



Architecture



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WV Purchasing Division



EXPRESSION OF INTEREST  
**West Virginia  
Children's Crisis Center**

September 29, 2022



Crystal Husted  
Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305

Re:  
A/E Services for Children's Crisis Center  
Solicitation No. CEOI 0511 BSS2300000001

Ms. Husted,

Many of our children are truly in crisis. We cannot imagine a more important project. It is with a heavy heart that a parent decides there is a place that is safer for their child than their own home. Many children along with their parents spend days in emergency departments waiting for beds to become available. Other parents are left with no other option than to take their child home and hope they are able to keep them safe until treatment options become available.

We are just now completing Construction Documents for a 108-bed child and adolescent psychiatric hospital on the Southwood Hospital campus in Upper St. Clair, Pennsylvania. We have spent the last several month's working with their team to make sure we are taking care of the needs of both the children and the staff. A staff that serves a population that is of significant challenge to care for.

Safety for both residents and staff is a priority in such a facility. This needs to be achieved without creating an us versus them mentality. Healing occurs best in a welcoming non-threatening environment where there is a perception of low security even if security is quite high. Natural light, views of the out of doors, access to the out of doors, nature inspired design, and places that can support positive interactions are all important characteristics of good behavioral healthcare design. These aspects need to be provided at the same time safety features are incorporated into the project, which include, line of sight, no hidden corners, anti-ligature building components, and nothing that can become weaponized as well as other considerations.

We have brought together a highly qualified team to deliver your project. You might have institutional memory that our team designed the 50-Bed Addition to William Sharpe Hospital for DHHR. We have assembled the same engineering consulting team for this project, which includes, ZDS (MEP Engineers), Allegheny Design Services (Structural Engineers), PCS (Cost Consulting), and Triad (Civil Engineering). This is a proven team that will exceed your expectations.

If you need any additional information or have any questions, please feel free to contact me. We look forward to the next step in the selection process

IKM INCORPORATED

A handwritten signature in blue ink that reads 'Roger Hartung'.

Roger Hartung, AIA  
Principal

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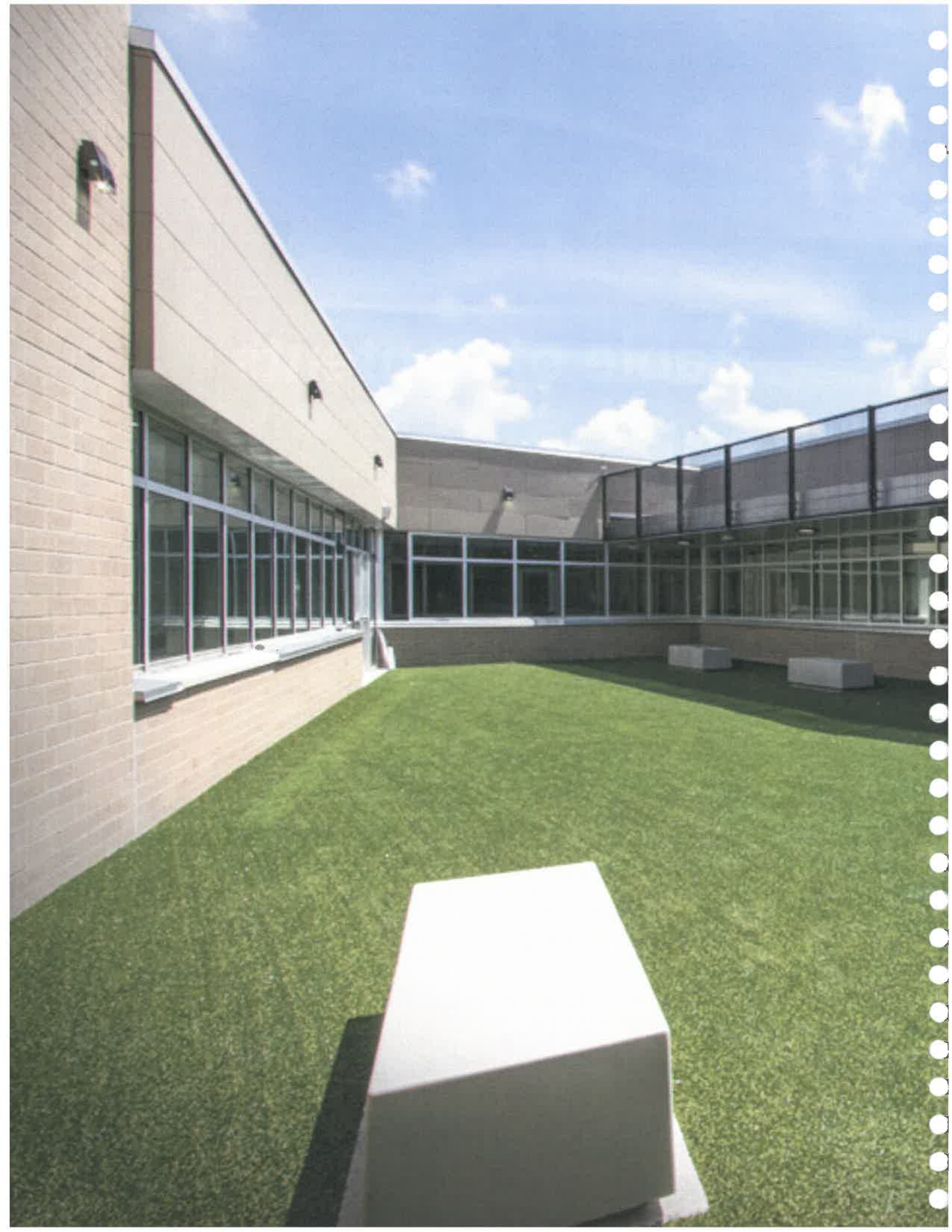
**02** | project team

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01

firm overview





# firm overview

## about IKM

IKM Architecture is an architecture, planning, and interior design firm that has been in continuous practice since 1911. IKM's practice specializes in completing complex projects in multiple market sectors. Completing renovation, adaptive reuse and new construction projects where the convergence of vision and creativity yield solutions of extraordinary value. Examples of this can be seen throughout our portfolio of work referenced in this submission. These clients represent outstanding results within specific project parameters.

## our mission

IKM's mission is to provide innovative and informed design solutions that create enduring value in a changing world through leadership in understanding, exploration, and decision making.

## IKM healthcare

Guided by our seven core values, IKM is committed to serving healthcare institutions by understanding the healthcare industry and providing architectural solutions that support the changing needs of our clients and a superior user experience. Using a Lean Approach and Evidence-Based Design, IKM creates highly efficient designed, high-quality facilities that transform healthcare and contribute to improved outcomes, increased patient satisfaction and a stronger return on investment.

As members of The Advisory Board Company, IKM accesses predictive modeling tools, analytical research, benchmarking best in class examples, and peer-driven insights to serve architecture, planning and interior design healthcare clients in a manner where decisions are supported by comprehensive evidence.

Since our inception, IKM has enjoyed a reputation for excellence in architectural design and outstanding service to our many clients. Rather than simply completing commissions, we concentrate on building lasting relationships through understanding all the

issues surrounding our clients business, placing ourselves in the position of patient, clinician, and administrator and focusing on a holistic approach to the healing process into which the physical environment is intrinsically woven.

## IKM behavioral health

Those of us at IKM who have had the privilege to design behavioral health facilities treat it as an opportunity to make the lives of those experiencing such challenges better and help bring to fruition the the resulting benefit to society. Our behavioral health work is some of the most demanding and complicated work that we have the benefit to work on. Such success comes from achieving a safe and a caring environment, while simultaneously meeting the requirements of the complex regulations of behavioral health facilities.

Visibility and line of sight issues need to be considered to protect our loved ones and staff. We must balance staff needing to be accessible to the patients, while also allowing them to have a place of protection. We do this by providing internal safe places for staff, nurse stations with visual access to social hubs, and outdoor areas internal to the building. Access control to every area needs to be reviewed in great detail. Intake needs to occur through a sally port or secure vestibule and have an adjacent intake exam room. Visitors also need to pass through a secure vestibule when entering into a designated visitors' area.

Patient care and dignity must also inform the design. At times these seem like competing issues, but they can be satisfied in the design of patient room doors, windows, toilets, showers, and finishes. These need to look and feel as non-institutional as possible, while ensuring that nothing can be torn from the building to become an instrument of harm. Furniture needs to be either affixed to the building or heavy enough that it cannot be lifted. Outdoor space should be provided to bring a stream of natural light and promote physical activity and patient interaction.

**1911**  
year founded

**65**  
number of  
employees

**pit + cle**  
two office locations

**75%**  
majority of  
our work is  
healthcare

**ACHA  
EDAC  
USGBC**

#### BEHAVIORAL HEALTH CLIENTS

- William R. Sharpe Hospital Behavioral Addition
- Southwood Psychiatric Hospital, 108-Bed Addition
- West Virginia University Medicine, Chestnut Ridge Center Addition
- WPH Forbes Regional Campus Inpatient Psychiatric Unit
- Southwood Psychiatric Hospital Residential Unit
- Southwood Psychiatric Hospital Residential Treatment & Inpatient Renovations
- VA Clarksburg Behavioral Health Unit Renovation
- Lakewood Psychiatric Hospital
- Western Psychiatric Institute and Clinic Renovation and Addition
- AHN Forbes 1st Floor ED Behavioral Health Suite
- UPMC Children's Hospital of Pittsburgh Outpatient Center
- WVU Medicine Women & Children's Hospital
- Penn State Health Children's Lancaster Pediatric Center Behavioral Health Suite

**curiosity, knowlege,  
& technology drive us  
to improve the human  
experience through design.**







# 02 project team



# proposed team

## ARCHITECTURAL & HEALTHCARE EXPERTS



**ROGER HARTUNG**  
Principal in Charge  
IKM



**JASON HINDE**  
Project Manager  
IKM



**MARISSA GETTY**  
Project Architect  
IKM



**WHITNEY LIVSEY**  
Interior Designer  
IKM

## ENGINEERING EXPERTS



**TODD ZACHWIEJA**  
Principal, MEP Engineering  
ZDS



**TED ZACHWIEJA III**  
MEP Engineer/Commissioning  
ZDS



**MARK ESTEP**  
MEP Engineer  
ZDS



**JIM WATTERS**  
MEP Designer/Construction  
Administration  
ZDS

## CONSULTANTS



**ZDS DESIGN/CONSULTING**  
MEP/FP Engineer



**ALLEGHENY DESIGN SERVICES**  
Structural Engineer



**TRIAD ENGINEERING**  
Civil Engineer



**&ESTIMATE**  
Cost Estimator



## consultant overviews

### ZDS Design/Consulting Services MEP/FP Engineer

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In 1983, Todd A. Zachwieja founded ZECO Consultants. In 1994, ZDS Limited Liability Company was incorporated in West Virginia using dba ZDS Design/Consulting Services, and was founded to provide design and consulting services. ZDS is a family-owned engineering firm offering comprehensive MEP design services, 3D laser scanning, forensic engineering and commissioning services. The ZDS team of professionals have been tackling energy and sustainability challenges for over 27 years.

ZDS Design/Consulting Services provides engineering for all types of facilities, including health care, governmental, commercial, industrial, schools and universities. Recognized nationally for excellence in engineering, ZDS provides design expertise in HVAC, electrical, plumbing, commissioning, IAQ and energy management. We employ highly-skilled and experienced engineers and powerful tools, such as 3D Laser Scanning and BIM Modeling. Our clients appreciate our ability to meet budgets and timelines while matching and exceeding expectations. Our credibility encourages industry leaders to consult us as expert witnesses in engineering.

ZDS is best known for a unique ability to blend an intimate knowledge of ASHRAE codes with solutions that deliver maximum performance and energy efficiency. For example, ZDS designed the first and largest commercial geothermal system in our region. Our projects have earned awards that distinguish our work, such as Energy Star, LEED and AEE recognition.

### Allegheny Design Services Structural Engineer

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Allegheny Design Services (ADS) is a consulting engineering firm specializing in structural and MEP building design and building analysis. Dedicated to serving West Virginia and the surrounding region, ADS recognizes the need for reliable and full service engineering support. ADS provides all phases necessary for the successful completion of a building project including schematic design studies, design development, construction documents and specifications, and construction administration.

ADS was established by David Simpson, PE, MBA, in 2002 as a result of a need in North Central West Virginia for reliable structural engineering services. ADS utilizes a combination of office technology and a motivated staff capable of delivering projects of all sizes and complexities. ADS works closely with architects and contractors to provide the engineering support that turn their vision into reality.

### Triad Engineering Civil Engineer

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Triad has a team of professional personnel which provides civil engineering design services in a variety of markets including healthcare facilities, land planning, site development of residential subdivisions, commercial development, education (K-secondary), water/wastewater, landfills, reservoirs, and many other facets of land development. We can combine many other in-house services, from surveying to construction inspection and testing, to provide a complete project from start to finish. Our goal is to design a cost-effective project that incorporates good engineering science, meets the local, state and federal regulations while exceeding our clients' expectations. Established in 1975, we pride ourselves in being an employee-owned firm with nearly 200 employees throughout West Virginia, Virginia, Maryland, Pennsylvania and Ohio.

Our professional staff can take a development project from property acquisition through construction. This ability offers our expertise to clients during all phases of a project which ultimately leads to greater project success. At Triad, we are small enough to be responsive to individual client needs, yet large enough to remain at the forefront of our industry. Our clients say that our people make the difference.

## project relationship between IKM and subconsultants

The IKM team is compiled of a strongly skilled architectural design and engineering team that will best benefit the West Virginia Children's Crisis Center project. Our internal team was carefully selected to ensure the strongest representation of our firms skill set and experience. The chemistry of a solid team is something that is created by respecting and engaging with different ideas and styles. It amplifies the individual's talents as well as the team's talent. Chemistry leads to communication that is virtually intuitive and a project that is successful.

As an example of how this team has worked together successfully, The WV Department of Health and Human Resources (WV DHHR) selected the team of IKM, ZDS, ADS and Triad to provide Master Planning, Design, Engineering, 3D Scanning and Commissioning services for comprehensive renovations and a major addition to William R. Sharpe, Jr. Hospital, a state-run psychiatric facility in Weston, WV. This project was completed much to the client's satisfaction.

Our combined strengths give WVCCC the depth and experience, including the local West Virginia presence of our engineering partners, and excellent design reputation to provide a successful project from engineering, planning, design, construction and commissioning. We have extensive and expansive design capabilities, a thorough understanding of the requirements of this project and will have the same point person throughout the duration of the project to take you through construction.

On the following pages you will find resumes for each key team member including their project role and background, as well as their experience with similar projects.







# roger hartung AIA, NCARB

principal in charge

## Education

Carnegie Mellon University  
Bachelor of Architecture

## Professional Registration

Architecture: PA, VA, WV, IL, NY, MS

National Council of Architectural  
Registration Boards (NCARB)

## Memberships

American Institute of Architects

Mr. Hartung has 35 years of architectural experience encompassing all areas of healthcare design, management, administration and production. A Principal with the firm, Mr. Hartung has significant experience with large capital projects as well as sophisticated healthcare projects which often involve complex environments and phased construction schedules. He has engaged in this type of work so extensively that he brings to his projects an ease of working in this environment. In addition, he has completed a variety of projects for corporate, private and public institutions.

## Relevant Experience

### **William R. Sharpe Hospital Behavioral Addition** *Weston, WV*

*Role: Principal in Charge*

50-bed addition to William Sharpe Hospital. William Sharpe is a State-run hospital that is exclusively for behavioral health patients. Safety for both the patients and the staff was paramount in the design.

### **VA Clarksburg Inpatient Mental Health Unit** *Clarksburg, WV*

*Role: Principal in Charge*

Renovation of an existing fourth floor administrative office suite into a new 10-bed acute inpatient mental health unit. The unit included both private and semi-private rooms. Each patient room was equipped with an integral bathroom and shower.

### **WVU Medicine, Chestnut Ridge Center Addition** *Morgantown, WV*

*Role: Principal in Charge*

Healthcare planning and design services to organize patient circulation by creating a new day-patient entrance to the facility; relocated the existing gymnasium and provided additional space for outpatient services.

### **Southwood Psychiatric Hospital, 108-Bed Child & Adolescent Addition** *Pittsburgh, PA*

*Role: Principal in Charge*

New three-story building addition on Southwood's existing campus accommodating 96 psychiatric inpatients within 6 patient units. There will be two units per floor serving 16 patients per unit. This project will serve

a growing need for child and adolescent behavioral health inpatient services.

### **AHN Forbes Hospital, 1st Floor ED Behavioral Health Suite Renovation** *Monroeville, PA*

*Role: Behavioral Health Consultant*

Renovation of 1,500 square feet of an existing portion of the Emergency Department at AHN Forbes to create a dedicated behavioral health suite. The overall environment is designed to reduce patient anxiety and stress, and provide a calming, healing space for patients in need.

### **Western Psychiatric Institute and Clinic Renovation and Addition** *Pittsburgh, PA*

*Role: Principal in Charge*

Provided design services for over 30 years including extensive renovation projects throughout the 17-story existing building, as well as major additions such as an adult emotional stress unit, child/adolescent psychiatric unit, geriatric psychiatric nursing unit and a chemical dependency nursing unit.

### **Penn State Health Children's Lancaster Pediatric Center Behavioral Health Suite** *Lancaster, PA*

*Role: Principal in Charge*

Former Toys "R" Us converted into a state-of-the-art pediatric outpatient facility. Serving children and adolescents, the 2,600 square foot Behavioral Health Suite includes three consultation rooms, a group therapy room, an observation room, and staff support space.



# jason hindes AIA

associate, project manager

## Education

Kent State University  
Master of Architecture

Kent State University  
Bachelor of Architecture

## Professional Registration

Architecture: PA  
LUMA Institute Certified  
Practitioner

## Memberships

American Institute of Architects

Mr. Hindes has over 15 years of experience practicing architecture and has worked on complex healthcare projects during all phases of design and construction on both new and renovated projects. He has extensive experience managing coordination efforts for large-scale, multi-phase projects. Mr. Hindes will be engaged throughout the process facilitating user group meetings and working closely with both internal and consultant teams to coordinate and document the project.

## Relevant Experience

### **William R. Sharpe Hospital Behavioral Addition** Weston, WV

*Role: Project Architect*

50-bed addition to William Sharpe Hospital. William Sharpe is a State-run hospital that is exclusively for behavioral health patients. Safety for both the patients and the staff was paramount in the design.

### **Southwood Psychiatric Hospital, 108-Bed Child & Adolescent Addition**

Pittsburgh, PA

*Role: Project Manager*

New three-story building addition on Southwood's existing campus accommodating 96 psychiatric inpatients within 6 patient units. There will be two units per floor serving 16 patients per unit. This project will serve a growing need for child and adolescent behavioral health inpatient services.

### **AHN Forbes Hospital, 1st Floor ED Behavioral Health Suite Renovation**

Monroeville, PA

*Role: Project Manager*

Renovation of 1,500 square feet of an existing portion of the Emergency Department at AHN Forbes to create a dedicated behavioral health suite. The overall environment is designed to reduce patient anxiety and stress, and provide a calming, healing space for patients in need.

### **WVU Medicine, Ruby Memorial Southeast Tower Expansion**

Morgantown, WV

*Role: Project Architect*

Planning and design of the new 10-story 356,000 sf patient bed tower including a 28-bed

intensive care units and a 32-bed acute care nursing unit.

### **UPMC Mercy, Vision and Rehabilitation Hospital**

Pittsburgh, PA

*Role: Project Architect*

Nine-story, 410,000 sf tower addition to UPMC Mercy that offers advanced vision care, and physical medicine and rehabilitation services. The facility will include approximately 91,000 square feet of lab and research space, as well as outpatient clinical labs and surgery suites.

### **WVU Medicine, Women & Children's Hospital**

Morgantown, WV

*Role: Project Architect*

This new 155-bed, eight-story pediatric bed tower, women's pavilion, and medical office building houses inpatient and outpatient services in a state-of-the-art environment. Each patient room unit has numerous family amenities to reduce stress levels during their child's stay. Units are set up in neighborhoods to bring care closer to the patient and reduce steps of caregivers.

### **WVUM Ruby Memorial Hospital Emergency Department Expansion**

Morgantown, WV

*Role: Project Architect*

Multiple phases of the \$280 million expansion at WVUM including the 32,900 square foot Emergency Department renovation and expansion. The Emergency Department and Trauma Center comprises 34 exam/treatment rooms in addition to a bariatric exam room, an isolation room, a decontamination room, eight trauma rooms, and three triage rooms.





# marissa getty AIA

project architect

Ms. Getty has 5 years of experience in the design industry working on healthcare, workplace, and parking garage design. As project architect, she is responsible for the design and documentation as well as coordination with consultants.

## Education

*Penn State University*  
Bachelor of Architecture

## Professional Registration

Architecture: PA

## Relevant Experience

### **Southwood Psychiatric Hospital, 108-Bed Child & Adolescent Addition**

*Pittsburgh, PA*

*Role: Project Architect*

New three-story building addition on Southwood's existing campus accommodating 96 psychiatric inpatients within 6 patient units. There will be two units per floor serving 16 patients per unit. This project will serve a growing need for child and adolescent behavioral health inpatient services.

### **UPMC Mercy, Vision and Rehabilitation Hospital**

*Pittsburgh, PA*

*Role: Project Designer*

Nine-story, 410,000 sf tower addition to UPMC Mercy that offers advanced vision care, and physical medicine and rehabilitation services. The facility will include approximately 91,000 square feet of lab and research space, as well as outpatient clinical labs and surgery suites.

### **WVU Medicine, Randolph Cancer Center**

*Morgantown, WV*

*Role: Project Designer*

44,000 square feet of renovations include waiting/reception spaces, a new USP 800 pharmacy, a 16,000 sf outpatient clinic, infusion spaces, physician offices, and multidisciplinary collaboration spaces. The center provides mammography, infusion therapy, radiation oncology and a full range of oncological specialties in a patient-centered environment.

### **UPMC Magee Women's Health at Lemieux Sports Complex**

*Pittsburgh, PA*

*Role: Project Designer*

13,000 square foot women's health clinic to provide access to world class care to

the northern communities. IKM worked with UPMC to integrate a feminine leaning function into a sport complex by using subtle design techniques and a soft finish palette. Modifications were made to the program in the late stages in design to separate the Women's Health and Breast Care from the imaging suite which enhanced patient privacy and improved flow. This project is a "Center of Excellence" that will help UPMC Magee serve more women in more communities.

### **UPMC Magee Women's Health at UPMC Passavant**

*McCandless, PA*

*Role: Project Designer*

UPMC is creating this Magee Women's Health clinic to bring world class care to Passavant Hospital. This project is ongoing. As the project architect, Ms. Getty is working with the users to develop a hospital-based exam and imaging suite which is located where the new Magee suite is intended to be constructed. This includes site visits to document the existing conditions and workshops to determine how to phase the project so the existing suite can continue to function during construction.

### **UPMC Passavant Emergency Department Compliance Renovation**

*McCandless, PA*

*Role: Project Architect*

This project is ongoing. As the project designer on this project, Ms. Getty is working with the users to add a program to bring the department up to code compliance. This includes extensive code review to determine what spaces are necessary and workshops to determine how to phase the project so the existing suite can continue to function during construction.



# whitney livsey LEED AP ID+C

interior designer

## Education

Kent State University  
Bachelor of Arts in Interior Design

## Professional Registration

LEED AP ID+C

Ms. Livsey has 5 years of interior design experience with IKM. Working on numerous institutional projects, she has a developed understanding of the design and construction process which allows her to design unique, rewarding spaces for her clients. As a LEED AP ID+C, Whitney places sustainability as a core focus in not only finish selection and furniture procurement, but throughout the project's entirety. As an interior designer, she ensures that the spaces she creates meet and exceed her clients' functional and aesthetic expectations.

## Relevant Experience

### **Southwood Psychiatric Hospital, 108-Bed Child & Adolescent Addition**

Pittsburgh, PA

*Role: Interior Designer*

New three-story building addition on Southwood's existing campus accommodating 96 psychiatric inpatients within 6 patient units. There will be two units per floor serving 16 patients per unit. This project will serve a growing need for child and adolescent behavioral health inpatient services.

### **WVU Medicine, Women & Children's Hospital**

Morgantown, WV

*Role: Interior Designer*

This new 155-bed, eight-story pediatric bed tower, women's pavilion, and medical office building houses inpatient and outpatient services in a state-of-the-art environment. Each patient room unit has numerous family amenities to reduce stress levels during their child's stay. Units are set up in neighborhoods to bring care closer to the patient and reduce steps of caregivers.

### **UPMC Passavant Center of Excellence**

McCandless, PA

*Role: Interior Designer*

UPMC Passavant wished to update their Center of Excellence for an improved patient experience. IKM refreshed the aesthetic and layout of the front door experience, added new signage and landscaping at the main entrances to the Hospital, created interconnecting stairs between the main registration area and the

cafeteria on the lower floor, and incorporated digital content into the design related to Hospital donors, history, and staff recognition.

### **Seneca Valley School District Aquatic Facility**

Seneca Valley, PA

*Role: Interior Designer*

The School District retained IKM to design a new 40,000 square foot facility that allows the swim team and diving team to practice and compete simultaneously, while also serving the greater student population and community. As the Interior Designer, Ms. Livsey worked with the design team and client to incorporate the client's branding and personality into the interior of the facility, as well as choosing materials that will withstand the harsh environment of a pool.

### **Carnegie Mellon University Forbes & Beeler Residence Hall**

Pittsburgh, PA

*Role: Interior Designer*

120,000 square foot residence hall located at the prominent intersection of Forbes Avenue and Beeler Street. The new construction includes a total of 266 beds in apartment-style units outfitted with kitchens. Student residences are configured into "pods" of four and eight and set back from the street for privacy, creating a quiet, comfortable environment for relaxation, wellness, and sleep. The residence hall also features a 6,000 square foot food market. This project is seeking LEED Gold certification.



# todd zachwieja PE, CEM, LEED AP

principal in charge, MEP engineering

Todd has over 40 years of experience involving the analysis, design, construction management and specifications for mechanical engineering, heating, ventilating, air conditioning, plumbing, fire protection, electrical and lighting, as well as indoor environmental quality analysis, building system commissioning and forensic engineering for healthcare, educational, governmental, military, commercial, and industrial clients. He is also recognized as a campus master planner for utility infrastructure providing master planning at many hospitals, Universities and the State of WV Capitol Complex. He has been invited as an industry leader to present technical papers and speak at professional conferences both regionally and nationally.

## Education

West Virginia University  
M.S., Engineering Management

West Virginia Institute of  
Technology  
B.S., Mechanical Engineering

## Professional Registration

Professional Engineer: FL, GA, KY,  
MD, NC, OH, PA, SC, VA, WV  
Fire Investigation Certification  
Certified Energy Manager  
LEED Accredited Professional

## Memberships

WV ASHRAE Chapter, Past  
President, current Governor  
Investigative Engineers  
Association (I-ENG-A) Tri-State  
Region, Founder  
West Virginia Society for  
Healthcare Engineering  
National Society of Professional  
Engineers  
Association of Energy Engineers,  
Charter Life Member

## Relevant Experience

**William R. Sharpe, Jr. Hospital  
Behavioral Addition & Renovation**  
Weston, WV

*Role: Principal*  
50-bed addition and renovation to the existing  
state-run hospital including new central  
heating/cooling plant, 1,800 KW emergency  
power station and comprehensive HVAC and  
electrical renovations.

**Bluefield Regional Medical Center**  
Bluefield, VA

*Role: Principal*  
Mechanical and electrical renovations,  
renovations to lighting systems

**Welch Community Hospital**  
Welch, WV

*Role: Principal*  
Mechanical and electrical design constructed  
in two phases, facility lighting upgrades, master  
plan for engineering upgrades

**Charleston Area Medical Center  
Memorial Division Surgery Center**  
Charleston, WV

*Role: Principal*  
Design and commissioning of a \$40 million  
surgery center addition to the CAMC Memorial  
Division campus.

**John Manchin, Sr. Health Care Center**  
Fairmont, WV

*Role: Principal*  
Master planning study, renovations to lighting  
systems at this state-run hospital.

**Hopemont State Hospital**  
Terra Alta, WV

*Role: Principal*  
Master planning, boiler system upgrades and  
ARRA funded lighting upgrades.

**Lakin State Hospital**  
West Columbia, WV  
*Role: MEP Engineer*

Master planning study and exterior envelope  
renovations and lighting renovations to this  
state-run hospital.

**VA Hospital Huntington**  
Huntington, WV

*Role: Principal*  
New mental health transitional living facility  
renovation and addition

**Mildred Mitchell-Bateman Psychiatric Hospital**  
Huntington, WV

*Role: Principal*  
Renovations included HVAC, fire safety, energy  
efficient lighting, plumbing, indoor air quality  
and electrical power engineering.





# ted zachwieja III PE, CEM

chief technical officer, MEP engineer/commissioning

## Education

Rochester Institute of Technology  
B.S., Mechanical Engineering

## Professional Registration

Professional Engineer: FL, WV  
Certified Energy Manager

## Awards & Recognitions

2012 Legend in Energy Award,  
Association of Energy Engineers  
ASHRAE 2015 Leadership  
University  
ASHRAE Blue Ribbon Award of  
Excellence  
Investigative Engineers  
Association (I-ENG-A) Tri-State  
Region, Co-Founder

Ted has over 16 years experience in the building construction design industry. His strategic thinking and development of technical resources has helped streamline design processes and improve the quality of work office wide. Ted is an innovative problem solver in engineering design, communication methods and management of BIM models between stakeholders during design. As a pioneer and believer in technological processes, Ted has championed integrated design practices that have become the fabric of ZDS's day to day operations. Ted's project experience includes design and commissioning for HVAC, plumbing, fire protection, electrical and lighting systems for health care, educational and commercial facilities.

## Relevant Experience

### William R. Sharpe, Jr. Hospital

#### Behavioral Addition & Renovation

Weston, WV

Role: MEP Engineer

50-bed addition and renovation to the existing state-run hospital including new central heating/cooling plant, 1,800 KW emergency power station and comprehensive HVAC and electrical renovations.

### Lakin State Hospital

West Columbia, WV

Role: MEP Engineer

Master planning study and exterior envelope renovations and lighting renovations to this state-run hospital under the operation of WV DHHR

### Welch Community Hospital

Welch, WV

Role: Principal

Mechanical and electrical design constructed in two phases, facility lighting upgrades, master plan for engineering upgrades

### Jackie Withrow Hospital

Beckley, WV

Role: MEP Engineer

Master planning study, new central steam plant, renovations to heating system and lighting renovations state-run hospital under the operation of WV DHHR

### Hopemont State Hospital

Terra Alta, WV

Role: MEP Engineer

Master planning study, renovations to heating and lighting systems at this state-run hospital under the operation of WV DHHR

### John Manchin, Sr. Health Care Center

Fairmont, WV

Role: MEP Engineer

Master planning study, renovations to lighting systems at this state-run hospital under the operation of WV DHHR

### Mildred Mitchell-Bateman Psychiatric Hospital

Huntington, WV

Role: MEP Engineer

Master planning study and lighting renovations at this state-run hospital under the operation of WV DHHR

### VA Hospital Clarksburg

Clarksburg, WV

Role: MEP Engineer

Medical Office Building Renovation

### VA Hospital Huntington

Huntington, WV

Role: MEP Engineer

New mental health transitional living facility renovation and addition



# mark estep PE

MEP engineer

Mark has over 18 years of experience and is responsible for the design of commercial, institutional, and industrial mechanical and electrical projects. He works with architects, civil and structural engineers to coordinate design and construction documents. He is responsible for project specifications and submittal review. He designs solutions that incorporate essential and functional needs, as well as aesthetic, life-safety, and constructibility considerations. Prior to joining ZDS, Mark was the President and Principal Engineer of another firm where he provided mechanical and electrical engineering design and analysis for commercial construction projects and was responsible for acquiring new projects.

## Education

*WV Institute of Technology*  
B.S., Mechanical Engineering

*Fairmont State College*  
B.S. Architectural Engineering  
Technology

*Fairmont State College*  
A.S. Mechanical Engineering  
Technology

## Professional Registration

Professional Engineer: WV, MD, VA,  
KY, OH

## Relevant Experience

### **Prestera Center for Mental Health Services**

*Danville, WV*  
*Role: MEP Engineer*  
Elevator Implementation.

### **WV Department of Health and Human**

#### **Resources**

*Various Locations throughout WV*  
*Role: MEP Engineer*  
Completed several WVDHHR projects  
throughout the State.

### **Valley Health Medical Center**

*Spring Mills, WV*  
*Role: MEP Engineer*  
New one story medical office building.

### **HIMG Regional Medical Center**

*Huntington, WV*  
*Role: MEP Engineer*  
Design build, 150,000 sf renovation of a former  
Wal-Mart building into a multi-tenant medical  
mall.

### **New River Health Association**

*Summersville, WV*  
*Role: MEP Engineer*  
New Medical Office Building.

### **St. Mary's Medical Center**

*Huntington, WV*  
*Role: MEP Engineer*  
510 car, four elevated-levels. Parking facility  
also has a pedestrian connection bridge to the  
main hospital facility.

### **King's Daughters Hospital Parking Garage**

*Ashland, KY*  
*Role: MEP Engineer*  
Five-level open parking structure for 530 cars.  
The garage was designed to accommodate three  
additional elevated levels and 348 spaces.

### **Summersville Regional Medical Center**

*Summersville, WV*  
*Role: Principal*  
Elevator Implementation.

### **Cancer Treatment Centers**

*Various Locations*  
*Role: MEP Engineer*  
Approximately 7,000 sf each, the treatment  
centers provided a CT scan and radiation  
treatment. The facilities also provided exam  
rooms, waiting areas, and administrative  
offices.



# jim watters

MEP designer, construction administration

Jim has over 40 years' experience in design and implementation of lighting, 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 and schedules. Jim's strengths reside in his ability to manage projects in an organized and cost-effective manner. Jim has extensive experience in energy saving programs for lighting, HVAC, plumbing and electrical systems in hospitals, state and government office buildings, schools, and manufacturing facilities, as well as managing performance contracts for a large facility's campus totaling \$10,000,000 in construction costs on various projects.

## Education

Dunbar High School  
General Education

## Memberships

National Fire Protection Association (NFPA), Member  
Health Care Sector of NFPA, Member  
Illuminating Engineering Society (IES), Member  
American Society of Plumbing Engineers (ASPE), Member  
Institute of Electrical Engineers (IEE), Member  
Energy Star Certified

## Relevant Experience

### William R. Sharpe, Jr. Hospital

#### Behavioral Addition & Renovation

Weston, WV

Role: Production Manager

50-bed addition and renovations to entire existing hospital, 1,800 KW emergency power station.

### Welch Community Hospital

Welch, WV

Role: Production Manager

Facility lighting upgrades.

### Cabell Huntington Hospital

Huntington, WV

Role: Production Manager

Numerous mechanical and electrical renovations.

### Charleston Area Medical Center

Charleston, WV

Role: Production Manager

Lab Renovations; Two-Four West Nursing Wing; Main Electrical Service Upgrade; ER Renovations; Two/Three East Patient Room Renovations; Four-North HVAC Renovations; Physical Therapy & Hydrotherapy; Pediatric ICU & Newborn ICU; Surgery Addition; Operating and Recovery Room.

### John Manchin, Sr. Health Care Center

Fairmont, WV

Role: Production Manager

Renovations to lighting systems.

### Hopemont State Hospital

Terra Alta, WV

Production Manager

Role: Principal

Heating and lighting renovations at this state-run hospital under the operation of WV DHHR.

### Jackie Withrow Hospital

Beckley, WV

Role: Production Manager

Lighting renovations state-run hospital under the operation of WV DHHR.

### Lakin State Hospital

West Columbia, WV

Role: Production Manager

Lighting renovations to this state-run hospital under the operation of WV DHHR.

### Mildred Mitchell-Bateman Psychiatric Hospital

Huntington, WV

Role: MEP Engineer

Lighting renovations at this state-run hospital under the operation of WV DHHR.

### VA Hospital Huntington

Huntington, WV

Role: Production Manager

Steam distribution system to serve six additional campus facilities, main hospital domestic water line replacement and CT scan renovations.





# david simpson PE, SECB

president, principal structural engineer

David is responsible for strategic management, marketing, quality control, personnel development, business development, project management and design at Allegheny Design Services. Experience includes over 40 years in structural design and project management for industrial, commercial, institutional, and nuclear/chemical facilities utilizing steel, concrete, masonry, and wood. Past accomplishments include design and construction administration of health care facilities, hotels, schools, shopping centers, aircraft hangars, numerous retail facilities, and numerous forensic engineering assignments. David received certification from the Structural Engineering Certification Board and National Council of Examiners for Engineering and Surveying.

## Education

West Virginia University  
Master of Business Administration

WV Institute of Technology  
B.S., Mechanical Engineering

## Professional Registration

Professional Engineer: WV, PA, MD,  
VA, FL, DC, NY, NJ, NC, SC, GA, OH

## Memberships

American Society of Civil  
Engineers (ASCE)  
Structural Engineering Institute,  
Charter Member  
American Concrete Institute,  
American Institute of Architects  
(AIA), West Virginia Chapter  
American Institute of Steel  
Construction, Inc.  
American Iron and Steel Institute,  
Member  
National Academy of Forensic  
Engineers

## Relevant Experience

### WVUM Rockefeller Neuroscience Institute

#### Innovation Center

Morgantown, WV

Role: Principal Engineer

60,000 sq. ft. Renovation & Addition. Structural design for support of the new MRI, new curved glass curtainwall in the atrium, replacement of an existing floor section with structural glass, the addition/modification of the floor system for removal of existing elevator and stairs, as well as the structural design for new exterior canopy system.

### WVU Medicine Residential Treatment Center at Mylan Park

Morgantown, WV

Role: Principal Engineer

New, 2-story, 24,800 SF drug rehab facility including admin offices, large group rooms, commercial kitchen, dining area, laundry area, and 30-bed dormitory. Also, a detached detox building with an office, group room, residential kitchen, dining area, laundry room, and 12-bed dormitory.

### Davis Memorial Hospital Addition

Davis, WV

Role: Principal Engineer

81,000 sq. ft. addition, Physician's Offices, Outpatient Services Center, Morgue, New Entrance

### Delaware Valley Veterans Home

Philadelphia, PA

Role: Principal Engineer

New State-of-the-Art 170 Bed Care Facility for Personal and Alzheimer's Care includes Interior Skylit 'Main Street' Corridor.

### Jerry Dove Medical Office Building

Bridgeport, WV

Role: Principal Engineer

Structural Mat Foundation System and Steel Framing for Medical Office Building

### WVUM Ruby Memorial Hospital

#### L1 MRI Suite Slab Design

Role: Principal Engineer

### William R. Sharpe Hospital Addition

Weston, WV

Role: Principal Engineer

50-bed addition to William Sharpe Hospital. William Sharpe is a State-run hospital that is exclusively for behavioral health patients.

### Monongalia General Hospital

#### Ambulatory Care Center

Morgantown, WV

Role: Principal Engineer

Renovation & Expansion to Existing facility for new Ambulatory Care Center.





# jason robinson PE

vice president, senior structural engineer

Jason works as Principal and Structural Project Manager at Allegheny Design Services. His responsibilities include structural engineering design, project management, construction documents, quality control and field engineering. Jason graduated from West Virginia University with a Bachelor's degree in Civil Engineering. He has been a part of Allegheny Design Services as a Senior Structural Engineer since June 2007. He has extensive engineering experience as both a field engineer and a structural engineer. He has also acquired skills in the Autodesk Revit 3D modeling system for the production of construction documents.

## Education

West Virginia University  
B.S., Civil Engineering

## Professional Registration

Professional Engineer: WV, PA, MD,  
KY, NE, MS, AL

## Memberships

American Institute of Steel  
Construction, Member  
American Society of Civil  
Engineers, Associate Member

## Relevant Experience

### Genesis Youth Crisis Center

Clarksburg, WV

Role: Structural Engineer

Emergency shelter for kids who need a temporary place to stay until permanent placement arrangements are made. Created through a cooperative effort between the City of Clarksburg and the WV DHHR.

### William R. Sharpe Hospital Addition

Weston, WV

Role: Structural Engineer

50-bed addition to William Sharpe Hospital. William Sharpe is a State-run hospital that is exclusively for behavioral health patients.

### WVUM Rockefeller Neuroscience Institute Innovation Center

Morgantown, WV

Role: Structural Engineer

60,000 sq. ft. Renovation & Addition. Structural design for support of the new MRI, new curved glass curtainwall in the atrium, replacement of an existing floor section with structural glass, the addition/modification of the floor system for removal of existing elevator and stairs, as well as the structural design for new exterior canopy system.

### WVU Medicine Blood Irradiator Elevated Floor Check

Morgantown, WV

Role: Structural Engineer

Outpatient laboratory with the most advanced diagnostic equipment Elevated structural floor stabilized over a concrete slab.

### WVU Medicine Concrete Vault Structural Modification

Morgantown, WV

Role: Structural Engineer

Structural shielding design for concrete vault designed to house linear accelerators for cancer treatments.

### Delaware Valley Veterans Home

Philadelphia, PA

Role: Structural Engineer

81,000 sq. ft. addition, Physician's Offices, Outpatient Services Center, Morgue, New Entrance

### Monongalia General Hospital Medical Office Building

Fairmont, WV

Role: Structural Engineer

Project consisted of renovating 8,000 SF of an existing, 15,000 SF bank building into a medical office building. The facility will include support offices, waiting rooms, future x-ray, exam rooms, and restrooms.





# I. Lee McCoy, Jr. PE

regional manager, civil engineering manager

## Education

West Virginia Institute of  
Technology  
BS, Civil Engineering

## Professional Registration

Professional Engineer: WV, KY, OH

## Memberships

American Society of Civil  
Engineers (ASCE)  
Society of American Military  
Engineers (SAME)  
Association of State Flood Plain  
Managers

Larry has over 20 years of leadership, design construction and project management experience. He is responsible for the oversight of the technical and management aspects of civil design projects. He has designed and managed projects in numerous disciplines including civil, structural and transportation engineering, site development, planning and surveying. These projects have included streets/highways, bridges, site preparation, airports, parking lots, buildings, retaining walls/foundations, and utilities. Duties include field surveying, drawings and specification preparation, design, drafting, construction inspection, quality control, shop drawing review, project management, contract administration and report preparation.

## Relevant Experience

### William Sharpe Hospital Expansion

Weston, WV

Role: Lead Civil Designer

Prepared construction documents for site infrastructure for a 50-bed expansion to the existing state-run William Sharpe Hospital. This project includes grading, drainage, detention, roadway expansion, parking lot design, utilities as well as many other aspects.

### Charleston Area Medical Center

#### Gastroenterology Addition

Charleston, WV

Role: Lead Engineer

Oversaw this project that consisted of providing surveying, geotechnical investigation, civil site design and construction services for a 4,500-square foot expansion of the existing Charleston Area Medical Center Gastroenterology office building.

### Taylor Health Care Center

Grafton, WV

Role: Lead Engineer

Provided geotechnical investigation, civil site design and construction services for a 20,600-square foot expansion of the Taylor Health Care Center in Grafton. The project team to provided construction documents including existing conditions, demolition plan, proposed site plan, layout plan, grading and drainage plan, erosion and sediment control plan and associated details.

### Louisa Medical Building

Louisa, KY

Role: Lead Engineer

Provided a Phase I environmental site assessment, surveying, geotechnical investigation, civil site design and construction services for a 10,000-square foot expansion of the Louisa Medical Building in Louisa, KY.

### King's Daughters Medical Center

Various Locations in Kentucky and Ohio

Role: Lead Civil Designer

Prepared construction documents for the construction of numerous medical office buildings throughout Ohio and Kentucky. These projects include grading, drainage, detention, roadway expansion, parking lot design, utilities as well as many other aspects.

### Child Development Center

#### Sewer Line Extension

Hanging Rock, OH

Role: Lead Engineer

Responsible for the initial study to determine the most feasible and cost-effective method for upgrading the existing sanitary sewer collection system. Based on the results of the study, the option of extending the line to the City of Ironton's Wastewater Treatment Plant was chosen. Included several thousand feet of 3-inch diameter force main line, booster stations, and road and creek crossings.







# Joseph Young RLA

senior landscape architect

## Education

West Virginia University  
BS, Landscape Architecture

## Professional Registration

Professional Landscape Architect:  
WV, KY, OH

## Memberships

West Virginia Recreation & Park  
Association (WVRPA)  
American Society of Landscape  
Architects (ASLA)

Mr. Young provides clients with a variety of landscape architectural services including site inventory and analysis, program production, conceptual design, design development, high quality graphic presentations, project management, construction document preparation and construction administration. In this capacity, Mr. Young brings years of experience on a diverse range of projects covering all aspects of landscape architectural design and planning in both the public and private sector.

## Relevant Experience

### Charleston Area Medical Center

#### Gastroenterology Addition

Charleston, WV

Role: *Landscape Architect*

This project consisted of the expansion of the CAMC gastroenterology facility in Charleston, West Virginia by adding a 4500-square foot addition to the existing building and expanding the parking lot. The project included surveying, geotechnical, and civil design and construction services. As the Senior Landscape Architect, Mr. Young was on the team that provided boundary retracement survey, a topographic location survey, geotechnical investigation, and civil design, permitting assistance, construction management and administration, and construction quality control testing services. The civil design services included site layout and preliminary plan, grading and drainage plan, and erosion and sediment control plan.

### Fast Pace Urgent Care

Various Locations, KY

Role: *Landscape Architect*

Triad Engineering teamed with Hutton Company on the design and construction of three 3,726 square foot Fast Pace Urgent Care medical facilities in Brandenburg, Corbin, and Paris, Kentucky. The Paris site also included a 2,760 square foot retail facility. Mr. Young was on the team that provided the ALTA/NSPS land title survey, geotechnical investigation, and civil design, and permitting assistance services. The civil design services included demolition plans, site layout and preliminary plans, grading and drainage plans, stormwater management plans, wet utility plans (potable water and sanitary

sewer), erosion and sediment control plans, landscape plans, site construction details, and permitting assistance.

### King's Daughters Medical Center Hospitality House

Ashland, KY

Role: *Landscape Architect*

The Hospitality House at King's Daughters Medical Center provides families of need a warm, inviting place to stay. Triad was very proud to provide the Tanner Stone and Company, the architect, with full civil engineering and landscape architectural services for this very important project. As Project Manager and Landscape Architect, Mr. Young led the services provided by Triad including construction documents and details including site grading and drainage features, vehicular drop-off area, creation of a hard surface outdoor gathering space for the families, and extensive landscaping to compliment the architecture.

### Taylor Health Care Center

Grafton, WV

Role: *Landscape Architect*

Triad provided civil site design and construction services for the 20,600 square-foot facility expansion, as well as the addition of 26 parking spaces to the parking lot of the Taylor Health Care Center in Grafton, West Virginia. Mr. Young worked with the team to provide geotechnical investigation, civil site layout and preliminary plans, grading and drainage plans, erosion and sediment control plans, and permitting assistance.





# william ernstes PLA

land development services manager

## Education

West Virginia University  
BS, Landscape Architecture

## Professional Registration

Professional Landscape Architect:  
WV, PA, VA, MD

Mr. Ernestes manages Triad's Northwestern Regional Civil Engineering & Land Development department. He provides professional services in the areas of site inventory and analysis, planning, landscape architecture, and permitting. His responsibilities include project management, client project coordination, design production, quality control and quality assurance. Mr. Ernestes' experience includes land and infrastructure development, permitting, utilities, stormwater management and storm drain design / best management practices, and erosion and sediment controls.

## Relevant Experience

### Autism Clinic

Morgantown, WV

Role: Project Designer

As Project Designer, Mr. Ernestes was responsible for the site design for this .28-acre clinic. Mr. Ernestes prepared a scaled geometric layout depicting the building location, parking limits, travelways, entrance/egress driveway and sidewalks, building entrances, building corners, and site elevations. Included in the plan were stormwater management, erosion and sediment control, and landscaping. A Site Plan package was provided which included construction details.

### The Crossings

Morgantown, WV

Role: Project Designer

As Project Designer, Mr. Ernestes was responsible for the site civil design transition of a 15.1-acre hillside farm into a 180,000 square foot, four-story senior living facility. Included in the project was site selection to best locate the structure away from abandoned strip mines and wetlands, and to create stormwater management best practice features which included moving 100,000 cubic yards of earth.

### Heartland of Clarksburg

Clarksburg, WV

Role: Project Manager

Project Manager responsible for preparation of Construction Plans for a 2,600 square foot building addition to the existing Heartland of Clarksburg skilled nursing facility and included related parking, drainage and site improvements. Scope included preparation of site layout, grading, utility, storm drainage and erosion and sediment control plans. Obtained required state and local permits for construction and currently providing ongoing coordination with the construction contractor and client for all surveying and construction inspection tasks.

### Beverly Elementary School

Beverly, WV

Role: Project Designer

As Project Designer, Mr. Ernestes worked with the Architect to add a 7,300 square foot addition this elementary school. A scaled geometric layout inclusive of location, ingress/egress, building points, sidewalks, and grading plans were designed. In addition, an erosion and sediment control plan in conformance with WVDEP was developed. Construction documents were prepared.





# benjamin campbell PE

senior engineer

Mr. Campbell has over 14 years of engineering experience. He is responsible to Triad's Geotechnical Engineering Services. Mr. Campbell performs geotechnical explorations, assessments, and evaluation of exploration results, foundation recommendations and reporting, laboratory testing, field inspections, and special inspections.

## Education

Marshall University  
MS, Engineering

Fairmont State University  
BS, Civil Engineering Technology

Potomac State College  
AA, Civil Engineering

## Professional Registration

Professional Engineer: WV, PA

## Memberships

ASHE, ASCE, NSPE

## Relevant Experience

### Pressley Ridge Office

Harrison County, WV

Role: Project Engineer

As Project Engineer, Mr. Campbell provided a subsurface exploration for the construction of a 2,300 square foot office building with a finished floor elevation of 1,046.99 feet and basement elevation of 1,037.21. Once the evaluation was completed a detailed report with foundation recommendations was provided.

### Ridgedale Elementary School

Morgantown, WV

Role: Project Engineer

As Project Engineer, Mr. Campbell provided subsurface exploration and laboratory testing for this school addition. The scope of work included soil borings and sampling within the new footprint. Laboratory testing was completed and a detailed geotechnical report was provided for this new construction of 17,000-18,000 square foot addition.

### Monroe Family Health Center

Woodsfield, OH

Role: Project Engineer

As Project Engineer, Mr. Campbell provided a geotechnical exploration, inclusive of drilling, field and laboratory testing, for this proposed 12,000 square foot building situated on a 10.53 acre site. Foundation and paving recommendations were made.

### WVU Dairy Barn at Animal Science Farm

Morgantown, WV

Role: Project Engineer

As Project Engineer, Mr. Campbell provided a geotechnical exploration for this 13,700 square foot single-story dairy barn. The foundation system included spread footings. Exploration included drilling of borings, laboratory testing, and foundation recommendations.

### The Club at Nevillewood

Nevillewood, PA

Role: Project Engineer

As Project Engineer, Mr. Campbell provided geotechnical exploration for two facilities at the site: a golf cart storage facility and a wellness center. Inclusive in the services was drilling, laboratory testing, and a detailed geotechnical report providing results of the investigation along with recommendations for site preparation and foundation construction.

### Portal Bathhouse Office Building

Barbour County, WV

Role: Project Engineer

As Project Engineer, Mr. Campbell provided a geotechnical exploration within the planned building footprint and in the proposed expanded parking area. Laboratory soils testing was provided and a detailed geotechnical report was developed discussing the site geology, subsurface conditions, foundation recommendations, recommended modulus of subgrade reaction for the design of concrete slabs on grade, and general pavement recommendations.

### Fairmont State Station

Fairmont, WV

Role: Project Engineer

As project engineer, Mr. Campbell provided a geotechnical explorations and site recommendations for a conceptual fire station project. Mr. Campbell was responsible for overseeing test borings and laboratory soil testing on different sites for the purpose of assisting with site selection and, once determined, for construction and design purposes.







# kevin brockett PS, PLS, RLS, EI

survey manager

## Education

*Glennville State College*  
AS, Land Surveying

*West Virginia University*  
BS, Mining Engineering

*West Virginia University*  
BA, History

## Professional Registration

Professional Land Surveyor: WV,  
TN, KY, PA, MD  
FAA Remote Pilot

As the manager of Triad Engineering's surveying department in Morgantown, West Virginia, Mr. Brockett leads a team of experienced geospatial professionals while leveraging his technical skills to support and achieve the continuous goals of safety, efficiency, accuracy, and client satisfaction. His diverse range of past project work has encompassed many aspects of surveying for both private and public clients. In addition to his other responsibilities, Mr. Brockett has engaged in hydrologic analysis, easement negotiations with project stakeholders, and management of traffic monitoring data collection. During his 6+ years of experience as a land surveyor, Mr. Brockett has demonstrated proficiency with boundary surveys for private homeowners, commercial ALTA surveys, industrial as-built surveys, topographic surveys, right-of-way alignment surveys, and construction layout surveys.

## Relevant Experience

### **Astronomical Alignment Survey**

*Green Bank, WV*

*Role: Land Surveyor*

Mr. Brockett combined GNSS data collection with field observations of the star Polaris to establish the correct astronomical alignment of a new scientific telescope in Green Bank, West Virginia. He collected and analyzed the observational data, performed all necessary computations, determined the proper orientation of the proposed structure, and set physical markers on site to serve as permanent references for the construction effort. He coordinated directly with facility staff to accomplish the necessary field work within the limitations of unusual restrictions that were specific to the site.

### **ALTA/NSPS Land Title Survey for Private Client**

*Wood County, WV*

*Role: Land Surveyor*

Mr. Brockett was the project lead for a survey of an existing tract of commercial real estate. He directed research efforts and field work, reviewed and analyzed field data, reestablished tract boundaries on the basis of field evidence and record information, plotted record descriptions of title commitment exceptions, and performed quality assurance checks on final survey documents in compliance with project specifications.

### **Boundary Survey for Private Client**

*Monongalia County, WV*

*Role: Land Surveyor*

Mr. Brockett was the project lead for a boundary survey of a parcel of undeveloped land whose boundaries were ambiguous due to the absence of an original survey in the chain of title. He prepared the project cost estimate, researched available public records, acquired additional relevant information from private sources, interviewed adjoining property owners, directed field work, analyzed field data, resolved existing boundary ambiguities on the basis of field and documentary evidence, and provided quality assurance of final survey documents in compliance with regulatory requirements.

### **Easement Survey for Friends of Deckers Creek**

*Preston County, WV*

*Role: Land Surveyor*

Mr. Brockett was the project lead for a survey to create an easement in relation to a planned acid mine drainage treatment facility. His project duties included client communications, project cost estimation, planning and coordination, direction of field work, field data review and analysis, transformation of coordinate data related to project design features, delineation of proposed easement boundaries, drafting of survey documents, and quality assurance of final work products in compliance with regulatory requirements.





# allan kennedy

QC, construction services manager

Mr. Kennedy started his career as an Engineering Technician with Triad Engineering over 26 years ago. He has provided QA / QC services including field tests for soils, asphalt and aggregate compaction, concrete placements, mortar and grout testing, and structural bolt testing for numerous private industry and government / public sector clients including coal / energy companies and the WV Department of Highways. Mr. Kennedy has experience in conducting soil foundation and rebar and subgrade inspections. He is knowledgeable in most laboratory testing procedures for soil, concrete, asphalt and aggregates. He has been involved with a variety of construction projects throughout his career, which enables him to read plans and specifications, complete clear and thorough field reports, and organize and manage on-site projects as needed to complete inspection tasks.

## Certifications

### WVDOH

- Soil Compaction Inspector
- Portland Cement Concrete Inspector

### MSHA

- Impoundments
- 24-Hour Surface Mine Operations

### APNGA

- HAZMAT Portable Nuclear Gauges

### ACI

- Concrete Strength Testing Level 1
- Concrete Lab Testing Level 1
- Aggregate Testing Level 1
- Field Concrete Testing Level 1

### OSHA

- 10-Hour Construction

## Relevant Experience

### The Crossings at Morgantown

*Morgantown, WV*

*Role: QC Manager*

Mr. Kennedy was responsible for overseeing field and laboratory testing and construction observation for this 180,000 square foot senior living facility. Site work included stipping and proof-rolling, compaction fill and backfill, spread footings, pavement thickness, and in-place density testing. Laboratory testing was ASTM approved.

### MEDVAL Medical Office

*Morgantown, WV*

*Role: QC Manager*

Mr. Kennedy provided oversight for construction materials testing and inspection services which included foundation inspection, concrete testing, and structural steel inspection for this 59,000 square foot office building.

### Beverly & George Ward Elementary School Additions

*Randolph County, WV*

*Role: QC Manager*

Mr. Kennedy was responsible for overseeing field and laboratory testing in support of geotechnical subsurface drilling investigations for these school additions. Quality control testing was completed for site work, foundations, concrete, and masonry.

### Agriculture Science Farm

*Reedsville, WV*

*Role: QC Manager*

Responsible to West Virginia University, Mr. Kennedy provided oversight for construction materials testing for the site work of two new buildings constructed on the farm. Specific services included field and laboratory testing of fill soils.

### Mylan Puskar Stadium Renovations

*Morgantown, WV*

*Role: QC Manager*

Responsible to West Virginia University, Mr. Kennedy provided oversight for field and laboratory testing for this stadium renovation. Specific services included field and laboratory testing of fill and concrete.

### West Virginia University, Olympic Sports Performance Center

*Morgantown, WV*

*Role: QC Manager*

Mr. Kennedy was responsible for the administration and oversight of Construction Materials Testing and Laboratory Testing Services for this \$10 million, 21,000 SF facility that includes new weight, training and rehabilitation rooms, cardio and plyometric areas, hydrotherapy and cryotherapy sections, and locker rooms. Services included construction observation for site work (subgrade, compacted fill and backfill), cast-in-place concrete, structural steel, and concrete compressive strength testing services.





# brandon lawlor LEED AP

president, cost estimator

Brandon joined PCScompanies in 2004 as a Project Estimator/Engineer and today is President of &estimate. He is our Chief Estimator with over 18 years of vast experience with cost estimating and over project development. He has advanced training and strong knowledge base in Architectural, Structural and Civil Engineering. Brandon is the primary contact for all our clients; his responsibilities include all estimating oversight. With this oversight, he is responsible for task allocation amongst our staff for all client needs. In addition, he provides third party legal opinions as well as project or cost estimating audits. Brandon has estimated over \$40 Billion of construction projects.

## Education

*Bowling Green State University*  
BS, Business Administration,  
Specialization Finance

## Professional Registration

LEED Accredited Professional

## Memberships

American Society of Professional  
Estimators (ASPE)  
American Society of Healthcare  
Engineers (ASHE)  
Construction Estimators  
Roundtable (CERT)

## Relevant Experience

### West Virginia University

*Morgantown, WV*

*Role: Cost Estimator*

Basketball Practice Facility, Heart & Vascular  
Institute Renovations, Healthcare Outpatient  
Surgery Center, Colson Hall & Maclin Hall,  
Nursery School, Physical Education Building,  
Downtown Housing Project

### West Virginia State Office Building

*Clarksburg, WV*

*Role: Cost Estimator*

### West Virginia University Medicine

*Morgantown, WV*

*Role: Cost Estimator*

Clinical Lab Building, Heart Lab Foundation  
Pricing, New Ambulatory Surgery Center

### Harrison-Taylor 911 Center

*Clarksburg, WV*

*Role: Cost Estimator*

### Martinsburg VA Medical Center

*Martinsburg, WV*

*Role: Cost Estimator*

### Tyler County Courthouse & Jailhouse

*Tyler County, WV*

*Role: Cost Estimator*

### Ohio Valley Medical Center

*Wheeling, WV*

*Role: Cost Estimator*

Adolescent Psychiatric Unit

### Ohio Department of Mental Health & Addiction Services

*Various locations, OH*

*Role: Cost Estimator*

Emergency Operations Center Reorganization,  
Pickaway Correctional Institute, Segregation  
Unit & Medical Housing Facility, Allen  
Correctional Institute Roofing Project, Lebanon  
Correctional Institution Water Treatment  
Improvements, State of Ohio Computer Center

### Ohio Reformatory for Women

*Marysville, OH*

*Role: Cost Estimator*

New Mental Health Center

### VAMC Wade Park

*Cleveland, OH*

*Role: Cost Estimator*

Cares Tower & Energy Center Upgrades,  
Prosthetics Lab Warehouse & VSO, ACS  
Specialty Care, Mental Health Clinic,  
Rehabilitation Medicine, Canteen Kitchen,  
Pharmacy Expansion, Bio Med / Staff Lockers

### Summa Health Systems

*Akron, OH*

*Role: Cost Estimator*

Akron New West Best Tower, Behavioral Health  
Building

### University of Toledo Medical Center

*Toledo, OH*

*Role: Cost Estimator*

Kobacker Behavioral Health Center





A photograph of a hospital hallway with a blue semi-transparent overlay. The hallway features a wooden door, a framed picture on the wall, and a handrail. The floor is a mix of wood and grey tile.

**03**

prior experience







BEHAVIORAL HEALTH FACILITY

# southwood psychiatric hospital 108-bed child & adolescent addition

**LOCATION**

Pittsburgh, PA

**SIZE**

65,000 sf

**COST**

TBD

**PROJECT REFERENCE**

Kim Lira  
(412) 257-2290  
kim.lira@  
southwoodhospital.com

Southwood Psychiatric Hospital treats children and adolescents that struggle with emotional, behavioral, and cognitive concerns. This project will serve a growing need for child and adolescent behavioral health inpatient services. It will help these individuals ages 4-18 who are experiencing severe symptoms of a mental health disorder achieve emotional stabilization and a higher level of functioning, allowing them to step down to a lower level of care and start to transition back to their daily lives. This project adds a new three-story building on its existing campus, accommodating 108 psychiatric inpatients within six patient units. There will be two units per floor serving 16 patients per unit.

IKM designed the original 42,000 square foot hospital and has designed multiple renovations within the facility since, so when Southwood Hospital decided to hire an architect to design their new addition, they chose IKM due to past successes.

Some patients are there for years, and others are there for a few days. This facility does an excellent job of providing both a safe and a caring environment. This, of course, is due in no small part to the staff, but is also due to the design of building. Nursing units are small with each unit divided into two separate areas effectively creating 8 bed nursing units. There is a gym, outdoor spaces, a common dining area, and classrooms. The facility also includes social noisy spaces, social quiet spaces, seclusion rooms, consultation rooms, offices, conference rooms, exam rooms, a new administration suite, and various support functions. As part of these renovations, a new and enlarged kitchen and dining area was created within the existing building in order to accommodate the increased bed count.







BEHAVIORAL HEALTH FACILITY

# william r. sharpe hospital behavioral addition

**LOCATION**

Weston, WV

**SIZE**

31,000 sf

**COST**

\$11 Million

William R. Sharpe, Jr. Hospital is a 150 bed acute care psychiatric facility that offers a wide range of services to patients either committed to the hospital through civil commitment or, in the case of forensic patients, ordered through the judicial system. Sharpe Hospital is considered a premier center for mental health education as well as research in the state of West Virginia.

IKM was retained to design a 31,000 square foot, 50 bed addition to William Sharpe Hospital. Sharpe is a state-run hospital that is exclusively for behavioral health patients. Included in the patient population are: those not guilty by reason of mental illness and, individuals who are to be restored to competency in order to stand trial. A separate area was created for patients with extreme behavioral problems. Safety for both the patients and the staff was paramount in the design.

The Nurse Station offers a safe space for staff with views of all indoor and outdoor social hubs. Some outdoor areas are internal to the building so that elopement is less of a risk. Visitors to the addition pass through a secure vestibule into a designated visitors' area.

Also included in the program is a separate room for meals with a servery and pantry, social noisy spaces, social quiet spaces, seclusion rooms, consultation rooms, offices, conference rooms, video court room, exam rooms, and various support functions. This project also included revised site circulation, added parking, and relocation of existing site utilities.

IKM teamed with ZDS, Allegheny Design Services and Triad Engineering on this project.









BEHAVIORAL HEALTH FACILITY

# wvu medicine chestnut ridge center behavioral health addition

**LOCATION**

Morgantown, WV

**SIZE**

5,000 sf

**COST**

\$2 Million

**PROJECT REFERENCE**

Scott Burns

(304) 598-4125

[burnss@wvumedicine.org](mailto:burnss@wvumedicine.org)

The existing behavioral health facility was overcrowded by the current patient load, particularly by increased outpatient visits. Because the facility was not designed to handle the current volume of traffic, the existing floor plan organization and circulation were confusing from the patient's perspective. Both inpatients and outpatients use the same entry, causing congestion at the single point.

The building also did not permit expansion of programs in its current state. In order to grow the program and service offering, Chestnut Ridge had to add staff. All of these factors combined facilitated the need for additional space.

The Hospital identified the need and selected IKM to provide professional healthcare planning and design services to organize patient circulation by creating a new day-patient entrance to the facility; relocating the existing gymnasium and providing additional space for outpatient services.

The resulting design provides a new gymnasium and facilitates the integration of inpatient and outpatient program space on the second floor of the existing building. The sensitive organization of space and circulation segregates services and minimizes the interaction between the two patient populations, allowing the client to better serve the individual patient needs.





# Behavioral Health

PEDIATRIC OUTPATIENT FACILITY

## penn state health children's behavioral health suite

### LOCATION

Lancaster, PA

### SIZE

2,600 sf

### PROJECT REFERENCE

Kent Eckerd  
(717) 531-4525  
keckerd@  
pennstatehealth.psu.edu

Penn State Health Children's Hospital converted a former Toys "R" Us to serve a diverse population of families as a state-of-the-art outpatient facility. Lancaster Pediatric Center accommodates multiple modalities, including Ophthalmology, Specialties, Primary Care, Behavioral Health, and on-site Imaging and Lab testing. The floorplan consists of a linear circulation spine lined with open waiting areas that lead to corresponding check-ins for each department.

The Behavioral Health Suite is located directly off the main corridor, alongside the other departments in the facility. Full height glazing keeps the suite separate but visible. Anti-ligature finishes are visually similar to other departments' waiting areas. The entrance and check-in design is intended to destigmatize behavioral

health and make patients and families feel safe and comfortable. Serving child and adolescent outpatients, the Behavioral Health Suite includes three consultation rooms, a group therapy room, an observation room, and staff support space.

Skylights along the circulation spine bring natural light into the main public area. The design team prioritized clear wayfinding throughout the facility. Starting at a graphic wall directory, ribbons of color flow along the floor to guide patients to each department's waiting area. Children that would have previously known this building as a place of joy and fun can now come to Lancaster Pediatric Center to receive life-changing care.











04

management &  
staffing capabilities





# staffing & meeting timelines

## **project staffing**

IKM has a firm commitment to adequate and appropriate staffing, and rigorously monitors staffing as compared to the status of ongoing work and project workload. Our policy requires bi-weekly updating of staffing and workload projections so that internal tracking systems for IKM staffing reflect the latest available information.

Our process overlays with the team meetings with consultants where project and task scheduling are addressed, monitored and adjusted to keep the prearranged schedule in place. This allows project teams to be supplemented to meet surges in workload or unexpected deadlines. Our team has a firm commitment to provide adequate resources in personnel, technology, and finances to successfully complete this project.

## **ability to meet schedule requirements**

IKM takes pride in our ability to consistently meet design and project deadlines. With a knowledgeable and cross disciplinary staff of 65 individuals, we create collaborative design teams to execute each project effectively. The staffing of each employee is reviewed weekly to ensure that all of our projects get the focus that they deserve.

## **your team leader**

The Principal in Charge of this project, Roger Hartung, is responsible for managing the IKM team to assure that the professional's fees are not exceeded. IKM staff input their hours daily into our accounting software and it is reviewed by the Principal in Charge on a weekly basis.



## ikm project delivery model

Successful projects require teamwork. IKM's project delivery model is focused on a team approach that incorporates a system of checks and balances designed to look around corners, anticipate, identify and address issues before they affect the project outcome. Our process relies on a strong partnership between the Design Team and West Virginia Children's Crisis Center, and includes regular check points in the project schedule for design, cost efficiency, constructibility, schedule and budget review.

## staffing & management

IKM's technical staff works under the project manager's supervision to produce the construction documents for the project. IKM believes in developing well-rounded professionals and does not have staff dedicated solely to performing construction administration. Typically, the IKM project manager or project architect who has been involved with the project from inception performs the on-site construction administration services including attending Owner meetings with the contractor and on-site observation of the progress of the work. It is not unusual, however, to see less experienced IKM staff attending construction meetings, site observation and punch list inspections under the supervision of more experienced staff as an opportunity for learning and mentorship.

## cost control & cost estimating

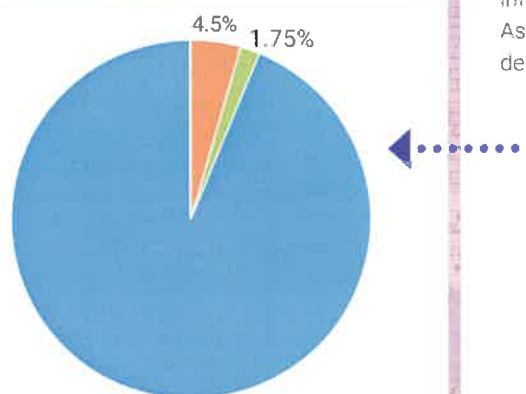
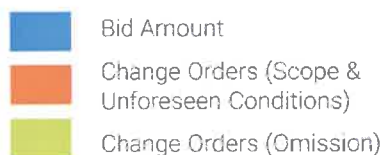
All projects large or small require diligent control of the projected construction costs as it relates to overall project budget. Our project control system follows a pre-established format. Our system combines financial monitoring with an assessment of progress, client satisfaction, and technical performance.

The initial step is the Owner's establishment of a budget. If the one is not established, we work closely with the client and a third-party cost estimator to establish a realistic budget.

As the project moves through the design phases, the estimate is revisited at the 30%, 60% and 90% stages. Each successive stage adds more detail. The accuracy level increases as more information and detail are developed. As that accuracy level increases, the design contingency decreases.

### % OF CONSTRUCTION COST CHANGE ORDERS

Average for last 5 similar projects





## quality control & quality assurance

IKM's quality control / assurance program strives to maintain the highest quality of architectural services through a combination of applied experience and project management. Elements of our QA/QC program include:

- Use of BIM to minimize duplication and errors through clash detection reporting
- Use of energy modeling software during design to ensure buildings are energy efficient and have sufficient daylighting
- In-house peer reviews of documents throughout all phases with a particular emphasis on technical quality.
- Regular multi-disciplinary meetings with consultants to ensure coordination
- Regular meetings with the Construction Manager to perform budget, schedule and constructibility reviews
- Clear and consistent communication channeled through the project manager.

## technology & communication

We believe that effective communication is key to a project's success. Recent advancements in technologies have provided IKM with new and exciting opportunities to communicate our designs and design intent with end-users. These methods of sharing ideas visually help to build an understanding, consensus and excitement for the project. Some examples of this include:

- Digital 3D Models using Sketchup and Revit.
- 3D Physical Models using in-house laser cutting and 3D printing equipment.
- Photo-Realistic renderings, videos and animations via Enscape.
- Virtual Reality Tools using the Oculus platform.

IKM has extensive experience in assisting clients in communicating their vision and possibilities of a project to patients, staff, and the community, and in building the awareness and support needed to make that vision a reality.

## internal peer review

Throughout the development of the project, IKM conducts an internal peer review process that is specifically designed to bring members of the firm, from outside the project team, into a process of review and dialogue regarding design and constructibility aspects of the project. Peer reviews typically include members of the firm's leadership, senior project managers, and other members of the firm with specific specialties. IKM reviews every project for compliance with the accessibility guidelines and endeavors to make the built environment a barrier free experience for all. Our peer review process includes the following items of focus:

- Project Kickoff and Visioning Meeting
- Internal Sustainable Design Charrette
- Architectural Design Reviews at Schematic, Design Development and Construction Drawing Phases
- Building Science
- Building Envelope
- Constructibility
- Building Code Compliance
- ADA Compliance



A photograph of a modern office interior. The scene is dominated by large, multi-paned windows with white frames, looking out onto a bright, overcast sky. In the foreground, a desk is visible, featuring a yellow top surface and a grey base. The overall atmosphere is clean, bright, and professional.

# 05 technical expertise

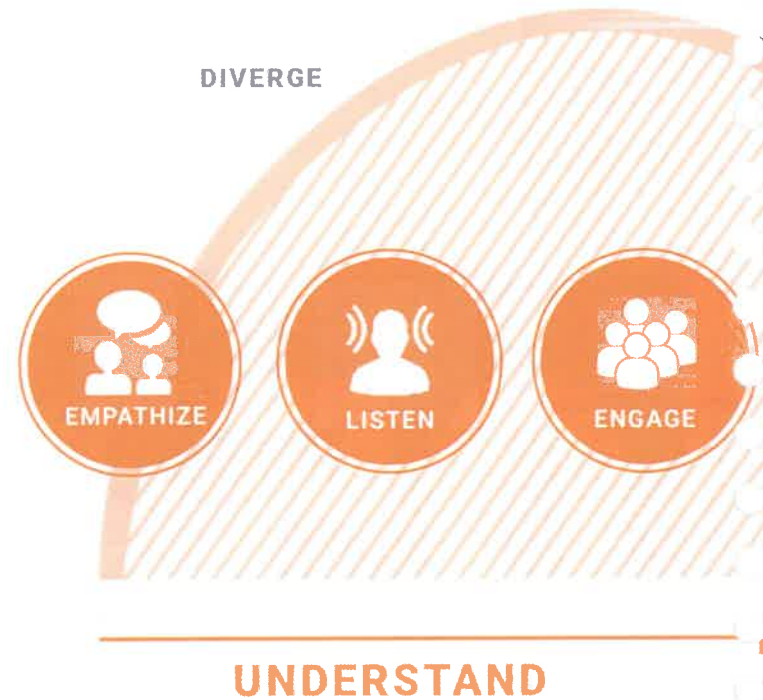


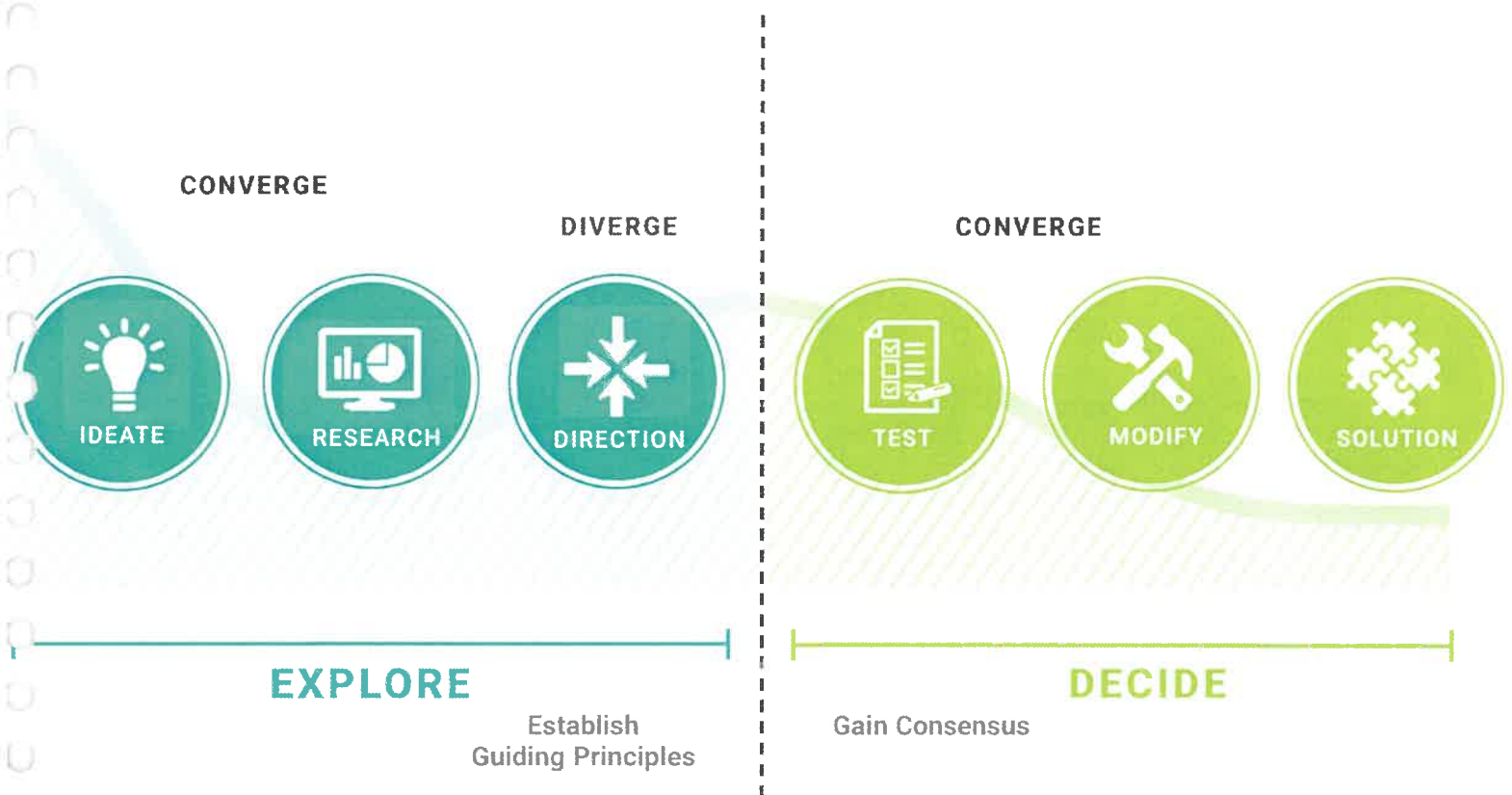


# collaborative process

Through a series of hands-on workshops and design charrettes tailored specifically to each project, we will gain a comprehensive understanding of West Virginia Children's Crisis Center, the project and your future goals.

This custom approach will streamline the discovery process, which translates into a better understanding of the right problems to solve and fewer dead ends that require backtracking. This is a fundamental separator between IKM and others in the regional design community. Our approach develops advocates for the project and enables a meaningful conversation between all stakeholders that helps us reduce miscommunication and increases speed to market.





## benefits & unique advantages to our approach:

- The Collaborative Process Uncovers Unspoken Needs
- As a Team We Discover Options Not Yet Considered
- We Build a Common Vision Together
- We Address Project Challenges Head-on

# design approach

For every project, there is a group of constituents with a deeply felt investment in project outcomes. Recognizing that the input, opinion and satisfaction of these constituents is a crucial component of our client's success, we employ an exceptionally inclusive, collaborative approach to planning, design and construction that puts our clients, their stakeholders and communities at the center of the project design. We pride ourselves on being good listeners, experienced communicators and skilled facilitators and our ability to translate project needs into inspiring and effective architectural design.

IKM's design approach is predicated on the idea that collaboration, open dialogue and client participation are fundamental to a successful project outcome. The approach we propose is interactive. Before lines are drawn on paper, our goal is to learn about you, how your organization works, who your stakeholders are, your goals, aspirations, concerns and how you might choose to involve your staff, patients and community.

The most successful outcomes follow a sequence of interactive visioning and concept design workshops which are designed to build on one another as the development of the design proceeds. The format of a workshop may be a day or carry over several days in which the design team "sets up shop" on site and engages leadership, administration, user groups, the Construction Management Team and, if desired, the broader community in a series of sessions designed to define the vision for the project, identify or verify programmatic needs, and project limitations.

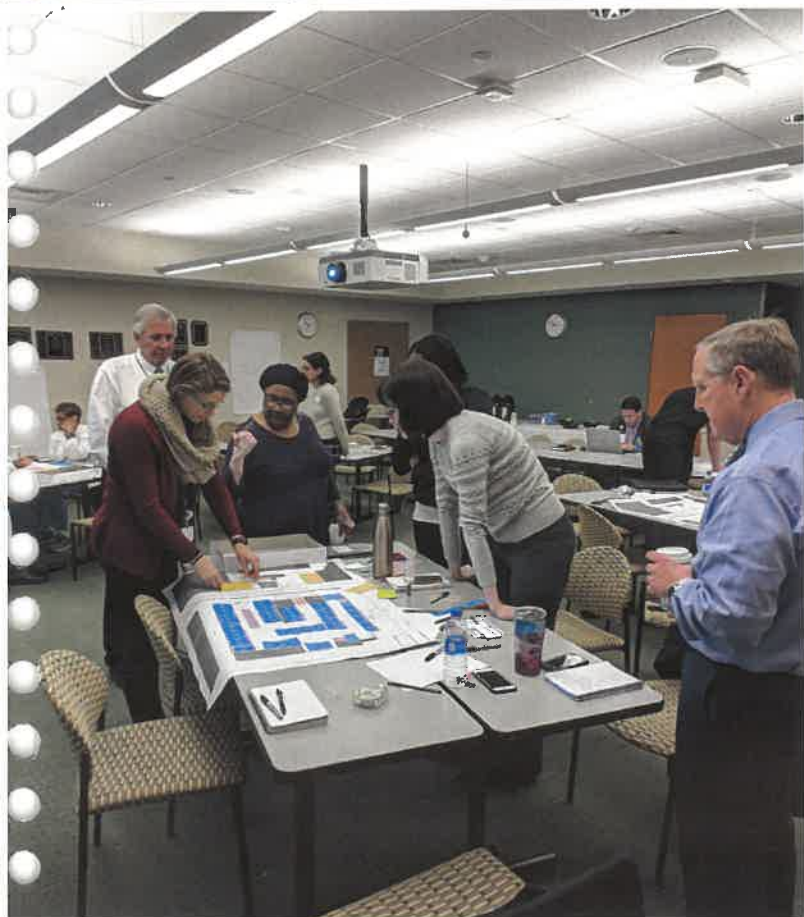
The sequence of workshops typically follows a three-step process of: **(1) Understanding;** **(2) Exploring;** and **(3) Deciding.**

**Understanding**—we seek to learn about your vision for the project, the physical characteristics imposed by the site and context; programmatic needs and budgetary limitations. In effect, the goal is to identify strengths and weaknesses and understand the goals and design principles that should guide the project.

**Exploring**—involves the evaluation of alternative "solutions" based on the information that has been gathered and analyzed. These solutions address not only the design of physical space, but also the design of the experience within that space. Design alternatives are reviewed with stakeholders and compared. Comparison with "benchmark" facilities researched by the design team could be brought into play at this point if the team feels that this would facilitate homing in on the most appropriate solution. Each option is evaluated for strengths and weaknesses based on the agreed goals and design principles.

**Deciding** — based on the evaluation of alternatives by stakeholders, the design team prepares a "final draft" concept plan and program for discussion and review. This plan, crafted to reflect the consensus input of stakeholders, becomes the basis for further development of the project.





For UPMC Presbyterian Hospital, IKM used immersive planning and design workshops where assumptions were challenged, questions were encouraged, and solutions were realized in partnership with our clients, their stakeholders and supporting expert consultants.



# trends in behavioral health

Over the past 50 years, we have seen considerable changes in the design of behavioral health facilities, from the institutional, sterile looking environments of the past to now almost spa-like environments that contribute to a sense of dignity and hope for patients. COVID-19 has put unprecedented strain on the behavioral health industry. Healthcare providers faced decreased revenue and increased cost as demand spiked. COVID-19 will continue to shape the behavioral health industry in 2022 and for years to come. That means we will likely see increases in demand and a continued widespread need for services.

## **Managing Security-Comfort Tension**

- Perception of low security
- Avoid us versus them mentality
- Approximate residential experience
- Welcoming, non-threatening environment
- Natural light/lighting choices
- Outdoor views
- Access to outdoor environments
- Nature-inspired design

## **Positive Distractions**

- Indestructible murals
- Game board tables
- Digital fish tanks
- Chalkboard painted walls
- Television access

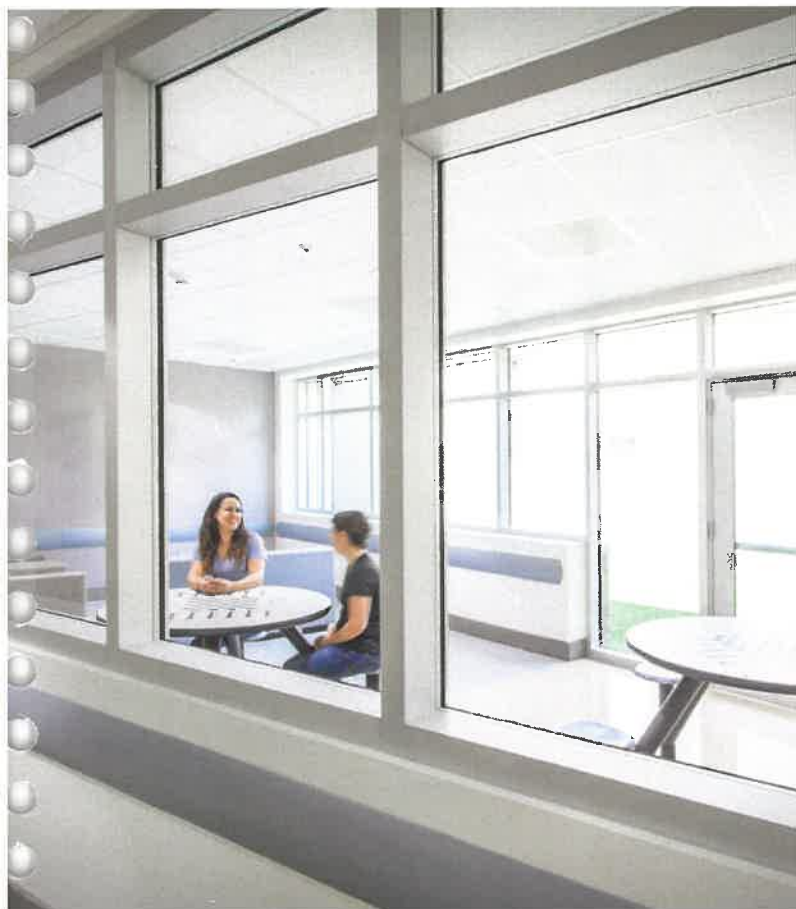
## **Patient Safety & Staff Safety**

- Line of sight
- Weighted furniture
- No sharp corners
- Tamper-resistant attachments
- Anti-ligature design
- Nothing that can become weaponized
- Secure vestibule entry/exit
- Retreat space for staff
- De-escalation room

## **Encourage Use of Communal Areas**

- Furniture arrangements that promote social interaction
- Comfortable furniture
- Positive distractions
- Spaces that serve multiple functions







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