development
- Preliminary design and analysis
- Alternative corrective action plans
- Maintenance and protection of vehicular and pedestrian traffic
- Detailed separation and re-lining plans and specifications
- Construction services

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

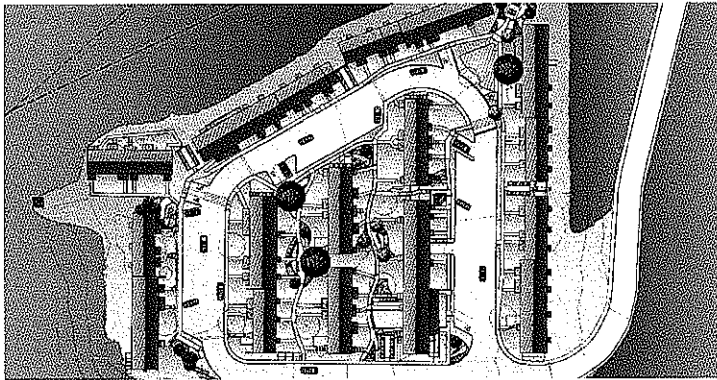




Land Development
 Site Development Services



Prospect Terrace
 Allegheny County, Pennsylvania



GAI Project Manager:
 James D. Roman, EIT

Project Team:
 GAI Consultants, Inc. (Prime)
 Santangelo & Lindsay (Subconsultant)

Client:
 Lami Grubb Architects

Client Contact:
 Suzan Lami
 412.243.3430

Owner:
 Allegheny County Housing Authority

Completion Date:
 December 2010

#0090662.00

Brief Project Description

Prospect Terrace, a 9.5-acre property, is owned by the Allegheny County Housing Authority (ACHA). Originally constructed in the mid-1960s, Prospect Terrace has not been renovated since.

The 94-unit public housing complex received almost \$4.5 million in federal American Recovery and Reinvestment Act funds to make energy-saving and green updates. Allegheny County will fund the balance of the \$7.4 million project.

GAI Consultants, Inc. (GAI) provided design for paving, sidewalks, curbs, landscaping, retaining walls, utility relocations, and site lighting. GAI also designed site access for handicapped residents, making the site compliant with Uniform Federal Accessibility Standards (UFAS).

Work Tasks/Services

- Erosion and sedimentation control plans
- Site design for UFAS compliance
- Utility relocation and design
- Landscape design
- Site lighting
- Utility plans

Value Added Innovations

GAI provided access for handicapped residents on a site having an elevation difference of 30 feet.

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

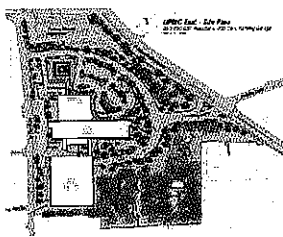




Land Development Civil Site Engineering, Design & Survey



UPMC East Hospital Complex Allegheny County, Pennsylvania



Brief Project Description

GAI Consultants, Inc. (GAI) participated in the design of a new hospital on approximately 19 acres of land in Monroeville, Pennsylvania. The site is located at the southwest corner of State Routes 48 and 22, the second busiest intersection in the state of Pennsylvania. This complex will consist of a 500-car parking garage and a 300,000 sq. ft. hospital comprised of inpatient services, medical offices, and facilities for emergency care, surgery, and imaging. The complex will also house a women's center, a cancer center, and a helipad. The project is currently being designed to obtain a LEED Certification. Additionally, the post-construction stormwater management collection conveyance and drainage facilities are being designed to LEED requirements.

GAI Project Manager:
 Patrick M. Gallagher

Project Team:
 BBH Design of PA. (Prime)
 GAI Consultants, Inc. (Subconsultant)
 Keddal Aerial Mapping (Subconsultant)

Client:
 BBH Design

Client Contact:
 Timothy Spence, AIA
 919.460.6700

Completion Date:
 July 2012

#C080600

Major Accomplishments

Pending LEED Certification and other awards after construction is completed.

Lasting Benefits

The stormwater management plan will help alleviate existing flooding problems in the Dirty Camp Run watershed and also provide infiltration to recharge ground water as well as treating post developed runoff providing improvements to water quality.

Work Tasks/Services

- Conceptual & Preliminary Engineering
- Proposed Geotechnical Boring Survey
- Utility Survey & Plans
- Property Survey, Topographic Survey & Verification of Aerial Survey
- Preliminary Investigations
- Site Plan
- Horizontal Control Plan
- Grading & Storm Drainage Plan
- Stormwater Management Plan (LEED Certification)
- National Pollution Discharge Elimination System (LEED Certification)
- Demolition plan and specifications
- PADEP Sewage Facilities Planning Module
- Final Construction Plans & Technical Specifications
- Engineering and Construction Monitoring Services Inspectors

Value Added Innovations

The existing site, home of the former Palace Inn Hotel, presented many site development challenges due to extreme topographic conditions, previous site fill material, site access, existing utility depths of 70 feet or greater, stormwater management problems and existing flooding conditions. There are also earthmoving challenges due to site size and poor existing soil conditions. GAI prepared a detailed grading plan that minimizes excess excavation and the need and the cost associated with hauling off-site for disposal. GAI avoided impacting an existing stream and a 72" culvert traversing the site. The culvert has over 70 feet of existing fill over it. GAI prepared a stormwater management system that utilizes infiltration, bioremediation swales, and a detention pond to alleviate existing flooding conditions and to meet LEED Certification requirements.

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

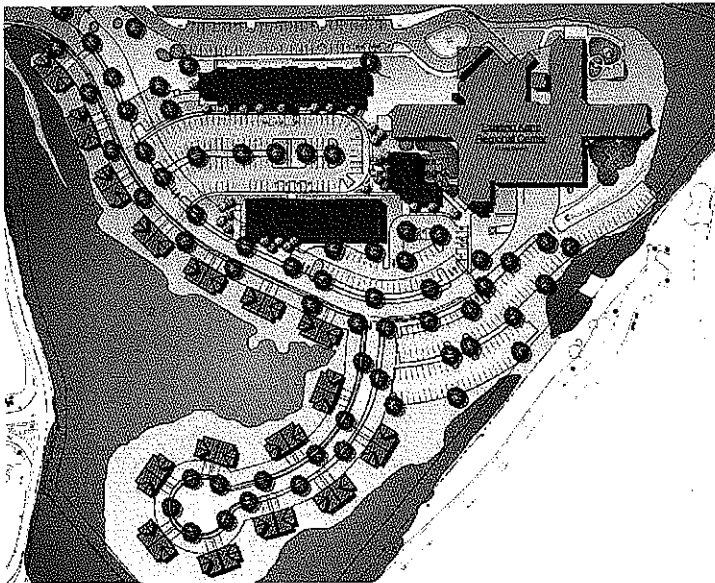




Land Development
 Survey and Engineering Services



Kane Regional Senior Care Campus
 Allegheny County, Pennsylvania



GAI Project Manager:
 Patrick M. Gallagher

Project Team:
 GAI Consultants, Inc. (Prime)
 Santangelo & Lindsay (Subconsultant)

Client:
 Ralph A. Falbo, Inc.

Client Contact:
 Ralph A. Falbo
 412.355.0300

Owner:
 Kane Regional Hospital

Completion Date:
 August 2010

#0071296.00

Brief Project Description

GAI Consultants, Inc. (GAI) provided engineering, design, and survey services for Phase 1 of the Kane Regional Center site development project along McIntyre Road in Ross Township. This is a four-phase residential development project on a 29-acre parcel of land. Phase 1 consists of the construction of two 60-unit independent living buildings, a 5,000-square-foot senior care facility, and 32 duplex units. The project also includes renovation of the fourth floor of the existing Kane Hospital building to create 37 assisted living units.

Work Tasks/Services

- Site design
- Property, topographic and utility survey
- ALTA/ACSM land title survey
- Utility investigation
- Geotechnical exploration
- Traffic planning
- Rezoning and variance approvals
- Land development approvals
- Stormwater management
- NPDES permit
- Landscape plan
- PADEP sewage planning module exemption
- Technical specifications
- Construction monitoring

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

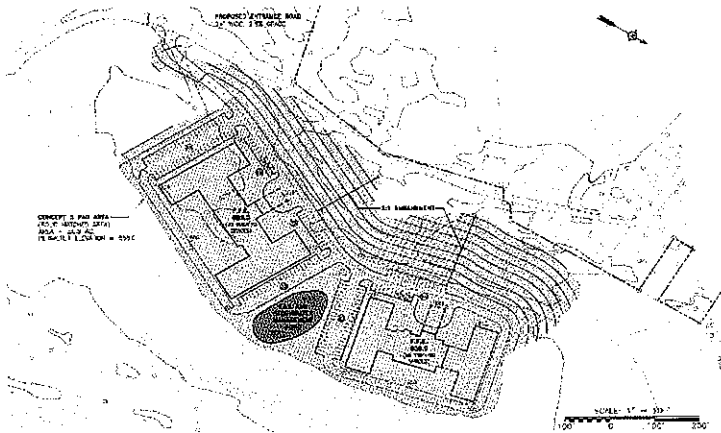




Land Development
 Multiple Services



Wheeling Hospital
 Ohio County, West Virginia



GAI Project Manager:
 James D. Roman
 Project Team:
 GAI Consultants, Inc. (Prime)
 Pennsylvania Drilling Company
 (Subconsultant)
 Client:
 Wheeling Hospital, Inc.
 Client Contact:
 John Pastorius
 304.243.3267
 Completion Date:
 April 2009

#C070745 & C081170

Brief Project Description

GAI Consultants, Inc. (GAI) provided engineering design and survey services for a proposed senior care facility, hospital expansion, and landslide stabilization project. The proposed senior care facilities included independent and assisted living facilities that required a zone change from the City of Wheeling. GAI provided a topographic, boundary, and ALTA/ACSM survey for the 154.85 acres of land owned by the hospital.

Additionally, GAI provided geotechnical explorations for the senior care facilities on the northern portion of the property and for the landslide stabilization project on the southern portion of the property.

Lasting Benefits

GAI provided geotechnical explorations and designs to remediate a landslide which has occurred periodically over the past five years and has effected the southern parking lot of the hospital. The design included a stream restoration that is under the jurisdiction of the Army Corps of Engineers.

Work Tasks/Services

- Conceptual design for Senior Care Facilities
- Utility investigation
- Zone change
- Geotechnical exploration
- Landslide stabilization
- Topographic, property, and ALTA/ACSM land title surveys
- Wetland and stream investigation
- Permitting through Army Corps of Engineers and Department of Environmental Protection
- Archaeological and historical site determinations
- Coordination with architects, utility agencies, and the City of Wheeling

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

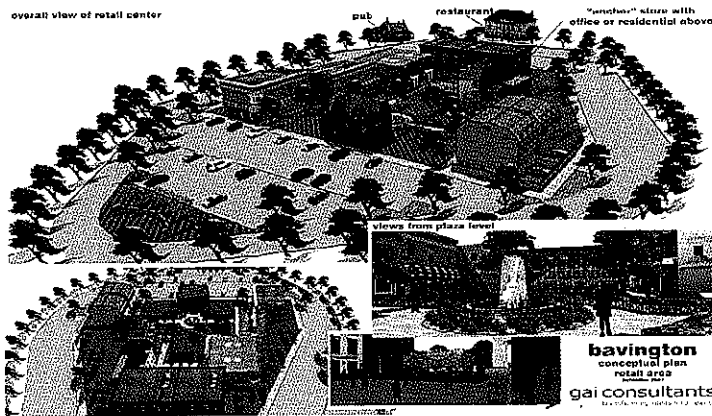




Land Development Concept Planning & Feasibility Study



Bavington Property Development Washington County, Pennsylvania



GAI Project Manager:
 Jeff Parobek, PE
 Project Team:
 GAI Consultants, Inc. (Prime)
 Client:
 Homestead Resource Group, LLC
 Client Contact:
 Gregory Kobulnicky
 304.374.0810
 Construction Cost:
 \$65 million
 Completion Date:
 2008

#C060830

Brief Project Description

GAI Consultants, Inc. (GAI) and the Homestead Resource Group worked together to develop a conceptual master plan that would transform a family farm into a traditional neighborhood development. The conceptual master plan had to ensure preservation of the property's heritage. Encompassing approximately 112 acres divided by a major highway (US 22/30) that connects Pittsburgh, Pennsylvania, to Weirton, West Virginia, and other points west, the property was developed utilizing traditional town planning principles to guide the planning process. Approximately 11 acres of the property separated from the total acreage by the aforementioned highway was identified as an opportune location for a town square-style retail development.

Work Tasks/Services

- Conceptual design
- Cost estimating
- Topographic surveying and mapping
- Conceptual grading

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

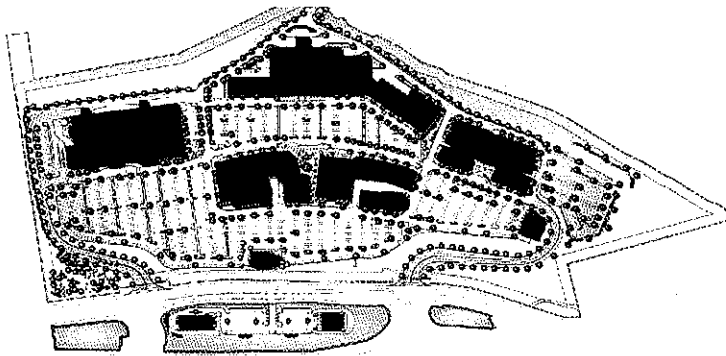




Land Development
 Site Development Services



Settlers Ridge Lifestyle Center
Allegheny County, Pennsylvania



GAI Project Manager:
 Ray B. Sutherland, P.E.

Project Team:
 KA, Inc. (Prime)
 GAI Consultants, Inc. (Subconsultant)

Client:
 Faison Enterprises, Inc.

Client Contact:
 James C. Castillo/Roger Wright
 301.986.9696

Owner:
 CBL & Associates Properties, Inc.

Project Fees:
 \$574,000

Completion Date:
 2007

#C050423

Brief Project Description

GAI Consultants, Inc. (GAI) was the Civil Engineer for the 600,000 square-foot Settlers Ridge site development project for a regional shopping center located just outside Pittsburgh. The development, which features a large grocery store, restaurants, open-air shopping and a fitness center, is situated on a 79-acre parcel of land that had been strip-mined. The project comprised three stages: data collection and review, design development, and retail site design. After completing preliminary site investigations, GAI was awarded a second contract to provide site design services for the Settlers Ridge development. GAI prepared a Subdivision/Consolidation Plan, site plans that included technical specifications, and an Opinion of Probable Construction Costs. Close coordination was maintained with Township officials and GAI was represented at all the project meetings. In addition, GAI provided services during construction.

Work Tasks/Services (Planning)

- ALTA/ASCM survey and aerial mapping
- Utility investigations and survey
- Geotechnical investigations
- Environmental review
- Stormwater management review and plan
- Utility plans
- Pennsylvania Department of Environmental Protection Sewage Planning Module

Work Tasks/Services (Design)

- Final site design and construction documents
- Preliminary engineering
- Design Development Site Plan assistance
- Lighting plan
- Landscaping design
- Parking lot layout
- Utility layout
- Storm drainage design
- Construction consultation

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.





Land Development Site Planning



Westmoreland County Building Addition *Westmoreland County, Pennsylvania*



Brief Project Description

GAI Consultants, Inc. (GAI) provided engineering and surveying solutions for this design-build project for the Westmoreland County Extension Building. The Extension Building is located west of the main Westmoreland County Courthouse.

Amenities for the new facilities included a first floor glass atrium with elevator in the northeast corner and a skywalk/bridge structure between the Extension Building and the Court Annex. In addition to the exterior structures, other elements of the Extension Building involved increasing the existing building from a single, above-street grade floor to a five-story structure above street grade.

GAI Project Manager:
Patrick Gallagher

Project Team:
GAI Consultants, Inc. (Prime)

Client:
Strada LLC

Client Contact:
Ed Shriver
412.263.3800

Completion Date:
2008

#0060179.00

Work Tasks/Services

- Property and topography survey
- Sewage planning module
- Utility investigation
- Geotechnical evaluation
- Site construction plans and specifications
- Erosion and Sediment Control Plan
- Services during construction

Lasting Benefits

The Westmoreland County Extension Building addition achieved LEED® certification through GAI's innovative, comprehensive and practical design-build solutions.



For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.
LEED® and related logo is a trademark owned by the U.S. Green Building Council and is used by permission.

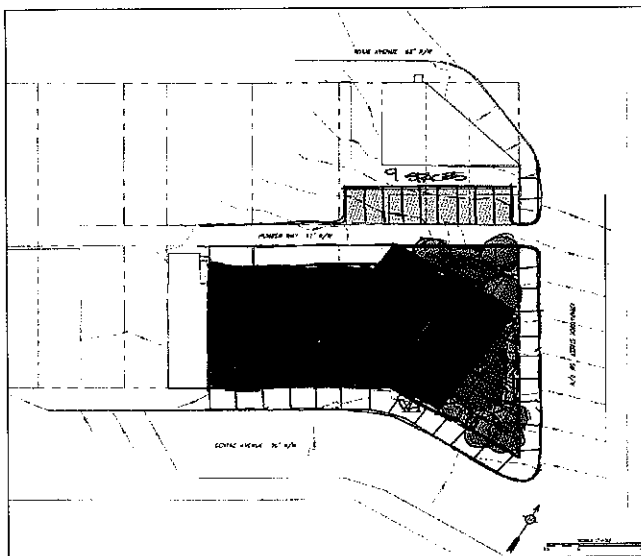




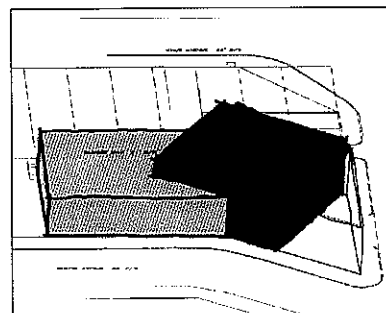
Land Development
 Conceptual Design Study



Carnegie Library of Pittsburgh, Hill District Branch
Allegheny County, Pennsylvania



SITE PLAN



MASSING STUDY

SITE CONCEPT SKETCHES

CONCEPT F
 Carnegie Library - Hill District
 ALLEGHENY COUNTY, PENNSYLVANIA
 DECEMBER 14, 2005



gai consultants

Brief Project Description

GAI Consultants, Inc. (GAI) was contracted by Carnegie Library of Pittsburgh to identify the site for a new branch of the public library in Pittsburgh's Hill District neighborhood, which lies within the city's limits. GAI was tasked with studying different conceptual designs, exploring parking configuration, screening needs, public plaza opportunities, building placement and massing and service access requirements. Through the combination of the results of the aforementioned tasks and our team's professional expertise, we were able to present the client with 7 very distinct possibilities.

Work Tasks/Services

- Conceptual design
- Preliminary study survey

GAI Project Manager:
Jeff Parobek, P.E.

Project Team:
 GAI Consultants, Inc.

Client:
 Carnegie Library of Pittsburgh

Client Contact:
Jane Dayton
 412.622.3114

Completion Date:
 2005

#C050523

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

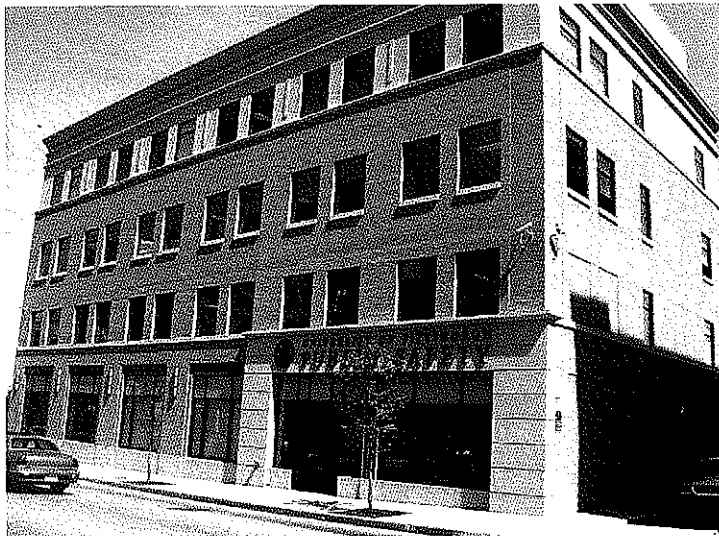




Land Development
 Site Development Services



University of Pittsburgh Public Safety Building
 Allegheny County, Pennsylvania



GAI Project Manager:
 Patrick M. Gallagher
 Project Team:
 GAI Consultants, Inc. (Prime)
 Client:
 Strada, LLC
 Client Contact:
 Alan Jesse Cuteri
 412.262.3800
 Fees:
 \$94,000
 Completion Date:
 December 2006

#0050452

Brief Project Description

The University of Pittsburgh's architect, Strada LLC, retained GAI Consultants, Inc. (GAI) for civil and geotechnical engineering services for the University's four-story Public Safety Building. The building is situated on University property in the Oakland section of the City of Pittsburgh and includes a full basement and an adjoining garage and deck structure. Challenging subsurface conditions found during construction required GAI field engineers to redesign original drawings within a short timeframe.

Work Tasks/Services

- Geotechnical engineering
- Sewage facilities planning module
- Utility investigation
- Site development plans
- Erosion and Sedimentation (E&S) control plan
- Stormwater management exemption
- PennDOT Highway Occupancy Permit (HOP)
- Technical specifications
- Pittsburgh Water and Sewer Authority (PWSA) tap-in drawings

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

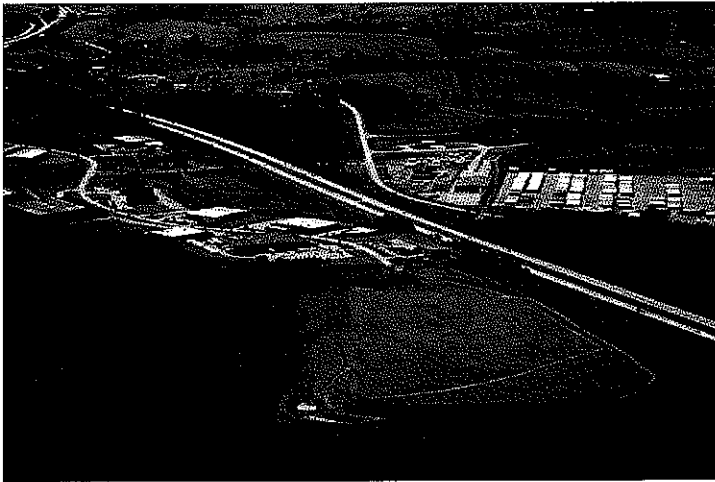




Land Development
Site Development Services



Westmoreland Technology Park – Lot 19
Hempfield Township, Westmoreland County, Pennsylvania



GAI Project Manager:
Patrick M. Gallagher
Project Team:
GAI Consultants, Inc. (Prime)
Client:
Westmoreland County Industrial
Development Corporation
Client Contact:
Jay Bandieramonte
724.830.3608
Construction Cost:
\$950,000
Fees:
\$250,000
Completion Date:
Spring 2007

#C030216

Brief Project Description

GAI Consultants, Inc. (GAI) provided site development services for Lot 19 of the Westmoreland Technology Park. The project involved designing utility and site infrastructure for an approximate 20.6 acres site pad. The proposed project consisted of approximately 200,000 cubic yards of site grading, geotechnical analysis of existing mine spoil areas along with excavation and re-compaction of previously strip mined areas of the site, erosion and sedimentation and stormwater detention basin design, access road design, and construction management.

Work Tasks/Services

- Design plans
- Stormwater management
- Erosion and Sedimentation (E&S) control plan
- PaDEP permitting
- Utility design

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

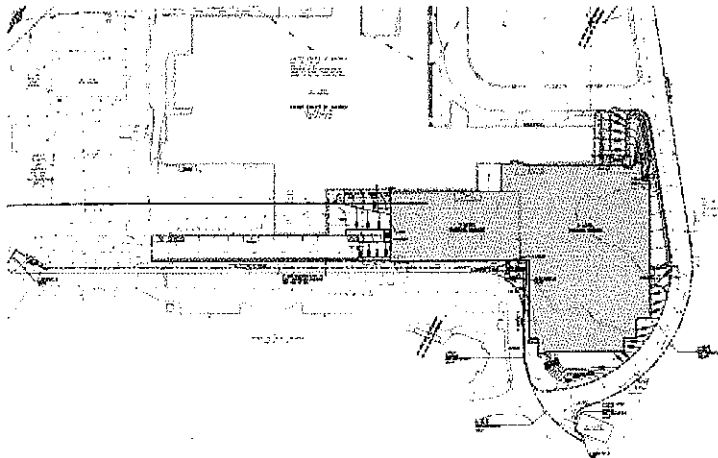




Land Development
 Site Development Services



Veterans Administration Facility Design-Build
Allegheny County, Pennsylvania



GAI Project Manager:
Jeffrey A. Parobek, P.E.
 Project Team:
GAI Consultants, Inc. (Prime)
 Client:
RTKL Associates, Inc.
 Client Contact:
David Spahr
202.833.4400
 Completion Date:
2006

#C0140480

Brief Project Description

GAI Consultants, Inc. (GAI) provided engineering and surveying services for a Veterans Administration parking garage project in Pittsburgh. The design-build project involved developing an 11-acre parcel of land at the Veterans Administration Hospital on University Drive to expand parking facilities. GAI developed the schematic site design for a parking garage structure and surface parking for 900 to 1,200 vehicles.

The site design effort included associated access roads and utility infrastructure, and involved preparing bridging documents for the design-build construction project. GAI also provided assistance during construction in the form of shop drawings, design, and change order review.

Work Tasks/Services

- Topographic survey
- Boundary survey
- Utility investigation and survey
- Preliminary development plans
- Site plan
- Grading and storm drainage plans
- Utility plans
- Specifications
- Stormwater management plan
- Geotechnical investigation

Lasting Benefits

This 11-acre garage expansion is the first phase of the largest Veterans Administration (VA) in Pittsburgh in 50 years. The overall five-year, \$200M federally-funded project will condense VA facilities in Oakland and O'Hara Township by one-third, while maintaining all programs and services. Inefficient buildings dating from the 1950s are being replaced to create a more residential, less institutional, healing environment at the facilities.

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

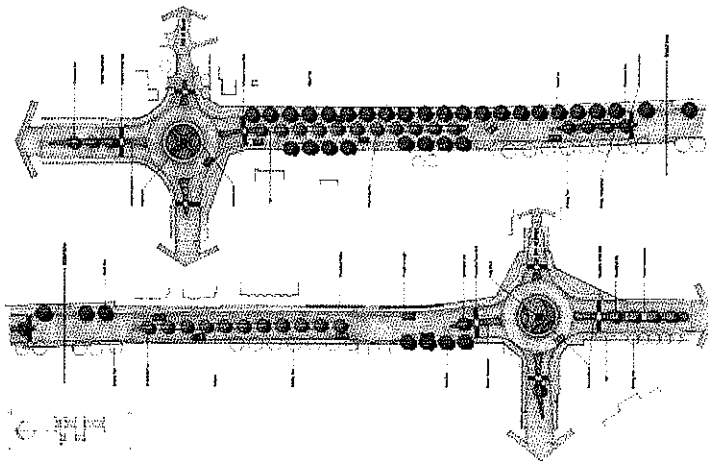




Transportation
 Roadway Design & Streetscape Services



Pennsylvania Street
 Hamilton County, Indiana



GAI Project Manager:
 W. Scott Allen, P.E.
 Project Team:
 GAI Consultants, Inc. (Prime)
 Client:
 City of Carmel
 Client Contact:
 Mayor James Brainard
 317.571.2401
 Eng. Michael McBride
 317.571.2441
 Completion Date:
 2006

#D060497

Brief Project Description

Due to the success of GAI Consultants, Inc., (GAI) on a past-accelerated project, the City of Carmel again called upon GAI to work on a major project that needed completed on a short time frame. The Pennsylvania Street Reconstruction project involved reconstructing an existing two-lane street into a four-lane, boulevard-style street, with a landscaped median and left-turn lanes. A roundabout at 103rd Street facilitated traffic flow and a second roundabout at 106th Street replaced an existing traffic signal.

To accommodate pedestrians, an 8-foot asphalt trail was included on the west side with a 5-foot concrete sidewalk on the east. Landscaping elements, such as trees, plantings, and architectural-style focal points, provided a new aesthetic feel to the corridor.

The project was designed in a very narrow corridor with minimal right-of-way impacts. Amazingly, all of this work was completed in only 12 weeks to maintain the City's very tight schedule.

Value Added Innovations

- Accelerated construction schedule
 - Survey delivery to plan submittal was only 10 weeks
- Design of two roundabouts, special hardscaping, and landscaping to beautify the corridor
- The addition of storm water quality units to improve storm water conditions prior to release of drainage into the receiving waters

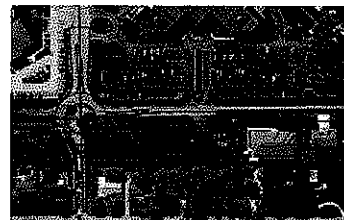
allowed the project to meet Rule 5 requirements for sediment control and pollution prevention

Lasting Benefits

- Attractive street for local residents
- Safety improvements with median and roundabouts
- Pedestrian access

Work Tasks/Services

- One-half mile of boulevard-style roadway reconstruction
- Design of two roundabouts to provide traffic calming and improve safety
- Asphalt trail and concrete sidewalk
- Storm sewer construction
- Water main realignment
- Traffic control plan
- Bids and specifications
- Inclusion of landscape elements such as stamped concrete, dyed asphalt, and landscape plantings to beautify the corridor
- Design performed in Fall 2006



For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.



STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, Limited Liability Company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: GAI Consultants, Inc.

Authorized Signature: *David Elman* Date: March 1, 2011

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 11 day of March, 2011.

My Commission expires October 28, 2012.

AFFIX SEAL HERE

NOTARY PUBLIC *Carola Moore*

