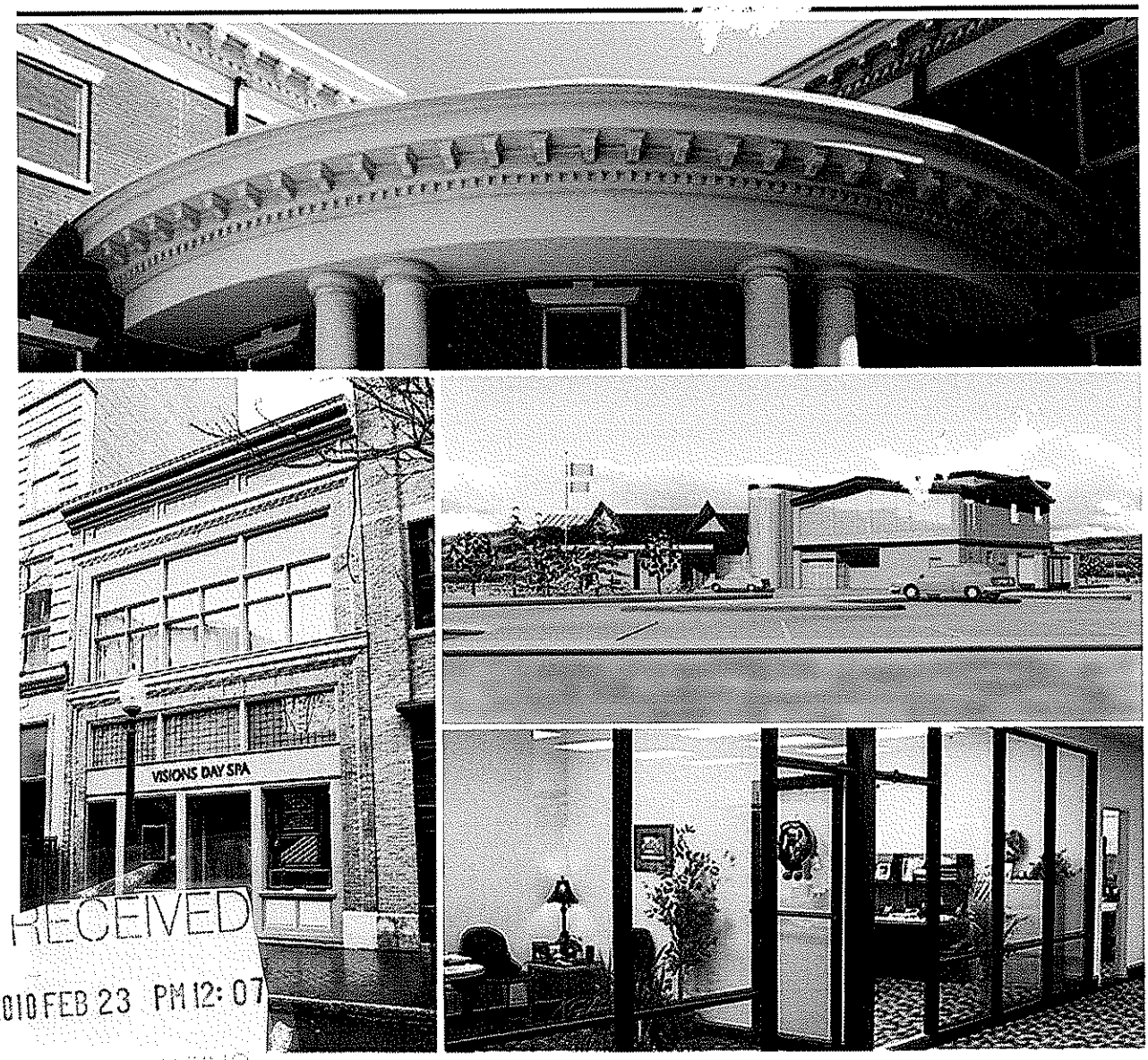
Chapman Technical Group

Statement of Qualifications to Provide Architectural Services to the Department of Agriculture for the New Two Story Office Building at the Gus R. Douglas Agricultural Center AGR1013

February 23, 2010



RFQ No. AGR1013

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 owed 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: Chapman Technical Group

Authorized Signature: _____ Date: 2/23/10

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 23rd day of February, 2010.

My Commission expires September 20, 2010.

AFFIX SEAL HERE

NOTARY PUBLIC Jessica D. Gunnoe

Official Seal
Notary Public, State of West Virginia
Jessica D. Gunnoe
506 Coal Fork Road
Charleston, WV 25306
My Commission Expires September 20, 2010

Chapman
Technical
Group

February 23, 2010

Mr. Ron Price
Department of Administration
Purchasing Division
Building 15
2019 Washington Street East
Charleston, West Virginia 25305-0130

Re: Expression of Interest for A/E Design Services for a New Office Building at the Gus R. Douglas Agricultural Center AGR1013

Dear Mr. Price and the Selection Committee:

Chapman Technical Group provides the professional design services for a diverse range of projects including architectural design, interior design and space planning, landscape architecture, site development, water and wastewater treatment plants, airport improvement projects and highway and bridge design. While the specialized program and equipment are unique to each of these types of projects, the fundamental components of planning, designing, quality control, and construction administration is essentially the same for any type of building project. Chapman Technical Group has been providing these components for 25 years. Our collective staff has hundreds of years of architectural and engineering experience. Couple this with our long standing collaborations with our highly experienced consultants and you will see that our team has the expertise and experience to affect all phases of the design of your project.

The following information should serve to introduce and qualify the various members of the team that we propose to complete the tasks required for your project.

Chapman Technical Group will lead all phases of the work, providing project management and professional architectural design services as well as interior design and space planning, civil engineering, and landscape architecture and site planning where appropriate.

We understand the goal of this project is to provide professional design and construction observation services for a new two story building on a designated site that will house offices, IT equipment, and appropriate storage for equipment and supplies. As you peruse this submission you will see examples of projects similar to yours.

Sharon Chapman, our owner and interior designer will be involved to fine tune the program for the spaces and to offer good quality, easily maintained finishes appropriate to the intended use. For exterior renovations and site considerations we will team up with our in-house Landscape Architecture Department and Civil Engineers.

200 Sixth Avenue
St. Albans, WV 25177
304.727.5501
FAX 304.727.5580

Buckhannon, WV
Martinsburg, WV

www.chaptech.com

ZDS Design and Consulting Services will act as our consultant for design related to Mechanical, Electrical and Plumbing (MEP) issues on this project. We have a history of successful collaboration with ZDS on past projects and feel that they can help us create solutions to the MEP needs of this project. ZDS will do the design of any plumbing and mechanical work as may be required. Mr. Todd Zachwieja, among other credentials, is a LEED Accredited Professional who will work towards making the building as "eco-friendly" as the budget will allow.

CAS Structural Engineering, a certified DBE, will act as our structural engineering consultant for this project. We work with CAS on all of our projects requiring structural design. Carol Stevens, owner and principal in charge, has been involved in most of the renovations and preservation work at our beautiful state capitol, and has been recognized with award specifically for the Dome Restoration project.

William S. Kostelic, of **Building Restoration and Preservation**, will work with this team to establish accurate opinions of probable construction costs to assist your building committee in formulating realistic and accurate budgets for the project. Mr. Kostelic brings many years of experience in the construction field and will assist not only with costing, but will work with the designers to offer ideas to facilitate the construction and thus help us to maximize your budget for the project.

Chapman Technical Group invites an opportunity to present our design team for your evaluation and to discuss your project. If you have any questions or require any additional information, please contact us. Thank you for the opportunity to submit on this project.

Sincerely,

CHAPMAN TECHNICAL GROUP

Dale E. Withrow
Manager Architecture

Enclosures

Chapman Technical Group

Executive Summary

Selecting a firm to provide professional services can be difficult in today's market. Many firms offer computer services and technical skills; however, Chapman Technical Group offers qualities that other firms may lack. Summarized below are the benefits of selecting Chapman Technical Group.

Chapman Technical Group has provided architectural, engineering, and interior design services for similar projects. We have or are providing full services for various renovation and addition projects. Some notable projects include:

- West Virginia Soil Conservation Office Addition
- Teays Medical Office Building
- Mason County Fish Hatchery
- Convention and Visitors' Bureau Administrative Offices Pocahontas County
- Bluefield Area Transit Administrative Offices and Maintenance Facility
- WVU Parkersburg Jackson County Center Administrative Offices and Computer Labs

Chapman Technical Group is a full service, multi-discipline firm offering all required services in-house or through a pool of consultants with which we have a history of successful collaborations. We have put together a strong team experienced in projects similar to yours. This team of architects, interior designers, landscape architects, mechanical/electrical engineers, technicians and field observers will work together to most effectively complete your project. All personnnel are available to begin working immediately.

Chapman Technical Group has a strong history and reputation of completing projects within budget and normally with lower than industry standard change orders during construction. Our design of the 5,000 square-foot New Health Department Clinic Facility in Point Pleasant, West Virginia, was constructed with the total of change orders at nearly 2%. Our New Haven (Mason County) Elementary School Addition project was constructed for nearly $35 per square foot less than the industry standard at the time. Including additional work requested by the Owner, the total for all change orders for this project was slightly more than 1%. The Classroom and Multi-Purpose Room at Man K-8 School in Logan County was designed and completed on a very tight schedule. This project bid at $75 per square foot below the trend for current school construction and the change order total was less than 2%. Our design of the Jackson County Annex renovation for West Virginia University at Parkersburg was constructed with NO CHANGE ORDERS. These examples are an indication of attention to details as well as the establishing of a good relationship with the Owner and the Contractor.

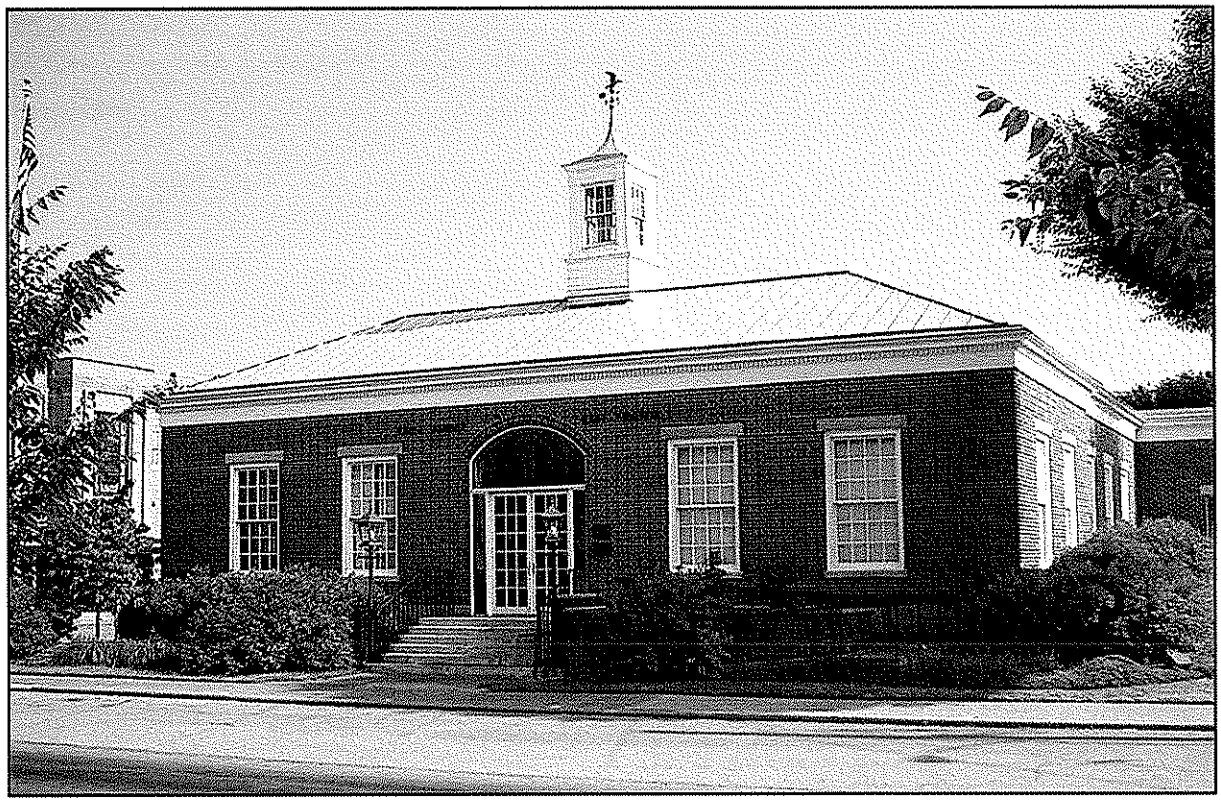
2/20/2010

5 Year History of Architectural Project Building Costs

CHAPMAN TECHNICAL GROUP

Project Name/Description	Opinion of Probable Costs	Bid Cost / Final Cost	Difference	Per Cent Savings
Eastern West Virginia Airport Terminal Building	$1,541,000.00	$1,463,000.00	($78,000.00)	5.06%
Rehabilitate Terminal Building-Mercer County Airport	$176,800.00	$145,200.00	($31,600.00)	17.87%
Renovations to Vienna Senior Center	$310,021.00	$302,200.00	($7,821.00)	2.52%
Belington WV Multi-Tenant Building	$2,156,104.00	$1,887,515.00	($268,589.00)	12.46%
Marshal University Renovations to Morrow Library 3rd Floor	$525,387.00	$499,302.00	($26,085.00)	4.96%
Addition to WV Paving Company Offices, Dunbar WV	$1,041,545.00	$809,887.00	($231,658.00)	22.24%
Addition/Renovation Man K-8 School, Logan County WV	$2,093,175.00	$1,572,500.00	($520,675.00)	24.87%
WVDOH Standard Reststop Burnsville, WV	$4,097,324.00	$4,378,282.00	$280,958.00	-6.86%
WVDOH Welcome Center Morgantown, WV	$2,623,148.00	$2,145,692.00	($477,456.00)	18.20%
WVDOH Welcome Center I-70/Pa. Line	$2,850,150.00	$2,583,000.12	($267,149.88)	9.37%
BLUEFIELD AREA TRANSIT AUTHORITY (w/alternates)	$3,480,000.00	$3,670,294.00	$190,294.00	-5.47%
Totals	$20,894,654.00	$19,456,872.12	($1,437,781.88)	6.88%

Company Overview



Chapman Technical Group's St. Albans Office

Chapman Technical Group is a full-service consulting firm with offices in St. Albans, Buckhannon, and Martinsburg, West Virginia offering an extensive range of professional architectural, engineering, interior design and landscape architectural services. Established in 1984, Chapman Technical Group has steadily grown to a diverse firm of professionals, many of whom were educated in West Virginia colleges and universities. We have achieved an outstanding reputation for providing high-quality design projects, while meeting client schedules and budgets and have received numerous awards for our work.

Our facilities are both state-of-the-art and architecturally significant. Our St. Albans office is a former post office and is now on the National Register of Historic Places.

Chapman Technical Group offers a broad range of professional services.

- Airport Design
- Architecture
- Civil Engineering
- Fire Pumping & Protection
- Interior Design
- Landscape Architecture
- Recreational Facilities
- Roads, Highways, & Bridges
- Site Development
- Space Planning
- Surveying
- Water & Wastewater Systems

Awards

AMERICAN SOCIETY OF CIVIL ENGINEERS - NATIONAL - SUPERIOR EMPLOYER AWARD, 2009, Support of Young Professionals in the Private Sector.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 2009, Gold Award - Special Projects Category for the Mercer County Airport Runway Safety Area Project.

AMERICAN INSTITUTE OF ARCHITECTS - HONOR AWARD FOR EXCELLENCE IN ARCHITECTURE, 2008 - Upshur County Courthouse Restoration and Renovations.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 2008, Bronze Award - Wastewater Category for the Spring Run State Fish Hatchery Improvements.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 2007, Silver Award - Structures Category for the Mercer County Airport Runway Safety Area Project.

GARY KING COMMUNITY SERVICE AWARD, 2006. **GOOD SCOUT RECIPIENT,** 2005.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 2003, Gold Award - Water Treatment Category for the City of Fairmont Water Treatment Plant Project.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 2002, Gold Award - Transportation Category for the Raleigh County Memorial Airport Runway Rehabilitation Project.

WINNER - "COMMISSIONER'S ENGINEERING ACHIEVEMENT AWARD", 2000, The WVDOT - Division of Highways - Large Bridge Category for WV10 Buffalo Creek Bridge, Logan County, West Virginia.

FINALIST - "COMMISSIONER'S ENGINEERING ACHIEVEMENT AWARD", 1999, The WVDOT - Division of Highways - Large Roadway Category for WV10 Buffalo Creek - Taplin Project and 2000 for WV10 Buffalo Creek - Huff Junction Project, both in Logan County, West Virginia.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 1999, Silver Award - Water and Wastewater Category, for the City of Beckley Piney Creek Wastewater Treatment Plant Project.

ENTREPRENEUR OF THE YEAR AWARD - FINALIST, 1999 and 2000, Sharon L. Chapman, President, was named one of twenty finalists in the West Virginia Area Entrepreneur of the Year Award. Sharon was recognized for leading Chapman Technical Group to become one of the most highly regarded engineering firms in the state after the death of her husband and company founder, Harvey R. Chapman.

"EXPECT THE BEST FROM WEST VIRGINIA AWARD", 1998, Charleston Regional Chamber of Commerce. The Expect the Best program was created to recognize West Virginia businesses and organizations that promote quality of life at home, work, and in the community so that individuals and organizations will implement quality principles and practices leading to unprecedented pride and economic growth in West Virginia.

HONOR AWARD, West Virginia Chapter of the American Society of Landscape Architects, 1994, Shrewsbury Street Area Redevelopment Plan, for excellence in planning and design projects. Joseph E. Bird, ASLA, Project Manager.

"GOVERNOR'S AWARD FOR ENGINEERING EXCELLENCE", 1990, The West Virginia Chapter of the American Public Works Association, in recognition of outstanding Public Works Engineering and Design of Projects within West Virginia.

DUNDEE CEMENT COMPANY ANNUAL DESIGN AWARD, 1988, Yeager Airport Taxiway Overlay Project. Harvey R. Chapman, P.E., Project Manager.

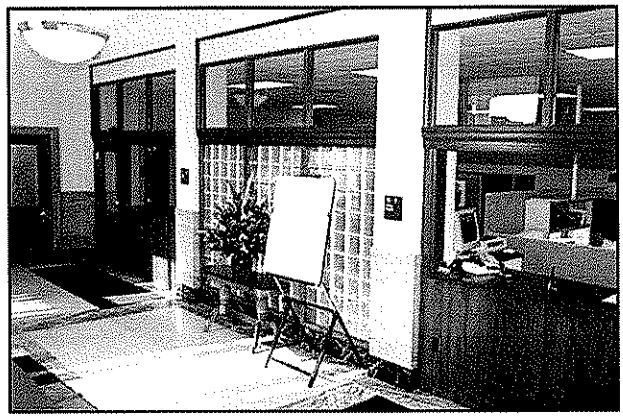
AUSTIN C. PALMER "OUTSTANDING FACILITY DESIGN AWARD", 1988, City of Bridgeport Swimming Pool Complex. Harvey R. Chapman, P.E., Project Manager.

"GEORGE WARREN FULLER AWARD", Harvey R. Chapman, 1984, Robert G. Belcher, P.E., 2001, and Sharon L. Chapman, 2005, American Water Works Association, for distinguished service in the water supply field in the State of West Virginia.

Architecture

Buckhannon City Hall Addition and Renovation 94063

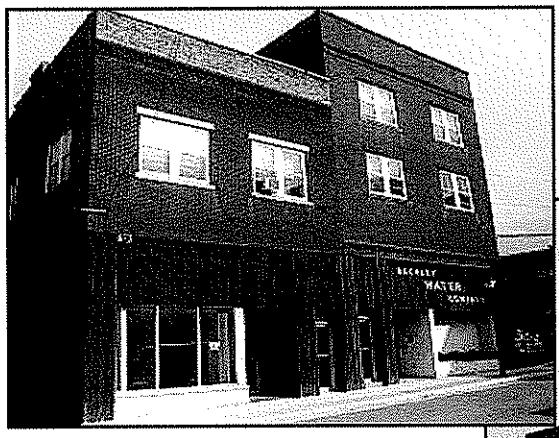
City of Buckhannon
70 East Main Street
Buckhannon, West Virginia 26201



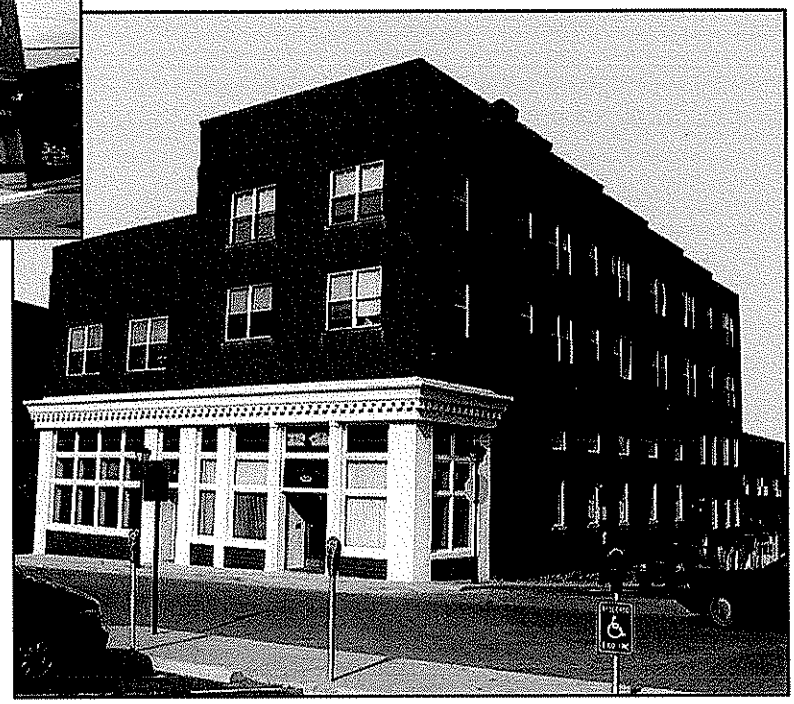
Project involves all design and space planning for a 3,000 square-foot addition and renovation of the 6,800 square-foot existing city hall facility. The addition includes council chambers, computer room, restroom facilities and office space. Project included all structural, mechanical, and electrical engineering.

Architecture

Beckley Water Company Office Renovations 95008



Before Renovations



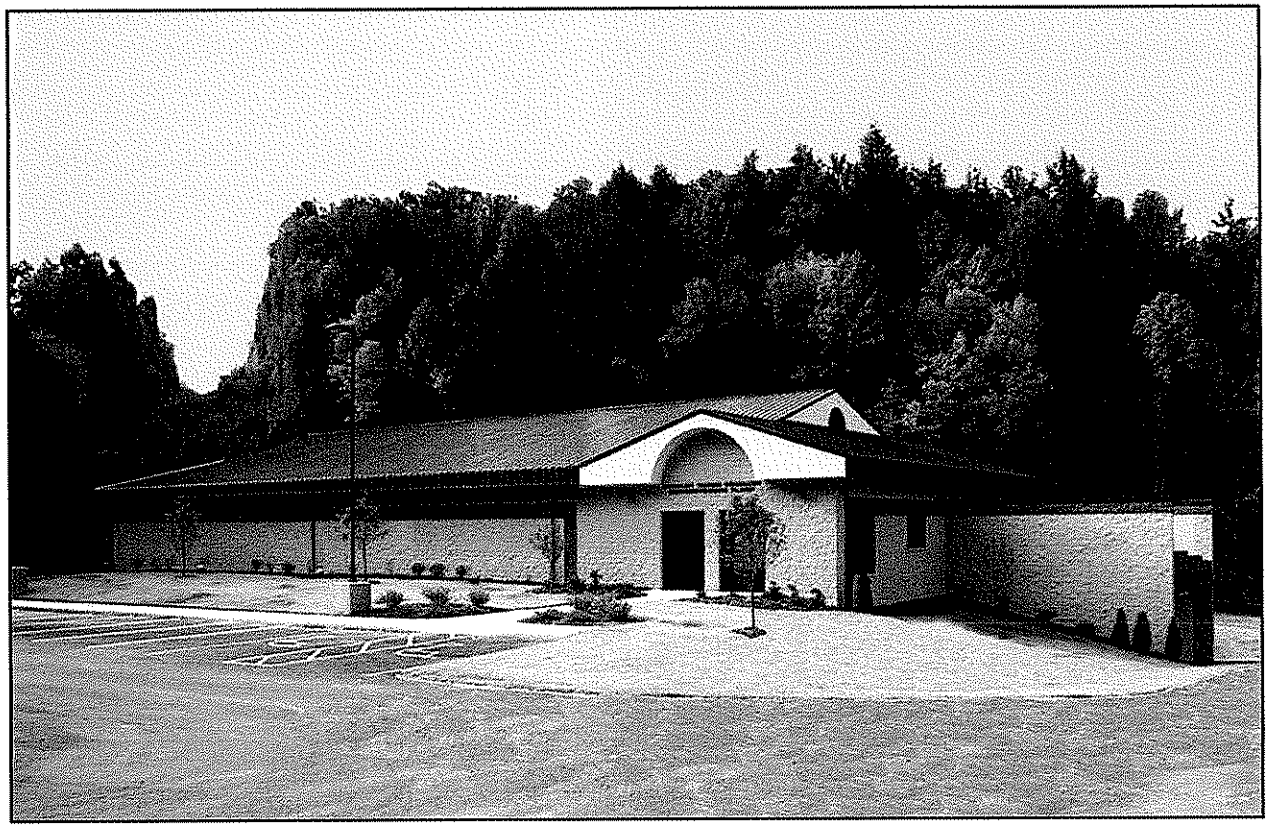
After Renovations

Beckley Water Company
Post Office Drawer U
Beckley, West Virginia 25801

Design and construction observation services for renovations to the existing Water Company offices and an expansion of those offices into an adjacent building. The interior spaces were restored to the original 1930's configuration with high ceilings and an open mezzanine. An original pressed tin ceiling which was badly damaged during previous renovations was replaced with a new ceiling of the same style. Facade renovations included traditional storefront design elements along with the introduction of stained glass transoms windows. The lobby area included the introduction of a new open office system. Mechanical and electrical systems for the entire building were replaced along with the installation of new sprinkler and fire alarm systems. The renovations were phased so that all operations of the Water Company were maintained during the construction process.

Architecture

Beckley Water Treatment Plant 93082

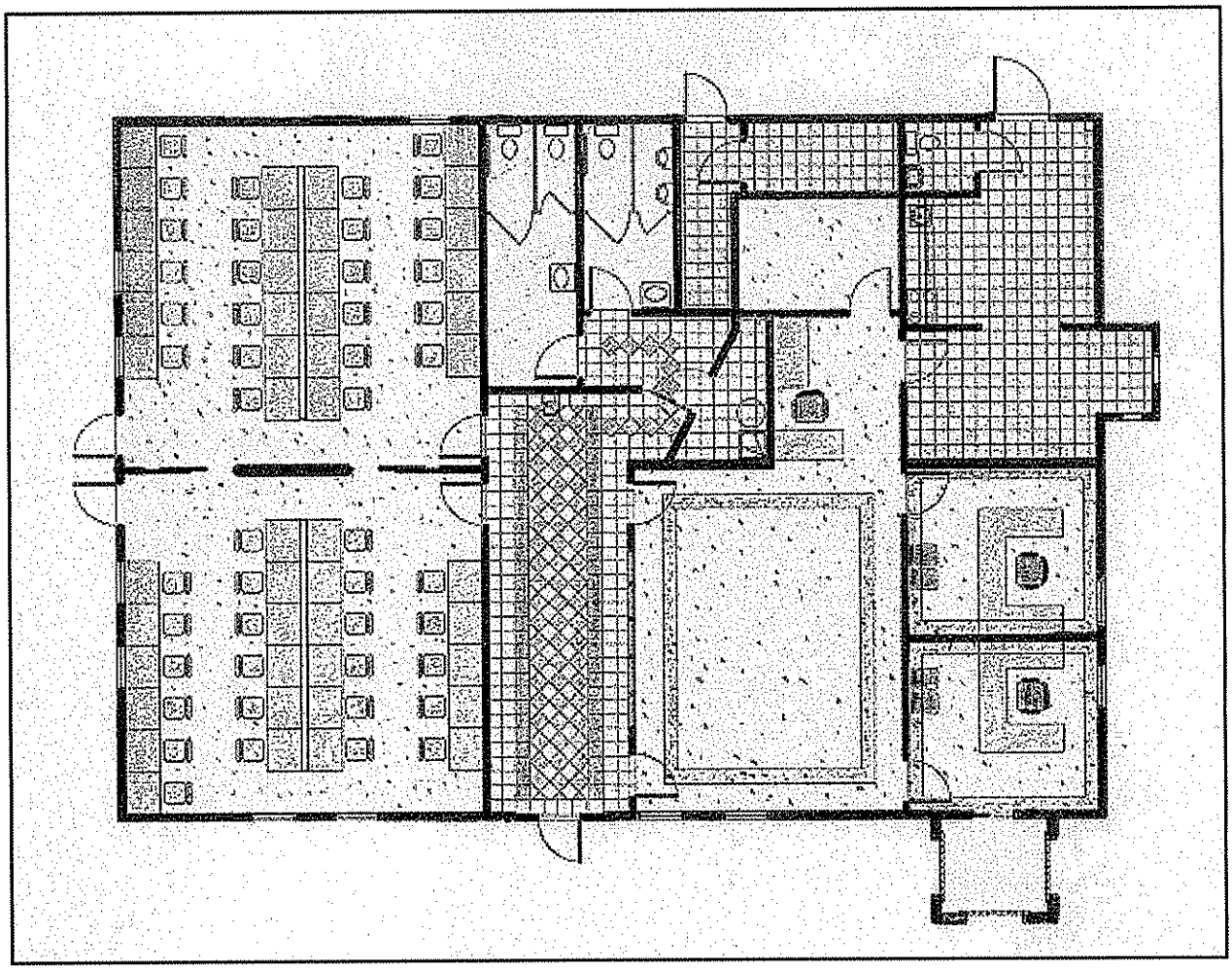


Beckley Water Company
Post Office Drawer U
Beckley, West Virginia 25801

Design and construction observation services for a new 3,500 gallon-per-minute (5 MGD) water treatment plant expandable to 7,000 gallon-per-minute (10 MGD) without major expansions. The plant obtains source water from the extensive abandoned deep mines underlying the Beckley area. The plant was designed around an existing dewatering shaft located on the site which is over 280 feet deep and has a static water depth of 52 feet. The process design includes an innovative vortex aeration system at the plant headworks to oxidize the high iron levels to allow precipitation. The application of this aeration equipment is the first known application of this technology in a potable water treatment facility in the nation. The process follows with tapered flocculation, inclined-plate high-rate lamella sedimentation units, and mixed media filtration. The raw water pump and high service pump for this facility are 350 HP and 700 HP respectively. Discharge pressure from the plant is in excess of 280 psi due to the plant's location. Included in this project was a complete hydraulic analysis of the entire water system to ensure the recommended improvements will eliminate the most serious flow and pressure problems within the existing system. Project included all structural, mechanical, and electrical engineering.

Architecture

Jackson County Center 02036

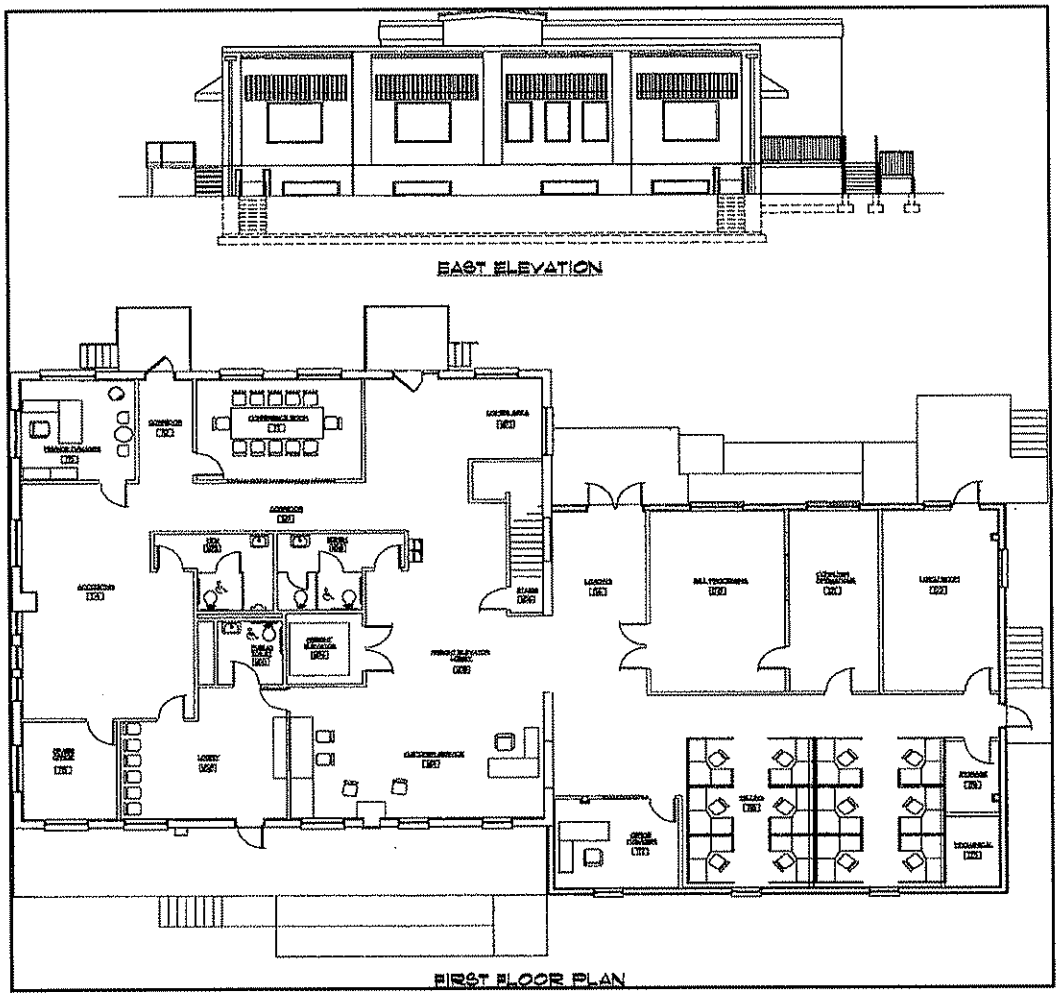


West Virginia University - Parkersburg
107 Academy Drive
Ripley, West Virginia 25271

Chapman Technical Group provided architectural design and construction services in converting a former restaurant into a new computer education facility for WVU-Parkersburg's Jackson County Center. The 3,700 square-foot distance learning and local instruction facility houses two computer labs, conference room, student advising and administration offices, files storage, rest rooms, break room and support areas. As a result of a good working relationship between the owner, architect, and contractors, this project was constructed with no change orders.

Architecture

Charleston Sanitary Board Bill Processing Center 96019

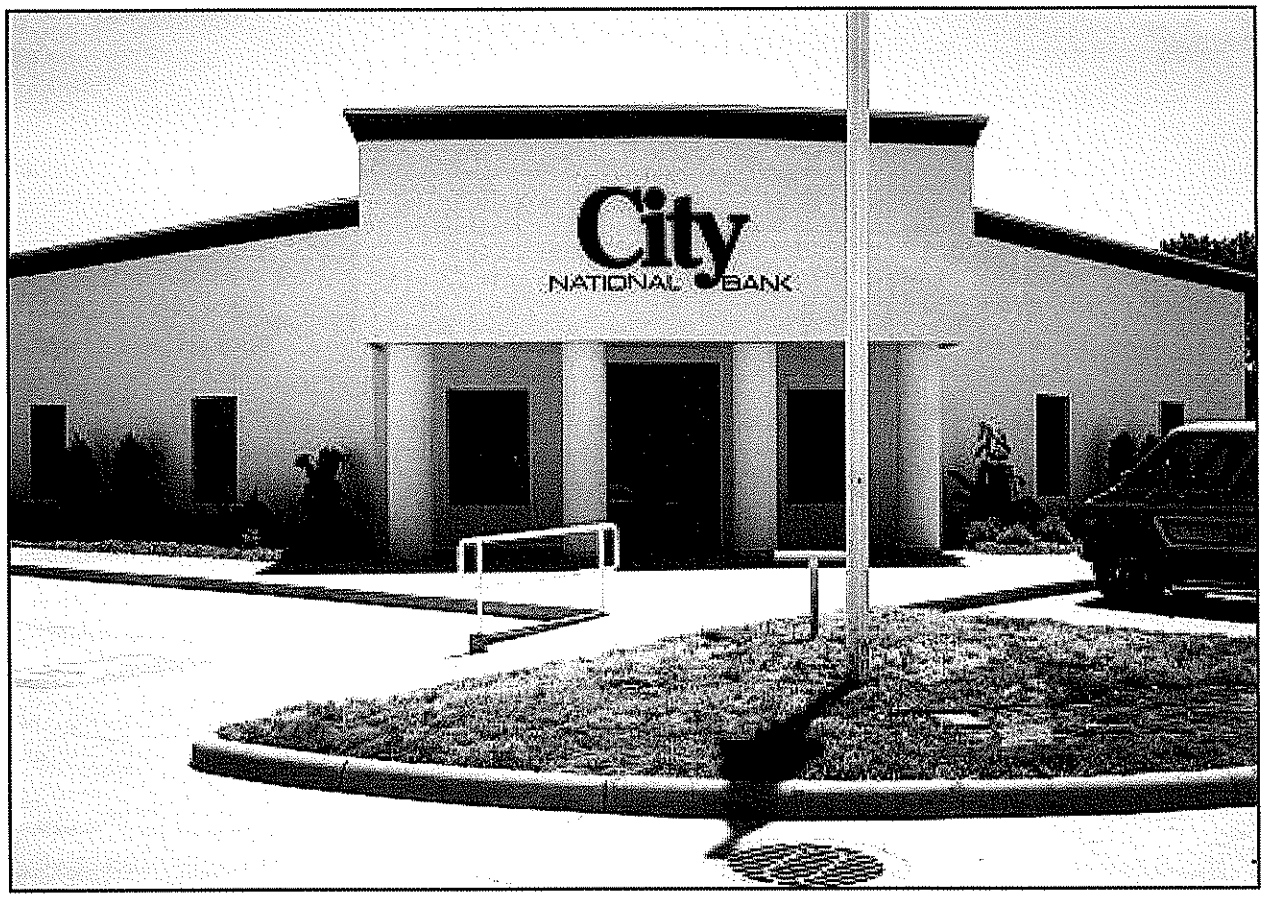


Charleston Sanitary Board
Post Office Box 1026
Charleston, West Virginia 25324

Project included design and bidding for a new bill processing center which will be constructed in an existing 1930's warehouse building. The center will house all billing operations including accounting, processing and customer service. Existing heavy timber structural system will be exposed along with the original interior sky-lights. The work includes a new exterior finish system, new roofing and total renovations of all interior spaces. All mechanical and electrical systems were replaced or upgraded.

Architecture

City National Bank 95061



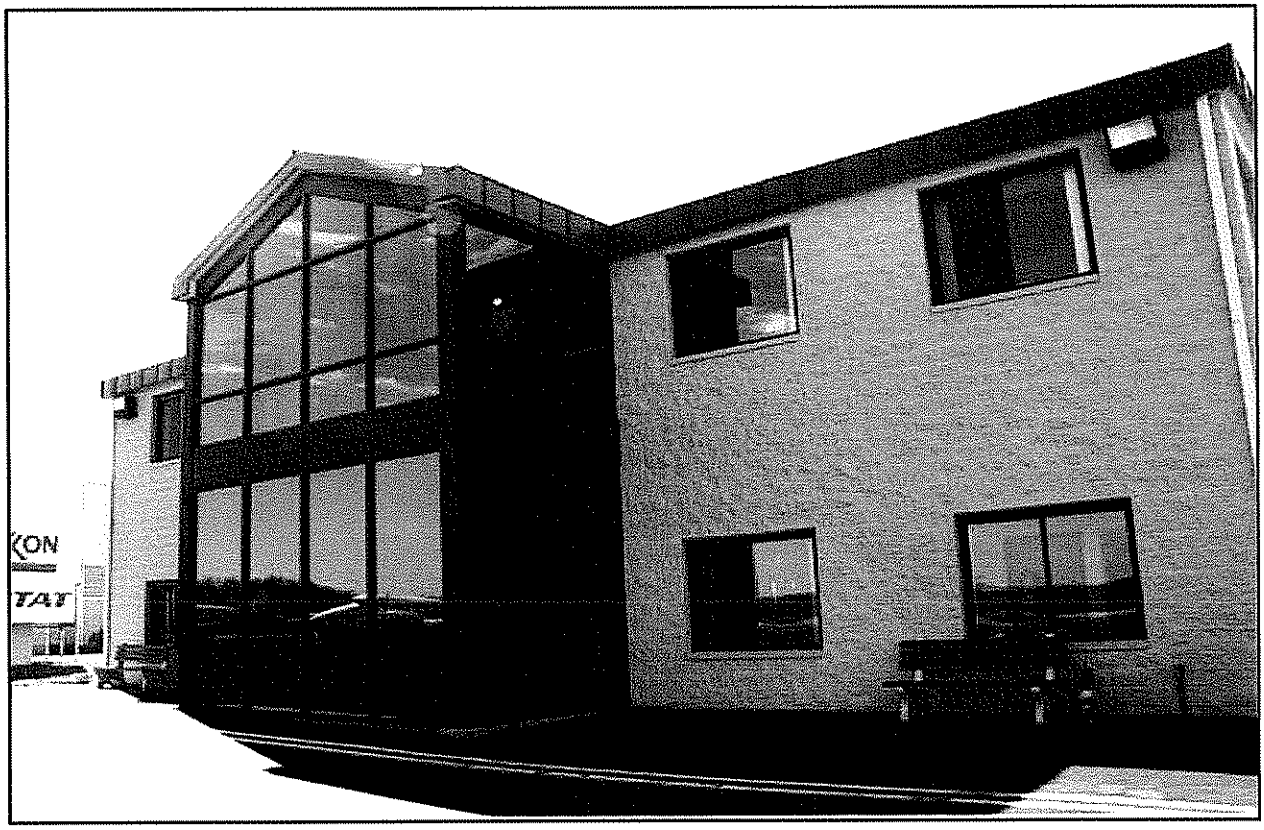
City National Bank
100 Poplar Fork Road
Scott Depot, West Virginia 25560

A new 3,000 square-foot branch bank for City National Bank is located in Teays Valley, West Virginia. The design services involved all disciplines of construction including site development, utility planning and landscaping. Interior Design included space planning and finishes, as well as furniture, layout, selection, purchase and installation.

Chapman Technical Group has provided services for Renovations and Interior Design at other City National Bank locations including a 2,700 square-foot building in Marmet, West Virginia and an 8,000 square-foot Operations Center in Cross Lanes, West Virginia.

Architecture

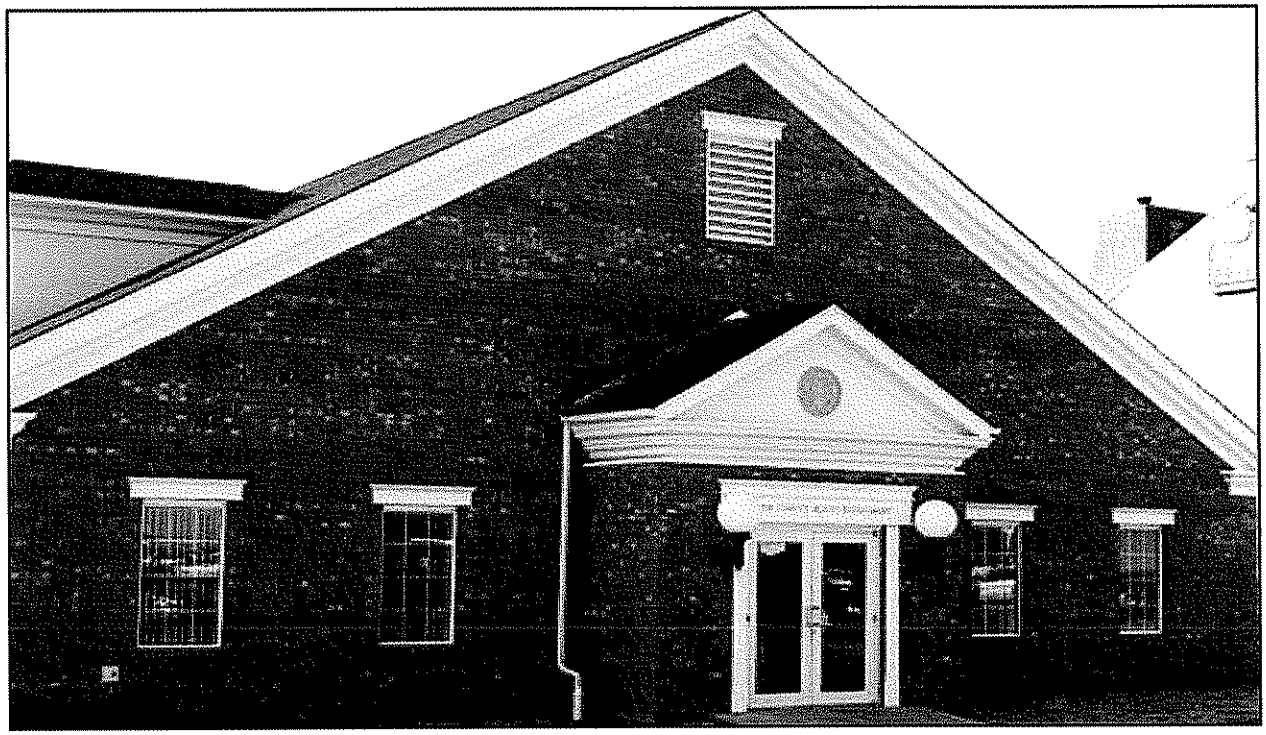
Executive Air FBO Terminal 95021



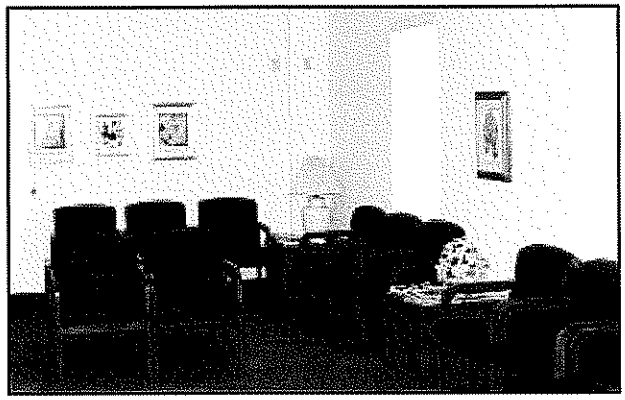
Executive Air Terminal, Inc.
300 Eagle Mountain Road
Charleston, West Virginia 25311

Project included architectural and interior design services for a new two-story facility. The 5,000 square-foot building provided private offices, pilots' lounge and sleeping rooms, lobby areas, and ticket counters. Large windows in the lobby areas give visitors an excellent view of plane activities on the runways. For added interest, a custom compass rose using company colors was incorporated into the tile flooring. The compass was installed to match the precise compass settings of the airport.

Mason County Health Department Clinic 98062



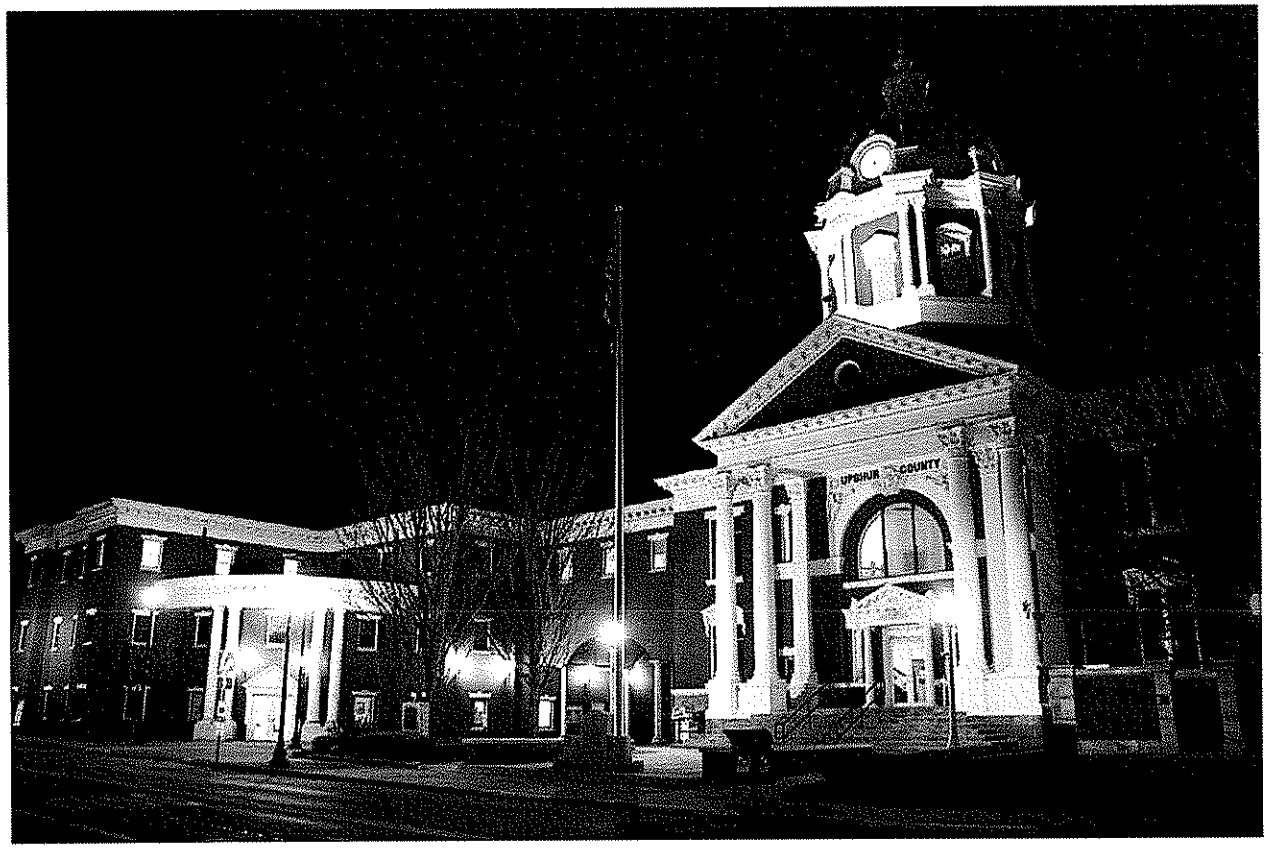
Mason County Commission
200 Sixth Street
Point Pleasant, West Virginia 25550



Point Pleasant is a charming, quaint town having a colonial historic character. In the center of town, at the intersection of Viand Street and Fifth Street, is the new Mason County Health Department building. The building was needed because the health department had outgrown their old space and to accommodate persons with disabilities, since the old clinic was located on the third floor of the courthouse annex. Chapman Technical Group designed the building to fit within the historical atmosphere of Point Pleasant. The style of the building is refined colonial and includes elements such as dormers, cornice moldings, brick quoins, door mantels, pilasters, and decorative window heads. The entrance of the building has a pediment with a medallion of garland leaves which is a reference to the health/medical profession. The 5,000 square foot building has exam rooms, offices for the staff, a conference room, kitchen, x-ray/lab room, accessible restrooms, and a play area in the waiting room for younger children.

Architecture

Upshur County Courthouse Renovations 04013



Upshur County Courthouse Complex

AIA Honor Award 2008

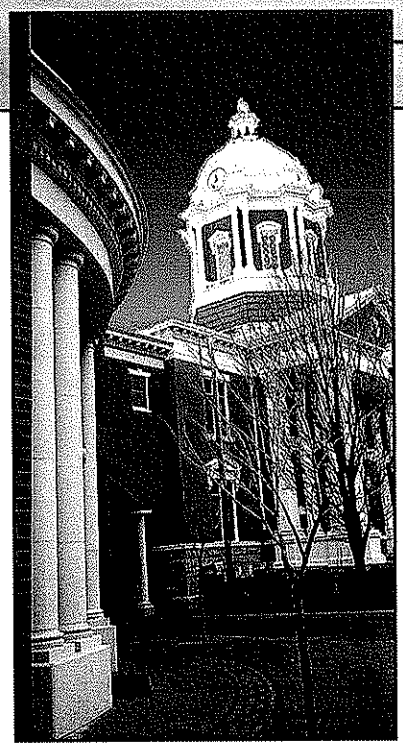
Upshur County Commission
38 West Main Street
Buckhannon, West Virginia 26201

Since the design and construction of the courthouse annex in 1995, Chapman Technical Group has been involved in several improvement and restoration projects at the Courthouse in Buckhannon. In 2005, a lift was installed and the plaza renovated to make the original courthouse accessible. In 2006, the Courthouse dome and clock tower were completely restored. In 2007, the Courthouse portico stonework was restored, and in 2008 the work was honored by the AIA/WV for Excellence in Archtitecture.

Dome Restoration Detail

Architecture

Judge Jack Dowell Jennings Courthouse Annex 93033



Upshur County Commission
38 West Main Street
Buckhannon, West Virginia 26201

Project included the complete design of a 24,000 square foot 3-story brick building, including structural, mechanical, and electrical engineering, as an annex to the existing courthouse. The new building design had to be sensitive to the existing building architecture. A skywalk was used to connect the two buildings for circulation and accessibility to the second floor of the existing courthouse. Also included in the project were space planning and interior design for the different departments of the Upshur County government such as the county assessor, sheriff, prosecuting attorney, county clerk, magistrates and magistrate's courtroom, jury room, tax department, and county commission meeting room.

Architecture

Eastern West Virginia Regional Airport Terminal 00054

Eastern West Virginia Regional Airport Authority
170 Aviation Way, Room 105
Martinsburg, West Virginia 25405

In 2001, the EWVRAA initiated the design and "Stage I" development of its terminal facilities, preparing to accommodate the airport's role as a "reliever" for Dulles International Airport. Stage I included the relocation of electrical equipment to a new underground vault, which was designed to be part of a small basement for the new terminal building. Stage II included the construction of a $1.9 M, 12,000 square-foot, two-story terminal/ administration building, adjacent to the existing terminal building.

The core function of the building is to function as a general aviation airport , while accommodating future passengers once commercial air service is provided. In addition to housing the EWVRAA main offices, a museum/lobby, interim lobby (sterile hold), restaurant, and tenant office spaces have also been provided.

One of the unique challenges of the project was to incorporate elements of the ruins of a nearby historic operations building into the design of the project. Original blocks from the historic building were used in the new construction to recreate its facade.

Architecture

Mercer County Airport Terminal Renovation

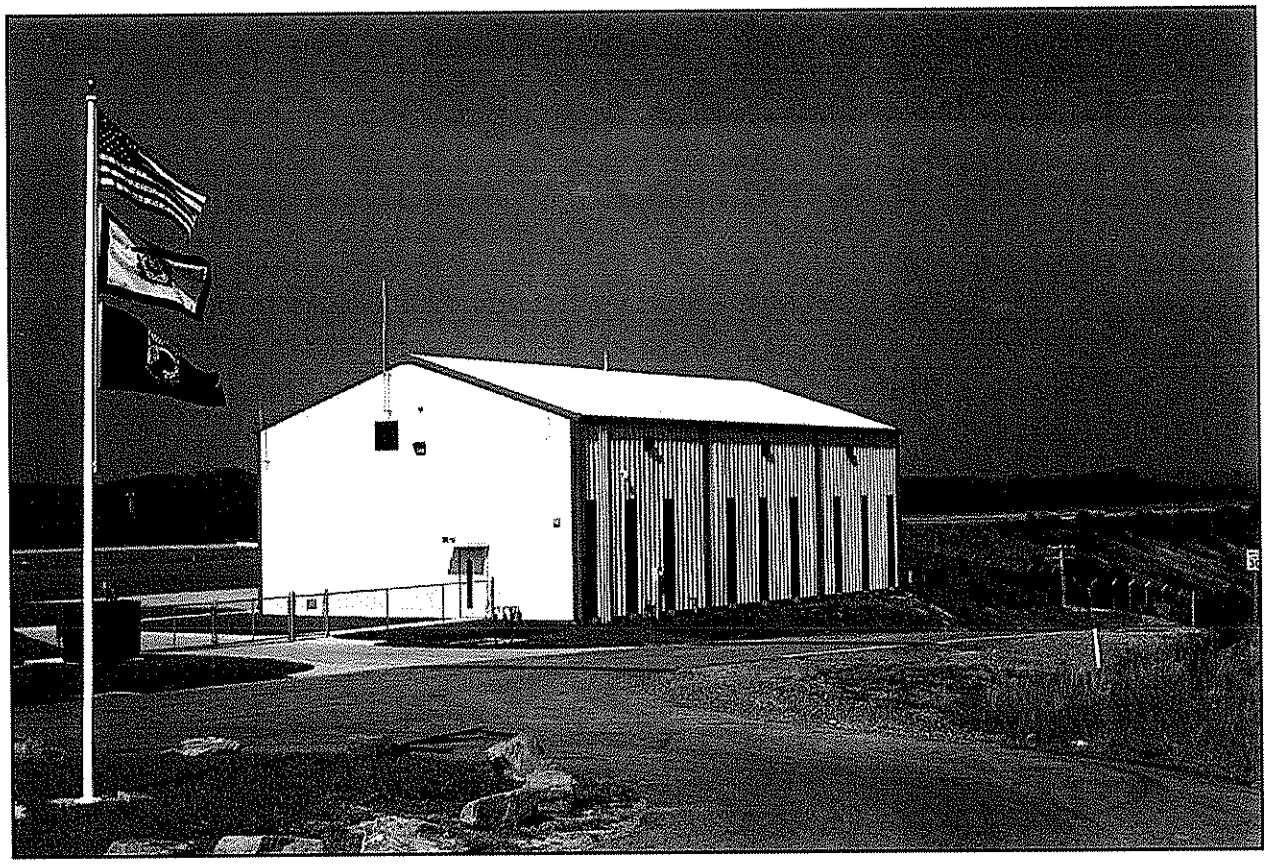
02026

Mercer County Airport Authority
Route 5, Box 202
Bluefield, West Virginia 24701

In 2003, the Mercer County Airport Authority initiated a renovation project for its 50 year-old terminal building. This 11,000 square-foot project will incorporate a phased renovation/addition process, allowing continuous occupation and operation of airline, car rental, Transportation Security Administration (TSA), and airport management facilities. The first two phase included a new EPDM roof for the upper area and a new standing seam metal roof, roof structure and a new facade for the lower area. Subsequent phases will provide stair and elevator silo additions, glass fronted second story access ways, new HVAC and electrical services, and relocated/upgraded restroom facilities to provide improved passenger circulation. Issues of security, passenger flow and accessibility are addressed in this design while providing these functional improvements and providing a "lighter" aesthetic which is more in line with the function of the Air Terminal. The project will be completed in phases, providing $2 million of upgrades as funds are released from the FAA.

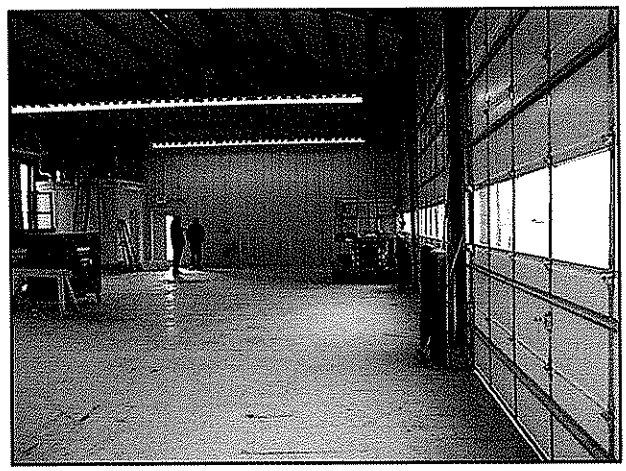
Architecture

Upshur County Snow Removal Equipment Building 00037



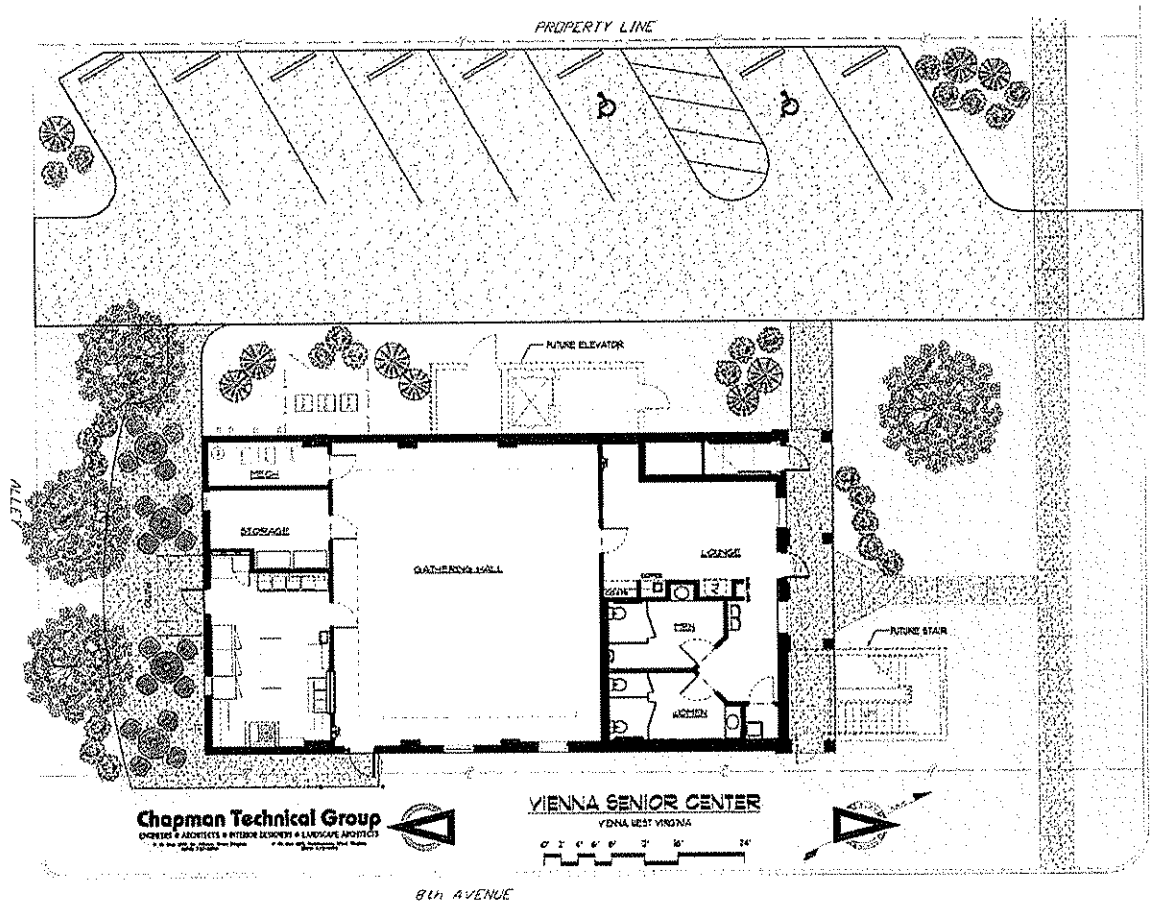
Buckhannon-Upshur Airport Authority
38 West Main Street
Buckhannon, West Virginia 26201

As part of the continuing expansion of the Upshur County Airport, Chapman Technical Group provided design and construction administration services for the three-bay Removal Equipment building. The building and the site were designed to easily accommodate future expansions. The 3,200 square-foot facility was completed in 2002 at an approximate cost of $300,000.



Architecture

Vienna Senior Center Renovation 04041

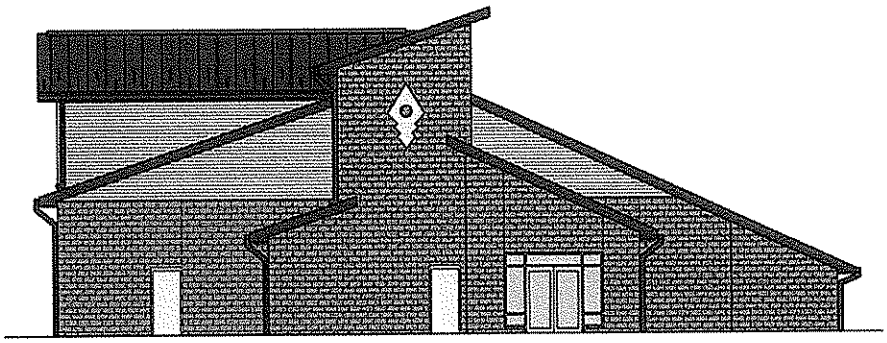


City of Vienna
Post Office Box 5097
Vienna, West Virginia 26105

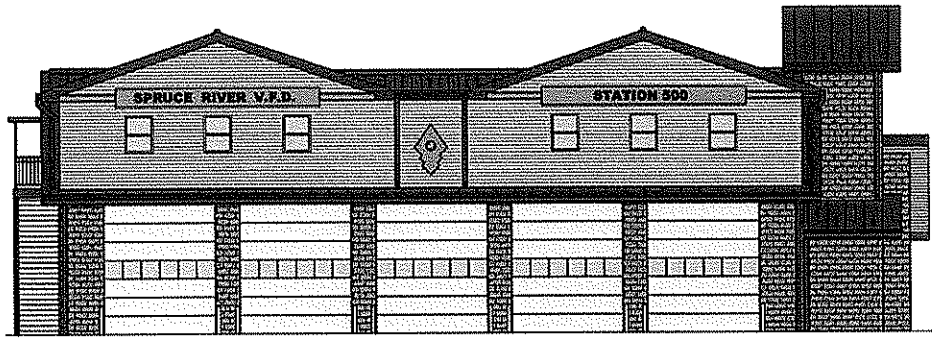
Chapman Technical Group assisted the City of Vienna in providing a $336K renovation to a former union hall to house the Vienna Senior Center. The two story, 4,000 square-foot structure was gutted on the lower level, with new wiring and plumbing services being installed. The existing mechanical equipment was reused with new ductwork serving the updated spaces. A bearing wall was removed and the upper floor was supported by columns and beams to provide more open and functional spaces at the lower level. This made room for a lounge, coffee station, gathering hall, commercial kitchen, storage, accessible restrooms and mechanical spaces. Fire improvements were made to the roof of the lower level and to the floor/ceiling area to bring the structure up to current code requirements for assembly structures. The upper level will generally be utilized as office space until a future stair and elevator are installed and the space renovated to house a game room, activity rooms, offices and an additional restroom. The lower level roof was repaired and recoated, and the upper level roof was provided with a new foam coat roof system. The exterior of the structure was painted and accessible parking and sidewalks were provided.

Architecture

Spruce River Volunteer Fire Department 06033



EAST ELEVATION



SOUTH ELEVATION

Spruce River Volunteer Fire Department
Post Office Box 99
Jeffery, West Virginia 25114

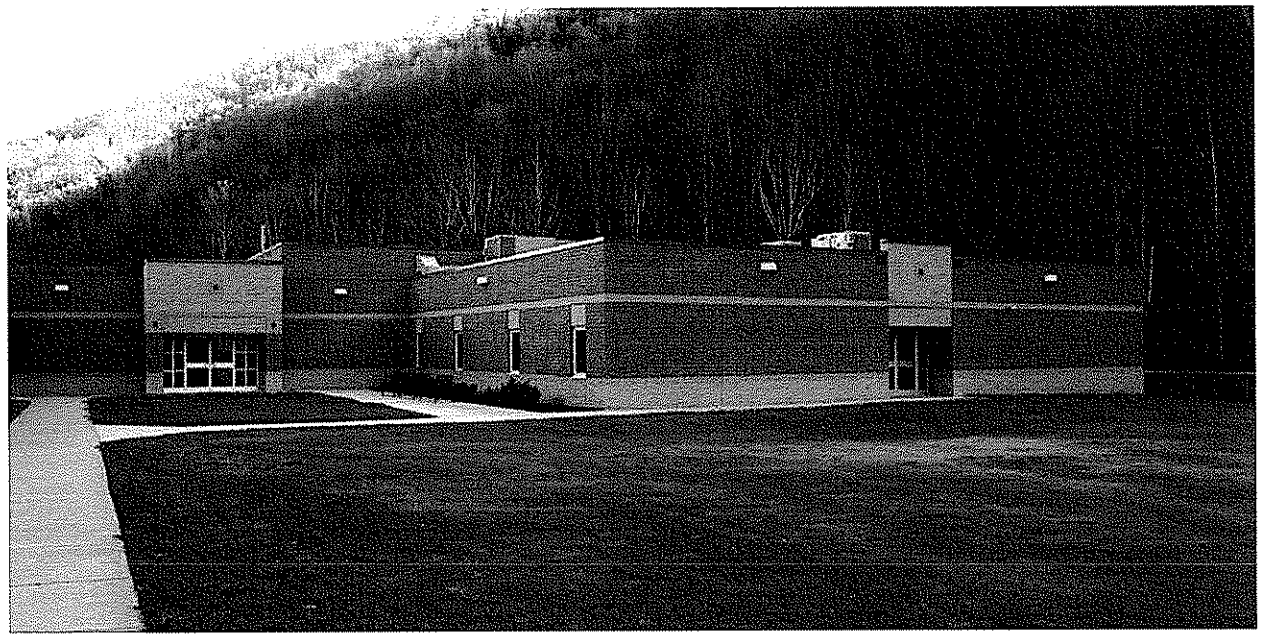
Chapman Technical Group Designed renovations to the Spruce River Volunteer Fire Department to expand and upgrade their current facility. The new apparatus bay, nearly twice the size of the original, provides for more efficient movement around the vehicles for cleaning and maintenance, as well as more direct movement of the vehicles. The existing apparatus bay is being converted to a fully accessible meeting room, including toilets and showers, which will be available for public functions and emergency sheltering.

A second floor will be constructed over the new bay to serve as a dayroom for the fire fighters. The site is being developed to provide parking, and landscape features which enhance the appearance of the facility while increasing accessibility and security around the building. The total renovation and addition will result in nearly 10,000 square-feet of space.

Architecture

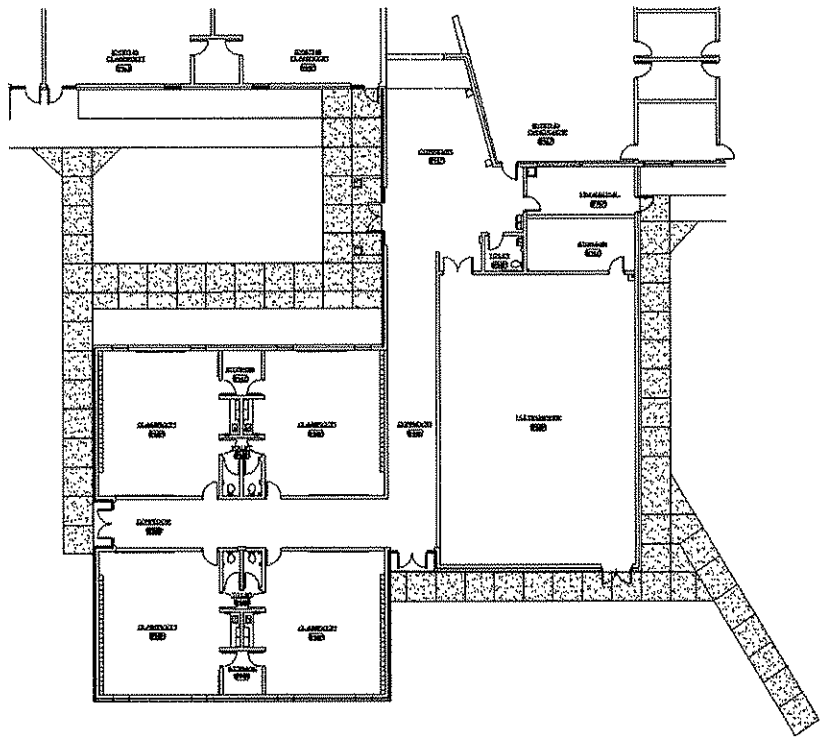
Man K-8 School Addition

06052



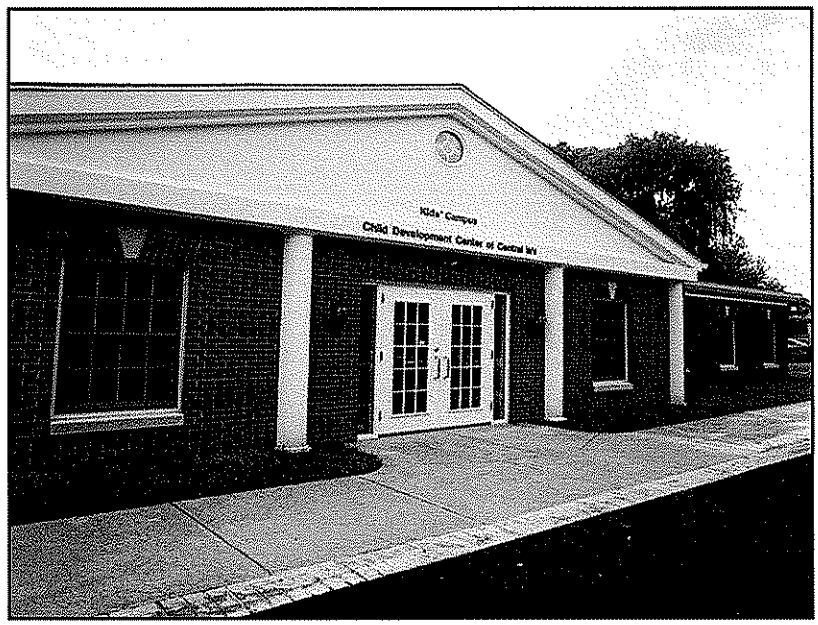
Logan County Board of Education
506 Holley Avenue
Logan, West Virginia 25601

Project involves all design and space planning for a 9,360 square-foot addition to the existing Man K-8 school facility. The addition includes four new classrooms, a 2,400 square-foot multipurpose room, ADA compliant restroom facilities, and a small landscaped courtyard. Project included all structural, mechanical, and electrical engineering. The design and construction was accomplished in 10 months and nearly 15% below budget.

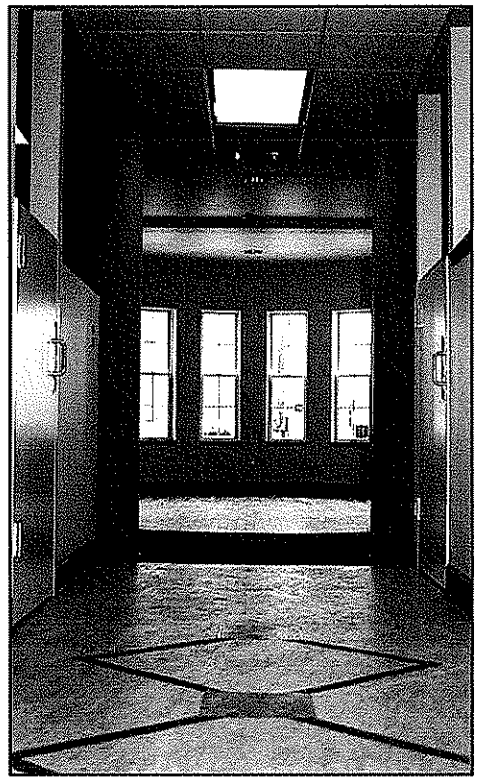


Architecture

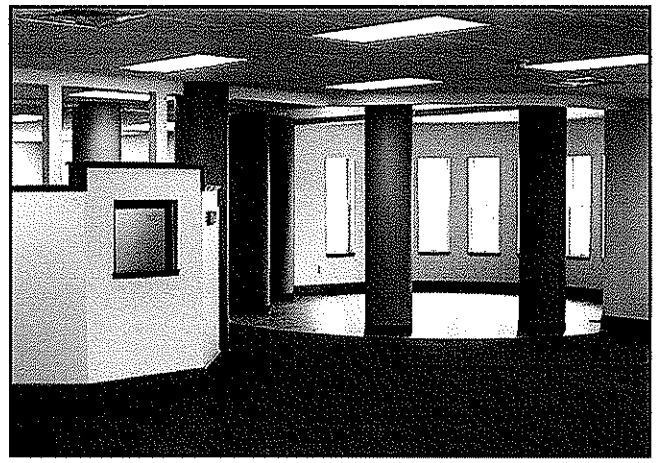
Child Development Center 94084



Project involved all design services for a new 8,000 square-foot Child Development Center including site design, landscape architecture, as well as structural, mechanical, and electrical engineering. Space planning and interior design were accomplished for classrooms, a parent resource room, a conference room, an after school play area, a kitchen, restrooms, storage, and office facilities. A unique feature of this facility was the design of the exterior to match the existing architecture of the structures which comprise West Virginia Wesleyan College buildings on whose property the center is located.

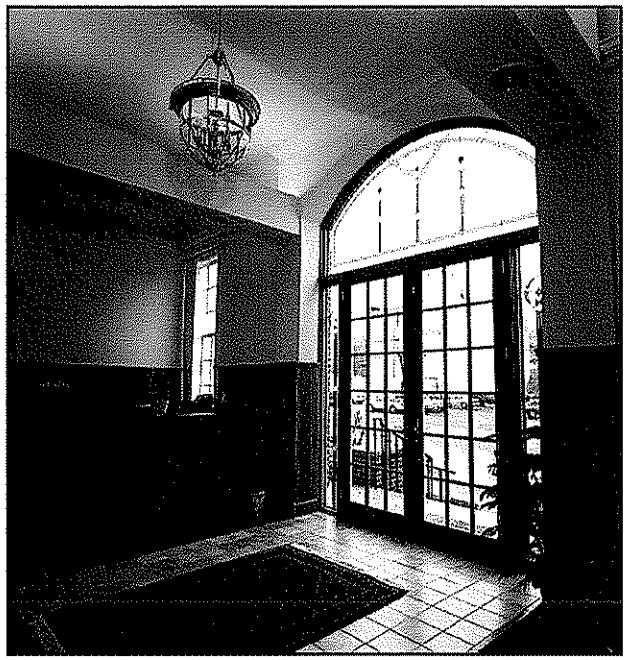


Child Development Center of Central WV, Inc.
20 Camden Avenue
Buckhannon, West Virginia 26201



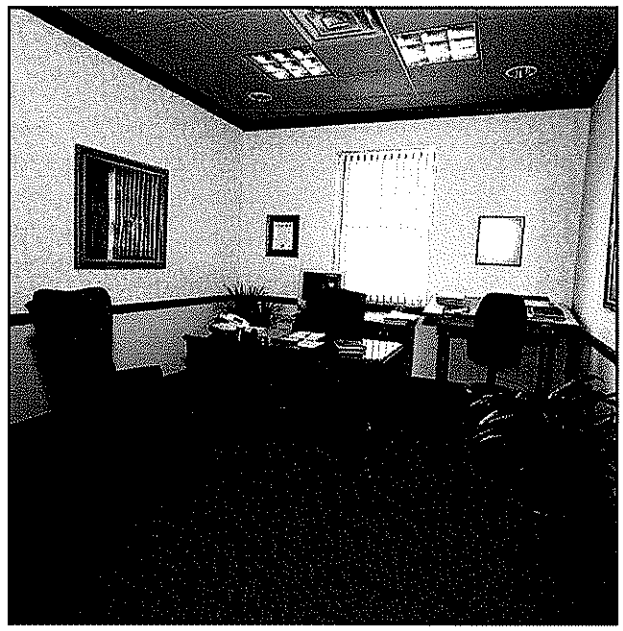
Interior Design

Chapman Technical Group Office 93037



Chapman Technical Group
Post Office Box 1355
St. Albans, West Virginia 25177

On the National Record of Historic Places, the Saint Albans office of Chapman Technical Group is a very successful example of a modernization of an historic structure. An 8,000 SF addition helped to turn this former post office into a state of the art Engineering/Architectural office. Original materials were refurbished and new materials were carefully selected to accentuate the building's historic nature while adding a dramatic flair.



Interior Design

Natural Resource Partners Office Renovations 02037

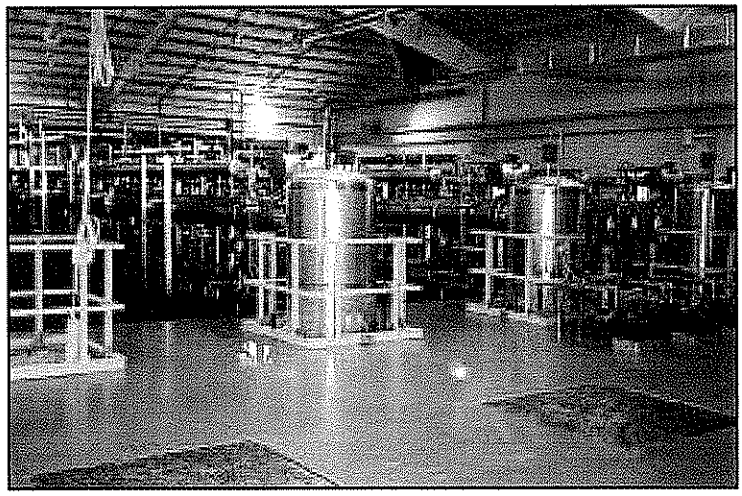
Natural Resource Partners, L.P.
1035 Third Avenue, Suite 300
Huntington, West Virginia 25727

Natural Resource Partners, L.P., wanted to update their image with a renovation of their office space in the Radisson Hotel in Huntington and turned to Sharon Chapman and Chapman Technical Group to provide interior design services. The renovation was accomplished in two phases starting in 2003 and finishing in early 2005. The 15,000 square-foot project included floor plan modifications, as well as new finishes and furnishings. The result is an ultra-modern look with a feeling of openness and spaciousness. The modern furnishings were provided by Contemporary Galleries and the unique carpet design was provided by Patcraft.

Interior Design

Fairmont Water Treatment Plant 97024

City of Fairmont
Post Office Box 1428
Fairmont, West Virginia 26555



The City of Fairmont Water System Improvements Project involved the construction of over $21 million of capital improvements, including the construction of a new water treatment plant. Because all treatment units are contained under roof in a 2-story building, selection of interior finishes was important in order to be durable and aesthetic. Treatment areas as well as offices and support facilities were carefully considered in the interior design process.

Interior Design

Beckley Water Company Office Renovation 95008

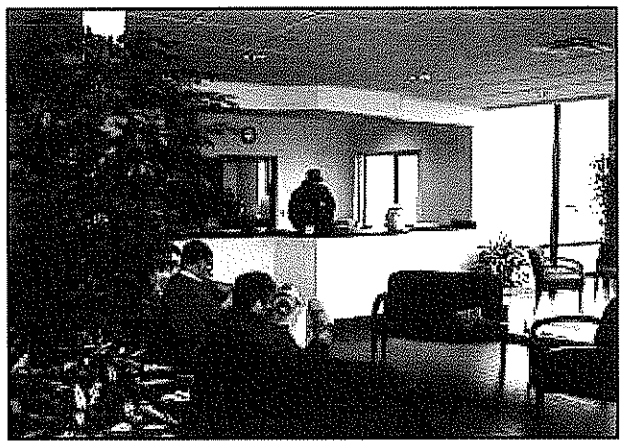
Beckley Water Company
Post Office Drawer U
Beckley, West Virginia 25801

Design and construction observation services for a renovation to the existing Water Company offices and an expansion of those offices into an adjacent building. The interior spaces were restored to the original 1930's configuration with high ceilings and an open mezzanine. An original pressed tin ceiling which was badly damaged during previous renovations was replaced with a new ceiling of the same style. Facade renovations included traditional storefront design elements along with the introduction of stained glass transoms windows. The lobby area included the introduction of a new open office system. Mechanical and electrical systems for the entire building were replaced along with the installation of new sprinkler and fire alarm systems. The renovation was phased so that all operations of the Water Company were maintained during the construction process.

Interior Design

Executive Air FBO Terminal 95021

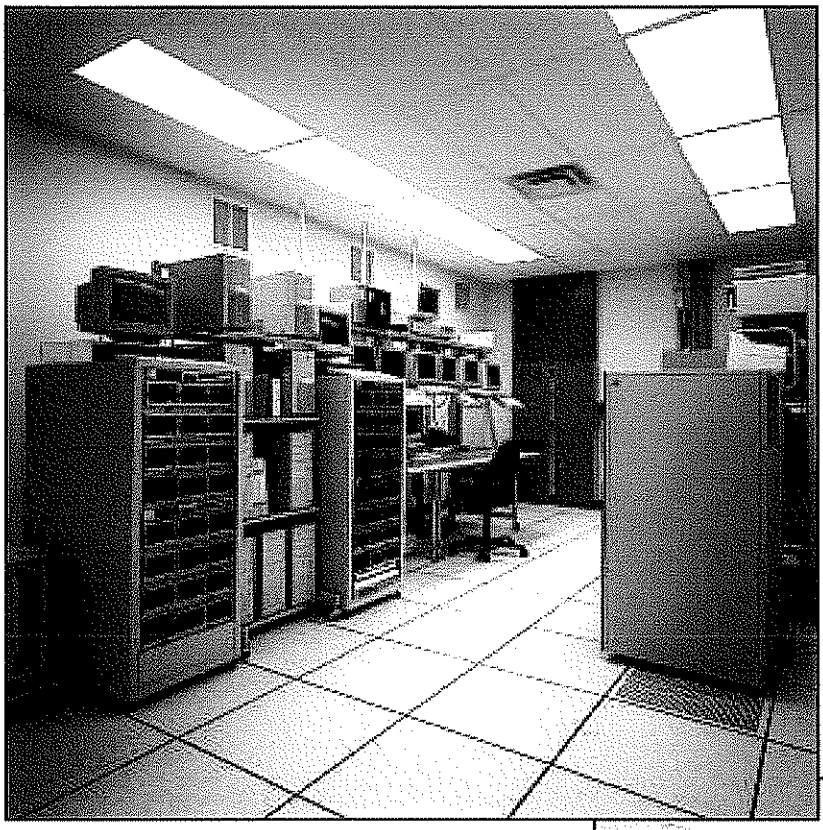
Executive Air Terminal, Inc.
300 Eagle Mountain Road
Charleston, West Virginia 25311

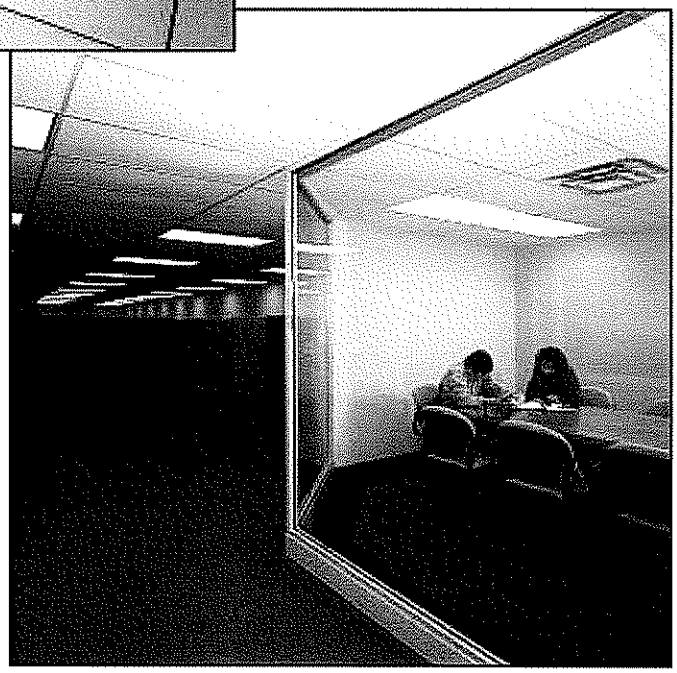


Project included space planning and interior design services for a new two-story facility. The 5,000 square-foot building provided private offices, pilots' lounge and sleeping rooms, lobby areas, and ticket counters. Large windows in the lobby areas give visitors an excellent view of plane activities on the runways. For added interest, a custom compass rose using company colors was incorporated into the tile flooring. The compass was installed to match the precise compass settings of the airport.

Interior Design

City National Bank Operations Center 95026





City National Bank
308 Goff Mountain Road
Cross Lanes, West Virginia 25313

Project included interior and exterior renovations of an 8,000 square foot fabric shop into a high-tech check imaging operations center. Space planning was provided for open office systems, private offices, as well as main frame room, transport room and print room. Interior design and furniture selections were also provided. The exterior facade was renovated to complement the style of other City National Bank facilities.

Interior Design

Judge Jack Dowell Jennings Courthouse Annex 93033

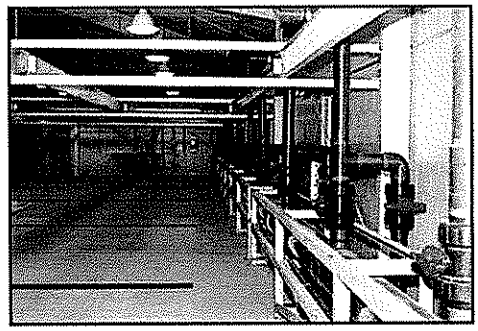
Upshur County Commission
38 West Main Street, Room 302
Buckhannon, West Virginia 26201

Project included the complete design of a 24,000 square foot, 3-story brick building as an annex to the existing courthouse. The new building design had to be sensitive to the existing building architecture. A skywalk was used to connect the two buildings for circulation and accessibility to the second floor of the existing courthouse. The building was designed with consideration for future expansion. Also included in the project was space planning and interior design for the different departments of the Upshur County government such as the county assessor, sheriff, prosecuting attorney, county clerk, magistrates and magistrate's courtroom, jury room, tax department, and county commission meeting room.

Mason County Fish Hatchery

00010

Above: The Mason County Fish Hatchery building houses fish rearing facilities as part of WVDNR's hatchery operations at the Robert C. Byrd Locks and Dam. Right: Piping manifolds will distribute both well water and reservoir water to a variety of fish tanks.



West Virginia Division of Natural Resources
Capitol Complex, Building 3, Room 669
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305

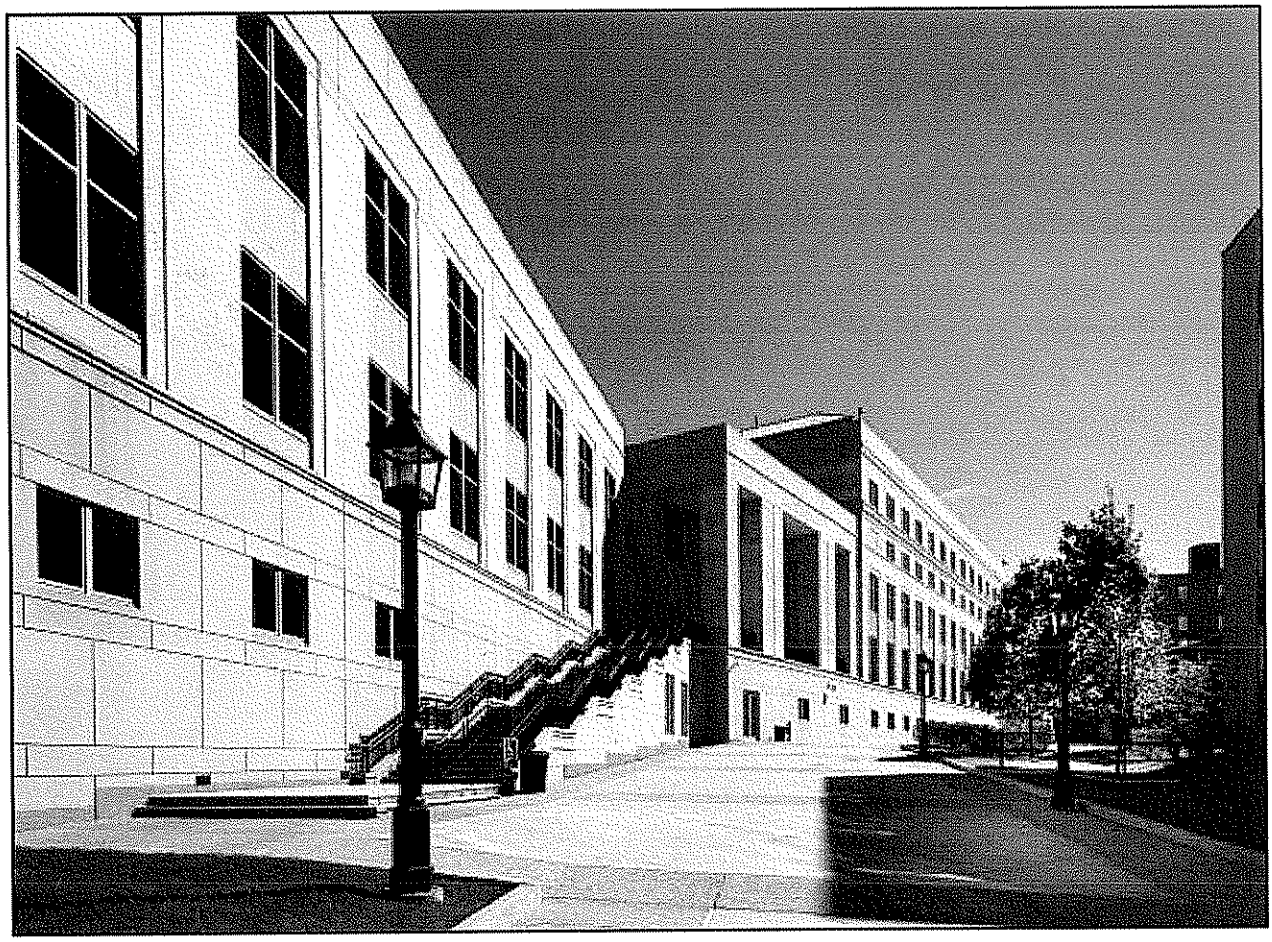
Located at the Robert C. Byrd Locks and Dam at Apple Grove, West Virginia, the Mason County fish hatchery building is the final component to the hatchery complex that also includes a series of fish rearing ponds and a reservoir to supply the ponds. The project also included the design and construction of two residences to be used by hatchery personnel.

The 9,200 square-foot fish hatchery building is a masonry and steel structure housing the actual hatching components, as well as offices and other support facilities. More than half of the building is open space to accommodate the fish hatching egg rack and a variety of rearing tanks that hold the fish until they are mature enough to be transferred to ponds. The tanks are fed from either reservoir water or directly from well water which first passes through a degassing head tank. As water flows continuously through the tanks from an overhead distribution system, it is collected in a series of trench drains in the hatchery floor and eventually makes its way back to the Ohio River.

The hatchery also includes an office, a bunk room and kitchen for seasonal employees, a brine/shrimp room, and storage and maintenance garages. A mezzanine above the office area provides for additional storage.

Landscape Architecture

Robert C. Byrd Federal Courthouse & IRS Complex 94074



Robert C. Byrd Federal Courthouse & IRS Complex
Beckley, West Virginia
Construction Cost: $1,500,000 (sitework only)
Completion Date: 1998

Working with Project Architect Robert A. M. Stern of New York and Einhorn Yaffee and Prescott of Washington, D.C., Chapman Technical Group provided the design and construction services for Phase I excavation, shoring and existing utility relocations in support of Phase II building construction. Phase II design and construction services included all site civil and site structural engineering and landscape architectural design including site grading and drainage, storm and sanitary sewage systems, retaining walls, underground electric and communication systems, natural gas supply, potable water and fire services, roads, parking facilities, pedestrian circulation, and site security enhancements.

Landscape Architecture

Microtel Motel

92036

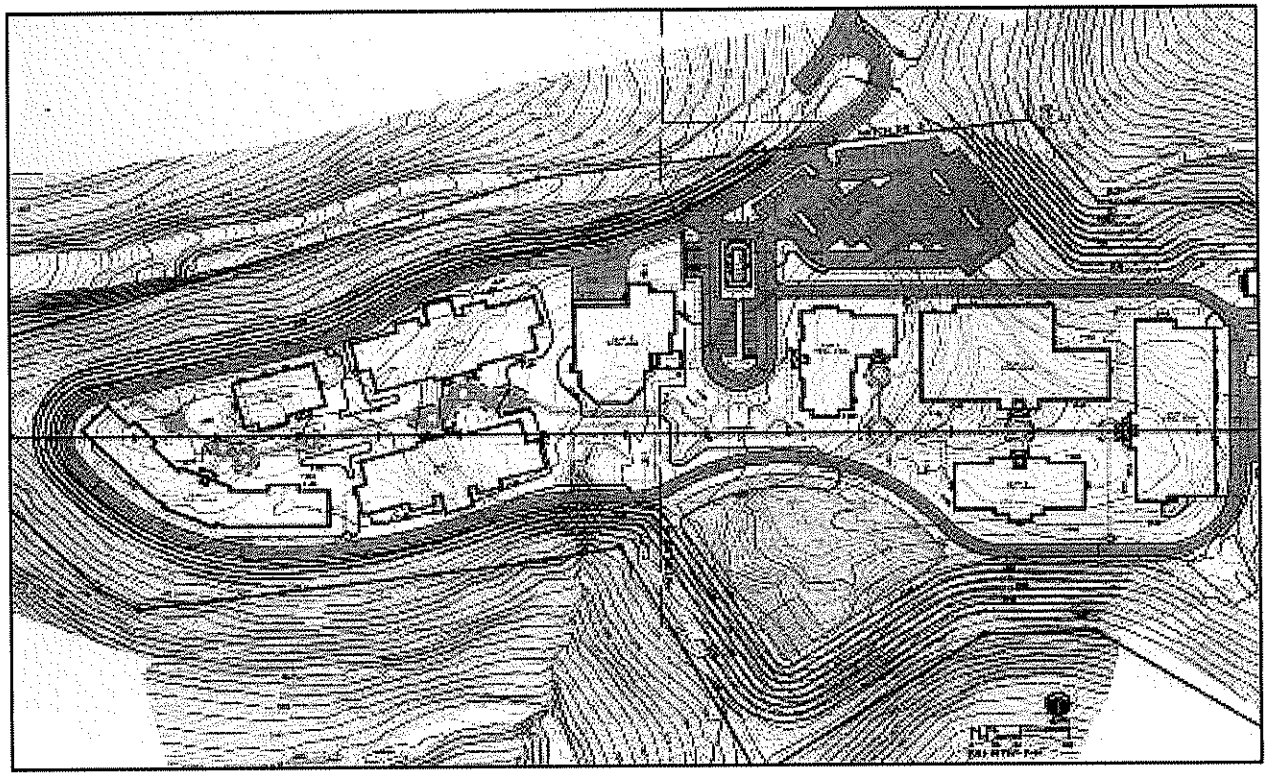
Essex Investment Group, Inc.
100 Corporate Woods
Rochester, New York 24623

Chapman Technical Group was contracted by Essex Partners of Rochester, New York to provide all site design services for a 102-room motel for the Microtel chain. The project included building siting, grading and storm drainage design, complete site utility design, and landscape design. The project required tight coordination among Chapman Technical Group and other consultants, which included architects and engineers from Ohio.

Landscape Architecture

Charleston Job Corps Center

92052



US Department of Labor
State Capitol Complex, Building 6
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305

Site design and structural engineering for an 11-building complex located on a 24 acre site. Site design included earthwork and grading, all utilities including storm and sanitary sewers, domestic and fire protection water systems, site lighting and electrical distribution, and pavement and roadway design. Structural engineering included design and drafting for the structural systems of all buildings.

Landscape Architecture

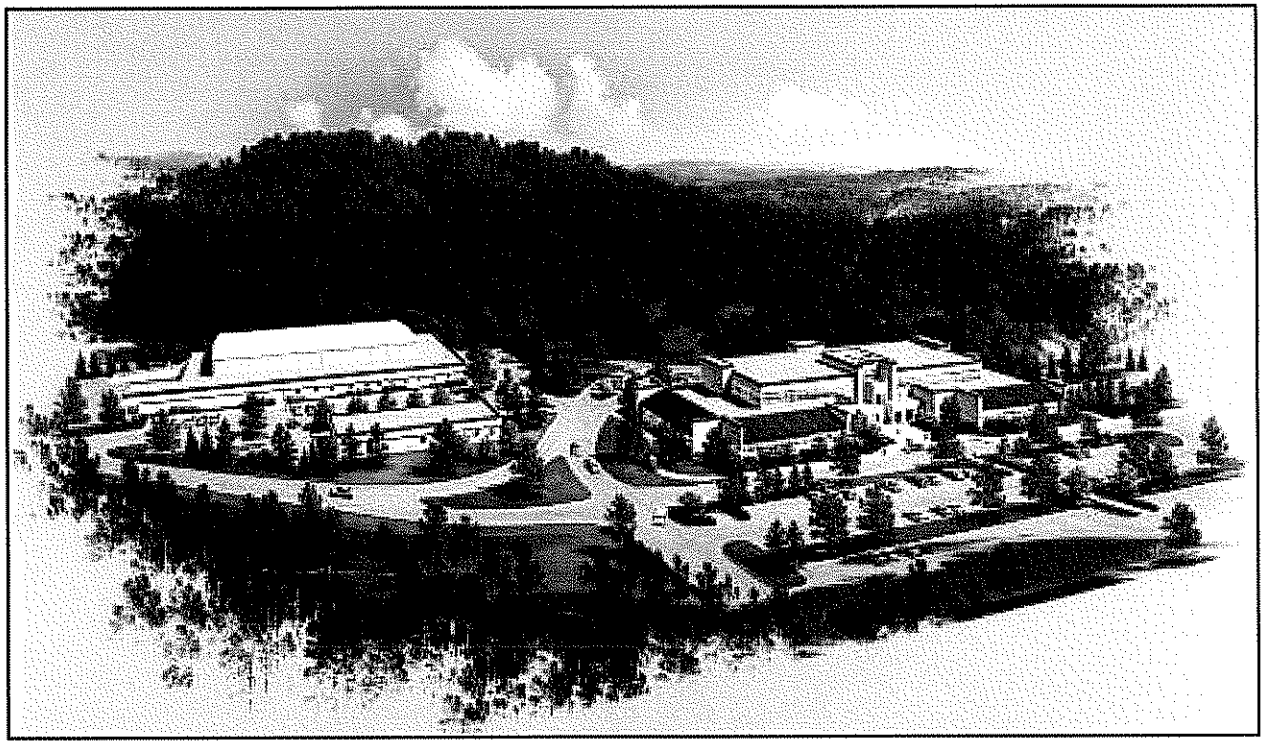
Twin Towers Landscaping and Site Development

Marshall University
One John Marshall Drive
Huntington, West Virginia 25755

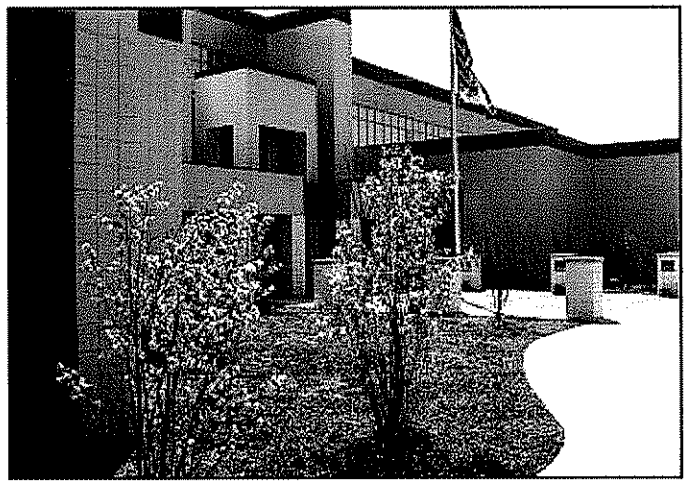
It had been nearly 30 years since The Twin Towers at Marshall University had been constructed and the area was badly in need of a facelift. Chapman Technical Group designed many site and architectural improvements including new stairway systems to enhance the main entrances, a system of seatwalls to provide much needed seating areas and improved landscaping beds. Extensive landscaping was also provided which successfully blended existing plantings with new landscape materials.

Landscape Architecture

West Virginia Air National Guard Support Complex 90001



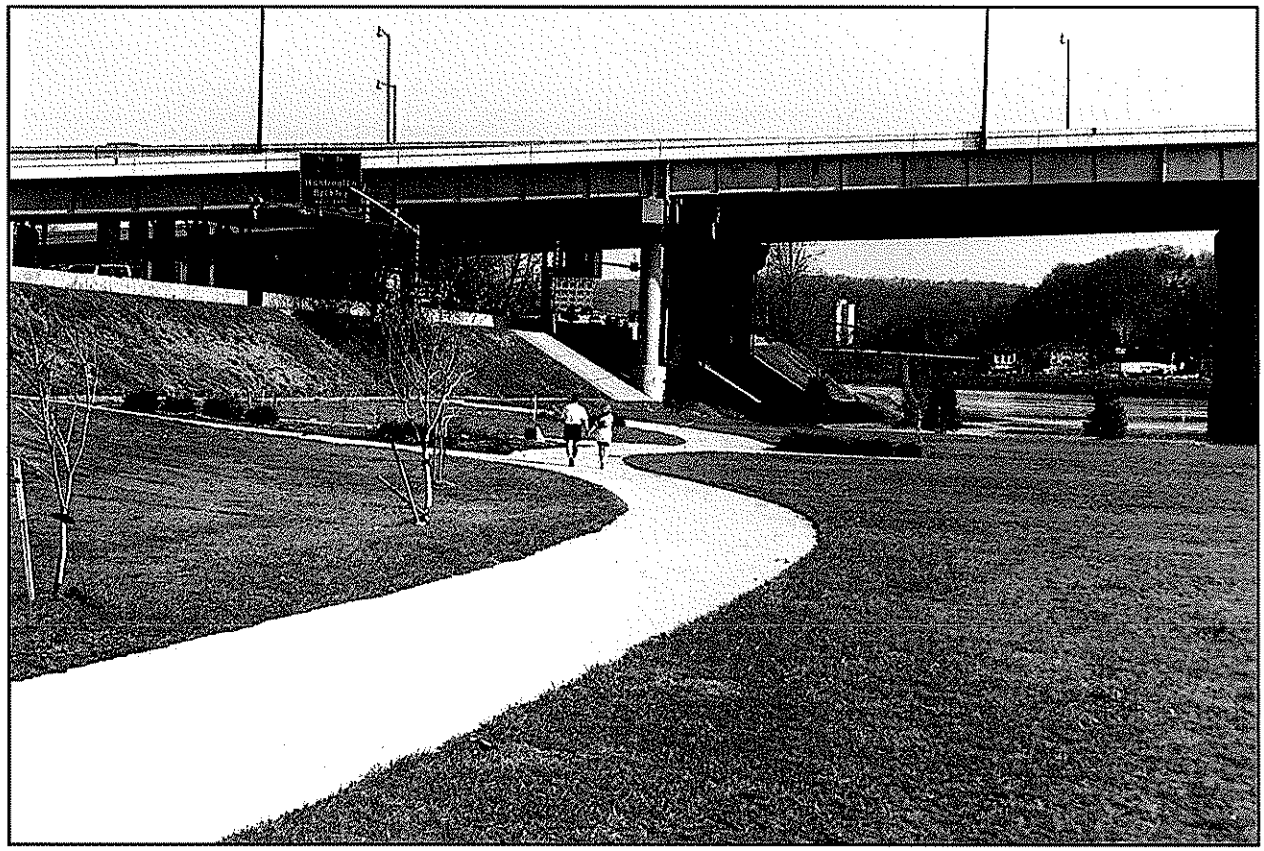
West Virginia Air National Guard
1679 Coonskin Drive
Charleston, West Virginia 25311



Design and construction inspection services for all site development project elements for a new complex of buildings for the 130th Airlift Group, West Virginia Air National Guard to include a new Headquarters Building, Consolidated Base Supply, and Security Police Headquarters. Firm's responsibility encompasses all site, civil engineering and landscape architectural design including site grading and drainage, storm sewers, sanitary sewers, underground electric, base-wide underground communications system, natural gas supply, potable and fire water supplies, roads and parking facilities, and pedestrian circulation.

Landscape Architecture

Magic Island Park 90015

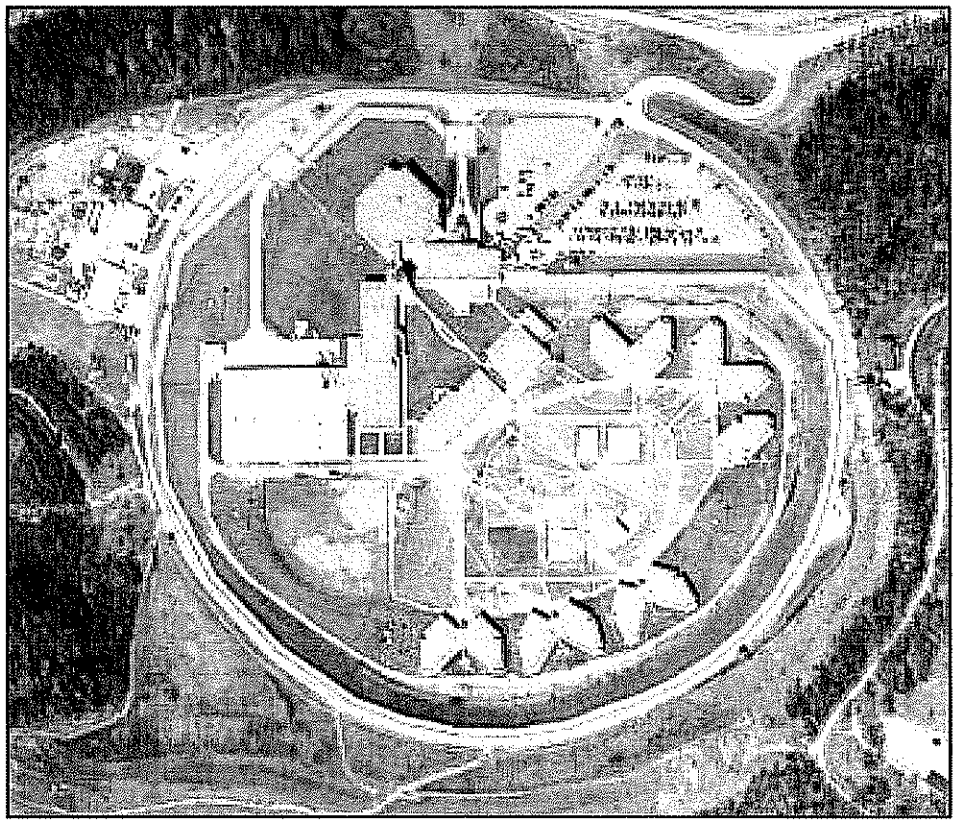


City of Charleston
501 Virginia Street, East
Charleston, West Virginia 25301

Magic Island was formerly an overgrown island along the banks of the Kanawha River in Charleston which was built up by the U.S. Army Corps of Engineers with dredged material from the Elk River. Chapman Technical Group developed a design to transform Magic Island into a public park featuring a boat dock, sand volleyball courts, concrete walkways, a restroom facility, an irrigation system and extensive landscaping.

Landscape Architecture

Mount Olive Correctional Facility 90027



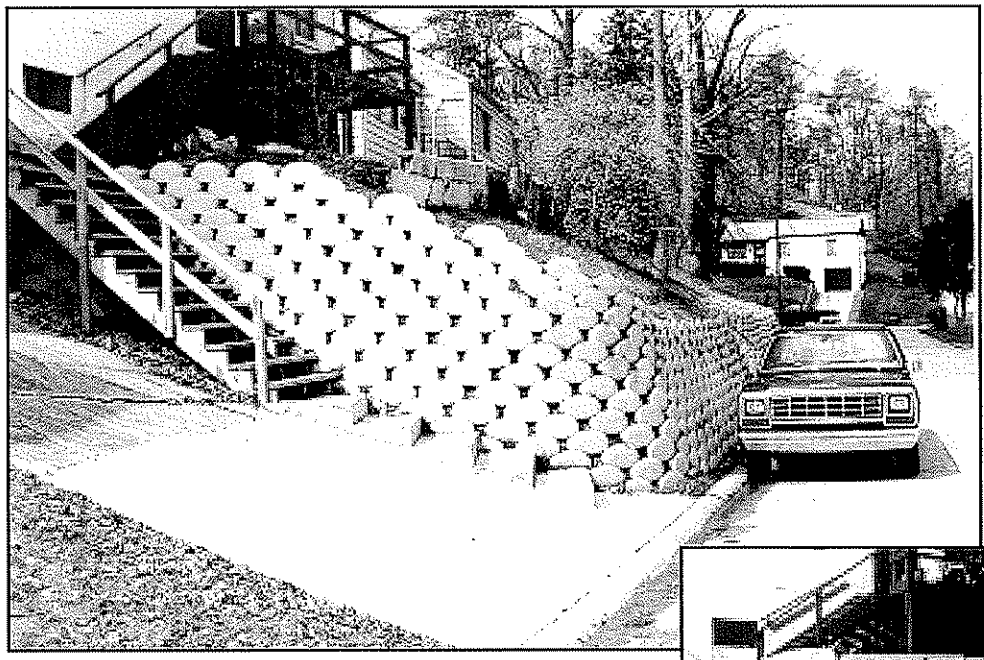
West Virginia Regional Jail and Correctional Authority
1325 Virginia Street, East
Charleston, West Virginia 25301

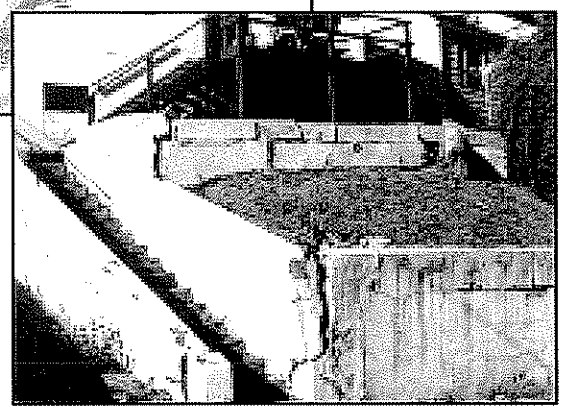
Design and construction inspection services for all site development project elements for a new 792 bed maximum and medium security state-of-the-art correctional center. Firm's responsibility encompasses all on-site (within the property boundaries of 110-acre site) project civil engineering and landscape architectural design including site grading and drainage, storm sewers, sanitary sewerage, potable and fire water supplies, roads and parking facilities, outdoor recreational facilities, and the interfacing and coordination with engineering consultants providing design of utilities to the property boundaries and with various regulatory agencies.

Civil Engineering

Northway Drive Retaining Wall

86005

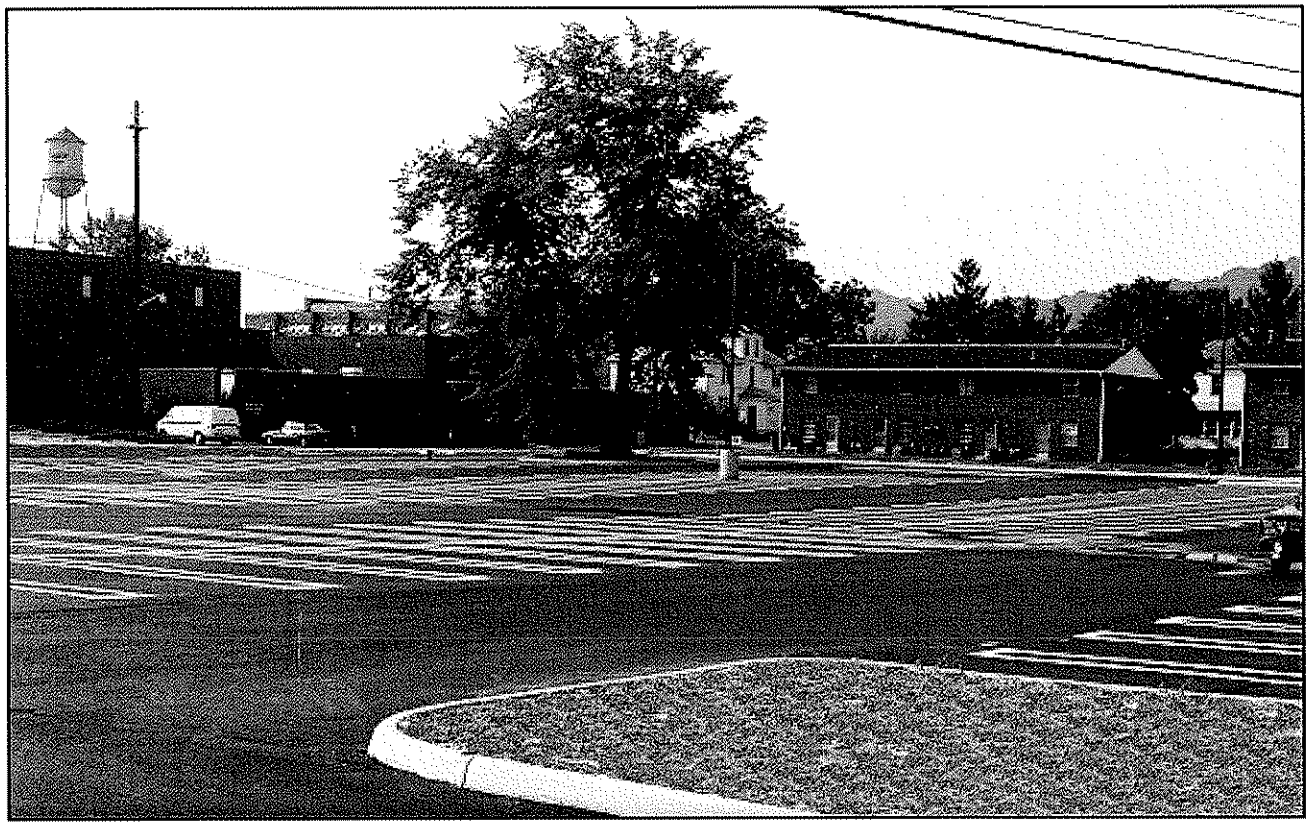




Northway Drive Retaining Wall
City of St. Albans
St. Albans, West Virginia

The retaining walls on Northway Drive in St. Albans had been failing for several years before the City was able to have new walls constructed. After considering several alternatives, a pre-cast concrete segmental wall was chosen as the optimum solution. The open design of the wall allowed water to flow through so hydrostatic pressure build-up, one of the main reasons for retaining wall failure, would not be an issue. The flexibility of the wall allowed the design to follow the existing contours, which resulted in a more pleasing project, and the cost of the wall was considerably less than a comparable cast-in-place concrete wall.

Parking Lots and Loop Roadway System 88019



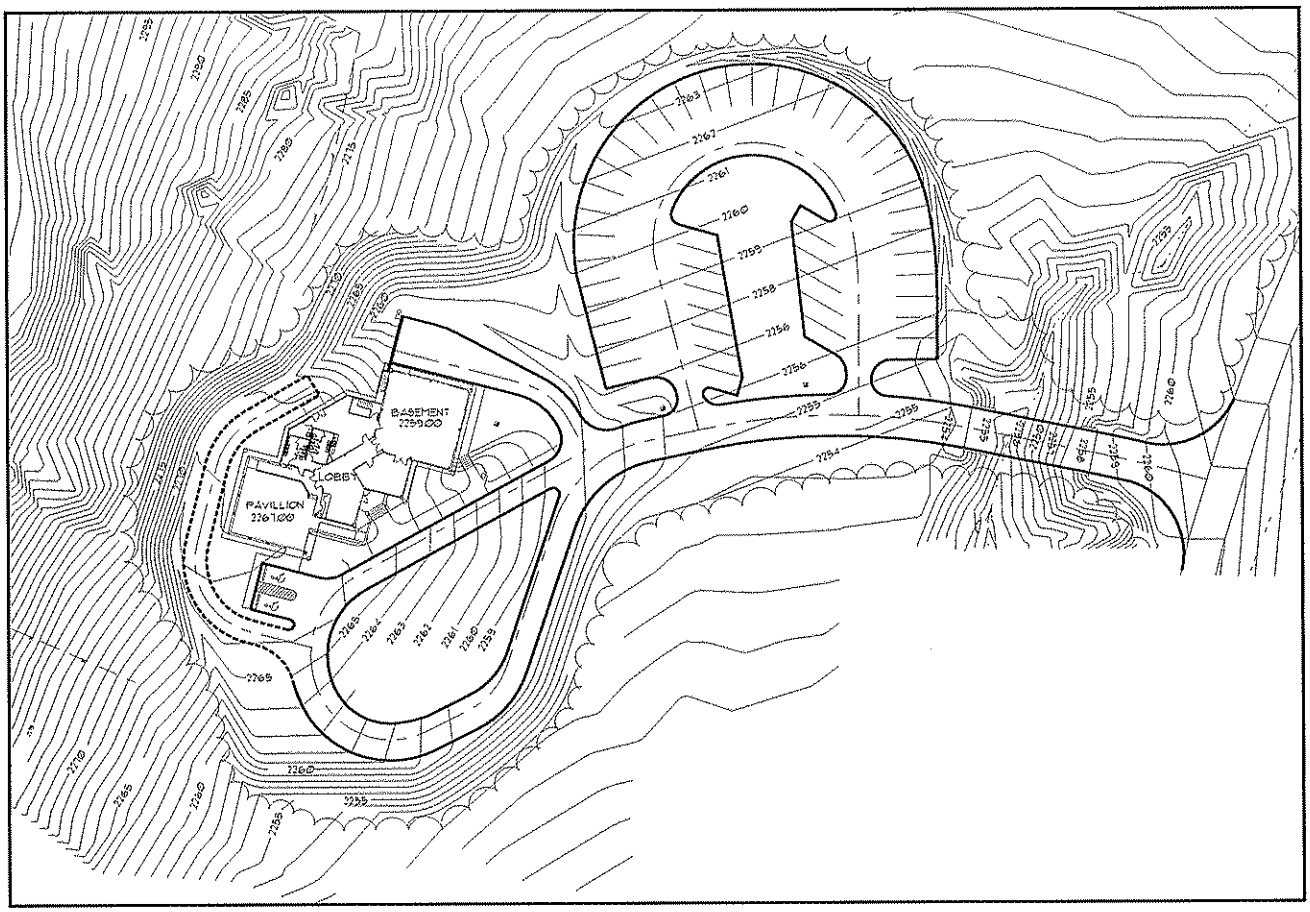
Parking Lots and Loop Roadway System
West Virginia State College
Institute, West Virginia

When West Virginia State College decided to convert the central core of the campus into a pedestrian mall, the first step was to move vehicular parking to the perimeter of the campus. Chapman Technical Group was selected to design six perimeter parking lots and a portion of a new perimeter loop roadway system. The design provided parking for more than 400 vehicles at various locations around the campus.

Civil Engineering

Natural Resources Center

93047

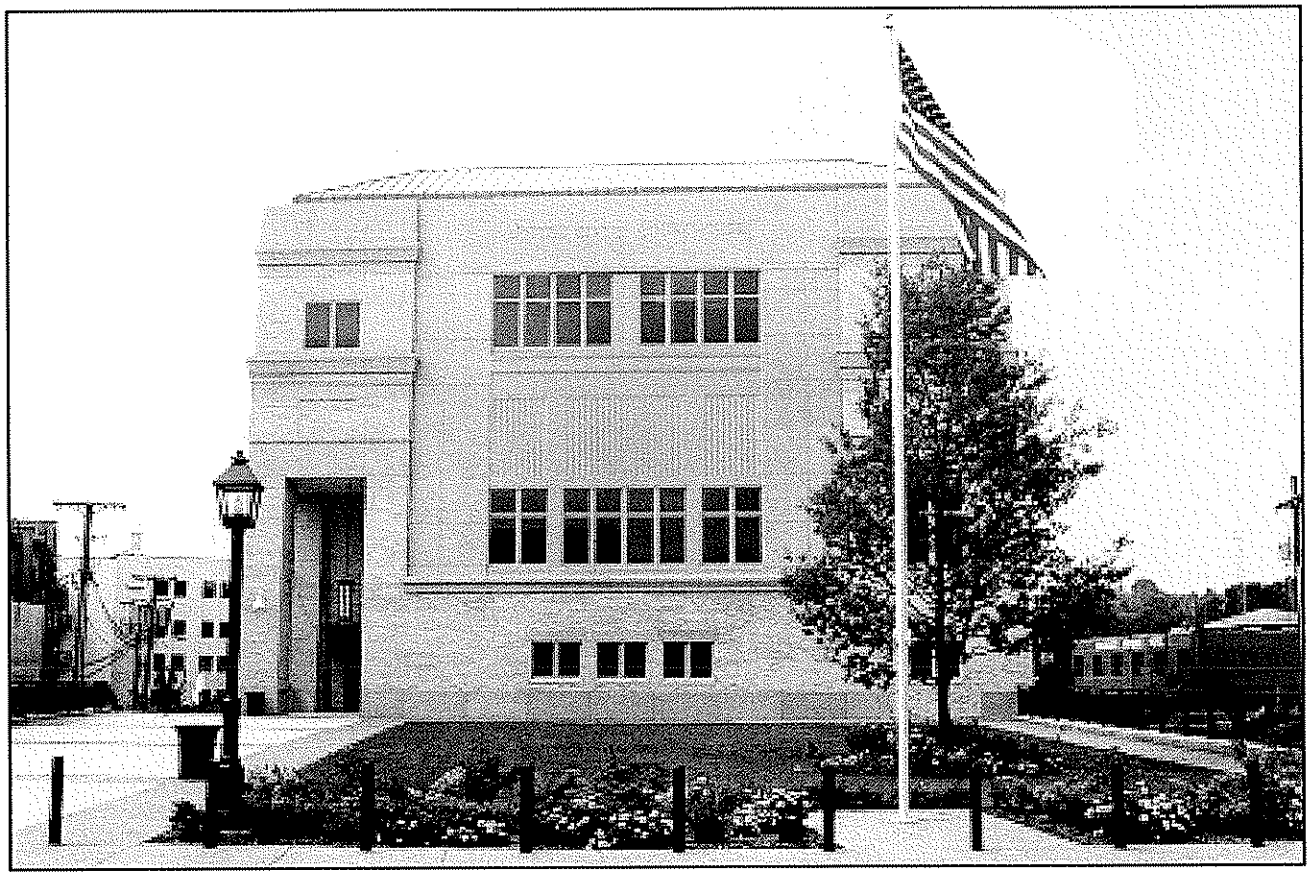


Natural Resources Center
West Virginia University
Morgantown, West Virginia

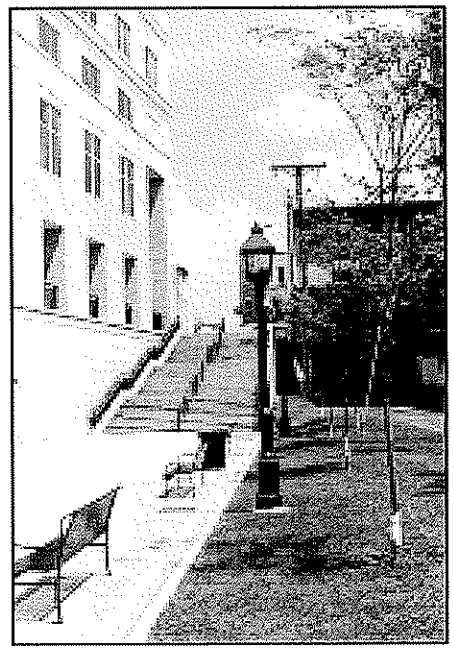
The new Natural Resources Center of West Virginia University was designed to highlight one the State's principal natural resources, wood products. The building, located in Cooper's Rock State Forest near Morgantown, features log-type construction, as well as other wood products on the interior. Chapman Technical Group provided all site planning and design, as well as civil engineering for the project. The new building and parking areas were sited to blend with the rustic surroundings and to minimize the impact of the new development.

Civil Engineering

Robert C. Byrd Federal Courthouse & IRS Complex 94074



GSA/Region 3
The Wanamaker Building
100 Penn Square East, Room 621
Philadelphia, Pennsylvania 19107-3396



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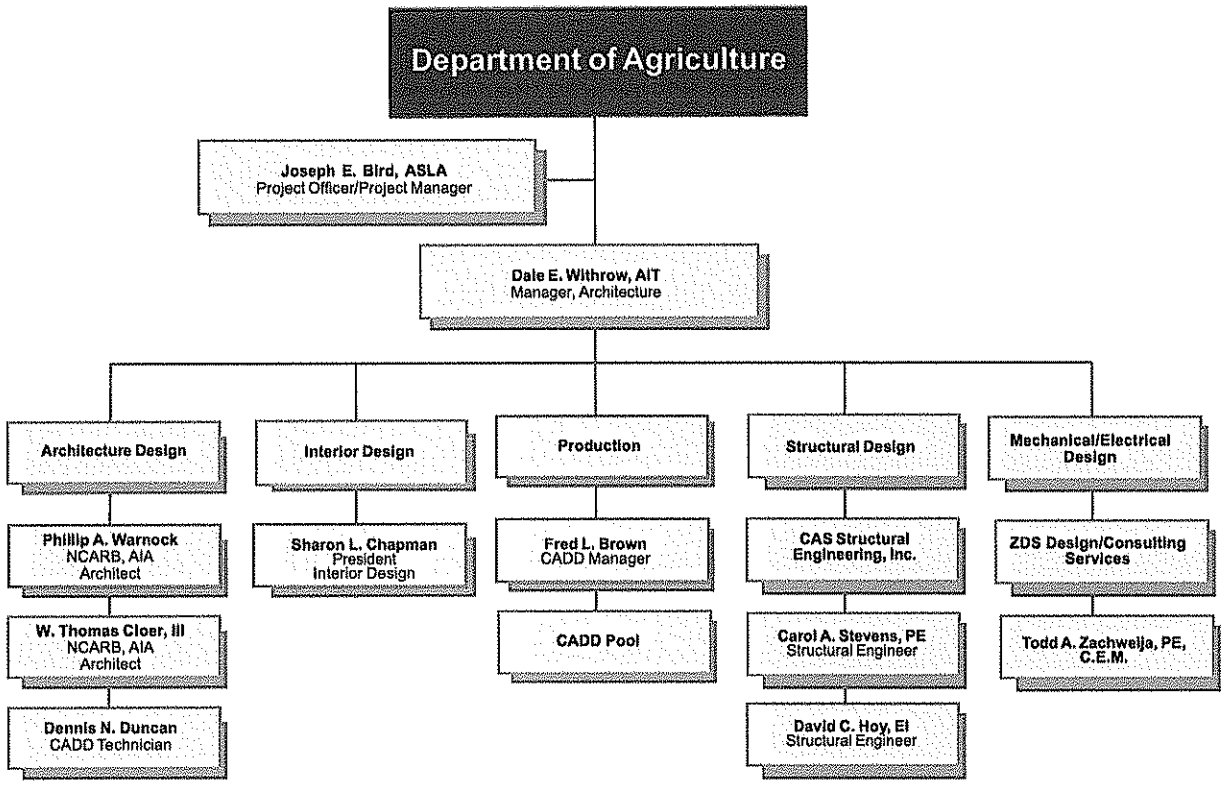
Project Team



JOSEPH E. BIRD, ASLA
Senior Vice President
Project Manager

EDUCATION

West Virginia University, BSLA, 1978

REGISTRATION

Landscape Architect, West Virginia, 1981

PROFESSIONAL HISTORY

August 1985 to Present: Chapman Technical Group
Senior Vice President and Project Manager.

May 1978 to August 1985: Kelley, Gidley, Blair & Wolfe, Inc.
Landscape Architect and Project Manager.

Mr. Bird is a project manager and registered landscape architect. His experience ranges from large site development projects to the management of multi-discipline and architectural projects.

31 years professional experience.

PROJECT EXPERIENCE

Site Development: Site planning and project management for numerous projects throughout West Virginia ranging from small campus sites to large sites for commercial, government, industrial, and institutional development. Projects include military complexes, campuses, public housing developments and other public facilities.

Parks and Recreation: Projects include swimming pools, bathhouses, cabins and support facilities for the West Virginia Division of Natural Resources and similar facilities for county and municipal park systems. Also involved in the design of facilities such as softball fields, fishing access facilities, recreation facilities for prisons, as well as passive recreation areas for public and private clients.

Miscellaneous: Other project experience includes the urban planning and development, streetscape design, roadway and storm drainage projects, as well as the project management of numerous major architectural projects throughout West Virginia.

AFFILIATIONS

West Virginia Chapter of the American Society of Landscape Architects

AWARDS

Honor Award for Shrewsbury St. Redevelopment Plan
West Virginia Chapter of American Society of Landscape Architects

DALE E. WITHROW, AIT
Project Coordinator, Department Manager
Architecture

EDUCATION

West Virginia Institute of Technology, AS, Drafting and Design, 1975.

PROFESSIONAL HISTORY

November 2000 to Present: Chapman Technical Group
Project Coordinator/Department Manager.

March 1993 to August 2000: The HDMR Group, Inc.
Project Coordinator.

February 1990 to March 1993: AFAB Services
Owner - Designer/Drafter.

Prior to 1990 Mr. Withrow worked with several architectural and engineering firms as an employee and independent consultant.

From 1978 to 1987 he was a Facilities Planner for the Kanawha County Board of Education.

Mr. Withrow is a Project Coordinator involved in all aspects of a wide variety of architectural projects. He is also Manager of the Architecture Group.

36 years professional experience.

PROJECT EXPERIENCE

Project Design and Management: Experience ranges from drafting, detailing and design through construction observation and project management of numerous building projects in West Virginia, Kentucky and North Carolina including:

- Residential/Housing
- Governmental Facilities
- Hospital/Healthcare Facilities
- Public School Facilities
- College Athletic Facilities
- Hotel/Hospitality Facilities
- Airport Support Facilities
- Historic Preservation
- Military Support Facilities/Armories
- Grocery and Drug Chain Stores
- Industrial Plant/Laboratory Facilities
- Office Buildings
- Banking Facilities
- Americans with Disabilities Act Assessment and Implementation
- Public Safety Facilities

AFFILIATIONS

Certified Architect-in-Training, State of Arizona
Associate Member WVAIA
President, St. Albans Business and Community Development Group
Vice Chair, Friends of the Alban Theatre
Board Member - St. Albans Chamber of Commerce

PHILLIP A. WARNOCK, NCARB, AIA
Project Architect

EDUCATION

The University of Tennessee, BArch, 1995

REGISTRATION

Architect, West Virginia, 2003
Architect, Tennessee, 2002

PROFESSIONAL HISTORY

September 2003 to Present: Chapman Technical Group
Project Architect.

June 2002 to July 2003: ZMM
Architect.

June 1995 to May 2002: Lockwood Greene
Intern Architect.

August 1991 to July 1993: Omni Associates
Architectural Draftsman.

17 years professional experience with additional experience in construction, interior design and developing.

AIA Honor Award for Excellence in Architecture for the historic preservation of the Upshur County Courthouse.

PROJECT EXPERIENCE

Project Participation and Design: Experience ranges from design, detailing and drafting through project management and construction administration of building projects in various states, including West Virginia, Tennessee, Kentucky and South Carolina. Project experience includes:

- Public School Facilities
- Community Centers
- Recreational Facilities
- Aviation Facilities
- Health Care/Hospice Facilities
- Medical and Psychiatric Clincics
- Pharmaceutical Facilities
- Research and Development Labs
- Office Buildings
- Rest Areas and Welcome Centers
- Public Transit Facilities
- Historic Preservation
- Historic Renovation/Additions
- Adaptive Reuse
- Governmental Facilities
- Military Support Facilities/Armories
- Multi-Family Housing
- ADA Assessments
- HUD 811, 202 and ECHO Facilities
- Small Cities Block Grant Developments
- Public Safety Facilities

AFFILIATIONS

National Council of Architectural Registration Boards (NCARB)
American Institute of Architects (AIA)

W. THOMAS CLOER, III, NCARB, AIA
Project Architect

EDUCATION

University of Tennessee, BArch, 2001

REGISTRATION

NCARB registered architect.
Intern Development Program completed.
ARE exam completed.

PROFESSIONAL HISTORY

October 2006 to Present: Chapman Technical Group
Project Architect and Architectural Designer

2001-2006: N Visions Architect
Architect Intern

9 years professional experience.

PROJECT EXPERIENCE

Experience ranges from design, detailing and drafting through project management and construction administration of building projects throughout West Virginia including the following project types:

Public School Facilities
Government Facilities
Office Buildings
Medical Office Facilities
Residential Housing
Multi-family Housing
Recreational Facilities
ADA Assessments
Site Planning

AFFILIATIONS

American Institute of Architects
City of St. Albans Property and Maintenance Board, Member
City of St. Albans Historic District Committee, Member
Boy Scouts of America Troop 250 Committee Member

DENNIS N. DUNCAN
CADD Technician

EDUCATION

Mountain CAD, April 1996
West Virginia State College, 1994
Putnam County Vocational School, 1991-1992

PROFESSIONAL HISTORY

September 1997 to Present: Chapman Technical Group
Architectural Technician and CADD Designer.

June 1992 to August 1997: Connie Post Designs
CADD Designer.

18 years professional experience.

PROJECT EXPERIENCE

Bridge and Highway: Responsible for CADD drafting on mainline and side road profiles, maintenance of traffic, signing and marking plans, intersection details, survey reference and control plans, typical roadway sections, stormline profiles, bridge sections and details.

Architectural/Structural: Responsible for CADD drafting on recreational and commercial floor plans, building cross sections and details, structural framing plans, foundation plans and details, and building renovations.

Water and Wastewater: Responsible for CADD drafting on treatment plants, improvements on existing and new facilities, stormwater plans and profiles, booster stations, meter vaults, water system updates for both public and private sectors, PRV plans and details.

SHARON L. CHAPMAN
President
Interior Designer

EDUCATION

University of Charleston, Carleton Varney Department of Art and Interior Design, BA, Interior Design, 1993

REGISTRATION

Allied Member, ASID

PROFESSIONAL HISTORY

July 1996 to Present: Chapman Technical Group
President and Interior Designer.

January 1991 to July 1996: Chapman Technical Group
Executive Vice President and Interior Designer.

19 years professional experience.

PROJECT EXPERIENCE

Space planning, interior design, material selections and furniture layouts for new and renovation projects including a courthouse annex, city hall renovations and other public buildings, private offices, commercial facilities, recreation facilities, industrial buildings, and residential properties. Also involved in building renovation feasibility studies and use analyses, and building facade renovation projects.

AWARDS

University of Charleston, Academic Achievement Award for Art and Design
Finalist, 1999 Entrepreneur of the Year Award
Finalist, 2000 Entrepreneur of the Year Award
St. Albans Renaissance Group, 2002 Business Person of the Year
Junior Achievement Chairman's Award, 2002-2003
St. Albans Renaissance Group, 2005 Appreciation Award
George Warren Fuller Award, 2005
Thomas Memorial Foundation Quiet Hero Award, 2009

AFFILIATIONS

Allied Member, American Society of Interior Designers
Rotary, St. Albans, West Virginia - Past President 2002-2003
Member, West Virginia Chamber of Commerce
Member, Charleston Area Alliance - Board of Directors
Member, Putnam County Chamber of Commerce
Member, St. Albans Chamber of Commerce
Member, Contractor's Association of West Virginia
Board of Directors, Thomas Memorial Hospital Foundation
AWWA West Virginia Section
Member, STARDA Board - St. Albans
Board Chair, Twin Cities Advisory Council
BB&T Advisory Board, Putnam County

CAS Structural Engineering, Inc.

Carol A. Stevens, P.E.
Structural Engineer

EDUCATION

West Virginia University, BSCE, 1984
Chi Epsilon National Civil Engineering Honorary
The Pennsylvania State University, ME Eng Sci, 1989

PROFESSIONAL REGISTRATION

P.E.	1990	Pennsylvania
P.E.	1991	West Virginia
P.E.	1994	Maryland
P.E.	2008	Ohio

BACKGROUND SUMMARY

2001 – Present	President, Structural Engineer CAS Structural Engineering, Inc.
1999 – 2001	Structural Engineer Clingenpeel/McBrayer & Assoc, Inc.
1996 – 1999	Transportation Department Manager Structural Engineer Chapman Technical Group, Inc.
1995 – 1996	Structural Engineer Alpha Associates, Inc.
1988 – 1995	Structural Department Manager Structural Engineer NuTec Design Associates, Inc.
1982 – 1988	Engineer AAI Corporation, Inc.

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers, WV Section
Past President
National Society of Professional Engineers
American Concrete Institute
American Institute of Steel Construction
West Virginia University Department of Civil and Environmental Engineering Advisory Committee
West Virginia University Institute of Technology Department of Civil Engineering Advisory Comm

CIVIC INVOLVEMENT

ASCE Christmas in April Project

EXPERIENCE

West Virginia, State Capitol Complex, Dome Structure: Exploratory investigation and preparation of construction documents for repairs to structural steel in Capitol Dome.

West Virginia, State Capitol Complex, Building 3: Structural design and construction administration of repairs and renovations to limestone canopy.

West Virginia, State Capitol Complex, Main Capitol Building Parapet: Exploratory investigation of limestone/brick parapet/balustrade of Main Capitol Building to determine cause of movement/cracking/leaks. Construction contract for repairs has recently been completed. Building is on State Historic Register.

West Virginia, Calvary Assembly of God Church: Designed structural repairs to existing roof and replacement of skylights.

West Virginia, Upshur County Courthouse: Developed construction documents for structural repairs to main entrance, dome, and stone columns of 1899 structure.

West Virginia, Westmoreland Apartments: Designed structural additions and renovations to existing closed multi-story school for use as elderly apartments. Work included restoration of exterior masonry components.

West Virginia, State Capitol Complex, Governor's Mansion: Structural analysis and design in addition to evaluation report for modifications and renovations to several areas of mansion. Building is on State Historic Register.

West Virginia, State Capitol Complex, Holly Grove Mansion: Structural evaluation report for preliminary condition assessment of building structure. Building is on State Historic Register.

West Virginia, State of West Virginia Office Building #21, Fairmont, WV: Preliminary structural observation report for condition assessment of building structure.

West Virginia, Kanawha County Schools: Structural design of additions and renovations to George Washington, Sissonville, Herbert Hoover, South Charleston and Nitro High Schools.

P.O. Box 469 Alum Creek, WV 25003-0469 (304) 756-2564 (voice) (304) 756-2565 (fax)
A West Virginia Certified DBE Consultant
Certified in the Practice of Structural Engineering

West Virginia, Mt. Calvary Baptist Church: Designed foundations and floor framing for new activities building.

PREVIOUS EXPERIENCE

West Virginia, Huntington TTA Bus Garage: Designed repairs to existing building foundation and floor slab in office area for project including renovations of offices, driver's and mechanic's area and locker room recreations room/break room.

West Virginia, State Capitol Building: Designed structural system to replace deteriorated reinforced concrete slab at landing on north side of Capitol steps.

West Virginia, Farrell Law Building: Performed analysis of existing deteriorated structural sidewalk over parking area. Recommended repair solutions for reinforced concrete and aged terra cotta façade of 1920's building.

West Virginia, Upshur County Courthouse Annex: Performed structural evaluation and design for repairs to existing multi-story Annex addition.

West Virginia, Sissonville Library: Structural design of new 7,000 SF branch library. Structure consisted of wood framing.

West Virginia, Cabell Huntington Hospital Boiler Mezzanine: Structural analysis and testing of existing reinforced concrete mezzanine with significant degradation from brine tank leakage. Developed new structural system to replace existing concrete mezzanine utilizing steel framing and steel grating.

West Virginia, Beckley Wastewater Treatment Plant: Designed reinforced concrete tanks and masonry support structures for new wastewater treatment plant.

West Virginia, Morgantown High School Additions: Designed steel framing and foundations for science classroom, cafeteria and gymnasium additions to existing education complex.

West Virginia, Grafton High School Addition: Designed steel framing and foundations for new science classroom addition to existing high school.

Pennsylvania, Metropolitan Edison Company, Headquarters: New 80,000 SF two-story office addition to existing complex.

Pennsylvania, Defense Distribution Region East: Structural engineering and design for a 33,000 SF Hazardous Materials Storage Warehouse.

Pennsylvania, Glatfelter Insurance: Design of steel framing and foundations for new 30,200 SF building.
Maryland, U.S. Army Corps of Engineers, Baltimore District, Administration Building: Seismic design of new 10,000 SF masonry building.

Pennsylvania, Carlisle Syntec: Design of foundation supports for 800,000 lb rubber vulcanizing machine; enlargement of foreman's office including new framing to support mechanical equipment on roof; new monorail installation; extension of existing gantry rail.

Pennsylvania, Engel Worldwide: Steel framing and foundations for new 12,000 SF two-story office building; design of crane beams and columns for adjacent 60,000 SF crane building.

Pennsylvania, AMP IMF: Structural design for the renovation and conversion of a stamping facility into an integrated manufacturing facility (IMF) housing operations for stamping as well as blow molding processes.

Texas, York International: Structural survey of existing building structure for modifications to incorporate large testing and manufacturing areas for mechanical equipment.

Maryland, Columbia 100: Design of structural steel framing for new two-story 43,000 SF office building.

Pennsylvania, York Federal Savings and Loan Association/New Service Corporation: Design of steel framing, reinforced concrete retaining wall and foundations for new 14,400 SF two-story office building.
Pennsylvania, Yorktowne Parking Garage: Study of reinforced concrete/steel framed parking garage.

Pennsylvania, Blakey Yost Bupp & Schaumann: Re-construction of a 3-story 10,200 SF, fire damaged urban building and conversion into law offices.

Pennsylvania, Queensgate Theaters: Structural analysis of existing mall area for conversion to movie theaters.

Pennsylvania, College Misericordia: Structural design of new 50,000 SF student resident hall utilizing precast concrete planks and masonry bearing walls.

Pennsylvania, Homewood Suites: Structural and foundation design for new two-story hotel.

ZDS offers an effective organizational structure; one that takes each project from inception through completion, working as an extension of the *Client* every step of the way.

In 1983, Todd A. Zachwieja founded ZECO Consultants. In 1994 **ZDS** Limited Liability Company was incorporated in WV using dba **ZDS Design/Consulting Services.** This company was founded to provide design and consulting services. Today there are four principals with over 100 years of technical expertise:

- **Todd A. Zachwieja,** PE, C.E.M., LEED AP, Chief Executive Officer, brings with him over 27 years in the design and consulting business.
- **Ted T. Zachwieja**, Principal over Construction Administration services with over 40 years experience in the design and consulting business. He was owner of Ted T. Zachwieja & Company from 1962 to 1982.
- **Daniel H. Kim**, Ph.D., Manager of Strategic Planning, brings with him over 20 years in the design and consulting business and is one of the nation's leading experts in organizational management. He is also owner/founder of Pegasus Communications, Inc. from 1991 to present.
- **Lori Zachwieja**, CPA, Chief Financial Officer and cofounder of ZECO Consultants.

ZDS is a consulting engineering firm specializing in the following areas:

MECHANICAL
ELECTRICAL
INDOOR AIR QUALITY
COMMISSIONING
ENERGY

Each new project is assigned to a principal in-charge who will follow the project from inception through commissioning.

We assign the production staff according to the nature of the project and the work force necessary to meet the schedule. The Principal in charge of that project determines if consultants are needed and coordinates all areas. After bidding, a Principal of **ZDS** coordinates visits to the job site regularly, all the way through the post warranty inspection.

"Excellent mechanical and electrical design results from an experienced team, as well as, listening to the needs of the Client."

ZDS believes in the team approach when providing engineering design and consulting services. We start with *our client* as the number one member on our team. We listen to the **needs** and **concerns** of our client and that becomes the basis for our design. Our design expertise includes:

MECHANICAL DESIGN	ELECTRICAL DESIGN
• Heating & Ventilation	• Power Distribution
• Air Conditioning	• Interior Lighting
• Piping	• Exterior Lighting
• Environmental Controls	• Emergency Power
• Process Controls	• Communications
• Refrigeration	• Technology
• Plumbing	• Fire Alarm
• Medical Gases	• Security
• Sprinkler-Fire Protection	• Life Safety
• Master Planning	• Master Planning

ZDS provides comprehensive design services. We have experience and specialties in indoor air quality, energy management and commissioning, along with traditional mechanical and electrical design experience dating back as far as 1958. We offer a complete package.

We work with all levels of the client's staff: the building owner, the budget supervisor, the operating and maintenance staff and others impacted by the project. We recognize the maintenance and operating staff live with the design long after the project's completion. We listen to and work with those who will continue to operate and maintain the equipment. We find that proper communication benefits the client throughout the design process and beyond.

ZDS design team provides a total system evaluation for cost effective selection, installation, and ease of maintenance for both new systems and retrofit of in-place systems.

Design begins with *our client.* Our staff meets with our client to review their concerns, budgets and schedules. The ZDS design team reviews the *entire* picture, and ends with "A Total Design."

ZDS provides consulting engineering services for the indoor air quality (IAQ) environment. These services include; strategic planning for renovation and new construction projects; technical research and writing; specialized applications software development; corporate and professional training programs; publications support and fulfillment; and site-specific engineering and scientific consultation.

Todd Zachwieja, **ZDS** principal, is contributing editor for the following IAQ publications:

- Contributing Editor and Technical Review Panel for the publication of the *IN*VIRONMENT© *Handbook of Building Management and Indoor Air Quality*, by Chelsea Group and published for Powers Educational Services.
- Technical Review Panel for the Quarterly publication of the *IN*VIRONMENT™ *Newsletter*, by Chelsea Group for Powers Educational Services.
- *Ventilation for a Quality Dining Experience: a Technical Bulletin for Restaurant Owners and Managers*, released in January 1993.
- *The New Horizon: Indoor Environmental Quality*, published as a supplement to the June 1993, issue of *Consulting Specifying Engineer* magazine, a trade magazine distributed to roughly 50,000 engineers.
- Editorial Advisory Board member reviewing the articles of the monthly publication *IN*VIRONMENT™ *Professional*
- Editorial Advisory Board member of *POWER PRESCRIPTIONS*™ Indoor Air Quality Publication by *Electric Power Research Institute.*

ZDS provides IAQ services for major corporations, government organization, and property owners to resolve their specific facility problems:

- Resolve the building's "sick building syndrome" complaints.
- Identify solutions to extensive biological contamination building related illnesses in renovated office buildings.
- Develop solutions for HVAC systems, temperature controls, equipment, operating and maintenance practices causing IAQ problems in schools and commercial buildings.
- Commission new and renovated facilities to minimize or eliminate IAQ issues before they become problems.
- Develop and establish master plans as well as conduct training seminars for IAQ of schools and commercial buildings.

As one of the Nation's leaders in Indoor Air Quality, **ZDS** produces sophisticated technical expertise that enables *Our Client* to be proactive in solving and preventing indoor environmental problems.

At ZDS, our engineering staff integrates energy efficiency into each project design to provide you, our client, with the added value that you expect and deserve. The ZDS team approach represents a tremendous amount of experience in designing energy efficient facilities. ZDS offers a comprehensive range of energy management services that includes:

- Providing detailed analysis of facilities.
- Recommending sound and proven energy saving solutions.
- Implementing energy management improvements
- Determine, quantify and assist in securing available Utility & Government grants.
- Evaluating and documenting utility savings.

The ZDS team members take pride in the quality of their projects and have been responsible for designing and implementing numerous energy management programs. These programs are providing significant energy improvements and include; optimizing, central utility plant equipment, control systems, air handling systems, lighting systems, and other energy consuming equipment. Recent projects include:

- Interconnecting boilers and chiller plant systems.
- Designing Geothermal HVAC systems
- Optimizing HVAC equipment and operating sequences.
- Installing Direct Digital Control (DDC) Energy Management Systems.
- Replacing inefficient lighting equipment with energy efficient ones.
- Converting constant speed air handling equipment and pumping systems to variable speed operation.
- Modifying air handling equipment from 100% outside air to return air operation.
- Implementing heat recovery units into HVAC equipment.
- Improving laundry, kitchen and other process application efficiencies.

In addition to the energy management projects outlined above, the ZDS team members have extensive experience in identifying and implementing energy efficient operating and maintenance measures. These are typically low cost or no cost measures that include:

- Inspecting, calibrating temperature controls and adjusting outdoor air dampers.
- Commissioning economizer cycle operation.
- Testing steam traps and pressure relief equipment operation.
- Enabling heating and cooling equipment only when required.

The ZDS team is trained and experienced in advising you of program options to incorporate energy efficiency and operational saving features into the design of your new construction and renovation projects. At ZDS, we view our role as helping you to define your own energy efficiency needs and goals through identifying energy saving options and providing supporting financial information. We then help you to fit your energy efficiency needs and goals into a workable budget and schedule, and then design a program to fill those needs.

Sustainable "Green Building" design including LEED's certification recognizes the importance of commissioning. The design and construction industry have had start-up problems when a facility is occupied and constructions' deficiencies that were not discovered until the contractors traditional one-year warranty period expires. The mechanical and electrical systems have continued to become more complex with sophisticated control systems and equipment, and a mountainous amount of changing technology. If not properly addressed, building Owners could face numerous operational problems from "Sick Building Syndrome," excessive energy costs, and uncomfortable indoor environments. Commissioning is the missing link between design and implementation.

Subsequent to joining **ZDS**, Todd Zachwieja established commissioning services for one of the nation's largest energy service companies. He is also a ***LEED's Accredited Professional.*** Many utility companies and building Owners now require commissioning for the new or renovated facilities in order to maximize the use of their investments in their facilities and to obtain LEED's certification. The commissioning process offers the following benefits:

- Improved comfort, serviceability and Owner understanding of systems and design intent.
- Added technical support for the Owner and being proactive in preventing new problems.
- Reduced maintenance and decreased expenses related to operating deficiencies.
- Early identification and resolution of system discrepancies while designers and contractors are still under contract and on the job.
- Verification of system performance while meeting financial restraints.
- Commission new and renovated facilities to minimize or eliminate IAQ issues before they become problems.

ZDS and its consultants, offer commissioning services for their commercial and institutional clients including meeting LEED's enhanced commissioning requirements. These services include strategic planning operations assistance for renovation and new construction projects. Commissioning services consists of construction document review, equipment performance testing, documentation of design criteria, value engineering, operational fine tuning, professional operations training programs and site-specific engineering consultation. Our project team has the unique experience of in-depth design knowledge and hands-on operations knowledge that fills in the gap between traditional design services and the building Owners operational needs.

National Recognition

The Second National Conference on Building Commissioning invited Todd Zachwieja, **ZDS**'s owner, to speak. He jointly presented a paper with the Director of Maintenance of Charleston Area Medical Center's Memorial division. The Tampa, Florida Conference was held in May 1994.

The principal owners of **ZDS** and their consultants have extensive experience in building commissioning and have saved their customers hundreds of thousands of dollars in construction costs and operating costs through their efforts.

The design team at **ZDS Design/Consulting Services** is the best to provide engineering services for **your** project. Satisfying *our Client's* individual needs and distinct requirements is the foremost concern of ZDS.

> ***The most important member of the design team is the client. We make every effort to involve our clients throughout the entire process, from the planning through the construction and beyond.***

The ZDS design staff continuously provides engineering design services value well into the millions of dollars on a variety of project types. Designing expertise goes as far back as 1958. Through the efforts of our staff, project locations include:

West Virginia	Virginia	North Carolina	Georgia
Kentucky	Ohio	Pennsylvania	Florida
Illinois	Connecticut	Texas	Michigan
New York	Wisconsin	Massachusetts	Indiana
Colorado	Tennessee	Maryland	Washington DC
California	Hawaii	South Carolina	

Our clients can rest assured that the design team will be available. Not just for the year or two that we are involved in the initial design and construction, but also for years that follow as questions arise about your facility. A good-engineered system and its equipment should last 15 to 40 years. Why not select a design firm with experienced staff committed to their projects with a comparable track record.

Our design team will provide comprehensive services utilizing experienced staff through planning; cost estimating, engineering, coordination of bidding, regular site visitation during construction and specifications for equipment. You, ***our Client***, will greatly benefit from a *single point of responsibility* for every need your project may have.

Our staff has the expertise with codes and standards. We have extensive experience in conducting engineering code surveys of existing facilities. Our staff has excellent working relationships with the West Virginia Fire Marshal's Office and the West Virginia Department of Health.

In addition to comprehensive Engineering services from an experienced design team, another major consideration in the selection of your engineer and design staff should be their track record. ZDS organization has an unbeatable, long running, and well-known track record for meeting ***our Client's*** needs, on time and within budget with outstanding quality.

We view these characteristics as the foundation of Quality. We look forward to the opportunity to discuss our ideas with you and assist you by providing solutions for your needs with a full range of services from Planning to Commissioning.

Primary MEP Contact: Todd A. Zachwieja, Principal, mobile phone (304) 545-4550
Secondary MEP Contact: Ted T. Zachwieja, Principal, mobile phone (304) 552-5724

ZDS was formed to provide quality engineering and consulting services specializing in:

- Design of mechanical systems and electrical systems.
- Building indoor air quality survey and analysis.
- Energy management and conservation services.
- Commissioning for new and renovated systems in commercial, educational, industrial and health care facilities.

ZDS approaches engineered systems improvements from the building owner operator's perspective, focusing on practicality, cost effectiveness, energy efficiency, reliability, operability, maintainability of the systems and timely implementation of projects to minimize disruption on existing facilities. We concentrate on optimizing and utilizing the existing systems prior to recommending the purchase of new equipment when upgrading a facility. Actual requirements of existing systems are analyzed and considered in addition to the "design" requirements. Our staff listens to their clients needs through their extensive interaction with the facility operators and the key decision-makers. We believe this approach enhances the design of new systems and ensures that the systems will be practical and functional.

ZDS is a team of professionals capable of meeting a diverse range of needs of facility professionals in the building design, construction and operations. The principals each have specialties in certain aspects that relate to meeting the needs of the building owners and operators. Mr. Ted T. Zachwieja's over 45 years of experience in mechanical and electrical design bring the depth of skills necessary to make the construction and design process operate effectively. Mr. Todd A. Zachwieja's project management skills with his extensive technical strengths in mechanical/electrical engineering and experience in indoor air quality, energy management and commissioning complement the traditional design needs. Mr. Daniel H. Kim's extensive management experience with some of the nation's largest companies provides us with important conceptual planning and organizational understanding. Ms. Lori Zachwieja's accounting and financial management skills provide the in house experience to operate an efficient and effective company to better serve our clients.

ZDS's also has a Professional Engineer working out of Morgantown that helps us reach our customers easily in the northern part of WV. Our current project team includes the following to meet the challenges of our client's building design and operating needs.

TODD (TED) A. ZACHWIEJA, PE, C.E.M., LEED AP

Chief Executive Officer
Principal-in-Charge, M/E/P Design Project Manager

Education

Bachelor of Science in Mechanical Engineering from West Virginia Institute of Technology in 1982.
Masters of Science in Engineering Management from the University of West Virginia College of Graduate Studies in 1989.

Registrations

Professional Engineer, West Virginia, No. 10,127
Certified Energy Manager (C.E.M.), National Certification
LEED® Accredited Professional, National Certification through USGBC
Professional Engineer, Georgia, No. 18253
Professional Engineer, Kentucky, No. PE-17961
Professional Engineer, North Carolina, No. PE-017445
Professional Engineer, Ohio, No. E-53587
Professional Engineer, Pennsylvania, No. PE-040929-R
Professional Engineer, South Carolina, No. 25985
Professional Engineer, Virginia, No. 0402 025427

Qualifications

Todd has more than 28 years of experience; in the design, construction management, and specifications for mechanical engineering, heating, ventilating, air conditioning, plumbing, electrical, and lighting; indoor air quality analysis and building system commissioning for educational, commercial, industrial and health care facilities. His specialties include mechanical engineering, HVAC/Plumbing systems master planning, conceptual design, energy conservation program development, commissioning and IAQ analysis relating to HVAC systems. He has extensive experience in industrial, commercial facilities, hospitals and educational design including preparation of construction documents for millions in renovations and additions to facilities. Some of his project experience includes projects new Mercer County Courthouse, Princeton, WV, Kanawha County Commission – 120,000 sf additions/renovations for the Judicial Annex/Kanawha County Courthouse Charleston WV, Laidley Towers – Charleston WV, Renovations to Buildings #1, #3, #4, #5, #5, #7, #8, #9, #10 at the WV State Capitol complex, Cultural Center HVAC Renovation, Union Carbide, United Center - Charleston WV, Phillip Morris USA, Rhone-Poulenc, Toyota, Olin Corporation, Walker Machinery, WV Air & Army National Guard, Bank One, WV; Kohl's, Sears, WV Public Service Commission Headquarters, and Yeager Airport. He also designed one of the largest geothermal heat pump applications in the mid Atlantic region, commissioned HVAC systems and mechanical engineering at many General Motors facilities in North America.

Some of his health care experience includes millions in renovation and new construction design for Charleston Area Medical Center including commissioning of Charleston Area Medical Center's $41 million Surgery Replacement center and many projects at General Division, Memorial Division, and Women & Children's Hospital. Other heath care experience includes Bluefield Regional Medical Center, Hopemont Hospital, Monongalia General Hospital, Montgomery General Hospital, United

Hospital Center, St. Mary's Hospital, Summersville Memorial Hospital, Thomas Memorial Hospital, Webster Memorial Hospital, Cabell Huntington Hospital, Welch Emergency Hospital, Surgicare Center, VA Hospital - Clarksburg, Mercy Medical Center, Wayne Memorial and Webster Memorial Hospital.

He also has experience in providing M/E/P design for the following higher education facilities including: Alderson Broadus College, Bluefield State College, Concord University, Fairmont State, Harvard University – LEEDS Silver certification project, Marshall University, Ohio University's Athens & Chillicothe campuses, Southern WV Community & Technical College, University of California-Davis, University of Charleston, Washington & Lee University, WV Wesleyan College, and West Virginia University. He was recognized nationally for his work with Ohio University in development of a performance contracting program that is anticipated to save $2.5 million annually in energy and operating costs.

He also has experience in providing M/E/P design for the following schools: Clay, Calhoun, Grant, Hardy, Harrison, Jackson, Kanawha, Logan, Marion, McDowell, Mercer, Mingo, Monroe, Ohio, Pocahontas, Putnam, Raleigh, Randolph, Ritchie, Summers, Taylor, Tucker, Upshur, Webster, and Wyoming County Schools. He also developed and designed a pilot geothermal heat pump HVAC with variable speed pumping system at Webster County High School which reduced electric bills by more than 40% while meeting IAQ requirements.

Prior to joining **ZDS**, Todd Zachwieja coordinated millions in comprehensive energy conservation programs resulting in annual energy saving millions per year and managed a profitable regional office for one of the countries largest energy service companies. He also developed computer programs for building energy analysis and monitoring and presented technical papers at regional and national conferences.

Professional Affiliations

Charter member Mountaineer chapter of American Society of Heating Refrigeration and Air conditioning Engineers (ASHRAE)
Served as ASHRAE's Energy and Technical Affairs Chairman for 6 years.
Recognized by the International Who's Who of Professionals.
Recognized nationally as West Virginia's Business Man of the Year
Recognized nationally in 2007 as a "Legend in Energy" by AEE
Charter life member of the Association of Energy Engineers
Professional Affiliate Member of the American Institute of Architecture
Member of the American Association of Hospital Engineers
Member of the National Society of Professional Engineers
Member of National Society of Plumbing Engineers
Member of the International Code Council
Contributing editor and on the Editorial Review Panel for "The Handbook of Building Management and IAQ", "Ventilation for a Quality Dining Experience", INvironment Professional, Power Prescriptions and other publications on Indoor Air Quality and MEP engineering systems.
Presented at regional and national conferences including the National System Commissioning Conference

TED T. ZACHWIEJA

Principal-in-Charge Construction Administration

Education

Bachelor of Science in Mechanical Engineering, West Virginia Institute of Technology, 1958.

Qualifications

Ted's responsibilities include over 45 years of experience in mechanical and electrical systems design and construction administration. His specialties include the design and development of mechanical and electrical systems, master planning and budgeting for mechanical and electrical systems, and management of complex design and construction projects. He is also a Codes and Standards Specialists.

He has been involved in West Virginia since 1958 in all aspects of mechanical and electrical design and construction, including machine design, structural design and design of heating, ventilating, air conditioning, plumbing, fire protection and electrical systems. His experience includes work for U. S. Steel, Union Carbide, Rhone-Poulenc, Bluefield Regional Medical Center, Charleston Area Medical Center, United Hospital Center, Kanawha County Schools, Marshall University, most buildings on the West Virginia Capitol Complex, West Virginia Institute of Technology, West Virginia University, Bank One and many others in the private sector.

Ted's Design regarding Chase Towers, Charleston, formerly Charleston National Bank, including conducting a comprehensive energy audit, design of a Building Automation Energy Management System, HVAC renovations of floors LM and LM1, design of flat plate heat exchanger system for the perimeter fan coil units and design of the boiler replacement.

Ted has been involved in the planning, design and construction administration of Concord University's Technology Center and Concord's campus medium voltage upgrades, Marshall University's Harris Hall renovations, Southern WV Community & Technical College's renovations, West Virginia University's White Hall and Armstrong Hall, WVU's Wise Library Sprinkler System, WVU's Chilled Water Loop Interconnect, Morgantown, WV; Charleston Area Medical Center (CAMC), Memorial Division Chiller Replacement; CAMC's General Division Chiller Replacement, Variable Pumping System and Chillers Interconnect, Charleston, WV; and many others. He has worked on new and renovation projects such as West Virginia University Stadium and Forestry Building, Morgantown, WV; Addition and Renovation of the Air Conditioning System for the West Virginia State Capitol Building, Charleston, WV; Conley Hall and Science Building HVAC Renovations and Additions, West Virginia Institute of Technology, Montgomery, WV; Indoor air quality (IAQ) and HVAC Renovations of Andrew Jackson Junior High School for Kanawha County School Systems; Fume Hood Design and HVAC Additions and Renovations for Union Carbide,

Charleston, WV; and Rhone Poulenc, Institute, WV; HVAC renovation for the Benedum Student Center at West Virginia Wesleyan College, Buchannon, WV; Greenbrier East and Greenbrier West Schools; Mingo County Schools; Raleigh County Schools including Shady Springs Middle School, Trap Hill Junior High School, Academy of Career and Technology Center, Marsh Fork Elementary, Park Middle School, Woodrow Wilson High School and others, Pocahontas County High School (Geothermal), Wyoming County Schools; Tucker County Schools; Webster County High School & Webster Springs Elementary School HVAC Renovations (Geothermal) and Exterior Renovations, and various other secondary schools throughout the years.

Ted was involved with the mechanical and electrical renovations for the State of West Virginia Library Commission Cultural Center as part of a total $4.5 million HVAC and Electrical Renovations, Charleston, WV. The indoor air quality, temperature and humidity each were not in accordance with good design practices for this type of structure. ZDS was commissioned to correct these deficiencies while conserving energy.

Ted was selected as one of three engineers to train and teach a course designed by the Department of Energy and American Society of Heating, Refrigeration and Air Conditioning Engineers for emergency building temperature restrictions.

Prior to forming ZDS, Ted was regional manager for a hospital design firm and responsible for designing, construction management and project management for over $200 million in hospital and health care facilities. The facilities were located over eastern United States. Some of his health care experience includes millions in renovation and new construction design for Charleston Area Medical Center's Special Care Facility. Other local heath care experience includes Bluefield Regional Medical Center, Hopemont Hospital, Monongalia General Hospital, Montgomery General Hospital, United Hospital Center, St. Mary's Hospital, Summersville Memorial Hospital, Thomas Memorial Hospital, Webster Memorial Hospital, Cabell Huntington Hospital, Welch Emergency Hospital, Surgicare Center, VA Hospital - Clarksburg, Mercy Medical Center, and Webster Memorial Hospital

Professional Affiliations

Construction Specifications Institute (Charter Member)
American Society of Mechanical Engineers
American Society of Heating, Refrigeration & Air Conditioning Engineers
WV Mountaineer Chapter ASHRAE Past President and Charter Member
Association of Energy Engineers
Association of Hospital Engineers
WV Society of Hospital Engineers
Professional Affiliate Member of AIA
WV Association of Physical Plant Administrators

MARK A. MOORE, P.E.

Project Manager: Electrical, Mechanical & Plumbing

Education

BS in Electrical Engineering from West Virginia University Institute of Technology, Montgomery, WV in 2001

Registration

Professional Engineer, West Virginia, No. 17286

Qualifications

Mark has more than 8 years of experience in electrical engineering, lighting, plumbing, technology, mechanical engineering, heating, ventilating, air conditioning, for educational, commercial and health care facilities. He researches and applies, International Building Codes, NFPA, Illuminating Engineers Society standards and National Electric Code in design. Mark has a strong background in microprocessor and microcomputer design. He is also responsible for Information Technology functions for ZDS and our customers.

Mark is also an information systems and technology specialist and provides networking solutions and Windows based programming system solutions.

Mark specializes in electrical power, security, fire alarm, lighting, plumbing, HVAC piping, and fire protection. Some of his educational and health care project experience includes: Charleston Area Medical Center, Bluefield High school renovations/Performing Art Center, Clay Elementary School HVAC Renovations, Concord University Technology Center, Elkins Middle School Renovations, H. J. Keiser Elem renovations, Hopemont State Hospital Fire Alarm renovations, James Monroe High School renovations, Ohio University Bennett Hall M/E Renovations, Park Middle School renovations, Ravenswood High Renovations, Ritchie Middle/High School renovations, Tucker County High/Career Center renovations, Webster Springs Elementary School geothermal heap pump system, Winfield High School HVAC/Electrical renovations, Pocahontas Co High School Renovations/science center additions, new McDowell County Southside K-8 school, Woodrow Wilson High School HVAC/Electrical renovations, United Hospital Center Wound Center and others.

His commercial experience includes; Cass Railroad Clubhouse renovations, DOT Rest Area and Welcome Center prototypes for the WV Department of Transportation, 4-H Camp Muffly Training/Dining facility, Hardy Co. Daycare facility, Jackson County Courthouse Annex renovations, Kanawha County Judicial Annex Renovations, Mason County Courthouse renovations, new Mercer County Courthouse Annex, multiple branch bank facilities, Camp Dawson Barracks security renovations, award winning Webster County IMC office facilities, Pendleton County Courthouse additions/renovations, new Webster Co. Multi-tenant Bldg., WV Capitol Complex Performance Contracting HVAC retrofits, WV Capitol Complex Master Planning for Security/Fire Alarm/Life Safety systems and others.

DAVID G. DIAL, P.E.

Senior MEP Engineer

Education Bachelor of Science Mechanical Engineering, WV University, 1978
Masters of Science Environmental Engineering, WV University, 1980

Registration Professional Engineer, West Virginia, No. 11692

Qualifications David has over twenty-eight years of experience in the design and commissioning of Mechanical and Electrical systems. He provides HVAC, electrical and plumbing design services for a variety of clients in West Virginia. His background also includes managing operating and maintenance repair and construction services for HVAC, plumbing, electric, and maintenance. David has managed grounds maintenance, security staff, information technology, IT NASA network, video surveillance and telephone systems. These areas provide inherent coordination expertise.

David has experience in Maintenance Engineering in plumbing, HVAC, clean room design, dust collector selections, steam and condensate flow measurement, transfer of steam production from in-house to private contractor, athletic field lighting design, farm pump water design, and even completed a successful energy grant application from the US Department of Energy.

Environmental Design experience includes PCB remediation, Air Pollution Control Commission annual reporting, removal of underground fuel storage tanks/pumps, installation & testing for radioactive material, conversion of a fleet of vehicles to operated duel fuel (gasoline and natural gas) including training, designing a filling station, custom built compressor station, cylinder operations area, filling post and monitoring of natural gas usage.

He has been involved in the design, document development, contract administration and recommissioning of the structural, mechanical, and electrical disciplines of several WVU projects including: Downtown Steam Tunnel Assessment, Coliseum Tunnel Redesign, Towers exercise room, Brooks Clean Room, lighting retrofits at Brooks Hall, exterior lighting for Mountainlair Parking Garage, cooling towers replacement at the Chemistry Annex, replacement of electric hot water boilers with natural gas pulse steam boilers, HVAC controls for Allen Hall, measure flow for sub metering/billing for campus steam/condensate systems, PCB removal from electrical equipment on campus, and power/cooling for a data Center at the WVU/NASA facility.

Other project experience includes design for Trinity High School's HVAC, plumbing and electric system, industrial dust collector system for the Percival Dust Collector, replacement of rigging of a 2500 seat Auditorium. As a production engineer, David optimized design of medical quality cryogenic freezers, incubator and shaker including scheduling the freight trucks, quality assurance of sheet metal shipments, writing repair manuals and set up insulation.

JAMES W. LOWRY, E. I. T.

HVAC, Plumbing & Fire Protection Designer

Education

BS in Mechanical Engineering from West Virginia University Institute of Technology, Montgomery, WV in 2004

Registration

EIT West Virginia # 8376
West Virginia State Board of Registration for Professional Engineers

Qualifications

James experience includes the design for mechanical engineering, heating, ventilating, air conditioning, plumbing, electrical, and lighting for educational and commercial facilities. He specializes in HVAC, Fire Protection and Plumbing design. He researches and applies International Building Codes, NFPA, ASHRAE standards, LEEDs and the AIA Guidelines for Design and Construction of Health Care Facilities in design.

His commercial experience includes Calvert County Indoor Aquatic Facility, Cass Railroad Clubhouse renovations, DOT Rest Area prototype, DOT Welcome Center prototype, 4-H Camp Muffly Training/Dining facility, Kanawha County Judicial Annex renovations, Jackson County Courthouse Annex renovations, Mason County Courthouse renovations, Pendleton County Courthouse additions/renovations, Pt. Pleasant River Museum Addition, Hardy Co. Daycare Center, multiple branch bank facilities, Webster Co. Multi-tenant build-out, WV Capitol Complex Performance Contracting HVAC retrofits & Master Planning for Security/Fire Alarm/Life Safety systems and others.

Some of his educational project experience includes: Concord University Technology Center, Anna Jarvis Elementary School Renovations, Elkins Middle School Renovations, Glade Elementary School HVAC Renovations, Harvard University Arboretum Research/Administration Building – LEEDS Silver Certification, James Monroe High School HVAC renovations, Man/Central Elementary Addition, Park Middle School HVAC renovations, Pleasant Hill Elementary, Ritchie County Middle/High School HVAC/Plumbing Renovations, Tucker County High/Career Center HVAC renovations, new McDowell County Southside K-8 School & Iaeger/Panther Elementary School, and Woodrow Wilson High School HVAC/Electrical renovations.

Professional Affiliations

American Society of Mechanical Engineers
Advisory Committee Mechanical Engineering Department WVU-Tech

JAMES E. WATTERS

Project Manager

Qualifications

Jim has over 35 years experience in design and implementation of HVAC, plumbing and electrical systems including 9 years in the construction industry. He has a comprehensive knowledge of construction documents, contracts, and development of cost estimates, budgets & schedules. Jim's strengths reside in his ability to manage projects and people in an organized and cost effective manner.

Jim has been involved with the design and production of mechanical and electrical drawings including HVAC, plumbing, fire protection, lighting, electrical power and specialized systems. He has worked with and managed engineers in projects for health care, educational and commercial buildings in the states of West Virginia, Ohio, Kentucky, Virginia, Georgia, New York, Arizona, Illinois and Massachusetts. He has extensive experience in energy savings' programs for HVAC, plumbing and electrical systems in hospitals, state & government office buildings, school systems, and manufacturing facilities as well as managing performance contracts for the state of Georgia totaling $10,000,000 in construction costs on various projects.

Some of Jim's HVAC, plumbing, fire protection and electrical project experience includes: Eleanor Maintenance Facility for the WV Department of Military Affairs and Public Safety in Eleanor WV; Kings Daughters Medical Center in Ashland KY (multiple projects exceeding $12,000,000 in construction costs); Charleston Area Medical Center in Charleston, WV; St. Mary's Medical Center in Huntington WV; Paul Blazer High School in Ashland KY; Marshall University Student Housing in Huntington, WV; Pleasant Hill Elementary plumbing renovations in Calhoun County WV; Boyd County Judicial Center in Boyd County, KY; Ritchie County Middle/High School; Elkins Middle School HVAC and electrical renovations; WV DOT Burnsville Rest Area and domestic water pumping station; Tucker County Board Office Boiler Retrofit; Kanawha County Commission Judicial Annex Renovations, new Iaeger/Panther Elementary School, and West Virginia Division of Culture and History Fire Alarm/Sprinkler upgrades.

Through the years Jim has researched and implemented into practice International Building Codes, National Electrical Codes (includes NFPA), Life Safety Codes, IES standards, AIA Guidelines for Design and Construction, and the evolving ADA standards and guidelines.

REFERENCES

One of the benefits of working in concert as a team as we have indicated above is that we can share references; however, we have also included references for individual team members for diversity.

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