Proposal
for
Construction Management Services
for the State High Project
State College Area School District

June 4, 2014

Submitted by Reynolds Construction, LLC

3300 North Third Street
Harrisburg, PA 17110
www.Reynolds-Companies.com
<table>
<thead>
<tr>
<th>Tab</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cover Letter</td>
</tr>
<tr>
<td>2</td>
<td>Project Team</td>
</tr>
<tr>
<td>3</td>
<td>Project Approach/Strategies</td>
</tr>
<tr>
<td>4</td>
<td>LEED and Commissioning Expertise</td>
</tr>
<tr>
<td>5</td>
<td>BIM Experience</td>
</tr>
<tr>
<td>6</td>
<td>Example Site Logistics Plan</td>
</tr>
<tr>
<td>7</td>
<td>Value Engineering Approach</td>
</tr>
<tr>
<td>8</td>
<td>Change Order Management</td>
</tr>
<tr>
<td>9</td>
<td>Project Experience</td>
</tr>
<tr>
<td>10</td>
<td>Fee Proposal</td>
</tr>
</tbody>
</table>
TAB 1: Cover Letter
June 4, 2014

Mr. Ed Poprik  
Director of Physical Plant  
State College Area School District  
131 West Nittany Avenue  
State College, PA 16801  

Dear Ed:  

Congratulations on your recent referendum approval to borrow funds for your State High Project. As the second school district in the Commonwealth to garner public votes successfully, it confirms the District’s two-year efforts in communicating your goals. Like the community showing their support and confidence in the District’s direction, we too are poised to communicate and deliver a quality high school construction project.

Reynolds is greatly interested in collaborating with the administrators, school board officials, the Citizen’s Advisory Committee, staff, and students of the State College area. As you consider our qualifications, please note the following strengths of our organization:

- Completion of over $2 billion in public school construction; Pennsylvania public schools account for 75% of our workload.
- Twenty years of experience working with Crabtree, Rohrbaugh & Associates on over 17 projects, of which more than half were schools.
- Adeptness at providing significant opportunities for savings and cost avoidance during the pre-construction and bidding phases.
- History with projects requiring multi-phased renovations. The goal is for efficient phasing that avoids disrupting educational operations and provides a safe environment.
- Familiarity with working on projects in and around the State College area. Reynolds worked on both the State College Area School District campus and the Penn State campus.
- Experience managing LEED projects, such as the first LEED platinum and LEED Gold certified school buildings in Pennsylvania.
- Ability to provide building commissioning to enhance the design of your projects and provide for future operational cost savings.

Reynolds has worked for over 70 school districts in Pennsylvania. Please call our references. We are confident they will speak of our dedication and determination to provide a successful project completed on time and within budget.

Thank you for inviting us to submit this proposal. We look forward to discussing your project with you and managing the construction of your high school.

Sincerely,

REYNOLDS CONSTRUCTION, LLC  

[Signature]

Damion Spahr  
Vice President, Project Executive

3300 North Third Street, Harrisburg, PA 17110  
Phone: 717.238.5737  
Fax: 717.238.9410  
www.Reynolds-Companies.com
TAB 2: Project Team
Project Team

Background

The foundation of Reynolds Construction is in serving client needs and solving problems. Since 1994, we have grown from a small construction management firm that focused on public school projects to become one of the largest and most successful construction firms in Pennsylvania. Reynolds has provided construction management and related services to 73 Pennsylvania school districts, including 54 high school, 35 middle schools, and 78 elementary schools.

In the 20 years since the formation of Reynolds, we have matured into a multi-faceted organization that annually manages or constructs over $300 million worth of construction-related projects. Today, in addition to the public construction market, Reynolds now serves clients in a wide variety of sectors, including universities, healthcare, corrections, government, industrial, hospitality, and transportation.

Reynolds is a strong believer that sustainable design and construction are important means of reducing the impact of the construction industry on the ecosystem. By incorporating the use of renewable materials, recycling, lower energy consumption, and minimizing environmental impact, the USGBC’s LEED program is leading the way in which these principals can be incorporated into real construction projects. With 15 LEED certified and one LEED registered buildings, as well as nine LEED accredited professionals on staff, Reynolds can assist in the design and construction of your LEED project.

Staff Overview

Reynolds has over 100 construction professionals on staff providing an array of services in-house. Our preconstruction department, which includes architectural, civil, electrical, and mechanical experts, can provide the State College Area School District with invaluable input during budgeting, value engineering, scheduling, and phasing of your project. Our construction department includes project managers, on-site construction managers, and project coordinators, who as a team provide firm control over the construction phase of your project. Our building commissioning experts can ensure your building systems are performing properly by testing and inspecting your equipment. In addition, we can provide cost-effective approaches to energy savings including identifying energy-saving technologies and practices, upgrading aging equipment, reducing maintenance expenses and utility bills, and improving occupant comfort. Finally, Reynolds can assist State College Area, if needed, with restoration services for emergency related projects from minor smoke and water damage, to extensive restoration and reconstruction. Reynolds has successfully completed all types of projects. We have a team of restoration and construction professionals second-to-none in the industry.

This diverse in-house capability serves as the infrastructure of Reynolds - allowing our clients the ability to obtain these services from one source. This helps minimize some burden throughout the complex building process.

“They (Reynolds) find ways at every turn to help us stay on budget and to navigate changes while keeping the project moving … They understand the importance of how to keep a school properly functioning during phased, occupied construction.”

Donald Blake
Facilities Director
Phillipsburg-Osceola Area School District

State High: The Next 50 Years

www.Reynolds-Companies.com
Staff members take great pride in their record of successfully completing projects on-time and within budget. To maintain this high level of achievement, Reynolds’ staff is encouraged to continue their education, both through in-house training as well as external instruction. Additionally, many Reynolds employees maintain memberships in numerous technical and professional associations.

In 1994, Reynolds instituted a quality enhancement program, which allows for total quality management on every project. It encourages constructive feedback from job site personnel to learn new ways to solve construction problems. The program is built on a clear understanding of what is expected from members of the project team, including contractors and suppliers.

In the end, the goal is to have a satisfied customer. Throughout the course of a relationship with a client, Reynolds strives to resolve each and every issue as it arises, so that the client ends up with a high quality project that meets their needs. To this end, Reynolds pledges to do whatever it takes to make sure clients are completely satisfied with their projects.

Memberships and Affiliations

Reynolds is a member of the Pennsylvania Association of School Business Officials.

Reynolds is a member of the Construction Management Association of America.

Reynolds is a proud supporter of the United Way and has earned its Campaign Excellence award every year since 2004.
Project Team

The Project Team
The proposed project team consists of top-level construction professionals who will provide the best possible service to the State College Area School District for your upcoming project.

**Damion Spahr** will lead this project team and provide executive level communication and management as the principal for the project. He will provide leadership to the project team throughout all phases of the project.

Through the preconstruction phase, **Walt Tack, P.E., LEED AP**, senior preconstruction manager, will prepare a detailed construction cost estimates, value engineering studies and oversee detailed constructability reviews. Since 1994, 90 percent or greater of Walt’s project estimates have been constructed for less than the initial project budget; thanks in part to a detailed database of historical information on similar projects. He will be supported by Reynolds’ in-house senior mechanical estimator **John Miller** and electrical estimator **Joe White**. In addition, Walt, John and Joe will review the construction bid documents to make certain that the work requirements are clear and the documents are coordinated.

Also part of the preconstruction team will be project scheduler **Tom Richards**. His first duty will be to create and manage a preconstruction schedule. Tom will prepare a CPM schedule that integrates critical design and construction activities, illustrates required project approvals and durations for design reviews. Tom will be instrumental in preparing a preliminary CPM construction schedule based on the project phasing details prepared by his colleagues. In construction he coordinates project milestones and required phasing with critical review and approval activity links, and identifies sequences and relationships for critical submittals and shop drawings.

Once the construction phase of the project begins, Damion will continue to play an active role in the management of the project, and will oversee the fulltime, on-site, project management responsibilities of **Tim Sullivan**. As a senior project manager, Tim will support the preconstruction phase services and will then be responsible for the oversight of project operations and construction phase activities including all leadership and administrative activities to assist in the successful completion of the project. He will monitor the progress of work, facilitate information from the design team, process payment requests and change orders, and manage the close-out phase duties.

To accompany Tim, Reynolds has selected **Stephen Reckhart** as the fulltime on-site superintendent. He will be responsible for oversight of daily project operations and construction phase activities. By working daily on the project site, he will provide day-to-day oversight of operations and construction activities to ensure that the project is safe, secure, and constructed in a quality manner. Project engineer **Justin Carper, E.I.T.**, will join Tim and Stephen on the site. He will be responsible for information management, document control, and select field assignments.

On the following pages we have included a project organization chart and detailed resumes for the key project staff proposed for your project.
Project Team

State College Area School District

Crabtree, Rohrbaugh and Associates

Clerk of the Works

Jeff Merritt, CCM
President

Damion Spahr
Project Executive

Preconstruction Phase

Walt Tack, P.E., LEED AP
Senior Precon Manager

John Miller
Mechanical Estimator

Joe White
Electrical Estimator

Tom Richards
Project Scheduler

Construction Phase

Tim Sullivan
Senior Project Manager

Stephen Reckhart
On-Site Superintendent

Justin Carper, E.I.T.
Project Engineer

Project Coordinator

Technical Support: Mechanical, Electrical, Plumbing Designers and Engineers, BIM Support, LEED Support

State High: The Next 50 Years

Reynolds

www.Reynolds-Companies.com
As President of Reynolds Construction, Mr. Merritt oversees the day-to-day operations of the construction management division including administration, business development, project management, and staffing.

**Project Experience**

**Bellefonte Area School District**
Bellefonte, PA
- Additions/renovations to Bellefonte Area High School
  Construction Cost: $30.1 million

**Harrisburg School District**
Harrisburg, PA
- Additions/renovations to John Harris High School
  Construction Cost: $49.6 million

**Mifflinburg Area School District**
Mifflinburg, PA
- Additions/Renovations to Mifflinburg High School
  Construction Cost: $13.1 million

**York County School of Technology**
York, PA
- Additions/renovations to a career and technical school
  Construction Cost: $37 million

**East Stroudsburg Area School District**
East Stroudsburg, PA
- Additions/Renovations to Senior High School
  Construction Cost: $77.9 million

**Mifflin County School District**
Lewistown, PA
- New construction of the Mifflin County High School
- Renovations to Indian Valley Elementary School
  Construction Cost: $56.5 million

**Central York School District**
York, PA
- Construction of new Central York High School
  Construction Cost: $48 million

---

**Education**
Bachelor of Architectural Engineering, Construction Management, Pennsylvania State University, 1985

**Affiliations**
Certified Professional Constructor, American Institute of Constructors, 2003
Certified Construction Manager, Construction Management Association of America, 2003

**Years of Experience**
29
Selinsgrove Area School District  
Selinsgrove, PA  
- Additions/renovations to High School and Elementary School  
  Certified LEED gold  
Construction Cost: $21.2 million

Armstrong School District  
Kittanning, PA  
- Construction of new Armstrong High School  
Construction Cost: $50 million

Manheim Central School District  
Manheim, PA  
- Additions/renovations to Manheim Central High School  
Construction Cost: $17.4 million

Elizabethtown Area School District  
Elizabethtown, PA  
- Additions/Renovations to East High Elementary School  
- New Construction of Bear Creek Intermediate Elementary School  
Construction Cost: $30.1 Million

Clearfield Area School District  
Clearfield, PA  
- Additions/renovations to Clearfield Area High School  
Construction Cost: $30 million

Eastern York School District  
York, PA  
- Additions/renovations to Eastern York High School  
Construction Cost: $35.5 million

Northern Bedford County School District  
Loysburg, PA  
- Additions/renovations to Northern Bedford Middle School and High School  
Construction Cost: $15.6 million

Philipsburg-Osceola Area School District  
Philipsburg, PA  
- Conversion of North Lincoln Hill Elementary School into a middle school  
Construction Cost: $17.6 million
As project executive, Mr. Spahr is responsible for executive level management and communications. He will provide leadership to the project team throughout pre-design, pre-construction, construction, and close-out phases.

**Project Experience**

**Neshaminy School District**  
Langhorne, PA  
- Additions/renovations to Neshaminy High School  
  Construction Cost: $72.4 million

**Marple Newtown School District**  
Newtown, PA  
- Additions/renovations to Marple Newtown High School  
  Construction Cost: $48.9 million

**Centennial School District**  
Warminster, PA  
- Complex, occupied renovations and additions to William Tennent High School, including a new natatorium  
  Construction Cost: $63.4 million

**Philipsburg-Osceola Area School District**  
Philipsburg, PA  
- Conversion of North Lincoln Hill Elementary School into new middle school  
  Construction Cost: $18 million

**Radnor Township School District**  
Wayne, PA  
- Construction of new Radnor Middle School  
  *Certified LEED Silver*  
  Construction Cost: $41.1 million

**Phoenixville Area School District**  
Phoenixville, PA  
- Construction of new middle school and district administration office  
  Construction Cost: $56 million

**School District of Philadelphia**  
Philadelphia, PA  
- Adaptive re-use program for centralized District Administration Offices  
  Construction Cost: $90 million

**Education**  
Bachelor of Architectural Engineering, Construction Management, Pennsylvania State University, 1992

**Affiliations**  
Member Construction Management Association of America, 2003

**Years of Experience**  
22
Wallingford-Swarthmore School District
Wallingford, PA
- Additions/renovations to Wallingford Elementary School
- Additions/renovations to Nether Providence Elementary School
- Additions/renovations to Strath Haven Middle School
Construction Cost: $68 million

Downingtown Area School District
Downingtown, PA
- Construction of new Pickering Valley Elementary School
- Construction of new Springton Manor Elementary School
- Additions and renovations to Brandywine-Wallace Elementary School
Construction Cost: $65 million

Delaware County Community College
Media, PA
- Construction of new science, technology, engineering, mathematics complex
  *Certified LEED Silver*
Construction Cost: $39.7 million

Pennsylvania Department of General Services
Harrisburg, PA
- Renovations to the Capitol Building, Speaker Matthew J. Ryan Legislative Office Building, Health & Welfare Building, Labor & Industry Building, and Finance Building.
Construction Cost: Confidential

Milton Hershey School
Hershey, PA
- Construction of a New Elementary School; 20 New Student Homes; New Site Signage, Landscape, and Roadway Improvements; Management of Campus Wide Deferred Maintenance Program; Construction of New Horticulture Center; Additions/Renovations to Catherine Hall Ice Hockey Rink; Renovation of former Dairy Barn into Willow Wood Environmental Center
Construction Cost: Confidential
Walt Tack, P.E., LEED AP
Senior Preconstruction Manager

As senior preconstruction manager, Mr. Tack’s responsibilities include preparing and updating budgets, coordination of architectural, mechanical, and electrical estimates, and monitoring of architectural drawings during development to ensure they conform to the owner’s budget.

Relevant Experience

Neshaminy School District
Langhorne, PA
• Additions/renovations to Neshaminy High School
Construction Cost: $72.4 million

York County School of Technology
York, PA
• Additions/renovations to a career and technical school
Construction Cost: $37 million

Harrisburg School District
Harrisburg, PA
• Additions/renovations to John Harris High School
Construction Cost: $49.6 million

Mifflinburg Area School District
Mifflinburg, PA
• Additions/Renovations to Mifflinburg High School
Construction Cost: $13.1 million

Centennial School District
Warminister, PA
• Additions/renovations to William Tennent High School
• Construction of two new elementary schools
• Renovations to one elementary school
Construction Cost: $129.9 million

East Stroudsburg Area School District
East Stroudsburg, PA
• Additions/Renovations to Senior High School
Construction Cost: $77.9 million

Armstrong School District
Kittanning, PA
• Construction of new Armstrong High School
Construction Cost: $50 million

Education
Bachelor of Science, Civil Engineering, University of Cincinnati, 1983

Affiliations
LEED Accredited Professional
Registered Professional Engineer, PA

Years of Experience
31
Philipsburg-Osceola Area School District
Philipsburg, PA
- Conversion of North Lincoln Hill Elementary into middle school
Construction Cost: $17.6 million

Danville Area School District
Danville, PA
- Construction of a New Elementary School
Construction Cost: $21 million

School District of the City of York
York, PA
- Construction of new Ferguson Elementary School
  Certified LEED Platinum
- Additions and renovations to Jackson, McKinley, and Davis Elementary Schools
  Certified LEED Silver
Construction Cost: $52.1 million

Selinsgrove Area School District
Selinsgrove, PA
- Additions/renovations to high school and elementary school
  Certified LEED gold
Construction Cost: $21.2 million

Phoenixville Area School District
Phoenixville, PA
- Additions/renovations to East Pikeland Elementary School
- Construction of new middle school and district administration office
Construction Cost: $72.9 million

Central York School District
York, PA
- Construction of new Central York High School
- Additions and renovations to Roundtown Elementary School
- Additions and renovations to Stony Brook Elementary School
- Additions and renovations to Hayshire Elementary School
Construction Cost: $73.7 million
As our mechanical estimator, Mr. Miller is responsible for the conceptual estimating, value engineering, life-cycle cost analysis and cost estimating of the project’s mechanical systems.

Relevant Experience

Neshaminy School District
Langhorne, PA
- Additions/renovations to Neshaminy High School
Construction Cost: $72.4 million

York County School of Technology
York, PA
- Additions/renovations to a career and technical school
Construction Cost: $37 million

Harrisburg School District
Harrisburg, PA
- Additions/renovations to John Harris High School
Construction Cost: $49.6 million

Mifflinburg Area School District
Mifflinburg, PA
- Additions/Renovations to Mifflinburg High School
Construction Cost: $13.1 million

Centennial School District
Warminster, PA
- Additions/renovations to William Tennent High School
- Construction of two new elementary schools
- Renovations to one elementary school
Construction Cost: $129.9 million

East Stroudsburg Area School District
East Stroudsburg, PA
- Additions/Renovations to Senior High School
Construction Cost: $77.9 million

Armstrong School District
Kittanning, PA
- Construction of new Armstrong High School
Construction Cost: $50 million
Joe White
Electrical Estimator

As our electrical estimator, Mr. White is responsible for the conceptual estimating, value engineering, life-cycle cost analysis and cost estimating of the project’s electrical systems.

Relevant Experience

Marple Newtown School District
Newtown Square, PA
- Additions/renovations to Marple Newtown High School
  Construction Cost: $49.9 million

Southeast Delco School District
Folcroft, PA
- Additions/renovation to Academy Park High School
  Construction Cost: $25.4 million

School District of the City of York
York, PA
- Additions/renovations to Jackson Elementary School
  LEED Gold Certified
  Construction Cost: $9.4 million

Milton Hershey School
Hershey, PA
- Electrical estimating and project management for select project
  Construction Cost: Varies

Owen J Roberts School District
Pottstown, PA
- District Wide Generator Studies
- Design for Electrical Service Modifications to Softball Field Lighting
- Electrical design for East Vincent and East Coventry Elementary Schools

University of Pittsburgh
Pittsburgh, PA
- Electrical commissioning for Health and Science Facility on Johnstown Campus
  Registered LEED Silver
  Construction Cost: $12 million

Bucknell University
Lewisburg, PA
- Electrical commissioning for West Academic Building, Student Housing, and Wrestling Athletic Building
  LEED Silver Certified
  Construction Cost: $60 million

Education
Bachelor of Science, Electrical Engineering, University of Dayton, 1985

Years of Experience
29
Tom Richards
Project Scheduler

As project scheduler, Mr. Richards is responsible for the creation of project schedules and updating them with current information.

Relevant Experience

Neshaminy School District
Langhorne, PA
• Additions/renovations to Neshaminy High School
  Construction Cost: $72.4 million

York County School of Technology
York, PA
• Additions/renovations to a career and technical school
  Construction Cost: $37 million

Harrisburg School District
Harrisburg, PA
• Additions/renovations to John Harris High School
  Construction Cost: $49.6 million

Mifflinburg Area School District
Mifflinburg, PA
• Additions/Renovations to Mifflinburg High School
  Construction Cost: $13.1 million

Centennial School District
Warminster, PA
• Additions/renovations to William Tennent High School
• Construction of two new elementary schools
• Renovations to one elementary school
  Construction Cost: $129.9 million

East Stroudsburg Area School District
East Stroudsburg, PA
• Additions/Renovations to Senior High School
  Construction Cost: $77.9 million

Armstrong School District
Kittanning, PA
• Construction of new Armstrong High School
  Construction Cost: $50 million

Years of Experience
45
As senior project manager, Mr. Sullivan is responsible for oversight of operations and construction phase functions to ensure that the project is successfully completed.

**Relevant Experience as Senior Project Manager:**

**Harrisburg School District**
Harrisburg, PA
- Additions/renovations to John Harris High School
  Construction Cost: $49.6 million

**Marple Newtown School District**
Newtown, PA
- Additions/renovations to Marple Newtown High School
  Construction Cost: $48.9 million

**East Stroudsburg Area School District**
East Stroudsburg, PA
- Additions/Renovations to Senior High School
  Construction Cost: $77.9 million

**Radnor Township School District**
Wayne, PA
- Additions/renovations to Radnor Senior High School
  Construction Cost: $30 million

**Lancaster County Convention Center**
Lancaster, PA
- Construction of New Downtown Convention Center and high rise Marriott Hotel
  Construction Cost: $105.6 million

**Dallastown Area School District**
Dallastown, PA
- Additions/renovations to Dallastown Area Middle School
- Additions/renovations to Dallastown Area Senior High School
  Construction Cost: $40 million

**Hempfield School District**
Landisville, PA
- Construction of New Landisville Middle School
- Construction of New Landisville Primary Center
  Construction Cost: $22 million

---

**Education**

Bachelor of Architectural Engineering, Construction Management Option, Pennsylvania State University, 1979

**Years of Experience**

35
**Tim Sullivan**  
Senior Project Manager

**Pennsylvania State University**  
University Park, PA  
- New lecture halls, classrooms, and faculty offices in the Thomas Building  
- Addition/renovations to the Palmer Museum of Art  
Construction Cost: $12.6 million

**Pennsylvania State University**  
Harrisburg, PA  
- Additions/renovations to Educational Activities Building on the Harrisburg Campus  
Construction Cost: $15.7 million

**Harrisburg Area Community College**  
Harrisburg, PA  
- Wildwood Conference Center  
Construction Cost: $3 million

**Millersville University**  
Millersville, PA  
- Additions/renovations to classrooms and facility offices in McComsey Hall  
- Renovations to Student Dining Area  
Construction Cost: $6.2 million
Stephen Reckhart, CDT, CCCA
On-site Superintendent

As On-site Superintendent, Mr. Reckhart is responsible for site safety and security, quality assurance, schedule compliance, and coordination of all activities necessary for the project’s successful completion.

Relevant Experience

Armstrong School District
Kittanning, PA
- Construction of new Armstrong High School
Construction Cost: $50 million

Experience Prior to Joining Reynolds

Burgettstown Area School District
Burgettstown, PA
- Occupied additions/renovations to Burgettstown Middle/High School
Construction Cost: $28 million

Hempfield Area School District
Greensburg, PA
- Occupied additions/renovations to Wendover Middle School
Construction Cost: $24 million

Barberton City Schools
Barberton, OH
- Construction of new Barberton Middle School
Construction Cost: $35 million

Norwin School District
North Huntingdon, PA
- Construction of new Hillcrest Intermediate School
Construction Cost: $11 million

Hempfield Area School District
Greensburg, PA
- Occupied additions/renovations to Stanwood Elementary School
Construction Cost: $12 million

Cranberry Area School District
Seneca, PA
- Occupied additions/renovations to Cranberry Elementary School
Construction Cost: $8 million

Registrations
- Certified as Construction Documents Technologist
- Certified as Construction Contract Administrator
- OSHA 10 hour
- CPR/First Air certified

Years of Experience
38
Stephen Reckhart, CDT, CCCA
On-site Superintendent

Freeport Area School District
Sarver, PA
  • Construction of new South Buffalo Elementary School
    Construction Cost: $12 million

Norwin School District
North Huntingdon, PA
  • Construction of new Sunset Valley Elementary School
    Construction Cost: $9 million

Pittsburgh Indoor Sports Arena
Pittsburgh, PA
  • New Construction
    Construction Cost: $1.5 million

Wexford House Nursing Home
Wexford, PA
  • Addition and Renovations
    Construction Cost: $3.5 million

Armstrong Utilities
Kittanning, PA
  • Additions and Renovations
    Construction Cost: $2.2 million

Hanover House Nursing Home
Pittsburgh, PA
  • Additions and Renovations
    Construction Cost: $2.5 million

Medical Reserve Training Facility
Pittsburgh, PA
  • New Construction: Project duty: Quality Control Manager working with the Army Corps of Engineers
    Construction Cost: $2.5 million
Justin Carper, ASHE, EIT  
Project Engineer

As Project Engineer, Mr. Carper is responsible for information management including document control, shop drawings and submittals, project controls, and documentation. He is also responsible for select field assignments.

**Relevant Experience**

**Marple Newtown School District**  
Newtown Square, PA
- Additions and renovations to Marple Newtown High School
- Renovations to the Gauntlet Center
Construction Cost: $53 million

**Lancaster County Convention Center Authority**  
Lancaster, PA
- Construction of new Marriott Hotel and convention center
Construction Cost: $105.6 million

**Queen Street Station Phase II**  
Lancaster, PA
- 10,000-square-foot expansion of the Lancaster Museum of Art along the 200 block of North Queen Street, the expansion of the existing bus station to link it with East Chestnut Street, and construction of a 395-space parking garage
  - The garage was built to support the later construction of a 38-unit condominium tower that could rise above it to 16 stories
Construction Cost: $15.1 million

**PinnacleHealth – Harrisburg Hospital**  
Harrisburg, PA
- On-call, library relocation
  - Estimated Construction Cost: $1.4 million
- Cardiac / CTICU core & shell
  - Estimated Construction Cost: $3.2 million
- Cardiac fit-out
  - Estimated Construction Cost: $7.4 million
- CTICU fit-out
  - Estimated Construction Cost: $3.7 million

**Education**
- Bachelor of Science Degree, Structural Design and Construction Engineering Technology, Penn State University, 2000

**Registrations**
- ASHE Healthcare Construction Certificate
- Engineer-in-Training (EIT) Certification

**Years of Experience**
14
**Tab 3:** Project Approach/Strategies
Project Approach/Strategies

Project Considerations

Our staff has visited the project site and toured the buildings to better understand the potential issues that will be faced during this complex construction project. During our visit to the site, we were able to witness the class changes and needs for safe campus circulation. The construction planning must center around providing safety for students, even if cost and schedule compromises must be made. As we look at how the construction can occur and begin to envision the systems to be installed in the buildings, we can formulate some preliminary thoughts about separation of work (both from school operations and among prime contractors) and how multiple prime contracts/bidding strategies may be used to reduce the costs of the project. Reynolds’ experience working for 73 Pennsylvania school districts on predominately occupied additions and renovations will be invaluable to this process.

Site Utilization Issues

Through our review of the project, we have identified several issues that will need to be addressed in a site utilization plan and through phasing of the project. These plans will begin to set the overall schedule and determine the flexibility of bid package options. These suggestions are the result of our study of the site and are necessary to plan and then lead your project. Our initial areas of concern are:

1. Walking Traffic Safety – Students, staff, and visitors must walk between both buildings across Westerly Parkway, all day, every day, with the highest concentration of foot traffic between classes and during pick-up/drop-off periods. Construction of the new addition on the Westerly Parkway side of the South Building will occur in direct conflict with current routes.

2. Students and Construction Separation – In order to provide a safe place for education and to accommodate the learning process, special care in separating school operations from construction will be required, including separation of the work through fencing, visual barriers, and by separation of time (through phasing). Communication of the traffic flows, clear signage and the potential for manned oversight (crossing guards) will also be key. Special planning will also be needed to provide for days of no noise disruption during select testing, such as PSSA’s, which will be accommodated by providing for a number of days for noise-generating reduced work in the front end specifications. Other noise restrictions will be required by specifications.

3. Pick-Up/Drop-Off Traffic and Flow – The current layout for student pick-up/drop-off will be affected by construction and must be accommodated. The most significant impact is at the construction of the new building on the Westerly Parkway side of the South Building.

4. Provision for Parking of Staff, Students, and Visitors – Construction of the addition at the Westerly Parkway side of the South Building will remove as many as 400 parking spaces, requiring parking to be accommodated elsewhere on site (via phased work) or at an off-site location. While there will be several options for resolving these issues, balancing cost, convenience, and safety will be the significant challenge.

5. Construction Traffic to, from, and within the Site – Construction traffic to and from the site will need to be closely controlled and properly separated from the operations of the school. Contractor parking will also need to be addressed, and likely be off site during school months.
6. **Accommodating the Welsh Pool Operations** – During the summer, when peak construction activity is occurring, special coordination will be required to provide parking for and access to the Welsh Pool. This will be one aspect of coordinating with the neighbors.

7. **Being Good Neighbors** – The construction will disrupt the neighborhood around the site. Communication and thoughtful coordination will be needed to minimize the level of disruption that will occur during the many years of construction.

**Site Utilization Potential Solutions**

Options that may be considered for solving site utilization issues include the following, which must be vetted with the project team and ultimately presented in public to allow for comment and potential improvement. We do not suggest that the public dictate the accommodations (although the municipality may provide some level of direction during the approval process), but only that the early sharing of good plans can sometimes result in improvements and better buy-in from the experience of residents.

---

**Please see the last three (3) pages of this tab where thoughts about Site Utilization are shown in three distinct phases. Those pages graphically depict some of the ideas developed below.**

---

1. **Walking Traffic Safety** – This important issue could be addressed several ways:

   - Separate construction of the addition to the Westerly Parkway side of the South Building to provide construction in two sub-phases around the main entry. This allows for the current main pathways between the North and South Buildings to remain open and controlled.

     **Benefit:** Maximizes safety through separation of work from operations
     Maintains the natural current routes around construction

     **Disadvantage:** Does not allow the entire addition in that area to be built at one time

   - Or, require students, staff and visitors to walk around the construction of the new addition (Westerly Parkway side of the South Building).

     **Benefit:** Allows for fastest construction sequence in that area

     **Disadvantage:** Does not maintain the natural current routes around construction
     May cause additional time to walk between classes (center of South Building to any location at North Building)

   - Or, construct a fenced pathway at the main entry of South Building, through construction of the new addition at Westerly Parkway, to provide access through construction.

     **Benefit:** Allows for fastest construction sequence in that area
     Maintains the natural current routes around construction
Disadvantage: May require a full time person where construction would cross between sections of the work, with special fencing that would preclude crossing of the walkway when fence allows access between areas

Note: A similar approach with fencing where required can be used at the North Building for pedestrian traffic.

2. **Students and Construction Separation** – This will be addressed in several ways, which must be developed with the building principals (and other appropriate administrators). These measures must be explained to the public and required by the contract documents. They include:

- Provide post-driven fence at all locations where separation is required
- Provide visual barriers on fence where disruption to the learning environment may occur, or where other concerns for visual interference may exist
- Provide sound-reducing barriers at building openings where new construction is abutting existing, operating buildings
- Require dust control with appropriate measures for providing by owner (or others) if not immediately provided by responsible contractor
- Provide negative air pressure in areas being renovated to reduce odor/dust issues
- Provide clear signage for traffic flow (walking, cars and buses)
- Provide days of no work/reduced noise for special testing such as PSSA’s
- Provide options for off hours work, where needed

3. **Pick-Up/Drop-Off Traffic and Flow** – This important issue could be addressed in a few ways, including these (focus is on the South Building, as North Building is more easily accommodated):

- Construct bus loop around the South Building immediately.
  
  **Benefit:** Provides best separation of this activity from construction
  Provides for closest drop-off and pick-up
  Could complete some portion of this critical work early, including some parking additions at this area

  **Disadvantage:** Will require some temporary construction, as demolition of one section of the South Building will not be able to occur until later

- Or, construct a temporary loop near Westerly Parkway for the South Building (this loop would be coordinated with the approach for pedestrian traffic safety).
  
  **Benefit:** Does not require as much construction as option above

  **Disadvantage:** Construction is all temporary and no parking is gained
  Longer walk to be inside of building, through construction pathway

4. **Provision of Parking for Staff, Students, and Visitors** – There are a few options, but likely, some off-site parking or reduction in student parking will be needed:

- Provide new parking early with loop around South Building constructed early (some temporary, limited parking may be available this way)
Project Approach/Strategies

- Reduce the amount of student parking made available (this is commonly used during construction projects in PA high schools)
- Construct the addition to the South Building at Westerly Parkway in two sections, preserving some of the parking in the early phase until more can be constructed
- Construct additional parking at the North Building, if possible
- Use leased (or other) off-site parking for teachers with shuttle to the school
- Require contractors to park off-site and use a shuttle during non-summer work

5. **Construction Traffic to, from, and within the Site** – Construction traffic on site will be separated during the construction by phase, as shown in our example site utilization plans (see Tab 6). Considerations include the following, all to be required by specification:

- One significant consideration will be required when determining if the new addition near Westerly Parkway will be constructed at one time or in two sub-phases:
  - If constructed at one time and a pathway is constructed through the work area, a fence will need to be designed that (when opened for construction pass through traffic) closes off the pedestrian traffic (this method has successfully been on our past projects)
  - We also suggest using a full-time “crossing guard” at any location like this, with gates locked in a position to facilitate pedestrian traffic only
- Contractors should be required to park at an off-site location and be shuttled to the site, to minimize additional traffic and parking issues
- During each phase of construction, the driving approach for large equipment and deliveries must be limited (we suggest primarily using the approach from Atherton Street and keeping large vehicles out of the neighborhoods to the west of the site)

6. **Accommodating the Welsh Pool Operations** – Special consideration must be given to areas near this pool during the summer operation to allow for parking and operation.

7. **Being Good Neighbors** – Reynolds strives to minimize the concerns of neighbors and the community during construction so that Board Members and Administration can continue to concentrate on the primary mission of educating the students. Our approach considers that:

- We understand that the community must have appropriate buy-in and discussion during design, particularly on areas most used by the community
- We also understand how to be good neighbors during construction; tools we use for community collaboration and being good neighbors include the following:
  1. Developing publications for printing, web-site posting and distribution by the District during design and construction
  2. Providing schedules for neighbors to understand how the construction will impact their lives, particularly during noisy work or if geothermal well drilling is required
  3. Providing access to Reynolds staff to key neighbors and local officials to keep the lines of communication open (when directed by the District), or providing an e-mail address for questions or concerns of the public
  4. Participating in regular neighbor meetings and updates
- Social media such as Twitter and Facebook can be utilized through the District to the extent desired and as appropriate; the release of this information would occur through the District only, as information must be approved prior to public consumption
Phasing Ideas

The key to solving site congestion is good planning. The planning must provide clear signage, safe pedestrian pathways and providing enough parking and allowing for proper drop-off and pick-up. How the new construction is phased will allow for later demolition and renovations. There are some significant decisions to be made regarding phasing. They include the following:

1. **Creation of Swing Space** – Swing space creation is limited to constructing the new addition at Westerly Parkway (at the South Building) or using many modular classrooms. Assuming that a goal would be to minimize or eliminate the use of modular classrooms, construction of the new section of the South Building in this area becomes an obvious contender for the first phase.

2. **North Addition to the South Building/Phasing** – The siting of the new addition to the South Building on the north side will require a decision to construct the addition in one or two phases. Issues to consider include:
   - **Construction all at Once** – this approach will require having students pass through construction areas (via a fenced pedestrian pathway) or pass around the site entirely, creating concerns for travel time between class/buildings; this approach is possible and has been completed on other projects, but the demolition needed to the existing building may preclude this approach due to initial swing space needed
   - **Construction in Two Phases** – this approach creates swing space to allow more construction and renovations early, and can be phased to allow for the second (west) section to begin prior to occupancy of the first area (east section), provided that construction on the west section progress only to the point where no demolition is required; infill of the new entrance can occur during the summers; this approach may work well if new construction can create enough swing space to accommodate demolition and phased renovation

3. **Demolition/New Construction at the South Side of the South Building** – this work can occur after the completion of a large portion or all of the work on the north side of the South Building is complete. Phasing will depend upon program accommodation and swing space available to accommodate demolition and renovation.

4. **Construction at the North Building** – timing of this portion of the work will be dependent upon when swing space is available in the South Building to accommodate demolition. Renovation can occur upon availability of programs in the South Building and can occur over two summers. It is possible that this work could occur over two summers and one school year, but it must be fit into the overall plan for phasing across the entire high school program set.

*Please see the last three (3) pages of this tab where thoughts about Phasing shown. Those pages graphically depict some of the ideas developed above.*
Bid Strategy 1 – the Combined Bid

Because the project is clearly discernable as two areas of construction, it could be considered a candidate for a bid strategy called the “Combined Bid.” This approach has saved school districts money and reduced bid day construction costs because it relies on competition between approaches and can provide for additional competition.

In the case of the State High Project, the South Building can be bid as one project, and concurrently, the North Building can be bid as one project. The bids can also be combined so that if an economy of scale exists for contractors, it can be priced in the combined bid.

The combined bid also provides the opportunity for smaller contractors to bid the North Building, creating more opportunity for local contractors that are smaller and possibly better economic development for the region.

Most importantly, this opportunity provides the District with the ability to show the public that it has bid the project in two ways, thereby obtaining the best value and demonstrating the highest level of fiscal responsibility.

In a combined bid, each project has prime contacts that marry up across the buildings, although the South Building may have more bid packages than the North Building. This will be discussed further in the next section of this tab.

Bid Strategy 2 – Multiple Prime Contracts

Reynolds, Crabtree Rohrbaugh, and the State College Area School District are all familiar with and have successfully used multiple prime contracts, which are the use of more than four prime contracts for major construction.

Our goals are to provide clear, complete bid packages and maximum competition on bid day, and a project that is at or under budget. We will study the market and conduct surveys of the contracting community as needed to provide the best recommendations for bid packages. We will do this in close collaboration with the District and the architect.

Use of multiple prime contracts must be managed to accommodate the following concerns:

1. Dilution of the General Trades Contract Package – when breaking out additional prime contracts, a dialog with likely bidders of the project is used to determine what scopes of work are preferred to provide the general trades contractor with proper control of the project. While breaking out casework, roofing and kitchen equipment are not likely a concern, the breakout of concrete, structural steel, glass/glazing and masonry will require such an evaluation. Similarly, breakout of finishes such as drywall, painting, flooring/carpeting are often considered. The goal is to provide large general trades contractors with the right scope of work to make the project as desirable as possible—as this will create competition and reduce bid day costs.

2. Potential Scope Coordination Issues – excellent front end documentation developed by Reynolds eliminates change orders across multiple prime contracts. Sometimes, however, the detailing of the construction can create coordination issues between potential bid packages,
particularly at the building envelope. Close review of the system selection/details during design development and purposeful breaks between scopes of different prime contractors will eliminate this issue at the building envelope, making the discussion about breaking out these packages more about the concern regarding dilution of the general trades contract package.

3. **Risk Management for Controlling Select Scopes of Work** – a review of the potential bidders for prime contractors is necessary to ensure that any smaller prime contract bid package will have adequate bidders that can be bonded, and that will be able to perform on a large project. Some owners and architects have had experiences where they simply prefer to place the risk of managing a specific scope of work in the hands of one prime contractor or another. A general consensus of the team surrounding scopes risk concerns must be reached during a discussion on final bid package determination.

Reynolds’ initial thoughts on bid packages for a combined bid are as follows:

<table>
<thead>
<tr>
<th>Bid Package</th>
<th>South Building</th>
<th>North Building</th>
<th>Combined Bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitework</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Demolition</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>General Trades</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Masonry</td>
<td>To be Evaluated</td>
<td>No, in General Trades</td>
<td>Via General Trades</td>
</tr>
<tr>
<td>Structural Steel</td>
<td>To be Evaluated</td>
<td>No, in General Trades</td>
<td>Via General Trades</td>
</tr>
<tr>
<td>Glass/Glazing</td>
<td>To be Evaluated</td>
<td>No, in General Trades</td>
<td>Via General Trades</td>
</tr>
<tr>
<td>Roofing</td>
<td>Yes</td>
<td>No, in General Trades</td>
<td>Via General Trades</td>
</tr>
<tr>
<td>Drywall/Ceilings</td>
<td>To be Evaluated</td>
<td>No, in General Trades</td>
<td>Via General Trades</td>
</tr>
<tr>
<td>Painting</td>
<td>To be Evaluated</td>
<td>No, in General Trades</td>
<td>Via General Trades</td>
</tr>
<tr>
<td>Tile and Flooring</td>
<td>To be Evaluated</td>
<td>No, in General Trades</td>
<td>Via General Trades</td>
</tr>
<tr>
<td>Terrazzo</td>
<td>To be Evaluated</td>
<td>To be Evaluated</td>
<td>Maybe</td>
</tr>
<tr>
<td>Elevators</td>
<td>No, in General Trades</td>
<td>No, in General Trades</td>
<td>No, in General Trades</td>
</tr>
<tr>
<td>Casework</td>
<td>Yes</td>
<td>No, in General Trades</td>
<td>No, in General Trades</td>
</tr>
<tr>
<td>Plumbing</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Food Service</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire Protection</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Mechanical</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ATC Controls</td>
<td>No, in Mechanical</td>
<td>No, in Mechanical</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Electrical</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Data Cabling</td>
<td>No, in Electrical</td>
<td>No, in Electrical</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

This approach provides for as few as ten (10) contracts if all combined bids are used, and as many as twenty-six (26) if the packages “to be evaluated” are used with no combined bids. Ultimately, the team should agree to the approaches based upon the criteria provided in this section. Abatement was excluded from this section, but could be handled in a combined bid as well.
Project Approach/Strategies

The Potential to Phase Bids

During our site visit and discussions with the District, we have determined that there is a potential opportunity to consider some phasing of bids. This approach would be used only to the extent that it would not interfere with any potential funding from the Pennsylvania Department of Education (PDE). These suggestions are provided for schedule control and additional cost control. Our ideas for consideration include the following:

1. **Early Bidding of the Sitework Package (for South Building or Combined)** – Completing the design and permitting for this project will be a challenge for the design team. The District and its team should not expect that design will be completed for the project for an early bid (to allow for procurement before the summer of 2015). If the design can be completed early for sitework that would allow for the installation of the loop road around the south of the South Building and some preliminary site clearing at the new construction at the South Building, that package could be bid about one month earlier than the rest of the project, allowing for paperwork to be gathered from the lowest responsible bidder (early). This package could be awarded with the rest of the project, but an early bid receipt could provide as much as a one month jump on the start of work.

2. **Rejection of Bids for the North Building** – If the potential PDE funding is being considered, and the North Building is considered a separate project, there is a potential that the bids for the North Building could be rejected in a dual bid or combined bid scenario. If the total project is not at budget on bid day, or if there is a potential to re-bid that portion of the project at a lower bid day cost (due to better bidding market conditions or any re-design desired by the District for the North Building), the bids for the North Building could be rejected and another bid event could be held. Currently, this option is not viewed as ideal, but it provides a contingency plan to manage the budget.

Other Comments on Scoping for Multiple Prime Contracts

Since 1994, Reynolds has been writing front end document scopes of work and “multiple contract work summaries,” and has been doing so with Crabtree, Rohrbaugh & Associates for all of those 20 years. Our approach to complete scoping without overlap includes the following highlights:

1. **Multiple Contract Summary** is provided for each project where a general summary that applies to all bid packages heads a group of discrete scope description sections for each bid package; the discrete section for each bid package provides a narrative for of each scope of work and item/specification section that is to be included in each bid package.

2. **The General Summary** within the multiple contract summary contains all items common to all bid packages, including the front end documents and general/supplementary requirements.

3. **The Detailed Bid Package Summaries** within the multiple contract summaries include written scope narratives based on the drawings and a technical specification sections listed; in most cases, one technical specification section marries only to one bid package.

4. **Drawing Notes** are carefully edited so that the notes do not conflict with the multiple contract summary; the documents also require that the multiple contract summary has priority.

*This approach is easily cross-checked in the constructability review by any team members.*
State High

Revised Site: Plaza Drive

- Student Circulation
- Event ADA Parking Bus Drop-Off Up To 30 Spaces
- Grass Field To Remain
- Welch Pool
- Staff Parking Up To 120 Spaces
- Driveway And Visitor Parking Up To 30 Spaces
- Storm Water Detention Basin

Construction Entrance
Contractor Staging
Temporary Bus Loop & Staging
Install Partial New Bus Loop (Summer 2015)

Potential Turf Field Full Size Soccer Up To 100,000 SF
Westerly Parkway "Reservoir"

Phase 1 - June 2015 to Sept 2016
State High

Student Circulation

Temporary Bus Loop & Staging

Maintain Access to Track & Tennis Courts

Renovate Existing Building In Multiple Phases

Contractor Staging

Construction Fence

Phase 2 - June 2016 to Sept 2017
State High

- Renovate Existing North Building
- Construct New Delta Addition
- Maintain Access to Athletic Fields
- Complete South Building
- Relocate Parking to Leased Spaces
- Construction Fence
- Construction Entrance
- Demolish Exist Bldg & Construct New Play Field
- Contractor Staging
- Revised Site: Plaza Drive

Phase 2 - June 2017 to Sept 2018
| Tab 4: LEED and Commissioning Expertise |
LEED and Commissioning Expertise

LEED Project Experience

Reynolds is a strong believer that sustainable design and construction are important means of reducing the impact of the construction industry on the ecosystem. By incorporating the use of renewable materials, recycling, lower energy consumption, and minimizing environmental impact, the USGBC’s LEED® program is leading the way in which these principals can be incorporated into real construction projects. **With 15 LEED certified buildings and one LEED registered building**, as well as **nine LEED accredited professionals** on staff, Reynolds can assist in the design and construction of your LEED project.

Reynolds and our staff are proud to have provided full construction management services for Ferguson Elementary School—the first LEED platinum certified school building in Pennsylvania. Below is a list of our certified and registered LEED projects to date.

**Clearview Elementary School**
Hanover Public School District
LEED BD+C: New Construction v2.0 – LEED Gold 2004
(First elementary school in Pennsylvania to receive Gold certification)

**PHFA Headquarters**
PA Housing Finance Agency
LEED BD+C: New Construction v2.1 – LEED Gold 2005

**Rector Science Center**
Dickinson College
LEED BD+C: New Construction v2.1 – LEED Gold 2008

**School Administration Building**
School District of the City of York
LEED BD+C: New Construction v2.2 – LEED Gold 2009

**Selinsgrove Elementary School**
Selinsgrove Area School District
LEED BD+C: Schools v2007 – LEED Gold 2010

**Newport High School**
Newport School District
LEED BD+C: New Construction v2.2 – LEED Gold 2010

**Lindbergh Avenue School**
School District of the City of York
LEED BD+C: Schools v2007 – LEED Silver 2011

**New STEM Complex**
Delaware County Community College
LEED BD+C: New Construction v2.2 – LEED Silver 2011

**Radnor Middle School**
Radnor Township School District
LEED BD+C: New Construction v2.1 – LEED Silver 2011
LEED and Commissioning Expertise

Ferguson Elementary School
School District of the City of York
LEED BD+C: Schools v2007 – LEED Platinum 2012
(First elementary school in Pennsylvania to receive Platinum certification)

Yorkshire Elementary School
York Suburban School District
LEED BD+C: Schools v2009 – LEED Silver 2012

Northeast Regional Center Addition
Community College of Philadelphia
LEED BD+C: New Construction v2.2 – LEED Silver 2013

McKinley Elementary School
School District of the City of York
LEED BD+C: Schools v2007 – LEED Silver 2013

Phineas Davis Elementary School
School District of the City of York
LEED BD+C: Schools v2009 – LEED Gold 2013

Jackson Elementary School
School District of the City of York
LEED BD+C: Schools v2007 – LEED Gold 2014

Selinsgrove High School
Selinsgrove Area School District
LEED BD+C: Schools v2007 (this project is awaiting certification)

Commissioning Expertise

As demonstrated by the fact that basic building commissioning services are a prerequisite in the US Green Building Council's LEED building certification program, and that another credit can be earned through more in-depth commissioning services, the acceptance of commissioning as a vital part of the design and construction process is growing. In fact, in some places it is becoming standard operating procedure for both new construction and additions and renovations.

Building commissioning is a quality assurance centered process of documentation, training, adjustment, testing, and verification. It is performed to ensure specifically that the finished building operates in the accordance with the owner’s documented project requirements and the construction documents. It typically begins in the design phase and continues through construction and occupancy.

Reynolds Construction has managed the commissioning process for more than 15 LEED projects. We have written requests for proposal for commissioning and assisted in hiring the commissioning agent. In addition, our sister company, Reynolds Consulting Engineers, has been providing building commissioning services since 1999. Their projects include 55 LEED certified or registered buildings.
TAB 5: BIM Experience
Building Information Modeling (BIM)

Reynolds is currently providing construction management services on a BIM project for Penn State’s Educational Activities Building (EAB) at the Harrisburg Campus and at Bristol Township School District projects.

Reynolds has developed the staff and capabilities to fully embrace the BIM process. For the PSU EAB project, we led the team in the process of developing and supporting the BIM model. During design, we worked closely with design partners to see that their information was complete and used fully in the creation of our estimates and constructability reviews. In construction we have ensured that all contractors have contributed to the success of the BIM process.

The BIM execution plan serves as the key document for identifying benefits, which we intend to secure for long-term owner use. Reynolds’ staff follows the lead set by the execution plan to ensure that the plan is implemented and that key benefits are recognized as the process unfolds. We have a solid record of managing design progress, cost, and schedule in the preconstruction phase, and have proven that management of the BIM implementation process is an enhancement adding value to all traditional preconstruction activities. During construction, reference is made to the BIM model for direction on design and coordination issues. Our field staff is fully equipped with mobile devices, which run cloud-based programs such as Plan Grid and “BIM Anywhere” utilization tools.

Helping owners receive and operate their facilities has always been a strong point for Reynolds. This includes clean organization and delivery of asset information for building managers, as well as reliable assistance with the receipt and installation of owner’s FF&E. Once again, we see that BIM can serve as the template and resource library for important information that will allow building managers to recognize the true long-term benefits of BIM in the facility.

This service is optional and available at your request. If the District wishes to use BIM, Reynolds will support the team actively in the effort.
Other Technology Experience

Project information management software provides us the ability to track in detail and effectively process project information, which is critical to the project. We are experienced with Newforma® software that is preferred by your design team. Utilizing this system, we will manage at a minimum the following information:

   a) Daily Reports
   b) RFI’s
   c) Submittals (administration, technical and close-out)
   d) Change Management
   e) Quality Control Logs
   f) Closeout Items

Our on-site construction managers and superintendents have smart phones and tablets. Use of cloud-based information enables our field staff to have information on-hand in real time. Our documentation and tracking process communicates issues to contractors and allows us to hold each team member accountable for corrective action.

The Central Penn Business Journal recently featured Reynolds in their Construction and Real Estate Magazine regarding technology in the field. We have provided the original article on the following pages.
By JENNIFER A. FITCH
Contributing writer

One may be the days when a contractor on a job site takes a thick roll of plans out of his pickup and spreads the pages across the tailgate.

Today, construction professionals are just as likely to pull out a tablet or smartphone to get the same information in an interactive format.

“There have been these big steps that have been made since the 1980s, and now it’s instant collaboration, real-time collaboration in the field,” said Damion Spahr, vice president of business development for Harrisburg-based Reynolds Enterprises.

Spahr called recent advances in technology “a major leap” after stalling for years following the advent of faxes, computers and email.

Software Advice Inc. surveyed 230 construction industry professionals last year and found 94 percent of them rely on software to manage projects. The company, which reviews and compares software on its website, reported 57 percent of those surveyed access applications and systems via a cloud service.

TECHNOLOGY RENAISSANCE

Ephrata-based general contracting firm Ames

‘A major leap’
Advances in construction technology improve collaboration, design process
Construction Inc. uses Dropbox to share pictures with owners, engineers and architects. Its personnel in the field have smartphones to access GPS, to sort through requests for information from owners and architects, to check specifications for equipment and to research serial numbers for existing equipment to determine the age of a unit and troubleshoot problems.

Ames Construction President James M. Stauffer said interactions with other entities are requiring his business to use more technology, such as when it navigates the online bidding process now used by many companies. Job foremen use documents from the Internet when they need specifications for various equipment.

“The days of the catalogs, when the guys brought catalogs of all their stuff, that’s dying,” Stauffer said.

The industry’s long-time standard for modeling, AutoCAD, is increasingly yielding to building information modeling with three-dimensional images. NuTec Design Associates of York County uses software called Revit for its BIM and invested $6,000 per workstation to incorporate it.

“AutoCAD became an extension of drawing lines on a piece of paper. What Revit did is build a building, a model,” said Mark Ottemiller, president of NuTec Design Associates.

Revit allows architects at NuTec Design Associates to work on small details, like identifying where each electrical outlet is. The
software knows how many light bulbs are in a room and creates shadows on walls to illustrate what is illuminated.

“What you’ve done is create a virtual building,” Ottemiller said, saying the software expedites the design process.

“A 3-D MODEL OF ANY ROOM”

Jason Erb, an on-site construction manager for Harrisburg’s Reynolds Construction, uses an iPad app called BIManywhere as he oversees development of nearly 50,000 square feet of new engineering classrooms at Penn State’s Harrisburg campus. He can use finger swipes to navigate detailed models of the building, and he can take measurements from the model or make notations in it.

“If I have mechanical, plumbing, electrical guys with an iPad, they can look at that, too,” Erb said, saying the technology improves opportunities for collaboration.

A facility management team, such as the one at a college or large manufacturer, can use the BIM from construction for years to come when they require information about things like what filter is in an HVAC unit and when that filter needs to be replaced, Ottemiller said. The architects can easily import BIM information provided by the equipment’s manufacturer, he said.

Clients like to have the ability to better visualize their projects, Ottemiller said.

“In any instant, we can give them a 3-D model of any room and anything out of the building,” he said.

BIM can highlight potential problems, like a light and duct work that would be touching in a ceiling.

“You basically walk through the model and see all the red flags,” Erb said.

BALANCING COST, EFFICIENCY

Those using some of the new technology say it has a learning curve, especially related to BIM. Spahr said a company also needs to invest in hardware and software thoughtfully to avoid those tools becoming outdated quickly.

Reynolds Construction turns to individual projects, like the Penn State Harrisburg one, to evaluate emerging technology as essentially a pilot program. The Penn State Harrisburg project’s design team handles submittals, field reports, requests for information and meeting minutes through a program called Submittal Exchange.

Erb, a certified associate constructor, said he now “can’t live without” a construction app called PlanGrid. It stores a complete set of as-built drawings for his project using a cloud service.

“You don’t have to carry a set of blueprints in the field, because it’s right at your fingertips,” he said.
TAB 6: Example Site Logistics Plan
Site Logistics Plan

Site logistics and the development of a proper site utilization plan are critical to the success of a project. From our past experience with complex, occupied project sites, we know that separating the students, visitors, and District staff from the construction activities is the key to proper planning. Top considerations for a site utilization plan include the following:

- Traffic flow – construction material deliveries
- Coordinated contractor arrival and delivery of materials
- Parking – contractor and campus (student, visitor, staff, and administration)
- Privacy screening on fence to reduce disruption to classrooms with view of construction activities
- Security fence and separation of construction activities from educational activities
- Scheduling no, or limited, work during final exam days
- Staging and material laydown areas
- Construction trailers
- Protection of existing facilities

On the following pages is a phasing and site logistics plan from the William Tennent High School project. This site logistics plan demonstrates how Reynolds addressed some of the same challenges associated with the State High Project. At William Tennent, we had to maintain access between existing school buildings while a new addition was built between them. Also, a large portion of the existing school had to be torn down following the new construction.

Following the site plans is an example from the Neshaminy High School project of how we share with the public strategies to address site utilization and phasing plans.

For more detailed project information about William Tennent High School and Neshaminy High School, including a self-appraisal of our performance, see Tab 9: Project Experience.

Part of William Tennent High School’s Site Logistics Plan
The detailed plans are shown on the following pages.
Master Phasing Plan
William Tennent High School
Additions and Renovations
Centennial School District

PUBLIC / STUDENT ACCESS
8/15/2010 - 6/15/2011

PHASE 1
7/15/2009 - 6/1/2011
PHASE 2
9/1/2009 - 6/1/2011
PHASE 3
5/1/2010 - 9/30/2010
PHASE 4
6/15/2010 - 8/27/2010
PHASE 5
6/15/2010 - 8/1/2011
PHASE 6
9/1/2010 - 3/1/2011

NOTES
- PROVIDE 4 SIDED PLYWOOD TUNNELS FOR EMERGENCY EGRESS WHENEVER EXISTING BUILDING IS OCCUPIED AND CONSTRUCTION IS GOING ON, PROVIDE LIGHTS, EMERGENCY LIGHTS AND EXIT SIGNAGE.

- EXISTING BUILDING WILL BE FULLY OCCUPIED AUG 15TH THROUGH JUN 15TH EACH SCHOOL YEAR.

- MAINTAIN EXISTING ELECTRICAL SERVICE UNTIL NEW SERVICE IS COMPLETE JUNE 1, 2010
Site Phasing and Utilization Plan
July 2009 through June 2010
William Tennent High School Additions and Renovations
Centennial School District

NOTES:
1. Contractors shall restrict deliveries to outside the hours of 7:00 - 8:00 AM, and 2:00 to 3:00 PM.
2. Contractors shall periodically inspect existing driveways and parking lots used by construction traffic and repair any damaged asphalt.
3. Install new water services and new electric service summer 2009 prior to beginning classes.
Site Phasing and Utilization Plan
July 2010 through June 2011
William Tennent High School Additions and Renovations
Centennial School District
Site Phasing and Utilization Plan
July 2011 through June 2012
William Tennent High School Additions and Renovations
Centennial School District

NOTES:
1. ABATE ASBESTOS AND FIBERS IN BUILDING "A" AND DEMOLISH EXISTING BUILDING "B".
2. COMPLETE STORM SEWER SYSTEM AND INSTALL NEW BUS LOOP, PARKING LOT & FRONT PLAZA.
TAB 7: Value Engineering Approach
Our Approach to Cost Avoidance and Savings

The primary objectives of each task performed by Reynolds Construction are providing 1) quality workmanship, 2) timely completion of the work, and 3) cost savings and cost avoidance. These savings categories, mentioned below, work toward one or more of these objectives.

It is difficult to place a dollar value on quality and timely completion of the work, as it is difficult to place a value on an accurate estimate. Poor quality, project completion delays or over budget bid day scenarios must be avoided, and should be considered as basic expectations of a construction manager.

Cost avoidance and savings are subjective. Reynolds offers the following information on how our methodology saves money and avoids costs for our public school clients:

- **Project Soft Cost Savings and Avoidance**: Up to 2%
- **Value Engineering Cost Savings**: Average of 4%
- **Scope Options Cost Avoidance**: Up to 4%
- **Reduction of Change Orders**: Average of 2%
- **Bid Strategies Cost Savings**: Up to 10%
- **Construction Phase Cost Savings and Avoidance**: Up to 2%

Reynolds seeks to achieve project savings of 6-10% on every project and has had results of over 20% on past projects for Pennsylvania public school district clients.
Value Engineering Approach

Value Engineering Methodology
Value engineering identifies ways to build and renovate in a more economical fashion while still meeting the architect’s design intent. During this process, we consider construction methods, materials, equipment, and systems. Reynolds will evaluate all aspects of the building and site design, structural systems, mechanical and electrical systems, exterior wall and roofing systems, building finishes, building materials, sole or limited-specification sources, methods of construction, site design issues, and phasing of construction activities. At design team meetings, we provide cost-saving suggestions for discussion and resolution. Reynolds will provide recommendations to assist the District in making selections.

We will prepare a written summary report of all value engineering suggestions. Following this report, we will meet with the Architect and Owner to review all suggestions and recommendations for final input and incorporation into bid documents where appropriate. Some of these items may be better suited as add or deduct alternates and decisions on those items can be made during this meeting as well.

It is important that a client’s “non-negotiable” selection of materials, equipment, finishes, etc. not be removed inadvertently from the scope during this effort. Reynolds is careful to this end and can document these items to ensure that owner’s requirements are included throughout the project.

Case Study and Example
On the following pages, we provide a value engineering report that outlines the cost reduction measures found by Reynolds for the William Tennent High School project.

The cost estimates completed during the schematic design and design development phases allowed the team to identify over 20 value engineering items that were accepted by the school district and incorporated into the design documents reducing the construction costs by $2,640,000.

For more detailed project information about William Tennent High School including a self-appraisal of our performance, see Tab 9: Project Experience.

“Reynolds’ pre-construction services of cost estimating and value engineering allowed for the project scope of work to be well defined and within the funds allotted to us…”

Wayne McCullough
Director of Operations
Southern York County School District
<table>
<thead>
<tr>
<th></th>
<th>COST REDUCTION MEASURES TO MEET $83 MILLION BUDGET</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reduce total square footage of new addition by reducing boiler room by 2,000 sf.</td>
<td>($200,000)</td>
</tr>
<tr>
<td>2</td>
<td>Change public toilet room sinks from solid surface counters and sinks to wall hung china.</td>
<td>($20,000)</td>
</tr>
<tr>
<td>3</td>
<td>Delete side lights at classroom entry doors.</td>
<td>($70,000)</td>
</tr>
<tr>
<td>4</td>
<td>Delete ornamental trellis above main entry.</td>
<td>($90,000)</td>
</tr>
<tr>
<td>5</td>
<td>Delete sloping exterior wing walls at stairs in A &amp; C Wings.</td>
<td>($7,000)</td>
</tr>
<tr>
<td>6</td>
<td>Reduce the size of the Theater Storage / Workshop addition behind the stage.</td>
<td>($80,000)</td>
</tr>
<tr>
<td>7</td>
<td>Delete roof monitor above Cafeteria (Alternate).</td>
<td>($150,000)</td>
</tr>
<tr>
<td>8</td>
<td>Delete exterior sun shades (Alternate).</td>
<td>($250,000)</td>
</tr>
<tr>
<td>9</td>
<td>Reduce other interior glass by 20%.</td>
<td>($45,000)</td>
</tr>
<tr>
<td>10</td>
<td>Reduce exterior glazing in B &amp; G wings (Library &amp; Cafeteria) by 40%.</td>
<td>($54,000)</td>
</tr>
<tr>
<td>11</td>
<td>Change Locker Room floors from ceramic tile to poured epoxy resin floor and walls from ceramic tile to epoxy paint. Toilets, and showers remain ceramic tile (Alternate).</td>
<td>($45,000)</td>
</tr>
<tr>
<td>12</td>
<td>Reduce terrazzo in base bid to patch and repair terrazzo in existing building. Provide new terrazzo in Main Entry Lobbies of E &amp; G wings &amp; Cafeteria and in Commons Area between grade houses in front of Library on both floors. Delete all terrazzo base. Provide terrazzo stair treads and risers at grand stair in E Wing Only (Alternate).</td>
<td>($1,800,000)</td>
</tr>
<tr>
<td>13</td>
<td>Delete replacement of Auditorium stage curtains.</td>
<td>($75,000)</td>
</tr>
<tr>
<td>14</td>
<td>Delete built-in desk units in classrooms, labs and offices (Alternate).</td>
<td>($355,000)</td>
</tr>
<tr>
<td>15</td>
<td>Change 2 cast iron sectional boilers to 4 high efficiency Fulton modular boilers. Increases efficiency of boilers from 80% to 90%. Plus during shoulder seasons efficiency is even further reduced.</td>
<td>($30,000)</td>
</tr>
<tr>
<td>16</td>
<td>Change heat pumps for Gymnasium, Natatorium and Auditorium to gas fired package rooftop units. Reduce size of boilers, evaporative coolers pumps and piping accordingly.</td>
<td>($455,000)</td>
</tr>
<tr>
<td>17</td>
<td>Bid project as 7 prime contracts and save General Contractor mark-up on these trades (net).</td>
<td>($1,500,000)</td>
</tr>
</tbody>
</table>

**TOTAL ANTICIPATED, ACCEPTED SAVINGS**  
($5,226,000)
## ADDITIONAL MEASURES REQUIRED TO REACH $80 MILLION BUDGET

1* Change HVAC system to package roof-top VAV system with gas fired boilers providing reheat to the VAV boxes; delete roof-top mechanical spaces and delete evaporative cooler. ($3,220,000)
2 Delete canopy at Rear Entrance to the Building ($70,000)
3 Reduce size of front canopy by 1/2. ($130,000)
4 Eliminate cable tray system; use J Hooks and Bridle Rings for low voltage wiring systems. (Alternate) ($200,000)

**TOTAL NOT RECOMMENDED** ($3,620,000)

* **Life Cycle Cost Note:** Selection of this option increases maintenance costs, reduces life expectancy of equipment and does not provide for the three to five year payback (and future energy savings) that occurs in the Recommended Project Scope.
**Centennial School District**  
**Additions and Renovations to William Tennent High School**  
**Design Development Cost Estimate**  
**Value Engineering**

---

**COST REDUCTION MEASURES ALREADY INCORPORATED INTO PROJECT**

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Balance site grading cut to fill by raising field hockey fields approximately 2'</td>
<td>($50,000)</td>
</tr>
<tr>
<td>2</td>
<td>Delete 1 of 2 parking lots near proposed field hockey field.</td>
<td>($40,000)</td>
</tr>
<tr>
<td>3</td>
<td>Delete seat walls from front plaza. Reduce rear plaza seat walls to only the retaining walls. Make curved retaining walls at rear plaza boulder walls. Limit stamped concrete to accent bands.</td>
<td>($280,000)</td>
</tr>
<tr>
<td>4</td>
<td>Delete pipe tunnel. Run piping mains above second floor corridor in D Wing.</td>
<td>($240,000)</td>
</tr>
<tr>
<td>5</td>
<td>Move basement of G wing away from existing weight room to avoid shoring of excavation.</td>
<td>($90,000)</td>
</tr>
<tr>
<td>6</td>
<td>Delete crawl space under cafeteria. Backfill area with soil.</td>
<td>($46,000)</td>
</tr>
<tr>
<td>7</td>
<td>Narrow back corridors of classroom wings from 12' to 10. Eliminate 608 sf.</td>
<td>($91,000)</td>
</tr>
<tr>
<td>8</td>
<td>Delete 1 stairway to each of the mechanical penthouses above the Classroom wings. Replace with roof access ladders and hatches.</td>
<td>($110,000)</td>
</tr>
<tr>
<td>9</td>
<td>Change Composite Metal Panels to insulated metal panels.</td>
<td>($415,000)</td>
</tr>
<tr>
<td>10</td>
<td>Delete soffit panels at front and rear canopies. Paint exposed structure.</td>
<td>($78,000)</td>
</tr>
<tr>
<td>11</td>
<td>Reduce glass in stair wells to 6'x4' sidelight and 12'x2' transom above 1st floor stairway doors.</td>
<td>($20,000)</td>
</tr>
<tr>
<td>12</td>
<td>Reduce quantity of drywall bulkheads by 20%.</td>
<td>($100,000)</td>
</tr>
<tr>
<td>13</td>
<td>Change ceilings in toilet rooms (public and private) from drywall abuse resistant lay-in tile, delete drywall ceilings in locker rooms &amp; receiving and provide exposed structure and change drywall ceilings in storage rooms and closets to 2x4 acoustical tile ceilings.</td>
<td>($220,000)</td>
</tr>
<tr>
<td>14</td>
<td>Change acoustical tile ceilings in classrooms and non-public from 2x4 Second Look Tile to standard 2x4 square edge vinyl faced fiberglass tile.</td>
<td>($60,000)</td>
</tr>
<tr>
<td>15</td>
<td>Simplify acoustical clouds in Cafeteria.</td>
<td>($20,000)</td>
</tr>
<tr>
<td>16</td>
<td>Delete interior GRG column covers in locker bays. Use exposed steel columns.</td>
<td>($80,000)</td>
</tr>
<tr>
<td>17</td>
<td>Reuse existing boys lockers and team room lockers (230 total). Reconfigure to fit new locker room lay-outs.</td>
<td>($35,000)</td>
</tr>
<tr>
<td>18</td>
<td>Reuse existing library shelving units. Owner to relocate, contractor to add end panels to shelves after relocation</td>
<td>($60,000)</td>
</tr>
<tr>
<td>19</td>
<td>Current estimate includes cost for new ductwork in the Auditorium. If existing ductwork can be reused with minimal work this cost could be significantly reduced.</td>
<td>($150,000)</td>
</tr>
<tr>
<td>20</td>
<td>Limit HVAC system cleaning requirements to only existing systems and ductwork to</td>
<td>($90,000)</td>
</tr>
<tr>
<td>21</td>
<td>Delete seismic requirements from HVAC specifications.</td>
<td>($295,000)</td>
</tr>
<tr>
<td>22</td>
<td>Eliminate primary electrical transformer C and associated feeders.</td>
<td>($40,000)</td>
</tr>
<tr>
<td>23</td>
<td>Move electrical service entrance for classroom addition to A Wing and add electrical room in A Wing.</td>
<td>($30,000)</td>
</tr>
</tbody>
</table>

**TOTAL COST SAVINGS ALREADY REALIZED**

($2,640,000)

---

Reynolds Construction Management, Inc.  
January 6, 2009
TAB 8: Change Order Management
Change Order Management

It is extremely difficult to eliminate change orders from any construction project, but it is possible to control them and to minimize the impact to the District with regard to cost.

Most change orders are generated from unforeseen subsurface conditions such as rock excavation, sinkholes, existing utility relocations, and from unforeseen conditions due to extensive renovations.

Reynolds will properly control and document the entire change order process in order to keep them to an absolute minimum. We do this by using the following procedural steps:

1. During the course of a project, it is the responsibility of the project manager and the on-site superintendent to identify cost issues that may arise. A cost issue is a concern that could affect the cost of the work. When a cost issue is identified, it will be logged into the change management log (see example at the end of this section) immediately by the project manager.

2. The exact procedure for entering the information will depend on the type of log being used on that particular project – Newforma® software for this project. The log will include a brief description of the cost issue and contractors associated with it, associated costs, and comments.

3. After a concern is identified as a possible cost issue, the project manager determines the appropriate action. If it is determined that there is a change in scope of work and work must proceed immediately, a construction change directive (CCD) should be prepared, signed by Reynolds, architect, and District, and issued to the contractor. Otherwise, the normal sequence is issuing an RFP, receiving a cost proposal, issuing a proposed change order (PCO) and finally issuing a change order (CO).

4. The project manager is responsible for tracking all cost issues and expediting closure of these issues. When contractors claim additional costs, they must provide supporting documentation to Reynolds, architect, and District for evaluation. All claims and change order proposals are responded to in a timely manner in accordance with the contract specifications, whether they are being approved or rejected.
5. The project manager will prepare a PCO with the recommendations for legitimate cost proposals and submit it to the District for approval. The PCO is a recommendation and not a contract document. If work must proceed immediately, a CCD will be issued to the contractor in conjunction with the PCO.

6. When final approval for issuing a change order is received from the District, the project manager will prepare a change order on an AIA form, sign it, and route it for signatures by all parties. The fully executed change order becomes a contract document that changes the contract amount or time. The change management log and the Contract/Change Order Summary should be updated to reflect the cost change.

7. If a contractor submits a claim, change order proposal and/or refuses to proceed with work, which they contend is not in the scope of work but Reynolds and the architect agree it is contract work, then a written directive will be issued advising them to proceed at no additional cost. If they refuse, they will get a seven-day notice.

8. Each month, the project manager will present a change issue summary (see example at the end of this section) update for the District. It will outline approved change orders for the month, recommended change orders for approval, and a summary of the contingency budget changes.

Change Order Results and Sample Documents

On the following pages are an example change order management log and a change issue summary update for the Marple Newtown High School project. Our proposed senior project manager, Tim Sullivan, and proposed project engineer, Justin Carper, authored and presented these reports to the Operations Committee and Board.

For more detailed project information about Marple Newtown High School including a self-appraisal of our performance, see Tab 9: Project Experience.

“On more than one occasion, Reynolds made suggestions of dealing with items in the field that saved the district significant money, and change orders were always carefully controlled. For both projects, only 30% of contingency funds were needed. The fees paid to Reynolds were quickly recouped several times over by savings throughout the duration of the project.”

Dr. Daniel R. Trimmer
Former Superintendent
Conewago Valley School District
<table>
<thead>
<tr>
<th>Change Mgmt. Number</th>
<th>Description of Change</th>
<th>Prime Ref. No.</th>
<th>CM Initiation Date</th>
<th>Contractor</th>
<th>Estimated Amount</th>
<th>Quoted Amount</th>
<th>Pending Amount</th>
<th>Final Approved Amount</th>
<th>AIA Change Order No.</th>
<th>Comments / Ball In Court</th>
<th>Reason for Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Delete PVC fence @ Bailey Property</td>
<td>1</td>
<td>12/3/09</td>
<td>Wohlsen</td>
<td>$3,200.00</td>
<td>$3,550.15</td>
<td>$3,550.15</td>
<td>$3,550.15</td>
<td>01-01</td>
<td>Fully Executed</td>
<td>OR</td>
</tr>
<tr>
<td>2</td>
<td>HVAC Demo @ Shop (T&amp;M)</td>
<td>GMC</td>
<td>12/4/09</td>
<td>$45,000.00</td>
<td>$46,096.65</td>
<td>$35,957.88</td>
<td>$35,957.88</td>
<td>$35,957.88</td>
<td>05-01</td>
<td>In Process</td>
<td>O</td>
</tr>
<tr>
<td>2B</td>
<td>Fairfield credit for HVAC Demo @ Shop</td>
<td>Farfield</td>
<td>2/16/10</td>
<td>$5,000.00</td>
<td>$5,000.00</td>
<td>$0.00</td>
<td>VOID</td>
<td>VOID</td>
<td>01-02</td>
<td>CO to MNSD 3/1/10</td>
<td>UC</td>
</tr>
<tr>
<td>3A</td>
<td>Cafeteria foundation/slab subgrade undercutting (Dec. '09)</td>
<td>Wohlsen</td>
<td>12/22/09</td>
<td>$8,000.00</td>
<td>$7,509.01</td>
<td>$7,509.01</td>
<td>$7,509.01</td>
<td>$7,509.01</td>
<td>01-01</td>
<td>Fully Executed</td>
<td>UC</td>
</tr>
<tr>
<td>3B</td>
<td>Cafeteria foundation/slab subgrade undercutting (Jan. '09)</td>
<td>Wohlsen</td>
<td>12/22/09</td>
<td>$7,000.00</td>
<td>$5,602.56</td>
<td>$5,602.56</td>
<td>$5,602.56</td>
<td>$5,602.56</td>
<td>01-02</td>
<td>CO to MNSD 3/1/10</td>
<td>UC</td>
</tr>
<tr>
<td>4</td>
<td>Ex. 15&quot; CMP conflict with foundations @ NW corner of cafeteria (RFI RCM-002)</td>
<td>Wohlsen</td>
<td>12/29/09</td>
<td>$5,000.00</td>
<td>$7,452.26</td>
<td>$7,378.48</td>
<td>$7,378.48</td>
<td>$7,378.48</td>
<td>01-02</td>
<td>CO to MNSD 3/1/10</td>
<td>UC</td>
</tr>
<tr>
<td>5</td>
<td>Phase 1 Coordination drawings</td>
<td>GMC</td>
<td>1/14/10</td>
<td>$20,000.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>VOID</td>
<td>NA</td>
<td>HVAC contract awarded, no longer reqd</td>
<td>NA</td>
</tr>
<tr>
<td>6</td>
<td>Relocate cooling tower</td>
<td>GMC</td>
<td>1/14/10</td>
<td>$10,000.00</td>
<td>$8,600.00</td>
<td>$0.00</td>
<td>VOID</td>
<td>VOID</td>
<td>NA</td>
<td>HVAC contract awarded, no longer reqd</td>
<td>NA</td>
</tr>
<tr>
<td>7</td>
<td>Relocate existing fuel oil tanks</td>
<td>GMC</td>
<td>1/14/10</td>
<td>$10,000.00</td>
<td>$6,500.00</td>
<td>$0.00</td>
<td>VOID</td>
<td>VOID</td>
<td>NA</td>
<td>HVAC contract awarded, no longer reqd</td>
<td>NA</td>
</tr>
<tr>
<td>8</td>
<td>Reconnect piping to relocated existing fuel tanks</td>
<td>GMC</td>
<td>1/14/10</td>
<td>$25,000.00</td>
<td>$27,000.00</td>
<td>$0.00</td>
<td>VOID</td>
<td>VOID</td>
<td>NA</td>
<td>HVAC contract awarded, no longer reqd</td>
<td>NA</td>
</tr>
<tr>
<td>9</td>
<td>Credit to re-use existing 13,200V transformer (RFI 07-002)</td>
<td>Goldhorn</td>
<td>1/20/10</td>
<td>-$45,000.00</td>
<td>-$28,000.00</td>
<td>-$32,000.00</td>
<td>-$32,000.00</td>
<td>-$32,000.00</td>
<td>07-01</td>
<td>CO to MNSD 3/1/10</td>
<td>VE</td>
</tr>
<tr>
<td>10</td>
<td>Concrete pad for relocated cooling tower</td>
<td>4R</td>
<td>1/25/10</td>
<td>$4,000.00</td>
<td>$5,642.30</td>
<td>$3,951.24</td>
<td>$3,951.24</td>
<td>$3,951.24</td>
<td>01-02</td>
<td>CO to MNSD 3/1/10</td>
<td>O</td>
</tr>
<tr>
<td>10B</td>
<td>Fairfield credit for cooling tower concrete pad</td>
<td>Farfield</td>
<td>2/16/10</td>
<td>$4,000.00</td>
<td>$4,000.00</td>
<td>$0.00</td>
<td>VOID</td>
<td>VOID</td>
<td>NA</td>
<td>Performing T&amp;M-Work Complete; Awaiting final costs</td>
<td>UC</td>
</tr>
<tr>
<td>11</td>
<td>Relocate existing RWC conflicting with conc pier at BA/B4 @ Classroom Addit.</td>
<td>JRRI</td>
<td>2/2/10</td>
<td>$2,000.00</td>
<td>$2,000.00</td>
<td>$0.00</td>
<td>VOID</td>
<td>VOID</td>
<td>NA</td>
<td>Awaiting response from Architect</td>
<td>O</td>
</tr>
<tr>
<td>12</td>
<td>RFI 04-008 - Chase added for RWC in Rooms A131 &amp; A231</td>
<td>Wohlsen</td>
<td>2/16/10</td>
<td>$1,000.00</td>
<td>$1,000.00</td>
<td>$0.00</td>
<td>VOID</td>
<td>VOID</td>
<td>NA</td>
<td>Awaiting response from Architect</td>
<td>O</td>
</tr>
<tr>
<td>12</td>
<td>RFI 04-008 - Piping not shown on P-103 &amp; P-114</td>
<td>JRRI</td>
<td>2/16/10</td>
<td>$2,500.00</td>
<td>$2,500.00</td>
<td>$0.00</td>
<td>VOID</td>
<td>VOID</td>
<td>NA</td>
<td>Awaiting response from Architect</td>
<td>O</td>
</tr>
<tr>
<td>13</td>
<td>Unsuitable soil claim - Wohlsen</td>
<td>Wohlsen</td>
<td>2/16/10</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>03-01</td>
<td>In Process</td>
<td>OR</td>
</tr>
<tr>
<td>14</td>
<td>Food Service equipment revisions during shop drawing review</td>
<td>TDFE</td>
<td>2/18/10</td>
<td>$0.00</td>
<td>$5,683.96</td>
<td>$475.84</td>
<td>$0.00</td>
<td>$0.00</td>
<td>03-01</td>
<td>In Process</td>
<td>OR</td>
</tr>
<tr>
<td>15</td>
<td>Relocate / re-pipe existing fuel oil tanks (RFI 06-001)</td>
<td>Farfield</td>
<td>2/19/10</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>03-01</td>
<td>In Process</td>
<td>OR</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$92,300.00</td>
<td>$88,936.59</td>
<td>$32,425.16</td>
<td>$31,949.32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

grey = closed
yellow = BIC owner
green = BIC architect
blue = BIC RCM
white = BIC contractor
red = claim

Reason for Change:
OR = Owner Req
EO = Error Omiss
UC = Unforeseen Cond
AHJ = AHJ Mandate
O = Other
VE/ PVE = Value Engr
## Change Issue Summary Update for Operations Committee and Board - March 9, 2010

### Approved this Month by Administration (Superintendent and Director of Operations)

<table>
<thead>
<tr>
<th>CM No.</th>
<th>CO No.</th>
<th>Change Description</th>
<th>Change Cause</th>
<th>Approval Type</th>
<th>Category</th>
<th>Contractor</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td></td>
<td>Food Service Equipment revisions at the Cashiers and Servery</td>
<td>Modifications requested by the District Personnel</td>
<td>Owner Request</td>
<td></td>
<td>Todd Devin</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

**Current Limit of Changes - Administration ($10,000 per Item/$50,000 Cumulative per Month)**

Within Limits

**Previously Approved Change Issues by Administration**

| B | $20,891.14 |

**To Date Net Changes - Administration**

| C = A + B | $20,891.14 |

### Recommended this Month for Approval by the Board

**Previously Approved Change Issues by Board**


| E | $3,957.88 |

**To Date Net Changes - Approved by Board**

| F = D + E | $3,957.88 |

### Monthly Activity for February 2010

<table>
<thead>
<tr>
<th>Summary of Change Orders this Month Approved by Administration</th>
<th>A</th>
<th>$0.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of Change Orders this Month Recommended for Approval by the Board</td>
<td>D</td>
<td>$0.00</td>
</tr>
<tr>
<td>Summary of Change Orders this Month by Administration and Board</td>
<td>A + D</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

**To Date Net Changes - Approved by Board and Administration**

| G = C + E | $24,849.02 |

**Recommended This Month for Approval by Board**

| D | $0.00 |

**To Date Net Changes - Approved Plus Recommended This Month for Approval by Board**

| H = G + D | $24,849.02 |

### Construction Contingency Budget

<table>
<thead>
<tr>
<th>100%</th>
<th>$2,500,000.00</th>
</tr>
</thead>
</table>

**To Date Net Changes - Approved Plus Recommended This Month for Approval by Board**

| 1% | $24,849.02 |

**To Date - Other Exposure Tracked in Change Management Log**

| 0% | $5,500.00 |

**To Date - Committed Changes (Approved and Recommended) and Other Exposure**

| 1% | $30,349.02 |

**Remaining Contingency - No Exposure Noted**

| 99% | $2,469,650.98 |

Approval Types: Administration = Approved by Administration via Authorization Previously Provided, Board = Seeking Board Approval by Vote, Ratification = Pre-Authorized by Board, Seeking Board Approval by Vote

Category Types: Code/Safety = Required for Code or Safety Improvement, Design = Design Modification Required to Complete Work, Other = Miscellaneous, Owner = Owner-Directed, Unforeseen = Unforeseen Condition
Tab 9: Project Experience
Unique Qualifications
During the last two decades, Reynolds has provided various levels of construction management services and has developed into a company fully prepared to meet the challenges of any project. We have the experience of lessons learned on hundreds of projects and have worked with owners, architects, and contractors to find a way to successfully complete them. Through this experience, Reynolds has obtained the skills that will increase responsiveness to the needs and expectations of the State College Area School District.

Below are a few unique advantages Reynolds’ team will bring to the State College Area School District and its State High Project.

Our Specialty - Public Schools
Reynolds has put into place over $2 billion of public school construction. In fact, we have provided construction management services to 73 Pennsylvania school districts, including 54 high schools, 35 middle schools, and 71 elementary schools. The many intricacies and sensitivities involved in public school construction projects are very familiar to our team members. We understand that public work means public scrutiny and public criticism. Our job is to work together with you to keep the public informed and to ensure that the project is completed successfully – within budget, on schedule, with quality, and minimal disruption to any school undergoing renovations.

Relationship with Your Architect
For the past 20 years, Reynolds has successfully worked with Crabtree, Rohrbaugh & Associates on more than 17 projects including 12 public schools. In fact, we completed the new Northern York High School and the York County School of Technology together along with numerous high schools, such as Bellefonte, Twin Valley, and Elizabethtown.

Experience in Phased Renovations/Additions
Reynolds’ key staff has been proficient in managing phased school additions and renovations. They know that in a phased renovation project, a construction manager must be able to plan proactively and react constructively as challenges are unearthed. Key attributes for a successful project manager are patience, flexibility, and the ability to resolve issues quickly.

Our staff has phased many renovations using on-site swing space, such as at John Harris High School, Neshaminy High School, and Marple Newtown High School. Reynolds will provide options for efficient phasing that avoid disrupting your educational operations and provide a safe environment. Reynolds puts the safety of the staff, students, and public first.
Project Experience

Reynolds has invaluable knowledge of the coordination issues involved in construction around a busy and occupied school building. Our goal is to execute a well-coordinated and constructed project with minimal disruption to the students, faculty, and staff. The Reynolds team, who has an understanding of phased renovations, is ready to put our experience to use to benefit the District and help make your project a success.

Familiarity with the State College Area
Reynolds has experience working in and around the State College area. For the Penn State main campus, we provided preconstruction services for the Chemistry, Forest Resources, and Food Science Buildings, as well as construction management services for three parking deck additions: Nittany, HUB, and Eisenhower. Neighboring school districts include Phillipsburg Osceola, Bellefonte Area, and Mifflin County.

In addition, our sister firm, Reynolds Consulting Engineers (RCE), has experience working with the State College Area School District. They provided building commissioning services to three elementary schools: Ferguson Township, Gray’s Woods, and Mount Nittany. RCE also provided building commissioning services to four buildings on the main campus of Penn State: Chemistry, Gary Schultz Child Care Center, and Hort Woods Child Care Center.

Expertise with LEED
Reynolds has extensive knowledge with LEED registered projects and other sustainable design projects. We provided construction management services on 15 completed LEED certified buildings and one LEED registered project. Reynolds is proud to have provided full construction management services for the Clearfield Elementary School, the first LEED Gold certified school building in Pennsylvania, as well as Ferguson Elementary School, the first LEED Platinum school building in Pennsylvania. Please refer to Tab 4 for a complete list of LEED projects.
Project Experience

Keeping the Public Informed
Reynolds works with the entire planning and project team, including the Citizens Advisory Committee, to provide website information, construction guides, and other public updates, through board meetings and other select meetings. These measures keep parents, students, and the public aware of the planned activities on site to provide the best separation of students from construction. Some of these measures include the following:

- Assistance with educating community on need and design/construction process
- During design, focus on communicating the need for the project, understanding concerns from neighbors at the sites
- Assisting the district in demonstrating that the project is appropriately sized/designed
- Mailers, websites, e-mails, other options can be used at district’s choosing
- Committees, full community meetings and special neighborhood meetings are used depending on phase and needs

Relevant Experience
On the following pages we have provided five projects of similar size and scope performed for educational institutions that have been completed within the last five years. For these projects, Reynolds worked directly with the design professional and the owner as an agency construction manager.
Neshaminy School District hired Reynolds as construction manager for the major additions and renovations project at their high school. Work included 162,000 square feet of renovations and a 263,000-square-foot addition.

The school accommodates 2,800 students with space for District administrative offices. The new additions include a wellness center, auxiliary gym with climbing wall, locker rooms, academic and LGI classrooms, science labs, art, technical education shops and classrooms, and music and band classrooms.

In addition to the high school, Reynolds was recently hired again to provide construction management services for a new elementary school.

Self-Appraisal Highlights:

- Preconstruction phase was completed on time but bids were over the estimate due to increased market activity at the time of bid in Philadelphia. Despite this issue, the project was managed to within the budget provided (which was higher than the estimate).
- Work was completed despite a contentious relationship between the municipality and the school board.
- Reynolds facilitated a post-bid design modification process where the District invested about $90,000 to obtain nearly $600,000 in additional PlanCon funding; the architect (from Minnesota) had not developed the design to account for considerations that could enhance program and provide additional PlanCon funding.
- A State contract-procured roofing prime contractor was used.
- While some re-phasing occurred, the project was completed on time and as required for the educational program. The project was fully occupied during construction, with no incident.
- The contingency use was managed to obtain more scope with optional owner-initiated change orders (project contingency used in full by owner).
Reynolds provided full construction management services for Centennial School's district-wide construction projects, which included major additions and renovations to their high school. Our services included multiple costs estimates, value engineering, constructability reviews, bidding services, and full on-site construction phase services.

Reynolds completed detailed cost estimates at various stages of design. The cost estimates completed during the schematic design and design development phases allowed the team to identify over 20 value engineering items that were accepted by the school district and incorporated into the design documents reducing the construction costs by $2,640,000. Reynolds also developed 26 bid alternates totaling over $2,000,000 that were incorporated into the bid documents that provided Centennial options on bid day to stay within their budget but maximize the scope of work within that budget.

Prior to the release of the construction documents for bid, Reynolds completed a constructability review on all disciplines and provided the school district and the design professionals a report with 581 items. We ensured that the issues noted in our constructability report were addressed by the design professionals and updated in the bid documents.

To provide further options to the district, Reynolds prepared two base bids, one utilizing a single prime general contractor as requested by the school district with a separate demolition contractor, and one using 10 prime contractors as recommended by Reynolds. Although both bids were under the school district’s budget, the base bid for the 10 prime contractor option saved over $5,000,000, which allowed the school district to accept alternatives for the high school project and fund their capital program for their elementary schools. Ultimately, the district used funds to add a planetarium to their high school by change order.
Reynolds provided a full time on-site staff during construction including a project manager, construction manager/inspector, and a project coordinator. We also provided a project executive, project scheduler, cost estimators, and MEP support staff. Our team provided the leadership to complete the project on time and under budget by diligently administrating the contracts and coordinating the work of the numerous prime contractors.

Reynolds developed a “lead safety contractor” program that assigned the safety of the entire project to the general trades contractor. This program was included in the bid documents and specified the lead safety contractor’s responsibilities including the requirement for an independent safety inspector. The key to this program is the deputizing of the general trades contractor, which gives them the authority to immediately correct any safety violations and be reimbursed for costs because of safety violations by other prime contractors through contractual obligation.

Self-Appraisal Highlights:

- Preconstruction phase was completed on time. Bids were under budget and the option to use multi-prime vs. single prime saved over $5,000,000.
- Work was completed despite a contentious relationship between the municipality and the school board.
- An owner-initiated change order of adding a planetarium was included during construction; Reynolds did not charge a fee for this added work.
- While some re-phasing occurred, the project was completed on time and as required for the educational program. The project was fully occupied during construction, with no incident.
- The contingency use was managed to obtain more scope with optional owner-initiated change orders (project contingency used in full by owner).
- Savings, initiated by Reynolds ideas, helped the District to build three new elementary schools and consolidate from six in a follow-up project.
Marple Newtown High School
Newtown Square, PA

Marple Newtown School District hired Reynolds to provide construction management services for a large renovation/addition project spanning 36 months at the Marple Newtown High School. The school was fully occupied at all times. The work was divided into 13 phases of construction with various spaces within the building being used to transition from one phase to the next.

The project added a new classroom wing and expanded the performing arts center. There is a new library, cafeteria, and kitchen spaces. The plan utilizes the current building structure with new systems and finishes throughout to bring the building up to 21st century standards.

During the development of the bid documents, Reynolds provided project estimates at significant design development milestones. Our final estimate at 90% documents was $54,617,000. During the estimating phase, Reynolds issued a constructability review containing 842 separate items for correction in the drawings and specifications. If uncorrected, these items would have cost the owner in excess of $1,000,000 in construction change orders.

At the same time, Reynolds developed a list of potential cost savings through value engineering where $1,550,000 were identified in potential savings and the owner accepted $905,000. Bid day results were substantially lower than estimated at $46,010,154. The owner utilized these bid savings for added scope to the project by replacing certain roofs not originally in the plan as well as a complete renovation to the natatorium that was originally deemed not to fit within the budget. The owner still realized significant bid day savings to renovate their district office, which was in very poor condition.
Reynolds also provided commissioning services for this project. The new emergency generators provide power for the entire building and allow the district to receive rebates from their electric provider. This measure provides for less than an eight-year pay back on the generators.

This project demonstrates Reynolds commitment and skill in managing a multi-phase, occupied high school renovation with a minimum of disruption to the educational program.

Self-Appraisal Highlights:

- Preconstruction phase was completed on time and bids were under budget due to excellent bidder participation/outreach and bid strategy.
- Construction was nearly delayed when a low bidder, rejected for being non-responsive, found a resident to request an injunction on the mechanical contract; we began work without the mechanical contractor and prevailed in court. No additional fee was charged for our assistance in the bid protest, and our testimony was key in the District prevailing.
- While some re-phasing occurred, the project was completed on time and as required for the educational program.
- The contingency use was managed to obtain more scope with optional owner-initiated change orders.
- Enough money was saved to allow for construction of other district projects, including upgrades to the District Administration Offices.
- The project was fully occupied during construction, with no incident.
Mifflinburg Area High School
Mifflinburg, PA

Mifflinburg Area School District hired Reynolds to manage the preconstruction and construction of their Mifflinburg High School renovation project. Built in 1952, the school was in need of major improvements.

All classrooms throughout the building were renovated, along with repairing ceilings and floors, and modifying access to comply with the Americans with Disabilities Act. The school was fully occupied at all times. The work was divided into eight phases of construction with various spaces within the building being used to transition from one phase to the next. Renovations to the building’s heating system included replacing heat, ventilation, and air conditioning with a geothermal heat pump. The electrical improvements included a keyless entry system. The new addition included three classrooms and three storage areas.

During the development of the project design, Reynolds provided two project estimates. Our final estimate at 90% construction documents was $14,650,000. During pre-construction, Reynolds issued constructability reviews at major design milestones for incorporation into the bid documents. Reynolds generated 255 constructability comments to the 90% construction documents. We ensured that the issues noted in our constructability report were addressed by the design professionals and updated in the bid documents.
Self-Appraisal Highlights:

- Preconstruction phase was completed on time and bids were under budget due to excellent bidder participation/outreach and bid strategy.
- The contingency use was managed to obtain more scope with optional owner-initiated change orders.
- The geothermal well field was installed under the existing football field. The field was re-graded and new sod installed for the start of football season.
- A detailed phasing plan was developed prior to bid and managed successfully through construction. It met the owner’s needs despite the lack of significant swing space.
- While some re-phasing occurred, the project was completed on time and as required for the educational program. The project was fully occupied during construction, with no incident.
The Philipsburg Osceola Area School District hired Reynolds to provide project management services to address a growing enrollment and outdated facilities. After months of discussion and community input, the school board approved consolidating its five schools into four. This included closing a junior high school and converting an existing elementary into a middle school.

Reynolds’ services for the renovation and addition began by assisting the District in establishing criteria, preparing an RFP, and selecting a design professional. Reynolds continued assisting the District in developing a scope of work, schedule, budget, and project criteria. After design was complete, Reynolds then provided construction management services to convert an existing elementary school into a middle school. The school was fully occupied during construction.

The project consisted of renovations to the existing building, such as converting the former gymnasium into a band and music room. The three additions included a new gymnasium, auditorium, tech-ed, cafeteria, classrooms, and science labs.

The plans include more secure features than the current junior high school. Since completion, the middle school has increased value to student learning. Students in grades 5-8 use science labs and technology and have access to green space, including a classroom courtyard.
Self-Appraisal Highlights:

- Preconstruction phase was completed on time. The optional auditorium addition had a higher bid cost than desired by the District, but it was built to allow for the best educational impact of the project.
- Work was completed despite a contentious relationship between the municipality and the school board.
- Change orders were managed to a negative number, due to post-bid value engineering efforts, supporting the acceptance of the Auditorium Alternate.
- The project was completed on time with no claims.
- The project was fully occupied during construction, with no incident.
## Tab 10: Fee Proposal
Fee Proposal

Lump Sum Fee
Reynolds Construction, LLC, proposes to provide construction management services to the State College Area School District on the State High Project based on the scope of services described in Request for Proposal for Construction Management Services for a fixed fee of:

$2,685,000

$500 per meeting over the base meeting amount of 48

While we have responded to the RFP as required, Reynolds is fully willing to negotiate the scope of work and hours required to best serve the State College Area School District. In order for the evaluators to understand our value proposition, we have provided hours for each staff member in each phase for your comparison to other fees.

Breakdown of Lump Sum Fee Proposal

Pre-Construction Phase Services
(July 2014 through March 2015 - 9 months)

<table>
<thead>
<tr>
<th>Position</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sr. Preconstruction Manager</td>
<td>620</td>
</tr>
<tr>
<td>Preconstruction Manager</td>
<td>160</td>
</tr>
<tr>
<td>MEP Estimators</td>
<td>820</td>
</tr>
<tr>
<td>Sr. Project Manager</td>
<td>120</td>
</tr>
<tr>
<td>Scheduler</td>
<td>60</td>
</tr>
<tr>
<td>Clerical</td>
<td>120</td>
</tr>
<tr>
<td><strong>Total – Preconstruction Phase Services</strong></td>
<td><strong>1,900</strong></td>
</tr>
<tr>
<td><strong>Fee</strong></td>
<td><strong>$185,000</strong></td>
</tr>
</tbody>
</table>

Bidding Phase Services
(April and May 2015 - 2 months)

<table>
<thead>
<tr>
<th>Position</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sr. Preconstruction Manager</td>
<td>80</td>
</tr>
<tr>
<td>Sr. Project Manager</td>
<td>96</td>
</tr>
<tr>
<td>Scheduler</td>
<td>24</td>
</tr>
<tr>
<td>Clerical</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total – Bidding Phase Services</strong></td>
<td><strong>240</strong></td>
</tr>
<tr>
<td><strong>Fee</strong></td>
<td><strong>$25,000</strong></td>
</tr>
</tbody>
</table>

Construction Phase Services
(June 2015 through September 2018 - 40 months)

<table>
<thead>
<tr>
<th>Position</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sr. Project Manager</td>
<td>6,400</td>
</tr>
<tr>
<td>On-site Construction Superintendent</td>
<td>6,600</td>
</tr>
<tr>
<td>Project Engineer</td>
<td>6,400</td>
</tr>
<tr>
<td>Tech/BIM Support</td>
<td>300</td>
</tr>
<tr>
<td>Scheduler</td>
<td>240</td>
</tr>
<tr>
<td>Project Coordinator</td>
<td>5,280</td>
</tr>
<tr>
<td><strong>Total – Construction Phase Services</strong></td>
<td><strong>25,220</strong></td>
</tr>
<tr>
<td><strong>Fee</strong></td>
<td><strong>$2,430,000</strong></td>
</tr>
</tbody>
</table>
The cost per month of Construction Phase Services as proposed is $60,750. Should construction time be reduced or increased, this basis would be used (and could be pro-rated by week) for adjustments.

Close-Out Phase Services
(October and November 2018 - 2 months)

<table>
<thead>
<tr>
<th>Position</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sr. Project Manager</td>
<td>160</td>
</tr>
<tr>
<td>On-site Construction Superintendent</td>
<td>160</td>
</tr>
<tr>
<td>Project Coordinator</td>
<td>160</td>
</tr>
<tr>
<td><strong>Total – Close-Out Phase Services</strong></td>
<td>480</td>
</tr>
</tbody>
</table>

Fee Summary

<table>
<thead>
<tr>
<th>Phase</th>
<th>Hours</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preconstruction</td>
<td>1,900</td>
<td>$185,000</td>
</tr>
<tr>
<td>Bidding</td>
<td>240</td>
<td>$25,000</td>
</tr>
<tr>
<td>Construction</td>
<td>25,220</td>
<td>$2,430,000</td>
</tr>
<tr>
<td>Close-Out</td>
<td>480</td>
<td>$45,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>27,840</td>
<td><strong>$2,685,000</strong></td>
</tr>
</tbody>
</table>

Hourly Billing Rates

<table>
<thead>
<tr>
<th>Position</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sr. Preconstruction Manager</td>
<td>$111</td>
<td>$114</td>
<td>$117</td>
<td>$121</td>
<td>$124</td>
</tr>
<tr>
<td>Architectural Estimator</td>
<td>$100</td>
<td>$103</td>
<td>$106</td>
<td>$110</td>
<td>$113</td>
</tr>
<tr>
<td>MEP Estimators</td>
<td>$102</td>
<td>$105</td>
<td>$108</td>
<td>$111</td>
<td>$115</td>
</tr>
<tr>
<td>Preconstruction Coordinator</td>
<td>$46</td>
<td>$47</td>
<td>$49</td>
<td>$50</td>
<td>$52</td>
</tr>
<tr>
<td>Sr. Project Manager</td>
<td>$117</td>
<td>$121</td>
<td>$124</td>
<td>$128</td>
<td>$132</td>
</tr>
<tr>
<td>On-site Construction Superintendent</td>
<td>$109</td>
<td>$112</td>
<td>$115</td>
<td>$119</td>
<td>$122</td>
</tr>
<tr>
<td>Project Engineer</td>
<td>$80</td>
<td>$83</td>
<td>$85</td>
<td>$88</td>
<td>$90</td>
</tr>
<tr>
<td>Scheduler</td>
<td>$99</td>
<td>$102</td>
<td>$105</td>
<td>$108</td>
<td>$111</td>
</tr>
<tr>
<td>Project Coordinator</td>
<td>$48</td>
<td>$49</td>
<td>$50</td>
<td>$52</td>
<td>$54</td>
</tr>
</tbody>
</table>

The hourly billing rates above are provided for additional services, if needed, and as a basis for comparison. The hourly rates used in our lump sum fee have been discounted and are lower than the rates above.

Reimbursable Costs

Reynolds Construction, LLC, proposes to provide reimbursable items as required by the RFP in our lump sum fee above, with the following exceptions: printing of design/bid/construction drawings and specifications, BIM consulting by an outside firm, professional photography, professional videography, or special travel to manufacturing facilities or similar. Any exception noted would need to be approved by the District in writing and would be billed with no mark-up.