RECEIVED
2020 AUG 24 PM 12: 54
WV PURCHASING DIVISION

CDI® Engineering Solutions

Quality Results. Safely Delivered.

STATE OF WEST VIRGINIA
DEPARTMENT OF ADMINISTRATION

IN RESPONSE TO REQUEST FOR

Preliminary Engineering Study – Nitrile Glove Manufacturing

Solicitation No. CEOI 0603 ADJ2100000005

August 24, 2020

Proprietary Statement

This document contains information which is proprietary and confidential to CDI. By receiving and retaining this information, the recipient agrees not to use (other than for its intended purpose), reproduce or disclose to any other person or entity any such information without the prior written permission of CDI, which permission may be granted or denied in CDI's sole discretion. The recipient further agrees to return or destroy this document at CDI's request or at such time as the approved use of the information has been completed, whichever is earlier.

CDI® Engineering Solutions

500 Corporate Landing, 2nd Floor
Charleston, WV 25311
Phone: 304-746-3652
Fax: 304-746-3668
www.cdiengineeringsolutions.com

August 24, 2020

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

REFERENCE: **Sealed Bid: Solicitation # CEOI 0603 ADJ2100000005**
Preliminary Engineering Study – Nitrile Glove Manufacturing

Dear Ms. Lyle,

Thank you for the opportunity to respond to your Expression of Interest (EOI) for the Preliminary Engineering Study of the proposed Nitrile Glove Manufacturing Line.

CDI Engineering Solutions is a 700+ person multi-disciplinary engineering, procurement and construction management firm specializing in the development of industrial facilities of the type you are considering. We have helped numerous clients justify, plan, analyze alternatives, design and construct facilities near Yeager Airport, throughout Charleston and across the nation.

CDI offers a number of benefits and value-added techniques to you on this project. We request your consideration of the following key points:

- CDI has produced literally thousands of similar preliminary engineering studies leading to hundreds of successful manufacturing facilities across the nation. Dozens of these facilities are located in the Kanawha Valley.
- We employ a structured Preliminary Engineering process to identify and quantify all project requirements to ensure project objectives, safety requirements, logistics and transportation, personnel and cost parameters are understood and documented. This is an interactive process driven by client input.
- As an independent firm, CDI will provide complete objectivity in the evaluation and eventual acquisition of production equipment, which in this case is the centerpiece of the facility. We can provide analysis of alternatives, develop procurement specifications and acceptance test procedures, and make unbiased sparing and support equipment recommendations.
- Our West Virginia licensed engineers, expert project support personnel, and seasoned construction managers are readily available to ensure success from our office located two miles from your headquarters. CDI can support you from "Concept" through "Commissioning" – as the preliminary study leads to cost estimating, permitting, detailed engineering, equipment procurement, construction, training, and startup.

Again, we extend our appreciation to the West Virginia Army National Guard for being considered in your EOI process and we truly look forward to exploring this further with you in the coming weeks. Please feel free to contact me at john.skaff@cdicorp.com or 304.746.3583 for any clarifications you may require or questions you may have.

Sincerely,

John Skaff
Director - Business Development

CDI® Engineering Solutions

Table of Contents

SECTION I | QUALIFICATIONS & EXPERIENCE 1

Engineering Organization 1

Organizational Chart 2

Staff Qualifications 3

Project Experience 4

Project References 8

SECTION II | PROJECT APPROACH & METHODOLOGY 9

SECTION III | PROPOSED PROJECT PLANS 12

Project Management & Control 12

Change Management 12

Engineering, Design, & Document Control 12

Information Management Plan 13

Safety Plan 13

Quality Management Plan 13

Project Controls Plan 14

APPENDICES

Appendix A Project Team Resumes & Staff Certification A-1

Appendix B Health • Safety• Security • Environment • Quality B-1

Appendix C Forms C-1

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

CDI® Engineering Solutions

Section I | Qualifications & Experience

Engineering Organization

CDI Engineering Solutions is a multi-disciplinary engineering organization offering a full range of integrated engineering, design, architecture and project support services to government and industrial clients throughout the eastern United States. We offer proven project management capabilities, mature systems and processes, a network of ten engineering centers and an incredible team of more than 700 experts to deliver the most complex and challenging projects - safely, on time and on budget.

CDI Engineering Solutions – Your Perfect Partner

Our employees are the reason our clients return to work with us again and again: Their technical expertise. Their relevant industry and project experience. Their collaborative approach. Their unwavering commitment to putting your interests first. Through dedicated design and engineering, integrated project delivery or technical staff augmentation, our team becomes your team.

Whether your project requires front end planning, facility programming, preliminary engineering, detailed design, environmental compliance and permitting, construction management or inspection services, our focus is to understand your needs and align our services with your goals every step of the way.

Established in Charleston West Virginia in 1976, CDI has supported virtually every industrial facility in the Kanawah Valley and nearby communities. We are the Engineer of Record at Yeager Airport and have designed numerous buildings and facilities within yards of your headquarters facilities. Our familiarity with the chemistry involved in the nitrile glove manufacturing process combined with our regulatory expertise will result in a successful preliminary engineering study. We are proud to work with each and every one of our clients to achieve their goals and objectives.

Mission Statement

Our mission is to provide the highest quality, highest value and safest architecture and engineering, procurement, and construction management (EPCM) services. We develop long-term relationships with our clients by delivering comprehensive, innovative solutions that respond directly to their specific needs while engaging with the utmost integrity, transparency and professionalism.

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

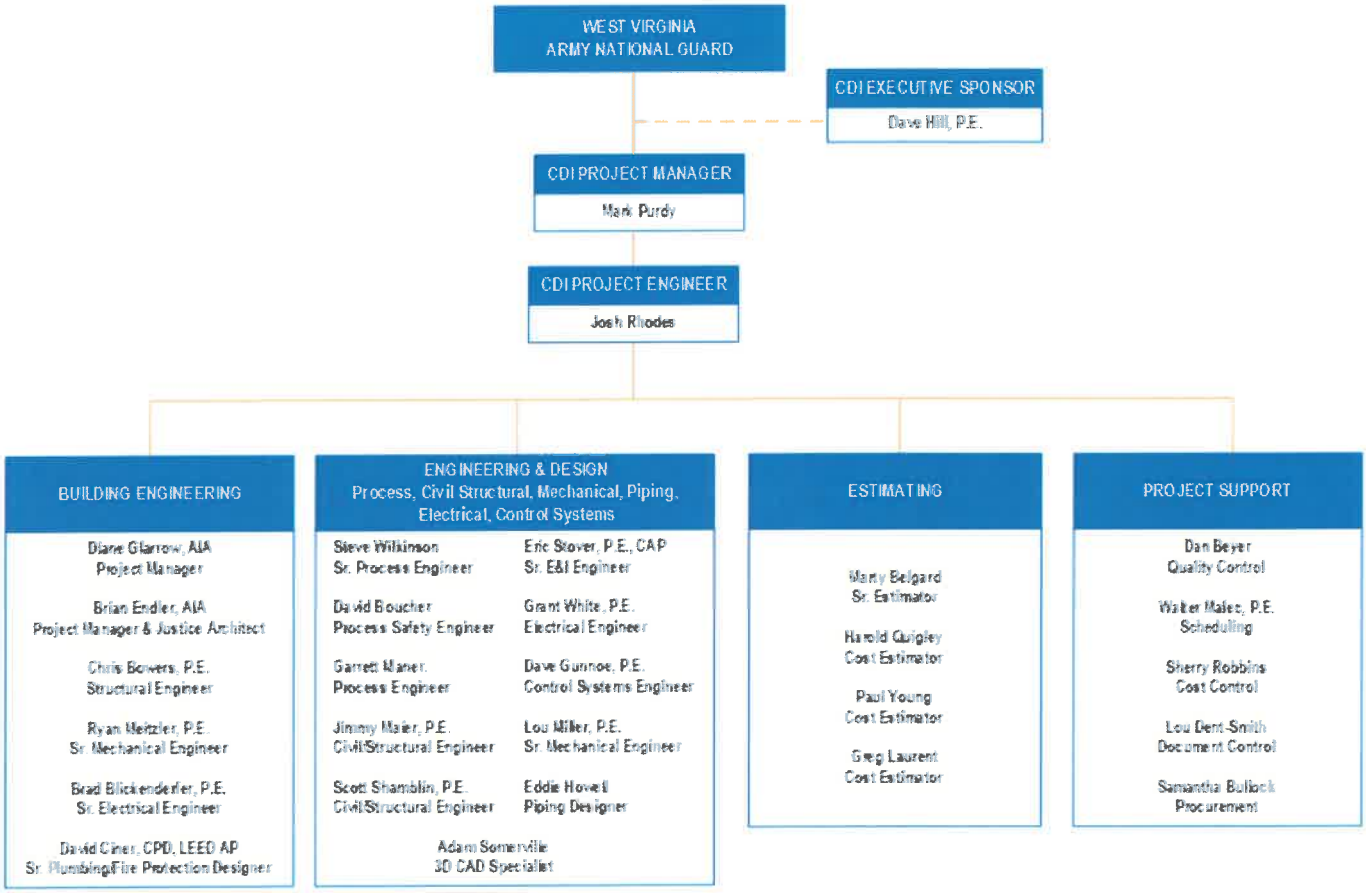
Organizational Chart

CDI has assembled a cross functional project team to bring the requisite technical and project execution skills to your Preliminary Engineering Study.

We will draw upon licensed engineers and architects to evaluate all technical aspects of the proposed Nitrile Glove Manufacturing Line. Manufacturing process engineers will take the lead, supported by all other required engineering disciplines needed to select and install a production line and design its support infrastructure. Evaluation of existing facilities and the design of modifications or new structures will be the purview of our Building Systems engineering group, which consists of architects and engineers who specialize in the modification and construction of facilities in West Virginia. Project support personnel will support project execution to ensure completion on time and under budget after contract details have been defined. CDI's dedicated group of cost estimators with an aggregate of more than 100 years of cost estimating experience will prepare construction, operations and life cycle cost estimates. CDI also has an experienced capital equipment procurement team with experience acquiring capital equipment with $10M+ value, who can either directly subcontract for such equipment or provide assistance to your procurement team with competitive procurement packages, technical specifications, technical bid evaluations, acceptance test plans, site surveys, inspections and expediting.

This cross functional team will be led by one of our most experienced manufacturing facility project managers, Mark Purdy. A 14-year veteran of CDI, Mark will be responsible to the WV Army National Guard and CDI management for successful completion of the project – to the National Guard's satisfaction, on time, and under budget. Mr. Purdy reports directly to David Hill, PE, our Director of Operations for our 100-person West Virginia Operation. Mr. Hill will ensure that our team dedicates the necessary experts at the right time and right place to ensure success.

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.



Staff Qualifications

Project team resumes are included in **Appendix A** of our submittal, along with a listing of staff certifications applicable to this project.

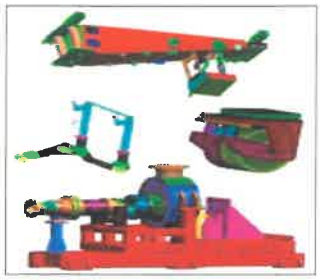
Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

CDI® Engineering Solutions

Project Experience

Confidential client names and additional project details can be provided upon request.

CONFIDENTIAL CLIENT
EXPANSION PROJECTS
KNOXVILLE, TN



Provided preliminary and detailed engineering for the design and installation of a new reactor, 2 new transformers, LOPA compliance design and new switch room.
Estimated TIC: $15,000,000

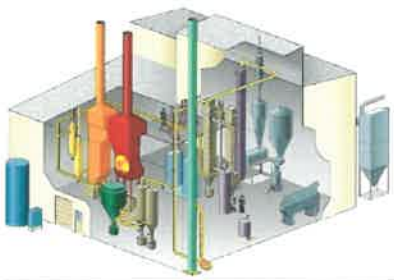
DEPARTMENT OF ENERGY (DOE)
YEAGER HYDROGEN STATION PROJECT
CHARLESTON, WV

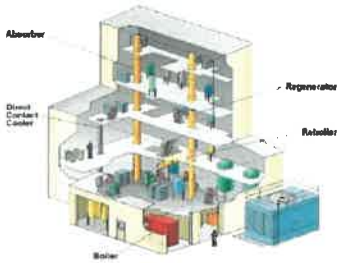
Project scope included a hydrogen fuel production and vehicle fueling facility for operation at the Yeager Airport in Charleston, WV. Designed as a research, development, test, and evaluation platform, the "open architecture" approach allowed for testing of new innovations in hydrogen technology. Production was 12 kg/day (approximately equivalent in energy content to 12 gallons/day of gasoline) of 6,000 psi hydrogen. CDI's scope was to provide site development and electrical support for the facility. The design was completed on a fast-track schedule to meet commissioning and operational goals after federal funding was approved. Engineering Value: $2,600,000.

CONFIDENTIAL CLIENT
RSAT CO2 ABSORPTION RESEARCH FACILITY
OHIO

Provided green-field design of Regenerable Solvent Absorption Technology (RSAT) CO2 absorption research facility.

- Defined process and general operating parameters, with specification and design of equipment, structure, buildings and foundations, and support facilities.
- Facilitated Hazardous Operation (HAZOP) Analysis and led definition and development of process safety interlock system.
- Supported R&D efforts to develop an energy efficient process capable of scale-up for industrial power plant applications.
- Designed for Inherent Safety and minimal environmental impact. Flexible design to support broad range of R&D activity related to CO2 absorption.





Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

CONFIDENTIAL CLIENT
FACILITY EXPANSION PROJECTS, MN

Preliminary and detailed engineering, procurement and construction support services for numerous Facility Capacity Expansions from 2004 through 2019 with an overall TIC Value of $200,000,000. CDI's primary execution office is located in Charleston, WV with additional support from Houston, TX office. The quality driven projects were collaborative efforts utilizing CDI Engineering and Client's Minnesota Site Team, Subject Matter Experts located in our Michigan office and Texas Project Support Services, and Engineering and Proprietary Equipment Manufacturer specialists.

SPLASH PROJECTS
VALUE: $2,700,000 ENGINEERING

Projects included conversion of a warehouse to a production facility. Scope included design of electrical, water and steam utilities, chemical tank farm storage, bulk unloading, and chemical mixing, solids handling, and vent emission systems. Utilizing 3D Model, CDI engineered a new production line to meet the demands of global business growth.

ROME PROJECTS
VALUE: $2,700,000 ENGINEERING

Projects included upgrading existing production building to expand utilities, tank farm storage, chemical mixing and vent emission systems. The new production line was engineered to meet the demands of global business growth.

BRIDGE PROJECTS
VALUE: $5,000,000 ENGINEERING

The projects increased production capacity global business demands. Projects included expanding building utilities, tank farm storage, chemical mixing and vent emission systems. Utilizing Laser Scanning and 3D Model technology. The new production line was engineered to be the largest and fastest with product quality improvements for the manufacturing site.

RAPID ROCK N ROLL / HOME DRINKING WATER
VALUE: $550,000 ENGINEERING

The project increased production capacity in Building 7215. Scope of work included expanding Building 7215 utilities and design of a new fabrication cell.

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

CDI® Engineering Solutions

PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES
ARMED FORCES RESERVE CENTER & FIELD MAINTENANCE SHOP, WILLIAMSPORT, PA

Designed a two-story masonry building of approximately 75,000 square feet located on the existing Williamsport Armory site. Accommodations for the Army Reserve unit and two National Guard units were addressed in the project design solutions. This training facility also houses offices and administrative areas as well as a separate building for vehicle maintenance. This project received Silver Level Certification under the LEED NC 2.2 rating system.

It required a Special Exception to the City's Zoning Ordinance since the proposed military facility was not an approved use of the property, even though the project site was the location of the existing military facility. We worked closely with the Pennsylvania Department of General Services, the Pennsylvania Department of Military and Veteran Affairs, and the City of Williamsport to have the initial denial of the Special Exception vacated and to get the necessary Special Exception Permit granted by the Zoning Hearing Board.

KEY FEATURES

- Coordination with Local, State and Federal stakeholders
- LEED Silver Certification

TOTAL SQUARE FOOTAGE 75,000 SF

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

CDI® Engineering Solutions

ORX RAILWAY CORPORATION
BUSINESS & MANUFACTURING ADDITION
TIPTON, PA

Designed a 70,000-square foot office/warehouse addition for ORX Railway Corporation in Tipton, PA. The office area includes locker rooms, conference rooms, lunch room, reception area as well as the offices. These areas are spread out on two floors at the entrance to the new portion of the building. The shop/warehouse area includes a receiving area, shop offices, and two overhead cranes for moving the material inside the building. The building was designed to match the existing facility as closely as possible.

KEY FEATURES

- Warehouse, Manufacturing, Office components
- Addition was designed to match the existing facility
- Completed on time and on budget
- No change orders

TOTAL SQUARE FOOTAGE

- 60,000 SF (Industrial Space)
- 10,000 SF (Office space addition)

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

CDI® Engineering Solutions

Project References

Due to client confidentiality and this being a public submittal, we can provide reference contact information under separate cover.

Site Improvement Engineer
Edina, MN 55439

Site Technology Specialist
Edina, MN 55439

Senior Project Manager
Plaquemine, LA 70764

Engineering Capital Project Engineer
South Charleston, WV 25112

Capital Project Engineer
Auburn Hills, MI 48326

ORX Railway Corporation
President

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

Section II | Project Approach & Methodology

The Preliminary Engineering study will provide engineering and design for chemical process requirements, infrastructure, and equipment specifications for a proposed new Nitrile Glove Manufacturing Line in West Virginia. Engineering will be performed in accordance with industry standards and all local, state, and federal codes.

1.0 Project Approach

CDI will approach the Nitrile Glove Manufacturing Line Preliminary Engineering Study utilizing our proven project methodology and work processes developed from over 43 years of building, manufacturing and chemical industry experience, informed by industry best practices for engineering processes, such as those developed by the Construction Industry Institute.

CDI's approach will be to complete a thorough evaluation of all aspects and requirements for the production line installation. The study will include electrical load study, equipment requirements, utility requirements, raw material storage, HVAC concerns, waste removal, safety, environmental and permits. The study will identify glove manufacturing equipment suppliers, like US-based DipTech Systems, Inc., for quotations. The preliminary engineering study is expected to include the following professional engineered deliverables as required for input into the Total Installed Cost (TIC) capital cost estimate:

- Milestone Project Schedule
- Building and HVAC evaluations
- Architectural layout
- Plant Plot plan
- Equipment layout
- Process Flow Diagrams (PFDs)
- Utility & Energy Requirements
- Utility Flow Diagrams
- Electrical load study
- Building Hazard/Electrical Area Classifications
- Environmental and Air Permit Plan
- Safe handling of required chemical compounds
- Waste Summary and Disposal plan
- Safety systems
- Fire protection systems
- Equipment and tooling requirements (quotes as required)

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

- Nitrile Glove Production Line suppliers and preliminary quotes
- Labor Estimates
- Operating cost analysis
- Raw Material requirements
- Storage requirements
- Shipping and receiving logistics
- Building Permit plan
- Early Construction Strategy

A complete Preliminary Engineering Study will normally include all of these deliverables; however, if specific deliverables are not required, CDI can modify the scope and approach. Conversely, other deliverables may be added based upon WV Army National Guard requirements.

2.0 Critical Success Factors

2.1 The project is successfully completed when all WV Army National Guard, OSHA and other safety goals and requirements are addressed.

2.2 Project is completed in accordance with contract requirements.

2.3 Engineering activities completed on schedule.

2.4 Meets customer required date.

2.5 Achieve contract performance for the facility engineering requirements.

2.6 On budget or better financial performance.

2.7 Managed Scope of Changes and DCNs. Deviations submitted in writing, estimated, and approved by the Project Manager prior to implementation.

2.8 Satisfied Client.

3.0 Design Basis

The Project Manager is ultimately responsible for the creation of the Design Basis, with applicable input from the Lead Engineers in the Process, Mechanical, Piping, Civil/Structural, Architecture, Electrical, Instrumentation and Cost Estimating disciplines. The Design Basis shall be "frozen" prior to project initiation.

- CDI Process SP-IE-009A Stage Gate Methodology
- CDI Process IE-0033 Scope of Work to be customized for the project
- CDI Process IE-0034 Project Specific Deliverables to be customized for the project
- OSHA Regulation and Standard Compliance

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

- Federal, State, and Local Government Agencies Compliance
- ASTM International Standards
- ASHRAE HVAC and Ventilation Standards
- ANSI Standards
- PIP Standards (Process Industry Practices)
- NFPA Standards
- UL Standards
- ASME Section VIII Pressure Vessels Code
- ASME Section I Boiler and Boiler Piping Codes
- ASME B31.3 Process Piping Code
- NFPA/NEC 70 Electrical Code Standards
- ISA Standards
- IBC Building Codes
- State of WV PE Board and Code Compliance

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

Section III | Proposed Project Plans

Project Management & Control

This project will be executed by the CDI Home Office located in Charleston, West Virginia. CDI will provide a single point of contact Project Manager to coordinate work activities, ensure consistency and quality, and maintain schedule and budget. Key project personnel will be assigned to the project on a full-time or part-time basis, as the activities dictate. Additional personnel may be assigned on a part-time basis as required by the project staffing needs.

Project Management will prepare and issue project status/progress reports, budget reports, and schedule updates on a biweekly basis. CDI Project Manager will have a weekly Skype meeting with State of WV Project Team and issue meeting notes for review and comments.

Change Management

There is the potential for change on all projects. Those changes may be technical, execution related or contractual in nature and may originate from anyone on the project team. For example, changes could result from vendor information delays, required equipment that was omitted from the preliminary design package, new specifications requirements, or improvements that result from value engineering activities. The project team members are expected to identify changes as early as possible, communicate them and ensure all impacts of the change (for example; cost, schedule, resources, constructability, etc.) are considered.

Our change management process is a communication and early identification tool that helps document potential activities that might affect the project cost and/or schedule. This process allows project management the opportunity to minimize or negate impacts of the potential change.

Any additions or changes from the project basis documents and scope of work will first require a review from CDI Project Management. If the additions or changes result in a cost and/or schedule variance from the project baseline, State of WV will be notified in writing through a Design Change Notice (DCN). CDI will only proceed with a change upon authorization/approval from State of WV.

Engineering, Design, & Document Control

The principle deliverable of preliminary engineering will be FEL evaluation, calculations and optimizing design basis for next phase of engineering. State of WV Air National Guard Project Manager will approve and authorize any alternative recommended options and deliverables prior to CDI initiating the work.

CDI Drawings shall be delivered in AutoCAD native DWG format via Newforma by CDI Document Control, unless notified otherwise by State of WV.

Scope of Work Narratives, tables, lists, and indexes shall be developed in Microsoft Office file format and delivered in PDF format.

All applicable Federal, State, and Process Industry Practices (PIP) design standards and specifications shall be used on this project. CDI will use the current issue of applicable codes and industry standards in the design.

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

Information Management Plan

Communication between discipline counterparts is encouraged, however, the CDI Project Manager (PM) shall be copied on all correspondence. All decisions/clarification/etc. should go through the CDI PM for review and approval prior to finalization.

A Distribution Matrix will be developed to ensure team members receive all required documentation. The submittal of documentation to discipline counterparts at State of WV shall be completed through Document Control.

Questions and clarifications required by CDI from State of WV will be submitted according to the project Request for Information (RFI) procedure (PM to define). Questions and clarifications required from vendors and contractors will follow the same procedure.

CDI's preferred Document Control System, Newforma shall be used to file emails, search for emails and/or other forms of project information, mark-up drawings, share large files (via Info Exchange), compile logs, follow through on action items, maintain the Construction Administration phase of a project, and coordinate files. The software is also used to generate transmittals, track files (i.e. when an item was sent, delivered, downloaded, etc.), and maintain a project directory. Newforma shall be used to maintain clear records of all project communications and activities.

To the extent that it is practical, telephone conferences and Skype/Microsoft Teams outlook meetings will be used for communication between CDI's offices, however, limited interoffice travel is budgeted in the engineering estimates (PM to define). Before traveling, team members must receive prior approval from the CDI Project Manager.

Safety Plan

Implementing Health, Safety, and Environmental (HSE) for safety in design and safety of personnel is the highest CDI value, together with our core belief that all incidents are preventable. A detailed project specific HS&E Plan will be provided prior to project kick-off. **Appendix B** contains an overview of our Health, Safety, Security, Environmental, and Quality (HSSEQ) principles.

Quality Management Plan

CDI ensures that all projects will be implemented according to CDI standards and procedures. Any deviations require approval from the Operations Director.

Quality Responsibilities

Similar to our solid commitment for safety, all CDI employees assume accountability for ensuring that quality, continuous improvement, and customer satisfaction are addressed.

Our Quality Representative bears the responsibility for the preparation and implementation of the Quality Management.

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

Quality Audits

Audits are to be conducted by the site Quality Representative and selected Auditors to judge the degree of compliance with standard procedures, maintenance of project schedule milestones, and compliance with contract requirements. Audits shall also confirm the existence of specified quality activities and records.

Audits of the project are to be scheduled by the Quality Representative and approved by the Project Manager to coincide with the completion or execution of critical project activities and milestones. Preliminary audit dates shall be confirmed a minimum of one (1) week prior to the event. Audits may be rescheduled to allow for variations in the project schedule or allow for the availability of objective evidence.

Corrective and Preventative Action Process

CDI has extensive Corrective and Preventive Action Processes as the mechanism for change and improvement of documented procedures, instructions, and associated work processes.

Corrective and Preventive Actions are identified non-compliances to requirements and shall be documented using the "Corrective / Preventive Action Form" as described in the "Project Quality Audits" section. The Quality Representative is responsible for follow-up to ensure that corrective and preventive action is in place, and for adjusting internal audit frequency as may be required.

Corrective and Preventive actions will be assigned to the person responsible for the activity or process noted for corrective action. The Corrective or Preventive Action Owner shall formulate a plan to resolve the deficiency and address rework output. The plan shall detail the actions to be taken to resolve the issue and specify a completion date.

When corrective measures are accomplished, the product shall be subjected to verification to demonstrate conformity to requirements.

Corrective / Preventive Action plans are Quality Records and shall be maintained accordingly.

Quality Records

Quality Records shall be maintained to demonstrate achievement of the required quality and the effective operation of the Quality Management System (QMS). Pertinent Quality Records shall be an element of this data.

Quality Reporting

Quality Management activities shall be reported in the project monthly reports providing status of quality audits and other current efforts.

Project Controls Plan

Cost Management

This work is being executed on a mutually agreed upon contract basis. Any work added beyond the proposed scope of work will be addressed with formal change orders and presented to the State of WV Project Manager for approval. No additional work will be initiated without the CDI Project Manager's approval.

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

For each cost element of the project, the Cost Engineer shall evaluate the work accomplished to date, the effort expended to accomplish that work, and the anticipated effort to accomplish the remaining work.

CDI will execute the project based on the Control Budget. The Control Budget identifies the project milestones and cost for the engineering, design, procurement services, and associated support and management activities to be performed by CDI.

CDI will utilize the standard Deliverables List to define the control budget against which the project team will execute the project. The deliverables list will detail out all documents, drawings, tasks, activities, etc. required to complete the contracted work scope. Internal CDI labor hours will be tracked on the project using CDI's timesheet program.

Progress curves for discipline deliverables will be actively reported against planned activities in the Deliverables List and Project Schedule, including calculation of a Productivity Index. These metrics are utilized by the Project Manager and Project Controls to determine if the project is on-track, address any deficiencies that may exist, and accurately estimate completion forecasts for the project.

Work Breakdown Structure

The Project Controls Manager, working with the Project Manager shall develop and organize the Project Work Breakdown Structure (WBS). This shall be in accordance with guidelines set by the CDI Project Manager. This breakdown structure shall be used to develop appropriate levels of the Project Schedule and for the applicable cost codes for time charging for all team members.

Change Management

The goal of change management is to effectively maintain the scope and execution strategy of the project. The intent is to negate or minimize the negative impacts of unplanned, unnecessary, or unjustified changes. The Cost Engineer shall capture and incorporate the impact of each authorized change into the overall TIC cost and schedule to ensure that analysis and forecasting is performed on the true project Scope of Work (SOW).

The project scope change management and Design Change Notice (DCN) process shall be followed as part of the Project Execution Plan (PEP) and will be the basis for all project budget revisions.

At a minimum, any new and pending changes shall be reviewed and discussed at every weekly project team meeting. Pending and approved changes are tracked by the Cost Engineer on the Change Logs and are reported as part of progress reporting in the Engineering Status Report (ESR).

Schedule

Planning and Scheduling is responsible for the organization and establishment of a logic driven baseline project schedule. They will incorporate status updates and monitor the current schedule against the baseline plan, report the current status and forecasting the completion of activities to all project members. If required, they will aid in the creation of action plans to meet any schedule objectives that may slip during the execution of the project.

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

The schedule will be updated weekly to aid in maintaining control of the project and it will be formally published monthly. Any changes to the schedule may be discussed at the weekly project coordination meetings or on an ad hoc basis, as required. Updating the schedule will be the responsibility of the Planner / Scheduler and the Discipline Leads. Any questions regarding the Project Schedule should be directed to the Project Engineer.

Document/Drawing Review Cycles

The schedule assumes a document review time of five (5) workdays by either the CDI or State of WV Team for technical document review/comments/edits. The basis of the schedule is one (1) cycle and exceptions to this will be noted specifically within the schedule.

The Project Engineer and Design Leads will monitor the review cycles of documents and drawings. Significant delays in performing reviews within this period will be brought to the attention of the CDI Project Manager for resolution.

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

CDI® Engineering Solutions

APPENDICES

CDI® Engineering Solutions

Appendix A *Project Team Resumes & Staff Certification*

Name	Role	Staff Certifications
ENGINEERING & DESIGN		
Mark Purdy	Project Manager	
Josh Rhodes	Project Engineer	
Steve Wilkinson	Sr. Process Engineer	
David Boucher	Process Safety Engineer	
Garrett Maner	Process Engineer	
Jimmy Maier, PE	Civil/Structural Engineer	West Virginia Professional Engineer (PE) #022712
Scott Shamblin, PE	Civil/Structural Engineer	West Virginia Professional Engineer (PE) #011057
Eric Stover, PE, CAP	Electrical/Instrumentation Engineer	West Virginia Professional Engineer (PE) #018476 ISA Certified Automation Professional (CAP)
Grant White, PE	Electrical Engineer	West Virginia Professional Engineer (PE) #022437
David Gunnoe, PE	Control Systems Engineer	West Virginia Professional Engineer (PE) #020758
Lou Miller, P.E.	Sr. Mechanical Engineer	West Virginia Professional Engineer (PE) #023693
Eddie Howell	Lead Piping Designer	
Adam Somerville	3D CAD Specialist	
BUILDING ENGINEERING		
Diane Glarrow, AIA	Project Manager	West Virginia Registered Architect
Brian Endler, AIA	Project Manager & Justice Architect	West Virginia Registered Architect
Chris Bowers, P.E.	Structural Engineer	West Virginia Professional Engineer (PE) #017076
Ryan Meitzler, P.E.	Sr. Mechanical Engineer	West Virginia Professional Engineer (PE) #022580
Brad Blickenderfer, P.E.	Sr. Electrical Engineer	West Virginia Professional Engineer (PE) #019920
David Ciner, CPD, LEED AP	Sr. Plumbing / Fire Protection Designer	Certified Plumbing Designer LEED Accredited Professional
ESTIMATING		
Marty Belgard	Estimating	
Harold Quigley	Estimating	
Paul Young	Estimating	
Greg Laurent	Estimating	
PROJECT SUPPORT		
Dan Beyer	Quality Control	
Walter Malec, PE	Scheduling	West Virginia Professional Engineer (PE) #008618
Sherry Robbins	Cost Control	
Lou Dent-Smith	Document Control	
Samantha Bullock	Procurement	

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

MARK E. PURDY
PROJECT MANAGER

CDI® Engineering Solutions

SUMMARY

Over 25 Years of technical leadership experience for Project Management, Plant Engineer, and Safety roles and responsibilities. Project Management experience includes basic engineering, front end engineering design and detail design engineering for chemical processes.

EXPERIENCE

2006 – Present | CDI Engineering

BRIDGE RO Filter Expansion – Dow Process Water Solutions (FilmTec)
EPC Project Manager for $45MM TIC capital project RO Filter production facility expansion project. Responsible for Front End Engineering and Detail Design Engineering for +/- 15% Capital Cost Estimate, Plant 3-D Model Design, P&ID's, equipment, instrumentation, electrical, ventilation, civil structural engineering and design specifications. CDI Engineering procurement and construction support services.

Organo-Clay Production Capacity Expansion – Elementis Specialties, Inc.
On-Site Project Engineer for $3MM TIC capital project for organo-clay production facility expansion project. Detail Design Engineering for piping design, equipment specification, instrumentation specification and associated procurement. Preparation of contractor bid package and bid evaluations. On-site field technical support and construction coordination with general contractor. Project support services for commissioning and start-up.

Pesticide Production Facility Capital Improvement Projects – Bayer Cropscience
Project Manager for multiple capital project multi discipline Front End Engineering and Detail Design Engineering for highly hazardous chemical operation for pesticide processes including chlorine, phosgene, methyl isocyanate, chlorinated solvents, caustic, oximes, amines, and others.

Epoxy & Forest Product Resins Process Safety and Capital Projects- Hexion Specialty Chemicals
Project Engineer FEED and Detail Design for various capital improvement projects and process safety information documentation for 18 North American plant facilities. Project deliverables include P&ID, PFD, HMB, EAC, Relief Device Records, Instrumentation Control/Alarm/Logic/Shutdown Records and Facility Siting Assessment.

2004 – 2006 | Safety Consultant- Sole Proprietor

Safety Consultant Self Employed- Services for Lancaster Safety Consulting Inc.
Secure contracts with West Virginia Companies for OSHA compliance programs, professional training, facility reports, workplace safety hazard assessments and OSHA abatement representation.

2002 | General Electric Corporation

Silicone Plant Capital Improvement Projects- GE Automation Services
Sr. Project Manager for creating FEED through Detail Design Engineering for small capital improvement projects for GE Silicones Production Facility.

2001 | Croda Inc.

Ethylene Oxide Intermediates- Croda Inc.
Project Engineer for creating FEED through Detail Design Engineering for capital improvement and expansion projects for cosmetic intermediate products derived from ethylene oxide.

1991-1998 | Rhone Poulenc Agrochemical

Pesticide Intermediate & Formulation- Rhone Poulenc AgroChemical
$55MM TIC Process Safety Improvement Project owner representative for FEED and Detail Design Engineering for PID, Equipment Sizing, Instrument Specifications, Redundant Instrumentation, Piping Specification Upgrade, Modular Phosgene Unit, HAZOP, Process Risk Assessment, Commissioning, Start-Up and then Production Engineer for Phosgene/Chlorine/Pesticide Operation and Engineering & Maint. Manager Pesticide Formulation

1985-1991 | Occidental Chemical Corporation

Chlorinated Solvents Capital Projects- Occidental Chemical Corporation
Process Engineer, Project Engineer, Construction Supervisor for Process Studies, FEED, Detail Design, Commissioning, Start-Up for Chlorinated Solvent Facility

1984-1985 | Graniteville Textile Company

Textile R&D Group Leader- Graniteville Company

EDUCATION

B.S. Chemical Engineering, 1983
West Virginia University Institute of Technology

JOSH RHODES
PROJECT ENGINEER

CDI® Engineering Solutions

SUMMARY

Eight years of experience with Process Engineering and Project Management in chemical, coatings, polymers and metal industries. Experienced in management and execution multi-discipline, small capital projects for multiple clients.

EXPERIENCE

2007 – Present | CDI Engineering

Project Manager – Various Clients
Responsible for cradle-to-grave project execution of multi-discipline, small capital projects for multiple clients including fire water pump installation, safety shower system evaluation and upgrade, and design and installation of small equipment throughout North and Central America.

Junior and Lead Process Engineer – Hexion, Inc.
Executed design of hundreds of pressure safety relief devices for pressure vessels as well as design of conservation and emergency venting for atmospheric storage tanks, pertaining to OSHA Process Safety Management of Highly Hazardous Chemicals 29 CFR 1910.119. Ensured documentation was up-to-date with all pertinent information including but not limited to; P&IDs, PFDs, HMBs, equipment design, MSDS, Hazard Area Classification, etc. Managed online document management system in SAP to ensure compliance with OSHA regulations.

Process Engineer – FMW Composites
Completed silane recovery process engineering simulation and design. Equipment design included distillation columns, heat exchangers, and pumps.

Process Engineer – Various Clients
Responsible for process improvement design of pumps, heat exchangers, nitrogen blanketing systems, control valves, etc.

EDUCATION

B.S. Chemical Engineering
West Virginia University
Morgantown, WV 26501

PROFESSIONAL TRAINING

EIT – Fall, 2004
DOW trained Pressure Relief Design, 2008

STEVE R. WILKINSON
SENIOR PROCESS ENGINEER

CDI® Engineering Solutions

SUMMARY

Senior Operations/Engineering Professional with expertise in management, chemical process design, problem solving & reliability improvements, budgeting and cost reductions, regulatory compliance, and process safety applications. Controlled budgets to $10M. Very strong mechanical background.

- **Experienced in mentoring and leading personnel, with emphasis on safety, integrity, and effectiveness**
- **Lead Engineer for major natural gas supply capacity expansion at Bayer CropScience (BCS) site**
- **Lead Engineer for design and installation of $10M BCS membrane water purification facility**
- **Process Design Engineer for $50M lethal-service chemical facility safety upgrade for BCS**
- **Lead Engineer in design, construction, and startup of $15M R&D Facility for Babcock & Wilcox** *Responsible for process design, control systems design, specification of equipment, procedure development, training of operations personnel, completion of safety reviews; PHA review completed with NO identified safety concerns*

Without exception, EVERY system or project that I have designed and installed was successfully started-up and met design operating conditions on the very first attempt. The $15M carbon-capture R&D facility designed for Babcock & Wilcox was commissioned and operating at design conditions ***within 24 hours of startup****.*

Proactive leader focused on optimizing resources and maximizing operational performance.

- **Achieved 99% on-stream operational reliability for 20-yr old Synthesis Gas Facility.** Implemented reliability improvements that increased unit onstream performance from 92% to 99% while achieving $1M reduction in operating costs and excellent safety rating.
- **Former elected representative of 1,000-member union operation**; "hands-on" expertise in plant safety and OSHA

Cost-Conscious with verifiable success spearheading and executing process and procedure improvements.

- Recruited to resolve problematic operation running $1M over budget and 2 months behind schedule. *Within 12 months, the 20-year-old facility achieved on-budget "Best Ever" production performance.*
- Managed safe, efficient, and on-budget operation of over-sized facility operating at only 15% of original design capacity

EXPERIENCE

2017 – Present | CDI Engineering
Senior Process Engineer
Provide engineering design services, troubleshooting, training, and operational expertise to support the needs of various clients

2017 – 2017 | Jacobs Engineering
Process Engineer
- Lead process engineer on several multi-million dollar projects
- Experience with developing engineering cost estimates, managing schedules, meeting deadlines
- Design and implementation of process improvements
- Mentor and assist less experienced engineers

2015 – 2017 | Kureha PGA
Staff Production Engineer
- Identification of process and equipment improvement opportunities
- Design and implementation of process improvements
- Identify and resolve reliability issues
- Training personnel on operation and troubleshooting of equipment
- Lead safety reviews (PSSR, PHA, etc.)
- Development of operating and safety procedures

2007 – 2015 | CDI Engineering Solutions
Senior Process Engineer
- Provide engineering design services, troubleshooting, training, and operational expertise to support the needs of various clients
- Multi-function lead engineer & designer of major expansion to Babcock & Wilcox R&D facility
  - Provided mechanical and other technical support to B&W personnel
  - Provided training to personnel on the startup and operation of the facility
  - System was commissioned and operating at design conditions within 24 hours of startup
  - Later requested by B&W to develop preliminary design for full-scale demonstration unit
- Recruited by Bayer CropScience as CDI staff engineer (2010 – 2015) with primary focus on identification and resolution of operational, maintenance, and safety issues; including design of new equipment installations
- Lead process design engineer for new facilities

1997 – 2007 | Bayer CropScience
Senior Chemical Production Engineer

- Lead Engineer for operational/reliability improvements across 4 chemical production units.
- Establish and enforce safety practices, responsible for OSHA and environmental compliance.
- Managed efficient utilization of $50M raw material budget.

Chemical Process Engineer

- Saved $1M annually in raw material expenses by decreasing energy consumption and increasing efficiencies.
- Resolved a site-wide reliability issue for less than $1K versus projected cost of $100K.
- Averted $200K/day production loss with design of reliable product conveying system.
- Instituted operational/safety improvements for 500-acre, multi-facility organization with 1K+ personnel.

1991- 1997 | Aventis
Synthesis Gas Specialist

- Directed a 16-member operation, preparing budgets, production plans, and performance reports.
- Identified design flaw in 15-year-old facility, improving Reformer tube & catalyst service life 100% with $25K/year expense reduction.
- Secured the safe operation of a 30-mile, cross-country pipeline transporting flammable gas in populated areas.
- "Best Ever" production reliability and onstream performance achieved 3 years in succession

EDUCATION

West Virginia University Institute of Technology
B.S. Chemical Engineering
Recognized for Student Contributions to Chemical Engineering Program

CERTIFICATIONS

- Mechanical Integrity
- Advanced Aspen Modeling/Simulation
- Computer Modeling/Process Simulation
- Centrifugal Pump Design
- Art & Science of Mixing
- ex-EMT & Hazmat Certified
- Former Board Member of the National Institute for Chemical Studies

OTHER QUALIFICATIONS

Owner/Manager of Custom Steel & Aluminum Fabricating Company –
www.WILSPECLLC.com

- Experience in developing working relationships with customers, meeting schedules and deadlines, developing cost estimates, and managing the day to day operation of the business
- Provided design-build fabrication services to DOW, Bayer, and other large companies for custom equipment to meet a specific need and/or resolve difficult operational issues
- Designed & fabricated aluminum suspended personnel platforms ("manbaskets") for U.S. Army Corps of Engineers
- Inventor / Manufacturer of specialized strapping tool used in the trucking industry
- ***Patent awarded March of 2018***

DAVID R. BOUCHER
SENIOR PROCESS ENGINEER

CDI® Engineering Solutions

SUMMARY

- Chemical Engineer with background in operations, process engineering, troubleshooting, statistical process control, quality systems, Process Safety Management, documentation, procedures and training
- Adept with process technology applications, chemical process equipment, process controls, heat and mass balances, P&ID, PFD and block flow diagrams and relief valve design basis
- Strong history and many examples of troubleshooting using statistical process controls
- Active with environmental air, water, permitting and waste minimization programs
- Excellent communication, organization and writing skills

EXPERIENCE

2019 – Present | CDI Engineering
Process Safety Engineer
- Responsible for process safety management initiatives across the organization.
- Provide process specifications, process system evaluations, design and review for numerous facility improvements and expansions.

2018 – 2019 | Nouryon (Akzo Nobel), Axis, AL
Lab Manager
- Setup, staff and manage the Chemical Products Lab
- Implement the internal six sigma technology (ALPS). Establish statistical controls for lab instrumentation.
- Lead two incident investigations, report findings and assign action items.
- Internal auditor for ISO 9001-2015

2014 – 2018 | Mississippi Power, Plant Ratcliff, Kemper County, Mississippi
Process Engineering Supervisor / Lab Manager
- Setup, staff and manage the Chemical Products Lab and the Water Treatment Labs.
- Lead the process engineering group at the Kemper County, Mississippi.
- Areas of responsibility include: acid gas recovery, water gas shift and 'sorption processes and chemical production. Startup activities included checkout and clearing, loading and starting up the Acid Recovery Unit (ACR), the Ammonia plant, and operating the sulfuric acid production plant. The ACR facility was the largest capacity ever built. It was a novel technology presenting many challenges.

2010 – 2014 | UOP / Honeywell, Mobile, AL
Senior Process Chemical Engineer
Process Safety:
- EMOC management for areas of responsibility, including PSSR, PHA, training, redlining P&IDs, procedure updates and training documentation for assigned areas.

- Update equipment instructions (standard operating procedures).

Costs:

- Managed annual recipe updates based on line performance, yields, rates, and costing lot size,
- Forecasted process order variance (POV) and (MUV) monthly, update weekly.
- Report monthly rates, yields and operational equipment effectiveness (OEE).

Product Development:

- Initiated "trial requests" and "clarification run requests".
- Coordinated product technology with the catalyst manufacturing facility.
- Update the recipe instructions (SOI Standard Operating Instructions).
- Coordinated new product introduction, lab sample points, SAP recipe setup, supply chain details, training.

2005 – 2010 | URS Corporation, Mobile, AL
Senior Process Engineer

- Client Kemira Water Polymers, 2007-2009 Daily plant evaluation and optimization of batch reactors producing Poly acrylamide polymers, cationic and anionic polymers, suspensions, emulsions and reverse emulsions. Manage formulations, track raw material usages, and update operating procedures for new or modified products and operations. Track, report and troubleshoot waste water performance problems.
- Client GE Plastics, 2007 evaluate and make recommendations for the correction of pH control in the process water outfalls for contact and non contact water
- Client: AKZO Nobel, prepare P&ID documentation for process technology upgrade
- Client: British Petroleum, 2006 Designed three million pound LGN storage facility, loading racks for rail and trucks, fire protection and proposed procedure and training programs.
- Client: GP Corporation, 2005 Performed PSM audit on a resins facility.
- Client, UOP Corporation, 2005 participated in the HASOP review for units in the catalyst facility.

2004 – 2005 | Arkema (Formally ATOFINA) Axis, AL
Technical Services Manager

- Lead Process Technology Group in projects involving updating process books, formulation revisions, new chemical approval processes, element champion for management of change
- Involved with customer requirements to modify products, pre production approval process.
- Responsible for the Continuous Improvement Process for process yield, and material use variance

2002 – 2004 | Almatis (Formally Alcoa World Chemicals) Port Allen, LA
Senior Process Engineer

- Lead new product development for the specialty chemical area
- Provide training resources and materials; train operations and lab technicians
- Coordinate toll manufacturing operations in the catalyst business
- Develop extrusion techniques and methods for the catalyst and adsorbents industry
- Formulated and scale up development for FCC and Oxychlornaiton processes

1994 – 2002 | Borden Chemicals and Plastics Company, Addis and Geismar, LA
Technical Manager and Interim Production Manager

- Technical Manager for three supervisors, six engineers and 24 lab technicians
- Lead process engineering efforts for reactors, recovery systems, utilities and finishing
- Responsible for programs to report and manage stream factors, downtime analysis, product yield, conversions, cost evaluation and cost of quality evaluations
- Experienced training coordinator, developed and validated procedures, managed training records
- Coordinated Problem Solving and Decision Making (PSDM), Root Cause Failure Analysis and brainstorming techniques with follow-up and closure

1989 – 1994 | Occidental Corporation, Pasadena, TX
Unit Superintendent

- Managed four shift supervisors, one day supervisor and 2 operation specialists
- Awarded OSHA Star Plant Site
- Recognized for training program development and PSM development work

1986 – 1994 | Oxychem Corporation, Pasadena , TX
Process Engineer

- De-bottlenecked fluid bed dryers, stripping columns, recovery area, cooling systems
- Improved incinerator performance, efficiency, compliance and stream factor
- Implemented statistical process controls, mechanical integrity and maintenance reliability programs
- Revised process control systems using programmable controllers, smart instrumentation and contributed to programming of distributed control system
- Wrote cause and effect manual for quality deviations and recommended recovery action
- Generated formulations guidelines and implemented procedures for on shift response

1977 – 1986 | Firestone Plastics Company (Oxychem), Pottstown, PA and Addis, LA
Staff Engineer

- Engineered projects from $50,000 to $1,000,000
- Experienced in project estimation, justification, civil and mechanical engineering design
- Worked shift schedule during startup, check out and troubleshooting phases
- Operated pilot plant, scale up, startup semi works reactors and verified by experimental design

EDUCATION

University of Massachusetts at Amherst
Bachelor of Science Degree - Chemical Engineering

REGULATORY BACKGROUND

- Experienced in OSHA regulatory areas including: 29 CFR 1910-119 (Process Safety Management) and 29 CFR 1910-1450 (Industrial Hygiene Standard for Laboratories)
- Experience in ISO 14000, ISO 2000, Q9000
- Achieved and maintained conformance of products, production and packaging with National Sanitation Foundation (NSF), Food and Drug Administration. (FDA), Kosher and other regulatory requirements
- Experienced in Excel, Word, Access, Northwest Quality Analyst, and many other software tools

GARRETT MANER
PROCESS ENGINEER

CDI® Engineering Solutions

SUMMARY

Four years' experience in the chemical industry. Experience includes PSV calculations, process equipment specifications, monitoring process equipment in a plant setting, and catalyst testing. Additional experience as GIS Analyst for WV Division of Highways.

EXPERIENCE

2015 – Present CDI Engineering
Process Engineer
- Perform sizing calculations, evaluate and prepare documentation of pressure relief devices
- Prepare specification sheets for process equipment and other documentation as needed
- Collaborate with CDI Baton Rouge and Houston offices as needed

2015 – 2015 WV Division of Highways, Charleston, WV
GIS Analyst
- Improve readability and accuracy of new GIS version of county highway maps

2013 – 2014 Jacobs Engineering Group Inc., Elkview, WV
Process Engineer
- Contracted at Bayer CropScience plant in Institute, WV on a rotating 12-hour shift schedule
- Monitored sumps and notified operator in the event of any problems or potential issues

2012 – 2012 Fraunhofer-Institut für Umwelt-, Sicherheits- und Energietechnik (UMSICHT), Oberhausen, Nordrhein-Westfalen, Germany
Research Assistant
- Operated pilot plant to test catalysts for syngas-to-methanol conversion
- Assisted in preparation of catalysts for testing
- Proofread English-language research papers written by co-workers

2011 – 2011 Ruhr-Universität Bochum, Bochum, Nordrhein-Westfalen, Germany
Research Assistant
- Assisted a Ph.D. student in doing research for his thesis on modular chemical plants
- Researched English-language papers on modular chemical plant technology
- Analysed economic data

2009 – 2009 WV Department of Transportation Materials Lab, Charleston, WV
Summer Intern
- Assisted with materials testing and collection of samples
- Logged bridge construction reports into mainframe
- Worked with pavement rehabilitation team
- Did research on biodiesel
- Built Microsoft Excel spreadsheets and Microsoft Access databases

GARRETT MANER
PROCESS ENGINEER

CDI® Engineering Solutions

EDUCATION

West Virginia University, Morgantown, WV
Bachelor of Science in Chemical Engineering, May 2012
Summa cum Laude (3.73/4.0), WVU Honors College, University Honors Scholar

AWARDS AND ACHIEVEMENTS

- DAAD RISE scholarship, 2011, and RISE Professional scholarship, 2012
- President's List, Fall 2009 and Fall 2010, Dean's List, Fall 2008 and Fall 2011
- National Merit Scholarship, Promise Scholarship, Robert C. Byrd Scholarship
- National Youth Science Camp, 2008

SKILLS

- Proficient in Microsoft Office
- Some programming experience in Java, Python, MATLAB and Visual BASIC
- Proficient in German and Italian, moderately proficient in French, basic knowledge of Dutch and Portuguese

EXPERIENCE

2012 – Present | CDI Engineering
Civil/Structural Engineer, Civil/Structural Department Manager

- Engineering analysis and design of structures, foundations, pipeline supports, and earthwork.
- Experience in a variety of environments with the majority of work in large industrial/chemical plants.
- Create a wide range of client specific engineering design drawings.
- Survey and Laser Scan a multitude of locations based on the client's needs. This includes stakeout of land for excavation, survey existing areas to determine exact locations for new construction and as-built modifications, also scan/survey dense piping areas.
- Create 3D models from the survey and scan data collected in the field.
- Help maintain a continued awareness of project schedule and budget.
- Provide field support to clients and contractors.
- Create scope of work bid estimates for clients.
- Research and interpret old and new underground drawings.
- Apply proper safety in daily activities and work design.
- Design and create foundation standardizations for compressor and process stations in the midstream for oil & gas clients.

2007 – 2009 | Cabot Oil and Gas
Drilling Engineer Technician

- Worked with various drilling companies developing future well sites.
- Designed Well Bore Schematics and cement calculations for wells.
- Maintained company drilling database.
- Completed all pre- and post-drilling forms for the state departments in both WV and PA.
- Assisted the drilling manager with the coordination of the drilling rig and completion unit moves.

2006 – 2007 | Greenwood
Chemical Plant Operations Support Crew Member

- Scaffolding erection
- Powerhouse operations maintenance
- Pipefitter assistant

2003 – 2005 | West Virginia State Workers Compensation
Maintenance Support
Worked semester and summer breaks performing maintenance support for multiple WV State buildings. Managed tracking system for computer inventory.

EDUCATION

West Virginia University, Morgantown, WV
B.S. Civil Engineering, May 2012

West Virginia University, Morgantown, WV
B.A. Multi-Disciplinary Studies: Business/ Communication/ Sport & Exercise Psychology, May 2007

PROFESSIONAL LICENSURE

Registered Professional Engineer in West Virginia

SKILLS

- Microsoft Office Suite
- Matlab
- RISA
- Staad Pro v8
- AutoCAD
- AutoCAD Civil 3D
- Autodesk Plant 3D Suite
- Revit Structure
- Microstation
- Total Station Survey Pro
- Leica Cyclone 8.1

AFFILIATIONS

- American Society of Civil Engineers
- Appalachian Service Project Volunteer
- Habitat for Humanity Volunteer

EXPERIENCE

Material Handling and Coal and Coke Processing:

Mingo-Logan Coal	Fan Housing Design
Bulk Material Coal Handling	Cyprus Amax/ Lady Dunn, Raw Coal Handling Facility
Riverpoint Processing	Inspection of Tube Truss over Rte. 61
Black Hawk Construction	Bin Foundations
Bulk Material Coal Handling	Microcel Addition, Cyprus Amax / Lady Dunn Facility
Raleigh Mine Supply	Coal Preparation Plant Modifications, Panther Coal Co.
Bulk Material Coal Handling	Truss Repair, Quarto Mining
Bulk Material Coal Handling	150 TPH Modular Ponds Fine Reclaim Plant
Bulk Material Coal Handling	Screen Bowl Addition, Cannelton Coal Co.
McAllister Construction	Reclaim Tunnel Design, Cannelton Coal Co.
Raleigh Mine Supply	Refuse Conveying System, Panther Coal Co.
Arclar Coal Co.	Coal Preparation Plant, Saline Co. IL
Long Airdox Co.	Tunnel Support Steel Retrofit
Long Airdox Co.	Retrofit of Existing Coal Handling Facility, Lone Mtn. Coal
Triple "S" Corp.	Raw Coal Handling Facility, Pioneer Fuel
Fairfield Engineering Co.	Screening Building, AK Steel
Raleigh Mine Supply	48" Raw Coal Stacking Conveyor
Jewell Coal and Coke Co.	Screening and Crushing Bldg. Addition
Triple "S" Corp.	Clean Coal Stockpile Expansion, Brooks Run Coal
Raleigh Mine Supply	Lime Bin, Panther Coal Co.
BG&S Contractors	Structural Inspection, Robinson Run Prep. Plant
Lakeshore Coal Handling	Material Handling for Coking Facility, East Chicago, Ill.
Quail Ridge Construction	Mix System Upgrade, Elkem Metals
Enterprise Coal Co.	Roxanne Coal Preparation Plant Upgrade

Material Handling and Coal and Coke Processing:

Indiana Harbor Coke Co.	Coking Facility Material Handling, East Chicago, Ill.
West Virginia Steel	Federal No.2 Fan House Design
Raleigh Mine Supply	Pond Fork Prep Plant Renovation
Lone Pine Construction	Raw Coal Stockpile Expansion Project, American Coal Co.
A&T Construction	Century Mine Coal Preparation Plant
A&T Construction	200 Ton Clean Coal Storage Bin
A&T Construction	Century Mine Plant Thickener
Raleigh Mine Supply	Overland Conveyor System, Evergreen Mining
Vulcan Materials, Lorton VA	Graham Quarry Plant and Material Handling
Vulcan Materials, Petersburg VA	Jack Quarry Plant and Material Handling
Vulcan Materials, Rockingham NC	Reclaim Tunnel and Stacking Conveyor Repair
Martin Marietta, Paducah KY	Three Rivers Quarry Plant and Material Handling
Sun Coke - Middletown, OH	Design of Coke Oven Facility and Material Handling
Sun Coke - Granite City, IL	Design of Cove Oven Facility and Material Handling
Sun Coke - Haverhill, OH	Design of Cove Oven Facility and Material Handling
Sun Coke - Haverhill, OH	Design of Cove Oven Facility and Material Handling (expansion)for plant expansion
Sun Coke - Quench Tower Addition	Design of Quench Tower for Coking Facility in Haverhill, OH
RCC Construction	Pinnacle Plant Expansion
Sun Coke - Haverhill Recirc Conveyor	Recirculation Conveyor at Haverhill OH Coking Facility
Sun Coke - Dominion 44	Reclaim Conveyor and Screening Tower
Hoover Conveyor	Radial Stacker Analysis
Sun Coke - Harold Keene Plant	Plate Press Addition and Material Handling System
RCC Construction	Kingston Natural Resources Plant Inspection

Material Handling and Coal and Coke Processing:

RCC Construction / Cliff Resources Concord, AL	Cliffs Natural Resources - Repair of Prep Plant and Material Handling Structures Damaged by Tornado.
Vulcan Skippers	Aggregate Reclaim Tunnel
Coal View	Sludge Reclaim and Processing Plant, Centralia Washington
Intrepid Potash	Thickener Installation, Carlsbard New Mexico
Martin Marietta	Highway 34 Aggregate Rail Unloader and Material Handling System
Martin Marietta	Red Hill Crusher, Screening and Material Handling Facility
Cliffs Natural Resources	Monorail Addition
Vulcan Portsmouth	Conveyor Relocation

Industrial Projects:

DuPont - Belle, WV	Building No. 77 Bracing Study
Century Aluminum	Roof Analysis
DuPont - Belle, WV	Wash down Tank Analysis
Century Aluminum	Pot rooms, Line 2 & 4 Roof Access Platforms
Century Aluminum	Pot room 1B Crane Rail Drilling
Century Aluminum	Reduction Area Crane Access Ladders
Century Aluminum	1A Crane Platform Modifications
Century Aluminum	Rodding Area, Jib Crane Relocation
Century Aluminum	Pot rooms Truss Analysis and Bracket Locations
Century Aluminum	Maintenance Building Pot Tending Cranes
Century Aluminum	Pot rooms Crane Access Ladder
Century Aluminum	Pot rooms 3A and 3B PTC Access Platforms
Sun Coke - Vansant, VA	100,000 gal. Water Tank, Foundations and Retaining Wall

Commercial and Residential Projects:

City of Huntington, WV	Warehouse Structural Inspection
Valtronics	Pre-engineered building foundation design and layout
Sony	Drainage study for facility expansion
Sterling Construction Mgmt.	Structural Design of New Residences at Greenbrier Resort
Jarrett Construction	Additional to Central Van and Storage Warehouse
Real Corp.	Structural Framing of Existing Building for Office Usage
Edward Tucker Architects	Associated Cardiology Building - Framing and Foundations
EIMORS Construction	Lance Building Renovation - Five Story Structural Inspection and Recommendations. Addition of fire escape stairwell.
RC Contracting	Residential Design - The Pointe at Northgate
Adkins Design, Inc.	Parkersburg Housing Authority Office Renovation and Addition
Adkins Design, Inc.	Genesis Health Care Facility
Adkins Design, Inc.	Dunbar Housing Authority Gym Addition
Adkins Design, Inc.	Maranatha Church Recreation Facility Addition
Adkins Design, Inc.	Fisher's Chapel Church Expansion and Flood Wall
Potesta and Associates	Troy Elementary Structural Renovation
Potesta and Associates	Artisian Heights Retaining Wall Inspection
City of Huntington	Concrete Bunker Design

Bridge Design and Inspection:

WVDOT	Smith Bridge, Wetzel Co., WV
WVDOT	Sulphur Springs Bridge, Jefferson Co. WV
WVDOT	I-64 Bridge Inspection over Davis Ck., Kanawha Co., WV

Bridge Design and Inspection:

WVDOT	I-64 Bridge Inspection over the Big Sandy River, Cabell Co., WV
WVDOT	Rte. 21 Bridge Over Tupper's Ck, Kanawha Co., WV
WVDOT	Stollings Bridge over Dingess Run, Logan Co., WV
WVDOT	Ronceverte RR Bridge Inspection, Ronceverte, WV
Ahern and Associates	Hobet Coal Bridge Deck Replacement
Gilbert Lumber Co.	Bridge Inspection, Cabin Ck. WV
Union Carbide	Inspection and Rehabilitation Plans for the Upper Island Bridge
Bridge and Conveyor Inspection	Inspection and Reports for Various Coal Conveyor and Bridge Crossings in WV for Arch Coal
White Wine Mining	Bridge over Slaughters Creek, Chelyan WV
EQT	Bridge Abutment Design - Wetzel County Ahern and Associates Demolition Plan for the Easley Bridge, Bluefield, WV
Potesta and Associates	Logan High School Pedestrian Bridge Inspection
Potesta and Associates	North Bridgeport Pedestrian Tunnel

EDUCATION

Virginia Tech Blacksburg, VA
MS Civil/Structural Engineering, 1989

West Virginia Institute of Technology, Montgomery, WV
BS Civil Engineering, 1985

PROFESSIONAL MEMBERSHIP

AISC (American Institute of Steel Construction)

PROFESSIONAL LICENSES

Registered Professional Engineer in West Virginia

ERIC STOVER, P.E., CAP
ELECTRICAL / INSTRUMENTATION ENGINEER
DEPARTMENT MANAGER

CDI® Engineering Solutions

SUMMARY

Over 14 years of experience in electrical engineering, instrumentation, and control systems in chemical plants, power plants, coal preparation plants, and waste treatment facilities. Automation experience with Delta V, ABB, Allen Bradley, Siemens, and Frick Quantum. He is experienced in leading an E/I project team through design, construction, and commissioning phases of projects. He spent 11 months on an international assignment in NSW Australia working on a Brownfield Coal Preparation Project for Peabody Energy.

EXPERIENCE

2014 – Present | CDI Engineering
Electrical / Instrumentation Engineer Department Manager

Responsibilities include: Build strong relationships with clients based on delivering a good product; develop current employees and recruit qualified employees. Act as Project Manager for multiple single discipline E/I projects. Manage budget, schedule, quality, and technical details of project.

Projects include:

- Dow Chemical Electrical Substation
- Dow Chemical E Reactor
- Dow Chemical Misc small projects
- Bayer Crop Science DO Anyalzer replacement
- Bayer Material Science EO Railcar Unloading
- Bayer Material Science Texin MDI Upgrade
- Bayer Material Science Texin Screen Changer and PDV Upgrade
- Chevron Tank Truck Unloading Rack (Colon, Panama)
- Hexion (Momentive) Blower Upgrade

2013 – 2014 | Forge Group North America (previously Taggart)
Lead Electrical Engineer

Responsibilities include: Industrial Electrical Systems Design, Electrical and instrument, specifications, approve electrical drawings and electrical studies, Oversee electrical commissioning and PLC programming, Project closeout (as-builts & electrical turnover documents). Projects include: Alpha Natural Resources Basin Based Biological Water Treatment Plant, Domtar Hawesville Mill Elevated Overland Woodchip Conveyor.

2010 – 2013 | Taggart Global LLC
Lead Electrical Engineer

Responsibilities include: Industrial Electrical Systems Design, Electrical and instrument specifications, Approve electrical drawings and electrical studies, Oversee electrical commissioning and PLC programming, Project closeout (asbuilts & electrical turnover documents). Projects include: Wilpingjong Coal Handling Preparation Plant Expansion Project, Monroe Generation Station Mersorb Building Rail Tanker Car Unloading Facility, Tunnel Ridge Coal Processing Plant Design & Construction, Rocksprings Belt Press Addition.

2007 – 2010 | Bayer Business and Technology Services, LLC
Process Control Technology Engineer III

Responsibilities include: Electrical/Instrumentation estimates, Instrument specifications (Smart Plant Instrumentation), Proposals and requisitions, Approve electrical drawings, Oversee electrical commissioning and DCS/SIS programming, Project closeout (asbuilts, electrical datasheets, etc.). Projects include: Project Freedom (Infrastructure Project), ECD Waste Water Treatment HAZOP Action Items.

2006 – 2007 | Belcan Corporation (contracted to Bayer)
Process Control Technology Engineer

Responsibilities include: Electrical/Instrumentation estimates, Instrument specifications (Smart Plant Instrumentation), Proposals and requisitions, Approve electrical drawings, Oversee electrical commissioning and DCS/SIS programming, Project closeout (asbuilts, electrical datasheets, etc.) Projects include: Polyol Hazop Action Items, Texin Storage Tank Upgrade, Polyol Blends Recycle Coolers.

2005 – 2006 | CDI Business Solutions
Electrical/Instrumentation Engineer

Responsibilities include: CAD Design (Microstation and AutoCAD), Device specification. Projects include: Miscellaneous projects for Dow Chemical, Elkem Metals, American Electric Power, and Hexion Specialty Chemicals.

EDUCATION

Bachelor of Science in Electrical Engineering, West Virginia University Institute of Technology

PROFESSIONAL LICENSURE

Registered Professional Engineer in West Virginia, Kentucky, Maryland, Pennsylvania, Ohio, Minnesota, Tennessee, Iowa, Tennessee, and North Carolina

ISA Certified Automation Professional (CAP)

GRANT WHITE, P.E.
ELECTRICAL ENGINEER II

CDI® Engineering Solutions

SUMMARY

- Completed Safety Management Program and have excellent understanding of how to integrate safety into the workplace.
- Experienced in: AutoCAD; Microsoft Office (PowerPoint, Word, Excel, Project); OSHA General Industry (29CFR1910) and Construction Industry (29CFR1926); Coding and Programming Allen Bradley PLC's (RSView and RSLogix); Completed 30-hour Occupational Safety & Health Training Course in General Industry Safety & Health while attending WVUIT

EXPERIENCE

2014 – Present | CDI Engineering
Electrical Engineer

- Performed arc flash analysis, load flow analysis, and short circuit analysis on various industrial projects.
- Experienced with ETAP & SKM electrical engineering software that includes analytical software modules for power systems analysis.
- Assisted with electrical engineering of a large-scale plant upgrade including: MCC & LVSG specification, panel layout, cable tray design, VFD parameter settings, transformer sizing & procurement.

2011 – 2014 | Casto Technical Services Inc.
Project Engineer

- Building Automation Systems & Automatic Temperature Control Design & Implementation.
- DDC/automated control systems to control and optimize building equipment energy usage.
- Project Management of multiple jobs.
- Generate estimates.
- Control valve sizing.
- AutoCAD graphics.
- Involved in contracting/AIA documents/submittal processes.

2010 – 2011 | Casto Technical Services Inc.
Engineer Intern

- Conducted a lighting energy audit at a local county school system, which ultimately developed into a performance contract.
- Assisted in sizing of duct and piping.

2007 – 2008 | Preiser Scientific
Electrical/Electronic Technician

- Implemented AutoCAD; created and redrafted various drawings including three dimensional objects.
- Manufactured and repaired various specialized coal testing equipment such as sulfur analyzers, plastometers, and temperature controllers.

2006 – 2007 | WV WVUIT Work Study
Research Assistant

Performed multiple tasks with robots, including: calibration, wireless connection, programming, video link, and mapping

EDUCATION

West Virginia University Institute of Technology
BS Electrical Engineering

PROFESSIONAL LICENSURE

Registered Professional Engineer in West Virginia

DAVE GUNNOE, P.E.
CONTROL SYSTEMS ENGINEER

CDI® Engineering Solutions

SUMMARY

Eight years of experience designing and implementing automation control systems for power plants, coal preparation plants, coal chemical treatment facilities, waste water treatment facilities, and other smaller processes. He has worked on sites all over the US as well as internationally. With over 10 years of classical programming experience, he brings techniques and methodologies typically reserved for high-level languages such as Java and C++ to the industrial automation domain. With this background and his experience in electrical engineering and construction, he can take an automation project from concept through design, construction, final commissioning, and long-term support.

EXPERIENCE

2014 – Present | CDI Engineering
Control Systems Engineer

Tank Truck Loading Rack – Confidential Client Panama
Developed electrical and instrumentation designs for a new tank truck loading rack

2012 – 2014 | Forge Group North America (Formerly Taggart), Nitro, WV
Control Systems Engineer

Designed and implemented PLC based control systems for material handling, coal refinement, chemical processes, water treatment, etc. Planned, documented, and performed control systems upgrades for plants with very high uptime requirements. Developed HMI interfaces from scratch as well as in kind with existing control interfaces.

2010 – 2012 | Joint Warfare Analysis Center, Dahlgren, VA
Control Systems Engineer

Classified Position. Power system analysis, programming.

2008 – 2010 | American Electrical Power
Control Systems Engineer

Designed and developed automation projects and applications using the Symphony/Harmony DCS system by ASEA Brown Boveri (ABB). Managed plant maintenance projects and upgrades.

EDUCATION

West Virginia University Institute of Technology
Bachelor of Science Electrical Engineering (BSEE) (Minor in Mathematics), May 2009

PROFESSIONAL LICENSES

Registered Professional Engineer [redacted] WV

LOUIS RUSSELL MILLER, PE
SR. MECHANICAL ENGINEER

CDI® Engineering Solutions

SUMMARY

Lou Miller, PE, has over 30 years of experience in providing practical application of Mechanical Integrity and Reliability solutions for chemical and petroleum refining industries. He has also written corporate MI programs that are used to manage sites covered by PSM regulations. He is skilled at developing individuals through the Change Management process who execute reliability plans for critical equipment, preventive maintenance, calibrations, and fixed equipment inspections.

Mr. Miller has used his extensive plant and organizational experience to deliver Information Technology architecture and enterprise systems that are used to drive Overall Equipment Effectiveness improvements as well as compliance with corporate Mechanical Integrity and compliance standards.

EXPERIENCE

2020 – Present | CDI Engineering Solutions
Sr. Mechanical Engineer, PE
Coordinated the specification, design, quality control and assurance for client fixed equipment procurement. Performed HVAC and heat balance studies for FEL 2 & 3 projects. Reviewed and approved design calculations for pumps, piping, towers, heat exchangers and tank equipment by utilizing the CAESAR II, AMETANK and COMPRESS Pressure Vessel software.

2015 – 2019 | Honeywell Performance Materials & Technologies – Claymont, DE
Principal Engineer – Maintenance Excellence
Functional Owner of the Fixed Equipment elements of the Inspection, Testing and Preventive Maintenance standards for the OSHA 1910.119 Mechanical Integrity element of Process Safety Management. This role drove the implementation of site MI programs for Inspection, Corrosion Monitoring, and Calibration Management. Developed programs for the global execution of reliability best practices along with compliance for Mechanical Integrity compliance and improvements in the Overall Equipment Effectiveness for site productions.

2011 – 2015 | DuPont – Wilmington, DE
Principal Engineer/Business Application Owner
Business Application Owner for the global deployment of the Meridium software program. Manager of program application, IT Infrastructure, support contractors, and budget for implementation. Developed training, configuration, and best practice specifications to support 80 manufacturing sites. Application is used to support the Mechanical Integrity/Quality Assurance and Reliability programs for manufacturing.

2010 – 2011 | Marathon Petroleum Company – Russell, KY
Reliability Specialist - Refining
Responsible for the coordination and implementation of the enterprise software applications for refining. Technology was used for maintenance planning, reliability and inspection management. Developed the training and auditing programs used for reliability improvement programs as well as compliance with corporate Mechanical Integrity standards.

2004 - 2010 | Catlettsburg Refining LLC, Catlettsburg, KY
Mechanical Integrity Coordinator
Responsible for the refinery's Mechanical Integrity Program. Developed and implemented the refinery's calibration, inspection, reliability and corrosion management applications. Created auditing protocols used to ensure compliance with OSHA's Mechanical Integrity program. Program was used as the basis for the corporate standard best practice.

1991 - 2004 | Marathon-Ashland Petroleum Company, Catlettsburg, KY
Senior Refining Engineer
Installed Meridium for use in managing the reliability and inspection management programs. Responsible for the refining standard practices for the management of equipment data and reliability failure coding practices. Partnered with the Meridium Company for the initial implementation of the of the inspection management, corrosion monitoring and reliability analytical tools.

Turnaround Supervisor
Responsible for the planning, execution and project tracking of maintenance projects ranging from 1 to 75 million dollars (US). Number of process unit shutdown events exceeded 100 events during this time frame. Was lead author for the development of the site turnaround standard best practice for planning and execution.

Maintenance Engineer
Project Engineer for new construction in a Refinery Environment. Responsible for setting up project plans for the commissioning of new process Units. Was planning supervisor for team responsible for the planning and scheduling for maintaining a refinery with 250 thousand barrels per day capacity.

1989 – 1991 | Missouri Public Service – Kansas City, MO
Fuels Engineer
Responsible for the purchasing of all fuels for electric generation. Administrator for the purchase of coal, natural gas, and fuel oil supplies with total annual values exceeding 500 million dollars. Acted as an interface for company state and federal regulatory organizations during rate hearings and audit proceedings.

1984 –1989 | Kansas City Power & Light – Kansas City, MO
Staff Engineer
Initial mechanical engineering employment with assignments related to the construction and maintenance of coal fired power plants with project scopes up to 5 million dollars.

EDUCATION

University of Missouri-Rolla
B. S. Mechanical Engineering, 1984
Pi-Tau Sigma International Honor Society for Mechanical Engineers

AREAS OF SPECIALIZATION

- Project Management
- Mechanical Integrity Programs
- ASME Codes, NBIC, API 653, API 510, API 570, API 571
- Reliability Analytics
- Design for Reliability
- Predictive Maintenance Vibration
- Non-Destructive Examination Methods for Inspection
- SAP Maintenance Planning System
- PSM Management of Change
- Corporate Process Safety Management (PSM)Auditor
- Train the Trainer
- Business Application Ownership
- Six Sigma Methodology
- IT Architecture
- Meridium
- Turnaround Supervision
- Change Management
- Overall Equipment Effectiveness (OEE)
- COMPRESS Pressure Vessel Design Software
- Six Sigma Green Belt Certified
- Caesar II Piping Design Software
- AMETANK Tank Engineering Software

PROFESSIONAL LICENSES

Currently registered as a Professional Engineer in the States of Missouri, Kentucky, Michigan, Ohio and West Virginia.

Former certified API-510 Pressure Vessel Inspector as well as API-936 Refractory Practitioner.

EDDIE D. HOWELL
SENIOR LEAD PIPING DESIGNER

CDI® Engineering Solutions

SUMMARY

Mr. Howell has over 43 years of experience in piping design for chemical, petrochemical, fossil fuel, and nuclear waste facilities. He has been responsible for the design of various types of projects, from initial process package to final design layout, including material and engineering estimates, field measurements, and field follow-up. Experience utilizing a wide range of piping materials including PVC, CPVC, carbon steel, stainless steel, chrome moly, hastelloy C, titanium and PFA/PTFE lined pipe and fittings, etc. He has experience as a design/drafting group supervisor and has also worked as a lead designer.

EXPERIENCE

- Provide piping design packages for various clients and various size projects. Lead designer on projects from conception to detailed design packages. Responsibilities include design/drafting Equipment Layouts, Piping Plans & Sections and Isometrics, performing design estimates, Material Take-offs, checking other designers work, write job scopes, and field data acquisition.
- Major expansion at FilmTec Corporation (Dow Chemical) in Edina, MN. Lead piping designer for installation of a new Membrane Line. Work included site visits for layout planning and routing piping. Utilized Autodesk Plant 3D software along with LFM laser scanning to create detailed design documents.
- $8 million Backbone Sewer Project for Flexsys in Nitro, WV. Lead piping designer of project to replace underground sewer piping with overhead TFE lined pipe.
- Major expansion at Filmtec Corporation (Dow Chemical) in Edina, MN. Lead Piping designer for installation of a new Membrane Line and several spin off projects. Work included site visits for layout planning and routing piping.
- $25 million upgrade of existing chemical unit for Union Carbide Corp. in Institute, WV. Lead designer responsible for the execution of piping design for entire project.
- Developed design packages for various maintenance projects using Intergraph Microstation for piping orthographics and isometric drawings.
- Provided piping design packages for various companies which include the following: Dow Chemical, Aristech, Bayer CropScience, Marathon Ashland Petroleum, FMC Corp., Calgon, E.I. DuPont De Nemours, Rhone-Poulenc Inc., Union Carbide Corp., and Liquid Carbonic Inc.
- $20 million Vent Gas Incinerator system for Rhone-Poulenc Inc. in Institute, WV. Led piping efforts in layout and design. Provided orthographics and isometrics with bill of material required for fabrication and construction. Also, provided field follow-up work with contractor as a field engineer.

- Lead piping design on waste treatment upgrade project, Institute, WV. Provided piping orthographics and isometrics with bills of material required for fabrication and construction.
- Led piping design efforts for two Water Intake Screen Projects for Rhone-Poulenc Inc. in Institute, WV. This included providing orthographics and isometrics with bills of materials for fabrication and construction. Coordinated design with civil, controls, and electrical design disciplines.
- $100 million capitol projects work at nuclear waste facility for the Department of Energy in Aiken, SC. (Required D.O.E. security clearance.) Piping engineer with the responsibilities of being Design/Drafting group supervisor and acting as liaison between engineering and design.
- New fossil fuel power plant piping and hanger design for Iowa-Illinois Electric Co. at the Louisa Generating Station, Muscatine, Iowa.
- Major upgrade of existing units and the addition of several new units for E.I. DuPont De Nemours at the Belle, WV plant. Field piping designer and material take-off person.

EDUCATION

Carver Career Center, Charleston, WV: Pipe Drafting/Design

Aiken Technical College, Aiken, SC: Computer Aided Drafting

Carver Career Center, Charleston, WV: Intergraph Microstation 4.03

MTI Inc., Charleston, WV: Omni 3D

SUMMARY

PIPING DESIGNER IV:

Performs design assignments ranging from routine to difficult, which require knowledge and skill in basic drafting techniques, procedures, knowledge of applicable industry standards, and design standards. Supervises other design personnel.

- Independently develops CADD drawings from scratch utilizing design sketches or catalog information.
- Demonstrates a continuing consciousness of safety in daily activities and implements it in work designed.
- Marks up works in progress for others to draft (or CADD).
- Prepares complex engineering and constructions drawing from scratch, sketches or verbal instruction, utilizing manual or computer-assisted drafting/design techniques.
- Performs related fundamental engineering support tasks such as updating computer lists, filing prints, distributing drawings, making simple calculations, proofreading reports, compiling Bills of Material, etc.
- Checks (and takes the responsibility for) the work of other designers and drafters.
- Mentors less experienced designers and drafters.
- Communicate general and detailed ideas with sketches and calculations to direct the work of other designers and drafters.
- May interface with clients as required to complete advanced design work.
- May utilize information from vendor prints, catalogs, technical manuals, etc. to do design work.
- Field notes are neatly arranged, accurate and complete.
- Sketches are readable by anyone and include all pertinent dimensions, notes and job number.
- May supervise and furnish work for designers and other drafting personnel.

CADD ADMINISTRATOR:

Works in conjunction with the CADD Administrators from other offices to ensure that adherence to best practices and standard operating procedures are utilized on all projects. Responsible for implementing project setups when required including adherence to client standards, border and piping specification creation, project template creation, Isogen setup, and database management.

- Provide guidance and direction to CADD team to ensure operational and technical excellence.
- Develop, implement and monitor CADD design standards and procedures to meet customer's needs.

- Manage CADD hardware and software systems for the design team.
- Work with Engineering Lead regarding technical issues, training and other CADD system issues.
- Initiate and maintain contact with clients for clarification, coordination, and negotiation of critical issues.
- Identify opportunities and recommendations for increasing workflow efficiencies.
- Recommend best practices for solutions to meet customer's business needs.
- Provide hiring recommendations, train, and supervise CADD users in core application skills and standards.
- Evaluate team members for their technical skills, performance, and productivity.
- Maintain a positive working relationship with all levels of the organization.
- Ensure project documentation and deliverables follow corporate standards.

EXPERIENCE

2010 – Present | CDI Engineering
Piping Designer IV and CADD Administration

- Worked with the Unipol Drafting group on evergreen P&ID updates.
- Utilized Microstation V7 and V8 Bitwyse to Design Piping layouts for Dow and Bayer Cropscience.
- Worked on the 3D Design in PDS for Filmtec Line 500 expansion and BASF projects.
- Used AutoCAD Plant 3D with a Sequel Server Database on Line 600 30% Facility Expansion for an Equipment Skid based DOW FilmTEC Project on a reverse osmosis filter manufacturing process.
- Functioned as the Project Piping Lead on Various Dow Jobs where I interfaced directly with the client to attend review meetings and make presentations of the 3D Models for local projects
- ranging from 250 Thousand to 5 Million Total Installed Cost.
- Implemented the use of CADWorx Plant 3D software to model multiple projects, including the Triton LOPA Project, South Charleston Dow Energy Systems Debt Reduction Feedwater Pump Installation, PVA Vacuum Pump Replacement, Chem Mix Drumming Upgrade, Dow Knoxville EReactor Upgrade.
- Utilized AutoCAD Plant 3D Software to create 3D models, P&ID's, Isometric and Orthographic drawings of multiple Midstream Gas Compressor Facilities for Access Midstream.

- Worked in CADWorx Plant Design software to update 3D Models for Columbia Gas Facilities. Designed Piping Skids for MarkWest L.P. Facilities utilizing CADWorx Plant. Familiar with the process of successful Compressor Station Design including skid based and nonskid based design of both wet and dry gas systems.
- Experience working with 3D Models for a Kinder Morgan Export Terminal as well as Updates on P&ID sets for multiple Stations.
- Excellent communication and visualization skills. Comfortable working in collaborative groups and strives to be considered a team player. Frequently leads 3D model reviews and client meetings.
- Twelve years of experience with Computer Aided Drafting and Design in software including AutoCAD, Microstation SE V7, Microstation V8, 3D PDS in Microstation J, DOW Commons, Smartplant P&ID, CADWorx Plant, CADWorx Equipment, CADWorx P&ID, Isogen, AutoCAD Plant 3D, LFM, Scene, Cyclone, Kubit, and ReCap.
- Twelve years of experience in Field Data Acquisition, Total Station Survey, and Laser Scanning at Chemical Plants including: Dow Chemical, FilmTec, Bayer Crop Science, Union Carbide, Unipol, Dupont Belle, Institute, Kureha PGP, ICL-IP Americas, Americas Styrenics, ECO Services, Nutrien, Hexion, Clearon, Covestro, Triton, Valero, Shell, Motiva, BASF, Marathon, PCS Nitrogen, Mark West, Kinder Morgan, Momentive, Columbia Gas, and TransCanada.
- Twelve years of experience with producing Isometric and Orthographic drawings from 3D software, including CADWorx and Plant 3D.
- Six years of experience functioning as CAD Administrator on 3D Projects with total installed cost ranging from 40-70 Million. Oversaw the development of Project Setups, 3D model creation, Piping Specifications, and maintained a Sequel Server database associated with the 3D Design software.
- Experience with Field Data Acquisition utilizing the following Laser Scanning Equipment:
  - Faro (Focus)
  - Leica (P40, RTC360, BLK360)
  - Z&F Imager (5010C, 5016)
- Experience Registering Point Cloud Data with the following software:
  - LFM
  - Scene
  - Cyclone
  - Cyclone Register 360
  - ReCap

2000 – 2008 | A.B. Construction
Supervisor and Lead Foreman

- Performed many tasks that directly apply to working in the drafting and design field, including interpreting architectural blueprint plans and orthographic layouts, ensuring adherence to applicable building codes, acquiring field data, and interfacing with the client.
- Responsible for a crew of seven to twelve people working on multiple contracts located at times on separate work sites. Planned and delegated work assignments for employees, coordinated and tracked the schedules of jobs, and estimating material and labor.
- Worked closely with surveyors and engineers to accurately and efficiently execute contracts. Worked with the crews to ensure quality control through leading by example and maintaining daily job inspections.
- Eight years of experience with AutoCAD.
- Eight years of experience with civil and architectural construction, design, and implementation.
- Proficient in Microsoft Office tools, such as Word, Excel, Outlook, Access, PowerPoint, and Windows OS environment.

EDUCATION/TRAINING

- Caperton Center for Applied Technology at WVU-P (GPA 3.5)
- AutoCAD Training (23 years of experience; 30 credit hours; +200 hours in training modules)
- PDS Training (2 years of experience; 10 credit hours; +80 hours in training modules)
- Smartplant P&ID Training (5 years of experience; 5 credit hours; +40 hours in training modules)
- CADWorx Plant Training (11 years of experience; 15 credit hours; +120 hours in training modules)
- CADWorx P&ID Training (11 years of experience; 5 credit hours; +40 hours in training modules)
- AutoCAD Plant 3D Training (7 years of experience; 10 credit hours; +80 hours in training modules)
- Autodesk University Training (24 hours in training modules)
- TWIC (Transportation Workers Identification Card; Expires: April 2023)
- RTC Regulatory Training Center Card
- Site Training for Kureha and Dow WVO

Education:

- B.S., Architecture, The Pennsylvania State University, 1980

Registrations:

- WV, Registered Architect, 2012
- PA, Registered Architect, 1988
- NC, Registered Architect, 2012
- TX, Registered Architect, 2012
- DE, Registered Architect, 2019
- NY, Registered Architect, 2012
- MD, Registered Architect, 2012
- VA, Registered Architect, 2012

Affiliations:

- American Institute of Architects

Years of Experience:

39 years

DIANE GLARROW, AIA
Project Manager

Diane brings nearly 40 years of experience to every project she is involved with. And, as knowledge + experience = wisdom, Diane's "big-picture" vision keeps complex projects on track, on time and on-budget. Diane, in her role as project manager with extensive expertise in the design of new and renovated facilities of all types, manages all technical aspects of a project. Her relevant experience includes:

> Benedum Airport Authority, North Central WV Airport Terminal, Bridgeport, WV
> Central WV Regional Airport Authority, Charleston, WV
  - Marshall Buildings
  - US Customs Building
> Bimbo Bakeries USA, Distribution Center Study, Rand, WV
> Sara Lee Food and Beverage, Warehouse Renovation (Conceptual Layout), Rand, WV
> Sheetz Inc.
  - Corporate Headquarters and Training Center, Claysburg, PA
  - Renovations to Existing Corporate Offices, Altoona, PA and Claysburg, PA
  - Architectural/Engineering Services for 100+ Stores: Prototype Stores, New Stores, and Renovations to Existing Stores in PA, MD, NC, OH, VA, and WV
> 219 West High Street - Conversion of Existing Two-Story Hardware Store into Leased Space and L.R. Kimball Training Center, Ebensburg, PA
> Borough of Brookville, Parking Garage/Office Building Study, Brookville, PA
> Business Records Management, Inc., Pittsburgh, PA
  - Code Evaluation of Storage Facility
  - Structural Assessment of Pittsburgh Facility
> California University Technology Park Hotel/WCRA, California, PA
> Crown-Phynex, LLC, Preparation of Plans and Acquisition of Permits for Future Development at Meadow Crest Estates, Johnstown, PA
> Department of the Air Force, 911th Airlift Wing, Coraopolis, PA
  - Repair (Replace) HVAC System - Multiple Buildings
  - Repair/Replace HVAC Controls - Multiple Buildings
  - Construct Addition to Dining Facility 213
  - Construct Addition to AGE Shop Building 420
  - Maintain/Repair Base Supply Building 312
  - Construct Covered, Non-Heated MXS Storage Facility
  - Construct Parking Lot - Aircraft Maintenance
  - Repair Grill Exhaust Hood - Picnic Pavilion B5842
  - Conduct Wood Truss Study - Buildings 120 and 312
  - Alter/Repair/Maintain Survival Equipment B 408
  - Repair/Maintain NDI Shop B 409
  - Replace Roofs/Skylights - Building 125
> Dollar Bank, Limited Architectural and Engineering Services for Layout of New Equipment in Card Production Room (Liberty Commons), Pittsburgh, PA
> First Commonwealth Bank, Ebensburg Branch Office, Ebensburg, PA
> The Greater Johnstown Technology Park, Multi-Tenant Office Building, Johnstown, PA
> Hyatt Hotel at the Pittsburgh International Airport, Pittsburgh, PA
> Indiantown Gap National Cemetery, Columbariums, Indiantown Gap, PA
> Johnstown Area Heritage Association, Festival Park Additions and Alterations, Johnstown, PA

BRIAN P. ENDLER, AIA
Project Manager and Justice Architect

Brian brings nearly 20 years of experience and expertise in all phases of architecture, engineering, and construction management. Specific responsibilities have included business development; coordination among the architectural, structural, civil, mechanical, and electrical disciplines; project management; budget control; direct client contact; and coordination between field and office during construction. Brian's experience includes the design of correctional, municipal, public safety, office, commercial, educational, and healthcare facilities. These project types encompass both new construction and renovations. Brian has been involved in the design of 30 correctional facility projects and 7 public safety/judicial facility projects.

Brian's project experience includes:

- 328 Innovation Boulevard Shell Office Building, State College, PA
- Ebensburg Presbyterian Church, Schematic Design Services for Elevator/Stair Addition, Ebensburg, PA
- The Greater Johnstown Technology Park, Johnstown, PA
- The Greater Johnstown Technology Park, Tenant Fit-Out for General Services Administration, Johnstown, PA
- Southern Alleghenies Museum of Art, Conceptual Design for New Museum, Cresson, PA
- Windber Research Institute, Laboratory and Multi-Tenant Office Building, Windber, PA
- New Jersey State Police Emergency Operations Center, West Trenton, NJ
- City of Pittsburgh, Renovation of Sixth Floor of City/County Building, Pittsburgh, PA
- Franklin County, Facilities Master Plan/Space Needs Analysis, Chambersburg, PA
- Logan Township Municipal Building, Altoona, PA
- Logan Township, Space Needs Analysis/Assessment of Existing Municipal Building, Altoona, PA
- State College Municipal Building, State College, PA
- Tioga County Courthouse Addition, Wellsboro, PA
- Allegany County Jail and Public Safety Facility, Amity, NY
- Berks County, Design Services for Prison Renovations/Additions, Leesport, PA
- Blair County Prison, Housing Unit Addition, Hollidaysburg, PA
- Blair County Prison Study, Hollidaysburg, PA
- Butler County Prison, Butler, PA
- Centre County Correctional Facility, Bellefonte, PA
- Cortland County Jail, Replacement Study, Cortland, NY
- Curran-Fromhold Correctional Facility Renovations/Additions, Philadelphia, PA
- Eastern Shore Regional Jail, Eastville, VA
- Fayette County, New Prison, Uniontown, PA
- Franklin County Jail, Chambersburg, PA
- Garrett County Detention Center Study, Oakland, MD
- Geauga County Safety Center, Chardon, OH
- Indiana County Jail Feasibility Study, Indiana, PA
- Indiana County Jail, Indiana, PA
- Jefferson County Correctional Facility, Needs Assessment, Watertown, NY
- Livingston County Jail Expansion/Renovation, Geneseo, NY
- Luzerne County, Design Services for Correctional Facility, Wilkes-Barre, PA
- Mercer County Jail, Mercer, PA
- Monroe County Correctional Facility Study, Stroudsburg, PA

Education:
- B.A. Architecture, Lehigh University, 2001

Registrations / Certifications:
- WV, Registered Architect, 2015
- NY, Registered Architect, 2009
- MD, Registered Architect, 2010
- PA, Registered Architect, 2012

Professional Affiliations:
- American Institute of Architects – Central PA Chapter
  - Director of Programs (2013-2014)
  - Vice President (2015-2016)
  - President (2017-2018)
- Laurel Municipal Inspection Agency, Board of Appeals

Honors:
- PA Business Central - Foremost Under 40

Total Years of Experience:
19 Years

Education:

- BS. Civil Engineering, The Pennsylvania State University, 2000

Registrations/Certifications:

- WV, Professional Engineer, 2006
- PA, Professional Engineer, 2005
- NY, Professional Engineer, 2007
- NC, Professional Engineer, 2009
- GA, Professional Engineer, 2015
- NJ, Professional Engineer, 2016
- MD, Professional Engineer, 2016
- TX, Professional Engineer, 2016
- SC, Professional Engineer, 2016
- LA, Professional Engineer, 2016
- VA, Professional Engineer, 2017
- OH, Professional Engineer, 2017
- FL, Professional Engineer, 201
- DC, Professional Engineer, 2018
- Illinois, Licensed Structural Engineer, 2010
- Nebraska, Licensed Structural Engineer, 2014
- California, Safety Assessment Program Evaluator, 2014

Affiliations:

- American Institute of Architects
- American Institute of Steel Construction
- American Society of Civil Engineers
- Structural Engineers Association of Pennsylvania
- PEMA Task Force 2, Company 5, Urban Search & Rescue, Structural Engineer

Years of Experience:

20 years

CHRISTOPHER BOWERS, PE, SE*
Structural Engineer

Chris has 20 years of experience as a Structural Engineer on a variety of projects including offices, and industrial / commercial facilities. He utilizes structural analysis and design software as well as AutoCAD and Revit in the drafting and production of drawings for structural systems.

Chris is a member of American Institute of Steel Construction; American Society of Civil Engineers; American Concrete Institute; Structural Engineers Association of Pennsylvania - Structural Engineering Emergency Response Committee Member; and PEMA Task Force 2, Company 5, Urban Search and Rescue, Structural Engineer.

Chris' relevant experience includes:

> Central WV Regional Airport Authority, Charleston, WV
  - Marshall Buildings
  - US Customs Building
  - Eagle Mount Road Extension

> United States Gypsum Corporation, Washingtonville, PA
  - Synthetic Gypsum Auxiliary Storage Shed
  - Design for Rail Car Unloading Facility
  - Structural Analysis & Repair

> BASF, Office Fit-Out, State College, PA

> Sheetz Inc., Corporate Headquarters and Training Center, Claysburg, PA

> PA Department of General Services
  - New Armstrong County Maintenance Facility, Salt & Equipment Storage Buildings, and Site Development (Schematic Design), Kittanning, PA
  - New Armed Forces Reserve Center and Field Maintenance Shop, Williamsport, PA

> PA Turnpike Commission, Various, PA
  - Bowmansville Maintenance Facility, Bowmansville, PA
  - Central Archive Facility Work, Middletown, PA
  - District 3 Mezzanine Storage Load Analysis

> Lockheed Martin, Owego, NY
  - VH-71 Presidential Helicopter Integration Facility

> Hancock County, WV, New Office of Emergency Management/911 Center and Health Department Building Complex, New Cumberland, WV

> Confidential Client, New Corporate Hangar, New York

> 328, 329, and 330 Innovation Boulevard, Multi-Tenant Office Buildings, State College, PA

> Bimbo Bakeries USA, Distribution Center Study, Rand, WV

> Concurrent Technologies Corporation, Structural Analysis of Mezzanine Floor Loading, Johnstown, PA

> PA Department of Environmental Protection, Southeast Regional Office Building, Norristown, PA

> The Greater Johnstown Technology Park, Johnstown, PA
  - Multi-Tenant Office Building & Various Tenant Fit-Outs

> Tech Park Associates, Structural Analysis of IBM Office Building, Mechanicsburg, PA

> Walsh Construction, Warehouse Building Relocation, Holtwood, PA

RYAN B. MEITZLER, PE, LEED AP ID+C
Senior Mechanical Engineer

Ryan has 15 years of experience in the design of complex mechanical and plumbing systems for various types of projects including educational, commercial, office, residential, and correctional facilities, involving both new construction and renovations. Ryan's responsibilities and experience have included serving as the primary point of contact for clients; survey and documentation of existing building systems and conditions; development of construction documents and coordination with architectural and structural elements; and ensuring compliance with ICC codes, ASHRAE standards, and other applicable requirements.

Ryan's experience also includes the management and documentation of LEED credits as well as the maintenance and improvement of CAD, Revit, and mechanical department standards. He is proficient in AutoCAD MEP, Revit, MasterSpec, HAP, Trane Trace 700, and the Microsoft Office Suite. His relevant experience includes:

> Benedum Airport Authority, North Central WV Airport Terminal, Bridgeport, WV
> Central WV Regional Airport Authority, Charleston, WV
  - Marshall Buildings
  - US Customs Building
> Allegheny County Department of Public Works, PA
  - District 5 Warehouse, South Park
  - District 5 Warehouse Site Analysis
> Confidential Client, Laboratory Fan Replacement, State College, PA
> Confidential Client, New Corporate Hangar and Terminal, NY
> Confidential Client, Facility Conditions Assessment & Master Plan Study for a Laboratory/Manufacturing/Warehouse Campus, PA
> Maser Consulting, Architecture & Engineering Design Services for a Variety of Projects (5 Year Contract) for the Federal Aviation Administration, Atlantic City, NJ
> Gwin, Dobson & Foreman, Inc., State College Water Authority, New Water Treatment Facility, State College, PA
> LA Group, For Indiantown Gap National Cemetery, Architecture and Engineering Services for a New Columbarium, Annville, PA
> PA Turnpike Commission, Open-End Contract for A&E Services, Various, PA
  - Bowmansville Maintenance Feasibility Study and Design Services, Bowmansville, PA
  - Central Archive Facility Work, Middletown, PA
  - Harrisburg West Interchange, Back Up Traffic Operations Facility, Interior renovations to existing 1,000 square feet garage building, Harrisburg, PA
  - Mon-Fayette Expressway, New Jefferson Hills Warehouse, Canonsburg, PA

  Sheetz Corporation, Conceptual Design for a New Prototype Store
> PA Department of General Services, New PA State Police Headquarters and Shooting Range, Erie, PA
> New Howard County Detention Center, Jessup, MD
> New Fayette County Prison, Uniontown, PA
> Maser Consulting, Toms River Regional Schools, Toms River, NJ
  - Facilities Conditions Assessment and Subsequent Renovations / Additions / Repairs
  - Energy Savings Improvement Projects

Education:
- B.S., Mechanical Engineering, The Pennsylvania State University, 2004

Registrations / Certifications:
- WV, Registered Engineer, 2017
- FL, Registered Engineer, 2019
- GA, Registered Engineer, 2017
- MD, Registered Engineer, 2011
- NC, Registered Engineer, 2017
- NJ, Registered Engineer, 2017
- OH, Registered Engineer, 2018
- PA, Registered Engineer, 2017
- TX, Registered Engineer, 2017
- VA, Registered Engineer, 2017
- LEED Accredited Professional Interior Design + Construction (LEED AP ID+C), 2013
- NCEES Record

Professional Affiliation:
- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

Years of Experience:
15 years

BRAD BLICKENDERFER
Senior Electrical Engineer

Brad currently serves as a Senior Electrical Engineer in L.R. Kimball's A/E Division. He has been practicing electrical engineering for over 18 years. His responsibilities include electrical, lighting, telecommunications, and security systems design for new construction and renovation projects, site inspections and field surveys, cost estimating, coordination of various building systems with electrical and lighting requirements, preparation of reports and specifications, and ensuring compliance with all applicable codes and equipment specifications. Brad's responsibilities during the construction administration phase include shop drawing/submittal processing, review of value engineering and change order requests, and punch lists.

Brad's experience includes a wide variety of project types including education and sports, hospitals, office buildings, correctional facilities, institutional facilities, and other commercial and industrial facilities.

Education:
- B.S. Electrical Engineering, University of Pittsburgh at Johnstown, 1999

Registrations / Certifications:
- West Virginia, 2012
- Pennsylvania, 2006
- Virginia, 2014
- North Carolina, 2013
- Delaware, 2020
- Georgia, 2014
- New Jersey, 2013
- Maryland, 2013
- New York, 2012

Professional Affiliations:
- Institute of Electrical and Electronics Engineer

Years of Experience:
22 years

> Bimbo Bakeries USA, Rand, WV
  - Distribution Center Study

> Central WV Regional Airport Authority, Charleston, WV
  - Eagle Mount Road Extension

> Department of the Air Force, 911th Airlift Wing, Coraopolis, PA
  - Repair Airfield Lighting, East and West Apron
  - Repair/Add to Security Forces, Building 221

> Hawbaker Engineering, LLC
  - Hydro Recovery Frac Plant, Burgettstown, PA

> McLean Architects, LLC
  - Engineering Design Services for Spoonwood Brewing Restaurant, Bethel Park, PA

> PA Department of General Services
  - New Armstrong County Maintenance Facility, Salt and Equipment Storage Buildings and Site Development (Schematic Design), Kittanning, PA

> Southern Alleghenies Museum of Art, Loretto, PA
  - Archive Storage Expansion

> Wilkes-Barre/Scranton International Airport, Avoca, PA
  - 2012 Taxiway B Extension (Runway 22 Approach End), Environmental and Preliminary Engineering Design

> The Salvation Army Building Renovations, Indiana, PA

> Sheetz, Inc.
  - New Corporate Headquarters, Claysburg, PA
  - Restroom Renovation for ADA Compliance, Hermitage, PA
  - Mechanical/Electrical/Plumbing Design Services for New Stores in Antrim Township, Butler, Cresson, Lancaster, Ligonier, Lower Swatara, Millcreek Township, Monroeville, Mt. Joy Township, Reedsville, Richland Township, Towanda, and Union Township, PA; Elkins and Huntington, WV; Balls Ford, King George, Manassas, Powhatan, and Stuarts Draft, VA; Goldsboro, High Point, Johnston County, Roanoke Rapids, Thomasville, and Winston-Salem, NC

DAVID J. CINER, CPD, LEED AP
Sr. Plumbing/Fire Protection Designer

With over 45 years of experience in plumbing and fire protection design, Dave has been involved in a large variety of project types including educational, commercial, office, public safety, correctional, industrial, manufacturing, transportation, judicial, municipal, healthcare, and recreational facilities.

He is involved in the design and preparation of working drawings for all types of plumbing/fire protection systems. His experience includes the preparation of plumbing and fire protection specifications, field surveys, and cost estimating of various building types.

Dave's project experience includes:

- 328 Innovation Boulevard Shell Office Building, State College, PA
- Allegheny County, PA
  - District 5 Warehouse Study, South Park
  - HVAC and Civil Engineering Assessment of Steam Vault at Allegheny County Jail
  - County Office Building Second Floor Partial Renovation
  - Courthouse Bullpen Stair Renovation
- Allegheny County Sanitary Authority, Operations and Maintenance Facility, Pittsburgh, PA
- Blair County Convention Center, Altoona, PA
- Calibre Residential, Inc., Conversion of School to Keith Hilltop Apartments, Altoona, PA
- California Hotel Associates, Hampton Inn and Suites Hotel at the California Technology Park, California, PA
- Chamber of Business & Industry of Centre County, Technology Center Expansion at Innovation Park, State College, PA
- Chestnut Ridge Resort, Blairsville, PA
  - Hotel/Conference Center
  - Condominiums
  - Addition to Chestnut Ridge Inn
- Concurrent Technologies Corporation, High Bay Manufacturing Technology Facility, Johnstown, PA
- Department of Environmental Protection, California District Office Building, California, PA
- Department of Environmental Protection, Southeast Regional Office Building, Norristown, PA
- First Commonwealth Bank, Ebensburg Branch Office, Ebensburg, PA
- Genomind, Inc., New Office and Laboratory, King of Prussia, PA
- The Greater Johnstown Technology Park, Johnstown, PA
- Hawbaker Engineering, LLC, Hydro Recovery Frac Plant, Burgettstown, PA
- Hawbaker Construction, MEP permit drawings for a new storage/office building, Youngstown, OH
- Holy Name Church Renovations/Additions, Ebensburg, PA
- Laurel Bank (now First National Bank of Pennsylvania), Indiana, PA
- Laurel Technologies, Schematic Design Services for Manufacturing/Office Facility, Johnstown, PA
- New Hyatt Hotel at the Pittsburgh International Airport, Pittsburgh, PA
- North American Hoganas, Inc., Quality Assurance Lab/Office Renovation, Hollsopple, PA

Education:
- Associate, Drafting/Design Technology, Electronics Institute of Pittsburgh, 1972

Certifications:
- Certified Plumbing Designer (CPD)
- LEED Accredited Professional

Professional Affiliations:
- American Society of Plumbing Engineers (ASPE)

Years of Experience:
48 Years

MARTY BELGARD
ESTIMATING MANAGER

CDI® Engineering Solutions

SUMMARY

Over 35 years of experience in estimating, scheduling, cost tracking, and construction management of industrial facilities. Multi-discipline technical experience and adept at supporting project front end loading functions. Provided estimating support of projects with budgets ranging from $.5M to $1.4B. Experience in construction management and field coordination of site work, erecting of structures and setting of equipment, project administration, and generating competitive lump sum and T&M bids.

EXPERIENCE

CDI Engineering, Estimating Manager

- Directing and Supervising TIC estimating activities for all CDI engineering sites located in Baton Rouge LA, Houston TX, Beaumont TX, and Charleston WV.
- ISBL, OSBL and Optional TIC estimates for a new Dynamic Fuels facility in Geismar, Louisiana which will produce 4300 BPD of diesel fuel from chicken fat.
- Preliminary TIC estimate for a 350K ECU chlorine plant for Westlake Chemicals.
- Produced 47 direct cost estimates for ExxonMobil BR facilities with a cumulative value of $359M including projects such as "BRPO Competitiveness – Controls Upgrade" and "TDC 2000 EGH Replacement".
- Utilized Aspen ICARUS Project Evaluator (IPE) software to determine replacement asset base (RAB) data used to establish maintenance budgets for multiple former Union Carbide Facilities in Texas, Louisiana and Europe.
- Performed economic feasibility study to relocate an existing specialty chemical unit from Paducah, KY to Plaquemine, LA using Aspen Kbase software.
- Developed more than 150 TIC estimates for Huntsman over the past 6 years, largest being the $1.4B TIC estimate for PO/MTBE facility siting study for China and USGC.
- TIC estimates for terminal facilities including: loading (ship, barge, rail and truck), storage (tank farm and rail), pipeline, blending, metering station, pigging station, anti-corrosion injection, compressors, vapor recovery, substation, MCC, PLC, DCS, containment and infrastructure.

Dow Chemical Company, Louisiana Operations Estimating SME
Developed TIC cost estimates to support all project phases for capital appropriation, and maintenance modifications for Dow Louisiana Operations located in Plaquemine, Greensburg, Sterlington, Taft, and Grand Bayou. Member of Dow's Global Estimating Team to develop global standards and procedures. Served as Dow Louisiana Operations SME for the Aspen estimating software suite, and estimating group leader. Projects: DCS conversion, debottleneck, unit expansion, RAB assessments, unit relocation, major ethylene outage, compressor replacement, rectifier replacement, co-gen replacement, terminal facilities, first wash treatment, exchanger

replacement requiring the largest lift in North America (1996), energy conservation, VOC reduction, etc.

Construction Contractor, Superintendent/Estimator
Numerous waste water treatment projects for industrial and municipal clientele.

EDUCATION

Bachelor of Science in Construction

HAROLD QUIGLEY
SENIOR COST ESTIMATOR

CDI® Engineering Solutions

SUMMARY

Over 35 years of cost estimating and project management of chemical units. Knowledge of project practices, analysis, forecasting, and format development,

EXPERIENCE

2019 – Present | CDI Engineering
Senior Cost Estimator
Responsible for generating Total Installed Costs (TIC) estimates for various projects. Prepare detailed reports for project management teams and work closely with project managers to determine material and labor requirements on undefined areas of project.

2019 | Worley
Senior Cost Estimator
Developed and updated cost estimates by documenting relevant information into jobs in internal database. Collected data and information from vendors, sub-contractors and teammates to determine exact costs for all aspects of each project. Analyzed project mandatories, scope and available resources to devise timelines and communicate with client on deliverable deadlines. Worked with managers to develop service improvement initiatives.

2001 – 2019 | Kelly Services / Dow Chemical
Cost Estimator
Developed project cost estimates for various plant locations for Dow Chemical Corporation. Performed tracking and forecasting of project costs.

1983 – 2001 | Union Carbide Corporation
Cost Estimator
Developed project cost estimates for Union Carbide plants in South Charleston, WV and Texas City, TX. Performed tracking and forecasting of project costs.

Small Project Engineer
Small project engineering support for Institute, West Virginia site.

EDUCATION

Master of Science Industrial Engineering | West Virginia College of Graduate Study
Bachelor of Science Mechanical Engineering Technology | West Virginia Institute of Technology
Associate of Science Drafting & Design Technology and Mechanical Engineering Technology | West Virginia Institute of Technology

CERTIFICATIONS

AACE Certified Cost Consultant

CLIENT FOCUSED
ENGINEERED VALUE
TECHNOLOGY FUELED

PAUL YOUNG
SENIOR ESTIMATOR

CDI® Engineering Solutions

SUMMARY

Mr. Young has over thirty-six years of challenging assignments in project work; managing, conception, design, construction, planning, scheduling, conceptual estimating, controls estimating, and cost control for a wide range of major capital and maintenance projects, in the petroleum refining, petrochemical, pulp and paper, and utility industries.

Senior level project control positions with several major operating and engineering companies, coordinating contractors to assure maximum performance, implementing proven effective and efficient management controls. Experience in varying projects and maintenance turnarounds ranging from $ 50K to $ 60M and conceptual estimating ranging to $1.4B.

Well versed in the use of latest computer project control tools, such as Primavera, MS Office, Lotus 1-2-3, Systems Application and Products (SAP as set up for ExxonMobil), Aspen Icarus Suite, Estimation. Have created applications in Excel, Access, and Paradox to assist in estimating, planning, procuring, tracking, cost control, and presentations for instruction and reporting.

Areas of Expertise include the following:

- Project Control
- Project Planning
- Project Scheduling
- Conceptual Estimating
- Material Take-off
- Bid/Proposal Preparation
- Exceptions Letter Preparation
- Vendor Evaluation/Selection
- Time/Feasibility Studies
- Project Engineering
- Purchasing Contracts
- Sub-Contract Administration
- Forecasting, Budgeting
- Cost Variance Analysis
- Change Order Evaluation
- Controls Data Analysis/Response

EXPERIENCE

- Development of conceptual project cost estimates up to $1.4B for CDI Engineering Solutions to support feasibility studies, budget planning, capital appropriation, and maintenance modifications for Chevron U.S.A., Inc., Pascagoula, MS, the Dow Chemical Company four Louisiana sites, ExxonMobil, Geismar Vinyls Company L.P., HEXION sites in Texas and Louisiana, IMTT, Motiva Enterprises, LLC Louisiana sites and Williams Energy Canada using an array of software such as Aspen Kbase, IPM, databases and Excel.
- Head Project Coordinator - Head-up coordinating all electrical/instrumentation aspects of projects and turnarounds in Baton Rouge ExxonMobil complex for ISC (only Evergreen Contractor on site). Responsibilities included overseeing all planners and estimators on site, summarizing their work for presentation and plant-wide coordination/scheduling, also working own assigned projects.
- T/A Project Coordinator - Contracted to ExxonMobil Chemicals Project Turnaround Group for coordinating electrical/instrumentation aspect of major turnarounds, in access of $ 5M. Responsibilities included administrating turnover of facilities to owner, and contractor staff training of project control practices and procedures.

- Project Engineer - Contracted to Central Mechanical Department at ExxonMobil Chemicals as Project Engineer in charge of varying small projects, managing projects from inception, through funding, planning, engineering, procuring, scheduling, stewarding contract installation, tracking, cost engineering, and close out; projects from $50K to $20M. Responsibilities include regular status reporting to the facilities owners.
- Project Coordinator - ISC Project Coordinator on varying industrial projects, from new plant construction, to additions and modifications of operating units, E/I portion from $ 1M to $ 20M (overall projects, $10M to $ 90M). Responsibilities included developing computer estimating, tracking, cost control tools for company wide use.
- Senior E/I coordinator on ExxonMobil's Switch Condenser Project ($60M) that garnered ABC Constructors '00 National First Place "Excellence in Construction" Eagle Award for E/I Projects over $ 2M. Normal duties included design review, constructability, estimating (also material take-off and bid proposals), planning, budgeting, scheduling, tracking, forecasting, change order coordination, corresponding with client, regular status reporting to client, coordination with other crafts, administering sub-contracts.
- Maintenance Instrument/Analyzer Technician - Contracted to Exxon Plastic's Plant as instrument and analyzer technician responsible for total plant maintenance.
- Instrument Supervisor - Supervisor over project construction, reworked Exxon's Plasticizer Unit.
- E/I Superintendent - Superintendent of E/I Installation and Start-up of Exxon Research and Development Fluid Bed Project.
- Instrument Technician/Journeyman Electrician - MMR, Baton Rouge, LA
- Journeyman Electrician/Journeyman Instrument Fitter – MRO, Baton Rouge, LA

EDUCATION

U.C.L.A., Los Angeles, CA
Graduate Work, 1 1/2 years

Cornell University, Ithaca, NY
Bachelor of Science

PROFESSIONAL TRAINING

- Instrumentation (Rosemount, Honeywell, Drexelbrooke, Foxboro, Micro Motion, K-Tron)
- Programmable Logic Controllers (Triconex, Modicon, Texas Instruments, Reliance, GE)
- Control Systems (Foxboro, Honeywell DCS (2000 & 3000), Modicon)
- Software programs (Aspen Icarus Engineering Suite, Word Perfect, Lotus, Paradox, Harvard Graphics, Excel, Access, Word, Estimation, and Primavera P3)
- One year ISC in-house course in Project Coordination with yearly refreshment courses
- The Dale Carnegie Course

GREGORY P. LAURENT
ESTIMATOR

CDI® Engineering Solutions

SUMMARY

E/I Designer and Project Manager with a 30-year record of success overseeing all phases of construction, engineering and design, and business development of projects for government and private-sector clients. Experience includes managing crews of up to 50 in electrical, process controls, boiler and furnace controls, heat recovery, greenhouse initiatives and a variety of other construction projects. Backed by strong credentials and a proven history of on-time, on-budget and high-quality project completions.

EXPERIENCE

2015 – Present | CDI Engineering
Project Controls/Estimating
Responsible for generating Total Installed Costs (TIC) estimates for various petrochemical projects. Estimations are compiled using Aspen Technology Inc. software, Aspen Capital Cost Estimator (ACCE). Prepare detailed reports for project management teams and work closely with project managers to determine material and labor requirements on undefined areas of project.

2013 – 2015 | ISC Engineering, LLC
E/I Designer
Responsible for all aspects of instrument and electrical design. Duties include developing P&ID's, specification and procurement of instruments, developing instrument control documents, including loops sheets, location drawings, installation details, wiring diagrams, junction box and panel layouts. Other duties include computer automated drafting (AutoCAD 2010), coordinating drawing package assembly, construction and start-up support.

2012 – 2013 | Applied Control Concepts, LLC
Project Manager/Engineer
Responsible for the design, management, and implementation of gas compression systems, boiler control systems, and emission reduction projects. Control engineering for projects including programming, HMI, and instrumentation. Development of new business opportunities and customers in the South Louisiana area.

2004 – 2012 | CPL Systems, Inc.
Project Manager/Director of Field Operations
Responsible for the Project Management and Construction of projects, development and coordination of installation schedules, coordination of contractor's responsibilities, and assistance with start-up and commissioning of control systems. Electrical and control engineering for projects including programming, HMI, power, and instrumentation. Development of innovative solutions for heat recovery and combustion efficiency.

1996 – 2004 | Warren Electric Company
Account Manager/Technical Resource
Responsible for managing large industrial accounts such as Dow, BASF, Cargill, Pennzoil, Exxon, and Conoco. Assisted companies in creating equipment specifications for unique applications including motor control centers and medium voltage equipment. Trained and assisted engineers on the use of new equipment such as programmable controllers and variable frequency drives.

PROJECT HIGHLIGHTS

- Design of 15kV infrastructure improvement project in local chemical plant.
- $2.5M, 5000 scfm LFGTE compression site in Memphis including the conversion of three boilers.
- $1.7M, 2700 scfm LFGTE compression site and boiler conversion in South Carolina.
- $2.1M LFGTE project in South Texas utilizing 7500 scfm of LFG and control modifications to a 300 KPPH boiler.
- Development, design, and implementation of automated piping movement and welding line at local casing company including all programming and HMI development.

EDUCATION

Louisiana State University Continuing Education
Public Speaking (Baton Rouge, LA), 2015

Louisiana State University Continuing Education
Business Communication (Baton Rouge, LA), 2015

I.B.E.W. Local 995 School (Baton Rouge, LA)
Electrician, 1980-1984

Louisiana State University (Baton Rouge, LA)
Electrical Engineering, 1976-1980

DAN BEYER
QUALITY MANAGER

CDI® Engineering Solutions

SUMMARY

Over 22 years of experience with emphasis on process improvement, lean management, and quality. Has held numerous positions of increasing responsibilities with CDI Engineering Solutions, making contributions across each business unit. An effective thought leader, problem solver, and business partner, Dan has a collaborative but decisive personal style and strong work ethic. With black belt certifications in lean management, have lead significant process improvements to grow the company.

EXPERIENCE

Director of Quality | CDI Engineering Solutions

- Led Lean Management initiative throughout the company.
- Improved Quality Management System.
- Developed Cost of Quality metrics which have shown reduction of rework by %50 YOY since 2018.

Process Improvement Manager | CDI Engineering Solutions

- Developed the team to combine and standardize process & tools for the L.R. Kimball (Infrastructure), Oil & Gas, and Chemical business units of CDI.
- Led the Quality Management process & tool improvement group.
- Created marketing collateral around EC&I's Quality Management System & HSSEQ presentation/brochure.
- Initial quality audits for EC&I; worked with Internal Audit to lean out process.
- Led/created initial Lessons Learned process & application; and initial Corrective & Preventative Actions for EC&I.
- Led the development of the current Quality Manual; discipline checklists; and squad checks.
- Led the Learning Management System.
- Led the Business Development, Project Controls and Project Accounting process improvement groups; Supported Project Management process improvement group.
- Created quality process around process governance for EC&I.
- Project Manager of consolidation of GETS CRM's.
- Administrator/Analyst: Vision Planning, Vision CRM, Vision Procurement.

Process Manager | CDI Engineering Solutions

- Led GETS Sales Enablement proposal team.
- Led L.R. Kimball's Marketing efforts; collateral, website development, analysis, & e-commerce.

Project Manager & Marketing/Sales Manager | CDI Engineering Solutions

- Led and administrated Skills Database (Halogen) and Resource Clearinghouse.
- Led L.R. Kimball's marketing department & supported sales team.
- Led all CRM efforts & administrated.

Project Manager/Applications Analyst | Sheetz

- Started this position directly after college as a product developer/analyst and transitioned into a project manager role.
- Led highest profile project on Sheetz customer appreciation card (My Sheetz Card). Completed This was completed ahead of schedule & received a bonus on a job well done
- Led process improvement across accounting & petroleum purchasing
- Manager of Sheetz reporting team.
- Petroleum purchasing analyst.

EDUCATION

Master of Business Administration, Indiana University of Pennsylvania, 2003
Bachelor's Degree Business Management Information Systems, Indiana University of Pennsylvania, 1999

CERTIFIATIONS

Lean Management Black Belt: (Management & Strategy Institute)
Lean Management Green Belt: (Management & Strategy Institute)
Quality Courses (American Society for Quality)
Implementing a Quality Management System
Quality Management for Business Excellence
CII Research Project (RT 340 Corporate Best Practices for Successful Productivity Improvement Programs)

WALTER F. MALEC, PE
PROJECT MANAGER /
PROJECT CONTROLS SPECIALIST

CDI® Engineering Solutions

SUMMARY

- Profit-oriented & schedule-conscious engineer with strong technical, quality, operational, leadership & management experience who produces value-added results.
- Successfully directed the activities of project teams, engineering disciplines, startup and test services, quality systems, project management, and operating units. Managed local and remote site personnel simultaneously.
- Team player that enjoys challenging situations; works well under pressure; flexibility in assignments, and new approaches to business process improvements.
- Strong personal and business work ethic. Excellent adaptive and transferable skills.
- Military training that translates directly to value for the employer. Multiple citations for superior performance of duty.
- PC literate in business software (e.g., Word, Excel, & PowerPoint), some technical software (e.g., TANK), and project management software (MS Project & Primavera).
- Teaching experience at the college level (engineering and physics).

EXPERIENCE

Central Michigan University, Mt. Pleasant, MI
Fixed-term Lecturer in Mechanical Engineering

Saginaw Valley State University, University Center, MI
Adjunct Instructor in Physics

Kelly Technical Services, Midland, MI
Project Engineer for chemical plant retrofits and upgrades

CDI Corp., Midland, MI
Project Manager (EPC projects)
Site Project Team Leader (Project Controls & Project Scheduling)
Project Engineer for selected plant retrofits and upgrades

RWC, Inc., Bay City, MI
Vice President of Continual Improvement
- ISO Management Representative
- Lead Internal Quality System Auditor

Vice President of Project Management
Vice President of Engineering
Management responsibility for Spare Parts subsidiary
Mechanical Assembly, Machine Shop, & Fabrication Shop Supervisor

North American Energy Services Co., Bellevue, WA
Director of Operations and Technical Services (Engineering & Operations)
President, North American Contract Employee Services subsidiary

Lockheed Shipbuilding Co., Seattle, WA
Director of Technical Operations (Engineering & Integrated Logistics Support)
Director of Quality Assurance, Test & Trials

Ebasco Services, Inc., New York, NY
Project Engineer
Site Supervising Project Engineer
Supervising Mechanical-Nuclear Engineer
Principal Mechanical-Nuclear Engineer

US Coast Guard (active duty)
Supervising Marine Engineering Inspector
Chief Engineer, USCGC SPENCER (WHEC-36) Steamship
Asst. Engineer Officer, USCGC MELLON (WHEC-717) Diesel/Gas Turbine Ship

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA
Master of Science (Nuclear Engineering)

NYU/Polytechnic Institute, Brooklyn, NY
Professional Degree of **ENGINEER** (Nuclear Engineering)

City University, Bellevue, WA
Marketing (MBA-level graduate course)

U.S. Coast Guard Academy, New London, CT
Bachelor of Science (Engineering, with honors)

SIGNIFICANT ACCOMPLISHMENTS

- Successful long-term and short-term strategic planning.
- Performed training of manufacturing personnel in short-term project planning and follow-up to achieve committed assembly start and completion dates.
- Leadership of diverse engineering and project teams to successfully achieve common goals. Excellent rapport at all levels with customers, professional personnel, and skilled trades. Able to effectively deal with issues from entire conceptual scope to detailed task completion.

- Successful Project Management assignments, including establishing a new department, staffing and training Project Managers, developing and implementing a new (common) scheduling and status reporting process to meeting customer and changing management needs. Resulted in higher customer satisfaction, increased company profitability, and closer conformance to requirements.
- Successfully established and executed projects controls for several mega-projects in large plant expansions. Subsequently, scaled-down those same programs to accommodate smaller scale projects in a cost-effective manner.
- As a part of Executive Management of a $40 Million special machinery company, achieved complete financial recovery by instituting cost control measures, reducing unnecessary overhead, controlled business expansion, and close financial management.
- Established the company Quality Management System and led the company into ISO-9001 registration. Documented the business process as an integral part of the procedures. Trained all internal auditors and functioned as the ISO Management Representative and the Lead Internal Quality Auditor. Coordinated the ISO-14001 Environmental Management System preparation.
- Designated as the company continual improvement and change agent.
- Systems thinking and personal mastery approach to new challenges, that results in shared vision and mental models, and team learning.
- Professional experience base that ranges from conceptualization through design, construction, startup, operations, and maintenance of machinery and technology projects.
- Continuous pursuit of personal excellence and learning opportunities, thereby maintaining value to the company and its customers.
- As one of 2 members of the company team, negotiated a renewal contract with the United Steelworkers local that was projected to be valued at ~$1.5 Million in total savings over the life of the 3-year contract (and avoided a strike in the process of achieving that goal).
- Served on Board of Directors of Saginaw Valley Manufacturers Association.
- Limited conversational ability in Spanish.
- Assisted in ABET course accreditation preparation in Engineering and Technology Departments at Central Michigan University.

PROFESSIONAL LICENSES

Registered Professional Engineer: West Virginia, New York, Texas, Florida

PROFESSIONAL TRAINING

- Received USAEC Special Fellowship in Nuclear Science & Engineering
- Fixed-Term Engineering Dept. Lecturer – Central Michigan University, Mt. Pleasant, MI
  - Thermodynamics I, Heat Transfer, and Thermal Fluids Laboratory.
- Adjunct Physics instructor – Saginaw Valley State University, Saginaw, MI
  - Received 2011 Mary H. Anderson Adjunct Instructor-of-the-Year Award
- Engineering Duty Officer, Captain, US Naval Reserve (Retired)/ USCG Reserve
  - Commanding Officer (5 tours)
  - Executive Officer (5 tours)
  - Project Officer (2 tours)
- Served on Board of Directors, Saginaw Valley Manufacturers Association
- Served on US Navy Detroit Recruiting District Assistance Council

SHERRY ROBBINS
PROJECT CONTROLS LEAD

CDI® Engineering Solutions

SUMMARY

Experienced project controls leader with exceptional customer service and client relations skills. Teaching background and degree provides skills to oversee project controls team and training as needed. Excellent relationships with coworkers provides efficiency in controlling project budget and schedule. Experience with maintaining Engineering Status Reports and Progress Measurement Books.

EXPERIENCE

2007 – Present | CDI Engineering Solutions
Project Controls Leader
Oversees project controls for engineering projects. Responsible for project planning, cost control, monitoring schedule, and quality review. Oversees project controls personnel.

Project Controls Team Member
Performed project controls duties on various engineering projects, including keeping Engineering Status Reports and Progress Measurement Books. Provided updates to discipline and project managers on the project.

Billing Analyst for the Shared Services Center
Handled the invoicing for 30+ different clients according to contract with CDI

2001 – 2007 | Dare County Schools
Teacher
Title One reading enrichment teacher as well as a middle school science teacher.

1985 – 1999 | McGee & Sons Plumbing Co
Office Manager, Payroll, HR
Ran all aspects of the office including putting together proposals, estimating cost, and scheduling appts.

EDUCATION

Bachelor of Science in Education, 1999
Elizabeth City State University, NC

V. LOU DENT-SMITH
PROJECT CONTROLS/
DOCUMENT CONTROL SPECIALIST

CDI® Engineering Solutions

SUMMARY

Over 30 years of administrative/secretarial experience in a corporate engineering environment, demonstrating proficient skills in secretarial expertise, office administration, payroll, accounts payable/receivable document control and health and safety coordination. Eleven years' teaching experience. Qualifications also include correspondence and interaction with all levels of internal and external management, personnel, and customers. Strong organizational and multi-tasking skills resulting in a proven ability to meet deadlines and produce high quality results. Offer excellent communication and human resource skills, computer proficiency and an understanding of organizational strategies to help meet corporate objectives.

EXPERIENCE

2012 – Present | CDI Engineering
Project Controls/Document Control Specialist

- Safety Responsibilities
  - Client safety training scheduling & maintenance of training records.
  - Plant access forms & background verifications for Engineering & Site Services.
  - Maintenance of Job Safety Analysis (JSAs) & Safety Observation Reports (SORs).
  - Fire retardant clothing (FRC) coordination.
- Document Control – Responsible for managing company documents while also ensuring their accuracy, quality & integrity.
  - Client transmittals/Drawing Packages to the clients.
  - Drawing records.
  - Manage & maintain controlled company documents.
  - Oversee documents through the entire lifecycle (inception to archive).
  - Log document requests & retrieve documents as needed for employees & clients.
- Proposal Support
- Site Services Admin/Invoicing/Payroll Support

2011 – 2012 | GEO-RHEA, INC
Executive Assistant, Operations & Payroll Administrator

- Biweekly payroll for employees and billing including receipt and reviewing timesheets, validating codes and resolving discrepancies.
- Develop and maintain all confidential employee files and customer contract files.
- PO coordination/management.
- New Hire processing and orientation.
- Proposal preparation.
- Expense report and invoice processing.
- Back office administrative tasks such as preparing, monitoring, and submitting invoices for executive review and submission to CPA as determined.
- Prepare appropriate documentation for executive review and signature.

- Coordinate general office equipment, scheduling of maintenance, repairs, and trouble-shooting.
- Assist in preparation for trade shows, conferences and other events.
- Frequently act as first point of contact with clients, vendors, and others.
- Make decisions concerning area of responsibilities and actions to be taken.
- Monitor executive calendars, schedule meetings/appointments for same.

2010 | Digital Management INC
Administrative Assistant & Operations Administrator
Weekly payroll input for field employees and billing. Holiday and vacation tracking for all employees. Develop and maintain all confidential employee files and customer contract files. PO coordination/management for field employees. New Hire processing and orientation including security and background screening. Proposal preparation. Expense report and invoice processing.

2009 | MERCURY Z
Administrative Assistant, Operations & Payroll Administrator
Weekly payroll input for field employees and billing. Holiday and vacation tracking for all employees. Develop and maintain all customer contract files. PO coordination/management for field employees. Recordkeeping – Weekly and monthly reports to management. Proposal preparation. Expense report and invoice processing.

2007 – 2009 | Butler Resources
Administrative Assistant & Payroll Administrator
Weekly payroll input for field employees and billing. Holiday and vacation tracking for all employees. Develop and maintain all confidential employee files and customer contract files. PO coordination/management for field employees. New Hire processing and orientation including security and background screening. Travel arrangements for employees and executives. Activity documentation and employee maintenance in Bullhorn (Butler staffing database). Maintain OSHA Log.

1989 – 2007 | CDI Engineering
Billing Analyst, Staffing Administrator, Administrative Assistant, Safety Coordinator and Project Aide Group Leader

Billing Analyst
- Member of a special billing team processing aged and current invoices to Dow Chemical.
  - Research and provide historical billing data to expedite payment of aged invoices.
  - Maintained database of current and historical data of all DOW invoices.
- Weekly, biweekly and monthly billing for various clients (DOW, Pharma, Great Plains accounts, etc.)

Staffing Administrator
- Weekly payroll for field employees and billing ensuring quality output to the Shared Services Center.
- Maintain all confidential employee files and customer contract files.

- PO coordination/management for field employees.
- Regular site visits for employee contact.
- Handling employee and client concerns (layoffs, PO updating, terminations)
- New Hire processing and orientation including security and background screening.
- Ongoing administrative supervision of staffing employees, performance management, training, benefit questions, pay changes and expense report processing.
- Activity documentation and employee maintenance in RAPID (CDI staffing database).
- General office administration issues that relate to staffing (publication of office notices, safety meetings, etc.).

Administrative Assistant to Engineering Managers and Vice Presidents

- Supervisor of the administration personnel, focusing on performance, standardize practices, and work coordination.
- Attend leadership functions, meetings and coordination inside and outside of CDI.
- Prepare business development, qualifications and operations information for presentations and proposals.
- Prepare operations reports, executive memos, letters, meeting minutes, etc. Maintain confidentiality of information.
- Travel arrangements for employees and executives.
- Work as liaison with DOW security and facility coordinators for Building 2000.
- Organize and maintain key operation files, documents, contracts, etc.
- Independent decision making with limited direction from VP of Operations.
- Maintain leadership role in safety coordination for the operation. Provide guidance to the leadership team on safety matters. Work with CDI counterparts in the reporting of safety data. Work with DOW and other client's in the coordination, record requirements and training or their safety requirements.
- Manage the data input into the operations report on a monthly basis (or as needed).
- Work as liaison with CDI corporate office in operations administrative matters, information requests, coordination, etc.

Safety Coordinator

- Maintenance of OSHA and client-required records including OSHA Log and incident reports.
- Ensure site training in safety and health-related topics to employees in accordance with CDI, OSHA and client requirements.
- Coordinate safety efforts of CDI Engineering Group personnel at client facilities to ensure compliance with company, OSHA and client requirements.
- Maintain and distribute personal protective equipment (PPE) to employees as needed.
- Coordinate random drug screening and maintain division drug testing database to ensure compliance with client requirements and provide semiannual and annual random drug screening reports.
- Safety orientation of new hires.

Project Aide Group Leader

- Provide direct project aide services for project managers, control systems and electrical engineers and supervision of the project aide group.
- Administrative responsibility for support services including personnel, building maintenance, janitorial services, housekeeping, offices/office furniture, etc.
- Determine the priority of the work that is to be done by the support staff, and allocate the resources needed to ensure that the work is completed when required.
- Ensure that the support staff is properly trained and has the resources needed to perform their work. Promote teamwork and the Quality process.
- Served on the CDI Safety Steering Committee, Quality As A Business Strategy (QBS) Steering Committee, Professional Development Steering Committee and In-House New Hire Training Procedures Committee.

1987 – 1989 | SecrePhone, LTD
Assistant Manager
Performed general management duties that included quality control, payroll, word processing transcription, medical transcription, Social Security Disability Hearings and Personal Denial Notices. Supervisory duties included word processing training of all personnel, continuous maintenance of computers and troubleshooting.

1975 – 1986 | Putnam County Board of Education
Teacher
Responsible for classroom, on-the road driving and Driving Range instruction for secondary students including physically handicapped, as well as Adult Driver Education. Also county evaluation, purchase and installation of equipment for physically disabled students enrolled in Driver Education.

1985 – 1986 | State of West Virginia
Consultant
Visually Impaired Driving Project. Evaluated legally blind student drivers on a 40-mile course after their completion of Driver Education Courses at the WV State Rehabilitation Center.

EDUCATION

Master of Science Safety, 1977
Marshall University

Bachelor of Science - Education (Comprehensive fields of Health, Physical Education & Safety K-12), 1974
West Virginia State College

HONORS AND ACCOMPLISHMENTS

Certified Defensive Driving Instructor
Co-author - *Teaching Driver Education to the Handicapped.*
Co-author - *Workbook for the Handicapped Student.*
Member of National Association of Executive Secretaries & Administrative Assistants

SAMANTHA BULLOCK
PROCUREMENT MANAGER

CDI® Engineering Solutions

SUMMARY

Results-oriented procurement professional with five years at the managerial level and a total of eight years in the oil and gas industry. Experienced in procuring engineered equipment and implementing corporate sourcing strategies. Negotiated multi-million-dollar orders for equipment services. Background in providing excellent service for large corporations that encounter detailed and ever fluctuating purchasing needs. Innovative, customer oriented, and able to handle multiple priorities and deadlines. Focused on efficiency and creating a positive impact on business goals and objectives.

EXPERIENCE

2015 – Present | CDI Engineering Solutions
Project Procurement Manager
Projects: PCS Nitrogen (350 mil TIC), Huntsman, Shell Deer Park, Braskem, Natgasoline

- Manage/compile and release Request for Quotation (RFQ).
- Manage/examine RFQ to determine that correct specifications, quantities, authorizations, terms and support documentation are included.
- Manage/analyze vendor quotes to identify those meeting all criteria, and subsequently negotiates, or assists with negotiation of, final terms and conditions.
- Manage/issue purchase orders/contracts.
- Develop Project Procurement Plan and Project Procurement Procedures.
- Develop Project Bidders List.
- Developed an onboarding policy for suppliers and subcontractors which included an implementation of a supplier portal.
- Assist in the implementation of document and purchasing management systems.
- Demonstrate an advanced understanding of project operations, engineering, and material management.
- Develop and implement innovations in coordinating project needs and schedules to improve timeliness, accuracy, and completeness and reduce costs.
- Manage and coordinate subcontractor sources and negotiate subcontracts for project installations.
- Managed and coordinated legal correspondence between suppliers and subcontractors.
- Supervise lower-level project purchasing staff (purchasing, expediting, document control and vendor document control).
- Coordinate third party inspections for clients.
- Develop and implement service agreements; Cost spend reports for small capital projects in SAP; Man-hour budgets for projects; Progress milestones for projects; Engineering Services Estimates (ESE) for potential projects.
- Managed project budgets set for the department.

- Manage or troubleshoot the more difficult problems associated with project material management.
- Able to accurately describe scope and estimate cost (time required) for personal work.
- Interfaced with client to ensure customer satisfaction.

2013 – 2015 | CDI Engineering Solutions
Procurement Lead
Projects: Solvay Dawn Project, Total Hydro DE aromatization Project, Kinder-Morgan, BASF, Huntsman, Shell

- Issued weekly Procurement Status reports detailing the statuses of material requisitions, purchase orders, expediting, and vendor data.
- Assisted project management with qualification of vendors and assembled Approved Equipment list. (AMEL).
- Prioritize material requisition list based on engineering requirements, lead time, and required on site dates.
- Review and analyze vendor data, technical specifications, authorizations, terms and support documentation received from engineering and pursue necessary measures in creating RFQ/RFI/RFP for vendors.
- Commercially evaluated vendor quotations based on lead time, cost, and quality.
- Negotiate price and lead time with suppliers to create cost savings and achieve financial/growth goals.
- Prepared and issued award recommendations to clients.
- Create and issue Purchase Orders and contracts to winning suppliers.
- Ensure client requirements, technical/commercial specifications, and company policies are implemented.
- Alleviate difficult issues within project material management.
- Lead purchasing agent for small capital projects.
- Prepared estimate cost and scope for potential projects.
- Help develop and implement standard templates and guidelines for procurement procedures.
- Effectively communicate progress of project to managerial team.
- Develop inspection plan based on individual project needs.
- Lead and facilitate service agreement contracts between suppliers and legal.
- Established open communication and a good rapport between clients and suppliers.
- Achieved high team morale and retention through effective communication, prompt resolution and a proactive work environment.
- Routinely collaborate and assist Material Manager with projects and initiatives to improve processes.

2012 – 2013 | URS
Lead Expediting Specialist

Projects: ConocoPhillips Alaska Engineering, Procurement, and Construction Services Program for multiple pipeline maintenance, improvement, and facility upgrade projects on the North Slope exceeding $30MM.

- Expedited activities or purchase items at various vendors to meet the project's schedule.
- Tracked orders and updated reports.
- Recorded and maintain milestones.
- Coordinated with planning and schedule, field material coordinators and construction to establish priorities, sequences and required delivery dates and instructs suppliers accordingly.
- Created and implemented a new format for preparing, issuing and presenting tracking reports for documenting supplier schedules, progress, forecasts, actions required, and all contracts with supplier and sub-supplier.
- Reduced time and email traffic to suppliers by combining multiple work orders and questions in a user-friendly format.
- Improved visibility on eight different projects for upper management by using Microsoft products which provided an easier and more accurate style of reporting.
- Monitor performance of tasks and workload on a group of expediters to make sure procedures were being carried out in to the highest degree of standards.
- Identify and resolve problems that may cause delay of delivery of goods to the point of use.
- Maintain a professional relationship with supplier and client that motivates compliance, promotes improved performance, and avoid compromising responsibility.
- Created and implemented guidelines for expediting material and documents.

2010 – 2012 | QC Data
Outside Plant Engineer, QC Data – Monroe, LA

- Completed detail field surveys used to develop Outside Plant Construction drawings for the placement of aerial and buried copper and fiber cables.
- Issued quality Outside Plant Construction drawings for pole replacements and the placement of buried and aerial cables.
- Responsible for identifying roadblocks on drawings and developing corrective action to help ensure customer commitments are met.
- Used computer aided drafted software (BST-CAD) to prepare Outside Plant Construction Authorizations.
- Prepared and submitted Highway Right of Way permits for approval.

EDUCATION

Southern University A&M, Baton Rouge, LA
Bachelor of Science, Civil Engineering, 2010

PROFESSIONAL LICENSES

In Progress - CSCP – Certified Supply Chain Professional
In Progress - Lean Professional Certification

CDI® Engineering Solutions

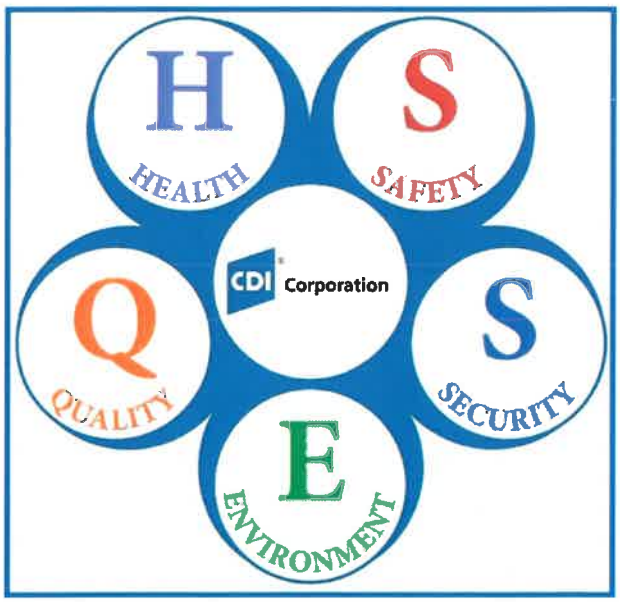
Appendix B *Health • Safety• Security • Environment • Quality*

Our Policy

CDI places the utmost importance on the health and safety of our employees and our clients, preserving the environment, and providing services and deliverables of the highest quality. For this reason, CDI incorporates our Health, Safety, Security, Environmental, and Quality (HSSEQ) principles throughout all facets of our organization. CDI's HSSEQ program is evergreen; we ensure a constant focus on its components to maintain the program's viability and relevance to our employees and our clients. We are dedicated to training our employees on the principles of our HSSEQ program such that we are wholly and individually accountable for achieving excellence through our Health, Safety, Security, Environmental, and Quality program.

Our Goals

- Zero incidences and zero non-conformities
- Preservation of the environment
- Continuous and sustainable improvement



Quality Results, Safely Delivered

Our Commitment

- Integrate HSSE and Quality principles into all of CDI's processes via CDiOS
- Communicate the principles and train our employees on an established cadence
- Maintain an evergreen HSSEQ program with annual reviews of all processes
- Verify and measure compliance and performance
- Capture and implement lessons learned
- Ensure compliance with all applicable regulatory requirements

Our Resolve

- Differentiate ourselves through our safety and operational excellence
- Satisfy our clients by meeting or exceeding their requirements and expectations

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

CDI® Engineering Solutions

Quality Management System

CDI's Quality Management System (QMS) is the set of policies, processes and procedures implemented to ensure our services meet or exceed our clients' expectations and adhere to our Quality Policy.

Quality Manual: Defines the scope of the QMS and governance around service quality delivery. Describes the sequence, application, and interaction of the QMS processes.

Checking: Formal checking processes ensuring that all deliverables meet client requirements and CDI standards.

Auditing: Ensures that projects and all CDI organizations adhere to the QMS through sample checking of projects, process adherence, and deliverables.

Document Control: Collects, maintains, and distributes all documents necessary to define configuration throughout the project. Ensures changes are controlled and released efficiently.

Corrective and Preventive Action: Addresses the identification of existing and potential nonconformities, their root causes, evaluation and subsequent implementation of associated actions needed to eliminate those causes.

Lessons Learned: Captures positive and negative experiences along with client feedback that can be utilized to benefit future projects and ensure continuous improvement.

Metrics: Measurement of service quality utilizing our quality metrics work processes, which include KPI's.

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

CDI® Engineering Solutions

Appendix C *Forms*

Use and disclosure of the information contained in this document are subject to the restrictions described in the Proprietary Statement on the cover page.

Purchasing Divison
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
02 — Architect/Engr

Proc Folder: 765618

Doc Description: Preliminary Engineering Study-Nitrile Glove Manufacturing

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2020-08-05	2020-08-24 13:30:00	CEOI 0603 ADJ2100000005	1

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Name, Address and Telephone Number:

CDI Engineering Solutions, LLC
500 Corporate Landing, 2nd Floor
Charleston, WV 25311
304-746-3583

FOR INFORMATION CONTACT THE BUYER

Tara Lyle
(304) 558-2544
tara.l.lyle@wv.gov

Signature X [signature] **FEIN #** 83-2548871 **DATE** 8/24/20

All offers subject to all terms and conditions contained in this solicitation