STATEMENT OF QUALIFICATIONS
ARCHITECTURAL/ENGINEERING SERVICES
FOR A 9-12 HIGH SCHOOL BUILDING
DOVER AREA SCHOOL DISTRICT
5 August 2016

Mr. David Nelson  
Director of Facilities, Safety and Technology  
Dover Area School District  
101 Edgeway Road  
Dover, PA 17315

RE: Letter of Transmittal – Request for Qualifications for Architectural/Engineering Services

Mr. Nelson:

SCHRADERGROUP architecture (SGA) is pleased to present our qualifications for providing architectural and engineering services to Dover Area School District for a new 9-12 High School. We appreciate the time and effort already dedicated by the District to exploring options for the new High School. We see great potential in the proposed project and would be honored to make a contribution to this very exciting endeavor.

Committed to design for education, we are passionate about creating the best environments and experiences possible to serve students, faculty, and the community as a whole. SCHRADERGROUP architecture delivers an unparalleled team that:

- contributes a quarter-century of experience in the planning and design of educational facilities. Principals of the firm have devoted their entire careers to creating learning environments. We are seasoned in projects ranging from feasibility studies and master planning to renovation, addition and new facility design, and are involved from inception through to construction closeout and beyond.

- is known for our expertise in educational planning and design, particularly in the planning and design of 21st century learning environments. Firm principal David Schrader has enjoyed long-spanning involvement with the Association for Learning Environments (A4LE, formerly CEFPI, the Council for Educational Facility Planners International) and, as a result, brings the latest in educational design and planning trends to every project undertaken by the firm.

- embraces team engagement processes as a norm in our approach to planning and design and are accustomed to working with a variety of stakeholders. Our dynamic planning process is extremely beneficial as it serves as an efficient and effective means of synthesizing your goals and known information into a solution that, because it was attained by consensus, is well-accepted and widely-supported.
has extensive experience completing projects locally. We are responsible for completing approximately $800 million in Pennsylvania public school projects, including work in the nearby Districts of Central York and York Suburban, and bring this wealth of experience to your project.

We look forward to discussing in greater detail the goals and vision of Dover Area School District, and how our team can be of service. Thank you for your consideration.

Sincerely,

[Signature]

Harry J. Pettoni, REFP
Principal
SCHRADERGROUP architecture LLC
FIRM INFORMATION

NAME
SCHRADERGROUP architecture LLC

ADDRESS
1860 Charter Lane, Suite 206
Lancaster, PA 17601

CONTACT
Harry J. Pettoni, Principal
P 717.299.8965
F 717.299.8965
hpettoni@sgarc.com

THEIR INSIGHT

into the need to not just design a building, but design a building that allows the implementation of the educational process

IS UNSURPASSED

DR. LINDA ESTEP
Former Superintendent (Retired)
Central York School District
we believe educational design

TRULY IS THE DESIGN
FOR THE FUTURE
WE DELIVER DYNAMIC + FUNCTIONAL DESIGNS
that stimulate the intellect and enhance the learning process
HISTORY OF FIRM

SCHRADERGROUP architecture LLC (SGA) is a full-service architectural firm offering planning, programming, architectural and engineering design services for a wide variety of project types, with specific expertise in the area of educational facility design. Founded in 2004 and providing services from offices in Philadelphia, Lancaster, Baltimore, and Wilmington, SGA is recognized both regionally and nationally for design that offers the highest degree of service to the user, responds to and respects both the built and natural environment and demonstrates inspired aesthetics.

At SGA, we believe educational design truly is the design for the future, as it provides the environment in which today’s students develop into tomorrow’s thinkers and leaders. We enter every project with that thought in mind. This lofty aim, however, is always juxtaposed with the practical concerns of complex approval processes combined with scheduling and budget constraints. To achieve all goals, SGA relies upon our extensive experience in design for education – which ranges from feasibility studies and master planning to additions, renovations and new facility design for the primary through higher education markets. We strive to deliver, on time and within budget, dynamic and functional designs that stimulate the intellect and enhance the learning process.

SGA selectively pursues and completes projects for educational clients with unique educational needs. This approach allows us to focus all of our design energies on specific clients and project types. We particularly seek to work with institutions of learning that focus on the student experience and wish to deliver the best service possible to the user.

SGA takes pride in our innovative design as well as our effective process for guiding the client through the entire programming, design, permitting, approval and construction process. We are pleased to have this opportunity to present our qualifications and look forward to sharing our experience with you.
### PROJECT TEAM MEMBERS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHITECTURE</td>
<td>SCHRADEGROUP architecture</td>
</tr>
<tr>
<td>STRUCTURAL ENGINEERING</td>
<td>SCHRADEGROUP architecture</td>
</tr>
<tr>
<td>CIVIL/SITE ENGINEERING</td>
<td>K+W Engineers</td>
</tr>
<tr>
<td>MEP ENGINEERING</td>
<td>Barton Associates</td>
</tr>
<tr>
<td>ACOUSTICAL DESIGN</td>
<td>Metropolitan Acoustics</td>
</tr>
<tr>
<td>FOODSERVICE DESIGN</td>
<td>McFarland Kistler + Associates</td>
</tr>
<tr>
<td>COST ESTIMATING</td>
<td>International Consultants, Inc.</td>
</tr>
</tbody>
</table>

### STAFFING

Following, please find a staffing matrix along with resumes for the key personnel that will be involved with your project. Our talented team contributes significant educational design experience as well as a distinctive approach to developing appropriate solutions for the unique challenges presented by many projects.

In addition to the skills and capabilities the SGA team offers, we also consider our ability to organize cohesive and experienced project teams that support each client’s specific needs as one of our greatest strengths. We recognize the importance of an integrated architecture and consultant team to your process and have carefully chosen a comprehensive team that will provide the resources needed to fulfill the goals of the Dover Area School District.

Please also note that principals of SGA have worked with all proposed consultants on other educational projects. Our existing relationships bring a familiarity of process and comfort level that provides us with an excellent starting point for your project, allowing us to devote less time to building consultant relationships and more time to developing creative solutions.
<table>
<thead>
<tr>
<th>KEY PERSONNEL</th>
<th>RESPONSIBILITIES</th>
<th>AMOUNT OF TIME TO BE DEVOTED TO PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PRE-DESIGN SD DD CD BID PHASE CA</td>
<td></td>
</tr>
<tr>
<td><strong>SCHRADERGROUP ARCHITECTURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>David L Schrader, AIA, LEED AP</td>
<td>Principal in Charge</td>
<td>50% 50% 30% 5% 2% 2%</td>
</tr>
<tr>
<td>Bruce E. Bacthle, AIA</td>
<td>Principal / Quality Assurance + Quality Control</td>
<td>5% 5% 10% 40% 2% 60%</td>
</tr>
<tr>
<td>Harry J. Pettoni, REFP</td>
<td>Principal / Senior Project Manager</td>
<td>50% 50% 50% 35% 30% 30%</td>
</tr>
<tr>
<td>Thomas E. Forsberg, PE</td>
<td>Principal / Structural Engineer</td>
<td>2% 5% 20% 50% 5% 10%</td>
</tr>
<tr>
<td>Courtney Anspach, RA</td>
<td>Project Manager</td>
<td>50% 50% 50% 85% 60% 60%</td>
</tr>
<tr>
<td>Dan D’Amico, AIA, LEED AP</td>
<td>Project Architect</td>
<td>10% 30% 85% 85% 30% 30%</td>
</tr>
<tr>
<td>Monique McCray, Assoc AIA, LEED AP, CDT</td>
<td>Designer / Interiors</td>
<td>10% 10% 85% 85% 30% 30%</td>
</tr>
<tr>
<td>Kelly Ryan, Assoc AIA, LEED Green Associate</td>
<td>Designer</td>
<td>5% 5% 85% 85% 10% 2%</td>
</tr>
<tr>
<td>Eric Weiss, Assoc AIA</td>
<td>Designer</td>
<td>5% 5% 85% 85% 2% 2%</td>
</tr>
<tr>
<td><strong>K+W ENGINEERS</strong> : CIVIL/SITE ENGINEERING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Marc Kurowski, PE</td>
<td>Principal in Charge</td>
<td>50% 35% 10% 10% 20% 20%</td>
</tr>
<tr>
<td>Jeffrey A. Shyk, RLA</td>
<td>Lead Designer / Project Manager</td>
<td>40% 45% 35% 40% 60% 60%</td>
</tr>
<tr>
<td>Hillary E. Olsavsky, EIT*</td>
<td>Project Engineer</td>
<td>5% 10% 25% 20% 10% 10%</td>
</tr>
<tr>
<td>Gregory S. Dice*</td>
<td>CAD Technician</td>
<td>5% 10% 30% 30% 10% 10%</td>
</tr>
<tr>
<td><strong>BARTON ASSOCIATES</strong> : MEP ENGINEERING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mike Rader</td>
<td>Project Manager</td>
<td>25% 25% 25% 25% 10% 25%</td>
</tr>
<tr>
<td>Wes Stiles</td>
<td>Lead Electrical Engineer</td>
<td>25% 25% 30% 30% 10% 20%</td>
</tr>
<tr>
<td>Doug Barnhart</td>
<td>Lead Mechanical Engineer</td>
<td>25% 25% 50% 50% 10% 20%</td>
</tr>
<tr>
<td>KEY PERSONNEL</td>
<td>RESPONSIBILITIES</td>
<td>AMOUNT OF TIME TO BE DEVOTED TO PROJECT</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PRE-DESIGN</td>
</tr>
<tr>
<td>METROPOLITAN ACOUSTICS : ACOUSTICAL DESIGN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Felicia Doggett</td>
<td>Project Management</td>
<td>-</td>
</tr>
<tr>
<td>Seth Harrison</td>
<td>Acoustical Design</td>
<td>-</td>
</tr>
<tr>
<td>Nathaniel Green</td>
<td>Audio Visual Design</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCFARLAND KISTLER + ASSOCIATES : FOOD SERVICE DESIGN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kenneth M. Kistler, FCSI</td>
<td>Principal in Charge</td>
<td>8%</td>
</tr>
<tr>
<td>Michael W. Rock, Associate*</td>
<td>Project Manager / Senior Designer</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERNATIONAL CONSULTANTS, INC : COST ESTIMATING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michael C. Funk</td>
<td>Senior Cost Estimator</td>
<td>2%</td>
</tr>
<tr>
<td>Gary E. Lloyd</td>
<td>Project Estimator</td>
<td>5%</td>
</tr>
</tbody>
</table>
*Support personnel, resumes not included in this submission but gladly provided upon request.
For over two decades, the professional experience of Mr. Schrader has been focused on the design of educational facilities. Mr. Schrader acts as Principal-in-Charge and leads the design team throughout project duration to develop and execute design solutions that achieve all client goals. His ability to create a vision with his clients has fostered significant success for all involved including the client, the design team and the public-at-large. “Partnership in design is a key focus of creating a better designed environment for each client.”

**EXPERIENCE**

**Bristol Township School District, Levittown, Pennsylvania**
- Brookwood Elementary School, New Facility
- Keystone Elementary School, New Facility
- Mill Creek Elementary School, New Facility
- District-Wide Feasibility Study and Master Plan

**Centennial School District, Warminster, Pennsylvania**
- Middle School Feasibility Study

**Central York School District, York, Pennsylvania**
- Central York High School, Additions
- Hayshire Elementary School, Additions and Renovations
- Roundtown Elementary School, Additions and Renovations
- Stony Brook Elementary School, Additions and Renovations
- High School Feasibility Study
- K-8 Feasibility Study Update

**Council Rock School District, Newtown, Pennsylvania**
- Churchville Elementary School, Additions and Renovations
- Goodnoe Elementary School, Additions and Renovations
- Holland Middle School, Additions and Renovations
- Capacity Study Analysis
- District-Wide Facility Study

**Derry Township School District, Hershey, Pennsylvania**
- Hershey Middle School, Additions and Renovations

**Independence Charter School, Philadelphia, Pennsylvania**
- Renovations and Additions to Thomas Durham School
- Feasibility Study and Master Plan

**Northwood Academy Charter School, Philadelphia, Pennsylvania**
- Additions and Renovations

**Phoenixville Area School District, Phoenixville, Pennsylvania**
- Early Learning Center and Elementary School, New Facility
- East Pikeland Elementary School, Additions and Renovations
Quakertown Community School District, Quakertown, Pennsylvania  
Facilities Feasibility Study

High School of Engineering and Science, Additions and Renovations  
Lankenau High School, Additions and Renovations

Springfield School District, Springfield, Pennsylvania  
High School, New Facility

State College Area School District, State College, Pennsylvania  
Ferguson Township Elementary School, Additions and Renovations  
Gray’s Woods Elementary School, Addition  
Mount Nittany Elementary School, New Facility

Twin Valley School District, Elverson, Pennsylvania  
Twin Valley High School, Additions and Renovations  
Twin Valley Middle School, Additions and Renovations  
Twin Valley Physical Education Center, New Facility  
Feasibility Study and Master Plan

Upper Merion Area School District, King of Prussia, Pennsylvania  
Caley Elementary School, New Facility  
Gulph Elementary School, New Facility  
Feasibility Study

Wallingford-Swarthmore School District, Wallingford, Pennsylvania  
Feasibility Study

York Suburban School District, York, Pennsylvania  
Valley View Elementary School, Additions and Renovations  
Yorkshire Elementary School, New Facility  
Various Locations, Renovation Projects  
Feasibility Study

Baltimore City Public Schools, Baltimore, Maryland  
Elementary/Middle School, Additions and Renovations  
High School, Additions and Renovations

Information about additional projects completed through prior employment available upon request.
Throughout his career, Mr. Bachtle has fulfilled the roles of Project Manager and Project Architect for major projects that include both new construction as well as additions and alterations. His project management experience combined with his commitment to maintaining long-term client relationships serves SGA clientele well. Mr. Bachtle has been recognized for his expertise in the management and design of complex projects from inception through to the construction administration phase. Ultimately, maintaining cost control, schedule control, and design quality for all SGA projects is his goal. He has a wide range of experience in the educational, institutional, healthcare, and public safety markets. Also, as an SGA firm partner, he is committed to the highest standards of architectural professional practice and design.

**SELECT EXPERIENCE**

**Bristol Township School District, Levittown, Pennsylvania**
- Brookwood Elementary School, New Facility
- Keystone Elementary School, New Facility
- Mill Creek Elementary School, New Facility

**Council Rock School District, Newtown, Pennsylvania**
- Churchville Elementary School, Additions and Renovations
- Goodnoe Elementary School, Additions and Renovations
- Sol Feinstone Elementary School, Secured Entry and Administration Design
- Various Locations, Entrance Security Renovations
- Walt Snyder Stadium, Repairs and Renovations

**Derry Township School District, Hershey, Pennsylvania**
- Hershey Middle School, Additions and Renovations

**Northwood Academy Charter School, Philadelphia, Pennsylvania**
- Additions and Renovations

**Phoenixville Area School District, Phoenixville, Pennsylvania**
- Early Learning Center and Elementary School, New Facility
- Visitor Side Stadium Addition

**School District of Philadelphia, Philadelphia, Pennsylvania**
- High School of Engineering and Science, Additions and Renovations
- Lankenau High School, Additions and Renovations

**Springfield School District, Springfield, Pennsylvania**
- High School, New Facility

**State College Area School District, State College, Pennsylvania**
- Ferguson Township Elementary School, Additions and Renovations
- Mount Nittany Elementary School, New Facility

**Twin Valley School District, Elverson, Pennsylvania**
- Twin Valley High School, Additions and Renovations
- Twin Valley Middle School, Additions and Renovations
- Twin Valley Physical Education Center, New Facility
HARRY J. PETTONI, REFP
SCHRADERGROUP architecture
Principal

Harry J. Pettoni has over 24 years of professional architectural and construction experience in the public, private and education sectors. Mr. Pettoni focuses on strategic planning, marketing, business development, educational programming, planning, project development and sustainable design. Mr. Pettoni is a Recognized Educational Facility Professional by the Association for Learning Environments (A4LE), formerly the Council for Educational Facilities Planners International (CEFPI), and is a past officer of the Northeast Region, focusing on improving educational facilities by creating 21st century, healthy environments for students, faculty and staff. He presents at numerous seminars, workshops and forums on various topics throughout Pennsylvania, Maryland, Delaware and New Jersey.

SELECT EXPERIENCE

Council Rock School District, Newtown, Pennsylvania
Sol Feinstone Elementary School, Secured Entry and Administration Design
High School North, Secured Entry Design

The Phelps School, Malvern, Pennsylvania
Master Plan
Alumni Hall, Renovations
Athletic Complex, New Facility

Phoenixville Area School District, Phoenixville, Pennsylvania
Barkley Elementary School, Exterior Door and Hardware Replacement
Phoenixville High School, Auditorium Interior Renovations
Phoenixville High School, Stage Renovations
Phoenixville High School, Generator Replacement and Sound Barrier Feasibility Study
Washington Stadium, Bleacher, Pressbox and Field Lighting Replacement and Upgrades
Washington Stadium, New Field House Feasibility Study

Quakertown Community School District, Quakertown, Pennsylvania
Facilities Feasibility Study

Williamsport Area School District, Williamsport, Pennsylvania
High School Aquatic Center Feasibility Study

Baltimore City Public Schools, Baltimore, Maryland
High School, Additions and Renovations
Elementary School, Additions and Renovations

the following projects were completed while employed by other firms

Council Rock School District, Richboro, PA
Council Rock High School North, Renovations and Additions
Council Rock High School South, New Facility

South Eastern School District, Fawn Grove, PA
Kennard-Dale High School, New Facility

West Chester Area School District, West Chester, PA
West Chester Bayard Rustin High School, New Facility

ROLE
EDUCATIONAL PLANNER

YEARS OF EXPERIENCE
THIS FIRM 3 years
OTHER FIRMS 22 years

EDUCATION
BACHELOR OF ARCHITECTURE
Syracuse University / 1991
ASSOCIATES DEGREE IN APPLIED SCIENCE,
ARCHITECTURAL AND CONSTRUCTION
TECHNOLOGY
State University of New York / 1987

AFFILIATIONS
American Institute of Architects (AIA)
Association for Learning Environments
(A4LE) – Formerly Council of Educational
Facilities Planners Int’l (CEFPI)
Association of School Business Officials
(ASBO, MD & DC)
Building Congress and Exchange
Businesses for the Bay
Green Building Assn. of Central PA (GBA-
CPA)
New Jersey Assn. of School Business Officials
(NJASBO)
Pennsylvania Assn. of School Business
Officials (PASBO)
SMPS – Central PA and MD
Sustainable Building Industry Council (SBIC)
US Green Building Council (USGBC)
From project inception through design and construction oversight, Mr. Forsberg’s structural design experience includes a wide array of new buildings, additions & alterations, feasibility studies and condition assessments. He is responsible for structural system optimization, multi-discipline coordination, and quality control. He is well-versed in the design and evaluation of concrete, masonry, steel and wood structures. During more than 20 years of professional practice, Mr. Forsberg has developed extensive expertise in the design and evaluation of masonry buildings and systems, forensic investigations, diagnostics, and problem resolution. Additionally, his expertise includes building surveys, code analyses, structural load ratings, reinforcement and restoration design, and investigative reports.

SELECT EXPERIENCE

Berwick School District, Berwick, Pennsylvania
Varsity Baseball Complex, New Facility

Bristol Township School District, Levittown, Pennsylvania
Brookwood Elementary School, New Facility
Keystone Elementary School, New Facility
Mill Creek Elementary School, New Facility

Council Rock School District, Newtown, Pennsylvania
Goodnow Elementary School, Additions and Renovations
High School North, Secured Entry Design
Holland Middle School, Renovations and Additions
Network Operations Center, Interior Renovations
Sol Feinstone Elementary School, Secured Entry and Administration Design

Orange Public Schools, Orange, New Jersey
Orange Middle School, Roof and Masonry Emergent Project

Pequea Valley School District, Kinzers, Pennsylvania
Intermediate School, Gym Roof Replacement
Salisbury Elementary School, Roof Replacement

Phoenixville Area School District, Phoenixville, Pennsylvania
Early Learning Center and Elementary School, New Facility
Phoenixville High School, Auditorium Interior Renovations
Phoenixville High School, Auditorium Stage Renovations
Phoenixville Library, Renovations
Schuylkill Elementary, Cupola Restoration
Visitor Side Stadium Addition

Springfield School District, Springfield, Pennsylvania
High School, New Facility

The Phelps School, Malvern, Pennsylvania
Athletic Complex, New Facility
Ms. Anspach in her role as Project Manager contributes over 19 years of experience in architectural design and project management. Since joining SCHRADERGROUP architecture, she has been responsible for managing projects, consultant coordination, design team production and drawing review. Ms. Anspach’s attention to detail has been noted by past clients and she strives to tie the client’s project goals with thoughtful architectural design to produce well-crafted buildings. She has experience in a wide range of project types with a focus now on K-12 education. That exposure to varying project types brings a unique focus to each project with an eye towards tailoring each project specifically to the user and site.

**SELECT EXPERIENCE**

- **Council Rock School District, Newtown, Pennsylvania**
  - Holland Middle School, Renovations and Additions
- **The Phelps School, Malvern, Pennsylvania**
  - Athletic Complex, New Facility
- **Phoenixville Area School District, Phoenixville, Pennsylvania**
  - Early Learning Center and Elementary School, New Facility
  - District Storage Building, New Facility
- **Red Clay Consolidated School District, Wilmington, Delaware**
  - Marbrook Elementary School, Renovations
  - Mote Elementary School, Renovations
- **Springfield School District, Springfield, Pennsylvania**
  - High School, New Facility
- **Baltimore City Public Schools, Baltimore, Maryland**
  - High School, Additions and Renovations
  - Elementary School, Additions and Renovations
  - the following projects were completed while employed by another firm
- **Episcopal Academy, Newtown Square, Pennsylvania**
  - Episcopal Academy Chapel, New Facility
- **Stuart Country Day School, Princeton, New Jersey**
  - Stuart Country Day School, Addition
- **Case Western Reserve University, Cleveland, Ohio**
  - The Milton and Tamar Maltz Performing Arts Center, Renovation and Addition
- **Dumbarton Oaks, Georgetown, Washington, DC (affiliated with Harvard University)**
  - Dumbarton Oaks Gardeners’ Cottage, Renovation
  - Dumbarton Oaks Gardeners’ Court, New Facility
  - Dumbarton Oaks Greenhouse, Restoration
  - Dumbarton Oaks Library, New Facility
  - Dumbarton Oaks Refectory, Renovation
DAN D’AMICO, AIA, LEED AP
SCHRADERGROUP architecture
Project Architect

As Project Architect, Mr. D’Amico brings to the team proficiency in both design sense as well technical skills. Mr. D’Amico contributes a strong working knowledge of BIM and uses his skills in Revit to improve design solution appropriateness, workflow, and efficiency in projects. He excels at developing graphic representations of evolving projects to assist clients in visualizing the design solution. Additionally, as a LEED Accredited Professional, he works to instill sustainable solutions into every design project.

SELECT EXPERIENCE

Bristol Township School District, Levittown, Pennsylvania
- Brookwood Elementary School, New Facility
- Keystone Elementary School, New Facility
- Mill Creek Elementary School, New Facility
- District-Wide Feasibility Study and Master Plan

Council Rock School District, Newtown, Pennsylvania
- Goodnoe Elementary School, Additions and Renovations
- High School North, Secured Entry Design
- Holland Middle School, Renovations and Additions
- Sol Feinstone Elementary School, Secured Entry and Administration Design
- Capacity Study Analysis

Derry Township School District, Hershey, Pennsylvania
- Hershey Middle School, Additions and Renovations

Northwood Academy Charter School, Philadelphia, Pennsylvania
- Additions and Renovations

Orange Public Schools, Orange, New Jersey
- Orange Middle School, Roof and Masonry Emergent Project

Pequea Valley School District, Kinzers, Pennsylvania
- Intermediate School, Gym Roof Replacement

The Phelps School, Malvern, Pennsylvania
- Athletic Complex, New Facility

Phoenixville Area School District, Phoenixville, Pennsylvania
- Early Learning Center and Elementary School, New Facility
- East Pikeland Elementary School, Additions and Renovations
- High School, Stage Renovations

Baltimore City Public Schools, Baltimore, Maryland
- Elementary/Middle School, Additions and Renovations
Ms. McCray brings over a decade of experience contributing to the design, drawing production and construction administration tasks for various academic, civic and religious projects. She has fulfilled the roles of Project Designer, Project Manager and Architectural Designer for a wide variety of project types ranging from 10,000 to 300,000 SF. Ms. McCray brings specific experience providing interior design and finish selection for educational design projects.

**SELECT EXPERIENCE**

**Bristol Township School District, Levittown, Pennsylvania**
- Brookwood Elementary School, New Facility
- Keystone Elementary School, New Facility
- Mill Creek Elementary School, New Facility
- District-Wide Feasibility Study and Master Plan

**Council Rock School District, Newtown, Pennsylvania**
- Goodnow Elementary School, Additions and Renovations
- High School North, Secured Entry Design
- Holland Middle School, Additions and Renovations
- Network Operations Center, Interior Renovations
- Sol Feinestone Elementary School, Secured Entry and Administration Design
- Various Locations, Entrance Security Renovations

**Derry Township School District, Hershey, Pennsylvania**
- Hershey Middle School, Additions and Renovations

**Northwood Academy Charter School, Philadelphia, Pennsylvania**
- Additions and Renovations

**The Phelps School, Malvern, Pennsylvania**
- Alumni Hall Auditorium Renovations
- Athletic Complex, New Facility

**Phoenixville Area School District, Phoenixville, Pennsylvania**
- Early Learning Center and Elementary School, New Facility

**State College Area School District, State College, Pennsylvania**
- Ferguson Township Elementary School, Additions and Renovations
- Gray’s Woods Elementary School, Addition
- Mount Nittany Elementary School, New Facility

**Baltimore City Public Schools, Baltimore, Maryland**
- High School, Additions and Renovations
Ms. Ryan comes to Schradergroup with multiple years of internship experience working primarily with institutional project types. Her experience to date includes completion of design and construction documentation, BIM model development, LEED documentation, feasibility studies, 3D digital modeling, and presentation renderings. In addition to her other valuable skills, Ms. Ryan excels at developing graphic representations of developing projects to assist clients in visualizing the design solution.

**SELECT EXPERIENCE**

**Bristol Township School District, Levittown, Pennsylvania**
- Brookwood Elementary School, New Facility
- Keystone Elementary School, New Facility
- Mill Creek Elementary School, New Facility

**Council Rock School District, Newtown, Pennsylvania**
- Goodnow Elementary School, Additions and Renovations
- High School North, Secured Entry Design
- Holland Middle School, Additions and Renovations
- Sol Feinstone Elementary School, Secured Entry and Administration Design
- Wrightstown Elementary School, Library Renovations
- Capacity Study Analysis

**Gettysburg College, Gettysburg, Pennsylvania**
- Gettysburg Admissions Building Interior Renovations

**The Phelps School, Malvern, Pennsylvania**
- Alumni Hall Auditorium Renovations

**Orange Public Schools, Orange, New Jersey**
- Roof and Masonry Emergent Project

**Phoenixville Area School District, Phoenixville, Pennsylvania**
- Early Learning Center and Elementary School, New Facility
- High School, Stage Renovations
- Maintenance Building, New Facility
- Phoenixville Library, Renovations
- Schuylkill Elementary, Cupola Restoration
- Visitor Side Stadium Addition

**Baltimore City Public Schools, Baltimore, Maryland**
- Elementary/Middle School, Additions and Renovations
- High School, Additions and Renovations

---

**KELLY RYAN, ASSOC AIA, LEED GREEN ASSOCIATE**

**SCHRADERGROUP architecture**

**Designer**

**ROLE**

**DESIGNER**

**YEARS OF EXPERIENCE**

**THIS FIRM 3 years**

**EDUCATION**

**BACHELOR OF ARCHITECTURE**

Pennsylvania State University / 2013

Integrated Study Abroad Program, The Pantheon Institute, Rome, Italy
ERIC H. WEISS, ASSOC AIA
SCHRADERGROUP architecture

Designer

Mr. Weiss comes to Schradergroup with multiple years of internship experience working primarily with institutional and residential project types. His experience with graphic presentation programs combined with his excellent skills as a photographer serve as valuable assets for helping to visually communicate ideas and concepts to clients. Mr. Weiss additionally contributes a strong working knowledge of BIM and uses his skills in Revit to improve design solution appropriateness, workflow, and efficiency in projects.

SELECT EXPERIENCE

Berwick School District, Berwick, Pennsylvania
- Varsity Baseball Complex, New Facility

Bristol Township School District, Levittown, Pennsylvania
- Brookwood Elementary School, New Facility
- Keystone Elementary School, New Facility
- Mill Creek Elementary School, New Facility

Council Rock School District, Newtown, Pennsylvania
- Capacity Study Analysis
- Holland Middle School, Additions and Renovations
- Sol Feinstone Elementary School, Secured Entry and Administration Design
- Wrightstown Elementary School, Library Renovations

The Phelps School, Malvern, Pennsylvania
- Athletic Complex, New Facility

Phoenixville Area School District, Phoenixville, Pennsylvania
- Early Learning Center and Elementary School, New Facility
- Maintenance Building, New Facility

State College Area School District, State College, Pennsylvania
- Ferguson Township Elementary School, Additions and Renovations

Upper Merion Area School District, King of Prussia, Pennsylvania
- Feasibility Study

Baltimore City Public Schools, Baltimore, Maryland
- Elementary/Middle School, Additions and Renovations
- High School, Additions and Renovations

ROLE
DESIGNER

YEARS OF EXPERIENCE
THIS FIRM 3 years

EDUCATION
BACHELOR OF ARCHITECTURE
Pennsylvania State University / 2013
Integrated Study Abroad Program, The Pantheon Institute, Rome, Italy
ABOUT US

Founded in 2005, K&W is a full-service planning and site design firm comprised of community development consultants, civil engineers, landscape architects, and land surveyors. Our expert staff blends a deep understanding of the regulatory process with excellent public presentation skills to secure the regulatory approvals you need.

Having designed more than 70 school projects over the last decade, K&W understands how to create school campuses that are safe, functional and cost-effective. Our site designers bring extensive experience with Feasibility Studies and Campus Master Plans, coupled with an-depth knowledge of Pennsylvania Department of Education (PDE) procedures.

WHAT WE DO

We seamlessly integrate planning and site design, landscape architecture, land survey, environmental permitting, and water/wastewater design with all other services necessary to take your project from concept to completion. All under one roof, on schedule and on budget.

HOW WE DO IT

Extensive and varied project experience with multiple stakeholders. Creative yet functional design. Expert presentation skills. Effortless navigation of the regulatory approvals process. We provide all the tools you need to develop a successful project ... with no surprises.

K&W EXPERIENCE WITH SIMILAR SITE ANALYSIS PROJECTS

In addition to their recent work at Dover’s stadium, Weigelstown Elementary and Dover Elementary Schools, K&W’s Marc Kurowski PE and Jeff Shyk RLA have completed numerous K12 site analysis and design projects involving the same issues that must be addressed in the construction of a new Dover Area High School on your current Intermediate School site. We’ve provided examples below of recent high school projects and new schools where we have successfully addressed traffic concerns, local zoning, subsurface conditions, wetlands, water, sewage, and the construction of a new school on an existing site followed by the demolition of an older school. Each of these projects involved multiple presentations to the School Board and public.
Dallas School District | New Dallas High School
Site investigations and design of the new Dallas High School on the existing multi-school campus. The existing high school remained in operation throughout construction. When the new school was complete, the old high school was demolished over one summer and replaced with a new parking lot.

Diocese of Harrisburg | New Bishop McDevitt High School and Stadium
Site analysis and campus master planning for a new high school, including a Traffic Impact Study and roadway modifications, water and sewer extensions, stormwater management, zoning and Land Development approvals.

Donegal School District | New Donegal High School and Athletic Stadium
Site investigations and design for a new high school included special consideration of subsurface conditions due to existing soils and previous sinkhole formation.

Northeastern School District | New Middle School
Design of a new 106,000 SF Middle School on an existing campus required special environmental permitting, protection of wetlands, and land development approvals from two neighboring townships.

West York Area School District | West York Area High School, Additions / Renovations
The planning of major, phased additions to the high school involved addressing subsurface conditions, traffic concerns and zoning issues.

West Shore School District | New Hillside Elementary School
Site analysis and design of a new Elementary School Building on the same site as the existing school, followed by the demolition of the older building when construction was complete.

Elizabethtown Area School District | New Bear Creek Intermediate School
Land planning and site design services for a new 154,000 SF Intermediate School addressed floodplains and wetland issues, and included a Traffic Impact Study involving two neighboring municipalities.

Eastern Lebanon County School District | New ELCO Intermediate School
Design of a new school on an existing campus required a zoning exception, approvals from two townships, water and sewer extensions, and the widening of an existing township roadway.
J. MARC KUROWSKI, PE
K+W Engineers
Principal in Charge / Civil Engineer

With more than 20 years of site design experience, Mr. Kurowski has led significant land development projects for educational, institutional, commercial, healthcare, industrial and residential development clients. He has provided a wide range of civil engineering services, including: traffic / transportation analysis and design; stormwater management; floodplain analysis; sanitary sewer system / water distribution system design; erosion and sedimentation control plans; NPDES Permit preparation and approvals; and Land Development Plan approvals.

Mr. Kurowski is extremely sensitive to his role in the stewardship of public resources and funds. He has worked successfully with all levels and types of governmental entities including school districts, municipalities, authorities, boards, commissions, the Commonwealth of PA and US Federal agencies. He guides clients from feasibility studies, through detailed site design and into construction, working diligently to find the most cost-effective solutions to achieve each client’s goals.

Having worked on dozens of K12 projects during his career, Mr. Kurowski brings a thorough understanding of school campus and athletic facility design. He excels at collaborating with school and community stakeholders to make site planning decisions and clearly communicate options and costs. Whether a project involves the renovation of a sports stadium or the design of a new Elementary school campus, Mr. Kurowski understands how to integrate the many technical and functional elements of a school site to create a safe and enjoyable environment for students and the community.

SELECT EXPERIENCE

Dover Area School District
Athletic Stadium – Renovations
Dover Elementary School – Additions / Renovations
Weigelstown Elementary School – Additions / Renovations

Camp Hill School District
New Grace Millman Pollock Performing Arts Center

Elizabethtown Area School District
New Bear Creek Intermediate School
New Athletic Facilities and Stadium Improvements
New Campus-wide Pedestrian Pathway

Coatesville Area School District
Coatesville Area Senior High School – As-Built Survey and Stormwater Management Calculations
New North Brandywine Middle School
New South Brandywine Middle School

Dallas School District
New Dallas High School
Donegal School District  
New Baseball Field  
New Donegal High School  
New Stadium and Athletic Facilities

Eastern Lebanon County School District  
Millcreek Elementary School – Site Investigation  
New ELCO Intermediate School

Gettysburg Area School District  
New Adams County Tech Prep Building  
New Gettysburg Area Middle School

Hanover Public School District  
New Elementary School

Harrisburg School District  
New High School / Middle School Connector Building  
New Northeastern Middle School  
New Spring Forge Intermediate School

Northeastern School District  
New High School / Middle School Connector Building  
New Northeastern Middle School  
New Spring Forge Intermediate School

South Western School District  
New Maintenance Building

The Circle School  
New K-12 Building and Campus

West Shore School District  
New Hillside Elementary School  
New Softball Field

Wyalusing Area School District  
Wyalusing Valley Junior / Senior High School – Parking/ Traffic Circulation and Site Improvements  
New Wyalusing Valley Elementary School

*Partial listing - complete list of educational experience available upon request*
JEFFREY A. SHYK, RLA
K+W Engineers
Landscape Architect

Mr. Shyk brings a deep understanding of both the technical and aesthetic considerations critical to successful site design. With more than 20 years of professional experience, his work spans a wide variety of projects for educational, governmental, commercial and athletic facility clients. Mr. Shyk is adept at taking a project from the earliest stages of feasibility studies and due diligence investigations through construction close-out. With all projects, he demonstrates a comprehensive knowledge of federal, state, county, and local municipal regulations, requirements and permit processes.

As a landscape architect and project manager, Mr. Shyk is known for being detail-oriented and easy to work with. During the design phases of a project, he oversees programming, master planning, site design, grading design, utility layout, conceptual stormwater conveyance design, profile development (roads and utilities) and construction drawings. His project management duties include developing the project schedule and managing all necessary permitting and approval processes, including application preparation, waiver drafting, zoning and special exception applications, NPDES Permit preparation and approvals, Subdivision and Land Development Plan preparation, and DEP exemption mailers and module preparation.

Mr. Shyk keeps projects on track through regular construction site observation visits and construction conferences with owners and contractors. He works diligently to promote team communication and manage construction phases changes to ensure that clients are happy with the end result.

SELECT EXPERIENCE

Dover Area School District
Athletic Stadium – Renovations
Dover Elementary School – Additions / Renovations
Weigelstown Elementary School – Additions / Renovations

Camp Hill School District
New Grace Millman Pollock Performing Arts Center

Coatesville Area School District
Coatesville Area Senior High School – As-Built Survey and Stormwater Management Calculations
New North Brandywine Middle School
New South Brandywine Middle School

Connellsville Area School District
Connellsville Area Senior High School – Additions / Renovations

Dallas School District
New Dallas High School
New Baseball Field

Diocese of Harrisburg; Harrisburg, PA
New Bishop McDevitt High School and Athletic Facilities
Donegal School District
New Donegal High School
New Stadium and Athletic Facilities

Eastern Lebanon County School District
New ELCO Intermediate School

Elizabethtown Area School District
East High Elementary School – Additions / Renovations
New Bear Creek Intermediate School
New Athletic Facilities and Stadium Improvements
New Campus-wide Pedestrian Pathway

Gettysburg Area School District
New Adams County Tech Prep Building
New Gettysburg Area Middle School

Harrisburg School District
John Harris High School – New Baseball Field

Midd-West School District
Midd-West High School – Additions / Renovations

Southern Huntingdon County School District
Southern Huntingdon County Jr. / Sr. High School – Additions / Renovations

Tussey Mountain School District
Tussey Mountain Jr. / Sr. High School – Additions / Renovations

The Circle School
New K-12 Building and Campus

West Shore School District
New Hillside Elementary School
New Softball Field

West York Area School District
High School – Additions / Renovations

Wyalusing Area School District
New Wyalusing Valley Elementary School
High School Site Improvements

Partial listing - complete list of educational experience available upon request

J. Marc Kurowski, PE
K+W Engineers

page 2
Whether we are serving as the prime professional or as a sub-consultant to an architectural, engineering, contracting, construction management or other professional firm, Barton provides an extensive list of services within various MEP-related disciplines:

**SERVICES**
- Feasibility Studies, Facility Assessments & Master Planning
- Energy Modeling, Life Cycle Costs & Payback Analysis
- Construction Cost Estimating
- Construction Drawings & Specifications Preparation
- Construction Contract Administration
- Peer Review Services
- Troubleshooting existing Systems and Components

**MECHANICAL SYSTEM DESIGN**
- Heating, Ventilation & Air Conditioning
- Plumbing
- Fire Protection
- Central Energy/Utility Plants
- Building Automation Systems

**ELECTRICAL SYSTEM DESIGN**
- Lighting
- Power Generation & Distribution
- Information Technology
- Fire Alarm & Security

**ARCHITECTURAL LIGHTING DESIGN**

**ADDED VALUE SERVICES**
- Building Information Modeling (BIM)
- Sustainable Design
- Commissioning
- Energy Analysis & Audits

---

**BARTON ASSOCIATES | MEP ENGINEERING**

**WHY BARTON**

Barton Education—a division of Barton Associates—concentrates exclusively on one of the firm’s strongest markets—education. We have completed more than 750 projects for over 100 K-12 school districts. Barton approaches each project holistically and systematically to strike the right balance between performance, sustainability, energy efficiency and cost. We engage project stakeholders to gain valuable insights, review existing system documentation then conduct extensive field survey to develop and document an accurate representation of the systems for the district. We have standardized survey procedures and forms to utilize lessons learned as well as expedite the survey process. We then take this information and leverage our extensive experience serving K-12 clients to benchmark and bring to bear industry best practices to provide a complete evaluation of existing conditions and potential from which all future planning will be based. We apply focus, dedication, practicality, precision and longevity to each project we deliver and live by these principles to help us achieve our mission—**We Make Buildings Work.**

**WHO WE ARE**

As the largest independent MEP consulting firm headquartered in Central PA, Barton provides quality engineering solutions for clients throughout the Mid-Atlantic Region with office locations in York, State College and Pittsburgh, PA. Our team of more than 70 registered professional engineers, designers, CADD technicians and support staff do more than just design MEP systems. We offer a holistic approach to any new construction, addition or renovation project from energy studies and facility master planning to systems design, commissioning and sustainability. Barton considers ways to minimize energy consumption, conserve resources and enhance indoor environmental quality for every project we complete. Energy Conservation is a priority in every design and our staff of professionals are trained, licensed and/or certified to design MEP systems and evaluate the performance of these systems. We utilize building information modeling for greater team collaboration.
MICHAEL S. RADER, PE, CEM
Barton Associates, Inc.
Vice President and COO

Michael is an experienced mechanical engineer and project manager and serves as Barton’s Vice President and Chief Operating Officer. He has more than 20 years of experience in project development, design and execution, he has extensive project experience in implementing large multi-faceted design projects. As Project Manager, Mike will be the main engineering contact and will lead project team meetings that involve all disciplines and will coordinate schedules and deliverables with the owner and members of the design team to maintain project quality, schedules and budgets.

RELEVANT EXPERIENCE

Chambersburg Area School District Senior High School - Chambersburg, PA
Served as project manager for 330,000 sq. ft. of additions and approximately 200,000 sq. ft. of renovations to accommodate 2,000 students at the Senior High School. Additions included a new sq. ft. gymnasium and fitness area that features an elevated track, weight rooms, fitness equipment rooms and locker rooms as well as science labs, library, technical education spaces, a greenhouse, cafeteria, art and music rooms and a tv recording studio. Renovations included the auditorium, classrooms and administrative offices.

Spring Grove Area School District New High School - Spring Grove, PA
Served as principal-in-charge for a new $340,000 sq. ft. high school that included classrooms, admissions office, computer lab, gymnasium, swimming pool and a 1,400 seat auditorium. The project also provided state-of-the-art technology and systems integration including a security system, broadcasting provisions and a wireless internet system.

Red Lion Area School District Senior High School - Red Lion, PA
Served as project manager for a 160,000 sq. ft. addition and 274,479 squarer-foot renovation project for the Red Lion Area School District. The $29.6 million expansion added a two-story classroom wing, technical education area, science labs, and a bi-level 3,000-seat gymnasium.

Warren County School District Warren High School - Warren, PA
Serving as principal-in-charge for a 146,253 sq. ft. renovation including dedicated classroom space for lab and storage/prep area for each Science discipline, classrooms located in clusters to facilitate collaboration, library in a more centrally located and easily accessible location, centralized administration, enhanced security, improved building circulation and day lighting, ADA accessibility and a connecting corridor for the main classroom wings. The project includes the complete replacement of all existing MEP systems including power, lighting, communications, geothermal heating and cooling, and fire protection. The project also included a substantial sustainable design component, including daylight harvesting, geothermal heating and cooling, rainwater collection tanks with greywater reuse, photovoltaic equipment, and an interactive sustainable technology reporting and learning station.

Phoenixville Area School District Early Learning Center & Elementary School – Phoenixville, PA
Serving as project manager for a new two-story 152,000 sq. ft. school. The building design promotes essentially every space in the facility as learning space. The project incorporates many sustainable concepts and technologies including extensive use of daylighting, LED lighting fixtures, a daylight harvesting/lighting control system, a ground coupled water source heat pump system, building automation system and water conserving plumbing fixtures.
Doug is an experienced project manager and mechanical engineer that strives to work with all project stakeholders to achieve project goals on all levels from the field technician to the project’s administrative team. As Lead Mechanical Engineer, Doug will attend engineering project team meetings and be an integral team member in assessing existing mechanical systems and evaluating potential replacement systems.

**RELEVANT EXPERIENCE**

**Red Lion Area School District Senior High School - Red Lion, PA**
Served as lead mechanical engineer for a 160,000 sq. ft. addition and 274,479 square-foot renovation project for the Red Lion Area School District. The $29.6 million expansion added a two-story classroom wing, technical education area, science labs, and a bi-level 3,000-seat gymnasium.

**Warren County School District Warren High School - Warren, PA**
Providing quality assurance for electrical design for a 146,253 sq. ft. renovation including dedicated classroom space for lab and storage/prep area for each Science discipline, classrooms located in clusters to facilitate collaboration, library in a more centrally located and easily accessible location, centralized administration, enhanced security, improved building circulation and day lighting, ADA accessibility and a connecting corridor for the main classroom wings. The project includes the complete replacement of all existing MEP systems including power, lighting, communications, geothermal heating and cooling, and fire protection. The project also included a substantial sustainable design component, including daylight harvesting, geothermal heating and cooling, rainwater collection tanks with greywater reuse, photovoltaic equipment, and an interactive sustainable technology reporting and learning station.

**School District of the City of York Arthur W. Ferguson Elementary School - York, PA**
Served as lead mechanical engineer for a new 90,250 sq. ft. elementary school. The building’s systems include a geothermal heating and cooling system, extensive day lighting and day lighting controls, energy recovery wheels for preconditioning fresh air, fresh air for the multipurpose room based on actual occupants (demand controlled), variable exhaust flow kitchen hood based on cooking demand, low flow fixtures with dual flush water closets and waterless urinals, pulper for kitchen waste and a green vegetative roof over the library. The school is the first LEED Platinum Certified Public Elementary School in PA.

**Phoenixville Area School District Early Learning Center & Elementary School – Phoenixville, PA**
Serving as lead mechanical engineer for a new two-story 152,000 sq. ft. school. The building design promotes essentially every space in the facility as learning space. The project incorporates many sustainable concepts and technologies including extensive use of daylighting, LED lighting fixtures, a daylight harvesting/lighting control system, a ground coupled water source heat pump system, building automation system and water conserving plumbing fixtures.

**School District of the City of York Lindbergh Education Center - York, PA**
Served as lead mechanical engineer for a renovation to the district’s former administration building to convert the 24,611 square-foot building into an alternative education school for students in grades 9-12 that created nine classrooms, a dining room and administrative offices.
WESLEY L. STILES, PE  
Barton Associates, Inc.  
Director of Electrical Engineering, York

Wesley is an experienced electrical engineer and project manager that has more than 12 years of experience. As Lead Electrical Engineer, Wesley will lead and direct Barton’s electrical engineering staff that will be assisting him on this project and will attend engineering project team meetings. He will provide oversight of the design of all electrical systems for the project and will be an integral team member in assessing existing electrical systems and evaluating potential replacement options.

RELEVANT EXPERIENCE

Central York School District High School - York, PA  
Served as lead electrical engineer for this 52,344 sq. ft. addition that includes a 23,503 sq. ft. natatorium with an 8-lane pool and 2, 3,000 sq. ft. team rooms at the football stadium as well as classroom additions and expansion of the cafeteria. Designed included a geothermal heating and cooling system to improve the school’s energy efficiency as well as daylighting strategies involving light and occupancy sensors.

Chambersburg Area School District Senior High School - Chambersburg, PA  
Served as lead electrical engineer for 330,000 sq. ft. of additions and approximately 200,000 sq. ft. of renovations to accommodate 2,000 students at the Senior High School. Additions included a new sq. ft. gymnasium and fitness area that features an elevated track, weight rooms, fitness equipment rooms and locker rooms as well as science labs, library, technical education spaces, a greenhouse, cafeteria, art and music rooms and a tv recording studio. Renovations included the auditorium, classrooms and administrative offices.

Phoenixville Area School District Early Learning Center & Elementary School – Phoenixville, PA  
Serving as lead electrical engineer for a new two-story 152,000 sq. ft. school. The building design promotes essentially every space in the facility as learning space. The project incorporates many sustainable concepts and technologies including extensive use of daylighting, LED lighting fixtures, a daylight harvesting/lighting control system, a ground coupled water source heat pump system, building automation system and water conserving plumbing fixtures.

York Suburban School District Yorkshire Elementary School - York, PA  
Served as lead electrical engineer for a new 60,835 sq. ft. elementary school that includes classrooms, administrative offices, multi-purpose areas and computer rooms as well as a cafeteria, kitchen and gymnasium. The mechanical systems included a geothermal heat pump system and an evacuated tube solar domestic water heater. Earned LEED silver certification.

Warren County School District Warren High School - Warren, PA  
Serving as project manager and lead electrical engineer for a 146,253 sq. ft. renovation including dedicated classroom space for lab and storage/prep area for each Science discipline, classrooms located in clusters to facilitate collaboration, library in a more centrally located and easily accessible location, centralized administration, enhanced security, improved building circulation and day lighting, ADA accessibility and a connecting corridor for the main classroom wings. The project includes the complete replacement of all existing MEP systems including power, lighting, communications, geothermal heating and cooling, and fire protection. The project also included a substantial sustainable design component, including daylight harvesting, geothermal heating and cooling, rainwater collection tanks with greywater reuse, photovoltaic equipment, and an interactive sustainable technology reporting and learning station.
METROPOLITAN ACOUSTICS | ACOUSTICAL DESIGN

Metropolitan Acoustics is an acoustics, vibration, audio-visual, and information technologies consulting firm based in Philadelphia, Pennsylvania. The firm was founded in 1990 by the present owner and Principal Consultant, Felicia Doggett. In the firm’s 25 year history, we have consulted on over 2,200 projects.

We consult on a diverse selection of project types, including:

- Mission Critical Facilities
- Performing Arts Centers
- Healthcare Facilities
- Educational Facilities
- Corporate Facilities
- Hospitality and Convention Facilities
- Judicial Centers + Municipal Buildings
- Senior Living Facilities
- Houses of Worship
- Multi-Family Dwellings
- Sports Facilities
- Industrial Facilities

Metropolitan Acoustics, LLC is a member of the National Council of Acoustical Consultants (NCAC), Acoustical Society of America (ASA), National Systems Contractors Associate (NSCA) as a Corporate Independent Design Consultant, affiliate member of the American Institute of Architects (AIA) and a corporate sponsor of the local chapter of the American Society for Heating, Refrigeration and Air-conditioning Engineers (ASHRAE).

The firm’s Principal is Board Certified by the Institute of Noise Control Engineering (INCE) and the staff members of Metropolitan Acoustics hold a variety of other professional certifications including Professional Engineer (PE), Certified Technology Specialist (CTS), Crestron DigitalMedia Certified Designer 4K, Renkus-Heinz Iconyx Certified Designer, Listen Technologies Level 2 Hearing Loop Certified Consultant, Synergetic Audio Concepts graduate, and Cambridge Sound Certified Masking Expert.

Metropolitan Acoustics is a certified Women’s Business Enterprise (WBE) in the City of Philadelphia, the Commonwealths of Pennsylvania and Virginia, the States of New Jersey and Delaware, and the Port Authority of NY/NJ.

Our expertise includes the following:

- Interior room acoustics
- Sound isolation of interior partitions and building shell
- Noise and vibration control of mechanical, electrical, and plumbing systems
- Environmental noise studies
- Vibration and micro-vibration diagnostics and isolation
- Long-term sound and vibration monitoring
- Audio-Visual and sound masking system design
- Information Technology, data, security, structure cabling design
- Expert witness testimony
FELICIA DOGGETT
Metropolitan Acoustics
Principal Consultant

As the principal consultant and founder of Metropolitan Acoustics in 1990, Ms. Doggett brings over 25 years of experience to the firm. Her wide-ranging knowledge in architectural acoustics and noise control is an invaluable resource to her clients.

Ms. Doggett has been a presenter and panelist at various functions including the May 2015, June 2013, October 2012, April 2010, May 2009, and November 2008 meetings of the Acoustical Society of America; the American Institute of Architects conferences in November 2006 and October 2004; a 2015 Work Design Magazine sponsored event; and at local professional society meetings. She has also been a guest speaker at Drexel University, Philadelphia University, Arcadia University, and Moore College of Art and Design to familiarize students with acoustic design considerations. Additionally, she has served as an expert witness for many court cases involving noise.

Ms. Doggett spearheaded the formation of the Philadelphia Regional Chapter of the Acoustical Society of America and is currently serving as chapter chair. She has also served as a mentor to the Women in Architecture group of the local AIA chapter and the ACE (Architecture Construction Engineering) Mentor Program of Eastern Pennsylvania.

SELECT EXPERIENCE
Agnes Irwin School, Athletic and Student Life Center – Rosemont, PA
Bryn Mawr College, Goodhart Hall – Bryn Mawr, PA
Chestnut Hill Academy – Philadelphia, PA
Drexel University, Steinbright Center and URBN Center – Philadelphia, PA
Germantown Academy, New Middle School – Fort Washington, PA
Germantown Friends School, Science Building – Philadelphia, PA
Harriton High School – Rosemont, PA
Haverford College, Gooding Arena – Haverford, PA
Kensington CAPA High School – Philadelphia, PA
Kutztown University, Rickenbach Auditorium – Kutztown, PA
Lafayette College, Film and Media Studies Building – Easton, PA
Lower Merion High School – Ardmore, PA
Milton Hershey School – Hershey, PA
Rowan University, Pfleeger Hall – Glassboro, NJ
School of the Future – Philadelphia, PA
Springside Chestnut Hill Academy, Springside Renovation – Philadelphia, PA
Swarthmore College, Town Center West – Swarthmore, PA
Temple University, Baptist Temple – Philadelphia, PA
University of Delaware – Health Science Center – Newark, DE
University of Pennsylvania: Hill College House, ARCH Building, Stemmler Hall – Philadelphia, PA
University of Pennsylvania, Pennovation Center – Philadelphia, PA
Upper Dublin High School – Fort Washington, PA
Villanova University, Student Athletic Performance Center – Villanova, PA
SETH HARRISON
Metropolitan Acoustics
Senior Consultant

As the Manager of the Acoustics and Vibration Group, Mr. Harrison is responsible for ensuring the company’s high quality standards are reflected in all acoustical projects. His diverse career in acoustics ranges from architectural acoustics consulting to research and development of noise control techniques for jet engines. As a licensed professional engineer with field experience commissioning building systems, he has a firm grasp of constructability and cost implications related to noise and vibration control within buildings.

Complementing these technical skills with experience performing in live musical and dramatic productions, he understands the needs of performers and audiences alike. This well-rounded skill set enables him to provide clients with practical, successful acoustical designs for all types of facilities.

Throughout his career, he has given numerous technical presentations at Acoustical Society of America (ASA) and American Institute of Aeronautics and Astronautics (AIAA) conferences as well as seminars on topics such as acoustical theory, the acoustics of operating rooms, the acoustics of sustainable design, rooftop unit noise and vibration control, and jet noise reduction techniques. Mr. Harrison is also an Adjunct Professor of Acoustics at the Moore College of Art and Design and serves as Treasurer of the Philadelphia Chapter of the Acoustical Society of America.

SELECT EXPERIENCE

Coebourn Elementary School (LEED) – Brookhaven, PA
Cornell University, School of Hotel Administration – Ithaca, NY
East Stroudsburg University, Keystone Commons Building - East Stroudsburg, PA
Erdenheim Elementary School (LEED) – Erdenheim, PA
Ferguson Township Elementary School (LEED) – State College, PA
Fulton Elementary School (LEED) – Lancaster, PA
Kutztown University, Rickenbach Center, Kutztown, PA
Lafayette College, Mohican, and Film and Media Studies Buildings - Easton, PA
Martin Elementary School (LEED) – Lancaster, PA
Mount Nittany Elementary School (LEED) – State College, PA
Nitschmann Middle School – Bethlehem, PA
Penn State University, Burrowes Building – University Park, PA
Richard Stockton College, Presidential Boardroom – Galloway, NJ
Rutgers University Camden, Nursing and Science Facility – Camden, NJ
Springfield Township Middle School (LEED) – Oreland, PA
Temple University, Bell Building – Philadelphia, PA
Temple University, Science Education and Research Building – Philadelphia, PA
Temple University, Wachman Hall – Philadelphia, PA
University of Pennsylvania – Kleinman Center on Energy Policy – Philadelphia, PA
University of Pennsylvania, Biomedical Research Building – Philadelphia, PA
University of Pennsylvania, Pen Novation Center – Philadelphia, PA
University of Pennsylvania, Perelman Center for Political Science & Economics - Phila, PA

EDUCATION
BACHELOR OF SCIENCE, MECHANICAL ENGINEERING
Pennsylvania State University
MASTER OF SCIENCE, ENGINEERING MECHANICS
University of Cincinnati

LICENSES + CERTIFICATIONS
PROFESSIONAL ENGINEER

AFFILIATIONS
Acoustical Society of America (ASA)
Institute of Noise Control Engineering (INCE)
EDUCATION

BACHELOR OF ART, MUSIC COMPOSITION
Vassar College

LICENSES + CERTIFICATES

Certified Technology Specialist (CTS) - InfoComm International
Digital Media Certified Designer – (DMC-D 4K) Crestron Electronics
Certified Masking Expert (Cambridge Sound Management)

AFFILIATIONS

Audio Engineering Society (AES)

NATHANIEL GREEN
Metropolitan Acoustics
Associate Consultant

Mr. Green provides consulting services in addition to drafting, 3-D modeling and design assistance for Audio/Video and Sound Masking Systems. He has experience in acoustic modeling, sound system design, product research and computer network administration. Prior to joining our firm in June 2011, he served as an Associate Consultant at Worley Acoustics in Houston, Texas. While at Worley Acoustics, he constructed EASE models and AutoCAD drawings to aid in the design and analyses of houses of worship and school auditoriums.

Mr. Green is a member of the Audio Engineering Society and has completed the following training:
- Shure Advanced Wireless Microphone Seminar
- Synergetic Audio Concepts (Syn-Aud-Con) Sound Reinforcement Training for Operators
- Syn-Aud-Con Sound Reinforcement Training for Technicians
- Extron School of Emerging Technologies
- Essentials of AV Technology - InfoComm
- Ford Audio-Video Sound Mixing Seminar
- TFWM All-Day Hands-On Audio Workshop
- Renkus-Heinz Iconyx Certified Designer
- Level Two Hearing Loop Certified Consultant (Listen Technologies)

In addition to Mr. Green’s experience in A/V and acoustics, he is a trained musician. He received a Bachelor of Arts in Music Composition from Vassar College and has composed original music for independent films, documentaries, website trailers, and a private dance company. As a multi-instrumentalist, he has been involved in a variety of musical performance organizations.

SELECT EXPERIENCE

Agnes Irwin School, Athletic and Student Life Center – Rosemont, PA
Phoenixville Area School District – Phoenixville, PA
Haverford College, Gooding Arena – Haverford, PA
Kutztown University, Schaffer Auditorium - Kutztown, PA
Lawrenceville School, Fathers Building - Lawrenceville, NJ
Northley Middle School – Aston, PA
Saint Joseph’s University, Athletic Fields – Philadelphia, PA
Salus University, Library Renovation – Elkins Park, PA
Sussex Academy – Georgetown, DE
Temple University, Wachman Hall – Philadelphia, PA
University of Pennsylvania, New College House – Philadelphia, PA
University of Pennsylvania, Perelman Center for Political Science & Economics - Phila, PA
Villanova University, Student Athletic Performance Center – Villanova, PA
Wilkes University, Lawrence and Sally Cohen Science Center Building – Wilkes Barre, PA
William Tennent High School – Warminster, PA
Woodbridge High School – Woodbridge, DE

History of Firm | 2.31
MCFARLAND KISTLER & ASSOCIATES, INC. | FOODSERVICE DESIGN

McFarland Kistler & Associates, Inc. (MKA) is a fully disciplined food service facilities analysis, design and operations firm, independent of affiliation with any manufacturer, supplier or purveyor. Our experience and skills are well suited for any food service project. We are in our 61st year of business and are currently ranked in the top 10% of all Food Service Consultants, based upon the volume of specified equipment among all Food Service Consultants in the country.

FIRM DESCRIPTION

- We have ample staff and complete office facilities to perform services to suit defined project schedules. We have proven capabilities in completing complex projects on restricted time schedules when required.
- Our corporate headquarters are located in Pittsburgh, Pennsylvania.
- We are available for meetings on short notice, as travel is an everyday part of our routine. We have consulted on a wide array of projects from coast to coast.
- Our reputation has been built on personalized service regardless of the magnitude of the project.
- The completeness and accuracy of our contract documents have virtually eliminated food service related change orders (averaging less than one-tenth of one percent of the food service contract amount).
- Our expertise and experience afford us the opportunity to develop the most efficient, cost-effective design possible in attaining the Owner’s goals and objectives.

A sampling of the projects on which we have participated include churches, colleges, universities, hospitals, nursing homes, hotels, convention centers, arenas, institutions, prisons, clubs, office buildings, schools, vocational/technical facilities, restaurants and employees’ cafeterias.
**KENNETH M. KISTLER, FCSI**
McFarland Kistler + Associates

President / CEO

Mr. Kistler will serve as Principal/Project Manager throughout the entire project. Ken will handle all meetings/correspondence, generate conceptual designs, compile all equipment specifications, coordinate with all other disciplines, generate equipment estimates, and provide all quality control measures associated with the Contract Documents.

**SELECT EXPERIENCE COMPLETED WITH SCHRADERGROUP ARCHITECTURE**

- **Bristol Township School District, Bristol, PA**
- Brookwood Elementary School (New), Levittown, PA
- Mill Creek Elementary School (New), Levittown, PA
- Keystone Elementary School (New), Bristol, PA

**Central York School District, York, PA**
- Hayshire Elementary School
- Roundtown Elementary School
- Stony Brook Elementary School
- Council Rock School District, Newtown, PA
- Churchville Elementary School, Churchville, PA
- Goodnow Elementary School, Newtown, PA
- Holland Middle School, Holland, PA

**Derry Township School District, Hershey, PA**
- Hershey Middle School*
- Northwood Charter Development Group, Philadelphia, PA
- Northwood Academy Charter School
- Philadelphia School District, Philadelphia PA
- Lankenau High School

**Phoenixville Area School District, Phoenixville PA**
- Phoenixville Early Learning Center & Elementary School

**State College Area School District, State College, PA**
- Ferguson Township Elementary School, Pine Grove Mills, PA
- Mt. Nittany Elementary School, State College, PA

**Twin Valley School District, Elverson, PA**
- Twin Valley Middle School*

**Upper Merion Area School District, King of Prussia, PA**
- Caley Elementary School (New)
- Gulph Elementary School (New)

**York Suburban School District, York, PA**
- Valley View Elementary School (K-2)
- Yorkshire Elementary School (New)

*Represents facilities with a "Food Court" style servery. Partial listing - complete list of educational experience available upon request.
International Consultants, Inc. (ICI) is a professional consulting firm for the design and construction industries. ICI’s areas of expertise include cost estimating, and owner’s representative or project management services.

ICI is experienced in all levels of cost estimating, from preliminary feasibility estimates to bid document cost estimates. Other estimating services tailored to meet the individual client’s needs include: cost control systems, value engineering studies, bid negotiation and analysis, change order consultation, and capital reserve studies.

In the early stages of the development of a proposed project, ICI offers services for feasibility studies, preliminary budgets, and value management options. As the project evolves, we monitor the cost and schedule implications and provide hands on coordination within the project team to maintain a thorough and consistent progression toward a successful completion.

Our management program is based on close scrutiny of each phase of a project as to its economic impact and scheduling on the total project. Our ability to deliver unbiased and objective information in these areas enables the client to maintain firm control over the entire design and construction process.

ICI’s objective is to assist its clients in controlling construction costs and completing projects within a scheduled period while attaining the highest degree of quality. We offer a broad base of experience and have successfully acted as the Owner’s Representative and applied its various components to a diverse client base.

Projects for which we provide services include a full range of construction projects; new construction, renovations, restorations, additions and adaptive reuse for residential, institutional, commercial, monumental, LEED certified and everything in between. Projects range in construction value from a few thousand dollars to hundreds of millions of dollars.

Located in Old City, the historic district of Philadelphia, ICI was a pioneer and continues to be a leader in its specialized market. Founded in 1970, ICI has a proven track record of providing quality professional design and construction consulting services across the nation.
MICHAEL C. FUNK
International Consultants, Inc.
Senior Cost Estimator

EDUCATION
BACHELOR OF SCIENCE, CONSTRUCTION MANAGEMENT
Spring Garden College / 1977

ASSOCIATE OF SCIENCE, CONSTRUCTION ENGINEERING
Spring Garden College / 1975

MEMBERSHIPS/ASSOCIATIONS
American Association of Cost Engineers
Community Design Collaborative
National Trust for Historic Preservation
Preservation Alliance of Greater Philadelphia
Project Management Institute

AREAS OF EXPERTISE
Cost Estimating
Life-Cycle Cost Analysis
Value Engineering
Change Order Review and Negotiation
Claims Preparation and Expert Witness Testimony

- 35 years of experience in the development of budgetary, schematic, design development and construction document cost estimates.
- Coordinator of all in-house cost consulting assignments.
- Extensive background in value engineering and life-cycle cost analysis for projects implemented by both public and private school districts.

REPRESENTATIVE EXPERIENCE
Senior Cost Estimator for the Abraham Lincoln High School for the School District of Philadelphia which included demolition and reconstructions of the High School and Athletic Fields.

Senior Cost Estimator for the comprehensive renovation and additions to the Upper Moreland High School, Willow Grove, Pennsylvania, which included systems upgrades, reconfigurations/renovations and new addition for Science Labs and Administration.

Senior Cost Estimator for the new construction of the 1002,000 sf G Street Elementary School for the Philadelphia School District, in Philadelphia, PA

Senior Cost Estimator for the East Goshen Elementary School - Gymnasium Addition in West Chester, Pennsylvania, an initiative of the West Chester Area School District.

Senior Cost Estimator for a variety of projects for The Shipley School located in Merion, Pennsylvania. Assignments have included an addition to the Science Building, the new construction of the Middle School and the historic restoration of the Carriage House.
GARY E. LLOYD
International Consultants, Inc.
Project Estimator

AREAS OF EXPERTISE
Cost Estimating
Life-Cycle Cost Analysis
Value Engineering
Change Order Review and Negotiation

- 13 years of experience in design and construction consulting.
- Well versed in all aspects of general construction cost estimating for both private sector and public works initiatives.
- Experienced with a broad range of projects from small scale residential projects to mega-million dollar institutional facilities.

REPRESENTATIVE EXPERIENCE
Project Estimator for the 152,000 SF addition of the Early Learning Center and Elementary School for Phoenixville Area School District in Phoenixville, Pennsylvania. The addition had a cost of $52 million.
Project Estimator for the 50,000 SF renovation and 17,000 SF addition of the Fern Hill Elementary School for West Chester Area School District in West Chester, Pennsylvania. The addition and renovations had a cost of $16 million.
Project Estimator for the 61,000 SF renovation and 18,000 SF addition of the Churchville Elementary School for Council Rock School District in Churchville, Pennsylvania. The addition and renovations had a cost of $14 million.
Project Estimator for the 175,000 SF renovation and 34,000 SF addition of the Upper Moreland High School for Upper Moreland School District in Willow Grove, Pennsylvania. The addition and renovations had a cost of $32 million.
DOVER AREA SCHOOL DISTRICT

ARCHITECTURE + STRUCTURAL ENGINEERING: SCHRADERGROUP architecture LLC

David L. Schrader, AIA, LEED AP
MANAGING PARTNER / PRINCIPAL IN CHARGE

Bruce E. Buchhe, AIA
PARTNER / PRINCIPAL IN CHARGE; BUILDING SYSTEMS + QUALITY CONTROL

Harry J. Pettoni, REFP
PRINCIPAL, SENIOR PROJECT MANAGER

Thomas E. Forsberg, PE
PRINCIPAL, STRUCTURAL ENGINEERING

Courtney Anspaugh, RA
PROJECT MANAGER

Dan D’Amico, AIA, LEED AP
PROJECT ARCHITECT

Monique McCray, Assoc. AIA, LEED AP, CDT
DESIGNER / INTERIORS

Kelly Ryan, Assoc AIA, LEED Green Associate

Eric Weiss, Assoc AIA
DESIGNERS

CIVIL/SITE ENGINEERING: K+W Engineers

J. Mark Kurowski, PE
PRINCIPAL IN CHARGE / CIVIL ENGINEER

Jeffrey A. Shy, RLA
LANDSCAPE ARCHITECT

MEP ENGINEERING: Barton Associates

Michael C. Rader, PE, CEM
PROJECT MANAGER

Douglas C. Barnhart, PE
LEAD MECHANICAL ENGINEER

Wesley L. Stiles, PE
LEAD ELECTRICAL ENGINEER

COST ESTIMATING: International Consultants, Inc.

Michael Funk
SENIOR COST ESTIMATOR

Gary E. Lloyd
PROJECT ESTIMATOR

ACOUSTICAL DESIGN: Metropolitan Acoustics

Felicia Doggett
PRINCIPAL CONSULTANT

Seth Harrison
SENIOR CONSULTANT

Nathaniel Greene
ASSOCIATE CONSULTANT

FOODSERVICE DESIGN: McFarland Kistler + Associates

Kenneth M. Kistler, FCSI
PRINCIPAL IN CHARGE
we use our experience to deliver on time and within budget dynamic, unique and functional design solutions.

SCHRADERGROUP ARCHITECTURE PROJECT ARCHITECT DAN D’AMICO AND DESIGNER KELLY RYAN
MANAGEMENT OF DESIGN TEAM

SGA realizes that effective and efficient project management is the key to the successful completion of all design and construction work. We recognize that there are many aspects of a design and construction project that require careful and calculated approaches. To assure the Dover Area School District that the proper experience and expertise is devoted to your project, we assign Partners/Principals of SGA to serve as the leaders for your project.

In the case of the proposed project, Firm Founder and Managing Principal, David Schrader, will serve as an overall academic design lead while Principal Harry Pettoni will serve as Senior Project Manager. This experienced and creative commitment guarantees that your project receives the amount and kind of attention it requires.

COORDINATION OF DESIGN DISCIPLINES

At SGA, we use the most current edition of modelling software (Revit 2016) to maximize efficiency and take advantage of new technology incorporated into each software release. SGA has transitioned from independent design teams working on projects and coming together to integrate at design coordination meetings to full utilization of Building Information Modeling (BIM). The software we utilize combined with the integration of systems with our engineering consultants has allowed us to improve the effectiveness of our continuous coordination.

SGA endeavors to run clash detection software (such as Navisworks, or similar) on each project prior to key milestones and at the end of the project to ensure compliance with Level of Detail – LOD 300. Recently, SGA has initiated the use of A360 Collaboration for Revit on a number of projects in order to collaborate in real-time with consultants as well. The utilization of A360 Collaboration for Revit allows SGA to provide constant model updates as well as the ability to disseminate a more frequent flow of building information to all team members. This cloud-based collaboration technique eliminates delays in information transfer seen in previous BIM sharing processes and results in a more efficient design process.

To assure that coordination is occurring beyond the BIM process, SGA continues to utilize a distinct method to aid organization between architecture, engineering and any other required design disciplines. Under the daily guidance of a Firm Principal, project leaders
also will run monthly in-house design coordination meetings at which all consultants must be in attendance for drawing review and coordination. This review will take place amongst all team members at the 30%, 60% and 90% stages of construction document production. In addition to regular telephone and Skype contact, these meetings serve to facilitate the reciprocal discussion that maintains a high quality design process. It is the option of the Dover Area School District to participate in these sessions; however, we see the best project outcomes when Owner representatives participate at this level of detail.

QUALITY CONTROL AND PROJECT COORDINATION

The effectiveness of our quality control process is evident in the low change order rates experienced by many of our projects – many of which are well below industry standard. This can be attributed to the quality of our documents as well as our process for document control and follow-through on construction administration.

Quality is of such importance to us that we, in addition to the standard document review that we provide, assign a Firm Principal not associated with the design phase of the project to provide a full coordination review of all documents. SGA will do this at the 90% complete phase of all construction documents to include a fresh perspective and to ensure that the design team has incorporated all necessary items. The goal, of course, being to reduce any changes that might be required during construction.

The Principal and Project Manager assigned to the project will work closely with the Quality Control Reviewer during the review process as well as throughout the coordination of the architectural drawings and building systems documentation. We strive to build a strongly integrated team, knowing that a cohesive team approach is critical to the quality and success of a project.
PROJECTS WITH SIMILAR CHALLENGES
our strength lies in our ability to assess conditions and develop 

CREATIVE, Viable, SUSTAINABLE + COST EFFECTIVE SOLUTIONS
we use our experience to deliver on time and within budget dynamic, unique and functional design solutions
PROJECTS WITH SIMILAR CHALLENGES

Below and on the following page please find a list of SGA projects from the past 5 years that involved challenges similar to that of Dover Area School District. All projects listed below involved intensive interaction with the community and district administration throughout the planning and design process. They additionally were either new construction or major renovation/addition projects that required extensive site analysis along with a series of presentations to administration and, often times, the community as well. In each of the projects listed, SGA was involved from the programming and conceptual design phases of the project through to construction.

None of the projects listed involved any claims, disputes or arbitration proceedings.

BRISTOL TOWNSHIP SCHOOL DISTRICT, LEVITTOWN, PENNSYLVANIA
Brookwood Elementary School, New Facility
Keystone Elementary School, New Facility
Mill Creek Elementary School, New Facility

COUNCIL ROCK SCHOOL DISTRICT, NEWTOWN, PENNSYLVANIA
Goodnoe Elementary School, Additions and Renovations
Holland Middle School, Additions and Renovations

from initial visioning and project planning, to architectural design, construction review and guidance to the date hereof,

SGA HAS BEEN AN EXCEPTIONAL AND VALUED PARTNER OF THE SCHOOL DISTRICT

ANGELA M. NOBER
President, Board of School Directors
Bristol Township School District
the SGA team demonstrates good listening skills, addresses the needs of the owner, has great problem solving skills and

**PROVIDES TRUE VALUE TO ANY PROJECT**

DOUGLAS TAYLOR
Supervisor of Operational Services
Council Rock School District
SIMILAR PUBLIC SCHOOL PROJECTS
REPRESENTING A QUARTER-CENTURY OF INVOLVEMENT IN DESIGN FOR EDUCATION

the SGA team offers specific, relevant experience
we use our experience to deliver on time and within budget dynamic, unique and functional design solutions
Representing a quarter-century of involvement in design for education, the SGA team offers a wide range of project experience that spans from feasibility studies and master planning to renovations, additions and new facility design. Specific areas of expertise include:

- Creative “student-centered” educational design, programming and planning
- Sustainable design – LEED certified projects
- Consensus-Based Planning Processes – information gathering / brainstorming sessions / charrette design

In the pages that follow, please find five similar public school projects completed by the firm. These projects represent a small sampling of our overall portfolio, which we will be happy to share with your District.
Central York High School is a 386,000 SF (divided among two phases of projects) complex that takes “Breaking Ranks” educational principles and adapts them to create an Academy structure that provides a traditional high school experience for ninth and tenth grade students while offering the option to attend one of four career academies to eleventh and twelfth grade students. The new Central York High School consists of four academies: Arts and Humanities; Business/Finance/Information Technology; Health and Human Services; and Science and Industry. The academies emphasize school-to-career opportunities, incorporate the small schools/school within a school concept, offer “real world” connections for the students and instructors, and provide a flexible structure that allows for acceleration of articulation, alternative learning venues and alternative modes of teaching and learning.

The facility design was part of a comprehensive site design project that included a significant realigning of a major PennDOT roadway. Site amenities include a football stadium with internal team lockers and synthetic track and field, a soccer stadium, competition baseball field, tennis courts, and a variety of other competition and practice fields.

Although the design embraces a sustainable approach, the District elected not to pursue a LEED rating. Sustainable initiatives include the utilization of a ground source heat pump heating and cooling system, daylighting strategies with light and occupancy sensors, waterless urinals, and the use of low-emitting and sustainable materials.

Following the completion of the High School in 2005, the District experienced unprecedented growth and required an addition of 52,344 SF to provide more classroom space. The additions were designed to continue to support an Academy structure and embrace the same sustainable approach as the existing building. The District elected to, at the same time, add a 23,503 SF natatorium that includes an 8-lane competition class pool with movable bulkhead as well as supporting amenities to allow for accommodating District swim and diving meets.

New facility completed by principals of SGA while employed by another firm.
The facade broken down into manageable, human-scale elements.
FAR LEFT: The Central York Panther. UPPER LEFT: Furniture designed for casual context. RIGHT: Academy student project areas. LOWER LEFT: Typical instructional area.
Built in 1948, the High School for Engineering and Science serves as a science, engineering and technology magnet school for the School District of Philadelphia. This project focused on rearranging space programmatically, completely renovating the entire facility and adding approximately 40,000 SF to address significant deficiencies.

Maximizing the ability of the school’s design to function as a teaching tool was a main goal of the project. Also, the project served as the District’s pilot green school project; however, the District ultimately decided not to pursue LEED Certification. Sustainable measures taken in site design included the reduction of impervious coverage by twenty five percent, the addition of an underground infiltration basin, landscaping with native plants requiring no irrigation, and night sky-friendly lighting. Within the building, sustainable measures include the use of low emitting and recycled content materials, FSC-certified wood, and water saving fixtures.

The approach to the design of the facility is unique in that it utilized a dynamic community planning process, which directly involved the community, faculty, students, administration, and local design professionals in the brainstorming process and charrette design.
New student entry flanked by public use spaces.
FAR RIGHT: Media Resource Center reading area. UPPER: Engineering lab. LOWER: Gymnasium.
In this project, 61,485 SF was added to the existing 122,789 SF Middle School, significantly expanding the classroom areas as well as all core and support spaces. The grade structure was realigned and new site circulation patterns were required as a result. The education design strives to achieve the “school within a school” concept by centering the organization on a learning and media center, and the new additions work to complement and enhance the existing aesthetic of the building. The addition of two artificial turf playing fields were also included as part of the project.
Blending of the additions with the existing building.
Similar Public School Projects

UPPER LEFT: Science lab. RIGHT: Student commons and dining. LOWER LEFT: Expanded athletic program.
View to court from dining.
View of Twin Valley Middle School synthetic turf athletic field, grand stands with Press Box and Maintenance Facility beyond.
Yorkshire Elementary School is a 60,835 SF new facility designed to accommodate 350 K-2 students. Two main goals for the design of the school include its ability to support the “school within a school” concept and its ability to function as a teaching tool. To facilitate the former, spaces were designed to allow for interaction and learning opportunities in a cross-grade instruction format. To facilitate the latter, features such as exposed mechanical systems, mechanical system monitoring devices, and detention pond wetland plantings were included.

Additionally, the facility features a “Main Street” that runs the length of the school and serves as a divider between the public and academic spaces. The media center functions as the core of the school, with all other academic spaces radiating out from it.

Employing steel frame construction with brick veneer and metal panel systems, the facility incorporates a substantial amount of curtain wall and storefront glazing to maximize natural day light. The new facility utilizes a ground source heat pump and solar hot water heater for efficient heating and cooling and, further contributing to the LEED Silver certification, reuses materials salvaged from the school that existed previously on the same site, including wood floors, trim and slate roofing shingles.

PROJECT OF DISTINCTION (completed project) | Council of Educational Facility Planners International Northeast Region 2011

CITATION OF EXCELLENCE | Learning by Design 2011

PROJECT OF DISTINCTION (project in progress) | Council of Educational Facility Planners International Northeast Region 2009

OUTSTANDING PROJECT | Learning by Design 2009

CASE STUDY | Evidence-Based Design of Elementary and Secondary Schools
Bus entry and gymnasium facade from the northwest.
FAR LEFT: Detail of gymnasium facade. UPPER LEFT: Media center looking towards the learning court. RIGHT: Gymnasium facade, from southwest, with ‘Mandrian’ wall panel detail. LOWER LEFT: Courtyard view looking north, showing reused chalkboards salvaged from the original school building on site.
SGA was engaged to complete a District-Wide Feasibility Study for the Bristol Township School District (BTSD) that included existing facility assessments of nine elementary schools, three middle schools and a high school. The facility assessments and feasibility study, along with an independent demographics analysis performed by DecisionInsight, led the district to a conclusive direction for major District-wide capital improvements. After extensive evaluation of options and District cost impacts, it was determined that three new elementary schools would be developed to replace the nine existing and aging elementary structures and subsequently provide significant savings for the future.

SGA developed the three elementary schools as sister schools of the same design. Each building functions as a school-within-a-school serving a total population of 1300 students. The school-within-a-school concept supports two distinct student bodies: a K-2 program and a 3-5 program. The two programs are served by a common core of facilities that provide all support needs for both programs.

Incorporating sustainable measures that include ground source heat pump system, recycled/renewable materials, rain gardens, high-efficiency building envelope, and dimmable/daylight-controlled lighting systems, the District also is reducing overall energy usage by consolidating the population of three inefficient buildings into one highly-efficient facility.

Through consensus-based planning, SGA and BTSD successfully integrated a large group of stakeholders in the ultimate design of the facilities.

---

**THREE ELEMENTARY SCHOOLS | NEW FACILITIES**

Bristol Township School District, Levittown, Pennsylvania

---

**CONSULTANTS INVOLVED**

International Consultants, Inc.
McFarland Kistler & Associates

**STAFF INVOLVED**

David L. Schrader
Bruce E. Bachtte
Dan D’Amico
Monique McCray
Kelly Ryan
Eric Weiss
Thomas E. Forsberg

**SIZE**

140,400 SF each facility / 420,000 SF total

**CONTACT / OWNER**

Dr. Melanie Gehrens, Superintendent
215.943.3200

**PROPOSED / ACTUAL BUDGET + SCHEDULE**

**BROOKWOOD ELEMENTARY**

$32 million / $33.4 million
December 2015 / August 2016

**MILL CREEK ELEMENTARY**

$32 million / $33.5 million
December 2015 / August 2016

**KEYSTONE ELEMENTARY**

$32 million / $36.2 million
July 2016 / August 2016

**CHANGE ORDERS NOT REQD BY OWNER (COST / % OF PROJ COST)**

$1,603,358 / 1.6%

**CONTACT / AWARDED CONTRACT AMT FOR EACH PRIME CONTRACTOR**

**GC:**

Boro Developers Inc. – Frederick J. Shapiro - 610.272.7400
Brookwood and Mill Creek:
$42,890,250

Ernest Bock & Sons – Gerry Glenn –
215.677.2625
Keystone: $23,285,000

Food Service: Todd Devin Food Equipment Inc. – Todd. D. Devin -
215.321.8877
Brookwood and Mill Creek:
$1,154,000
Keystone: $592,000

Fire Protection: S.A. Comunale – Joe Geary – 856.848.4666
Brookwood and Mill Creek: $773,700
Keystone: $385,125

Plumbing: Bofinger & Breslin Plumbing Contractors – Tom Bofinger –
215.288.3550
Brookwood and Mill Creek: $2,418,900
Keystone: $1,169,000

HVAC:

DWD Mechanical – Dave White –
610.328.0820
Brookwood and Mill Creek: $11,948,025
Devine Brothers – Richard Devine –
484.674.8500
Keystone: $6,620,000

Electrical:

QPI Electrical Co., Inc. – Deborah R. Warr – 215.949.1592
Brookwood and Mill Creek: $7,690,000

MBR Construction Services – David Henne – 610.926.1490
Keystone: $4,187,000

---

**OUTSTANDING DESIGN | American School & University Architectural Portfolio 2015**

**OUTSTANDING DESIGN | American School & University Educational Interiors Showcase 2016**

---

4.26 | SCHRADEGROUP architecture
our team contributes

A DISTINCTIVE APPROACH for developing appropriate solutions to unique challenges
we use our experience to deliver dynamic, unique and functional design solutions
CONSULTANT TEAM

In addition to the skills and capabilities the SGA team offers, we also consider our ability to organize cohesive and experienced project teams that support each client’s specific needs as one of our greatest strengths. We recognize the importance of an integrated architecture and consultant team to your process and have carefully chosen a comprehensive team that will provide the resources needed to fulfill the goals of the Dover Area School District.

<table>
<thead>
<tr>
<th>CONSULTANT</th>
<th>DISCIPLINE</th>
<th>NO. OF PROJECTS COMPLETED WITH SGA</th>
<th>TOTAL PROJECT VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>K+W Engineers</td>
<td>Civil/Site Engineering</td>
<td>0*</td>
<td>0</td>
</tr>
<tr>
<td>Barton Associates</td>
<td>MEP Engineering</td>
<td>32+</td>
<td>$163.6 million +</td>
</tr>
<tr>
<td>Metropolitan Acoustics</td>
<td>Acoustical Design</td>
<td>8</td>
<td>$220.1 million</td>
</tr>
<tr>
<td>McFarland Kistler + Associates</td>
<td>Foodservice Design</td>
<td>24+</td>
<td>$450 million +</td>
</tr>
</tbody>
</table>

* Although SCHRADERGROUP architecture has not yet completed any projects with K+W Engineers, we selected them to be on our project team for two reasons:
  1. K+W has existing experience completing projects in the Dover Area School District.
  2. A principal of SGA worked with K+W on 5 previous major construction projects totalling over $160 million.
SGA EMBRACES 21ST CENTURY LEARNING ENVIRONMENT DESIGN

and is proud of the facilities we’ve developed as a result
FLOOR PLAN | PHOENIXVILLE EARLY LEARNING CENTER AND ELEMENTARY SCHOOL

FIRST FLOOR
1 GYMNASIUM
2 ADMINISTRATION
3 LEARNING SPACES*
   EACH LEARNING SPACE AREA IS COMPRISED OF GROUP LEARNING AREAS AND LEARNING STUDIOS (SEE INSET)
4 GROUP LEARNING AREA
5 LEARNING STUDIO
6 LEARNING RESOURCE CENTER
7 MUSIC
8 NURSE
9 SUPPORT
10 DINING
21ST CENTURY DESIGN PHILOSOPHY

SCHRADERGROUP architecture embraces 21st century learning environment design and is proud of the facilities we’ve developed as a result. We work closely with each client group through our collaborative approach to understand the desired outcome of the district, to engage each Owner’s ideas with the twenty-first century learning trends we see in the industry through our broad exposure via A4LE (Association for Learning Environments), and to integrate all components into contemporary learning environments capable of supporting the needs of the next generation of learners AND becoming the community centers that schools (community-funded institutions) should be. To that end, we have developed a number of twenty-first century learning environments that are integrated into the community. Select examples include:

CENTRAL YORK HIGH SCHOOL - The principals of SGA designed the present Central York High School* and, later, an addition completed by SGA. We worked closely with the principal, District Administration and the community to develop a career academy high school to function as a true center of the community. The facility accommodates the portfolio-based and flexible learning requirements of tomorrow’s student, and supports an “anywhere/ anytime” learning strategy. Of utmost importance was providing the flexibility for technology integration as well as spaces that flow from one learning community to another. The movement of learning from “teacher-based” in learning studios to individual, project-based learning in student work areas is most apparent in the arts wing where there are no doors hindering movement between spaces. The community use of the facility is supported by individual entries to both the athletics and the performing arts portions of the building. The athletics portion of the facility supports community use before and after school in the natatorium and wellness spaces while the performance portion supports full community-based performances and is used as one of the premier venues in the York area.

YORKSHIRE ELEMENTARY SCHOOL – The SGA team worked closely with the York Suburban School District to develop an early learning center for twenty-first century learners. Located on a semi-urban site, playing fields are thoughtfully oriented on the residential side of the site, providing a green space for the neighborhood. Following a four-day design workshop that included parents, teachers, community members and students, the design team created a small schools cluster of classroom structures focused around and accessed through the media center space. Emphasizing a focus on literacy, all students must pass through the media center stairway to access classrooms on the second floor. Each classroom cluster is comprised of various educational community components including traditional academic spaces combined with small group learning spaces that are cloistered around a learning commons. A large gymnasium and dining common space is available for community use after school hours.

PHOENIXVILLE EARLY LEARNING CENTER + ELEMENTARY SCHOOL – The SGA team included a multitude of 21st century learning environment concepts to develop one of the most flexible K-12 educational structures in the Commonwealth, providing internal learning communities of all scales to serve the needs of students of the next generation. Every learner must access their flexible and adaptable learning environments through the “living room” media center space. In the reading area, with no structured walls surrounding the space, every book is on display for use at all times. The dining space is separated only by a glass partition so that “foods” instruction can be integrated into the tactile learning opportunities available to students. Vegetables grown by the students in garden areas will be used in the preparation of food to emphasize a farm-to-table concept. Designed through a collaborative process, the facility includes a middle school-size gymnasium for community use and an extensive community-focused playing field complex. The team also worked with the Chester County library program to develop a library that can be used by the greater community.

(*designed by principals of SGA while employed with another firm)
GEOGRAPHIC LOCATION
GEOGRAPHIC LOCATION

The Lancaster office of SCHRADEGROUP architecture is located 36.5 miles from the District’s site at 4500 Intermediate Avenue, Dover, Pennsylvania.
ADDITIONAL INFORMATION

CONSENSUS-BASED PLANNING

We firmly believe that, in planning and architecture, the process of getting to the end result is as important as the end result itself, and that the client is a critical component. Through experience, we’ve learned that involving client and building end user representation as well as the community as a whole in the design process produces amazing results.

This approach – consensus-based planning – is the foundation from which we begin our work. Through information gathering and sharing sessions, brainstorming workshops and design charrettes conducted with both the professional design team and the client group involved, we find we reach creative and appropriate solutions that are better conceived than they might be utilizing a traditional Architect/Owner approach. By engaging the client in this interactive process of workshop planning, programming and design, we produce designs that go beyond the basic and deliver a level of detail that enhances the day-to-day experience for all users.

To achieve the initial goal of analyzing the Intermediate School site and developing a schematic design as well as cost estimate for the new high school, a consensus-based planning approach would be a vital benefit as the method allows for input and information sharing by ALL from the very beginning, and the buy-in to and ownership of the final design is beyond any that might develop otherwise.

While a final presentation to a school board still occurs, it is conceivable that some or all of the board will have been involved in the process to that point. As a result, the likelihood of the design being accepted is high, as the decision-makers were involved in the actual design process and instrumental in arriving at the final concept.

FORMATION OF A DESIGN COMMITTEE | Integration of client and building end user representation as well as the community as a whole is key to developing the most effective outcome for the facility design. SGA emphasizes the importance of a collective whole – not just the designers – making the decisions for design. After all, it is the client’s building in the end.
INFORMATION GATHERING | To gather important and necessary information, we tour the District’s existing facility and proposed site with the Design Committee and the entire consultant team to understand present and future needs and uses. This generates a shared awareness among the team and additionally provides a sense of the potentials for the project. We then conduct a “best practices workshop” to showcase state-of-the-art educational facilities internationally. This series of events provides all parties with a baseline upon which to develop the project. If the team deems it helpful, we will tour a series of similar facilities together to develop a shared perspective of what your project might be.

PROJECT TOUCHSTONES WORKSHOP | We conduct a Project Touchstones Workshop with the Design Committee focusing on collaboratively developing the team’s collective goals as well as the vision for the project. We also, at this time, evaluate the District’s sustainable design interests and goals.

DESIGN CHARRETTE WORKSHOP | We conduct an intensive consensus-based design charrette session for the project. SGA is a skilled facilitator for design charrettes of any size and works to develop a unified approach to the design of a project. This workshop WILL result in a concept or concepts with which to initiate the design process.

REFINEMENT WORKSHOP | The entire SGA team participates with the balance of the team in a Refinement Workshop, which allows the District to collectively react to a fully-developed concept for the project. The concept (or concepts, if required) will be honed in this workshop presentation so the design team can recess and begin initial modeling.

INDIVIDUAL SPACE DESIGN WORKSHOP | While the traditional design team (inclusive of the District) meetings occur throughout the process to keep everyone in tune with overall status, a specific set of workshops occurs during the early Design Development process to further define the individual spaces within the facility. The entire SGA team (inclusive of engineers/consultants) will meet with individual departments to view the spaces in 3D and to develop interiors.

In summary, and given the amount of time and thought already devoted to the High School project by the District, a process such as ours is extremely beneficial as it serves as an efficient and effective means of synthesizing your goals and known information into a solution that, because it was attained by consensus, is well-accepted and widely-supported.