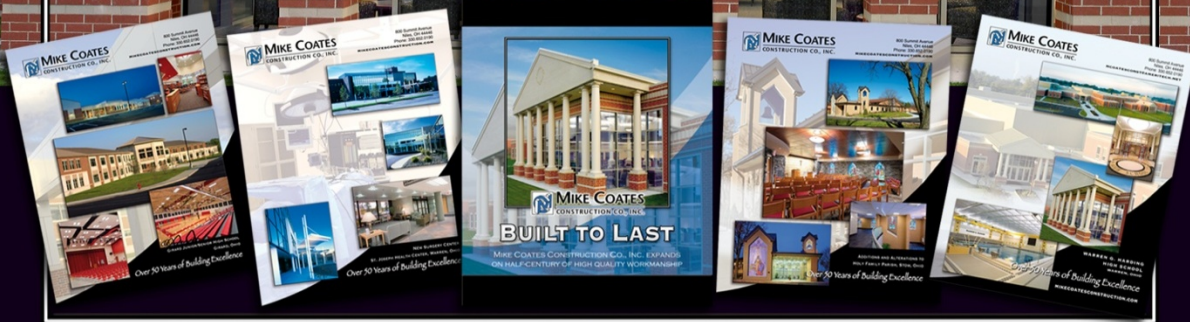




# MIKE COATES

## CONSTRUCTION CO., INC.

*Over 50 Years of Building Excellence*



**MikeCoatesConstruction.com • NILES: 330.652.0190**

DESIGN-BUILD PROPOSAL FOR CITY HALL PARKING STRUCTURE

CITY OF MEDINA, OHIO



**MIKE COATES**

CONSTRUCTION CO., INC.

**BUILT TO LAST**

*Celebrating 50 Years of Building Excellence*



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- A. Team Organization**
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- D. Safety Plan**

### **2) Schedule (20 Points)**

- A. Architectural and Engineering Design Schedule and Ability to Meet Schedule**
- B. Construction Schedule and Ability to Meet Schedule**
- C. Length and Reasonableness of Design and Construction Schedules**
- D. Ability to Complete Projects in a Satisfactory and Timely Manner**
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- A. Technical Criteria**
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- C. Exterior Quality of Appearance**
- D. Design Features Provided Beyond Those Required in the RFP**

### **4) Added Value (10 Points)**

- A. Narrative Why This Design Should Selected Over Others**
- B. Features Above and Beyond Those Required by the RFP**

# **1 – TEAMWORK AND MANAGEMENT PLAN** (maximum 20 points)

## **1.A - TEAM ORGANIZATION**

### **1.A.1 Provide a team organization chart.**

A team organizational chart is attached. **See Attachment 1A at the end of this Section 1.**

### **1.A.2 Provide resumes for the following key individuals.**

Resumes for the following key individuals are attached. **See Attachment 1B at the end of this Section 1.**

- |                               |                             |
|-------------------------------|-----------------------------|
| • Principal In Charge         | Michael J. Coates, Jr.      |
| • Project Manager             | Jay Kester                  |
| • Lead Estimator              | Steve Balent                |
| • Superintendent              | Adam Bundy                  |
| • Design Project Manager      | Matthew J. Jobin, RA        |
| • Project Architect           | Richard W. Kinnell, AIA     |
| • Project Structural Engineer | Terry Elliott, PE, SE       |
| • Project Civil Engineer      | Christopher Bednar, PE      |
| • Project Mechanical Engineer | Sarah K. Terborg, PE, LEED  |
| • Project Electrical Engineer | AP Craig Christie, PE, RCDD |
| • Project Parking Consultant  | Richard W. Kinnell, AIA     |

### **1.A.3 Provide proof that individuals responsible for the design may seal drawings in the State of Ohio.**

Ohio seals for each architect and engineer involved in this project are attached. **See Attachment 1C at the end of this Section 1.**

### **1.A.4 Provide a narrative explaining team make-up, leadership, primary point of contact, and how the team will function over the life of the project.**

The primary point of contact between the City of Medina (the “Owner”) and Mike Coates Construction Co., Inc. (“Coates”) will be Mike Coates, Jr., Coates’ principal in charge, and John J. Kester, the project manager for Coates. There are three phases to the



project, namely design, pre-construction and construction. Construction is divided into off-site activities and on-site activities. With respect to design, architectural and structural engineering will be performed by Rich and Associates. BSHM Architects, Inc. was hired by Coates to review the City's historical guidelines and to make suggestions, and Karpinski Engineering will be responsible for all civil and MEP engineering. Please see the organizational chart, Attachment 1A, at the end of this Section 1 for lines of communication. The design team will be involved with the project throughout its completion. In the construction phase, the design team will make periodic visits to the project to conduct QA/QC, and will also be involved with the project through RFI's, changes in the work, etc.

**1.A.5 Demonstrate responsibility and lines of communication between preconstruction, construction, and design activities.**

The lines of communication between preconstruction, construction and design activities are indicated in the organizational chart, Attachment 1A, at the end of this Section 1. The lines of communication are strict, the goal being to funnel information to a central point and then to disperse the information from that point to each team member, so that all team members are working with the same documents. Each phase, namely design, pre-construction, construction off-site and construction on-site has a manager. Team members within each phase can discuss matters amongst themselves. However, information is only to be transmitted from that group to the other team members via Coates' project manager. The project manager will create an electronic cloud file, and will place documents (i.e., new drawings, RFI's, approved submittals, etc.) into that file. All team members will be notified when documents have been added to the project file. With respect to QA/QC, please note that both Tom Leskosky, our full-time QA/QC professional, and the A/E team members can directly communicate with both the project manager (John J. Kester) and the principal in charge (Mike Coates, Jr.). In this way, if they have any concerns, they are permitted to go directly to top management.

**1.A.6 Provide a list of projects performed by the design-build team. Specify method of construction procurement and entity holding prime designer's contract. For each project provide photographs or rendering, budget, completion date and owner.**

Coates and Rich and Associates first worked together back in 1989 on a three deck, 138,000 SF parking structure for St. Elizabeth Hospital Medical Center in Youngstown, Ohio. The structure also included offices and work rooms on the ground level, which necessitated extensive waterproofing. The cost of the project in 1989 was approximately \$4,500,000.00. Over the years, as design-build opportunities for parking structures presented themselves, Coates and Rich and Associates collaborated on the design-build. About four ago, Coates and Rich and Associates collaborated on a four story,

**\$10,000,000. parking structure for Erie Insurance in Erie, PA. The team finished second, although the Owner adopted our design.**

**As indicated in the RFQ, Rich and Associates has completed more than seventy-two parking decks in the last five years, seven of those being design-build. Coates has worked on two parking structures in the last five years, including a 283 car, cast-in-place, post-tensioned deck for the Erie County Convention Center in Erie, PA.**



**New parking Structure/ St. Elizabeth Hospital Medical Center/ Youngstown, Ohio**

## **1.B – MANAGEMENT PLAN**

### **1.B.1 Clearly describe material and equipment staging, security, parking, equipment access, lighting, site aesthetics, dust and mud control, and plans to eliminate conflict with existing operations.**

Site logistic plans which show staging, trailer park, security fencing, access gates, wheel wash, etc. are attached for each of the three phases of the project. Please see **Attachment 1G at the end of this Section 1.** In Phase 1, the entire construction site will be fenced with access from a new entrance cut at North Elmwood Avenue. Construction operations will not leave the fenced-in area. In this phase, the new parking structure will be constructed. The Owner will lose approximately one-half of its existing parking in front of City Hall, and will enter/exit the remaining parking area from the existing entrance/exit at North Elmwood Avenue. The remaining parking area will be re-worked to allow for handicap parking. In Phase 2, the parking area accessed from West Liberty Street will be closed for approximately 30 days to allow for construction of the new drive into the new parking structure. In phase 3, the new parking structure will be opened, the new drive and parking area accessed from West Liberty Street will be opened, and the existing parking area in front of City Hall will be closed and re-worked.

### **1.B.2 Sample and/or proposed documents/forms to be used on this project as they relate to services identified in RFP and/or those services your organization proposes to provide. Provide a proposed index for the project record keeping system.**

**See Attachment 1D at the end of this Section 1.**

### **1.B.3. Identify any major areas of potential problems/challenges and possible solutions or proposed plan of action to mitigate them.**

Coates does not anticipate any labor or material shortage issues. Coates will self-perform a large part of the work with its own employees, including sitework, cast-in-place concrete work and related formwork, and items of carpentry: This will allow for the ready availability of labor. Regarding materials, there are several local redi-mix companies which have shown interest in the project.

The main problem/challenge of the project will be to minimize disruption to the Owner's operations. Coates will try to keep open as many parking spaces as possible in the immediate area of City Hall. However, during construction of the new parking structure, it will be necessary to take about one-half of the parking immediately in front of City Hall, and it is the half with the handicap parking spaces. Coates will re-work the remainder of the lot to accommodate the required number of handicap parking spaces.



**1.B.4 Proposed phasing of design and construction to maximize market resources enhancing early occupancy, controlled disruption to existing operations, improving construction quality and improving costs.**

Design will be phased so that construction can begin as soon as possible after the NTP. We would anticipate a site and foundation drawing package, which will allow work to begin once permitted, followed by drawings for the balance of the work. As noted in 1.B.1, Coates is dividing construction into three phases. The goal behind the construction phasing is to minimize disruption to the Owner's existing operations by keeping open as many parking spaces as possible in the area immediately adjacent to City Hall. With respect to enhancing early occupancy, the Spring start and resulting weather will be the factors which mostly drive completion. Also, the existing schedule will provide the best opportunity to improve quality and costs, as the work will be performed outside of the winter months, and so quality will be higher and costs will be lower as heat and other additives will not be needed.

**1.B.5. Explain methods for controlling costs and maintaining the schedule, avoiding/minimizing material, labor and equipment shorages, labor problems, and other potential delays.**

**A. Cost Control:** On this project, Coates is submitting a lump sum fixed bid amount. As such, the risk of cost control is entirely on Coates and the Owner will not be impacted by any cost overruns.

However, for cost control, Coates uses construction financial and project management software from Computer Guidance Corporation. Many of Engineering News Record's Top 50 contractors use this software: It has also been selected as the construction management solution of choice by members of The Associated General Contractors of America. The voluminous cost information which it generates may be arranged in any format. For self-performed work, the software will separately capture hours (regular, overtime and other) and related payroll costs, and material receipts and related information. For subcontracted work, the software will capture all invoices posted against a subcontract. The project cost reports will allow a reviewer to compare actual cost to estimated cost, and to provide a basis for projecting the balance to complete for that item of work. Again, the reports can be set-up to display information in a preferred format. Coates is currently considering adding the ability to scan documents into the system.

To further control cost, all subcontractors will be pre-qualified. Coates uses software systems which allow it, on line, to communicate with potential subcontractors, pre-qualify those subcontractors, and make plans, specifications, addenda and other like documents available to those subcontractors. Pre-qualifying subcontractors and giving all pre-qualified subcontractors timely access to complete bid documents is an important factor in cost control.



**Actual / Committed Report**[illegible]

The Actual/Committed Report is one of several cost reports that are provided. It is widely used by contractors who have large material purchases or subcontracts (committed costs).

3

## Project Control

### Job Cost Report

```

DATE 4/15/96          PCF000 Phase / Cont. Code SEQUENCE          33 001 Computer Delandee Corporation
                                JOB COST SUMMARY
                                REPORT DATE 4/15/96
                                TIME 8:42
                                PAGE 1

A42892  GAINANCE COURT
        OFFICE NUM          COMC. DATE 4/15/93          LANCER          4/15/96          JPMCC COSTS          4/15/96          CONTRACT TYPE: COST PAID
                                GENERAL LEISER          6/02/90          C. S. LAC          6/30/96

--- Proj Mgr ---          --- Estimator ---          --- Supt ---          --- Exec Mgr ---          --- Purch Agent ---          --- Safety Eng ---
1 JAMIEE HARRY          2 ERLAR BRANSON          3 SORIS JANITION          4 BRADON BRADGIAN
2 MELIA JENSEN          6 AUSTE CHANDLER          1 BRADON BRADGIAN

-----
Cont.  DESCRIPTION/          BUDGET          COST          COMMITMENTS          PROCURED ORDERS          PARTICIPATED COST          PROJECTED          SAVINGS/          PRNTY
Code  CY TRAILER CONTRACTOR          ORIGINING          CHANGE          CURRENT          TOTAL          OUT OF          IN          OUT OF          SCORE          ESTIMATED          FINAL COST          LOSS          TYPE          IMPACT
                                BRIDGE          ORDER          BUDGET          SCORE          SCORE          SCORE          SCORE          SCORE          SCORE          SCORE          SCORE          TYPE          IMPACT

001 FORMATIONS          1,805,436          78,331          1,686,139          817,471          0          35,400          15,151          1          997,918          1,678,629          210,718          CHG          310,493
002 PURCHASMENTS          1,317,151          543,320          1,405,151          1,379,057          2,510          0          0          0          569          249,911          1,648,539          311,993          LE          321,993
003 JOB MANAGEMENT          47,410          15,500          57,910          0          0          0          0          0          0          49,400          11,200          NE          11,200
Sub Job TOTAL          3,160,417          636,741          3,055,159          1,995,499          2,510          35,400          15,151          501          1,317,097          3,273,747          531,411          310,493

ADJUST. PRICE REDUCT OF SCORE - TRADE          15,151          0
COMPLETED OUT OF SCORE          0          2,500
SUBTOTAL          549,142          0
ADJUST. ALLOCANCES          0          0
ADJUSTED BUDGET SAVINGS/LOSS          549,142

```

The Job Cost Report reflects what effect any change estimates have on your profit for a particular project. It identifies "In Scope" and "Out of Scope" changes, with or without a notice to proceed, and their profit impact. *This report can be run in summary or in detail formats.*

**B. Schedule Maintenance:** Scheduling will be performed by outside consultant Christopher Paetsch of Paetsch Scheduling & Planning, LLC, using the industry standard Primavera P6 Project Management scheduling software. Chris has more than 20 years of experience in the construction industry, and has developed and managed schedules for projects varying in scope and size during all phases of construction, i.e., from pre-planning to project close-out. The CPM schedule will be updated at least monthly, and will focus on key design and construction activities and milestones.

**i. Master Project Schedule.** The Master Project Schedule will be used as a basis for status evaluation and critical path analysis. After discussing with the Owner its time line for project delivery, Coates, from experience, will make the Owner aware of other considerations and the cost and impact to the schedule associated therewith, e.g., weather, long lead items. Once all parties are in agreement about the overall project delivery date, an integrated project schedule will be developed.

**ii. Integrated Project Schedule.** The Integrated project Schedule will display the relationships among design, procurement and construction. This schedule is developed by incorporating the latest design phasing, construction activities, quantities, production rates and procurement data. During development of the integrated project schedule, Coates will resolve major interface problems and make decisions on which activities must be accelerated or revised to an alternative path to eliminate conflicts. The primary objective in developing the integrated schedule is to set out the work plan for all independent functions and to identify the critical path or paths for the project. Throughout the duration of the project, this schedule, once approved, is the control schedule from which all further detailed scheduling follows.

**C. Material, Labor and Equipment Shortages:** Coates does not anticipate any labor or material shortage issues. Coates will self-perform a large part of the work with its own employees, including sitework, cast-in-place concrete work and related formwork, and items of carpentry: This will allow for the ready availability of labor. Regarding materials, there are several local redi-mix companies which have shown interest in the project.

**1.B.6. Discuss potential requirements for and benefits of off hour work, including cost trade-offs.**

As this time, Coates does not anticipate any need for off hour work, other than to complete pours started that day. The time allowed to complete the project appears to be adequate. However, this may change if too many days are lost to inclement Spring weather.

**1.B.7 Provide a plan for use of the site during construction dealing with issues of access, material storage, trailers, mud, snow removal, overall aesthetics, temporary lighting, security, parking, refuse, etc.**

Site logistic plans which show staging, trailer park, security fencing, access gates, wheel wash, etc. are attached for each of the three phases of the project. See **Attachment 1G at the end of this Section 1.** In Phase 1, the entire construction site will be fenced with access from a new entrance cut at North Elmwood Avenue. Construction operations will not leave the fenced-in area. In this phase, the new parking structure will be constructed. The Owner will lose approximately one-half of its existing parking in front of City Hall, and will enter/exit that parking area from the existing entrance/exit at North Elmwood Avenue. The remaining parking area will be re-worked to allow for handicap parking. In Phase 2, the parking area accessed from West Liberty Street will be closed for approximately 30 days to allow for construction of the new drive into the new parking structure. In phase 3, the new parking structure will be opened, the new drive and parking area accessed from West Liberty Street will be opened, and the existing parking area in front of City Hall will be closed and re-worked.

**1.B.8 Address aspects of dispute resolution, contractor claims, interpretation of construction documents, weather, delays, change orders/proposals, RFI, submittals and other factors which your organization deems important as part of this evaluation process.**

Coates has developed strict policies for protecting a project against potential liens. In some cases, Coates requires payment and performance bonds from its subcontractors. In other instances, when NOF's are filed, Coates requires conditional waivers and pays open amounts with joint checks. Coates also requires monthly lien waivers from all unions which may be working on a project. These matters are handled by Michael J. Coates, Jr., JD, MBA, an Ohio licensed attorney with more than thirty years of experience with Ohio construction law, and in particular, public contracting.

Because this project is design-build, the only change orders which could arise would be Owner initiated changes, and changes necessitated by unforeseen site conditions, i.e., site conditions being other than as represented in the RFP. The likelihood of either is low. Similarly, because the project is design-build, the likelihood of disputes between the Design-Builder and Owner are also low. Disputes between the Design-Builder and any subcontractor are addressed in each subcontract: Subcontractors are required to provide timely notice of any event which may give rise to a dispute, or else the right is waived. Early notice of a dispute provides Coates with the opportunity to minimize its impact. Also, disputes are minimized by pre-qualifying subcontractors, having good specifications and drawings, providing a reasonable bid period, and performing scope reviews, all of which will be performed hereunder by Coates.

Regarding weather delays, Coates has included a number of days in the schedule for no work due to inclement weather. The number of days included by month is based upon historical weather data. If we exceed those days and it impacts the schedule, then the choices would be to request a time extension or to work overtime and/or Saturdays.

RFI's generated during construction will be passed to the design team for review. If requested, the Owner's representative will be copied on these items.

**1.B.9 Provide a list of any items which will be required to be provided by the City of Medina.**

Items required to be provided by the City include the following:

- Notice to Proceed
- Notice of Furnishing
- Certificate of Insurance for Builder's Risk Insurance
- Approval by Historic Preservation Board
- Building Permit



## **1.C – QUALITY ASSURANCE PLAN**

**1.C.1 Discuss quality control procedures (Contractor's Inspection and Approval Process) to be applied to this project and list most recent project where these procedures were used. Describe the quality control organization reflecting authority and responsibility of key personnel. Include a plan for commissioning the building, training of operators, maintenance manuals.**

**Design Stage.** For construction projects, quality assurance/quality control means making sure things are done in accordance with the drawings, specifications and permit requirements. QA/QC is at the core of our construction management services, and for this Project, **Coates will take extraordinary measures to assure QA/QC.**

In the design stage, drawings will be periodically reviewed for constructability by our in-house staff. Each individual who will be working on the project has more than 20 years of construction experience. Coates and its consultants will apply field knowledge gained through experience on similar projects to pick-up and resolve problems in the following areas:

Adequacy of lead times for the procurement of materials and equipment.

Issues with logic of work sequence

Logistic issues, e.g., access, laydown, parking, and other site restrictions.

Issues with the depiction of actual job site conditions by the contract documents

Conformance to state and local codes.

Lack of pertinent information in the specifications and drawings.

**Estimating and Scheduling.** Coates is consistently involved in the hard bid market, and so lives and dies by its estimates. Coates is a true builder, not just a broker, and Coates has expended significant resources for sophisticated software programs which allow it to take-off each job, piece by piece, and to price the same based upon current labor rates and production values which we know our crews can achieve. We have a program to take off site work, a program which takes off masonry and models the same in 3-D, on-screen take-off capabilities for concrete, and a new, top drawer program for metal studs, drywall, acoustical and other finishes. Companies 10 times our size, because they do not self-perform this work, do not have the estimating capabilities which Coates can bring to the table. In addition, our estimating talent is unmatched. All estimators who will be working on this Project have 20 or more years of experience in construction; and, each has estimated work on projects similar to this Project.

**Scheduling.** Schedules will be prepared by Chris Paetsch of Paetsch Scheduling & Planning LLC with input from our entire project team. Each and every schedule will then be reviewed by our core team. Each schedule will likely be revised numerous times before it is finally released. The scheduling process will be a fully transparent, collaborative, and communicative process. Schedules are developed with the full input and buy-in of the project participants. Although our proposal schedules are an exception, due to space, throughout the project every schedule will be distributed with multiple layouts (by Category, by Area, by Responsibility, Longest Path, Look Ahead, etc.) which can be consulted as necessary depending on preference to fully convey the plan and progress. Each layout will include columns as necessary to reflect all available schedule information, including durations, percentage complete, early dates, late dates, total and free float, calendar, and manpower. The distributions will also include a back-up, a narrative describing any changes to the schedule and impacts, and a logic report or revision report as appropriate.

**Construction Stage.** QA/QC in the construction stage begins with the prequalification of our subcontractors. Through a sound prequalification protocol, Coates will identify subcontractors which provide quality workmanship.

During the construction phase, Coates' daily QA/QC management procedures will be directed by our site superintendent and Tom Leskosky, our dedicated QA/QC and safety professional. Activities in this process include the following:

- **Pre-Construction Conferences.** Coates will conduct pre-installation meetings with our employees and subcontractors targeted at specific building components prior to their installation. The purpose of these meetings will be to review quality expectations and compliance with the contract documents.
- **Contractor Submittals.** Coates will maintain a complete log of all required submittals. Upon receipt of each submittal, Coates will review the information for compliance with the contract specifications prior to forwarding the submission to the A/E.
- **Subcontractor Coordination.** Coates will conduct weekly progress and coordination meetings with all subcontractors to secure a smooth flow of work throughout the course of the Project.
- **On-Site Inspections.** To have good quality control in construction projects is to perform good inspections. Coates' on-site superintendent will have the daily and primary responsibility of inspecting work in place for compliance with the contract provisions. In addition, Tom Leskosky, Coates' dedicated QA/QC professional will visit the site at the start of new activities and periodically thereafter to ensure compliance by our employees and subcontractors with the approved specifications and drawings. Coates will receive, review and distribute all testing reports. In the event that any test fails to comply with the contract requirements, Coates will provide prompt notice to the responsible subcontractor in the form of a non-conforming work notice. Coates will maintain a log of all non-conforming work notices with documentation confirming satisfactory resolution.

**A sample quality control program, most recently used in conjunction with an \$8 Million indoor firing range at the Youngstown Air Reserve for the US Army Corps of Engineers is attached. See Attachment 1E at the end of this Section 1.**

#### **1.B.9 Provide information regarding testing, inspections, etc.**

Coates will hire PSI (Professional Service Industries Inc.) to perform testing at the site. All major components of the work, including soils, concrete, post-tensioning, etc. will be tested. Test results will be forwarded to Coates, and if so requested, to the Owner's representative.

## **1.D – SAFETY PLAN**



### **1.D.1. Discuss the issue of job safety for both workmen and occupants, identify personnel responsibilities. Provide a safety plan from a similar project or for this project.**

Coates is committed to providing a safe workplace. In 2009, Coates was the winner of the Joan Kovach Safety Leadership Award from the Mahoning Valley Safety Council, Ohio's largest safety council. The award recognizes leadership in safety related matters. To support our safety efforts, Coates has developed a comprehensive safety program, the major components of which are the following:

- **Safety Education.** Coates contracts with Safety Resources Company of Ohio, Inc. to provide assistance with OSHA compliance and safety training. This relationship has reduced injury rates and lowered worker's compensation costs. Mr. Speck of Safety Resources will be developing a site specific safety plan for this project.
- **Audits.** As part of their daily record keeping, our superintendents are required to review and record safety related matters. The chief safety officer on the Project will be the superintendent. Coates supplements his or her efforts by contracting with Safety Resources to perform an **OSHA like inspection at each of its projects every 2 weeks. The inspections by Safety Resources are meant to catch problems early and to provide a forum where our superintendent and subcontractors can discuss upcoming safety related matters.**
- **Customized Written Policies and Procedures.** Our written safety manuals are job-site specific and assist us in complying with all federal and state safety guidelines. A typical Safety manual includes the following:

|                          |
|--------------------------|
| Aerial Lift              |
| Compresses Gas Cylinders |
| Confined Spaces          |



|   |
|---|
| Contractor Safety Guidelines                      |
| Cranes and Sling safety                           |
| Disciplinary Policy                               |
| Electrical safety                                 |
| Fall Protection                                   |
| Fire Protection and Fire Extinguishers            |
| First Aid Facilities & Supplies, First Responders |
| GFCI  |
| Grinding Wheel Safety                             |
| Hazard Communication                              |
| Hearing Conservation                              |
| Housekeeping                                      |
| Ladder Safety                                     |
| Lockout/Tagout                                    |
| New Employee Orientation                          |
| Personal Protective Equipment                     |
| Powered Industrial Trucks                         |
| Rough Terrain Vehicle                             |
| Scaffolding                                       |
| Silica  |
| Steel erection                                    |
| Tool safety                                       |
| Trenching and Excavating                          |
| Vehicle Safety                                    |
| Welding and Hot Work                              |

▪ Other:

- The superintendent and all foremen will have OSHA 30 training, and all other employees will have at least 10 hours of OSHA training;
- All employees are subject to the DFWP and related testing for pre-hire, post-accident, random and reasonable suspicion;
- We pre-qualify all subcontractors;
- Every construction worker must complete a safety orientation session before entering the job site;
- We require reporting of every near miss and investigate the same; and
- Our outside safety consultant conducts unannounced bi-weekly OSHA like jobsite inspections.

**A safety plan, most recently used in conjunction with an \$8 Million indoor firing range at the Youngstown Air Reserve for the US Army Corps of Engineers is attached . See Attachment 1F at the end of this Section 1.**

With regard to occupants, the construction site will be entirely fenced off from the Owner's existing operations. All construction operations will take place within the fenced-in area. The fenced-in area will have its own entry/exit cut into North Elmwood Avenue. The Owner's existing entrances/exits will not be used by Coates.

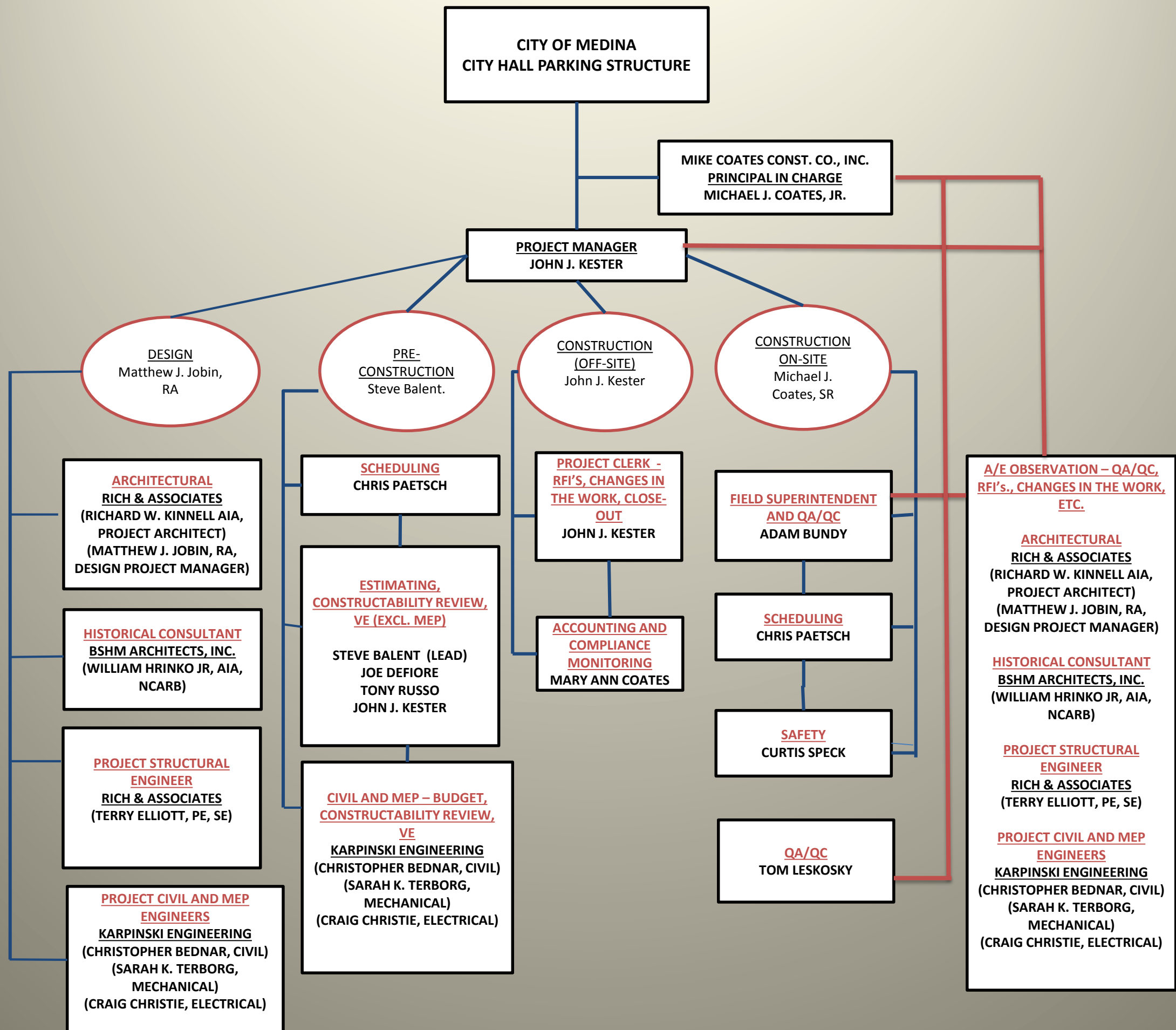
**1.D.2 Address issues which may be of concern such as security, health, safety, deliverables, visitors and cleanliness.**

Coates' on-site office trailer will be located just inside of the access gates to the construction site. All visitors will be required to register at the office. Individuals having a valid reason to be on-site will be required to have appropriate safety gear, including hard hat, eye protection, etc., before being allowed on-site. Visitors will be escorted on-site by a Coates employee.

The access gates will be opened during the working day and locked at night. Coates may add security cameras if needed.

The project will be generally cleaned daily, with a more thorough cleaning occurring each Friday.

**ATTACHMENT 1A**  
**TEAM ORGANIZATIONAL CHART**





**ATTACHMENT 1B**  
**RESUMES**

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person. Limit one page per person)

|   |  |  |  |                |                            |
|---|--|--|--|----------------|----------------------------|
| 16. NAME<br><b>Michael J. Coates, Jr.</b>   | 17. ROLE IN THIS CONTRACT<br>Project Management Lead;<br>Preconstruction Manager;<br>Const. Phase Off-Site Manager | 18. YEARS EXPERIENCE<br><table style="width: 100%;"> <tr> <td style="width: 50%;">a. TOTAL<br/>33</td> <td style="width: 50%;">b. WITH CURRENT FIRM<br/>33</td> </tr> </table> |  | a. TOTAL<br>33 | b. WITH CURRENT FIRM<br>33 |
| a. TOTAL<br>33  | b. WITH CURRENT FIRM<br>33   |  |  |                |                            |
| 19. FIRM NAME AND LOCATION (City and State)<br>Mike Coates Construction Co., Inc., Niles, Ohio  | 20. EDUCATION (Degree and Specialization)<br>Case Western Reserve University,<br>BA, JD, MBA. Construction Law     | 21. CURRENT OH PROF REGISTRATIONS (List Discipline)<br>Attorney At Law   |  |                |                            |
| 22. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)<br>Training includes construction law, mediation, claims avoidance. |  |  |  |                |                            |

### 23. RELEVANT PROJECTS (Up to a maximum of 5 samples)

|   | (1) Title, Client & Location<br>(City, State)   | (2) Building Type, Size &<br>Project Cost / Performance                 | (3) Type of Construction,<br>Delivery Model & Services | (4) Date Completed |              | (5) Example<br>Project Key No. |
|---|---|---|--|--------------------|--------------|--------------------------------|
|   |   |   |  | Design             | Construction |                                |
| a.  | <b>Ashtabula Elementary School Campus Project; OFCC and Ashtabula Area LSD; Ashtabula, Ohio</b> | 5 Elementary Schools<br>300,000 sf new<br>\$40,000,000.                 | New Construction<br>Split Trades<br>General Trades     | 2010               | 2012         |                                |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Oversaw all aspects of the project; and, in particular, administrative functions including bidding, contract negotiation, subcontractor qualification, subcontract negotiation, documents for payments to subcontractors, EEO and EDGE compliance, Compliance with all law and regulations. |   |   |  |                    |              |                                |
| b.  | <b>Warren G. Harding High School; OFCC and Warren City School District; Warren, Ohio</b>        | New 9-12 High School<br>318,700sf<br>\$44,000,000.                      | New Construction<br>Split Trades<br>General Trades     | 2006               | 2008         |                                |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Oversaw all aspects of the project; and, in particular, administrative functions including bidding, contract negotiation, subcontractor qualification, subcontract negotiation, documents for payments to subcontractors, EEO and EDGE compliance, Compliance with all law and regulations. |   |   |  |                    |              |                                |
| c.  | <b>EMTA Transit Operations Facility Phase II; Erie Metropolitan Transit Authority Erie, PA</b>  | New Administration Bldg., Bus Garage, and Parking Deck<br>\$21,261,000. | New Construction<br>Multiple Primes<br>General Trades  |                    | 2019         |                                |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Oversaw all aspects of the project; and, in particular, administrative functions including bidding, contract negotiation, subcontractor qualification, subcontract negotiation, documents for payments to subcontractors, EEO and EDGE compliance, Compliance with all law and regulations. |   |   |  |                    |              |                                |
| d.  | <b>Buchtel Perkins CLC; OFCC and Akron CSD; Akron, Ohio</b>                                     | New 7-12 School Building<br>215,000.<br>\$45,000,000.                   | New Construction<br>Split Trades<br>General Trades     | 2010               | 2012         |                                |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Oversaw all aspects of the project; and, in particular, administrative functions including bidding, contract negotiation, subcontractor qualification, subcontract negotiation, documents for payments to subcontractors, EEO and EDGE compliance, Compliance with all law and regulations. |   |   |  |                    |              |                                |
| e.  | <b>Northcoast Behavioral Healthcare Campus, Phase 2; OFCC and ODMH; Northfield, Ohio</b>        | New Buildings and Renovation of Existing<br>200,000sf<br>\$60,000,000.  | New Construction<br>Split Trades<br>General Trades     | 2013               | 2016         |                                |

(6) Role (Benefit / Value to Client)

☒ Check if project performed with current firm

Oversaw all aspects of the project; and, in particular, administrative functions including bidding, contract negotiation, subcontractor qualification, subcontract negotiation, documents for payments to subcontractors, EEO and EDGE compliance, Compliance with all law and regulations.

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person. Limit one page per person)

|  |  |  |  |
|--|--|--|--|
| 16. NAME<br><b>Jay Kester.</b>   | 17. ROLE IN THIS CONTRACT<br><b>Specialty Estimator, Concrete;<br/>Project Manager</b> | 18. YEARS EXPERIENCE<br>a. TOTAL <b>35</b> b. WITH CURRENT FIRM <b>3</b> |  |
| 19. FIRM NAME AND LOCATION (City and State)<br>Mike Coates Construction Co., Inc., Niles, Ohio | 20. EDUCATION (Degree and Specialization)  | 21. CURRENT OH PROF REGISTRATIONS (List Discipline)                      |  |

22. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)  
Trade estimator specializing in concrete and sitework. Previous roles included tradesman, foreman, on-site superintendent.

### 23. RELEVANT PROJECTS (Up to a maximum of 5 samples)

|    | (1) Title, Client & Location<br>(City, State)   | (2) Building Type, Size &<br>Project Cost / Performance  | (3) Type of Construction,<br>Delivery Model & Services | (4) Date Completed |              | (5) Example<br>Project Key No. |
|----|---|--|--|--------------------|--------------|--------------------------------|
|    |   |  |  | Design             | Construction |                                |
| a. | <b>EMTA Transit Operations<br/>Facility Phase II; Erie<br/>Metropolitan Transit Authority<br/>Erie, PA</b>  | New Administration Bldg., Bus<br>Garage, and Parking Deck<br>\$21,261,000.                           | New Construction<br>Multiple Primes<br>General Trades  |                    | 2019         |                                |
|    | (6) Role (Benefit / Value to Client)<br>Chief estimator, specializing in concrete and site work, and assembly of the final bid. <span style="float: right;">X Check if project performed with current firm</span> |  |  |                    |              |                                |
| b. | <b>Superior Square Parking<br/>Garage, Cleveland, Ohio</b>  | Cast-In-Place<br>5 Stories<br>600 Cars<br>\$8,000,000.   | New Construction                                       | (4) Date Completed |              | (5) Example<br>Project Key No. |
|    |   |  |  | Design             | Construction |                                |
|    | <b>P.E.R.S. Parking Garage and<br/>Office Building, Columbus,<br/>Ohio</b>  | Cast-In-Place<br>2 Story Underground Parking<br>Garage with 5 Story Office<br>Tower<br>\$11,000,000. | New Construction                                       |                    | 2000         |                                |
|    | (6) Role (Benefit / Value to Client)<br>Chief estimator, specializing in concrete and site work, and assembly of the final bid. <span style="float: right;">X Check if project performed with current firm</span> |  |  |                    |              |                                |
| d. | <b>Superblock Office Tower and<br/>Parking Garage, Akron, Ohio</b>  | Cast-In-Place<br>4 Story<br>450 Cars<br>\$6,000,000.   | New Construction                                       | (4) Date Completed |              | (5) Example<br>Project Key No. |
|    |   |  |  | Design             | Construction |                                |
|    | <b>South Broadway Parking<br/>Garage, Akron, Ohio</b>   | Cast-In-Place<br>4 Story<br>500 Cars<br>\$7,200,000.   | New Construction                                       |                    | 1994         |                                |
|    | (6) Role (Benefit / Value to Client)<br>Specialty estimator, specializing in concrete and site work. <span style="float: right;">X Check if project performed with current firm</span>                            |  |  |                    |              |                                |

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person. Limit one page per person)

|  |  |   |                      |                                 |
|--|--|---|----------------------|---------------------------------|
| 16. NAME<br><b>Steve Balent.</b>   | 17. ROLE IN THIS CONTRACT<br>Chief Estimator   | 18. YEARS EXPERIENCE<br><table style="width: 100%;"> <tr> <td style="width: 50%;">a. TOTAL<br/>35 Years</td> <td style="width: 50%;">b. WITH CURRENT FIRM<br/>3 Years</td> </tr> </table> | a. TOTAL<br>35 Years | b. WITH CURRENT FIRM<br>3 Years |
| a. TOTAL<br>35 Years   | b. WITH CURRENT FIRM<br>3 Years  |   |                      |                                 |
| 19. FIRM NAME AND LOCATION (City and State)<br>Mike Coates Construction Co., Inc., Niles, Ohio | 20. EDUCATION (Degree and Specialization)<br>Associate in Applied Science in Drafting and Design | 21. CURRENT OH PROF REGISTRATIONS (List Discipline)   |                      |                                 |
| 22. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)    |  |   |                      |                                 |

### 23. RELEVANT PROJECTS (Up to a maximum of 5 samples)

|   |   |   |  |  |              |                                |
|---|---|---|--|--|--------------|--------------------------------|
| a.  | (1) Title, Client & Location<br>(City, State) | (2) Building Type, Size &<br>Project Cost / Performance   | (3) Type of Construction,<br>Delivery Model & Services               | (4) Date Completed                                 |              | (5) Example<br>Project Key No. |
|   |   |   |  | Design   | Construction |                                |
|   |   | <b>EMTA Transit Operations Facility Phase II; Erie Metropolitan Transit Authority Erie, PA</b>      | New Administration Bldg., Bus Garage, and Parking Deck \$21,261,000. | New Construction Multiple Primes General Trades    |              | 2019                           |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Chief estimator, responsible for assembling final bid.  |   |   |  |  |              |                                |
| b.  | (1) Title, Client & Location<br>(City, State) | (2) Building Type, Size &<br>Project Cost / Performance   | (3) Type of Construction,<br>Delivery Model & Services               | (4) Date Completed                                 |              | (5) Example<br>Project Key No. |
|   |   |   |  | Design   | Construction |                                |
|   |   | <b>US Army Indoor Firing Range; US Army Engineer District Louisville, KY</b>                        | New Indoor Firing Range \$8,063,000.                                 | New Construction Negotiated All Trades             |              | 2018                           |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Chief estimator, responsible for assembling final bid.  |   |   |  |  |              |                                |
| c.  | (1) Title, Client & Location<br>(City, State) | (2) Building Type, Size &<br>Project Cost / Performance   | (3) Type of Construction,<br>Delivery Model & Services               | (4) Date Completed                                 |              | (5) Example<br>Project Key No. |
|   |   |   |  | Design   | Construction |                                |
|   |   | <b>Penn State Trippe Hall; Penn State University; Turner Construction Erie, PA</b>                  | New Student Housing \$3,455,000.                                     | New Construction Subcontractor Interiors           |              | 2018                           |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Chief estimator and project manager, responsible for assembling final bid and project management during construction. |   |   |  |  |              |                                |
| d.  | (1) Title, Client & Location<br>(City, State) | (2) Building Type, Size &<br>Project Cost / Performance   | (3) Type of Construction,<br>Delivery Model & Services               | (4) Date Completed                                 |              | (5) Example<br>Project Key No. |
|   |   |   |  | Design   | Construction |                                |
|   |   | <b>Acmetonia Primary School, Allegheny Valley School District Pittsburgh, PA</b>                    | New School Building \$6,140,000.                                     | New Construction Multiple Primes General Trades    |              | 2018                           |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Chief estimator and project manager, responsible for assembling final bid and project management during construction. |   |   |  |  |              |                                |
| e.  | (1) Title, Client & Location<br>(City, State) | (2) Building Type, Size &<br>Project Cost / Performance   | (3) Type of Construction,<br>Delivery Model & Services               | (4) Date Completed                                 |              | (5) Example<br>Project Key No. |
|   |   |   |  | Design   | Construction |                                |
|   |   | <b>Slippery Rock University Performing Arts Center, Dept. of General Services Slippery Rock, PA</b> | New Performing Arts Center and Remodel of Gym \$13,244,000.          | Renovation and Additions Negotiated General Trades |              | 2019                           |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Chief estimator, responsible for assembling final bid.  |   |   |  |  |              |                                |



## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person. Limit one page per person)

|  |   |   |  |                       |                                   |
|--|---|---|--|-----------------------|-----------------------------------|
| 16. NAME<br><b>Adam Bundy</b>  | 17. ROLE IN THIS CONTRACT<br>Field Superintendent; QA/QC                        | 18. YEARS EXPERIENCE<br><table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-bottom: 1px solid black;">a. TOTAL<br/><b>32</b></td> <td style="width: 50%; border-bottom: 1px solid black;">b. WITH CURRENT FIRM<br/><b>22</b></td> </tr> </table> |  | a. TOTAL<br><b>32</b> | b. WITH CURRENT FIRM<br><b>22</b> |
| a. TOTAL<br><b>32</b>  | b. WITH CURRENT FIRM<br><b>22</b>   |   |  |                       |                                   |
| 19. FIRM NAME AND LOCATION (City and State)<br>Mike Coates Construction Co., Inc., Niles, Ohio | 20. EDUCATION (Degree and Specialization)<br>Carpenter's Apprenticeship Program | 21. CURRENT OH PROF REGISTRATIONS (List Discipline)   |  |                       |                                   |
| 22. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)    |   |   |  |                       |                                   |

### 23. RELEVANT PROJECTS (Up to a maximum of 5 samples)

|   |   |  |  |  |              |                                |
|---|---|--|--|--|--------------|--------------------------------|
| a.  | (1) Title, Client & Location<br>(City, State) | (2) Building Type, Size &<br>Project Cost / Performance  | (3) Type of Construction,<br>Delivery Model & Services                                     | (4) Date Completed   |              | (5) Example<br>Project Key No. |
|   |   |  |  | Design   | Construction |                                |
|   |   | <b>EMTA Transit Operations<br/>Facility Phase II; Erie<br/>Metropolitan Transit Authority<br/>Erie, PA</b> | New Administration Bldg., Bus<br>Garage, and Parking Deck<br>\$21,261,000.                 | New Construction<br>Multiple Primes<br>General Trades      | 2019         |                                |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Oversaw all field aspects of the project, including manpower, material staging, coordination of subcontractors, coordination with other prime contractors, coordination with Owner's representatives. |   |  |  |  |              |                                |
| b.  | (1) Title, Client & Location<br>(City, State) | (2) Building Type, Size &<br>Project Cost / Performance  | (3) Type of Construction,<br>Delivery Model & Services                                     | (4) Date Completed   |              | (5) Example<br>Project Key No. |
|   |   |  |  | Design   | Construction |                                |
|   |   | <b>Warren G. Harding High<br/>School;<br/>OFCC and Warren City School<br/>District;<br/>Warren, Ohio</b>   | New 9-12 High School<br>318,700sf<br>\$44,000,000.   | New Construction<br>Split Trades<br>General Trades         | 2006         | 2008                           |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Oversaw all field aspects of the project, including manpower, material staging, coordination of subcontractors, coordination with other prime contractors, coordination with Owner's representatives. |   |  |  |  |              |                                |
| c.  | (1) Title, Client & Location<br>(City, State) | (2) Building Type, Size &<br>Project Cost / Performance  | (3) Type of Construction,<br>Delivery Model & Services                                     | (4) Date Completed   |              | (5) Example<br>Project Key No. |
|   |   |  |  | Design   | Construction |                                |
|   |   | <b>Bayfront Place Parking Deck,<br/>Erie, PA</b>   | New Parking Deck<br>Cast-In-Place<br>283 Cars<br>\$3,100,000.                              | New Construction<br>Split Trades<br>General Trades         | 2016         |                                |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Oversaw all field aspects of the project, including manpower, material staging, coordination of subcontractors, coordination with other prime contractors, coordination with Owner's representatives. |   |  |  |  |              |                                |
| d.  | (1) Title, Client & Location<br>(City, State) | (2) Building Type, Size &<br>Project Cost / Performance  | (3) Type of Construction,<br>Delivery Model & Services                                     | (4) Date Completed   |              | (5) Example<br>Project Key No. |
|   |   |  |  | Design   | Construction |                                |
|   |   | <b>Renovation of Campus<br/>Buildings<br/>Community College of Beaver<br/>County;<br/>Monaca, PA</b>       | Renovation of Nine Campus<br>Buildings, Exterior & Interior<br>150,000.sf<br>\$20,000,000. | Renovation and Additions<br>Split Trades<br>General Trades | 2008         | 2010                           |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Oversaw all field aspects of the project, including manpower, material staging, coordination of subcontractors, coordination with other prime contractors, coordination with Owner's representatives. |   |  |  |  |              |                                |
| e.  | (1) Title, Client & Location<br>(City, State) | (2) Building Type, Size &<br>Project Cost / Performance  | (3) Type of Construction,<br>Delivery Model & Services                                     | (4) Date Completed   |              | (5) Example<br>Project Key No. |
|   |   |  |  | Design   | Construction |                                |
|   |   | <b>New High School;<br/>Kenston Local School District;<br/>Bainbridge Twp., PAio</b>                       | New 9-12 High School<br>200,000sf<br>\$40,000,000.   | New Construction<br>Split Trades<br>General Trades         | 2004         | 2006                           |
| (6) Role (Benefit / Value to Client) <span style="float: right;">X Check if project performed with current firm</span><br>Oversaw all field aspects of the project, including manpower, material staging, coordination of subcontractors, coordination with other prime contractors, coordination with Owner's representatives. |   |  |  |  |              |                                |

**Matthew J. Jobin, RA**

**Rich & Associates, Inc.**

Senior Associate / Project Manager

**Education:** *Bachelor of Science Architecture – Lawrence Technological University*

**Experience:** *35 years in the industry and Rich & Associates*

**Registration:** *Architecture – Ohio #9310252*

Matt's is one of Rich & Associates' most experienced project managers. He has managed the design of over \$1.75 billion in parking garages projects including many large complex mixed-use projects. As project manager, Matt takes ownership of every project he manages providing a high level of responsiveness and attention to detail. Since joining the firm in 1983, Matt has been involved in the design of more than 350 parking garages, including many large mixed-use garages.

- General Motors Design Center Garage, Warren, MI – 1,100 spaces
- General Motors Event Island Garage, Warren, MI – 3,000 spaces
- Olympia Temple West Garage, Detroit, MI – 730 cars
- East Village Garage, Des Moines, IA – 540 spaces
- Olympia Tiger Garage 2, Detroit, MI – 920 spaces
- Firelands Regional Medical Center, Sandusky, OH. – 583 cars
- Michigan State Garage, Lansing, MI – 881 spaces
- City of Rochester East Parking Platform, MI – 258 spaces
- City of Rochester West Parking Platform, MI – 297 spaces
- Detroit Medical Center CVI Parking Garage, Detroit, MI – 1,692 spaces
- Bedrock Realty the 'Z' Deck, Detroit, MI – 1,282 spaces
- Dolphin Mall Garage, Miami, FL – 1,282 spaces
- City of Traverse City Old Town Garage, MI – 522 spaces
- Washtenaw Community College Garage, Ann Arbor, MI – 473 spaces
- Detroit Opera House Garage, Detroit, MI. - 782 spaces
- Blue Cross Blue Shield Garage, Detroit, MI. – 1,800 spaces
- City of Dubuque Intermodal Transit Garage, IA – 292 spaces
- City of Coralville Intermodal Transit Garage, IA – 425 spaces
- City of Davenport River Drive Garage, IA – 455 spaces
- City of Davenport Second Street Garage, IA – 623 spaces
- City of Royal Oak 5th & Lafayette Garage, MI. – 488 spaces
- Uniland Development 250 Delaware Garage, Buffalo, NY – 538 spaces
- Main Lofts North Parking Garage, Royal Oak, MI – 375 spaces
- College for Creative Studies Argonaut Garage, Detroit, MI – 483 spaces
- Greektown Casino Parking Garage, Detroit, MI – 2,800 spaces
- Greektown Casino Valet Garage, Detroit, MI. – 900 spaces
- City of Ames / ISU Intermodal Garage, IA – 294 spaces
- Compuware Garage, Detroit, MI – 2,200 spaces
- Beaumont Hospital West Garage, Royal Oak, MI – 2,032 spaces
- City of Ann Arbor Fourth & Washington Garage, MI. – 277 spaces
- City of Northville Cady Street Garage, MI – 120 spaces

**Richard W. Kinnell, AIA****Rich & Associates, Inc.**

Principal Architect / Parking Designer

**Education:** *Bachelor of Architecture, B.S. – Architecture Lawrence Technological University*

**Experience:** *38 years in the industry and with Rich & Associates*

**Registrations:** *Architecture –*

Rick Kinnell has been involved in the design of over 500 parking decks since joining the firm in 1980. His experience includes the design of several award winning parking garages throughout the state of Michigan and across the country. He has designed parking garages ranging in size from 100 spaces to 11,500 spaces. Rick's recent experience includes the following parking projects:

- City of Royal Oak City Center Garage 11 Mile Road, MI – 581 spaces
- City of Dearborn Wagner Place Garage, MI – 373 spaces
- Macomb County Admin Center Parking Garage, Mt. Clemens, MI – 519 spaces
- City of Royal Oak 2<sup>nd</sup> Street Parking Deck, MI – 521 spaces
- Botsford Hospital Parking Garage, Farmington, MI – 471 spaces
- City of Rochester East Parking Platform, MI – 258 spaces
- City of Rochester West Parking Platform, MI – 297 spaces
- City of Grosse Pointe Kercheval Garage, MI – 243 spaces
- Beaumont Hospital Parking Garage, Grosse Pointe, MI – 405 spaces
- City of Traverse City Old Town Garage, MI – 522 spaces
- City of Billings, Empire Garage, MT – 540 spaces
- City of Jackson Francis Street Garage, MI – 578 spaces
- City of Jackson Cooper Street Garage, MI – 462 spaces
- City of Royal Oak 5th & Lafayette Garage, MI. – 488 spaces
- City of Warren City Hall Garage, MI – 710 spaces
- City of Dearborn East Garage, MI – 337 spaces
- City of Dearborn West Garage, MI- 321 spaces
- City of Ann Arbor Fourth & Washington Garage, MI. – 277 spaces
- City of Detroit Book Cadillac Garage, MI – 519 spaces
- City of Terre Haute Cherry St. Garage, IN – 626 spaces
- City of Iowa City Iowa Avenue Garage, IA – 566 spaces
- City of Sault Ste. Marie Osborn St. Garage, MI. – 402 spaces
- City of New Orleans Erato Terminal Garage, LA - 1,020 spaces
- City of Orlando Admin. Services Garage, FL. – 857 spaces
- City of Ottumwa Garage, IA – 120 spaces
- City of Orlando Courthouse Garage, FL. – 770 spaces
- City of Orlando Jefferson Street Garage, FL. – 1,045 spaces
- City of Orlando, Church Street Garage, FL. – 1,100 spaces
- Garden Theatre Garage, Detroit, MI – 296 spaces

**Terry Elliott, P.E., S.E.**

**Rich & Associates, Inc.**

Principal Engineer / Structural Engineer

**Education:** *University of S. Florida, BSCE/2001/Civil Engineering , MCE/2004/Civil Engineering*

**Experience:** *17 years in the industry 14 years with Rich & Associates*

**Registrations:** *Engineer: Ohio # 72518, Michigan, North Carolina, Iowa, Illinois and Missouri.*

Over the past fifteen years, Terry has proven himself an exceptional structural engineer of parking structures. His experience includes the engineering design of over 40 parking structure projects throughout the country. His recent experience includes the following:

- Firelands Regional Medical Center, Sandusky, OH. – 583 cars
- General Motors Design Center Garage, Warren, MI – 1,100 spaces
- General Motors Event Island Garage, Warren, MI – 3,000 spaces
- Macomb County Admin Center Parking Garage, Mt. Clemens, MI – 519 spaces
- City of Royal Oak 2nd Street Parking Deck, MI – 521 spaces
- Olympia Temple West Garage, Detroit, MI – 730 cars
- East Village Garage, Des Moines, IA – 540 spaces
- Village Municipal Garage, Grosse Pointe, MI - 243 cars
- Allegiance Health /Foote Hospital, Jackson, MI - 306 cars
- City of Rochester East Parking Platform, MI – 258 spaces
- City of Rochester West Parking Platform, MI – 297 spaces
- Olympia Tiger Garage 2, Detroit, MI – 920 spaces
- Michigan State Garage, Lansing, MI – 881 spaces
- “Z” Deck – Bedrock Real Estate Services, Detroit, MI – 1,282 cars
- City of Traverse City Parking Garage, Traverse City, MI – 522 cars
- City of Grosse Pointe Garage, MI. – 241 cars
- Washtenaw Community College Parking Garage, Ann Arbor, MI – 473 cars
- Ames Intermodal Parking Garage, Ames, IA – 294 cars
- College for Creative Studies Garage #2, Detroit, MI - 483 cars
- Cherry Street Multi Modal Transportation Facility, Terre Haute, IN. – 626 cars
- Greektown Casino Parking Garage, Detroit, MI – 2,681 cars
- Main Lofts Garage, Royal Oak, MI – 375 cars
- Merchants Row Garage, Detroit, MI – 242 cars
- Motor City Casino Garage Phase II, Detroit, MI. – 933 cars
- Detroit Opera House Garage, Detroit, MI. – 783 cars



**karpinski**  
ENGINEERING

# christopher bednar, pe

Director of Civil Engineering

As a civil engineer, Christopher Bednar is passionate about contributing to the safety and wellbeing of communities. He leads projects and design teams from conceptualization through construction completion. He focuses on municipal and site development infrastructure improvements, including roadway and utilities.

Chris's project approach blends analytical and creative thinking. He believes that teams develop great projects when they look beyond the status quo and explore a variety of solutions. He also believes that each team member has something valuable to contribute to the development of a project, and he values their diverse ideas and expertise.

## project role: lead civil engineer



### credentials

Bachelor of Civil Engineering  
Cleveland State University

Master of Business Administration  
Trinity College Dublin

### professional registrations

Ohio Professional Engineer #68297

New York Professional Engineer #100496

ODOT Pre-Qualified for Complex and  
Non-Complex Roadway Design

### firm tenure

1 Year with Karpinski Engineering

## select project experience

### Westlake High School Westlake, Ohio

New High School Site Development\*

### Norton High School Norton, Ohio

New High School Site Development\*

### Westlake Lee Burneson Middle School Westlake, Ohio

New Middle School Site Development\*

### Greater Cleveland Regional Transit Authority Westlake, Ohio

Westlake Park'n'Ride Parking Lot  
Expansion\*

### Huntington Convention Center of Cleveland Cleveland, Ohio

LEED-Gold Certified\*

### Avon Distribution Center Avon, Ohio

Warehouse / Truck Facility Site  
Development\*

### Courtyard by Marriott & Towne Place Suites

Middleburg Heights, Ohio

New Hotel Site Development\*

### Cleveland Metro Housing Authority Cleveland, Ohio

Riverview Towers Parking Lot Expansion\*  
ADA Parking Lot Improvements (10  
Properties)\*

### Whirlpool Cylde, Ohio

Spill Wrap Containment and Bulk Oil  
Unloading Containment Systems\*

### Tri -Tech Medical Center Avon, Ohio

Office Building Site Development\*

### The Great Escapes Furniture Avon, Ohio

Retail Site Development\*

*\*Indicates projects completed prior to  
employment with Karpinski Engineering*





**karpinski**  
ENGINEERING

# sarah k terborg, pe, leed ap

Senior Project Engineer, Mechanical

For Sarah Terborg, engineering is about helping people. She values design that is buildable and maintainable. She prioritizes careful listening and clear communication, and one of her goals is to help her clients make informed decisions.

Sarah manages projects and leads mechanical system design for healthcare and higher education projects. Her portfolio reflects a breadth of engineering experience: She designs HVAC, plumbing, and medical gas systems, and she has experience with both new construction and renovations.

Sarah is an advocate of using Building Information Modeling (BIM), because it facilitates a smoother construction process.

## project role: lead mechanical engineer

## select project experience

### **The Ohio State University** **Columbus, Ohio**

9th Avenue Parking Garage  
Cramblett Hall Demolition  
Newton Hall Renovation  
Pomerene Hall History of Art  
Department Renovation

### **Ohio State Highway Patrol** **Alum Creek & Lancaster, Ohio**

LEADS Data Center  
Crime Lab Addition

### **City of Marietta** **Marietta, Ohio**

Administrative Building HVAC and  
Roof Replacement

### **Belmont College** **St. Clairsville, Ohio**

Health Sciences Center  
HVAC Renovations

### **Clark State Community College** **Springfield, Ohio**

Rhodes Hall Renovation

### **Samaritan Regional Health Systems** **Ashland, Ohio**

OB Medical Office Building  
Third Floor Renovation

### **Signet Mercy Hospital** **Massillon, Ohio**

Medical Office Building

### **Nationwide Children's Hospital** **Marysville, Ohio**

Close to Home Urgent Care  
**Columbus, Ohio**  
A & T Backfill Projects

### **Orrville City School District** **Orrville, Ohio**

High School Boiler Replacement

### **Grandview Heights City Schools** **Grandview Heights, Ohio**

Multiple School Assessment



## credentials

Bachelor of Mechanical Engineering  
University of Dayton, 2001

Masters of Business Administration  
University of Arizona, 2006

LEED-Accredited Professional, 2004

ASSE 6005 Certified Medical  
Gas Designer, 2010

ASHRAE, Member

## professional registration

Ohio Professional Engineer #73899

## firm tenure

11 Years with Karpinski Engineering



**karpinski**  
ENGINEERING

## craig christie, pe, rcdd

Senior Engineer, Electrical

Craig Christie balances the technical and the human sides of the building industry. With nearly 30 years of experience, he has served as a designer, project manager, and principal. He has worked in the higher education, K-12, and healthcare markets.

As a leader, Craig's goal is to empower his team. He takes an active role on projects, bringing both vision and engineering experience. He appreciates working with people, and he values the everyday conversations that he gets to have with clients and colleagues.

Craig joined Karpinski Engineering in 2016.

### project role: lead electrical engineer

### select project experience

#### City of Westerville

##### Westerville, Ohio

- Community Center Expansion
- Community Center Chiller Replacement

#### The Ohio State University

##### Lima, Ohio

- HVAC Repair and Replacement

#### Grace College

##### Winona Lake, Indiana

- Dr. Dane A. Miller Science Complex

#### Ohio University

##### Athens, Ohio

- Cutler and McGuffey Hall Electrical Upgrades
- Stocker Center Emergency Generator
- Washington Hall Restroom Upgrade

#### Rio Grande Community College

##### Rio Grande, Ohio

- Nursing Simulation Lab Renovation

#### University of Saint Francis

##### Fort Wayne, Indiana

- Achatz Hall of Science

#### Licking Heights Local School District

##### Pataskala, Ohio

- New High School

#### Gahanna-Jefferson Public Schools

##### Gahanna, Ohio

- Fueling Station
- ADA Restroom

#### St. Paul's Episcopal Church

##### Richmond, Virginia

- Historic Renovation

#### Licking County Foundation

##### Newark, Ohio

- Louis Sullivan Building Restoration



### credentials

Bachelor of Electrical Engineering  
University of Akron, 1987

Associates in Business  
Stark Technical College, 1979

BICSI, Member

### professional registration

Ohio Professional Engineer #58826

Registered Communication Distribution  
Designer (RCDD), 2009

### firm tenure

3 Years with Karpinski Engineering

**ATTACHMENT 1C**  
**OHIO SEALS FOR ARCHITECT**  
**AND ENGINEERS**



arc.ohio.gov

**Ohio Architects Board**  
**Ohio Landscape Architects Board**

77 South High Street, 16<sup>th</sup> Floor Columbus, Ohio 43215-6108 (614) 466-2316

**State of Ohio**

**OHIO ARCHITECTS BOARD**

**CERTIFICATE OF QUALIFICATION**

Be It Known That

**MATTHEW J JOBIN**

Is hereby authorized to practice  
Architecture

In the State of Ohio

Under the provisions of Chapter 4703 of the  
Ohio Revised Code and Ohio Administrative Code.  
This registration expires 12/31/2019 unless renewed.

Certificate No. ARC.9310252



A handwritten signature in black ink that reads "Amy Kobe".

Amy M. Kobe, Hon AIA  
Executive Director



arc.ohio.gov

**Ohio Architects Board**

**Ohio Landscape Architects Board**

77 South High Street, 16<sup>th</sup> Floor Columbus, Ohio 43215-6108 (614) 466-2316

**State of Ohio**

**OHIO ARCHITECTS BOARD**

**CERTIFICATE OF QUALIFICATION**

Be It Known That

**RICHARD KINNELL**

Is hereby authorized to practice  
Architecture

In the State of Ohio

Under the provisions of Chapter 4703 of the  
Ohio Revised Code and Ohio Administrative Code.

This registration expires 12/31/2019 unless renewed.

Certificate No. ARC.0413673



A handwritten signature in black ink, reading 'Amy Kobe'.

Amy M. Kobe, Hon AIA  
Executive Director



State of Ohio  
State Board of Registration for  
Professional Engineers and Surveyors  
77 S. High Street, Suite 2472  
Columbus, Ohio 43215

Terry Neil Elliott  
2439 Westgate Ct  
Canton MO 48188

For information regarding seals visit  
the Board's Website at [peps.ohio.gov](http://peps.ohio.gov)





karpinski  
ENGINEERING

## christopher bednar, pe

Director of Civil Engineering

As a civil engineer, Christopher Bednar is passionate about contributing to the safety and wellbeing of communities. He leads projects and design teams from conceptualization through construction completion. He focuses on municipal and site development infrastructure improvements, including roadway and utilities.

Chris's project approach blends analytical and creative thinking. He believes that teams develop great projects when they look beyond the status quo and explore a variety of solutions. He also believes that each team member has something valuable to contribute to the development of a project, and he values their diverse ideas and expertise.

### project role: lead civil engineer

### select project experience

#### Westlake High School Westlake, Ohio

New High School Site Development\*

#### Norton High School Norton, Ohio

New High School Site Development\*

#### Westlake Lee Burneson Middle School Westlake, Ohio

New Middle School Site Development\*

#### Greater Cleveland Regional Transit Authority Westlake, Ohio

Westlake Park'n'Ride Parking Lot  
Expansion\*

#### Huntington Convention Center of Cleveland Cleveland, Ohio

LEED-Gold Certified\*

#### Avon Distribution Center Avon, Ohio

Warehouse / Truck Facility Site  
Development\*

#### Courtyard by Marriott & Towne Place Suites Middleburg Heights, Ohio

New Hotel Site Development\*

#### Cleveland Metro Housing Authority Cleveland, Ohio

Riverview Towers Parking Lot Expansion\*  
ADA Parking Lot Improvements (10  
Properties)\*

#### Whirlpool Cylde, Ohio

Spill Wrap Containment and Bulk Oil  
Unloading Containment Systems\*

#### Tri -Tech Medical Center Avon, Ohio

Office Building Site Development\*

#### The Great Escapes Furniture Avon, Ohio

Retail Site Development\*

*\*Indicates projects completed prior to  
employment with Karpinski Engineering*



### credentials

Bachelor of Civil Engineering  
Cleveland State University

Master of Business Administration  
Trinity College Dublin

### professional registrations

Ohio Professional Engineer #68297

New York Professional Engineer #100496

ODOT Pre-Qualified for Complex and  
Non-Complex Roadway Design

### firm tenure

1 Year with Karpinski Engineering



**karpinski**  
ENGINEERING

# sarah k terborg, pe, leed ap

Senior Project Engineer, Mechanical

For Sarah Terborg, engineering is about helping people. She values design that is buildable and maintainable. She prioritizes careful listening and clear communication, and one of her goals is to help her clients make informed decisions.

Sarah manages projects and leads mechanical system design for healthcare and higher education projects. Her portfolio reflects a breadth of engineering experience: She designs HVAC, plumbing, and medical gas systems, and she has experience with both new construction and renovations.

Sarah is an advocate of using Building Information Modeling (BIM), because it facilitates a smoother construction process.

## project role: lead mechanical engineer

## select project experience

### **The Ohio State University** **Columbus, Ohio**

9th Avenue Parking Garage  
Cramblett Hall Demolition  
Newton Hall Renovation  
Pomerene Hall History of Art  
Department Renovation

### **Ohio State Highway Patrol** **Alum Creek & Lancaster, Ohio**

LEADS Data Center  
Crime Lab Addition

### **City of Marietta** **Marietta, Ohio**

Administrative Building HVAC and  
Roof Replacement

### **Belmont College** **St. Clairsville, Ohio**

Health Sciences Center  
HVAC Renovations

### **Clark State Community College** **Springfield, Ohio**

Rhodes Hall Renovation

### **Samaritan Regional Health Systems** **Ashland, Ohio**

OB Medical Office Building  
Third Floor Renovation

### **Signet Mercy Hospital** **Massillon, Ohio**

Medical Office Building

### **Nationwide Children's Hospital** **Marysville, Ohio**

Close to Home Urgent Care  
**Columbus, Ohio**  
A & T Backfill Projects

### **Orrville City School District** **Orrville, Ohio**

High School Boiler Replacement

### **Grandview Heights City Schools** **Grandview Heights, Ohio**

Multiple School Assessment



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Bachelor of Mechanical Engineering  
University of Dayton, 2001

Masters of Business Administration  
University of Arizona, 2006

LEED-Accredited Professional, 2004

ASSE 6005 Certified Medical  
Gas Designer, 2010

ASHRAE, Member

**professional  
registration**

**Ohio Professional Engineer #73899**

## firm tenure

11 Years with Karpinski Engineering



**karpinski**  
ENGINEERING

## craig christie, pe, rcdd

Senior Engineer, Electrical

Craig Christie balances the technical and the human sides of the building industry. With nearly 30 years of experience, he has served as a designer, project manager, and principal. He has worked in the higher education, K-12, and healthcare markets.

As a leader, Craig's goal is to empower his team. He takes an active role on projects, bringing both vision and engineering experience. He appreciates working with people, and he values the everyday conversations that he gets to have with clients and colleagues.

Craig joined Karpinski Engineering in 2016.

### project role: lead electrical engineer

### select project experience

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##### Westerville, Ohio

- Community Center Expansion
- Community Center Chiller Replacement

#### The Ohio State University

##### Lima, Ohio

- HVAC Repair and Replacement

#### Grace College

##### Winona Lake, Indiana

- Dr. Dane A. Miller Science Complex

#### Ohio University

##### Athens, Ohio

- Cutler and McGuffey Hall Electrical Upgrades
- Stocker Center Emergency Generator
- Washington Hall Restroom Upgrade

#### Rio Grande Community College

##### Rio Grande, Ohio

- Nursing Simulation Lab Renovation

#### University of Saint Francis

##### Fort Wayne, Indiana

- Achatz Hall of Science

#### Licking Heights Local School District

##### Pataskala, Ohio

- New High School

#### Gahanna-Jefferson Public Schools

##### Gahanna, Ohio

- Fueling Station
- ADA Restroom

#### St. Paul's Episcopal Church

##### Richmond, Virginia

- Historic Renovation

#### Licking County Foundation

##### Newark, Ohio

- Louis Sullivan Building Restoration



### credentials

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Stark Technical College, 1979

BICSI, Member

professional  
registration

Ohio Professional Engineer #58826

Registered Communication Distribution  
Designer (RCDD), 2009

### firm tenure

3 Years with Karpinski Engineering

**ATTACHMENT 1D**  
**SAMPLE FORMS**



DAILY CQC REPORT

CONTRACTOR QUALITY CONTROL

REPORT **3** PAGES



3. Work performed today: (Indicate location and description of work performed by prime and/or subcontractors by letter in table above).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Results of control activities: (Indicate whether P - Preparatory, I - Initial, or F - Follow-up Phase. When a P or I meeting is conducted, complete attachment 1-A or 1B, respectively. When network analysis system is used, identify work by use of I-J numbers.)

[illegible]

5. Test performed as required by plans and/or specifications:

[illegible]

6. Material received:

---

---

---

---

---

---

7. Submittals Reviewed:

| (a) Submittal No. | (b) Spec/Plan Reference | (c) By Whom | (d) Action |
|-------------------|-------------------------|-------------|------------|
| _____             | _____                   | _____       | _____      |
| _____             | _____                   | _____       | _____      |
| _____             | _____                   | _____       | _____      |
| _____             | _____                   | _____       | _____      |

8. Offsite surveillance activities, including action taken:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. Job Safety: (Report violations; corrective instructions given; corrective actions taken).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10. Remarks: (Instructions received or given. Conflict(s) in Plans and/or specifications).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Contractor's Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.

\_\_\_\_\_  
Authorized QA Mgr at Site

\_\_\_\_\_  
Date

# PREPARATORY MEETING CHECKLIST

3 PAGES

|  |               |                       |  |
|--|---------------|-----------------------|--|
| <b>Preparatory Meeting Checklist (to support each DFOW)</b>    |               |                       |  |
| <b>Project Name: INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO</b> |               |                       | <b>Project Number: W912QR-16-C-003</b> |
| <b>DFOW:</b>   |               |                       |  |
| <b>Date:</b>   | <b>Sheet:</b> | <b>Spec. Section:</b> | <b>Page: <u>1</u> of <u>3</u></b>      |

|                          |   |                 |                           |
|--------------------------|---|-----------------|---------------------------|
| <b>PERSONNEL PRESENT</b> | USACE Representative Notified? YES <input type="checkbox"/> NO <input type="checkbox"/> |                 |                           |
|                          | <b>Name</b>   | <b>Position</b> | <b>Company/Government</b> |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          | Review submittals and/or submittal register. Have all submittals been approved? YES     |                 |                           |
|                          | If no, what items have not been submitted?  |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          | Are all materials on hand? YES <input type="checkbox"/> NO <input type="checkbox"/>     |                 |                           |
|                          | If no, what items are missing?  |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          | Check approved submittals against delivered material. (This should be done as material  |                 |                           |
|                          | Comments:   |                 |                           |
| <b>MATERIAL STORAGE</b>  | Are materials stored properly? YES <input type="checkbox"/> NO <input type="checkbox"/> |                 |                           |
|                          | If no, what action is taken?  |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |



|  |        |                |  |
|--|--------|----------------|--|
| <b>Preparatory Meeting Checklist (to support each DFOW)</b>    |        |                |  |
| Project Name: <b>INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO</b> |        |                | Project Number: <b>W912QR-16-C-003</b> |
| DFOW:  |        |                |  |
| Date:  | Sheet: | Spec. Section: | Page: <u>2</u> of <u>3</u>             |

|                                       |   |
|---------------------------------------|---|
| <b>SPECIFICATIONS</b>                 | <i>Review each paragraph of specifications.</i>                     |
|                                       |   |
|                                       |   |
|                                       | <i>Discuss procedure for accomplishing the work.</i>                |
|                                       |   |
|                                       |   |
|                                       | <i>Clarify any differences.</i>                                     |
|                                       |   |
|                                       |   |
| <b>PRELIMINARY WORK &amp; PERMITS</b> | <i>Ensure preliminary work is correct and permits area on file.</i> |
|                                       | <i>If no, what action is taken?</i>                                 |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       |   |
| <b>TESTING</b>                        | <i>Identify test to be performed, frequency and by whom.</i>        |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       | <i>When required?</i>   |
|                                       |   |
|                                       |   |
|                                       | <i>Review testing plan.</i>   |
|                                       |   |
|                                       |   |
|                                       | <i>Have test facilities been approved?</i>                          |
|                                       |   |
|                                       |   |

|   |        |                |   |
|---|--------|----------------|---|
| <b>Preparatory Meeting Checklist (to support each DFOV)</b>       |        |                |   |
| Project Name:<br><b>INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO</b> |        |                | Project Number:<br><b>W912QR-16-C-003</b> |
| <b>DFOV</b>   |        |                |   |
| Date:   | Sheet: | Spec. Section: | Page: <u>3</u> of <u>3</u>                |

|   |   |  |
|---|---|--|
| <b>SAFETY</b>                             | Site Safety Plan Approved? YES <input type="checkbox"/> NO <input type="checkbox"/> |  |
|   | Review Site Safety Plan:  |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
| <b>MEETING COMMENTS</b>                   | Comments during meeting:  |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
| <b>WORKSHEETS</b>                         | Worksheets:   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
| <b>OTHER ITEMS OR REMARKS</b>             | Other items or remarks:   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
| Reported By:                              |   |  |
| (Contractor Quality Control Manager CQCM) | X _____   |  |

# INITIAL INSPECTION CHECKLIST

1 PAGE

## Initial Inspection Checklist

**Project Name:** *INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO*

**Project Number:**

*W912QR-16-C-003*

**DFOW:**

**Date:**

**Sheet:**

**Spec. Section:**

**Page:** \_\_\_\_ of \_\_\_\_

| No. | Item  | Yes | No | N/A |
|-----|---|-----|----|-----|
| 1   | Was the production foreman present?                                     |     |    |     |
| 2   | Material  |     |    |     |
| a)  | Were materials inspected for compliance?                                |     |    |     |
| b)  | Were corrective actions taken for defective material?                   |     |    |     |
| c)  | Were corrective actions appropriate?                                    |     |    |     |
| d)  | Were any deviations accepted?   |     |    |     |
| 3   | Installation Requirements   |     |    |     |
| a)  | Did work comply with specifications or plans?                           |     |    |     |
| b)  | Was workmanship satisfactory?   |     |    |     |
| c)  | Were corrective actions appropriate?                                    |     |    |     |
| d)  | Were any deviations accepted?   |     |    |     |
| 4   | Tests   |     |    |     |
| a)  | Were tests being performed?   |     |    |     |
| b)  | Was testing frequency satisfactory?                                     |     |    |     |
| c)  | Were test samples or locations appropriate?                             |     |    |     |
| d)  | Was testing quality coordinated with Mechanical/Electrical technicians? |     |    |     |
| 5   | Inspections   |     |    |     |
| a)  | Was inspection done by the QC Inspector in the Prep. meeting?           |     |    |     |
| b)  | Was the inspection frequency as established in the Prep. Meeting?       |     |    |     |
| c)  | Were critical inspections satisfactory?                                 |     |    |     |
| d)  | Was the inspection satisfactory?  |     |    |     |
| 6   | Safety  |     |    |     |
| a)  | Was the safety officer present?   |     |    |     |
| b)  | Were the safety requirements followed?                                  |     |    |     |
| c)  | Were the safety requirements modified?                                  |     |    |     |

Remarks (explanations required for "No" responses and if deviations were accepted):

*Reported By:*

*(Contractor Quality Control  
Manager CQCM)*

X \_\_\_\_\_

NON-CONFORMANCE DEFICIENCY

REPORT 1 PAGE

|  |                                     |                                     |                                |
|--|-------------------------------------|-------------------------------------|--------------------------------|
| <b>Non-Conformance Deficiency Report</b>                                 |                                     |                                     | <b>No.</b> _____               |
| <b><i>INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO</i></b>                  |                                     |                                     | <b><i>W912QR-16-C-003</i></b>  |
| Structural <input type="checkbox"/>                                      | Mechanical <input type="checkbox"/> | Electrical <input type="checkbox"/> | Civil <input type="checkbox"/> |
| Date:  | Location:                           | Spec. Section:                      | Spec. Paragraph: _             |
| <b>Non-Conforming Condition:</b><br><br><br><br><br><br><br><br><br><br> |                                     |                                     |                                |
| <b>Reported By (Quality Control Representative):</b><br><br>             |                                     |                                     | <b>Date:</b><br><br>           |
| <b>Disposition:</b><br><br><br><br><br><br><br><br><br><br>              |                                     |                                     |                                |
| <b>Dispositioned By (Project Engineer):</b><br><br>                      |                                     |                                     | <b>Date:</b><br><br>           |
| <b>Re-Inspected By (Quality Control Representative):</b><br><br>         |                                     |                                     | <b>Date:</b><br><br>           |
| <b>Accepted By CQCM:</b><br><br>   |                                     |                                     | <b>Date:</b><br><br>           |



NON-CONFORMANCE DEFICIENCY

REPORT LOG

1 PAGE



**ATTACHMENT 1E**  
**SAMPLE QUALITY CONTROL PLAN**

# Contractor Quality Control (CQC) Plan

W912-QR-16-C-0031

Project Number

INDOOR FIRING RANGE, YOUNGSTOWN ARS

Project Name

---

USACE Approval Date

MIKE COATES CONSTRUCTION CO., INC.

Contractor

800 Summit Avenue

Niles, Ohio 44446

Contractor's Address

mail@mikecoatesconstruction.com

E-Mail Address

330-652-0190/330-652-3463

Phone/Fax

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**PROJECT: W912QR-16-C-0031  
INDOOR FIRING RANGE  
YOUNGSTOWN ARS, OHIO**

**CONTRACTOR: MIKE COATES CONSTRUCTION CO., INC  
800 SUMMIT AVENUE, NILES, OHIO 44446**

- - - - -

**I. COMPANY POLICY STATEMENT**

Mike Coates Construction Co., Inc. considers quality control to be an inherent safeguard to ensure quality work and to guarantee that all work is done in accordance with the Contract Documents and in a professional manner. Noncompliance with the plans and specifications must be detected promptly and proper action taken to ensure that this policy is a viable tool in monitoring the work. Our dedication is to a project well done in terms of **QUALITY, SAFETY, AND BUDGET**.

**II SCOPE OF WORK**

It is the intent of this Quality Control Plan (QCP) to establish and explain how this Company plans to organize, control, and review activities set forth in the plans and specifications provided by the U.S. Army Corps of Engineers (USACE). The QCP's primary purpose is to provide for the level of construction quality required by strictly adhering to the plans and specifications.

In order to satisfy these requirements, the proposed Quality Control Plan includes the following aspects:

- A. Organization of the quality control workforce: To ensure that inspections and tests are performed and that the results of such inspections and tests, and other relevant data, is passed along and utilized to obtain the specified quality of work.
- B. Certification of submittals: To ensure strict compliance with the contract documents.
- C. Inspection of construction operations and materials: To determine and document that the specified results are being obtained and maintained.



- D. Performance of quality control tests: To document specified material and/or work quality standards.
- E. Identification and correction of construction features: For those elements that either do not satisfy the contract requirements or do not produce the required results, and to offer recommendations for action that may be necessary to correct the deficiency.
- F. Maintain and submit daily quality control reports and test reports: To ensure appropriate documentation of specified inspections and testing performance.

### **III CQC PERSONNEL**

[NOTE: The approval of the Contracting Officer's Representative will be requested before any staff changes occur, if necessary.]

#### **A. CQC System Manager**

The CQC System Manager (CQCM) has front line responsibility for quality control. He will become thoroughly familiar with all aspects of the project and ultimately inspect all work to ensure quality is being maintained by all workers, vendors and subcontractors. The CQCM is ultimately responsible for inspecting, documenting and reporting to the CQCA and Contracting Officer's Representative all aspects of the work described and detailed in the plans and specifications. He is responsible for implementing and enforcing the QCP. These responsibilities include, without limitation, the following:

1. Implementation of the Three-Phase Control System for all definable features of work.
2. Day-to-day inspection of the work.
3. Daily on-site documentation.
4. Ensure that all in-place work meets or exceeds all minimum standards set forth in the plans and specifications.
5. Detect discrepancies or problems on-site and immediately bring the same to the attention of the CQCA and Contracting

Officer's Representative, as necessary.

6. Maintain document control.
7. Maintain as-built conditions.
8. Interface with the owner and outside agencies as required.

The CQCM proposed for this project is **MR. TOM LESKOSKY**. See resume attached hereto as Exhibit A, and Letter of Designation attached hereto as Exhibit B.

**B. CQC System Manager - Alternate**

The CQC System Manager Alternate (CQCMA) will assume responsibilities for all aspects of quality control as required by our QCP and the Contract Documents should the CQCM not be able to perform his duties. The CQC System Manager Alternate for this project is **MR. JIM HUFFMAN**. See resume attached hereto as Exhibit C, and Letter of Designation attached hereto as Exhibit D.

**C. CQC System Administrator**

The CQC System Administrator (CQCA) for this Company is based in the home office of Mike Coates Construction Co., Inc. and has a major responsibility for quality control through a supervisory role of the CQCM. His duties include, but are not limited to:

1. At all times keep the field forces focused on the Company's commitment to quality in all phases of the work.
2. Make routine visits to the site of the work.
3. Prepare and review submittals and certify submittals prior to submission.

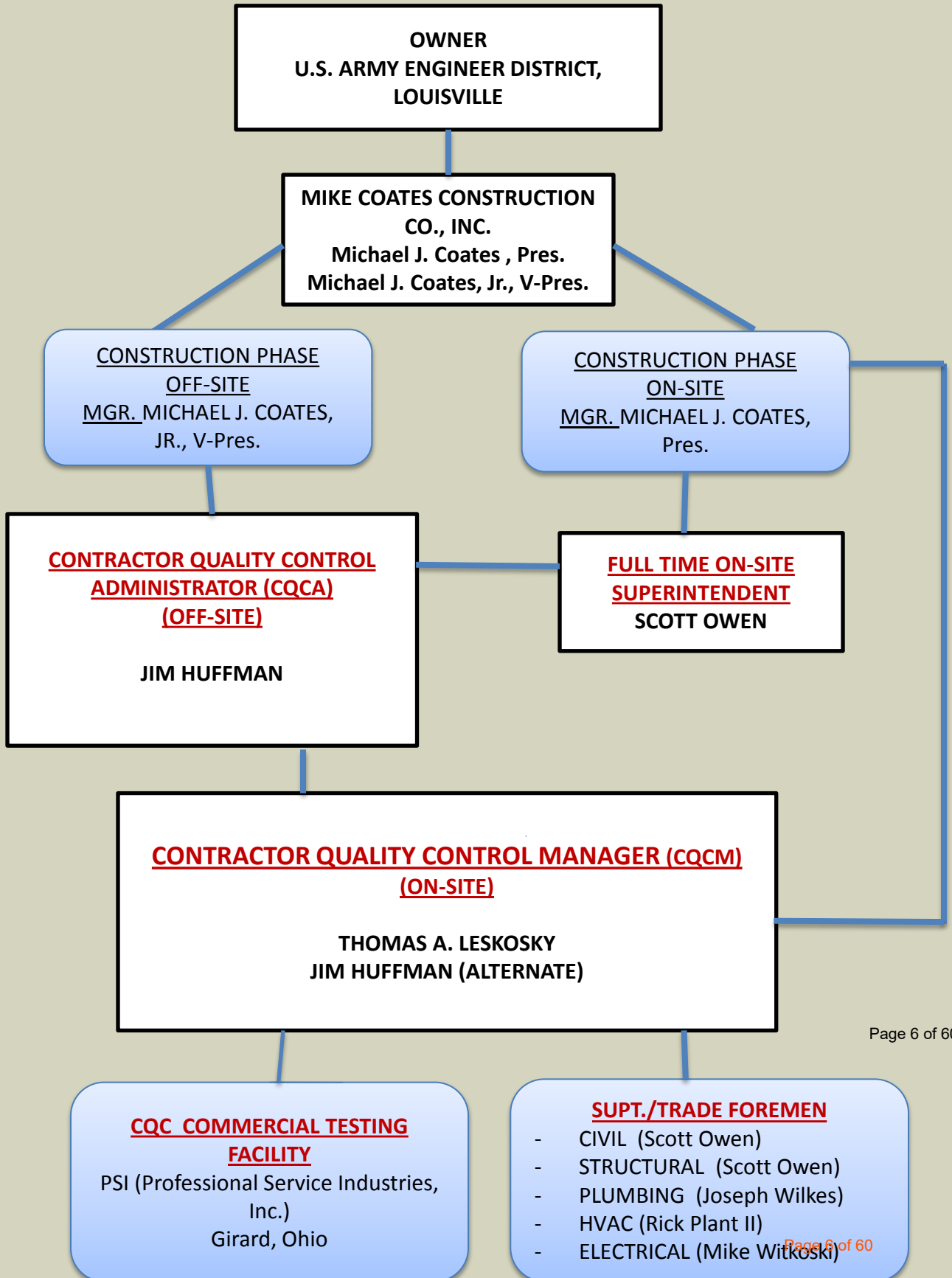
The CQCA for this Company is **MR. JIM HUFFMAN**. See resume attached hereto as Exhibit E, and Letter of Designation attached hereto as Exhibit F.

**D. Other CQC Personnel**

The following specialized personnel shall assist the CQC System Manager (CQCM). These individuals shall be responsible to the

**W912QR-16-C-0031 CONTRACTOR QUALITY CONTROL PLAN OUTLINE**

INDOOR FIRING RANGE, YOUNGSTOWN ARS, YOUNGSTOWN, OHIO



CQC System Manager and physically present at the construction site during work on their areas of responsibility. These individuals may perform other duties but shall be allowed time to perform their assigned quality control duties.

| <u>AREA</u> | <u>INDIVIDUAL</u> | <u>COMPANY</u>                             |
|-------------|-------------------|--|
| Civil       | Scott Owen        | Mike Coates Construction Co., Inc.         |
| Structural  | Scott Owen        | Mike Coates Construction Co., Inc.         |
| HVAC        | Rick Plant II     | York Mahoning Mechanical Contractors, Inc. |
| Plumbing    | Joseph Wilkes     | Conti                                      |
| Electrical  | Mike Witkoski     | Penn-Ohio Electrical, Inc.                 |

See Exhibit M for a summary of the qualifications of each individual listed above.

**E. CQC Commercial Testing Facilities**

1. The proposed testing company is PSI (Professional Service Industries, Inc.), Youngstown Branch, Girard, Ohio 44420, TEL 330-759-0288. PSI will be performing testing as indicated in the “USACE QUALITY CONTROL SYSTEM (QCS) TEST MATRIX”, attached hereto as Exhibit G.
2. Contractor shall perform specified or required tests to verify that control measures are adequate, and as required to provide a product which conforms to the Contract Documents. Upon request, the Contractor shall furnish to the Contracting Officer’s Representative duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. With reference to the CQC Commercial Testing Facility, the CQCM shall perform the following activities and record and provide the following data:
  - a. Verify that testing procedures comply with contract requirements.
  - b. Verify that facilities and testing equipment are available and comply with testing standards.
  - c. Verify that test instruments are calibration against certified standards.

documentation requirements, have been prepared.

- e. Results of all tests taken, both passing and failing, will be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test will be given. If approved by the Contracting Officer's Representative, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an off-site or commercial test facility will be provided directly to the Contracting Officer's Representative. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

#### **IV SUBMITTALS**

- A. The CQCA will be the Submittal Manager. The CQCA has full authority to act for Contractor in all submittal matters. His responsibilities include scheduling, reviewing, and updating any submittals required from subcontractors.
- B. Contractor schedule dates will be coordinated with the progress schedule and shall reflect a 30-day minimum period for review and approval.
- C. The CQCA will review the submittal register a minimum of every 30days. The submittal register will be utilized to plan and monitor submittal progress so as to ensure timely approval of methods/materials prior to their scheduled need times. The submittal register will be available for inspection by the Contracting Officer's Representative at all times.
- D. The CQCM will review the submittal register during preparatory phases of quality control to ensure that all submittals for the ensuing feature of work are approved and will take action to correct any deficiencies in submittal requirements.
- E. All submittals required by the specifications or as needed for approval of deviations will be submitted by the CQCA utilizing ENG Form 4025, in accordance with submittal register schedule dates or

sooner. Prior to submittal, all shop drawings, data, samples, certifications, and test reports will be reviewed by the CQCA to ensure compliance with the contract requirements. Corrections and revisions will be requested where necessary.

- F. All submittals, including those of subcontractors, will be processed through Mike Coates Construction Co., Inc.
- G. **AISC Certified Structural Steel Fabricator:** This project requires the use of a structural steel fabricator that has been certified by the American Institute of Steel Construction, Incorporated (AISC). The fabricating firm we are proposing to use for this purpose is **LIVI STEEL, INC.** A copy of the certificate issued by the AISC will be provided to the USACE via the formal submittal process. The certificate will be reviewed and discussed at the Preparatory Inspection phase for the Structural Steel, and re-verified at the Initial Phase inspection.
  - 1. The CQCM will verify that the AISC certificate is current and available at the Preparatory Inspection meeting. If said certificate is not current, or is not available, the CQCM will reject deliveries of structural steel to the job site until such time as said certificate is provided.
  - 2. The CQCM will be personally responsible for verifying that all structural steel delivered to the job site is accompanied by documentation which verifies that the steel was fabricated at the plant noted on the AISC certificate.
- H. All submittals shall be reviewed, certified and managed by the CQCA. Copies of the manufacturer's data (material, equipment, etc.), including catalogue cut-sheets showing dimensions, performance characteristics, capacities, wiring diagrams, schedules, operation and maintenance manuals and any other relevant information are reviewed by the CQCA. The CQCA is an authorized submittal reviewer and testing lab report reviewer.
- I. Submittals (material, design, data, samples, shop drawings, etc) are filed according to the specification section and paragraph number in a secure place for reference and coordination. Color and mock-up samples are maintained in a secure place at the job site for comparison with the finished product. A tag or sticker identifying the submittal number and the date of approval is attached to the sample. When a color or mock-up sample is not approved, it is

labeled as “Rejected” and removed from the job site (if requested). The record is maintained along with a photograph of the disapproved item with a copy submitted to the Contracting Officer’s Representative.

- J. The Submittal Register is maintained by the CQCA. Revised copies of the Submittal Register shall be provided to the CQCM and Contracting Officer’s Representative on a monthly basis.
- K. Prior to submittal, all items are checked and approved by the CQCA. If found to be in strict conformance with the contract requirements, each item is stamped, signed and dated by the CQCA. Copies of review comments indicating action(s) taken are included within each submittal.
- L. CQCM Guidelines Regarding Submittals:
  - 1. Be familiar with the submittal procedures.
  - 2. Review all of the information attached to the submittal.
  - 3. Ensure that all of the pages associated with the enclosures are attached to the submittal.
  - 4. Thoroughly review the applicable design documents.
  - 5. Ensure that the attachments are legible.
  - 6. Direct all questions to the CQCA.
  - 7. Ensure that the sample received and/or material received complies with the submittal.
  - 8. Notify the CQCA if material is installed without a submittal; then request a submittal.
  - 9. Maintain and file submittals on-site so they are readily retrievable.
- M. STAMPS: Stamps shall be used by the CQCA to certify that the submittal meets contract requirements and are similar to the following:



Contractor (Firm Name): \_\_\_\_\_

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

I certify that this submittal is accurate, is in strict conformance with all contract requirements, has been thoroughly coordinated and cross-checked against all other applicable disciplines to prevent the omission of vital information, that all conflicts have been resolved, that repetition has been avoided, and that it is complete and in sufficient detail to allow ready determination of compliance with contract requirements by the Contracting Officer's Representative.

Printed Name of the CQCA:

\_\_\_\_\_

Signature of the CQCA:

\_\_\_\_\_

Date: \_\_\_\_\_

## **V CONTROL TESTING**

- A. Daily Records: The CQCM shall utilize the QC Report Form entitled, "Contractor Quality Control Report," attached hereto as Exhibit H and referred to hereinafter as the "Daily CQC Report," to record daily control activities and resources used, work performed, and other data included on this form. The original and one copy will be furnished to the Contracting Officer's Representative within 24 hours of the reporting date. The CQCM will maintain a copy of each such report for his files.

### **B. Control Testing**

A listing of all quality control tests indicated in the Contract Documents and additional tests as may be needed to establish quality control, is attached hereto as Exhibit G, i.e., the document labeled "USACE QUALITY CONTROL SYSTEM (QCS) TEST MATRIX". This listing includes the feature of work tested, the name of the test, the specification paragraph number, associated activity, responsible person, and frequency.

**C. Materials:** The CQCM will inspect all material/equipment deliveries for:

1. Compliance with approved submittals;
2. Damage;
3. Correct dimensions and quantities; and
4. Required labeling and documentation.

The CQCA and Contracting Officer's Representative will be notified of any materials/equipment failing to meet requirements. A record of inspection will be noted in the Daily CQC Report and any necessary corrective action will be initiated. Proper storage will be checked.

**D. Off-Site Inspection:** The CQCM will inspect manufacturing facilities and material sources as specifically directed by the specifications. Additional inspections will be conducted as necessary to ensure compliance with the contract specifications. The CQCM will record off-site surveillance activities in the Daily CQC Report. Where instances of noncompliance are observed, corrective action will be initiated.

**E. On-Site Inspection:** Each worker will be charged with the responsibility of performing his or her work in a workmanlike manner and will continually strive for the highest degree of quality. Only workers who exhibit an ability to perform and a desire to achieve quality will be employed and retained.

The CQCM will routinely and continuously inspect the work for compliance with the Contract Documents. His duties, as outlined above, are for the purpose of maintaining and documenting the work as required to achieve a high degree of quality.

The QCP outlined in this plan will include a complete listing of definable features of work. The CQCM's inspection of these work features will be accomplished through implementation of the Three-Phase Control Procedure outlined hereinafter.

**F. Three-Phase Inspection Control Procedures**

A Three-Phase Control System shall be implemented by the quality control staff to ensure that all work, including the work of all subcontractors, fabricators and suppliers, complies with the

requirements of the Contract Documents. This CQCM will address each definable feature of work beginning with early planning requirements and ending with the finished work activities. Each phase will allow the opportunity to prevent problems and deficiencies and to ensure that the accident prevention program is implemented. The three control phases are outlined hereafter.

The Three-Phase Inspection Process is conducted for each definable feature of work. The definable features of work for this project are set forth in Exhibit G.

**1. Preparatory Inspection Phase**

This phase will be performed prior to beginning work on each definable feature of work. The phase will include:

- a. Review each paragraph of applicable specifications.
- b. Review the contract drawings.
- c. Check to ensure that all materials and/or equipment have been tested, submitted, and approved.
- d. Review provisions that have been made to provide required control inspection and testing.
- e. Examine the work area to ensure that all required and preliminary work has been completed and is in compliance with the Contract Documents.
- f. Physically examine required materials, equipment, and sample work to ensure that they are on hand, conform to approved shop drawings or submittals, and are properly stored.
- g. Review appropriate activity hazard analysis to ensure that all safety requirements are met.
- h. Discuss procedures for controlling quality of the work, including any repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.

- i. Check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer's Representative.
- j. Discuss the initial control phase.
- k. Notify the Contracting Officer's Representative at least 24 hours in advance of beginning the preparatory control phase: This phase shall include a meeting conducted by the CQCM and attended by other CQC personnel and the foreman responsible for the definable feature.

The results of the preparatory phase actions shall be documented in the QC Report Form entitled, "Preparatory Phase Checklist Form," attached hereto as Exhibit I.

- l. Additional preparatory phases shall be conducted on the same definable feature of work if: The quality of ongoing work is unacceptable; there are changes in the applicable CQC staff, on-site foreman or work crew; work on a definable feature is resumed after a substantial period of inactivity; or, other problems develop.

## 2. Initial Inspection Phase

This phase shall be accomplished at the beginning of each definable feature of work. The initial inspection phase will include:

- a. A check of work to ensure that it is in full compliance with the contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.

- d. Resolve all differences.
- e. Check safety to include compliance with the Safety Plan and Activity Hazard Analysis. Review the Activity Analysis with each worker.
- f. Notify the Contracting Officer's Representative at least 24 hours in advance of beginning the initial phase. The results of the initial phase shall be documented in the QC Report Form entitled, "Initial Phase Checklist Form," attached hereto as Exhibit J. The exact location of the initial phase shall be indicated for future reference and comparison with follow-up phases.
- g. Additional initial phases shall be conducted on the same definable feature of work if: The quality of ongoing work is unacceptable; there are changes in the applicable CQC staff, on-site production supervision or work crew; work on a definable feature is resumed after a substantial period of inactivity; or, other problems develop.

3. Follow-up Inspection Phase

Daily checks shall be performed to ensure that control activities, including control testing, are providing continuing compliance with the contract requirements, until completion of the particular feature of work. The checks shall be made as a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. Non-conforming work shall not be built upon or concealed.

G. The CQCM shall provide written notice to The Contracting Officer's Representative of each proposed test 3 days in advance. The CQCM shall witness the test with the appropriate representatives present and/or with the individual(s) qualified to perform the designated test(s).

H. Other

- 1. The CQCM shall review the testing requirements to ensure that the planned test is in accordance with the design

- documents: ie, plans, specifications, shop drawings and/or other documents.
2. Instruments used for testing are calibrated in accordance with established calibration procedures. Specialists experienced in such work perform the calibration.
  3. Technicians performing tests shall provide copies of calibration certificates and their field notes and reports to the CQCM.
  4. The CQCM shall witness all required tests detailed in the design documents (plans, specifications, shop drawings, etc).
  5. Witnessing of tests by the Contracting Officer's representative does not relieve the Contractor of their obligation to comply with the requirements of the Contract Documents.
  6. Test reports, when completed, are attached to the Daily CGC Report and submitted to the Contracting Officer's Representative.

## **VI DEFICIENCY TRACKING**

### **A. Non-Conforming Items**

1. Non-conforming items are those conditions that deviate from the requirements detailed in the specifications, plans and /or shop drawings. The CQCM is responsible for the control and documentation of non-conforming items.
2. The CQCM prevents non-conforming items from being installed.
3. Minor non-conforming items, which are corrected in the same day, are documented in the CQC Daily Report. All other non-conformances are documented on a Non-Conformance Report prepared by the CQCM, sequentially numbered and dated and include the following information, as appropriate:
  - a. Description of the non-conformance including relevant details of the occurrence.
  - b. Identification of material, component or system by part number, plan, shop drawing and/or specification number and intended installation location.
  - c. Source of material or item (name of supplier, owner or subcontractor).
  - d. Current status of item, i.e., in shop, warehouse, lay-down yard or structure.

- e. Individual and organization which detected the non-conformance.
- f. Recommendation for corrective action including sketches, test data and/or repair procedures necessary to substantiate the recommendation.
- g. Cause of the non-conformance and steps taken to prevent reoccurrence indicating action(s) taken, positions or titles of persons contacted, letters written and/or procedural changes proposed.
- h. The CQCM signs and forwards the Non-Conformance Report to the CQCA and Contracting Officer's Representative.
- i. Each Non-Conformance Report is recorded on the Non-Conformance Report Log by the CQCM.
- j. Actions to be taken are entered on the Non-Conformance Report Log. The Engineer of Record initiates the disposition(s) necessary to clear the item.
- k. Verification of "Corrective Action" (eg, completion of repair) by Quality Control after the work in question has been re-inspected and re-tested. Entries are made in the Non-Conformance Report (NCR) log documenting the Final Disposition of each NCR.
- l. Non-Conformance Reports, logs and documents are filed and maintained. Reports and Records are submitted to the CQCA and the Contracting Officer's Representative.

**B. The form for tracking construction deficiencies is the Non-Conformance Deficiency Report, attached hereto as Exhibit K, and the Non-Conformance Deficiency Report Log, attached hereto as Exhibit L. The Non-Conformance Deficiency Report and the Non-Conformance Deficiency Report Log shall be available for inspection by the Contracting Officer Representative at all times.**

**C. A CONSTRUCTION DEFICIENCY FOR THE PURPOSE OF THIS PLAN IS DEFINED AS THE FOLLOWING:**

- An occurrence in which defective work or work lacking some essential part has been covered or is otherwise left as complete.

- Products are furnished to the site or incorporated into the work which do not meet the conditions or the contract documents.
- Inspection points or contract requirements affecting quality of the work have not been met.

**NOTE:** Minor defects in work on which construction is underway are not to be considered a “Construction Deficiency.”

**D.** After completion of all work the CQCM will conduct a completion inspection of all work features and activities. A punchlist will be developed to identify all items which are not in compliance with the specifications and drawings. The CQCM will establish a date by which each deficiency will be corrected and note such date on the punchlist. A follow-up inspection will be conducted to verify completion of all punchlist items. The completion inspection and any resulting corrective action will be accomplished within the contract performance period. The Contracting Officer’s Representative will be notified upon completion of the punchlist and corrective work. The punchlist will be made part of the QCP by attachment to the Daily QCP Report.



EXHIBIT A

RESUME OF MR. TOM LESKOSKY

THOMAS A. LESKOSKY

**PROJECT:**

W912QR-16-R-0042

INDOOR FIRING RANGE, YOUNGSTOWN ARS, OH

**PROPOSED ROLE:**

CQC AND SSHO

**APPLICABLE CLASSROOM TRAINING:**

**CQM-C Training, USACE, Louisville, December 13-14, 2016, expiring December 13, 2021.**

NSC 1<sup>st</sup> Aid, Expiring October 19, 2019

NSC CPR/AED, expiring October 19, 2018

OSHA 30 Hour Construction Training and Health, completed 10/13/2016

**CQC QUALIFICATIONS:**

3.5.2(a) T. Leskosky is a “construction person” with 41 years experience in the construction industry, and 24 years of experience in related quality management work. In his role as a foreman for Coates, T. Leskosky was responsible for supervising and managing general or industry construction, directing crews, and quality control.

NOTE: Through his role as a foreman, T. Leskosky is familiar with all aspects of building construction, including sitework, concrete, masonry, carpentry, framing and drywall, specialties, HVAC, plumbing, electrical and fire protection. T. Leskosky is proficient in reading drawings and specifications, handling submittals, three phase control, and various testing procedures.

**SSHO QUALIFICATIONS:**

1.6.1.1(b)1 See Above.

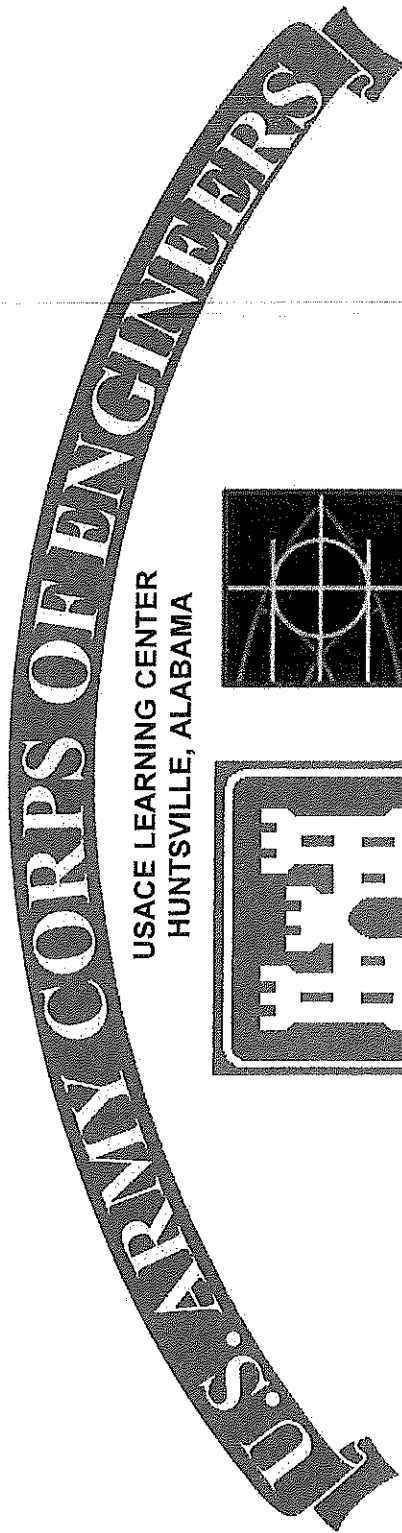
1.6.1.1(b)2 41 years experience in construction industry.

24 years of construction industry experience on similar projects in supervising and managing general or industry construction. T. Leskosky was employed by Coates as a carpenter journeyman and then foreman between 1992 and 2016. In that role, he supervised and managed general or industry construction, directed crews, and was responsible for the safety of those crews. T. Leskosky formally retired from his union and Coates in 2008, but continues to work for Coates, with tools, from time to time, for the hours allowed per month by his union.

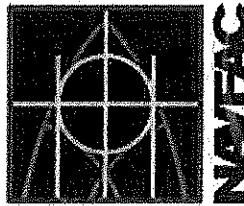
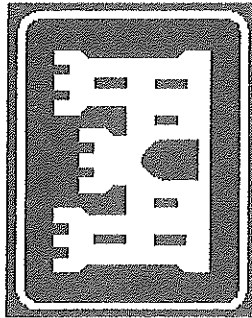
**1.6.1.1(b)3** T. Leskosky participated in more than 8 hours of safety and health related training in each of the past 3 years. This training included both coursework and field task specific training.

**1.6.1.1.(b)4** T. Leskosky has had training in the following areas: Personal protective equipment and clothing; hazard communication; excavation; scaffolding; fall protection; and, confined spaces. T. Leskosky was responsible for building scaffold systems and is certified as a “competent person”.

**NOTE:** T. Leskosky is familiar with activity hazard analysis, safety indoctrination, walkthroughs, conducting safety/health inspections, conducting mishap inspections, maintaining a safety and health deficiency tracking system, and ensuring that all employees and subcontractors comply with safety and health requirements.



USACE LEARNING CENTER  
HUNTSVILLE, ALABAMA



# CERTIFICATE

Tom Leskosky

LRL-06-17-01070

has completed the Corps of Engineers and Naval Facility Engineering Command Training Course

## CONSTRUCTION QUALITY MANAGEMENT FOR CONTRACTORS - #784

|                        |                                  |                                |                                  |
|------------------------|----------------------------------|--------------------------------|----------------------------------|
| Dayton, OH             | Dec. 13-14, 2016                 | LRL - Louisville               | Roger K. Riddick, PE             |
| Location               | Training Date(s)                 | Instructional District/ NAVFAC | CQM-C Manager                    |
| Douglas M. Sheffer     | Douglas.M.Sheffer@usace.army.mil | 502-315-7426                   | <i>Douglas M. Sheffer</i>        |
| Facilitator/Instructor | Email                            | Telephone                      | Facilitator/Instructor Signature |
|                        |                                  |                                | <i>John E. Bennett</i>           |
|                        |                                  |                                | Chief, USACE Learning Center     |

THIS CERTIFICATE EXPIRES FIVE YEARS FROM DATE OF ISSUE

EXHIBIT B

LETTER OF DESIGNATION FOR MR. TOM  
LESKOSKY AS CQCM



# MIKE COATES

CONSTRUCTION CO., INC.

December 15, 2016

MR. THOMAS A. LESKOSKY, CQCM

RE: Letter of Designation for  
Contractor Quality Control Manager

Project: W912-QR-16-C-0031  
INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO

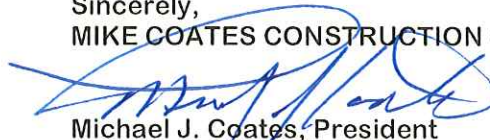
Dear Mr. Leskosky:

This Letter of Designation appoints you as Contractor Quality Control Manager for the project referenced above, and outlines your responsibilities as our site Quality Control Manager. As the site Quality Control Manager, you report directly to Mr. Jim Huffman, the Contractor Quality Control Administrator (CQCA) and myself. You shall review the specifications, addenda and plans in their entirety and implement the Quality Control Plan. The Quality Control Plan encompasses three phases of inspection: Preparatory Meetings, and Initial and Follow-Up Inspections. All inspections and testing are recorded in the Daily CQC Report and submitted to the CQCA and the Contracting Officer's Representative. Test reports are submitted no later than three (3) working days after the test was performed. You and/or your staff are responsible for reviewing the specifications, addenda and plans in their entirety, as well as approved submittals and shop drawings, for compliance with the contractual requirements.

Additionally, this applies to all subcontracted work. You and/or your staff shall conduct daily inspections to ensure that the workmanship and materials used in the construction of the Project are in compliance with the specifications, addenda and plans, as well as approved submittals and shop drawings.

**You are authorized to stop work that does not comply with the specifications, addenda and plans, as well as approved submittals and shop drawings.** You and/or your staff shall witness all tests required by the specifications and coordinate such tests with USACE. You and your staff must document all non-conforming conditions, items and/or workmanship noted and constantly monitor and alert safety personnel to safety violations. If, at any time, you require assistance with the implementation of the Quality Control Program, contact the CQCA or me. Your responsibilities are further enumerated in the Quality Control Plan, attached hereto.

Sincerely,  
MIKE COATES CONSTRUCTION CO., INC.



Michael J. Coates, President

Accepted By:



Mr. Thomas A. Leskosky

## EXHIBIT C

### RESUME OF MR. JIM HUFFMAN

JIM HUFFMAN

**PROJECT:**

W912QR-16-C-0031

INDOOR FIRING RANGE, YOUNGSTOWN ARS, OH

**PROPOSED ROLE:**

ALTERNATE CQCM

**APPLICABLE CLASSROOM TRAINING:**

CQM-C Training, USACE, Louisville, December 13-14, 2016, expiring December 13, 2021.

**CQCM QUALIFICATIONS:**

Thirty-six plus years experience working in the construction industry. Completed carpentry apprenticeship and two (2) years of millwork & cabinet making training at Trumbull County Joint Vocational School. Operated own small construction business for four (4) years.

Moved to and worked twenty-eight years in California as a journeyman carpenter for eight years, foreman for two years, superintendent for eight years, and Senior project manager for ten years.

Moved back to Ohio and worked 1-1/2 yrs. as a civil construction manager for the new \$1.5 billion Vallorec Tube Steel Mill in Girard, Ohio.

**Typical Role and Responsibilities with Mike Coates Construction Co., Inc:**

Senior Project Manager: Work to ensure that projects maintain schedule and budget; submittal manager; submit all required documents for construction compliance; facilitate change orders and RFI's; project close out documentation, etc.

**Role this Project:**

Contractor Quality Control Administrator (CQCA), and  
Alternate Contractor Quality Control Manager (CQCM)





USACE LEARNING CENTER  
HUNTSVILLE, ALABAMA



## CERTIFICATE

Jim Huffman

LRL-06-17-01068

has completed the Corps of Engineers and Naval Facility Engineering Command Training Course

## CONSTRUCTION QUALITY MANAGEMENT FOR CONTRACTORS - #784

Dayton, OH

Dec. 13-14, 2016

LRL - Louisville

Training Date(s)

Location

Douglas M. Sheffer

Douglas.M.Sheffer@usace.army.mil

502-315-7426

Facilitator/Instructor

Email

Telephone

Instructional District/ NAVFAC

CQM-C Manager

Facilitator/Instructor Signature

*Douglas M. Sheffer*

Chief, USACE Learning Center

*Jim Huffman*

THIS CERTIFICATE EXPIRES FIVE YEARS FROM DATE OF ISSUE

EXHIBIT D

LETTER OF DESIGNATION FOR MR. JIM  
HUFFMAN AS ALTERNATE CQCM



# MIKE COATES

CONSTRUCTION CO., INC.

December 15, 2016

MR. JIM HUFFMAN, Alternate CQCM

RE: Letter of Designation for  
Alternate Contractor Quality Control Manager

Project: W912-QR-16-C-0031  
INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO

Dear Mr. Huffman:

This Letter of Designation appoints you as ALTERNATE Contractor Quality Control Manager for the project referenced above, and outlines your responsibilities as our site Quality Control Manager should Mr. Leskosky be unable to perform his responsibilities as the Contractor Quality Control Manager. As the site Quality Control Manager, you report directly to myself. You shall review the specifications, addenda and plans in their entirety and implement the Quality Control Plan. The Quality Control Plan encompasses three phases of inspection: Preparatory Meetings, and Initial and Follow-Up Inspections. All inspections and testing are recorded in the Daily CQC Report and submitted to the Contractor Quality Control Administrator (CQCA) and the Contracting Officer's Representative. Test reports are submitted no later than three (3) working days after the test was performed. You and/or your staff are responsible for reviewing the specifications, addenda and plans in their entirety, as well as approved submittals and shop drawings, for compliance with the contractual requirements.

Additionally, this applies to all subcontracted work. You and/or your staff shall conduct daily inspections to ensure that the workmanship and materials used in the construction of the Project are in compliance with the specifications, addenda and plans, as well as approved submittals and shop drawings.

**You are authorized to stop work that does not comply with the specifications, addenda and plans, as well as approved submittals and shop drawings.** You and/or your staff shall witness all tests required by the specifications and coordinate such tests with USACE. You and your staff must document all non-conforming conditions, items and/or workmanship noted and constantly monitor and alert safety personnel to safety violations. If, at any time, you require assistance with the implementation of the Quality Control Program, contact me. Your responsibilities are further enumerated in the Quality Control Plan, attached hereto.

Sincerely,  
MIKE COATES CONSTRUCTION CO., INC.

  
Michael J. Coates, President

Accepted By:


  
Mr. Jim Huffman

EXHIBIT E

RESUME OF MR. JIM HUFFMAN

JIM HUFFMAN

**PROJECT:**

W912QR-16-C-0031

INDOOR FIRING RANGE, YOUNGSTOWN ARS, OH

**PROPOSED ROLE:**

ALTERNATE CQCM

**APPLICABLE CLASSROOM TRAINING:**

CQM-C Training, USACE, Louisville, December 13-14, 2016, expiring December 13, 2021.

**CQCM QUALIFICATIONS:**

Thirty-six plus years experience working in the construction industry. Completed carpentry apprenticeship and two (2) years of millwork & cabinet making training at Trumbull County Joint Vocational School. Operated own small construction business for four (4) years.

Moved to and worked twenty-eight years in California as a journeyman carpenter for eight years, foreman for two years, superintendent for eight years, and Senior project manager for ten years.

Moved back to Ohio and worked 1-1/2 yrs. as a civil construction manager for the new \$1.5 billion Vallorec Tube Steel Mill in Girard, Ohio.

**Typical Role and Responsibilities with Mike Coates Construction Co., Inc:**

Senior Project Manager: Work to ensure that projects maintain schedule and budget; submittal manager; submit all required documents for construction compliance; facilitate change orders and RFI's; project close out documentation, etc.

**Role this Project:**

Contractor Quality Control Administrator (CQCA), and  
Alternate Contractor Quality Control Manager (CQCM)





# CERTIFICATE

Jim Huffman

LRL-06-17-01068

has completed the Corps of Engineers and Naval Facility Engineering Command Training Course

## CONSTRUCTION QUALITY MANAGEMENT FOR CONTRACTORS - #784

|                        |                                  |                                |                                  |
|------------------------|----------------------------------|--------------------------------|----------------------------------|
| Dayton, OH             | Dec. 13-14, 2016                 | LRL - Louisville               | Roger K. Riddick, PE             |
| Location               | Training Date(s)                 | Instructional District/ NAVFAC | CQM-C Manager                    |
| Douglas M. Sheffer     | Douglas.M.Sheffer@usace.army.mil | 502-315-7426                   | <i>Douglas M. Sheffer</i>        |
| Facilitator/Instructor | Email                            | Telephone                      | Facilitator/Instructor Signature |
|                        |                                  |                                | <i>Jim E. Huffman</i>            |
|                        |                                  |                                | Chief, USACE Learning Center     |

THIS CERTIFICATE EXPIRES FIVE YEARS FROM DATE OF ISSUE

EXHIBIT F

LETTER OF DESIGNATION FOR MR. JIM  
HUFFMAN AS CQCA



# MIKE COATES

CONSTRUCTION CO., INC.

December 15, 2016

MR. JIM HUFFMAN, CQCA

RE: Letter of Designation for  
Contractor Quality Control Administrator

Project: W912-QR-16-C-0031  
INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO


Dear Mr. Huffman:

This Letter of Designation appoints you as Contractor Quality Control Administrator (CQCA) for the project referenced above. As the CQCA, you will be based in the home office of Mike Coates Construction Co., Inc. and have a major responsibility for quality control through a supervisory role of the CQCM. Your duties include, but are not limited to, the following:

1. At all times, keep the field forces focused on the Company's commitment to quality in all phases of the work.
2. Make routine visits to the site of the work.
3. Prepare and review submittals and certify submittals prior to submission.
4. Other responsibilities as set forth in the Quality Control Plan, attached hereto.

As the site CQCA, you report directly to Mike Coates, Jr. On your visits to the site of the work, you are authorized to stop work that does not comply with the specifications, addenda and plans, as well as approved submittals and shop drawings. If, at any time, you require assistance with the implementation of the Quality Control Program, contact Mike Coates, Jr. or myself. Your responsibilities are further enumerated in the Quality Control Plan, attached hereto.

Sincerely,  
MIKE COATES CONSTRUCTION CO., INC.

  
Michael J. Coates, President

Accepted By:

  
Mr. Jim Huffman



## EXHIBIT G

### USACE QUALITY CONTROL SYSTEM (QCS) TEST MATRIX

| SPEC SECTION   | SPEC DESCRIPTION                               | SPEC PARAGRAPH # | TEST DESCRIPTION                                      | FREQUENCY                           | PERFORMED BY: | DUE DATE                                 | STATUS |
|----------------|--|------------------|---|-------------------------------------|---------------|--|--------|
|                |  |                  |   |                                     |               |  |        |
| 01 35 26.00 06 | GOVERNMENT SAFETY REQUIREMENTS                 | 1.13             | Reports   | Daily                               | QCS Manager   | End of Each Day                          |        |
|                |  | 1.13.1           | Accident Reports                                      | Each Occurrence                     | QCS Manager   | When Needed                              |        |
|                |  | 1.13.3           | Exposure Reports                                      | Monthly                             | QCS Manager   | End of Each Month                        |        |
|                |  | 1.13.5           | Crane Reports   | As Needed                           | QCS Manager   | When Needed                              |        |
|                |  |                  |   |                                     |               |  |        |
| 01 45 35       | SPECIAL INSPECTIONS                            | 3.1.2            | Daily Reports   | Daily                               | QCS Manager   | End of Each Day                          |        |
|                |  | 3.1.1            | Biweekly Reports                                      | Bi Weekly                           | QCS Manager   | Every Two Weeks                          |        |
|                |  |                  |   |                                     |               |  |        |
| 01 46 00.00 06 | COMMISSIONING OF BUILDING ENERGY SYSTEMS       | 1.3              | Final Commissioning Report                            | Once                                | Subcontractor | Prior to Turnover                        |        |
|                |  |                  |   |                                     |               |  |        |
| 01 50 00       | TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS | 3.5.11           | Inspection  | Weather Protection as Needed        | QCS Manager   | Prior to Impending Negative Weather      |        |
|                |  |                  |   |                                     |               |  |        |
| 02 83 13.00 06 | LEAD IN CONSTRUCTION                           | 1.5.2.2          | Sampling results                                      | Once                                | PSI           | Prior to Abatement                       |        |
|                |  | 1.5.2.2          | Occupational and Environmental Assessment Data Report | Once                                | PSI           | Prior to Abatement                       |        |
|                |  |                  |   |                                     |               |  |        |
| 03 11 13.00 10 | CONCRETE FORMING                               | 3.2              | Inspection  | Before Each Pour                    | QCS Manager   | Prior to Each Pour                       |        |
|                |  |                  |   |                                     |               |  |        |
| 03 11 19.00 06 | INSULATED CONCRETE FORM (ICF) SYSTEM           | 1.3.1            | ICC ES Evaluation Report                              | Prior & Post of Each Pour As Needed | QCS Manager   | Prior & Post of Each Pour                |        |
|                |  |                  |   |                                     |               |  |        |
| 03 20 00.00 10 | CONCRETE REINFORCING                           | 2.7              | Test, Inspections, and Verifications                  | Before Each Pour                    | QCS Manager   | Prior Test in Submittal, Balance at Pour |        |
|                |  |                  |   |                                     |               |  |        |
| 03 30 00.00 10 | CAST-IN-PLACE CONCRETE                         | 2.1.1            | Mixture Proportions                                   | Once                                | Supplier      | 60 Days Prior                            |        |
|                |  | 3.7              | Testing and Inspection for CQC                        | Before Each Pour                    | PSI           | Prior to Pour                            |        |
|                |  |                  |   |                                     |               |  |        |
| 03 39 00.00 10 | CONCRETE CURING                                | 3.2              | Testing and Inspection for CQC                        | Each Pour                           | PSI           | Each Pour                                |        |
|                |  |                  |   |                                     |               |  |        |
| 04 20 00       | MASONRY  | 2.1.2.1.4        | Efflorescence Test                                    | As Needed                           | PSI           | Prior to Use                             |        |
|                |  |                  |   |                                     |               |  |        |
| 05 12 00       | STRUCTURAL STEEL                               | 2.3              | Bolts, nuts, and washers                              | As Needed                           | PSI           | Prior to Use                             |        |

| SPEC SECTION   | SPEC DESCRIPTION   | SPEC PARAGRAPH # | TEST DESCRIPTION                         | FREQUENCY       | PERFORMED BY: | DUE DATE                     | STATUS |
|----------------|--|------------------|--|-----------------|---------------|------------------------------|--------|
|                |  |                  |  |                 |               |                              |        |
| 05 21 00       | STEEL JOIST FRAMING                                      | 3.3              | Erection Inspection                      | As Needed       | PSI           | Prior to Install of Joist    |        |
|                |  | 3.3              | Welding Inspections                      | As Needed       | PSI           | Upon Completion              |        |
|                |  |                  |  |                 |               |                              |        |
| 06 10 00       | ROUGH CARPENTRY  | 1.4.4            | Preservative-treated                     | Once            | Manufacturer  | In Submittals                |        |
|                |  |                  |  |                 |               |                              |        |
| 06 61 16       | SOLID POLYMER (SOLID SURFACING) FABRICATIONS             | 2.1              | Solid polymer material                   | Once            | Manufacturer  | In Submittals                |        |
|                |  |                  |  |                 |               |                              |        |
| 07 05 23       | PRESSURE TESTING AN AIR BARRIER SYSTEM FOR AIR TIGHTNESS | 3.5              | Pressure Test Procedures                 | Once            | PSI           | Within 60 Days of Completion |        |
|                |  | 3.5.5            | Air Leakage Test Report                  | Once            | PSI           | Upon Completion of Building  |        |
|                |  | 3.6.5            | Diagnostic Test Report                   | Once            | PSI           | Post Previous Reports        |        |
|                |  |                  |  |                 |               |                              |        |
| 07 22 00       | ROOF AND DECK INSULATION                                 | 1.4.1            | Flame spread and smoke developed ratings | Once            | Manufacturer  | In Submittals                |        |
|                |  |                  |  |                 |               |                              |        |
| 07 27 10.00 10 | BUILDING AIR BARRIER SYSTEM                              | 1.8              | Design Review Report                     | Once            | Subcontractor | Prior to Commencement        |        |
|                |  | 3.1.2            | Testing and Inspection                   | Once            | PSI           | During & Post Install        |        |
|                |  |                  |  |                 |               |                              |        |
| 07 42 13       | METAL WALL PANEL   | 3.7.2            | Leakage Test                             | Once            | Manufacturer  | In Submittals                |        |
|                |  | 1.3.2            | Wind Load Test                           | Once            | Manufacturer  | In Submittals                |        |
|                |  | 2.2.2.6          | Coating                                  | Once            | Manufacturer  | In Submittals                |        |
|                |  | 2.2.2.6          | Chalking                                 | Once            | Manufacturer  | In Submittals                |        |
|                |  |                  |  |                 |               |                              |        |
| 07 61 14.00 20 | STEEL STANDING SEAM ROOFING                              | 3.6              | Field Inspection                         | Upon Completion | QCS Manager   | During & Post Finish         |        |
|                |  | 1.3.3            | Structural performance                   | Once            | Manufacturer  | In Submittals                |        |
|                |  | 1.6.6            | Finish                                   | Once            | Manufacturer  | In Submittals                |        |
|                |  |                  |  |                 |               |                              |        |
| 07 84 00       | FIRESTOPPING   | 3.3              | Inspection                               | As Needed       | PSI           | During & Post                |        |
|                |  |                  |  |                 |               |                              |        |
| 08 11 13       | WOOD DOORS   | 2.4              | Cycle-slam                               | Once            | Manufacturer  | In Submittals                |        |
|                |  | 2.4              | Hinge loading resistance                 | Once            | Manufacturer  | In Submittals                |        |

| SPEC SECTION   | SPEC DESCRIPTION                           | SPEC PARAGRAPH # | TEST DESCRIPTION                       | FREQUENCY | PERFORMED BY: | DUE DATE                          | STATUS |
|----------------|--|------------------|--|-----------|---------------|-----------------------------------|--------|
|                |  |                  |  |           |               |                                   |        |
| 08 51 13       | ALUMINUM WINDOWS                           | 1.4.4            | Minimum condensation resistance factor | Once      | Manufacturer  | In Submittals                     |        |
|                |  | 1.11.2.3         | Standard Airblast Test                 | Once      | PSI           | Post Install                      |        |
|                |  |                  |  |           |               |                                   |        |
| 09 51 00       | ACOUSTICAL CEILINGS                        | 1.2.1            | Ceiling Attenuation Class and Test     | Once      | Manufacturer  | In Submittals                     |        |
|                |  |                  |  |           |               |                                   |        |
| 09 65 00       | RESILIENT FLOORING                         | 3.3              | Moisture, Alkalinity and Bond Tests    | As Needed | Subcontractor | Prior to Install                  |        |
|                |  |                  |  |           |               |                                   |        |
| 09 65 33       | CONDUCTIVE VINYL FLOORING                  | 3.5              | Testing                                | Once      | Subcontractor | 30 Days Post Install              |        |
|                |  |                  |  |           |               |                                   |        |
| 09 67 23.13    | STANDARD RESINOUS FLOORING                 | 1.4              | Records of Inspection                  | Once      | Subcontractor | Prior to Install                  |        |
|                |  |                  |  |           |               |                                   |        |
| 09 68 00       | CARPET                                     | 3.2              | Moisture and Alkalinity Tests          | As Needed | Subcontractor | Prior to Install                  |        |
|                |  |                  |  |           |               |                                   |        |
| 09 69 13       | RIGID WALL/CEILING SYSTEMS                 | 2.6              | Factory Test                           | Once      | Manufacturer  | In Submittal                      |        |
|                |  | 3.2.2            | Electrical Resistance                  | Once      | PSI           | Post Completion                   |        |
|                |  | 3.2              | Field Test                             | Once      | PSI           | Prior to Install                  |        |
|                |  |                  |  |           |               |                                   |        |
| 10 26 13       | WALL AND CORNER GUARDS                     | 2.2              | Corner Guards                          | Once      | QCS Manager   | Post Completion                   |        |
|                |  |                  |  |           |               |                                   |        |
| 12 24 13       | ROLLER WINDOW SHADES                       | 2.1              | Window Shades                          | Once      | QCS Manager   | Post Completion                   |        |
|                |  |                  |  |           |               |                                   |        |
| 21 13 13.00 10 | WET PIPE SPRINKLER SYSTEM, FIRE PROTECTION | 3.8              | Preliminary Test Report                | Once      | Subcontractor | 14 Days Prior to Charging System  |        |
|                |  | 3.9              | Final Acceptance Test Report           | Once      | PSI           | Within 14 Days of Charging System |        |
|                |  |                  |  |           |               |                                   |        |
| 21 13 17.00 10 | DRY PIPE SPRINKLER SYSTEM, FIRE PROTECTION | 3.8              | Preliminary Test Report                | Once      | Subcontractor | 14 Days Prior to Charging System  |        |
|                |  | 3.9              | Final Acceptance Test Report           | Once      | PSI           | Within 14 Days of Charging System |        |
|                |  |                  |  |           |               |                                   |        |
| 21 30 00       | FIRE PUMPS                                 | 3.9.2            | Preliminary Tests                      | Once      | Subcontractor | 14 Days Prior to Charging System  |        |
|                |  | 3.9.3            | Army Final Acceptance Test             | Once      | Government    | Within 14 Days of Charging System |        |

| SPEC SECTION   | SPEC DESCRIPTION                                     | SPEC PARAGRAPH # | TEST DESCRIPTION                          | FREQUENCY | PERFORMED BY: | DUE DATE        | STATUS |
|----------------|--|------------------|---|-----------|---------------|-----------------|--------|
|                |  |                  |   |           |               |                 |        |
| 22 00 00       | PLUMBING, GENERAL PURPOSE                            | 3.9              | Tests, Flushing and Disinfection          | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.9.1.1          | Test of Backflow Prevention Assemblies    | Once      | Subcontractor | Upon Completion |        |
|                |  |                  |   |           |               |                 |        |
| 22 15 14.00 40 | GENERAL SERVICE COMPRESSED-AIR SYSTEMS, LOW PRESSURE | 3.2.1.1          | Hydrostatic Testing                       | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.2.1            | Compressed Air Systems Testing            | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.2.1.1          | Valve-Operating Test                      | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.2.1.1          | Drainage Tests                            | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.2.1.1          | Pneumatic Testing                         | Once      | Subcontractor | Upon Completion |        |
|                |  |                  |   |           |               |                 |        |
| 23 05 93.06    | TESTING, ADJUSTING, AND BALANCING OF HVAC            | 3.1              | Design Review Report                      | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.6.2            | Systems Readiness Check                   | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.6.3            | TAB Report                                | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.6.4            | TAB Verification Report                   | Once      | Subcontractor | Upon Completion |        |
|                |  |                  |   |           |               |                 |        |
| 23 09 23.13 20 | BACnet DIRECT DIGITAL CONTROL SYSTEMS FOR HVAC       | 3.4.11           | Performance Verification Testing Report   | Once      | Subcontractor | Upon Completion |        |
|                |  |                  |   |           |               |                 |        |
| 23 11 25       | FACILITY GAS PIPING                                  | 3.17             | Testing                                   | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.17.1           | Pressure Test                             | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.17.3           | Test With Gas                             | Once      | Dominion      | Upon Completion |        |
|                |  |                  |   |           |               |                 |        |
| 23 23 00       | REFRIGERANT PIPING                                   | 3.5              | Refrigerant Piping Test                   | Once      | Subcontractor | Upon Completion |        |
|                |  |                  |   |           |               |                 |        |
| 23 52 00       | HEATING BOILERS                                      | 3.1              | Heating System Test                       | Once      | Subcontractor | Upon Completion |        |
|                |  |                  |   |           |               |                 |        |
| 23 82 02.00 10 | UNITARY HEATING AND COOLING EQUIPMENT                | 3.5              | Refrigerant Tests, Charging, and Start-up | Once      | Subcontractor | Upon Completion |        |
|                |  | 3.6              | System Performance Tests                  | Once      | Subcontractor | Upon Completion |        |

| SPEC SECTION   | SPEC DESCRIPTION                                 | SPEC PARAGRAPH # | TEST DESCRIPTION                                   | FREQUENCY       | PERFORMED BY: | DUE DATE                        | STATUS |
|----------------|--|------------------|--|-----------------|---------------|---------------------------------|--------|
|                |  |                  |  |                 |               |                                 |        |
| 26 20 00.00 06 | INTERIOR DISTRIBUTION SYSTEM                     | 3.5.2            | 600-Volt Wiring Test                               | Upon Completion | Subcontractor | Upon Completion                 |        |
|                |  | 3.5.5            | Grounding System Test                              | Upon Completion | Subcontractor | Upon Completion                 |        |
|                |  | 3.5.3            | Transformer Tests                                  | Upon Completion | Subcontractor | Upon Completion                 |        |
|                |  | 3.5.4            | Ground-fault Receptacle Test                       | Upon Completion | Subcontractor | Upon Completion                 |        |
|                |  |                  |  |                 |               |                                 |        |
| 26 27 13.10 30 | ELECTRIC METERS                                  | 3.3.1            | Acceptance Checks and Tests                        | Upon Completion | Edison        | Upon Completion                 |        |
|                |  |                  |  |                 |               |                                 |        |
| 26 29 23       | VARIABLE FREQUENCY DRIVE SYSTEMS UNDER 600 VOLTS | 3.2.1            | VFD Test   | Once            | Manufacturer  | Min. 28 Days Prior              |        |
|                |  | 3.2.2            | Performance Verification Test                      | Once            | Subcontractor | 14 Days Prior                   |        |
|                |  | 3.2.3            | Endurance Test                                     | Once            | Manufacturer  | Immediately After PV Test       |        |
|                |  |                  |  |                 |               |                                 |        |
| 26 41 00       | LIGHTING PROTECTION SYSTEM                       | 1.4.3            | Lighting Protection and Grounding System Test Plan | Once            | Subcontractor | Prior to Install                |        |
|                |  | 3.4.1            | Lighting Protection and Grounding System Test      | Once            | Subcontractor | Upon Completion                 |        |
|                |  |                  |  |                 |               |                                 |        |
| 26 51 00       | INTERIOR LIGHTING                                | 3.3              | Operating Test                                     | Upon Completion | Subcontractor | Upon Completion                 |        |
|                |  |                  |  |                 |               |                                 |        |
| 26 56 00       | EXTERIOR LIGHTING                                | 1.5.4            | LED Luminaire - IES LM-79 Test Report              | Upon Completion | Subcontractor | Upon Completion                 |        |
|                |  | 1.5.5            | LED Light Source - IES LM-80 Test Report           | Upon Completion | Subcontractor | Upon Completion                 |        |
|                |  | 3.2              | Operating Test                                     | Upon Completion | Subcontractor | Post 100 Hours Burn-in          |        |
|                |  |                  |  |                 |               |                                 |        |
| 27 10 00       | BUILDING TELECOMMUNICATIONS CABLING SYSTEM       | 3.5.1            | Telecommunications Cabling Testing                 | Upon Completion | Subcontractor | Upon Completion                 |        |
|                |  |                  |  |                 |               |                                 |        |
| 27 51 16       | RADIO AND PUBLIC ADDRESS SYSTEMS                 | 3.5              | Approved Test Procedures                           | Once            | Manufacturer  | Notify CO 14 Days Prior to Test |        |
|                |  | 3.5              | Acceptance Test                                    | Once            | Subcontractor | Notify CO 14 Days Prior to Test |        |
|                |  |                  |  |                 |               |                                 |        |
| 27 51 23.10    | INTERCOMMUNICATION SYSTEM                        | 3.4              | Acceptance Test                                    | Once            | Subcontractor | Notify CO 10 Days Prior to Test |        |

| SPEC SECTION   | SPEC DESCRIPTION  | SPEC PARAGRAPH # | TEST DESCRIPTION                                | FREQUENCY | PERFORMED BY: | DUE DATE                        | STATUS |
|----------------|---|------------------|---|-----------|---------------|---------------------------------|--------|
|                |   |                  |   |           |               |                                 |        |
| 28 13 00.00 48 | PHYSICAL ACCESS CONTROL SYSTEM                            |                  | Test Reports                                    | Once      | Manufacturer  | In Submittals                   |        |
|                |   |                  | Investigation Reports                           | As Needed | Subcontractor | As Needed                       |        |
|                |   |                  | Final Acceptance Test and Operational Procedure | Once      | Government    | Notify CO 14 Days Prior         |        |
|                |   |                  |   |           |               |                                 |        |
| 28 23 23.00 10 | CLOSED CIRCUIT TELEVISION SYSTEMS                         | 1.4.4            | Performance Verification Test                   | Once      | Subcontractor | Prior to Testing                |        |
|                |   | 1.3.2            | Test Procedures and Reports                     | As Needed | Subcontractor | 7 Days Post Test                |        |
|                |   | 3.5.1            | Original Copies of All Test Data                | Once      | Subcontractor | Upon Government Approval        |        |
|                |   | 3.5.2            | Report Describing All Results                   | Once      | Subcontractor | Upon Completion of Testing      |        |
|                |   |                  |   |           |               |                                 |        |
| 28 31 76       | INTERIOR FIRE ALARM AND MASS NOTIFICATION SYSTEM          | 3.6              | Field Quality Control                           | Daily     | Subcontractor | End of Day                      |        |
|                |   | 3.6.1            | Testing Procedures                              | Once      | Subcontractor | 60 Days Prior to Test           |        |
|                |   | 2.9.3            | Smoke Sensor Testing                            | Once      | Subcontractor | Upon Approval of Test Procedure |        |
|                |   |                  |   |           |               |                                 |        |
| 31 00 00.00 06 | EARTHWORK   | 3.17             | Testing   | As Needed | PSI           | Upon Completion                 |        |
|                |   |                  |   |           |               |                                 |        |
| 31 32 11       | SOIL SURFACE EROSION CONTROL                              | 2.2.2            | Geosynthetic Binders                            | As Needed | PSI           | Upon Completion                 |        |
|                |   | 2.3.10           | Hydraulic Mulch                                 | As Needed | PSI           | Upon Completion                 |        |
|                |   | 2.4              | Geotextile Fabrics                              | As Needed | PSI           | Upon Completion                 |        |
|                |   | 2.5              | Erosion Control Blankets                        | As Needed | PSI           | Upon Completion                 |        |
|                |   | 2.8              | Sand  | As Needed | PSI           | Upon Completion                 |        |
|                |   | 2.8              | Gravel  | As Needed | PSI           | Upon Completion                 |        |
|                |   |                  |   |           |               |                                 |        |
| 32 01 19       | FIELD MOLD SEALANTS FOR SEALING JOINTS IN RIGID PAVEMENTS | 1.3.1            | Certified Copies of the Test Reports            | Once      | Manufacturer  | In Submittal                    |        |
|                |   |                  |   |           |               |                                 |        |
| 32 11 16       | BASE COURSE FOR RIGID AND SUBBASES FOR FLEXIBLE PAVING    | 1.5              | Sampling and Testing                            | As Needed | PSI           | Prior to Commencement           |        |
|                |   | 1.5.2.4          | Field Density Tests                             | As Needed | PSI           | Upon Completion                 |        |
|                |   |                  |   |           |               |                                 |        |
| 32 12 16       | HOT MIX ASPHALT (HMA) FOR ROADS                           | 2.2              | Aggregates                                      | Once      | PSI           | 14 Days Prior                   |        |
|                |   | 3.9.2.10         | QC Monitoring                                   | As Needed | PSI           | Daily                           |        |
|                |   |                  |   |           |               |                                 |        |
| 32 16 13       | CONCRETE SIDEWALKS AND CURBS AND GUTTERS                  | 3.8              | Field Quality Control                           | As Needed | PSI           | Upon Completion                 |        |

| SPEC SECTION   | SPEC DESCRIPTION                       | SPEC PARAGRAPH # | TEST DESCRIPTION                      | FREQUENCY       | PERFORMED BY: | DUE DATE                | STATUS |
|----------------|--|------------------|---------------------------------------|-----------------|---------------|-------------------------|--------|
|                |  |                  |                                       |                 |               |                         |        |
| 32 17 23.00 20 | PAVEMENT MARKINGS                      | 2.1.1            | Paints for Roads and Streets          | Once            | Subcontractor | Prior to Commencement   |        |
|                |  |                  |                                       |                 |               |                         |        |
| 32 92 19       | SEEDING                                | 2.2.3            | Topsoil Composition Test              | As Needed       | PSI           | Prior to Commencement   |        |
|                |  |                  |                                       |                 |               |                         |        |
| 33 11 00       | WATER DISTRIBUTION                     | 2.2.2.17         | Disinfection                          | Once            | Subcontractor | Prior to Turnover       |        |
|                |  |                  |                                       |                 |               |                         |        |
| 33 30 00       | SANITARY SEWERS                        | 2.4              | Reports                               | Once            | PSI           | Daily                   |        |
|                |  |                  |                                       |                 |               |                         |        |
| 33 51 15       | NATURAL-GAS DISTRIBUTION               | 3.13.2           | Pressure and Leak Tests               | Once            | Subcontractor | Prior to Turnover       |        |
|                |  |                  |                                       |                 |               |                         |        |
| 33 71 02       | UNDERGROUND ELECTRICAL DISTRIBUTION    | 3.15.1           | Field Acceptance Checks and Tests     | Upon Completion | Subcontractor | Upon Completion         |        |
|                |  | 3.3              | Cable Installation Plan and Procedure | As Needed       | Subcontractor | Prior to Commencement   |        |
|                |  |                  |                                       |                 |               |                         |        |
| 33 82 00       | TELECOMMUNICATIONS OUTSIDE PLANT (OSP) | 3.5.1            | Pre-installation Tests                | Once            | Subcontractor | 5 Days Prior to Use     |        |
|                |  | 3.5.2            | Acceptance Test                       | Once            | Government    | Notify CO 14 Days Prior |        |
|                |  | 1.6.3            | Outside Plant Test Plan               | Once            | Subcontractor | 30 Days Prior           |        |



EXHIBIT H

DAILY CQC REPORT

CONTRACTOR QUALITY CONTROL REPORT

**3** PAGES



3. Work performed today: (Indicate location and description of work performed by prime and/or subcontractors by letter in table above).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Results of control activities: (Indicate whether P - Preparatory, I - Initial, or F - Follow-up Phase. When a P or I meeting is conducted, complete attachment 1-A or 1B, respectively. When network analysis system is used, identify work by use of I-J numbers.)

[illegible]

5. Test performed as required by plans and/or specifications:

[illegible]

6. Material received:

---

---

---

---

---

---

7. Submittals Reviewed:

| (a) Submittal No. | (b) Spec/Plan Reference | (c) By Whom | (d) Action |
|-------------------|-------------------------|-------------|------------|
| _____             | _____                   | _____       | _____      |
| _____             | _____                   | _____       | _____      |
| _____             | _____                   | _____       | _____      |
| _____             | _____                   | _____       | _____      |

8. Offsite surveillance activities, including action taken:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. Job Safety: (Report violations; corrective instructions given; corrective actions taken).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10. Remarks: (Instructions received or given. Conflict(s) in Plans and/or specifications).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Contractor's Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.

\_\_\_\_\_  
Authorized QA Mgr at Site

\_\_\_\_\_  
Date

EXHIBIT I

PREPARATORY MEETING CHECKLIST

3 PAGES

|  |               |                       |  |
|--|---------------|-----------------------|--|
| <b>Preparatory Meeting Checklist (to support each DFOW)</b>    |               |                       |  |
| <b>Project Name: INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO</b> |               |                       | <b>Project Number: W912QR-16-C-003</b> |
| <b>DFOW:</b>   |               |                       |  |
| <b>Date:</b>   | <b>Sheet:</b> | <b>Spec. Section:</b> | <b>Page: <u>1</u> of <u>3</u></b>      |

|                          |   |                 |                           |
|--------------------------|---|-----------------|---------------------------|
| <b>PERSONNEL PRESENT</b> | USACE Representative Notified? YES <input type="checkbox"/> NO <input type="checkbox"/> |                 |                           |
|                          | <b>Name</b>   | <b>Position</b> | <b>Company/Government</b> |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          | Review submittals and/or submittal register. Have all submittals been approved? YES     |                 |                           |
|                          | If no, what items have not been submitted?  |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          | Are all materials on hand? YES <input type="checkbox"/> NO <input type="checkbox"/>     |                 |                           |
|                          | If no, what items are missing?  |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          | Check approved submittals against delivered material. (This should be done as material  |                 |                           |
|                          | Comments:   |                 |                           |
| <b>MATERIAL STORAGE</b>  | Are materials stored properly? YES <input type="checkbox"/> NO <input type="checkbox"/> |                 |                           |
|                          | If no, what action is taken?  |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |
|                          |   |                 |                           |

|  |        |                |  |
|--|--------|----------------|--|
| <b>Preparatory Meeting Checklist (to support each DFOW)</b>    |        |                |  |
| Project Name: <b>INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO</b> |        |                | Project Number: <b>W912QR-16-C-003</b> |
| DFOW:  |        |                |  |
| Date:  | Sheet: | Spec. Section: | Page: <u>2</u> of <u>3</u>             |

|                                       |   |
|---------------------------------------|---|
| <b>SPECIFICATIONS</b>                 | <i>Review each paragraph of specifications.</i>                     |
|                                       |   |
|                                       |   |
|                                       | <i>Discuss procedure for accomplishing the work.</i>                |
|                                       |   |
|                                       |   |
|                                       | <i>Clarify any differences.</i>                                     |
|                                       |   |
|                                       |   |
| <b>PRELIMINARY WORK &amp; PERMITS</b> | <i>Ensure preliminary work is correct and permits area on file.</i> |
|                                       | <i>If no, what action is taken?</i>                                 |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       |   |
| <b>TESTING</b>                        | <i>Identify test to be performed, frequency and by whom.</i>        |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       | <i>When required?</i>   |
|                                       |   |
|                                       |   |
|                                       | <i>Review testing plan.</i>   |
|                                       |   |
|                                       |   |
|                                       | <i>Have test facilities been approved?</i>                          |
|                                       |   |
|                                       |   |

|   |        |                |   |
|---|--------|----------------|---|
| <b>Preparatory Meeting Checklist (to support each DFOW)</b>       |        |                |   |
| Project Name:<br><b>INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO</b> |        |                | Project Number:<br><b>W912QR-16-C-003</b> |
| DFOW  |        |                |   |
| Date:   | Sheet: | Spec. Section: | Page: <u>3</u> of <u>3</u>                |

|   |   |  |
|---|---|--|
| SAFETY                                    | Site Safety Plan Approved? YES <input type="checkbox"/> NO <input type="checkbox"/> |  |
|   | Review Site Safety Plan:  |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
| MEETING COMMENTS                          | Comments during meeting:  |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
| WORKSHEETS                                | Worksheets:   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
| OTHER ITEMS OR REMARKS                    | Other items or remarks:   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
| Reported By:                              | X _____   |  |
| (Contractor Quality Control Manager CQCM) |   |  |



EXHIBIT J

INITIAL INSPECTION CHECKLIST

1 PAGE

## Initial Inspection Checklist

**Project Name:** *INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO*

**Project Number:**

*W912QR-16-C-003*

**DFOW:**

**Date:**

**Sheet:**

**Spec. Section:**

**Page:** \_\_\_\_ of \_\_\_\_

| No. | Item  | Yes | No | N/A |
|-----|---|-----|----|-----|
| 1   | Was the production foreman present?                                     |     |    |     |
| 2   | Material  |     |    |     |
| a)  | Were materials inspected for compliance?                                |     |    |     |
| b)  | Were corrective actions taken for defective material?                   |     |    |     |
| c)  | Were corrective actions appropriate?                                    |     |    |     |
| d)  | Were any deviations accepted?   |     |    |     |
| 3   | Installation Requirements   |     |    |     |
| a)  | Did work comply with specifications or plans?                           |     |    |     |
| b)  | Was workmanship satisfactory?   |     |    |     |
| c)  | Were corrective actions appropriate?                                    |     |    |     |
| d)  | Were any deviations accepted?   |     |    |     |
| 4   | Tests   |     |    |     |
| a)  | Were tests being performed?   |     |    |     |
| b)  | Was testing frequency satisfactory?                                     |     |    |     |
| c)  | Were test samples or locations appropriate?                             |     |    |     |
| d)  | Was testing quality coordinated with Mechanical/Electrical technicians? |     |    |     |
| 5   | Inspections   |     |    |     |
| a)  | Was inspection done by the QC Inspector in the Prep. meeting?           |     |    |     |
| b)  | Was the inspection frequency as established in the Prep. Meeting?       |     |    |     |
| c)  | Were critical inspections satisfactory?                                 |     |    |     |
| d)  | Was the inspection satisfactory?  |     |    |     |
| 6   | Safety  |     |    |     |
| a)  | Was the safety officer present?   |     |    |     |
| b)  | Were the safety requirements followed?                                  |     |    |     |
| c)  | Were the safety requirements modified?                                  |     |    |     |

Remarks (explanations required for "No" responses and if deviations were accepted):

*Reported By:*

*(Contractor Quality Control  
Manager CQCM)*

X \_\_\_\_\_

EXHIBIT K

NON-CONFORMANCE DEFICIENCY REPORT

1 PAGE

|  |                                     |                                     |                                |
|--|-------------------------------------|-------------------------------------|--------------------------------|
| <b>Non-Conformance Deficiency Report</b>                                     |                                     |                                     | <b>No.</b> _____               |
| <b>INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO</b>                             |                                     |                                     | <b>W912QR-16-C-003</b>         |
| Structural <input type="checkbox"/>  | Mechanical <input type="checkbox"/> | Electrical <input type="checkbox"/> | Civil <input type="checkbox"/> |
| Date:  | Location:                           | Spec. Section:                      | Spec. Paragraph: _             |
| <b>Non-Conforming Condition:</b><br><br><br><br><br><br><br><br><br><br><br> |                                     |                                     |                                |
| <b>Reported By (Quality Control Representative):</b><br><br><br>             |                                     |                                     | <b>Date:</b><br><br>           |
| <b>Disposition:</b><br><br><br><br><br><br><br><br><br><br><br>              |                                     |                                     |                                |
| <b>Dispositioned By (Project Engineer):</b><br><br><br>                      |                                     |                                     | <b>Date:</b><br><br>           |
| <b>Re-Inspected By (Quality Control Representative):</b><br><br><br>         |                                     |                                     | <b>Date:</b><br><br>           |
| <b>Accepted By CQCM:</b><br><br><br>   |                                     |                                     | <b>Date:</b><br><br>           |

EXHIBIT L

NON-CONFORMANCE DEFICIENCY REPORT  
LOG

1 PAGE

| Non-Conformance Deficiency Report Log                             |             |   |   |
|---|-------------|---|---|
| Project Name:<br><i>INDOOR FIRING RANGE, YOUNGSTOWN ARS, OHIO</i> |             |   | Project Number:<br><i>W912QR-16-C-003</i>     |
|   |             |   |   |
|   |             | Date:                                       | Page:    __ of __                             |
| No.   | Description | Completed by<br>Construction<br>(Sign/Date) | Accepted by<br>Quality Control<br>(Sign/Date) |
|   |             |   |   |
|   |             |   |   |
|   |             |   |   |
|   |             |   |   |
|   |             |   |   |
|   |             |   |   |
|   |             |   |   |
|   |             |   |   |

## EXHIBIT M

### OTHER CQC PERSONNEL

## OTHER CQC PERSONNEL

### SCOTT OWEN

**Employer:** Mike Coates Construction Co., Inc.

**Role This Project:** Project Superintendent, Overseeing all Self-Performed and Subcontracted Work

**Qualifications:**

35 years construction experience. Started as an apprentice carpenter and progressed to journeyman, foreman, and is now a field superintendent.

**Responsibilities:**

Contractor field coordination; safety compliance; quality control inspections; weekly look ahead schedules; maintain record drawings; punch list support; coordinate manpower for self-performed work; coordinate subcontractors.

**Applicable Classroom Training:**

**USACE Construction Quality Management for Contractors LRL-06-17-01072  
Louisville, December 13-14, 2016, Expiring December 14, 2021, attached.**

|   |                                  |                                |  |
|---|----------------------------------|--------------------------------|--|
|   |                                  |                                |  |
| USACE LEARNING CENTER<br>HUNTSVILLE, ALABAMA  |                                  |                                |  |
|   |                                  |                                |  |
| <b>CERTIFICATE</b>  |                                  |                                |  |
| Scott Owen  |                                  |                                |  |
| LRL-06-17-01072   |                                  |                                |  |
| has completed the Corps of Engineers and Naval Facility Engineering Command Training Course   |                                  |                                |  |
| <b>CONSTRUCTION QUALITY MANAGEMENT FOR CONTRACTORS - #784</b>   |                                  |                                |  |
| Dayton, OH  | Dec. 13-14, 2016                 | LRL - Louisville               | Roger K. Riddick, PE   |
| Location  | Training Date(s)                 | Instructional District/ NAVFAC | CQM-C Manager  |
| Douglas W. Sheffer  | Douglas.W.Sheffer@usace.army.mil | 502-315-7426                   |                                  |
| Facilitator/Instructor  | Email                            | Telephone                      | Facilitator/Instructor Signature   |
| THIS CERTIFICATE EXPIRES FIVE YEARS FROM DATE OF ISSUE  |                                  |                                | <br>Chief, USACE Learning Center |



**RICK PLANT II**

**Employer:** York Mahoning Mechanical Contractors, Inc.

**Role This Project:** Foreman, HVAC Subcontractor

**Qualifications:**  
12 years experience in HVAC.

**MIKE WITKOSKI**

**Employer:** Penn-Ohio Electric

**Role This Project:** Foreman, Electrical Subcontractor

**Qualifications:**  
28 years experience as an electrician.

**JOSEPH J. WILKES**

**Employer:** The Conti Corporation

**Role This Project:** Foreman, Plumbing Subcontractor

**Qualifications:**  
See Attached.

# *The* **CONTI** *Corporation*

*Founded in 1960 by Ralph L. Conti*

Phone: 330-536-6241 Fax: 330-536-8130



## **Jobsite Foreman: Joseph "Jay" Wilkes**

Wilkes is a licensed journeyman plumber/pipefitter, having completed the five year apprenticeship program in 1986.

He began his employment with various mechanical contractors as a journeyman plumber/pipefitter. He worked on a variety of commercial, industrial, institutional, and retail projects, and was promoted to Superintendent in 1990.

He joined The Conti Corporation in 2011 and was assigned as Superintendent overseeing the Upson School plumbing project. In 2012, Wilkes was assigned to the Toronto K-12 School plumbing project, and in 2013, Wilkes was assigned to oversee the plumbing for Conti's multi-million dollar contract at the St. Elizabeth Hospital Boardman Campus Expansion.

In 2014, The Conti Corporation assigned Wilkes to the Beaver Local K-12 project in East Liverpool, Ohio. In 2015, he was assigned to the Streetsboro Elementary School project in Streetsboro, Ohio.

Wilkes is a member of Plumbers/Pipefitters Local 396, and he is OSHA-30 certified; VA-21 certified; Med-Gas certified; and Brazing certified.

**ATTACHMENT 1F**  
**SAMPLE SAFETY PLAN**



# MIKE COATES

---


## CONSTRUCTION CO., INC.

### Youngstown Indoor Firing Range Accident Prevention Plan (APP)

---

Youngstown Air Reserve Station  
Building 521  
3976 King Graves Road  
Vienna, OH 44473

#### Signature Sheet

| <u>Printed Name</u> | <u>Job Title</u>                           | <u>Signature</u>   | <u>Phone Number</u>   |
|---------------------|--|--|---|
| Justin Snyder       | Safety Consultant,<br>CP, QP, Back-up SSHO |  | Cell: 330-620-0177<br>Office: 330-477-1100<br>Fax: 330-477-1200 |
| Mike Coates Sr.     | Corporate Officer,<br>President            |  | Office: 330-652-0190<br>Cell: 330-540-7909                      |
| Tom Leskosky        | Corporate Safety Staff,<br>SSHO, FPCP      |  | Office: 330-652-0190<br>Cell: 330-482-0853                      |
| Steve Balent        | Project Manager, Plan                      |  | Office: 330-652-0190  |
| Jim Huffman         | Approver, CP                               |  | Office: 330-652-0190  |
| Scott Owen          | Job Superintendent,<br>FPCP                |  | Cell: 330-502-4187  |
| N/A                 | Certified Industrial                       |  |   |
| N/A                 | Hygienist                                  |  |   |
| N/A                 | Certified Safety<br>Professional           |  |   |

This sheet is to be used as a reference in ensuring the proper personnel have reviewed and acknowledged this plan. Certifications and training documentation may be provided by request from each Qualified, Competent, or Safety Staff person when deemed necessary by the Contract Manager.

# **Background Information**

## **Contractor**

Mike Coates Construction Co., Inc.  
800 Summit Ave.  
Niles, OH 44446  
P: (330) 652-0190  
F: (330) 652-3463

## **Contract Number**

W912QR-16-C-0031/W912QR-16-R-0042

## **Project Name**

[insert project name here]

## **Project Contacts**

Jim Huffman-Project Manager, Mike Coates Construction Co., Inc.  
P: (330) 652-0190

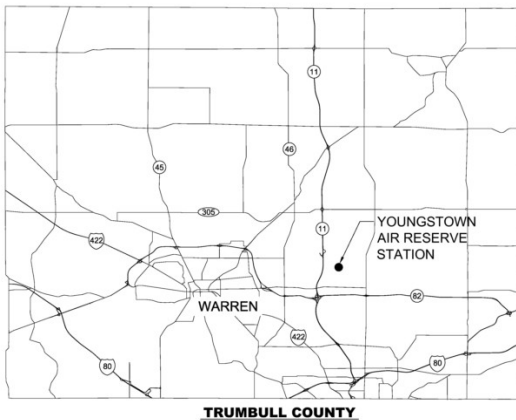
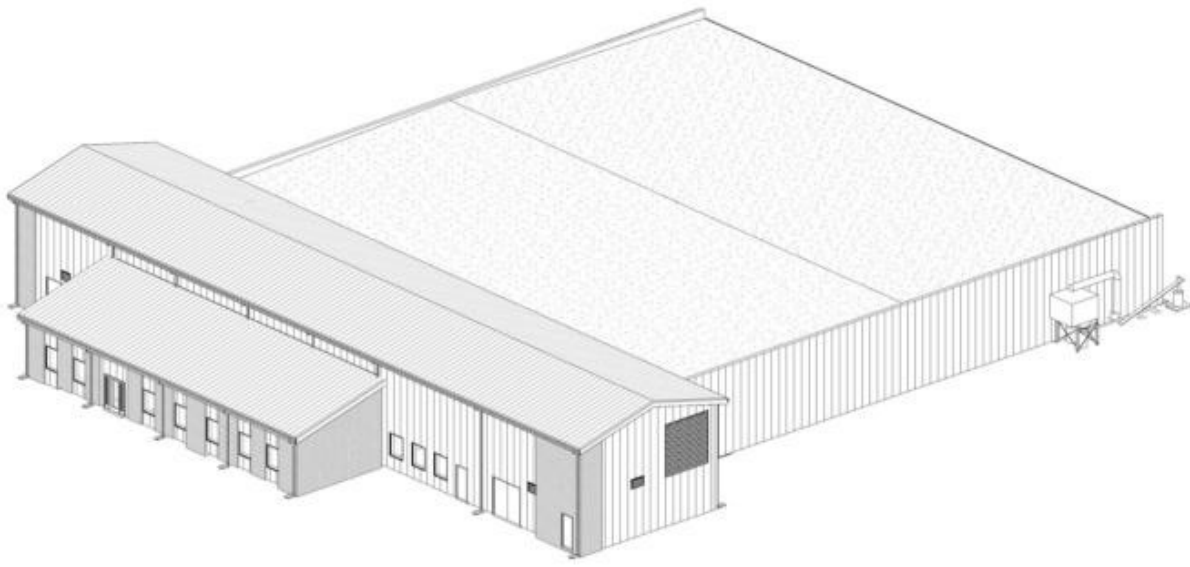
Tom Leskosky-Corporate Safety Staff, SSHO, Mike Coates Construction Co., Inc.  
P: (330) 921-1644

Mike Coates Sr.-CEO, Mike Coates Construction Co., Inc.  
P: (330) 540-7909

TBD-Safety Consultant, Safety Resources Company of Ohio, Inc. P: (330)  
620-0177

## **Document Prepared By**

TBD-Safety Consultant, Safety Resources Company of Ohio, Inc. (Under direct authority from  
Mike Coates Construction Co., Inc.)



## Brief Project Description

This project consists of the excavation of existing grade and construction of the new [insert project name here] at [insert project location here] in [insert city, state here]. After the [insert project description here] has been completed demolition of the old [if applicable, insert building description here] will be completed. Throughout this project tasks including excavation, concrete placement, masonry, structural steel framing, and demolition work will be performed. Finishes of interior areas will follow rough construction.

There will also be asphalt and landscaping work included in the exterior finishes. With these tasks, come potential risks and hazards. This Accident Prevention Plan ensures that potential and recognized hazards will not lead to injury or exposure.

## Introduction

The purpose of this document is to address all potential hazards included in this project to effectively protect the health and safety of all affected employees as well as the environment. This plan has been written in accordance with all required regulating bodies including, but not limited to the Occupational Safety and Health Administration (OSHA), the National Fire Protection Agency (NFPA), and the American National Standards Institute (ANSI).

By implementing this plan, Mike Coates Construction Co., Inc. will ensure all recognized potential hazards will be abated, as well as all initially unidentified hazards will be addressed during the duration of the project.

## Equipment to Be Used

For this plan, the major pieces of equipment that may be used during the duration of the project are as follows:

- Site surveying, testing, locating, and other equipment used to map the site
- Dump trucks, excavators, backhoes, bulldozers, front end loaders, graders, scrapers, rollers, trenchers and other earthmoving equipment for earthmoving and demolition as needed
- Tree removal equipment as needed including saws and chippers
- Mobile cranes, telehandlers, forklifts, and other material handling equipment
- Concrete work equipment such as power trowels, mix trucks, portable mixers, portable grout silos, and other pieces of equipment used in concrete/masonry applications
- Hand and power tools covered throughout this APP
- Generators and other power transmission equipment
- Portable heaters and other temporary air moving equipment

## Anticipated High Risk Activities

For this plan, the anticipated high-risk activities are as follows:

- Heavy excavation work (Cave-in potential)
  - Trenching and excavating related work
- Concrete placement/formwork (Silica exposure potential, fall hazard potential)
  - Foundations and walls
- Structural steel erection and detail (Fall hazard exposure potential, high heat exposure potential)
  - Welding

- Torch cutting
  - Brazing
  - Decking placement
- Framing (Fall hazard exposure potential)
  - Setting trusses, joists, and other prefabricated building materials at height
  - Constructing load bearing walls
  - Sheeting floors
- Utilities (Electrocution potential, explosion and fire hazard potential)
  - Electrical installation work throughout the project
  - Gas installation work throughout the project
- Finishes (Silica exposure potential, explosion and fire hazard potential)
  - Masonry installations including block and brick

## Major Phases and Work Anticipated

For this plan, the major phases of this project are as follows:

1. Storm water protection and sediment basin establishment
2. Site work including grade changes, rough grading utility installations, sanitary installations, erosion control, and foundation preparation
3. Foundation installation including cast-in-place concrete with reinforcing steel
4. Installation of slab-on-grade pads
5. Poured walls using cast in place forming
6. Steel structure placement and detail
7. Framing and sheeting of sides and roof
8. Masonry veneer installation
9. Door and window installation
10. Utility rough-ins
11. Roofing work (Low slope roofs according to initial plans) with standing seam steel sections
12. Utility installations including but not limited to electrical, sewer, sanitary, HVAC, and gas
13. Finishes on the interior including drywall, paint, trim, etc.
14. Installation of [if applicable, insert building description here] finishes and equipment
15. [if applicable, insert building description here] finishes and installation of [if applicable, insert building description here] safety equipment and signage
16. Finishes on the exterior including sheet metal and siding
17. Asphalt and paving
18. Landscaping and site finishes
19. Demolition of existing Open Firing [if applicable, insert building description here] including curbs, drains, asphalt pavement, sidewalks, [if applicable, insert building



description here] Building, and HVAC equipment

## **Statement of Safety and Health Policy**

Mike Coates Construction is committed to providing a safe and healthful work environment for its employees and preventing occupational illness and injury. As the employer, Mike Coates Construction is responsible for the health and safety of its employees. It is the goal of all employers on site to have no occupational injuries or illnesses throughout the project entirety. It is also the goal of Mike Coates Construction to have a site free from recognized and potential hazards. By following all standards of federal regulatory agencies including but not limited to OSHA, ANSI, and NIOSH, contractors will maintain a jobsite free from recognized and potential hazards which could lead to injury or illness.

Mike Coates Construction employees shall be committed to working within regulations and rules set forth by the employer without fear of reprisal when hazards are recognized then abated.

This document shall be available to all employees on the worksite. The specific location shall be accessible to all employees including subcontractors and other visitors to the site. This document is to be followed by all contractors and subcontractors onsite. Copies of this APP will be provided to all subcontractors before work starts.

Site specific objectives include the following:

- Zero injuries and illnesses onsite
- Corporate backing of safety and health policies and procedures
- Positive and successful safety culture while following [insert client's name here] safety and health regulations and standards

## **Responsibilities and Lines of Authority**

It is the responsibility of the employer to implement and maintain a safety and health program to protect all their own and other employees, including subcontractors, from recognized and potential hazards. A disciplinary policy will come into effect when employees do not follow said program requirements. Supervisors and managers are to be responsible for the safety and health of the site. This includes exercising stop work authority when needed, ensuring abatements are done in a feasible timeframe, as well as following all [insert client's name here] and other regulations. Failure to do so will lead to disciplinary action.

## SSHO Responsibilities – Tom Leskosky

- Shall be qualified in accordance to [insert client's name here] Safety and Health Standards
- Shall be trained to the OSHA 30-hour requirements or equivalent per [insert client's name here] Safety and Health Standards. Only official OSHA 30hr cards will be accepted or, if equivalent training is provided, appropriate instructor qualifications.
- Familiarized with health and safety regulations related to his/her area of responsibility.
- Develop programs and technical guidance to identify and remove physical, chemical, and biological hazards from facilities, operations, and sites.
- Direct, implement, and coordinate health and safety program elements and activities within area of responsibility.
- Require all employees to be trained to properly use approved individual personal protective equipment and safety devices, as outlined in Mike Coates Construction's individual safety policies and procedures.
- Develop and maintain accident and incident investigation and reporting procedures and systems to be used by onsite supervisory personnel. Ensure the investigation of serious or reportable accidents and act to eliminate accident causes. Reportable incidents consist of fatalities, lost workday cases, and without lost workdays requiring medical treatment.
- Ensure the review of all accidents/incidents with Supervisory Personnel and workers involved.
- Ensure accident reports and Workers' Compensation forms are completed and submitted as appropriate.
- Ensures that corrective action is taken immediately to eliminate the cause of the accident/near miss.
- Ensure that Onsite Supervisory Personnel requires that all approved safety equipment is available, maintained, used and stored correctly.
- Ensure that all persons within area of responsibility receive job safety and health training as required.
- Conduct (monthly/quarterly) health and safety inspections of work sites. Directs correction of unsafe conditions when needed.
- Conduct (weekly/monthly) safety briefings with all Supervisors and/or workers (regardless of status).
- Ensure that Supervisory Personnel are aware of and comply with requirements of each individual safety policy and procedure.
- Recommend and administer disciplinary action for repeat violators of health and safety rules as outlined in Mike Coates Construction's individual safety policies and procedures.

- Maintain copies of applicable programs and safety forms in the work area, in accordance with our Mike Coates Construction individual safety policies and procedures (i.e., SDS sheets, safety training logs/sheets, OSHA 300 Injury Log.
- With the approval of the President, the Safety Representative and/or Supervisory Personnel may delegate the responsibility of various aspects of the Disciplinary Program to a Qualified Organization (as approved by the President). However, the Safety Representative and/or Supervisory Personnel's ultimate responsibility for his/her aspects of the program cannot be delegated.

### Competent (CP) and/or Qualified Person(s) – Scott Owen

- Shall be qualified in accordance to [insert client's name here] Safety and Health Standards
- Shall be trained to the OSHA 30-hour requirements or equivalent per [insert client's name here] Safety and Health Standards. Only official OSHA 30hr cards will be accepted or, if equivalent training is provided, appropriate instructor qualifications. Please refer to the Appendices for certificates of completion for CP and QP.
- Be familiar with, explain, and enforces health and safety regulations that apply to company operations within his/her area of responsibility.
- Ensure that approved safety devices and approved personal protective equipment (PPE) is being used and properly cleaned, inspected and stored by persons under his/her supervision.
- Instruct and train all persons within area of responsibility in the company's individual safety policies and procedure requirements.
- Conduct frequent and regular safety and health inspections of his/her work area(s) and ensure that no unsafe condition(s) exist in area of responsibility.
- Recommend and administer disciplinary action for repeat violators of health and safety rules as outlined in Mike Coates Construction's individual safety policies and procedures.
- Conduct weekly (or more often if needed) safety briefings with all workers under his/her supervision.
- Ensure that injuries and illnesses are treated promptly and reported properly.
- Act on reports of hazards or hazardous conditions reported to them by all individuals.
- With the approval of the Safety Representative and/or Supervisory Personnel, the Supervisor may delegate the responsibility of various aspects of the Disciplinary Program to a Qualified Organization (as approved by the Safety Representative and/or Supervisory Personnel). However, the Supervisor's ultimate responsibility for his/her aspects of the program cannot be delegated

For an illustration of Lines of Authority, please refer to the Appendices.

## Risk Management

To reduce the risks and to avoid incidents and injuries, this project will utilize a risk management process. This process includes the use of an Activity Hazard Analysis (AHA). Contractors and other individual employers may utilize their own form of AHA such as a Job Safety Analysis (JSA) or Job Hazard Analysis (JHA). The AHA should be used during daily inspections to ensure the effectiveness of safety and health controls listed on the AHA.

An AHA will be developed by the contractor or subcontractor responsible for the specific task for every operation involving tasks presenting hazards. All activities listed in the project schedule will require an AHA. At minimum, an AHA shall list the defined activities being performed, safety and/or health hazards associated with each task, and safety and environmental controls to abate each hazard. All AHA's shall be signed and dated by the on-site superintendent, site safety officer, and competent person before the task begins. Initial AHA's shall be submitted and accepted at preparatory meetings before the start of the task(s). Any changes to the AHA shall be reviewed and signed by the onsite superintendent, site safety officer, and competent person before the new tasks are initiated. The AHA will then be reviewed by all affected employees before the specific task(s) begin.

No work by the contractor shall be performed unless a designated Competent Person or Site Safety and Health Officer is present on the site per [insert client's name here] regulations. Communication of AHA content shall be completed with said employees before work starts.

In the event of non-compliance by any contractor or subcontractor onsite including (but not limited to) not following OSHA, [insert client's name here], ANSI, NIOSH regulations as well as Mike Coates Construction Safety Policies and Procedures, disciplinary action shall be taken by the Mike Coates Construction. A copy of the Mike Coates Construction's Disciplinary Policy may be obtained from their onsite management. Lines of authority for disciplinary action will be followed as described in Mike Coates Construction's Disciplinary Policy. All safety and health deficiencies shall be handled on a case by case basis ensuring a thorough abatement and discipline when necessary.

|                         |   |
|-------------------------|---|
| <b>First Violation</b>  | <ul style="list-style-type: none"> <li>▪ Verbal warning documented in personnel file.</li> </ul>  |
| <b>Second Violation</b> | <ul style="list-style-type: none"> <li>▪ Verbal and written warning with copy to union representative (if applicable).</li> </ul>   |
| <b>Third Violation</b>  | <ul style="list-style-type: none"> <li>▪ Suspended from job site for three (3) days.</li> </ul>   |
| <b>Fourth Violation</b> | <ul style="list-style-type: none"> <li>▪ Employment terminated for period of six (6) months, or at the discretion of Coates Construction which shall be not less than six (6) months with notification in writing to union representative (if applicable).</li> </ul> |

## Subcontractors and Suppliers

The subcontractors for the following DFOWs/activities are not known at this time, but additional information will be submitted to the APP for acceptance prior to the start of any activities listed. Since the Controlling Contractor has over-all authority of the site, it is their responsibility to ensure a safe and healthful jobsite. All subcontracted employers and suppliers must comply with this program, OSHA regulations, and regulations and standards set forth by the most current edition of EM 385-1-1. The Controlling Contractor may request training and/or other safety and health documentation (not considered confidential) at any time throughout the duration of the project. In the event the Controlling Contractor deems a contractor or subcontractor unsafe, disciplinary action towards said employers will be administered at the discretion of the Controlling Contractor.

## Training

New employees including prime and subcontractor employees shall receive adequate training on site specific hazards before they begin work. They must also receive mandatory training for tasks that include explosive actuated tools, confined space entry, crane operation, vehicle operation, HAZWOPER training and certification (when required), personal protective equipment, Lockout/Tagout, fire protection, emergency response procedures, hazard communication, etc. It is the responsibility of the employer to provide the training at no cost to the employee when their jobs or tasks require it. If an employee recognizes an unsafe act or condition, they may exercise their right to stop work until the hazard has been eliminated completely.

Emergency response policies and procedures for this site shall be communicated to each employee upon initial employment and/or entry to this site by the controlling contractor.

Periodic training for a variety of safety and health topics shall be provided to each employee and supervisor including the required trainings and certifications set forth by OSHA and other regulating bodies. In the event an employee or supervisor demonstrates incompetence of a specific health or safety policy or procedure, retraining may be instituted before they continue with the task. It is the responsibility of the employer to deem what training is required and to provide said training at no cost to the employee.

Training shall be documented, including the date, attendance, subjects discussed and names of the individuals who conducted the meeting. Documentation shall be maintained by the employer and copies furnished to the designated authority, including the controlling contractor, on request. The documentation shall also include the content materials as well as any required qualifications of the trainer.

## **Safety and Health Inspections**

At a minimum, daily safety and health inspections shall be done and documented during periods of work. Who conducts the inspections depends on the level of technical proficiency required to properly inspect the work areas for recognized and/or potential hazards. Other applicable inspections of site safety and health will be done as needed. This APP will be updated if the frequency of site safety and health inspections change or differ from normal operation. Inspections shall include the safety and health issues identified and actions, timetable, and responsibilities for correcting each hazard. It is the responsibility of the Contractor to post these findings and corrective actions on the Project Bulletin Board as required. A daily inspection checklist has been attached to the end of this APP.

Safety inspections of the site will be done on a regular basis by the Corporate Safety Staff, Project Manager, Plan Approver, Job Superintendent, and Safety Resources Company of Ohio, Inc. Please refer to the signature page for these names. Qualifications and other information about these professionals may be obtained by contacting the Corporate Safety Staff. Please refer to the Appendices for information and training documents for safety and health inspectors.

Any inspections done by OSHA or any other regulatory agency shall be done after the notification of the local Safety and Occupational Health Office (SOHO). In the event of an OSHA onsite inspection, also contact Mike Coates Construction at the number listed at the Project Contacts section of this APP. Mike Coates Construction or any other employer onsite may use their right to notify any other 3<sup>rd</sup> party contractor or representative before any opening conference or inspection begins.

Any inspection done onsite containing focus information of site safety and health shall be given to the Site Superintendent immediately upon completion. Reports and other inspection documentation shall remain onsite for the duration of the project. Deficiencies found in the inspections shall be tracked and followed-up with as soon as possible by the controlling contractor.

All inspection reports shall be retained onsite by Mike Coates Construction. All deficiencies shall be tracked and followed up with in a feasible timeframe. Tracking of deficiencies and abatements shall be done. Logs of such information shall be posted on the board in the field office.

## **Mishap Reporting and Investigation**

### **Exposure Hours**

The Corporate Safety Representative is to track all RMS/QC exposure data throughout the duration of the project and shall follow reporting requirements for that information per [insert client's name here] requirements.

### **Investigations, Reports, and Logs**

A mishap is any undesired, unplanned event that occurs during work being performed. This includes accidents, incidents and near misses. All mishaps occurring incidentally to a project, operation, or facility shall be investigated and analyzed. All employees are responsible for reporting all mishaps to their supervisors immediately. Employers and supervisors are responsible for reporting all recordable (recordable to OSHA and other regulatory agencies) mishaps to the Government Designated Authority (GDA) within 24 hours after notification from the affected employee. No supervisor may decline to accept a report of a mishap from a subordinate.

Employers are also required to report:

- Property damage exceeding \$5,000
- Days Away Injuries
- Days Away Illnesses
- Restricted/Transfer Injuries



Any accident that has or appears to have any of the following consequences shall be immediately reported to the GDA:

- Fatal injury/illness
- Permanent totally disabling injury/illness
- Permanent partial disabling injury/illness
- If one (1) or more of the Contractor's employees are hospitalized as inpatients because of a single occurrence.
- \$500,000 or greater of accidental property damage

Contractors are responsible to notify OSHA in accordance with 29 CFR 1904.39 within eight (8) hours of an employee(s) fatal injury, and within twenty-four (24) hours if one (1) or more of their employees are hospitalized as inpatients because of a single occurrence, amputation, or loss of an eye.

The above listed reportable mishaps shall also be investigated in depth to identify all the contributing hazards and recommended hazard control measures. Investigations shall be done within 10 days of the occurrence.

The GDA shall notify the local SOHO when any one of these following investigations occur.

- Electrical injuries including arc flash, shock, etc.
- Uncontrolled release of hazardous energy leading to injury (includes failure to follow proper LOTO procedures.)
- Load handling equipment (LHE) or rigging related injuries
- Falls from height to any level other than the same surface
- Underwater Diving related incidents

After the scene has become safe and all injuries have been attended to, the scene now must be preserved. Doing so will ensure sufficient gathering of all investigation information. The scene shall not be disturbed until the investigation official has released the site.

Preserving the scene means leaving everything within the vicinity of the accident untouched, to the best extent possible. Securing and isolating the scene of an incident protects people from any remaining hazards, prevents the scene from being disturbed or altered, and prevents items from being removed.

The following precautions may be taken to prevent the disturbance to the scene:

- Cordoning the area off with rope, tape or barricades
- Locking doors and gates

- Posting warning signs
- Using a log to document who can enter the area and their justification for entry
- Posting guards to control and limit access

The Accident Investigator or Onsite Supervisory Personnel will need to begin interviewing involved parties and witnesses as quickly as possible after the event to collect facts, construct a timeline and clarify critical elements. The contractor shall identify all witnesses to the accident and ensure that any uninjured parties are available for interview. Attached to this plan is the Accident Investigation Form used to provide detailed information about the investigation.

If any witnesses are injured or in obvious distress, be sympathetic and do not cause additional distress to find out what happened. Instead, diplomatically collect names and contact information, then include that in the Accident Investigation. Remember that inundating witnesses and affected personnel with questions is not the intention of an interview, however the collection of facts and other elements is.

When documenting information in the investigation, make sure you completely compile all pictures and written and/or typed material in one document. Ensure all details are accurately represented and pictures are correctly labeled.

All corrective actions in response to an occupational injury or illness shall be reported to the contract officer as soon as reasonably possible.

## **Programs, Procedures, Assessments, and Evaluations**

### **Fatigue Management Plan**

Not Applicable

### **Emergency Plans**

All onsite emergencies shall be handled according to this Emergency Action Plan (EAP). An effective means of communication with 911 access or other emergency response source and transportation to properly care for injured workers shall be provided. When emergency medical services are not accessible within 5 minutes from a work area containing 2 (two) or more employees, at least 2 employees on shift shall be qualified to administer first aid and CPR. First aid kits shall also be provided at such locations. Following these procedures will ensure safe and complete aid in emergency situations.

## **In the event of a:**

### **Fire:**

In the event of a fire, evacuate the area immediately. All employees are to report to the designated Emergency Fire Meeting Locations, located near Mike Coates Construction's Onsite Trailer. In these areas, Onsite Supervisory Personnel will then take attendance of all employees. Missing employees shall be reported to emergency services. If not done already, employees must contact the Onsite Supervisory Personnel and report the fire. Emergency services shall be called when a fire has occurred.

All employees, after reporting to the Emergency Fire Meeting Locations, shall stay in those areas until the scene has been deemed safe to re-enter.

### **First Aid Emergency:**

In the event of a first aid emergency ensure employees trained in first aid treat such patients. After treatment has been given, be sure to notify Mike Coates Construction of the incident. If medical treatment beyond first aid is required, notify emergency responders or if safe to do so, transport the victim by safe means. The local hospital's contact information has been included in this document.

### **Medical Emergency Beyond First Aid:**

An effective means of communication with 911 access or other emergency response source and transportation to properly care for injured workers shall be provided. Call 911 in the event of an injury or illness that cannot be fully treated with basic first aid treatments.

### **Severe Weather Conditions:**

A designated onsite Contractor representative shall be responsible for checking the weather conditions at least two (2) times a day. In the event of severe weather, evacuate the work area and report to the Emergency Severe Weather Meeting Locations set by Mike Coates Construction Company.

In these areas, Onsite Supervisory Personnel will then take attendance of all employees.

Before leaving the work area and if it is safe to do so:

- Shut off all equipment
- Close any fuel containers, including closing compressed gas cylinder valves.
- Secure any potentially hazardous material from wind displacement.

All employees, after reporting to the Emergency Severe Weather Meeting Locations, shall stay in those areas until the weather conditions have been deemed safe to restart work.

In the event of lightning, all load handling equipment, drill rigs, work on elevated platforms, scaffolding work, roofing activities, tree trimming activities, pole climbing activities or any work in open areas shall stop. Once lightning is seen, count the number of seconds until you hear thunder. Divide that number by 5 to get the distance from you to the strike. If lightning is 10 miles or closer, work should stop until 30 minutes after the last visible strike.

### **Onsite Act of Violence:**

In the event of an act of workplace violence, employees and Onsite Supervisory Personnel must ensure that safety is their main priority. Removing oneself from the situation is the best measure that can be taken to protect personal safety. The following are, but not limited to examples of workplace violence:

- Threats of personal harm
- Defacing of company property
- Psychological harm
- Any type of harassment including sexual and verbal




At no point will any type of recognized workplace violence be tolerated. In the event of an act of workplace violence, disciplinary actions will be at the discretion of Mike Coates Construction's Onsite Supervisory Personnel. Contact the Police Department when needed.

### **Spill of Hazardous Materials:**

In the event of a spill, follow all Hazard Evaluation and Hazard Control Program requirements. Hazard evaluations shall be done prior to using any hazardous chemical or hazardous material. A qualified industrial hygienist shall complete this evaluation. A Hazard Control Program shall be constructed before use of said chemicals or materials. AHA's shall be used to ensure safe use and storage of all chemicals. The assessment shall include but is not limited to the proper use,

storage and emergency containment of chemicals. Documents shall be made available upon request by any GDA or SOHO for [insert client's name here].

### Emergency Services List

|   |   |
|---|---|
| <br><b>Fire Department</b><br>(ARS Fire Department) | Dial: (555) 555-5555 [actual number to be inserted]<br><br>Or Dial <u>911</u> |
| <br><b>Police Department</b><br>(ARS Security)      | Dial: (555) 555-5555 [actual number to be inserted]<br><br>Or Dial <u>911</u> |
| <br><b>Ambulance Service</b><br>(ARS Emergency)     | Dial: (555) 555-5555 [actual number to be inserted]                           |
| <b>Universal Emergency</b>  | Dial: <u>911</u>  |

*These numbers shall be posted conspicuously throughout the jobsite and shall be clearly communicated to all employees upon hire onsite.*

### Drug and Substance Abuse Safety

Mike Coates Construction and [insert client's name here] strictly prohibit the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance including alcohol while on duty. A single violation of such prohibition shall result in the offending individual being removed from the job-site with the recommendation of participation in an approved drug abuse assistance or rehabilitation program, and/or reporting to the civil authorities for criminal prosecution. For further information, contact your immediate supervisor. While on duty, employees shall not use or be under the influence of alcohol, narcotics, intoxicants, or similar performance or mind-altering substances.

Personnel should be alert for abnormal behavior and are required to report their observations to the appropriate supervisory personnel. Should the behavior create or have the potential to create a hazard to personnel, property or the environment, affected personnel have the right to stop work on that activity.

For further information, refer to the Appendices for Mike Coates Construction's policy on Drug and Alcohol Abuse in the workplace.

## **Site Sanitation/Housekeeping Plan**

It is the policy of Mike Coates Construction to provide a place of employment that is free from recognized hazards that cause, or are likely to cause, death or serious physical harm to employees or the public. Therefore, all employees on Coates Construction worksites will practice good housekeeping to further reduce hazards to employees. Daily housekeeping tasks shall be completed per *[insert client's name here]* requirements.

### **Dust and dirt removal:**

On some work sites, enclosures and exhaust ventilation systems may fail to collect dust, dirt, and chips adequately. Vacuum cleaners are suitable for removing light dust and dirt. Industrial models have special fittings for cleaning walls, ceilings, ledges, machinery, and other hard-to-reach places where dust and dirt may accumulate.

Dampening floors or using sweeping compounds before sweeping reduces the amount of airborne dust. The dust and grime that collect in places like shelves, piping, conduits, light fixtures, reflectors, windows, cupboards and lockers may require manual cleaning.

Special purpose vacuums with HEPA (high efficiency particulate air) filters will be used for the cleanup and removal of hazardous substances (i.e., particles of asbestos, lead or fiberglass).

Compressed air will not be used for removing dust, dirt or chips from equipment, work surfaces or clothing.

### **Waste Removal:**

Scrap material and debris generated during construction usually consist of:

- Non-combustible scrap material and debris; and
- Combustible scrap material and debris.

Combustible scrap material and debris that consists of form and scrap lumber with protruding nails, and all other debris, must be kept cleared from work areas, passageways, and stairs, and from around buildings or other structures.

Nails are to be removed from used lumber before stacking. Combustible scrap and debris must be removed at regular intervals during construction without increasing the hazard exposure to employees who remove such debris.

**Water:**

Potable water is water that meets the quality standards prescribed in the U.S. Public Health Service Drinking Water Standards, or water that is approved for drinking purposes by the state or local authority having jurisdiction.

Although OSHA does not indicate how much drinking water is required at a work site, they do mandate that an adequate supply of drinking water always be available to employees.

- Water must be in a container that is tightly closed and has a tap; water cannot be “dipped”.
- The container must be clearly marked and not used for any other purpose.
- A standard container with single-use cups, as well as a trash receptacle for used cups, must be provided.

Non-Potable water is not meant for drinking but for industrial or firefighting purposes. There cannot be any cross-connections between systems providing potable and non-potable water. Non-potable water must be clearly labeled to indicate that the water is not safe for drinking, washing, or cooking.

All non-potable water containers must be properly labeled per Hazard Communication standards.

**Toilets and Washing Facilities:**

Unless access or transportation to nearby toilet facilities is readily available, toilets must be supplied for employee use. Under temporary field conditions, one toilet must be provided for 20 or fewer employees. For every additional 40 employees, one toilet and one urinal must be provided. If the job site does not have a sanitary sewer, the standard requires that one of the following should be provided unless prohibited by local codes:

- Privies (where their use will not contaminate ground or surface water);
- Chemical toilets (most commonly used at construction sites);
- Recirculating toilets;
- Combustion toilets.

Sanitary washing facilities are to be provided in any situation in which employees are working with harmful contaminants. The facilities need to be adequate for employees to remove such substances and be located near the work site.

**Medical Support Agreement**

Not Applicable

## Bloodborne Pathogens Program

Bloodborne pathogens (BBP) are infectious microorganisms in human blood that can cause disease in humans. These pathogens include, but are not limited to, hepatitis B (HBV), hepatitis C (HCV) and human immunodeficiency virus (HIV). Needlesticks and other sharps-related injuries may expose workers to bloodborne pathogens.

Since BBP's may be found in many bodily fluids, all employees must consider all bodily fluids to be potentially infected with the BBP. This safety control is also called Universal Precautions. In the event of a bodily fluid on the workplace, must be brought to Mike Coates Construction's attention. Once notified, only trained and authorized employees may remove the bodily fluid from the area.

In the event of a first aid situation, the trained responder(s) shall only make protected contact with body fluid when necessary. Protective methods may include but aren't limited to gloves, safety glasses, aprons, rubber boots, body protection suits, etc. The disposal and decontamination of tools and protective equipment must be done by a trained employee. The area in which the body fluid is contained shall be considered hazardous and shall not be entered by any untrained employee until the area is completely decontaminated.

## Exposure Control Plan

In the event of a BBP exposure, only trained and authorized professionals shall deal with the contamination.

When responding to a spill, always select the proper PPE. This includes gloves, eye protection, face shield or mask, coveralls, and booties. If any sharp objects are contaminated with blood or bodily fluids, ensure you remove said materials safely. Ensure all contaminated materials are contained properly. Clean-up may be done by using a 10:1 water to bleach ratio to disinfect the area.

Bloodborne Pathogens kits shall be used when dealing with Bloodborne pathogens and possibly contaminated materials. It shall also be used to provide first aid when needed.

For more information, refer to the Appendices of this program.

## Automatic External Defibrillator (AED) Program

Not Applicable



## Site Layout Plan

See Appendices (Logistics Plan)

## Access/Haul Road Plan

Not Applicable – Submitted

## Hearing Conservation Program

Employees will be provided with and required to wear hearing protection when exposed to 85 decibels TWA or greater during the work shift even if the employee has not had a baseline audiogram or experienced an STS.

Replace hearing protection whenever it becomes too worn to effectively protect the employee. A variety of hearing protectors will be available for employee selection at each work site. Training on the use and care of hearing protection will be provided by Supervisory Personnel. All hearing protection will be properly fitted, and its use supervised. Hearing protection must be adequate to reduce employee exposure to 90 dBA or below if no STS has occurred or to 85 dBA or below if an STS has occurred.

Hearing protection equipment shall be furnished by the employer when required at no cost to the employee.

Each employer shall follow the requirements set forth by [insert client's name here] EM 385-1-1-05.C.

## Respiratory Protection Plan

The use of respirators is required when occupational exposure levels exceed OSHA Permissible Exposure Limits (PEL) and engineering or administration controls cannot control or eliminate the hazard.

Respirators, applicable and suitable for the purpose intended, shall be provided by the workers' employer when such equipment is necessary to protect the health of the employee.

Subcontractors are responsible for providing a Competent Person for respiratory protection and establishing and maintaining a Respiratory Protection Program, including methods of cleaning and sanitizing respirator face pieces that are not considered disposable, in accordance with OSHA regulations. Clean reusable respirators in a manner that meets the requirements in the OSHA Respirator Standard 29 CFR 1910.134 Appendix B-2.

There are hazards associated in the scope of many construction activities. One such hazard is the generation of hazardous dusts, i.e. silica. Respiratory protection shall be evaluated for use by the exposed company during these and other activities throughout the course of a project.

Each employer shall follow the requirements set forth by [insert client's name here] EM 385-1-1-05.G.

### Health Hazard Control Program

See Hazard Communication Program.

### Hazard Communication Program

The purpose of this Hazard Communication Program is to inform all employees of known chemical hazards that may be brought into or exist in the workplace as per OSHA Subpart Z, 1910.1200.

If a general contractor has subcontractors, appoint/establish a Hazard Communication Program Coordinator to synchronize the work activities of those lower tiered contractors who are creating hazards while working with hazardous chemicals and physical agents with other lower tier contractors whose employees are being exposed to chemical hazards and physical agents associated with the work.

Employees will receive on the job training from their supervisor. This training will cover chemical safety training for the specific chemicals they will be using or will be working around.

The following general safety rules shall be observed when working with chemicals:

- Read and understand the Safety Data Sheets.
- Keep the work area clean and orderly.
- Use the necessary safety equipment.
- Carefully label every container with the identity of its contents and appropriate hazard warnings.
- Store incompatible chemicals in separate areas.
- Substitute less toxic materials whenever possible.
- Limit the volume of volatile or flammable material to the minimum needed for short operation periods.
- Provide means of containing the material if equipment or containers should break or spill their contents.

All chemicals used onsite require the submittal and documentation of the product's SDS sheet. The submittal shall be turned into Mike Coates Construction Onsite Supervisory Personnel before the use of the product.

All labels shall include:

- Supplier ID - The name, address and telephone number should be provided on the label.
- Product ID - Name or number used for a hazardous product on a label or in the SDS.
- Precautionary Statement – Standardized and assigned phrases that describe the hazard(s)
- Signal Words - The signal word indicates the relative degree of severity a hazard
- Pictograms - Harmonized hazard symbols plus other graphic elements, which are intended to convey specific information

All existing labels on containers of hazardous substances must remain intact. The labels must be legible and written in English. Where labels are not present or are not legible, a new label will be affixed to those containers holding the hazardous substance.

All outside contractors onsite are required to follow the requirements of this program. Mike Coates Construction will provide Contractors information on:

- Location of SDSs.
- Precautions to be taken to protect contractor employees.
- Potential exposure to hazardous substances.
- Chemicals use in or stored in areas where they will be working.
- Location and availability of Safety Data Sheets.
- Recommended Personal Protective Equipment.
- Labeling system and requirements for chemicals.
- Safety Data Sheets (SDS's) are used to communicate chemical hazard information from the manufacturer to the employee. This is the information needed to inform and train employees on the safe use of hazardous chemicals.
- Every SDS is required to follow OSHA's Hazard Communication requirements, including the 16-section format.

### Process Safety Management Plan

Not Applicable

### Lead Compliance Plan

Not Applicable

## Asbestos Abatement Plan

Not Applicable

## Radiation Safety Program

Not Applicable

## Abrasive Blasting Plan

Not Applicable

## Heat Stress Monitoring Plan

When the body is unable to cool itself through sweating, serious heat illnesses may occur. The most severe heat induced illnesses are heat exhaustion and heat stroke. If actions are not taken to treat heat exhaustion, the illness could progress to heat stroke and possible death.

This plan shall be followed when employees are exposed to the following conditions:

- Near Continental United States (CONUS) and Outside Continental United States (OCONUS) locations when hot/dry or hot/humid conditions are forecasted
- Work is conducted in semi-permeable or impermeable clothing
- Work is conducted in confined spaces with low air flow
- Work is conducted when the heat index is 75 deg. with 55% humidity
- Work is conducted near heat producing equipment, furnaces, boilers, asphalt pots, engines compressors, etc.

Common symptoms of heat stress include:

- Headaches
- Dizziness/Light Headedness
- Weakness
- Mood Changes (irritable, or confused/can't think straight)
- Feeling Sick to your Stomach
- Vomiting/Throwing up
- Decreased and Dark Colored Urine
- Fainting/Passing Out
- Pale Clammy Skin

First aid for heat stress includes:

- Move the person to a shaded area. Don't leave the person alone. If the person is dizzy or light headed, lay them on their back (raise their legs 6-8 inches). If the person is sick to their stomach lay them on their side.
- Loosen and remove heavy clothing.
- Have the person drink some cool water (a small cup every 15 minutes).
- Cool the skin with water or wet cloth.
- If the person does not feel better in a few minutes, call 911.

Common symptoms of heat stroke include:

- Dry Pale Skin (no sweating)
- Hot Red Skin (looks like a sunburn)
- Mood Changes (irritable, confused/not making any sense)
- Seizures/Fits
- Collapse/Passed Out (will not respond)

First Aid for heat stroke includes:

- Call for emergency help (911)
- Move the person to a cool area. Don't leave the person alone. Lay them on their back and if the person is having seizures/fits remove any objects close to them so they won't strike against them. If person is sick to their stomach lay them on their side.
- Remove any heavy and outer clothing
- Have the person drink some cool water (a small cup every 15 minutes)
- Try to cool the person with water or a wet cloth.
- If ice is available, place ice packs under the arm pits and groin area.

How to reduce the likelihood of heat related illnesses:

- Train the workforce on heat illnesses
- Perform heavier work on cooler days
- Work in pairs
- Drink plenty of cool water every 15-20 minutes
- Wear light, loose-fitting, breathable clothing
- Take frequent breaks in cool areas
- Avoid eating large meals before work
- Avoid caffeine and alcoholic beverages

Potable drinking water shall be available to employees and shall be encouraged to be drank (e.g. ½ cup every 15-20 minutes).

A tool box training which covers the requirements of this plan, forecasted conditions, and heat related illnesses shall be done prior to each shift when this plan is initiated.

When possible, work should be scheduled for cooler periods of the day.

A buddy system shall be used to monitor each employee's physical and mental well-being.

Any employee not used to work in warm weather, that has had previous heat related illnesses, or is known to be on medications that could make them more sensitive, shall be given time to acclimate to the hot environment.

Recovery areas shall be provided near the work areas such as shaded areas, air-conditioned locations etc.

If a worker is required to wear semi-permeable or impermeable clothing, [insert client's name here]EM 385-1-1-

6.J.3.g requirements shall be followed.

## **Cold Stress Monitoring Plan**

A cold weather environment is very dangerous. The exposure to extreme temperatures, blistering wind, and precipitation can all cause harm to the human body. Numerous medical conditions, such as hypothermia and frostbite, can occur easily while working outdoors in cold weather if you are not cautious. The best way to protect yourself from these conditions is to wear proper clothing always while working outdoors. This will help protect you from the different hazards cold weather poses. In terms of proper clothing, there are four main parts of the body which need protected with special clothing accessories: feet, hands, face, and head.

Workers who are exposed to extreme cold or work in cold environments may be at risk for a cold stress injury or illness. Extremely cold or wet weather can cause dangerous situations in which a worker could get hypothermia. Hypothermia is a condition in which the body uses up its stored energy and can no longer produce heat. Hypothermia normally occurs when a person is exposed to a cold temperature for a prolonged period. Hypothermia is a medical emergency. Symptoms may include shivering, confusion, fatigue loss of coordination, blue skin, reduced pulse, slowed breathing, and more severe, loss of consciousness.

First Aid for hypothermia includes:

- Request immediate medical assistance.
- Move the victim to a warm area or shelter.
- Remove wet clothing.
- Warm the body starting at the center first. Use blankets, towels, or skin to skin contact.
- If conscious, warm beverages may help to raise core body temperature. Do not give alcohol.
- Once temperature has increased continue to keep victim dry and warm until medical help arrives.

To minimize the potential for hypothermia:

- Dress for the conditions. Wear several layers of loose-fitting clothing. Remove layers as need for comfort.
- Wear a moisture wicking layer closest to your skin to minimize losing body heat to wet clothing.
- Cover all exposed skin to minimize wind burn or frostbite.
- Always have extra socks, gloves, and boot liners available.
- Wear a hat or hood when possible to minimize body heat loss.

Frostbite is result of ice crystals forming in the fluid and soft tissue of the skin. Frostbite only occurs when temperatures are below freezing. Exposed skin can start to freeze at 28 degrees Fahrenheit. Deep frostbite can cause blood clots and even gangrene. It is distinguishable by a white or greyish-yellow skin tint and the lack of feeling or numbness in the affected area. A person who has frostbite once is more apt to get it again than someone who has not had it before. The areas of the body primary affected are the fingers, toes, ears, cheeks, and nose. A less serious cold weather stress is frostnip. Frostnip is the beginning stages of frostbite and is easier to treat than the more serious condition.

Whenever frostbite is detected, take the following immediate actions:

- Call for medical assistance as soon as possible.
- Protect the affected area from further injury until the victim can be moved somewhere warm.
- Remove any wet gloves, socks, etc. that are covering the affected area.
- Wrap or cover the victims with blankets, clothing, or other warm dry materials.
- Submerge the affected area in warm (100-105 degrees) water if possible.
- Provide the victim with warm fluid, but no alcohol.

- Never rub the affected area and do not attempt to reheat the area with hot water or a heating lamp.

When working in cold conditions that has the potential for frostbite consider the following PPE:

- Wear several layers of loose-fitting clothing.
- Always wear gloves, a hat/ hood, and insulated footwear when possible. Having extra socks, gloves, hoods, and boot liners is recommended to switch out wet articles of clothing.
- Do not consume alcohol. It increases the body's heat loss.
- Pace yourself to reduce level of activity outside. In temperatures under 20 degrees Fahrenheit, extra breaks may be needed.
- Use an onsite source of heat such as air jets, radiant heaters, or contact-warm plates.
- Shield work areas from drafts and wind if possible.

Air temperature and wind speeds shall be taken by the Controlling Contractor at least every 4 hours then the temperature drops below 20 deg. F and wind speed exceeds 5 mph.

Warming shelters shall be made available nearby when the wind chill drops below 10 deg. F.

A change of clothing shall be made available in the event a worker's clothes become wet.

When the wind chill drops below 0 deg. F. the follow practices shall be followed:

- Workers shall use the buddy system to monitor their physical well being
- The work shall be moderated to prevent sweating
- Heat shelters shall be provided
- New workers shall be given time to acclimate to the conditions

Workers exposed to -15 deg, F. shall use the work/warm-up schedule specified in the ACGIH TLVs/BEIs booklet.

As the wind chill drops below 20 deg. F. air temperature and wind speed shall be monitored every 4 hours. Once the wind chill drops below 0 deg. F. wind speed and temperature shall be monitored every 2 hours.

## Indoor Air Quality Management Plan

Supervisors shall report employee concerns or complaints of indoor air quality problems to the facility manager/owner or other designated contract representative. That individual will be responsible for investigating and resolving the complaint in a timely manner and reporting back to the supervisor.



Investigations shall be done per [insert client's name here]EM385-1-1-06.L.01 when needed.

Smoking, to include the use of smokeless cigarettes or cigars, shall be prohibited inside all Department of Defense (DoD) facilities, vehicles, aircraft, vessels, or other work buildings including buildings under construction. Designated smoking areas shall be located at least 50 feet from any building entrance with containers located in each smoking area to contain cigarette butts.

All employees must also follow Ohio Department of Health requirements for indoor air quality standards and guidelines.

### **Mold Remediation Plan**

Not Applicable

### **Chromium (VI) Exposure Evaluation**

All activities which could generate chromium (VI) fumes, mists, or dusts shall be evaluated by an Industrial Hygienist to determine potential personnel exposure over the OSHA Chromium (VI) standards.

To prevent exposure to chromium (VI), the use of paints with chromium pigments, Portland cement with greater than 20 ppm chromium, or chromium/arsenic treated lumber shall be avoided when possible. Should chromium (VI) containing products be required, a justification and similar non-chromium (VI) product evaluation shall be conducted and submitted for review by the GDA or the [insert client's name here]SOHO.

When welding with chromium coated rods and welding products, ensure proper ventilation in the area. When administrative or engineering controls cannot remove the hazard, the use of a respirator may be used to reduce chromium exposure. Review and follow all regulations before using respirators.

### **Crystalline Silica Assessment**

Each employer who has workplaces where silica is occupationally produced, reacted, released, transported, stored, handled, or used shall inspect each workplace and work operation to determine if any employee may be exposed to silica at or above the OEL. This evaluation shall be documented in the AHA for the job/task to be completed.

Each employee who may be potentially exposed to silica shall be instructed at the beginning of his/her employment or assignment to potential silica exposure in the following:

- Relevant symptoms, appropriate emergency procedures, and proper conditions and precautions for safe use or exposure
- How to advise the employer of the development of the signs and symptoms of prolonged exposure to silica
- Specific nature of operations that could result in exposure to silica above the OEL, as well as safe work practices for the release of the silica and the types and function of engineering controls
- Housekeeping practices to reduce exposure
- Use and limitations of PPE including but not limited to respirators
- What a medical surveillance program is and what it entails

When the exposure to silica cannot be lowered below the OEL by engineering and administrative controls, an employer shall use respiratory protection.

Where exposure to airborne silica or other substances is above the occupational exposure limit, work clothing shall be properly cleaned before removal unless it is wet.

All food, beverages, tobacco products, nonfood chewing products, and unapplied cosmetics shall be discouraged in work areas.

When employees are exposed to airborne silica at temporary work sites away from the primary worksite, emphasis shall be placed on respiratory protection, protective clothing, portable engineering controls, and provisions for personal hygiene and sanitation. Training of employees shall be provided to protect them as well as others from airborne silica dust exposure.

### Lighting Plan for Night Operations

Proper illumination of work spaces, project sites, roadways and vessels are imperative to a safe working environment.

The following are the minimum lighting requirements for facilities or function:

| Facility or Function | Lux | Foot Candles<br>(lm/ft <sup>2</sup> ) |
|----------------------|-----|---------------------------------------|
| Access ways          |     |                                       |
| - general indoor     | 55  | 5                                     |
| - general outdoor    | 33  | 3                                     |

|   |     |    |
|---|-----|----|
| - exit ways, walkways, ladders, stairs  | 110 | 10 |
| Administrative areas (offices, drafting and meeting rooms, etc.)  | 540 | 50 |
| Chemical laboratories   | 540 | 50 |
| Construction areas  |     |    |
| - general indoor  | 55  | 5  |
| - general outdoor   | 33  | 3  |
| - tunnels and general underground work areas (min 110 lux required at tunnel/shaft heading during drilling, mucking, and scaling) | 55  | 5  |
| Conveyor routes   | 110 | 10 |
| Dam Operating Areas (Interior)  |     |    |
| -Tunnels and underground work areas   | 55  | 5  |
| -Control Stations   | 150 | 15 |
| Docks and loading platforms   | 33  | 3  |
| Elevators, freight and passenger  | 50  | 5  |
| Temporary Electrical Panels (Interior)  | 300 | 30 |
| Temporary Electrical Panels (Exterior)  | 50  | 10 |
| First-aid stations and infirmaries  | 300 | 30 |
| Maintenance/operating areas/shops   |     |    |
| - vehicle maintenance shop  | 300 | 30 |
| - carpentry shop  | 110 | 10 |
| - refueling area, outdoors  | 55  | 5  |

|   |         |       |
|---|---------|-------|
| - shops, fine - medium detail work      | 540-325 | 50-30 |
| - welding shop                          | 300     | 30    |
| Mechanical/electrical equipment rooms   | 110     | 10    |
| Outdoor parking areas                   | 33      | 3     |
| Toilets, wash, and dressing rooms       | 110     | 10    |
| Visitor areas                           | 215     | 20    |
| Warehouses and storage rooms/areas      |         |       |
| - indoor rack storage                   | 270     | 25    |
| - outdoor storage                       | 33      | 3     |
| Work areas - general (not listed above) | 325     | 30    |

### Traffic Control Plan

Not Applicable

### Fire Prevention Plan

Fire extinguishers shall be provided and properly maintained at strategic locations around the job and inspected monthly per NFPA 10 and Site-Specific Requirements.

Unencumbered free access to all fire protection equipment on the job site shall be maintained.

Fire protection equipment shall be immediately accessible during any construction activities that may pose an increased fire hazard,( i.e. welding, open flame, cutting and welding, powered equipment etc.) and there shall be one suitable fire extinguisher for each activity. Fire extinguisher locations shall be visibly marked.

The following is a chart to describe what type of fire extinguisher best suits each type of fire classification:

| CLASS OF FIRE  | CHARACTERISTICS OF BURNING MATERIALS   | EXTINGUISHER   |
|--|--|--|
| <b>Class A</b>   | <b>Ordinary combustible materials</b> such as cellulose products, wood, paper, cloth, plastics or rubber         | Water, multipurpose dry chemical (ABC)                             |
| <b>Class B</b>   | <b>Flammable and combustible liquids</b> such as oils, gasoline, alcohol, and solvents (See Safety Note 1 below) | Carbon dioxide, dry chemical (BC or ABC) (See Safety Note 1 Below) |
| <b>Class C</b>   | <b>Electrical equipment and wire installation</b> while electrical current is on (See Safety Note 2 below)       | Carbon dioxide, dry chemical (BC or ABC) (See Safety Note 2 Below) |
| <b>Class D</b>   | <b>Burning magnesium, thorium, uranium, potassium, and sodium metals.</b>  | G-1 powder (special graphite) or Metl-X (sodium chloride)          |
| <b>Safety Note 1:</b> Do not use water on a flammable or combustible liquid fire because it will spread and accelerate the fire. An explosion may result if water is used.                                   |  |  |
| <b>Safety Note 2:</b> do not use water on energized electrical equipment. Many electrical fires can be controlled by safely turning off the power for equipment such as personal computers and photocopiers. |  |  |

Portable fire extinguishers will be mounted conspicuously, located and identified so they are readily accessible. Extinguisher locations will be carefully selected to ensure extinguishers are adequately spaced and are not in danger of being damaged by vehicles, weather, or storage materials.

#### **Inspection of Fire Extinguishers:**

Portable fire extinguishers shall be visually inspected monthly. The monthly inspection is a quick check intended to give reasonable assurance that the extinguisher is accessible, fully charged, and operable. The following shall be checked at a minimum:

- The extinguisher is in the designated area;
- There are no obstructions to access or visibility;
- Operating instructions on the name plate are legible;
- Seals and tamper indicators are not broken or missing;

- The extinguisher is full (determine fullness by weighing or “hefting”).
- There is no obvious physical damage, corrosion, leakage, or clogged nozzles;
- The pressure-gauge reading or indicator is in the operable [if applicable, insert building description here] or position.

Any extinguisher that shows excessive wear, damage or unserviceable condition will be removed from service and replaced by an operable extinguisher.

Fire extinguisher maintenance will be performed at least annually by an approved contractor or trained Mike Coates Construction personnel. This annual inspection is intended to give maximum assurance that extinguishers will operate effectively and safely. Annual maintenance and inspection records will be maintained from one annual inspection to the next (at which time the old inspection record is replaced by the new inspection record). Tags on the extinguishers will be used to track this inspection.

During any period when an extinguisher is removed from service for testing, another extinguisher must replace the extinguisher out for testing.

#### **Use of a fire extinguisher:**

To extinguish a fire in its incipient stage, use the following procedure:

- Evacuate the building and/or area;
- Call the fire department;
- Make sure the fire is small;
- Make sure you have a clear way out;
- Make sure the fire extinguisher is rated for the type of fire and that you know how to use the extinguisher;
- Start as far away from the fire as possible. **“Pass”** is a method for operating most common fire extinguishers. It is a four-step method

| <b>PASS</b> |   |
|-------------|---|
| <b>P</b>    | <b>Pull the pin. This will unlock the operating handle and allow you to discharge the extinguisher.</b>     |
| <b>A</b>    | <b>Aim at the base of the fire.</b>   |
| <b>S</b>    | <b>Squeeze the operating handle. This will discharge the firefighting agent.</b>                            |
| <b>S</b>    | <b>Sweep from side to side. Move carefully in on the fire, aiming at the base, sweeping back and forth.</b> |

**Fuel storage on the jobsite:**

Fuel storage of 5 gallons or more in one area is required to have a fire extinguisher within 50 feet of travel distances.

Project fuel storage area shall be kept free from accumulation of unnecessary combustible materials.

Non-compatible materials which create a fire hazard shall be segregated by a barrier having a fire resistance of at least 1 hour.

No more than 25 gallons of flammable liquids can be stored in a room outside of an approved fire-resistant cabinet.

Fuel storage outside of the building shall not be within 20 feet of the structure.

Refueling tanks for equipment shall have a portable fire extinguisher located in the near vicinity. Liquid petroleum gas shall never be stored inside of a building.

**Wild Land Fire Management Plan**

Not Applicable

**Arc Flash Hazard Analysis**

Whenever work on or near energized parts greater than 50 volts is necessary, a hazard analysis/arc flash hazard analysis shall be conducted in accordance with NFPA 70E standards. The flash protection boundary, approach distances, hazard/risk category and personal protective equipment (PPE) requirements shall all be identified before work proceeds.

PPE that provides appropriate arc flash protection is required for all personnel working on or near exposed energized electrical equipment operating at 50 volts or more. Identification of required PPE is based on equipment arc flash labels or NFPA 70E task tables. PPE garments shall meet and be labeled in accordance with ASTM F1506 standards.

All personnel entering the identified arc flash protection boundary must be QPs and properly trained in NFPA 70E requirements and procedures. Unless permitted by NFPA 70E, Article 130.4, no Unqualified Person shall be permitted to approach nearer than the Limited Approach Boundary of energized conductors and circuit parts. Training must be administered by an electrically qualified source and documented.

Arc rated clothing shall be properly worn. Long sleeves must be rolled down and buttoned, shorts are prohibited and trousers shall extend the full length of the leg. Garments with exposed metallic fasteners shall not be worn unless the garments are properly arc rated.

Proper labels shall be placed of energized equipment and shall include:

- Safe approach distance locations
- Incident energy at work distances.
- System nominal voltages
- Hazard Class category and required PPE

### **Assured Equipment Grounding Control Program (AEGCP)**

All receptacle outlets (125-volt, 15-, 20-, 30-ampere and greater) that provide temporary electrical power during construction, remodeling, maintenance, repair, or demolition shall have ground-fault circuit-interrupter (GFCI) protection for personnel.

GFCI protection shall be provided on all circuits serving portable electric hand tools or semi-portable electric power tools (such as block/brick saws, table saws, air compressors, welding machines, and drill presses).

Electric tool circuits that are hard-wired directly to an electrical source of power shall be protected by a GFCI circuit-breaker type.

All electrical distribution panels, breakers, disconnects, switches, junction boxes shall be completely enclosed.

Water tight enclosures shall be used where there is possibility of moisture entry either from operations or weather exposure.

Electrical distribution area will be guarded against accidental damage by being in specifically designed rooms, use of substantial guard posts and rails and other structural means.

A clear approach and 3-foot side clearance shall be maintained for all distribution panels.

All conduit shall be fully supported throughout its length. Non-electrical attachments to conduit is prohibited.

All non-rigid cords shall be provided with strain relief where necessary.

Only trained and authorized employees may conduct repairs to electrical equipment.

Contractors performing electrical work must hold a license for the rated work.



Areas under new installation or repair will be sufficiently guarded with physical barriers and warning signs to prevent unauthorized entry.

Electrical equipment shall be free from recognized hazards that are likely to cause death or serious physical harm to employees. The safety of equipment shall be determined using the following criteria:

- Suitability for installation and use in conformity with the provisions of this subpart. Suitability of equipment for an identified purpose may be evidenced by listing or labeling for that identified purpose.
- Mechanical strength and durability, including parts designed to enclose and protect other equipment, the adequacy of the protection thus provided.
- Electrical insulation.
- Heating effects under conditions of use.
- Arcing effects.
- Classification by type, size, voltage, current capacity, and specific use.
- Other factors which contribute to the practical safeguarding of employees using or likely to encounter the equipment.

Work around energized circuits:

- Warnings and barricades shall be employed to alert unqualified employees of the present danger related to exposed energized parts. The following rules apply:
- Safety signs, warning tags, etc., must be used to warn unqualified employees of the electrical hazards present, even temporarily, that may endanger them.
- Non-conductive barricades shall be used with safety signs to prevent unqualified employees access to exposed energized parts or areas.
- Where barricades and warning signs do not provide adequate protection from electrical hazards, an attendant shall be stationed to warn and protect employees.

Portable Electrical Equipment Safety Rules:

- The tool must be properly grounded or double-insulated.
- “Properly Grounded” means an approved three-wire cord with a three-prong plug. You should only use the tool in a three-pole outlet or receptacle.
- Never cut off or bend back the ground pin on a three-prong plug to make it fit in a two-pole receptacle. Never use a two-prong cheater or adapter
- Make sure that the casing of a double-insulated tool is not cracked, split, or broken.
- Replace open front plugs with dead front plugs. Dead front plugs are sealed. They present less danger of shock or short-circuit.

Electrical equipment is defined as cord or plug-type electrical devices that include the use of flexible or extension cords. Examples of portable electrical equipment include power hand tools, powered bench tools, fans, radios, etc. The following safety rules apply to portable electrical equipment:

- Portable electrical equipment shall be handled in such a manner to not cause damage. Power cords may not be stapled or otherwise hung in a way that may cause damage to the outer jacket or insulation.
- Portable electrical equipment shall be visually inspected for damage, wear, cracked or split outer jackets or insulation, etc., before use each shift. Portable electrical equipment that remains connected once put in place need not be inspected until relocated. Any defects; such as cracked or split outer jackets or insulation must be repaired, replaced or placed out of service.
- Always check the compatibility of cord sets and receptacles for proper use.
- Ground type cord sets may only be used with ground type receptacles when used with equipment requiring a ground type conductor.
- Attachment plugs and receptacle may not be altered or connected in a way that would prevent the proper continuity of the equipment grounding conductor. Adapters may not be used if they interrupt the continuity of the grounding conductor.
- Only portable electrical equipment that is double insulated or designed for use in wet areas or likely to contact conductive liquids may be used.
- Employees that are wet or have wet hands may not handle portable electrical equipment (i.e., plug-in, un-plug, etc.). Personal Protective Equipment must be used when handling portable electrical equipment that are wet or covered with a conductive liquid.

#### Extension Cords:

- Extension cords shall not be used as a substitute for the fixed/permanent wiring on the worksite.
- Extension cords shall not be tacked, stapled or otherwise affixed in semi-permanent or permanent manner.
- Multiple outlet adapters (octopus adapters) are not permitted.
- Extension cords shall not be used on stationary equipment or equipment drawing more than 15 amps, such as power tools, refrigerators, television, etc.
- Do not connect or splice extension cords together to make a longer connection. The resulting extension cord may not be able to provide sufficient current or power safely.
- Extension cords shall not run through behind or in walls, ceilings or floors or other concealed space, nor shall they be run in or through ventilation ducts.

- Extension cords shall not be placed under carpets, under doors, or other locations that subject the cord to abrasion or other damage and which would prevent adequate air circulation and cooling of the cord.
- Avoid creating a tripping hazard; do not place extension cords across walkways.
- All Onsite Supervisory Personnel shall ensure that all workers are instructed to inspect power tools prior to each use to ensure tools are in proper operating condition before use and to immediately tag out and remove all equipment found to be defective for repair or replacement.

## **Hazardous Energy Control Program and Procedures**

Lock-out/tag-out (LOTO) refers to specific practices and procedures to safeguard employees from injury due to the unexpected energization or startup of machinery and equipment, or the release of hazardous energy during operations, service, or maintenance activities. OSHA standards must be followed.

Hazardous energy includes:

- Gravity
- Electrical
- Mechanical
- Chemical
- Hydraulic
- Pneumatic
- Thermal
- Radiological

Training for Authorized Employees will be provided to ensure that, the purpose and procedures of the Hazard Control Plan are understood, and that the knowledge and skill required for the safe application, usage, and removal of lockout/tagout devices are conveyed to all employees.

The training will include, but not be limited to the following:

- Type and magnitude of the energy available at the work site
- Install and remove individually assigned lock(s) and danger tag(s) on the isolation device(s) for their safety in accordance with this program
- Methods and means necessary for energy isolation
- Safe Condition Checks
- Procedures for transfer of Lockout/Tagout (shift work & personnel changes)
- Procedures for emergency/temporary lifting of tags and/or LOTO devices
- Use of Tagout only

- Working on energized equipment
- Stored energy and potential accumulation awareness
- Authorized LOTO equipment, its assignment and recordkeeping requirements
- Equipment-Specific Written Procedures (if applicable)
- Applicable OSHA Standards

Periodic inspections of the energy control procedure are conducted and documented at least annually to ensure that procedures and requirements are being followed. Before beginning work on any equipment or system, always notify equipment users and employees in the area that could be affected by the shutdown and the reason(s) for the shutdown. Whenever possible work should be scheduled and coordinated with other employees to minimize programmatic interruptions. The Authorized Employee must turn off or shut down the equipment using established methods for that equipment. Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy.

The authorized employee must determine if an equipment-Specific Written procedure is applicable to the task (the Superintendent will present the authorized employee with any applicable material at the assignment of the task.) The authorized employee will turn off or shut down the machine or equipment using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees because of the equipment stoppage. If the Authorized Employee feels that the current equipment specific written procedure is inadequate or needs to be updated and/or changed, he/she should contact the Superintendent. The Superintendent will then discuss and investigate the issues raised by the authorized employee. The Superintendent will then, if applicable, re-issue the Equipment-Specific Written Procedure with approved changes and/or additions.

Many pieces of equipment have more than one energy source that must be controlled. Written Lockout/Tagout procedures are required for all equipment/systems that have more than one energy source. All external energy sources such as electrical, mechanical, hydraulic, pneumatic, chemical, thermal, etc. must be addressed. In addition, stored energy sources such as charged capacitors, batteries, wound springs, etc. must be identified. Equipment with energy sources with the potential for re-accumulation of energy requires continuous verification of isolation. Schematic diagrams and operator's manuals should be available and referenced for assistance in identifying input power requirements and internal energy sources. The specific LOTO procedure shall be referenced by the Authorized Employee.

Physically disconnect and isolate the energy source(s). Once all energy sources have been identified, the next steps are:

- Physically disconnect and/or shut off the source(s) with appropriate energy-isolating devices;
- Secure them in the off/disconnect position (It may be necessary to leave bleed valves open to prevent the accumulation of stored energy. The written LOTO procedure must specify how this is accomplished).
- The Authorized Employee then affix's his/her LOTO lock to this device.
- Before applying a lockout device, be sure that the energy source(s) have been disconnected. The Authorized Employee must physically attempt to operate the energy-isolating device and attempt to restart the equipment using the normal equipment controls (i.e., start buttons, or computer software controls).
- Try out the equipment to ensure de-energization.

The Authorized Employee must test potential energy sources using appropriate instruments or testers. Any instrument used to test for voltage, pressure, or temperature must be checked for proper operation both before and after use. If the Authorized Person is not qualified to test the energy being isolated, he or she must ensure that the energy is tested by a Qualified Person.

The qualified tester, if other than the Authorized Employee, must be identified in the "Remarks" section on the tag.

Each energy source must be locked out to prevent others from inadvertently reconnecting or re-energizing the equipment. Lockout devices must always be applied at the input power source and not at the control circuit. Remember that many pieces of equipment have more than one switch or switching method in which they can be turned on, thereby making control circuits poor places to apply lockout devices. Users with multiple locks shall record the details of each application (date, lock number, location, etc.) in their User Log.

A "Danger Do Not Operate" tag shall be installed at the energy-isolating device(s). The tag will be marked with the name and phone number of the person performing the Lockout/Tagout, the date, and other relevant information, and applied with a lock or plastic locking tie.

Always perform a final verification before proceeding with work that is to be performed. Verification shall include:

- Check that all electrical systems show no voltage present (and are grounded if applicable.)
- Steam, fluid and pneumatic systems are depressurized and vented (or drained if applicable), and all isolation devices are properly positioned, inoperable and appropriately tagged. If the work will be performed for an extended period,

periodic verifications must be performed to ensure the integrity of the lockouts that have been applied.

Lockout/Tagout devices shall only be removed by, or under the direction of, the individual who applied the device and whose name appears on the tag. Before LOTO devices are removed and energy is restored to the equipment, the authorized employee must follow the procedures below:

- The last Authorized Employee to remove his/her LOTO must verify that the work for which the LOTO was applied has been completed and that it is safe to re-energize equipment.
- The authorized employee must check the work area to ensure that all tools and personnel are at a safe distance from the equipment.
- The authorized employee must remove any device(s) applied.
- The authorized employee must check the equipment to ensure that any removed guards are reinstalled.
- The energy-isolating device reset, and the machinery returned to service.
- If safety is compromised by following the above prescribed sequence, the authorized employee may modify the sequence; however, all steps must be performed, regardless of the sequence.

### Standard Pre-lift Plan (SLP)

All lifts must be planned to avoid situations where the operator cannot maintain safe control of the lift. A written SLP shall be prepared for every lift or series of lifts (if duty cycle or routine lifts are being performed). The SLP shall be developed, reviewed and accepted by all personnel involved in the lift. The SLP shall be maintained on the LHE for the current lift(s) being made. SLPs shall be maintained for a minimum of three months.

Attached to this APP is a Standard Pre-Lift Plan Checklist.

### Critical Lift Plan

This plan shall be developed and implemented before any critical lift is made. Ensure plan follows [insert client's name here] EM 385-1-1-16.H.

### Naval Architectural Analysis

Not Applicable

## Floating Plant Inspection and Certification

Not Applicable

## Severe Weather Plan for Marine Activities

Not Applicable

## Emergency Plan for Marine Activities

Not Applicable

## Man Overboard/Abandon Ship Procedures

Not Applicable.

## Float Plan for Launches, Motorboats, Skiffs

Not Applicable

## Fall Protection and Prevention Plan

If a Contractor will have personnel working at heights and/or exposed to fall hazards, a Fall Protection and Prevention Plan shall be developed and submitted to the GDA for review and acceptance as part of this Accident Prevention Plan (APP).

Anticipated tasks at height include but are not limited to working near leading edges, from mobile work platforms, access and egress ways at height, etc.

The fall protection threshold height requirement is 6 ft. for ALL work covered by this manual, unless specified differently below, whether performed by Government or Contractor work forces, to include steel erection activities, systems-engineered activities (prefabricated) metal buildings, residential (wood) construction and scaffolding work.

Workers exposed to fall hazards shall be protected from falling to a lower level using standard guardrails work platforms, temporary floors, safety nets, engineered fall protection systems, personal fall arrest systems, or the equivalent, in the following situations:

- When workers are exposed to falls from unprotected sides or edges, access ways, fixed ladders over 20 ft. in height, unprotected roof edge or floor openings, holes and skylights, unstable surfaces, leading edge work, scaffolds, formwork, work platforms, re-bar assembly, and steel erection

- For access ways or work platforms over water, machinery, or dangerous operation
- When installing or removing sheet piles, h-piles, cofferdams, or other interlocking materials from which workers may fall 6 ft. or more
- Where there is a possibility of a fall from any height onto dangerous equipment, into a hazardous environment, or onto an impalement hazard
- For steel erection activities, when connectors are working at the same connecting point, they shall connect one end of the structural member before going out to connect the other end. The connectors shall always be 100% tied off.

When determining the control measure when fall hazards exist, use the following hierarchy of control:

1. Elimination
2. Prevention
3. Work platforms
4. PPE – (Harness, Lanyard, and Anchorage Point)
5. Administrative Controls

When using stilts, working from raised platforms, or floors above a walking/working surface that exposes workers to a fall of 6 ft. or more in areas protected by guardrails, the height of the guardrail must be raised accordingly to maintain a protective height of 42 in. above the stilt, raised platform, floors, or work stands.

During construction activities, fall protection is required for employees exposed to fall hazards while conducting inspection, investigation or assessment work.

Prior to start of construction or after construction work is complete, fall protection is required when conducting inspection, investigation or assessment work 6 ft. or more from an unprotected edge of a roof. An AHA shall be developed and reviewed by a CP for this activity and submitted for GDA review and acceptance.

### **Responsibilities:**

The Program Manager is responsible for the overall development, implementation, monitoring and evaluation of the Fall Protection Program. The Program Manager shall:

- Be adequately trained with a minimum 24 hours of CP training
- Advise and correct hazards as needed
- Establish responsibilities within employees
- Provide proper equipment for fall protection when required
- Establish procedures to ensure all hazards are abated
- Ensure the proper development of the Fall Protection and Prevention Plan



- Participate in investigations of mishaps
- Evaluate the effectiveness of this program.

Qualified Personnel (QP) shall:

- Have understanding and knowledge of the requirements, equipment, and systems for fall protection and rescue
- Be qualified to select proper protection and rescue equipment
- Supervise use and installation of anchorages and horizontal lifelines
- Be trained according to minimum QP training requirements

Competent Persons (CP) shall:

- Be trained according to minimum CP training requirements (24hrs of training)
- Conduct a fall hazard survey before employees are exposed to said hazards
- Identify limitations of systems for fall protection and rescue
- Have stop work authority if they recognize a hazard
- Prepare and update this program
- Review procedures as the workplace changes
- Ensure rescue plans are adequate and feasible
- Supervise the selection, installation, use and inspection of non-certified anchorage points
- Verify training of employees engaged in work such that they are covered by this program
- Ensure prompt rescue
- Participate in mishap investigations regarding falls from height
- Ensure damaged or deployed fall protection equipment is removed from service immediately
- Inspect fall protection equipment at the frequency recommended by the manufacturer

“End Users” (EU) shall:

- Bring all unsafe acts or conditions to the attention of the CP
- Properly use, inspect, maintain, store and care for their fall protection equipment and systems
- Inspect fall protection equipment before each use and notify the CP if any issues exist.

Competent Rescuers (CR) shall:

- Be trained according to minimum Competent Rescuer training requirements

- Prepare, update and approve the rescue plan
- Identify resources necessary to conduct rescue if needed
- Know the hazards associated with a rescue
- Verify the rescue equipment is protected from damage
- Verify that rescue plans have been reviewed annually

Authorized Rescuers (AR) shall:

- Have knowledge and experience in the use, storage, and care of all equipment necessary to perform a rescue
- Inspect the rescue equipment according to CR requirements
- Be trained according to minimum AR training requirements

### **Training Requirements:**

The Program Manager, QPs, CPs, End Users, Authorized and Competent Rescuers, as well as any associated fall protection trainers — shall be as described in ANSI/ASSE Z359.2, Minimum Requirements for a Comprehensive Managed Fall Protection Program, and shall conform to ANSI/ASSE Z490.1, Criteria for Accepted Practices in Safety, Health and Environmental Training. The refresher for all personnel involved in the fall protection program shall also be in accordance with requirements prescribed in ANSI/ASSE Z359.2 standard.

Program Managers shall have a working knowledge of current fall protection regulations, requirements, standards, equipment and systems. Training shall cover the items prescribed in ANSI/ASSE Z359.2 standard. Program Managers shall complete refresher training annually, by participating in at least one (1) hour of fall protection and rescue-related informational meetings and/or training.

A **Qualified Person** shall be trained by a QP Trainer in proper inspection, assembly and use of all fall protection equipment and systems that they encounter in their work as a QP. The frequency and duration of training that a QP requires to remain proficient in that role varies with the amount and types of fall protection work for which that person is responsible. Training shall include those items in ANSI /ASSE Z359.2 standard, and shall include hands-on use of all types of equipment and systems used in locations where EU work, to include: inspecting the systems prior to use; installing systems; analyzing structures and verifying that fall protection systems are properly installed; determining component compatibility; estimating free fall distances; determining total required clearance; dismantling systems storing equipment and common hazards associated with each system component.

A **Competent Person** shall be trained by a Competent Person trainer or a Qualified Person Trainer. Competent Person for Fall Protection training shall be at minimum 24 hours, with a

combination of formal classroom training and practical applications. All training shall be documented. Refresher training requirement for the CPs is to stay current in fall protection and rescue knowledge by participating in at least two (2) hours annually of fall protection and rescue-related training and/or informational meetings.

**Each worker (end user)** who might be exposed to fall hazards from heights, shall be trained before using fall protection equipment by a CP, who is qualified in delivering fall protection training to the workers in the safe use of fall protection systems/equipment and the recognition of fall hazards related to their use, including:

- Fall hazards in their work area
- Correct use and installation of fall protection systems
- Limits of fall protection systems
- Rescue plan requirements
- Hands-on applications
- Proper anchoring techniques
- All requirements set forth by [insert client's name here] EM385-1-1-21

Refresher training shall be provided as necessary for the end users in the following situations:

- Changes in the fall protection program
- Changes in equipment
- Inadequacies are found in EU performance
- Conditions change

Refresher training for end users shall be provided a minimum of one (1) hour annually to stay current with fall protection and rescue requirements.

The **Competent Rescuer** shall be trained by a Competent Rescue Trainer. Training shall include at minimum:

- Safe use and limitations of rescue equipment
- Practical applications of systems and equipment

Refresher training for CR's shall be provided a minimum of one (1) hour annually to stay current with fall protection and rescue requirements.

The **Authorized Rescuer** shall be trained by a Competent Rescuer. Training shall include at minimum:

- Practical applications of systems and equipment
- Inspection of rescue equipment

Refresher training for authorized rescuers shall be provided a minimum of one (1) hour annually to stay current with fall protection and rescue requirements.

Training and evaluations for fall protection and rescue training shall be documented and retained for the current and previous training program and shall include: trainer/evaluator's name, student's name, training or evaluation organization's name (if external), dates/times of training and evaluations, course objectives, content of training program, performance of student based on observation of physical demonstrations of skill or on exercises.

All training shall be documented and maintained by the Controlling Contractor onsite. Records shall be made available upon request by the owner/operator.

Investigations of a fall mishap shall be done by the required employer representatives. At minimum the Contract Officer, employer CP, and QP shall be in attendance during this mishap investigation. Refer to Mishap Reporting and Investigation section for further details.

#### **Fall Protection Systems:**

##### **Controlled Access Zones:**

The use of Controlled Access Zone as a fall protection method is prohibited.

##### **Standard Guardrail Systems:**

Top rails, mid-rails, and posts shall have a vertical height of 42 +/- 3 in from the upper surface of the top rail to the floor or other lower working surface. Top rail shall be capable of withstanding, without failure, a force of at least 200 lb. applied within 2 in of the top edge, in any outward or downward direction, at any point along the top edge. It shall not deflect more than 3 in. nor to a height less than 39 in.

Mid-rails shall be erected halfway between the top rail and the floor or other lower working surface. Mid-rails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members shall be capable of withstanding, without failure, a force of at least 150 lb. applied in any downward or outward direction at any point along the mid-rail or other member.

The ends of the top rails and mid-rails shall not overhang the terminal posts except where such overhang does not create a projection hazard.

Toe-boards shall be provided on open sides/ends at locations where persons are required or permitted to pass or work under the elevated platform or where needed to prevent employees and material from falling from the elevated platform.

Guardrail systems shall be so surfaced as to prevent injury to a worker from punctures or lacerations and to prevent snagging of clothing.

## *Guardrail Construction*

Wood railings shall be constructed of not less than 1500 lb-ft/in<sup>2</sup> rated lumber.

- Top rails must be at least 2-in x 4-in (5-cm x 10-cm) lumber
- Mid-rails must be at least 1-in x 6-in (2.5-cm x 15.2-cm) lumber
- Posts must be constructed of at least 2-in x 4-in (5-cm x 10-cm) lumber spaced not to exceed 8 ft. (2.4 m) on center.

Pipe Railing shall be constructed of at least 1 ½ in. (schedule 40) pipe. Posts shall be constructed of at least ½ in. (schedule 40) pipe placed at no more than 8 ft. on center.

Structural steel railings shall be constructed of at least 2 in. x 2 in. x 3/8 in. angles. Posts shall be constructed of at least 2 in. x 2 in. x 3/8 in. angles placed no more than 8 ft. on center.

Steel cable railings shall be constructed of at least ¼ in diameter cable flagged every 6 feet with highly visible material. Tension shall be maintained to prevent deflection of more than 3 inches when a 200 lb. load is applied in any outward or downward direction. Posts shall be located to ensure tension is maintained.

Engineered guardrail systems may be used instead of constructing a system. If so, the portable guardrail system (webbing, straps, etc.) must be designed and engineered to meet the same requirements as required in this program. The employer is still responsible for ensuring the system used is approved, completed, installed and used as designed.

Toe-boards shall be 3½ in in vertical height and shall be constructed from 1-in x 4-in lumber or the equivalent. Toe-boards shall be securely fastened in place and have not more than ¼ in. clearance above floor level. Toe-boards shall be made of any substantial material, either solid or with openings between adjacent pieces not greater than 1 in. Where material is piled to such a height that a standard toe-board does not provide protection, paneling or screening from floor to top rail or mid-rail shall be used. Toe-boards shall be able to withstand, without failure, a force of 50 lbs. applied in any outward or downward direction at any point along the toe-board.

Guardrails receiving heavy stresses from workers trucking or handling materials shall be provided additional strength by using heavier stock, closer spacing of posts, bracing, or by other proper means.

For parapet walls to be considered adequate fall protection systems, they shall have a height of 42 in +/- 3 in. unless it is an existing parapet walls with a height of less than 42 in. If so, the existing parapet wall may be used as a compliant fall protection system if the vertical height is a minimum of 30 in. or more plus width that equal to 48 in.

### Covers

Any hole 2 in. or more in its least dimension on walking/working surfaces such as floors, roofs or other openings shall be covered by a cover rated for twice the maximum intended load. Covers shall be secured when installed, clearly marked with the word "HOLE", "COVER" or "Danger, and shall not be removed unless safe to do so while following this program.

### Safety Net Systems

Safety nets shall be installed as close under the work surfaces as practical but in no case more than 30 ft. below such work surface. Nets shall be hung with sufficient clearance to prevent contact with the surfaces or structures below. Such clearance shall be determined by impact load testing. When nets are used on multi-story buildings or structures, the potential fall area from the walking/working surface to the net shall be unobstructed.

The maximum size of the mesh openings shall not exceed 36 in<sup>2</sup>. The border rope or webbing shall have a minimum breaking strength of 5,000 lb.

Nets shall extend outward from the outermost projection of the work surface as shown in the following table:

| Vertical Distance from Working Level to Horizontal Plane of Net | Minimum Required Horizontal Distance of Outer Edge of Net from Edge of Working Surface |
|---|--|
| Up to 5 ft. (up to 1.5 m)                                       | 8 ft. (2.5 m)  |
| 5 ft. up to 10 ft. (1.5 m up to 3.1 m)                          | 10 ft. (3.1 m)   |
| more than 10 ft. (more than 3.1 m)                              | 13 ft. (4 m)   |

Connecting devices shall be made of forged steel.

Materials, scrap pieces, equipment, and tools that have fallen into the safety net shall be removed as soon as possible and at least before the next work shift. Safety nets shall be protected from sparks and hot slag resulting from welding and cutting tasks.

Inspections of the net shall be in compliance with [insert client's name here]EM 385-1-1-21.07.

### Personal Fall Protection Systems

Personal fall protection equipment and systems (to include fall arrest, positioning and restraint) shall be used when a person is working at heights and exposed to a fall hazard.

Personal fall protection equipment shall be inspected by the EU prior to each use to determine that it is in a safe working condition. A CP shall inspect the equipment at least once semi-annually and whenever equipment is subjected to a fall or impacted. Inspection by the CP shall be documented.

The following defects shall lead to removal from service for any system:

- Check all components for cuts, wear, tears, damaged threads, broken or torn stitching, discoloration, abrasions, burn or chemical damage, ultraviolet deterioration and missing markings and/or labels
- Check all hardware components for signs of wear, cracks, corrosion and deformation

Personal fall protection equipment shall be used, inspected, maintained and stored in a safe place in accordance with manufacturer's instructions and/or recommendations or as prescribed by the CP and this program.

Selection of personal fall protection equipment shall be based on the type of work being performed, the work environment, the weight, size, and shape of the worker, the type and position/location of anchorage, and the required length of the lanyard.

Personal Fall Arrest System (PFAS) consists of a full body harness, a connecting device, and an anchorage system.

When stopping a fall, PFAS shall:

- Limit maximum arresting force on the body of the employee to 1,800 lbs.
- Be rigged such that a worker cannot free fall more than 6 ft. nor contact any lower level or other physical hazard in the path of the fall.

PFAS require the use of a full-body harness. The use of body belts is prohibited.

Only full body harnesses meeting the requirements of ANSI Z359 are acceptable. The fall arrest attachment point on the full body harness shall be integrally attached and located at the wearer's upper back between the shoulder blades.

All full body harnesses shall be equipped with Suspension Trauma Preventers such as stirrups, relief steps, trauma straps, or like provide short-term relief from the effects of orthostatic intolerance.

Lanyards shall be made of ropes, straps or webbing made from synthetic materials. The 6 ft. Free Fall (FF) energy absorbing lanyard shall only be used when the tie-off point is above the dorsal D-ring creating an FF distance of less than 6 ft. When an anchor point is below the dorsal D-ring, an FF distance greater than 6 ft. is created. For these situations, a 12 in. FF energy absorbing lanyard shall be used in accordance with manufacturer's instructions and recommendations.

Snap hooks and carabiners shall be self-closing and self-locking, only capable of being opened only by at least two consecutive deliberate actions.

The anchorage system consists of the anchorage (the rigid part of the building, facility, structure or equipment) and the anchorage connector. Anchorages used for attaching the PFAS shall be independent of any anchorage used to support or suspend platforms. They shall be capable of supporting at least 5,000 lbs. per EU attached or designed by a QP for twice the maximum arrest force on the body.

A positioning system uses some of the same equipment as a fall protection system (i.e., a harness, etc.), however, a positioning system used alone does not constitute fall protection. A positioning system shall not be used as a primary fall arrest system. While positioning (working with both hands free), a person shall use a separate system that provides back-up protection from a fall.

Fall restraint systems prevent the user from reaching an area where a free fall could occur by restricting the length of the lanyard or by other means. The anchorage strength requirement for restraint systems shall be 3,000 lbs. Restraint systems can be used only on flat or low-sloped surfaces (4:12 slope).

#### Ladder-Climbing Devices (LCD)

An LCD is a sleeve or cable/rope attached to a fixed ladder over 20 ft. in length. Anchorage strength for LCDs shall be a minimum of 3,000 lbs. The free fall distance when using an LCD shall not exceed 2 ft.

#### Scaffolds, Work Platforms, and Elevated/Aerial Devices

Scaffolds shall be equipped with a standard guardrail or other fall protection systems per [insert client's name here] EM 385-1-1-21.F.01.

For workers erecting and dismantling scaffolds, an evaluation shall be conducted by a CP to determine the feasibility and safety of providing fall protection if fall protection is not feasible. An AHA detailing infeasibility of use of fall protection shall be submitted and accepted by the GDA.



Scissor lifts shall be equipped with standard guardrails. A restraint system shall be used in addition to guardrails. The lanyards, to include lanyards with built-in shock absorbers, used with the restraint system shall be sufficiently short to prohibit workers from climbing out of, or being ejected from the platform. The use of a self-retracting device (SRD) is prohibited unless permitted by the SRD manufacturer and used in accordance with manufacturer's instructions.

In aerial lifts, workers shall be anchored to the basket or bucket in accordance with manufacturer's specifications and instructions.

Self-retracting devices are not acceptable in aerial lifts.

#### Warning Line Systems (WLS)

A WLS may ONLY be used on floors, or flat or low-sloped roofs (4:12 slope or less) during construction work and shall be erected around all sides of the work area. A WLS shall consist of wires, rope or chains 34-39 in. high with supporting stanchions. WLS shall be flagged at not more than 6 ft. intervals with a high visibility material.

Working within the WLS does not require fall protection. No worker shall be allowed in the area between the roof or floor edge and the WLS without alternative fall protection. Fall protection is required when working outside the WLS.

For roofing work on flat roofs, the WLS shall be erected not less than 6 ft. from the edge

When roofing work is conducted on low sloped roofs (less than 4:12), or when using mechanical equipment or when work is performed by other trades the WLS shall be erected not less than 15 ft. from the unprotected side or edge.

#### Safety Monitoring System (SMS)

The use of a SMS as a fall protection method is prohibited on this project.

#### Rescue Plan and Procedures

A rescue plan shall be prepared and maintained by the employer when workers are using fall protection equipment. The plan shall contain provisions for self-rescue and assisted rescue of any worker who falls including rescue equipment. If other methods of rescue are planned, it shall be indicated in the rescue plan including how to contact and summon the agency to the mishap site.

In this plan a means of rescue shall be developed and maintained before work at height with a PFAS has started. This rescue shall be done by an employee trained in rescue. This project has deemed rescue responsibility to be done by the fall protection competent person. Refer to the signature sheet for this employee's information.

## Demolition/Renovation Plan

Demolition and/or renovation activities shall be performed in accordance with ANSI Standard A10.6, Safety Requirements for Demolition.

During this project, the demolition of the existing [if applicable, insert building description here] shall done in accordance to [insert client's name here]EM 385-1-1-23.

An engineering survey by a Registered Professional Engineer (RPE) shall be performed of the structure to determine the structure layout, the condition of the framing, floors, walls, the possibility of unplanned collapse of any portion of the structure (any adjacent structure where employees or property may be exposed shall be similarly checked), and the existence of other potential or real demolition hazards. This shall be done prior to work starting.

A demolition plan developed by an RPE and shall be submitted to the GDA. This will be done after the survey has been completed.

## Rope Access Work Plan

Not Applicable

## Excavation/Trenching Plan

All excavation activities onsite must be communicated to Mike Coates Constructions Onsite Supervisory Personnel prior to the beginning of the task. An Excavation/Trenching Plan and/or Activity Hazard Analysis (AHA) will be prepared by the onsite Competent Person (CP) for Excavation or a Registered Professional Engineer (RPE), submitted and accepted by the GDA prior to beginning operations.

For excavations or trenches greater than 5 ft. (1.5 m) in depth, both an Excavation/Trenching plan and AHA are required.

The identification and credentials of the onsite CP may be obtained by referring to onsite supervision.

A rescue plan shall be prepared and maintained when workers are working at depths more than 5 ft. This will be done before any such work begins by the CP.

Projected depths and sketches shall be documented before work begins.

All cave-in protection shall conform to the applicable OSHA requirements for specific class of soil.

Methods intended for supporting existing utilities and maintaining surface encumbrances such as roadways, sidewalks, and other anticipated surface encumbrances are defined in 29 CFR 1926 Sub Part P- Excavations.

For excavations that are less than four feet (48 inches), if a daily documented physical examination of the ground by the Competent Person provides no indication of any potential cave-in or soil movement, shoring or sloping is not required providing soil conditions do not change.

An adequate number of means of egress shall be present in the excavation for access. OSHA requires no more than 25 feet of lateral travel between means of egress. Ladders must extend 36 inches above the top surface of the excavation and be used in accordance with the manufacturer's instructions.

Suitable ramps or bridges must be installed whenever personnel must cross over an open trench or excavated area.

Excavated materials shall be placed a minimum of two feet away from excavation cut to decrease additional loading on the support system, as well as decrease the potential for excavated material to slough off into the open cut.

At minimum, daily inspections of the excavation shall be performed by a competent person to monitor the condition of the support system. Additional inspections performed as conditions require.

Proper permits shall be filled out and approved before beginning work (i.e. digging, confined space entry, etc.)

There shall be adequate, effective barricading, including warning lights, to eliminate the potential of vehicles, or personnel, from straying into, or making unauthorized entry into the excavated site. To prevent unauthorized entry, the barricades will be maintained daily.

Daily examinations must be done of the soil/ground conditions (as often as is necessary) by a Competent Person to determine that no indication of a potential cave-in or soil movement is evident.

For excavations greater than 20 feet in depth, the protective systems shall be designed, stamped and approved by a registered professional engineer.

Failure to have an effective qualified, Competent Person present during excavation work will result in the work being stopped.

Determination of soil conditions shall in compliance with [insert client's name here]385-1-1-25.

Protective systems including sloping, benching, shoring, and shielding shall be used and maintained in accordance to [insert client's name here]EM 385-1-1-25.

### **Fire Prevention and Protection Plan for Underground Construction**

Not Applicable

### **Compressed Air Work Plan for Underground Construction**

Not Applicable

### **Erection and Removal Plan for Formwork and Shoring**

The planning and design of formwork and shoring shall be in accordance with provisions of American Concrete Institute (ACI) Publication 347.

The design of the shoring shall be prepared by a QP (designer) and the Erection and Removal Plan for Formwork and Shoring shall be submitted for review to the GDA. The erected shoring shall be inspected by an engineer qualified in structural design.

This shall be submitted before such work begins.

### **Precast Concrete Plan**

Not Applicable

### **Lift-Slab Plans**

Not Applicable

### **Masonry Bracing Plan**

This plan shall be submitted to the GDA for review and acceptance prior to the start of work by the contracted employer.

### Steel Erection Plan

This plan shall be submitted to the GDA for review and acceptance prior to the start of work by the contracted employer.

### Explosive Safety Site Plan

Not Applicable

### Blasting Plan

Not Applicable

### Dive Operations Plan

Not Applicable

### Safe Practices for Manual Diving Activities

Not Applicable

### Emergency Management Plan for Diving

Not Applicable

### Tree Felling/Maintenance Program

Not Applicable

### Aircraft/Airfield Construction Safety and Phasing Plan

Not Applicable

### Aircraft/Airfield Safety Plan Compliance Document

Not Applicable

### Site Safety and Health Plan

Refer to this APP.

## Confined Space Entry Procedures

A Confined Space has the following physical characteristics:

- Is large enough and so configured that personnel can bodily enter and perform assigned work
- Has limited or restricted means for entry or exit (e.g., tanks, vessels, silos, storage bins, hoppers, vaults, and pits)
- Is not designed for continuous personnel occupancy

A Permit Required Confined Space is a confined space that has the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere
- Contains a material that has the potential for engulfing an entrant
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section
- Contains any other recognized serious safety or health hazard.

Confined space entry: Entry into confined spaces shall be in accordance with 29 CFR 1910.146 subpart AA and Mike Coates Construction's safety policies – Confined Spaces.

Lockout/ Tagout program must be used prior to and during work in a confined space where necessary. Potentially hazardous utilities must be double blanked, bled, capped, or otherwise rendered no longer a threat to worker safety.

Proper signage must be displayed on all permit required spaces.

Atmospheric testing must be continuously monitored by an attendant for the duration of work in a confined space.

Any conditions resulting in an immediate danger to life or health are grounds for removal from the space until the hazard is mitigated. A permit must be on site always when required for confined space work.

Accountability and communications must be maintained always while working in a permit required confined space.

All fixed permit-required CS (PRCS) shall be labeled as a PRCS. With the approval of the local Safety Office (SOHO), the CSCP may exclude from labeling those confined spaces that pose little or no hazard, (i.e., a navigation lock), but meet the strict definition of a permit-required confined space (PRCS).

All fixed PRCs shall be labeled as a danger. PRCs that are created as part of construction work shall be labeled and have a barrier to restrict entry. All Non-Permit-Required Confined Spaces (NPRCS) created as part of construction are not required to be labeled.

All entrants, authorized attendants, and supervisor or managers shall receive an initial CS training course that includes hands-on practical exercise with all the equipment; rescue exercise; and completing the CS permit. The training shall include, at a minimum: the roles and responsibilities in conducting an entry; specialized training on the use, calibration, and maintenance of monitoring, communications, and retrieval equipment; the hazards of the entry and the control of the hazards of the entry. Training shall be documented.

Before each activity requiring entry into a CS, the entrant, authorized attendants, supervisor/managers, and workers near, shall review the entry procedures, the use of the air monitoring, PPE, and retrieval equipment. Emergency responders shall be invited to the training review. If it has been over a year since the initial training, a rescue exercise shall be part of the training review.

The CSCP shall develop or establish rescue and emergency services for PRCs entry. Emergency responders shall be notified of the training and at least annually, or immediately prior to each entry, shall have participated in an emergency response drill for retrieval of an employee or dummy from the CSs. This plan shall be developed by the entry contractor.

### Confined Space Program

Please refer to “Confined Space Entry Procedures” section.

# Definitions and Acronyms

## Definitions

Accident Prevention Plan – The plans, preparations and actions taken to avoid or stop an accident before it happens.

Activity Hazard Analysis - A procedure which helps integrate accepted safety and health principles and practices into a task or job operation.

Affected Employee - An employee who is required to use machines or equipment on which servicing is performed under the Lockout/Tagout standard or who performs other job responsibilities in an area where such servicing is performed.

Authorized Employee - A person who locks out or tags out a machine or equipment to perform servicing or maintenance on that machine or equipment.

Bloodborne Pathogen - Pathogenic microorganisms that are present in human blood and can cause disease in humans.

Competent Person - One who can identify existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Controlling Contractor - Means a prime contractor, general contractor, construction manager or any other legal entity which has the overall responsibility for the construction of the project.

Demolition - The action or process of demolishing or being demolished

Excavation - Any man-made cut, cavity, trench, or depression in the earth's surface formed by earth removal.

First Aid - Help given to a sick or injured person until full medical treatment is available.

Host Employer - Owns or manages the property or facility that work is being done throughout.

Personal Protective Equipment - Refers to protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection.

Qualified Person - One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.



Qualified Rigger - Person holds a degree, certificate or professional standing or has extensive knowledge, training and experience can successfully demonstrate their ability to rig materials safely.

Safety Data Sheet - A document that contains information on the potential health effects of exposure to chemicals, or other potentially dangerous substances, and on safe working procedures when handling chemical products.

Trench - Means a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet.

## Acronyms

AHA (Activity Hazard Analysis) *Defined*

ANSI (American National Standards Institute)

APP (Accident Prevention Plan) *Defined*

BBP (Bloodborne Pathogens) *Defined*

CONUS (Continental United States)

CP (Competent Person)

DoD (Department of Defense)

FPCP (Fall Protection Competent Person)

NFPA (National Fire Protection Agency)

NIOSH (National Institute for Occupational Safety and Health)

OCONUS (Outside Continental United States)

OSHA (Occupational Safety and Health Administration)

PPE (Personal Protective Equipment) *Defined*

QP (Qualified Person)

SDS (Safety Data Sheet) *Defined*

[insert client's name here](United States Army Corps of Engineers)

## **Appendices**

Appendix A – Activity Hazard Analysis Form - [insert

client's name here]Appendix B – Confined Space Entry

Permit - [insert client's name here]Appendix C – Critical

Lift Form - [insert client's name here]

Appendix D – Drug Free Workplace Policy - MCC

Appendix E – Hot Work Permit - [insert client's name  
here]

Appendix F – LHE Certificate of Compliance Form - [insert client's  
name here]Appendix G – Site Safety Audit Form - MCC

Appendix H – Training and Certification Documents

H.1 – Anthony Crossen Training Documents (SRCO Back-up SSHO Alternate)

H.2 – TBD Training Documents (SRCO Back-up SSHO)

H.3 – 24 hr. CP Fall Protection Training Cards for MCC

H.4 – Harold Miller Training Documents (Employee)

H.5 – Jim Huffman Training Documents and Designation Letter (Project Manager)

H.6 – Mike Deans Training Documents (Employee)

H.7 – Other CP and QP Training Documents

H.8 – Scott Owen Training Documents and Designation Letter (Superintendent)

H.9 – Tom Leskosky Training Documents and Designation Letter (SSHO)

Appendix I – Standard Lift Plan Form - [insert client's name here]

Appendix J – Logistics Plan - MCC

Appendix K – Lines of Authority – MCC

Appendix L – MCC OSHA 300 Logs 2013-2015

Appendix M - Activity Hazard Analysis Example - MCC

## Appendix N – Confined Space Entry Program - MCC



ACTIVITY HAZARDS ANALYSIS

Date Prepared: 01/11/2020  
Project: 01/11/2020

Risk Assessment Code

1

Job:

(RAC):

Reviewed by

Recommended Protective Clothing & Equipment:

E = Extremely High Risk  
H = High Risk  
M = Moderate Risk  
L = Low Risk

|          |              | Probability |        |            |        |          |
|----------|--------------|-------------|--------|------------|--------|----------|
|          |              | Frequent    | Likely | Occasional | Seldom | Unlikely |
| Severity | Catastrophic | E           | E      | H          | H      | M        |
|          | Critical     | E           | H      | H          | M      | L        |
|          | Marginal     | H           | M      | L          | L      | L        |
|          | Negligible   | M           | L      | L          | L      | L        |

| JOB STEPS | HAZARDS | ACTIONS TO ELIMINATE OR MINIMIZE HAZARDS | EM 385-1-1 (PARA REF) | RAC |
|-----------|---------|--|-----------------------|-----|
|           |         |  |                       |     |



## ACTIVITY HAZARDS ANALYSIS

Date Prepared:

Job:

Cu- - - -

Risk Assessment Code (RAC):

---=1

Project:

Reviewed by **I**  
([insert client's name here]):

Prepared by:

| JOB STEPS | HAZARDS | ACTIONS TO ELIMINATE OR MINIMIZE HAZARDS | EM 385-1-1 (PARA REF) | RAC |
|-----------|---------|--|-----------------------|-----|
|           |         |  |                       |     |



ACTIVITY HAZARDS ANALYSIS

Date Prepared:   
Project:

Risk Assessment Code (RAC):

Job:   
Reviewed by   
([insert client's name here]):

Prepared by:

| JOB STEPS | HAZARDS | ACTIONS TO ELIMINATE OR MINIMIZE HAZARDS | EM 385-1-1 (PARA REF) | RAC |
|-----------|---------|--|-----------------------|-----|
|           |         |  |                       |     |

ACTIVITY HAZARDS ANALYSIS

Date Prepared:

Job:  
Reviewed by

Risk Assessment Code (RAC):

=1

Project:

Prepared by:

\_\_\_\_\_  
([insert client's name here]):

JOB STEPS

HAZARDS

ACTIONS TO ELIMINATE OR  
MINIMIZE HAZARDS

EM 385-1-1  
(PARA REF)

RAC

ACTIVITY HAZARDS ANALYSIS

Date Prepared: | |

Job: CH-H  $\frac{=}{1}$

Risk Assessment Code (RAC): [ - .-H]

Project: |

Prepared by: | Reviewed by  
([insert client's name here]):

| EQUIPMENT TO BE USED | INSPECTION REQUIREMENTS | TRAINING REQUIREMENTS |
|----------------------|-------------------------|-----------------------|
|                      |                         |                       |

COMPETENT PERSON(S):

| Confined Space Entry Permit                                   |        |   |        |   |        |        |        |        |        |        |
|---|--------|---|--------|---|--------|--------|--------|--------|--------|--------|
| Space To Be Entered (i.e., Equip #, building located, etc.):  |        |   |        |   |        |        | Date:  |        | Time:  |        |
| Purpose Of Entry:   |        |   |        |   |        |        |        |        |        |        |
| Air Quality Test  |        | Fill in appropriate time frequency:   |        |   |        |        |        |        |        |        |
|   |        | Test Frequency: every                      min(s) or                      hr(s) |        |   |        |        |        |        |        |        |
| Type Test   | Result | Result  | Result | Result                                      | Result | Result | Result | Result | Result | Result |
| Tester (i.e., initials)                                       |        |   |        |   |        |        |        |        |        |        |
| Time of Sample  |        |   |        |   |        |        |        |        |        |        |
| Oxygen<br>19.5% – 23.5%                                       |        |   |        |   |        |        |        |        |        |        |
| Flammables<br>< 10% of LEL/LFL                                |        |   |        |   |        |        |        |        |        |        |
| Carbon Monoxide<br>< 50 ppm                                   |        |   |        |   |        |        |        |        |        |        |
| Hydrogen Sulfide<br>(Max – 10 ppm)                            |        |   |        |   |        |        |        |        |        |        |
| Airborne Combustible<br>Dust<br>Vision > 5 Feet or = or > LFL |        |   |        |   |        |        |        |        |        |        |
| Hazards   | Y      | N   | N/A    |   |        |        |        | Y      | N      | N/A    |
| Oxygen Deficient  |        |   |        | Heat Stress                                 |        |        |        |        |        |        |
| Oxygen Enriched   |        |   |        | Entrapment                                  |        |        |        |        |        |        |
| Flammables  |        |   |        | Corrosive Materials                         |        |        |        |        |        |        |
| Combustible Dust  |        |   |        | Physical Hazards in Space                   |        |        |        |        |        |        |
| Toxic Gases/Vapors  |        |   |        | Mechanical Hazards                          |        |        |        |        |        |        |
| Engulfment  |        |   |        | Other                                       |        |        |        |        |        |        |
| Electrical Shock  |        |   |        | Other                                       |        |        |        |        |        |        |
| Skin Hazards  |        |   |        | Other                                       |        |        |        |        |        |        |
| Anti-Hazard Methods   | Y      | N   | N/A    |   |        |        |        | Y      | N      | N/A    |
| Barriers  |        |   |        | Continuous Air Monitoring                   |        |        |        |        |        |        |
| Rescue Equipment  |        |   |        | Forced Ventilation                          |        |        |        |        |        |        |
| Safety Glasses/Goggles  |        |   |        | Ground Fault Circuit Interrupters           |        |        |        |        |        |        |
| Appropriate Gloves  |        |   |        | Artificial Lighting – Low Voltage           |        |        |        |        |        |        |
| Safety Shoes/Boots  |        |   |        | Mechanical Lift                             |        |        |        |        |        |        |
| Safety Harness  |        |   |        | Welding/Cutting Tools Outside Unless in Use |        |        |        |        |        |        |
| Hearing Protection  |        |   |        | Adequate Work Platform                      |        |        |        |        |        |        |
| Hard Hat  |        |   |        | Face Shields                                |        |        |        |        |        |        |
| Scott Air Packs   |        |   |        | Rubber Boots                                |        |        |        |        |        |        |
| Fire Extinguisher   |        |   |        | Safety Coveralls                            |        |        |        |        |        |        |
| Respirator/Type:  |        |   |        | Other:                                      |        |        |        |        |        |        |
| Permits   | Y      | N   | N/A    |   |        |        |        | Y      | N      | N/A    |
| Lockout   |        |   |        | Hot Work                                    |        |        |        |        |        |        |
| Method Of Communication                                       | Y      | N   | N/A    |   |        |        |        | Y      | N      | N/A    |
| Line of Sight   |        |   |        | Radio                                       |        |        |        |        |        |        |

Authorization By Entry Coordinator – I certify that all required precautions have been taken and necessary equipment is provided for safe entry and work in this confined space.

| Printed Name | Signature | Company | Time |
|--------------|-----------|---------|------|
|              |           |         |      |
|              |           |         |      |

Emergency Dial \_

## Confined Space Entry Log

**Space Name:**\_\_\_\_\_

**Date of Permit:** \_

**My signature as an Entrant signifies that I have read this entry permit carefully and I understand the possible hazards and necessary precautions. I will maintain contact with the Attendant and I have checked my escape route and will exit the area if ordered. I have followed all guidelines and procedures listed.**

[illegible]

My signature as an **Attendant** signifies that I have read this entry permit carefully and I understand the possible hazards and necessary precautions. I will maintain contact the Entrant(s) at all time and will order exit immediately if hazards occur. I understand that I am not to enter this space. I know where the nearest telephone is, and I know how to summon rescue help if the need arises.

[illegible]

### In the event of an Emergency Call

**Has the means of help been verified?**

Yes

**No**

If an emergency should occur – **first summon help**. Do not enter a confined space until qualified help arrives, and entry can be made safely. **If a person is down for no apparent cause** you must assume that toxic gases or oxygen deficiency could exist – **do not allow any rescuer to enter without full protective gear and self-contained breathing device**.

| Sampling Equipment | Type | Date Calibrated | Type of Calibration | Identification/Serial Number |
|--------------------|------|-----------------|---------------------|------------------------------|
|                    |      |                 |                     |                              |

**I have inspected this confined space and acknowledge that all work has been completed, all equipment removed, and all employees accounted for.**

| Date/Time | Company | Entry Coordinator – Print Name | Entry Coordinator - Signature |
|-----------|---------|--------------------------------|-------------------------------|
|           |         |                                |                               |

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|--|--|--|--|

**I have inspected this confined space and acknowledge that all work has been completed, all equipment removed, and all employees accounted for.**

## Confined Space Entry Checklist

| Existing Facility/Worksite:   | Space To Be Entered (i.e., Equip #, building located, etc.): | Date: |    |     |
|---|--|-------|----|-----|
|   |  | Yes   | No | N/A |
| Are confined spaces thoroughly emptied of any corrosive or hazardous substances, such as acids, caustics or asbestos before entry?  |  |       |    |     |
| Are all lines to a confined space, containing inert, toxic, flammable, or corrosive materials valved off and blanked or disconnected and separated before entry?  |  |       |    |     |
| Are all impellers, agitators, or other moving parts and equipment inside confined spaces locked-out if they present a hazard?   |  |       |    |     |
| Is either natural or mechanical ventilation provided prior to confined space entry?   |  |       |    |     |
| Are appropriate atmospheric tests performed to check for oxygen deficiency, toxic substances and explosive concentrations in the confined space before entry?   |  |       |    |     |
| Is adequate illumination provided for the work to be performed in the confined space?   |  |       |    |     |
| Is the atmosphere inside the confined space frequently tested or continuously monitored during conduct of work? Is there an assigned safety standby employee outside of the confined space when required, whose sole responsibility is to watch the work in progress, sound an alarm if necessary, and render assistance?                     |  |       |    |     |
| Is the standby employee appropriately trained and equipped to handle an emergency?  |  |       |    |     |
| Is the standby employee or other employees prohibited from entering the confined space without lifelines and respiratory equipment if there is any question as to the cause of an emergency?  |  |       |    |     |
| Is approved respiratory equipment required if the atmosphere inside the confined space cannot be made acceptable?   |  |       |    |     |
| Is all portable electrical equipment used inside confined spaces either grounded and insulated, or equipped with GFCI ground fault protection?  |  |       |    |     |
| Before gas welding or burning is started in a confined space, are hoses checked for leaks, compressed gas bottles forbidden inside of the confined space, torches lighted only outside of the confined area and the confined area tested for an explosive atmosphere each time before a lighted torch is to be taken into the confined space? |  |       |    |     |
| If employees will be using oxygen-consuming equipment-such as salamanders, torches, and furnaces in a confined space, is sufficient air provided to assure combustion without reducing the oxygen concentration of the atmosphere below 19.5 percent by volume?   |  |       |    |     |
| Whenever combustion-type equipment is used in a confined space, are provisions made to ensure the exhaust gases are vented outside of the enclosure?  |  |       |    |     |
| Has the confined space been checked for decaying vegetative or animal matter which may produce methane?   |  |       |    |     |
| Is the confined space checked for possible industrial waste which could contain toxic properties?   |  |       |    |     |
| If the confined space is below the ground and near areas where motor  |  |       |    |     |



|   |  |  |  |
|---|--|--|--|
| vehicles will be operating, is it possible for vehicle exhaust or carbon monoxide to enter the space? |  |  |  |
| Do you know the location of the nearest campus phone?   |  |  |  |
| Is the confined space checked for possible industrial waste which could contain toxic properties?     |  |  |  |
| Are confined space entrants wearing proper personal protective equipment?                             |  |  |  |
| Have the means of communication been verified and tested?   |  |  |  |

Form 16-3  
CRITICAL LIFT PLAN

For use of this form, see EM 385-1-1, Section 16. Proponent is Crane HHWG.

Date:  
Location:

Prepared By:  
[insert client's  
name  
here]District:

A "critical lift" is defined as any non-routine crane lift requiring detailed planning and additional or unusual safety precautions. Critical lifts include: lifts made where the load weight is greater than 75% of the rated capacity of the crane; lifts which require load to be lifted, swung or placed out of the operator's view ; lifts made with more than one crane; lifts involving non-routine/technically difficult rigging or [if applicable, insert building description here]ment; hoisting personnel with a crane or derrick; or any lift which the crane operator believes should be critical.

A. TOTAL LOAD

1. Load Weight
2. Wt. of Aux. Block
3. Wt. of Main Block
4. Wt. of Lifting Beam
5. Wt. of Sling/Shackles
6. Wt. of Jib/Ext. (erected/stowed)
7. Wt. of Hoist Rope
8. Other:

TOTAL WEIGHT

Note: Source of load weight (Drawings, Calcs, etc.) must be attached on Page 2.

B. CRANE

1. Type of Crane Mobile Hydraulic Truck
2. Maximum Crane Capacity
3. Radius (Maximum)
4. Radius (Minimum)
5. Boom Length (Maximum)
6. Boom Length (Minimum)
7. Crane Capacity (Max Radius)
8. Crane Capacity (Min Radius)
9. Boom Angle (Maximum)
10. Boom Angle (Minimum)
11. Gross Load of Crane
12. Lift is % of the Crane's rated capacity
13. If Jib/Ext. is to be used:

Length

Offset

14. Rated Capacity of Jib/Ext.

C. HOIST ROPE

1. # of Parts
2. Rope Diameter
3. Capacity

Main

Aux 1

D. R  
I  
G  
G

E. CRANE PLACEMENT (Mobile Cranes Only)

1. Maximum Bearing Pressure PSF  
Note: Bearing Pressure Calculations must be attached on Page 3.
2. Ground Conditions Suitable for Load? YES / NO  
Note: Ground Condition Calculations must be attached on Page 3.
3. High Voltage or Electrical Hazards? YES / NO  
Note: If Electrical Hazards are present they must be shown on Page 4.
4. Obstructions to Lift or Swing? YES / NO  
Note: If Obstructions are present they must be shown on Page 4.

5. Travel with Load Required? YES / NO

6. Other?

F. OPERATOR QUALIFICATIONS

1. Certified Operator? YES / NO
2. Option?
3. Certified for Type, Class & Capacity? YES / NO
4. Designated in writing by employer: YES / NO

G. PRE-LIFT CHECKLIST (YES) N/A (NO)

1. Crane Inspected
2. Rigging Inspected
3. Crane Set-up
4. Overhead Hazard Check
5. Swing Check
6. Counterweight Check
7. Operator Qualifications
8. Signal Person Qualifications

9. Rigger Qualifications

10. Load Chart in Crane

11. Load Test

ING

1. Hitch Type(s)

12. T  
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13. W  
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2. No. of Slings:

3. S

ling Type:

Size:

1. Crane  
Operator

2. Ri  
gg  
er

4. Sling Assembly Capacity: \_\_\_\_\_ lbs.

5. Shackle Size(s):

6. Shackle Rated Capacity(s) \_\_\_\_\_ lbs.

### 3. Signal Person

#### 4. Lift Supervisor

5. Other

## 6. Other

[illegible]

---

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[illegible]

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[illegible]

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[illegible]

For use of this form, see EM 385-1-1, Section 16. Proponent agency is Crane HHWG.

Show here or attach calculations, drawings, etc.

Form 16-3  
CRITICAL LIFT PLAN

For use of this form, see EM 385-1-1, Section 16. Proponent agency is Crane HHWG.

BEARING PRESSURES & GROUND CONDITIONS

*Show here or attach calculations, drawings, etc.*

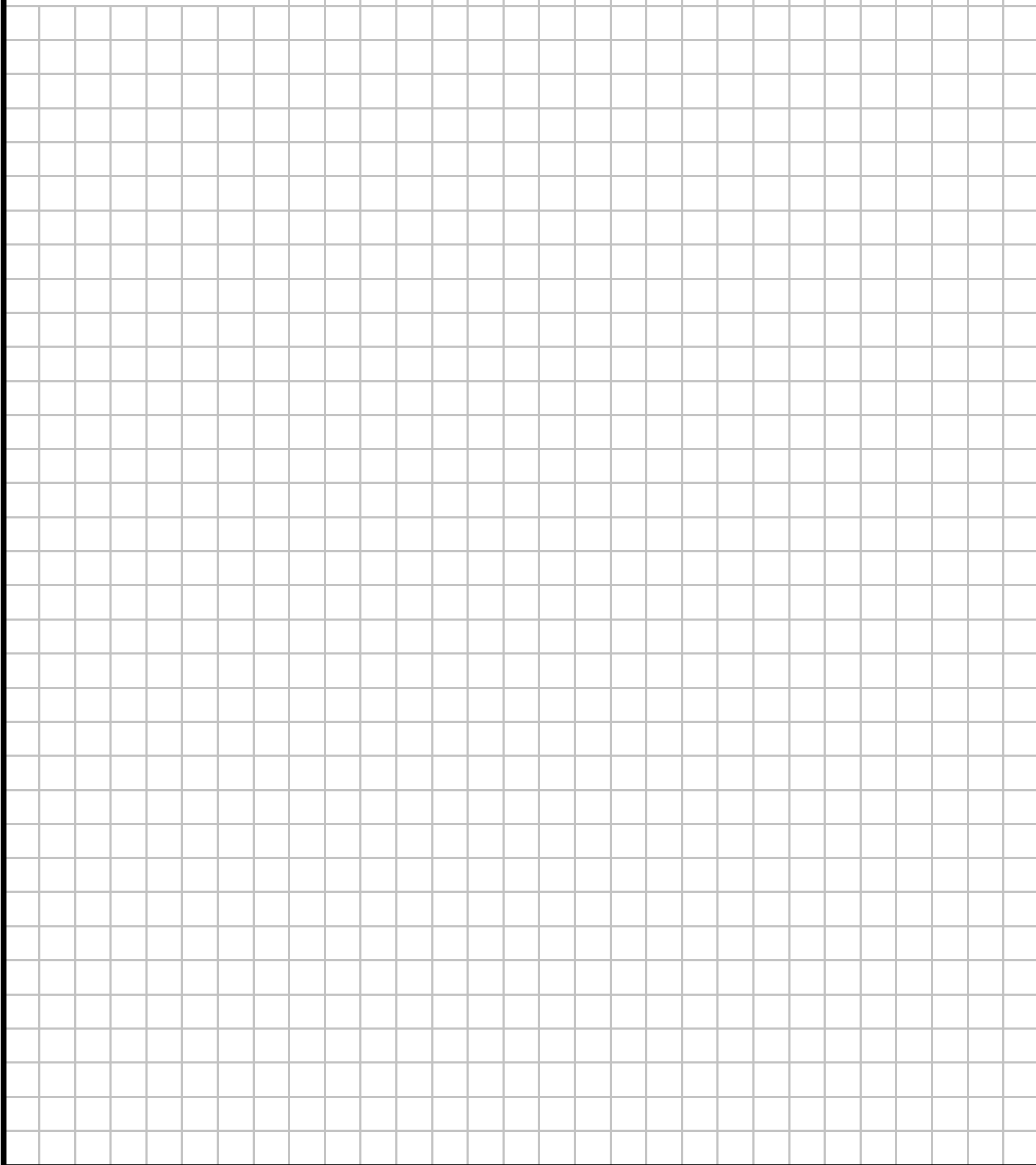
A large grid area for calculations and drawings, consisting of 20 columns and 30 rows of squares.

Form 16-3  
CRITICAL LIFT PLAN

For use of this form, see EM 385-1-1, Section 16. Proponent agency is Crane HHWG.

LOAD CHART

*Show here or attach load chart*

A large grid area for drawing or attaching a load chart. The grid consists of 20 columns and 30 rows of small squares, providing a space for technical drawings or data entry.

## CRITICAL LIFT PLAN

## CRITICAL LIFT PLAN

For use of this form, see EM 385-1-1, Section 16. Proponent agency is Crane HHWG.

## OPERATOR, RIGGER, SIGNAL PERSON QUALIFICATIONS

*Show here or attach operator qualifications*

This image shows a full page of blank graph paper. The background is white, and it is covered by a uniform grid of thin, light gray lines. These lines intersect at regular intervals to form a series of small, identical squares across the entire surface. There are no margins, text, or other markings present on the page.



Form 16-3  
CRITICAL LIFT PLAN

For use of this form, see EM 385-1-1, Section 16. Proponent agency is Crane HHWG.

SITE PLAN

*Show here or attach site plan and sequencing*

A large grid area for drawing the site plan and sequencing. The grid is composed of small squares, providing a space for technical drawings or diagrams.

**ATTACHMENT 1G**  
**SITE LOGISTIC PLANS**

---



MCC LOGISTICS  
PLAN - N.T.S.

PHASE ONE (1)

CONSTRUCTION  
PARKING AREA

GATED  
CONSTRUCTION  
ENTRANCE

CONSTRUCTION  
OFFICE TRAILES

CONCRETE  
WASHOUT AREA

CONSTRUCTION  
LAYDOWN AREA



MEDINA CITY HALL PARKING  
STRUCTURE

Medina, OHIO

**MIKE COATES**  
CONSTRUCTION CO., INC.  
800 Summit Avenue • Niles, Ohio • 330.652.0180

**RICH & ASSOCIATES**  
PARKING CONSULTANTS  
26877 Northwestern Hwy. Suite 208  
Southfield, Michigan 48033  
Lutz, FL  
248.353.5280 813.949.9860  
ARCHITECTS • ENGINEERS • PLANNERS

**b s h m**  
architects, inc.

**karpinski**  
ENGINEERING

| Date     | ISSUED FOR: | By |
|----------|-------------|----|
| 03-22-19 | PROPOSAL    |    |
|          | SUBMISSION  |    |

Sheet Title:

SITE PLAN

|            |               |
|------------|---------------|
| Drawn By   | Detail Number |
| Checked By | Detail Sheet  |
| File Name  |               |
| Plot Date  |               |

All matter contained herein and associated drawings, specifications, reports, and other documents are the property of the undersigned and shall remain confidential and proprietary information of the undersigned and shall not be disclosed to any third party without the written consent of the undersigned.

Rev. A-0.1

Sheet Number:











## **2 – SCHEDULE (maximum 20 points)**

### **2.A. Provide a windows-based CPM preliminary schedule reflecting subcontractor and supplier commitments for manufacture, testing, installation, start up, and appropriate slack for weather, other delays and Owner obligations.**

The schedule included with this proposal was prepared using Primavera Professional R8.3m, which is a windows-based scheduling software. The included Preliminary Baseline Schedule reflects Coates' intentions for design and construction as coordinated with their field staff who will be working on the project, potential subcontractors and suppliers. As the design progresses and more information becomes available, more detailed construction schedules will be developed as coordinated with the Coates field personnel, subcontractors, and suppliers. These more detailed schedules will include additional procurement, testing, and start-up activities than reflected in this preliminary schedule.

To account for weather in this schedule we utilized a 'Weather Calendar' for activities that will potentially be impacted by weather. This weather calendar assigns a number of days each month as 'non-work days' consistent with the number of days we expect to miss each month due to weather based on 5-year averages, as reflected in the weather day key in the bottom right corner of the proposal schedule. Furthermore, the schedule reflects the project finishing December 6, 2019, 2-weeks earlier than required, which will allow another 2-weeks of float to address any further delays and/or Owner obligations.

**The schedules are attached. Se Attachment 2A at the end of this Section 2.**

### **2.B. Description of the method used to develop and maintain the schedule, including the name of the scheduling consultant.**

The scheduling consultant used on this project will be Paetsch Scheduling & Planning, LLC a Cleveland based EDGE certified business. We have worked together on numerous projects and have established procedures for the development and maintenance of schedules. The schedule included with this proposal is minimally detailed while still reflecting our intentions for construction with the limited information available at this time. Detail will be added to the schedule at each phase as the design progresses and more information becomes available. Once established, schedules will be updated on a monthly basis at a minimum but will be monitored continuously as work progresses. If issues are encountered or work is observed to be slipping between updates, we will proactively coordinate a work session to review the schedule and progress and make any adjustments necessary to ensure the completion is maintained.

**2.C. Provide submittal schedule for long lead items, and describe the job site scheduling system to be used on this job and list the most recent project where used.**

The submittal schedule is prepared by Coates independent of the Project Schedule. Although not all submittals are included in the schedule, long-lead and critical items are included to ensure that they are properly coordinated and tracked relative to the related work. Coates updates the submittal schedule more frequently than the project schedule; and, if any submittals approach critical, then they can be added to the schedule as/if needed.

**2.D. Architectural and engineering design schedule and ability to meet schedule.**

Rich and Associates and Karpinski Engineering have reviewed the schedule and confirmed that they can meet the durations and dates reflected for the design portion of the schedule.

**2.E. Construction schedule and ability to meet schedule.**

Coates has reviewed the schedule and confirmed that they can meet the durations and dates reflected for the construction portion of the schedule.

**2.F. Length and reasonableness of design and construction schedules.**

The Proposal Schedule includes 25 work days for the completion of the Design Development and Construction Documents with the design divided into (3) phases, i.e., site and foundation, structural, and final construction documents. Each phase includes an associated 10-day permit review activity. The Construction period in the schedule is 156 days long extending from the Notice to Proceed on April 29, 2019 until the Scheduled Occupancy Date of December 6, 2019, with construction of the parking deck taking 127 days from June 3, 2019 through December 2, 2019 and site finishes taking 20 days from October 24, 2019 through November 25, 2019. Coates has reviewed and confirmed the schedule as reasonable.

**2.G. Ability to complete project in a satisfactory and timely manner.**

Coates has reviewed the schedule and verified that they can complete the project in a satisfactory and timely manner.

**2.H. Date of Substantial Completion**

The included Preliminary Baseline Construction Schedule reflects the Scheduled Occupancy Date/ Substantial Completion as December 6, 2019, which is 2-weeks earlier than the required December 20, 2019 date. The schedule reflects a reasonable plan for completion while accounting for weather, permitting, procurement, construction, final cleaning, punch list corrections, and final inspections.

# **ATTACHMENT 2A**

## **SCHEDULES**























































| Activity ID                        | Activity Name                                  | Orig Dur | Start    | Finish    | Total Float | Free Float | Calendar  | 2019 |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          | 2020 |
|------------------------------------|--|----------|----------|-----------|-------------|------------|-----------|------|-----------------------------------|-----------------------------------|-----------------------------------|---|--|---|--------------------|-----|-----|-----|--------------------------|------|
|                                    |  |          |          |           |             |            |           | Feb  | Mar                               | Apr                               | May                               | Jun                                       | Jul  | Aug   | Sep                | Oct | Nov | Dec | Jan                      |      |
| Medina Parking Deck                |  | 221      | 01-28-19 | 12-06-19  | 0           | 0          |           |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| Project Milestones                 |  | 313      | 01-28-19 | 12-06-19  | 0           | 0          | Cal Days  |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-100                           | Issue RFP                                      | 0        |          | 01-28-19* | 0           | 2          | Cal Days  | ◆    | Issue RFP                         |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-105                           | Madatory Pre-proposal Conference               | 0        |          | 01-30-19* | 0           | 0          | Cal Days  | ◆    | Madatory Pre-proposal Conference  |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-115                           | Deadline for Contractor Questions              | 0        |          | 02-22-19* | 0           | 0          | Cal Days  |      | ◆                                 | Deadline for Contractor Questions |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-135                           | Receipt of Design-build Proposals              | 0        |          | 03-22-19* | 0           | 0          | Cal Days  |      |                                   | ◆                                 | Receipt of Design-build Proposals |   |  |   |                    |     |     |     |                          |      |
| 1030-145                           | Design-Build Interviews                        | 0        |          | 04-04-19* | 0           | 0          | Cal Days  |      |                                   |                                   | ◆                                 | Design-Build Interviews                   |  |   |                    |     |     |     |                          |      |
| 1030-155                           | Design-Build Notice to Proceed                 | 0        |          | 04-29-19* | 0           | 0          | Cal Days  |      |                                   |                                   | ◆                                 | Design-Build Notice to Proceed            |  |   |                    |     |     |     |                          |      |
| 1030-175                           | Commence Construction Period                   | 0        |          | 04-29-19  | 2           | 0          | Cal Days  |      |                                   |                                   | ◆                                 | Commence Construction Period              |  |   |                    |     |     |     |                          |      |
| 1030-220                           | Commence Work On-site                          | 0        |          | 05-17-19  | 4           | 0          | Cal Days  |      |                                   |                                   | ◆                                 | Commence Work On-site                     |  |   |                    |     |     |     |                          |      |
| 1030-245                           | Commence Work on Building                      | 0        |          | 06-04-19  | 0           | 0          | Cal Days  |      |                                   |                                   |                                   | ◆   | Commence Work on Building                      |   |                    |     |     |     |                          |      |
| 1030-375                           | Commence Build-out                             | 0        |          | 09-18-19  | 0           | 0          | Cal Days  |      |                                   |                                   |                                   |   |  | ◆   | Commence Build-out |     |     |     |                          |      |
| 1030-610                           | Scheduled Occupancy Date                       | 0        |          | 12-06-19* | 0           | 0          | Cal Days  |      |                                   |                                   |                                   |   |  |   |                    |     |     | ◆   | Scheduled Occupancy Date |      |
| Preconstruction                    |  | 99       | 01-30-19 | 06-18-19  | 3           | 0          | Work Days |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| Design-Build Team Selection/ Award |  | 61       | 01-30-19 | 04-24-19  | 2           | 0          | Work Days |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-110                           | RFP Review/ Questions Preparation              | 15       | 01-30-19 | 02-19-19  | 2           | 2          | Work Days | ▲    | RFP Review/ Questions Preparation |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-120                           | Prepare Design-Bid Proposal                    | 15       | 02-22-19 | 03-14-19  | 1           | 0          | Work Days |      | ▲                                 | Prepare Design-Bid Proposal       |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-125                           | Proposal Schedule/ Estimating                  | 5        | 03-13-19 | 03-19-19  | 1           | 0          | Work Days |      |                                   | ▲                                 | Proposal Schedule/ Estimating     |   |  |   |                    |     |     |     |                          |      |
| 1030-130                           | Internal Review/ Coordination                  | 5        | 03-14-19 | 03-20-19  | 1           | 1          | Work Days |      |                                   | ▲                                 | Internal Review/ Coordination     |   |  |   |                    |     |     |     |                          |      |
| 1030-140                           | Owner Review of Proposals                      | 7        | 03-22-19 | 04-01-19  | 2           | 2          | Work Days |      |                                   | ▲                                 | Owner Review of Proposals         |   |  |   |                    |     |     |     |                          |      |
| 1030-150                           | Owner Team Selection/ Award                    | 15       | 04-04-19 | 04-24-19  | 2           | 2          | Work Days |      |                                   |                                   | ▲                                 | Owner Team Selection/ Award               |  |   |                    |     |     |     |                          |      |
| Design                             |  | 26       | 04-29-19 | 06-04-19  | 3           | 0          | Work Days |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-160                           | Design Development                             | 10       | 04-29-19 | 05-10-19  | 0           | 0          | Work Days |      |                                   |                                   | ▲                                 | Design Development                        |  |   |                    |     |     |     |                          |      |
| 1030-170                           | Prepare Site/ Foundation Permit Documents      | 5        | 05-07-19 | 05-13-19  | 0           | 0          | Work Days |      |                                   |                                   | ▲                                 | Prepare Site/ Foundation Permit Documents |  |   |                    |     |     |     |                          |      |
| 1030-195                           | Prepare Structural Permit Documents            | 5        | 05-14-19 | 05-20-19  | 0           | 0          | Work Days |      |                                   |                                   | ▲                                 | Prepare Structural Permit Documents       |  |   |                    |     |     |     |                          |      |
| 1030-205                           | Prepare Final Construction Documents           | 10       | 05-21-19 | 06-04-19  | 3           | 0          | Work Days |      |                                   |                                   |                                   | ▲   | Prepare Final Construction Documents           |   |                    |     |     |     |                          |      |
| Permitting                         |  | 25       | 05-14-19 | 06-18-19  | 3           | 0          | Work Days |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-180                           | Site/ Foundation Permit Review                 | 10       | 05-14-19 | 05-28-19  | 0           | 0          | Work Days |      |                                   |                                   | ▲                                 | Site/ Foundation Permit Review            |  |   |                    |     |     |     |                          |      |
| 1030-200                           | Structural Permit Review                       | 10       | 05-21-19 | 06-04-19  | 0           | 0          | Work Days |      |                                   |                                   | ▲                                 | Structural Permit Review                  |  |   |                    |     |     |     |                          |      |
| 1030-230                           | Final Permit Review                            | 10       | 06-05-19 | 06-18-19  | 3           | 1          | Work Days |      |                                   |                                   |                                   | ▲   | Final Permit Review                            |   |                    |     |     |     |                          |      |
| Construction                       |  | 156      | 04-29-19 | 12-06-19  | 0           | 0          |           |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| Mobilization                       |  | 15       | 04-29-19 | 05-17-19  | 2           | 0          | Work Days |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-165                           | Sitework Mobilization                          | 15       | 04-29-19 | 05-17-19  | 2           | 0          | Work Days |      |                                   |                                   | ▲                                 | Sitework Mobilization                     |  |   |                    |     |     |     |                          |      |
| Material Procurement               |  | 25       | 05-14-19 | 06-18-19  | 0           | 0          | Work Days |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-185                           | Site Sewer Structure Procurement               | 20       | 05-14-19 | 06-11-19  | 4           | 1          | Work Days |      |                                   |                                   | ▲                                 | Site Sewer Structure Procurement          |  |   |                    |     |     |     |                          |      |
| 1030-190                           | Foundation Materials Procurement               | 15       | 05-14-19 | 06-04-19  | 0           | 0          | Work Days |      |                                   |                                   | ▲                                 | Foundation Materials Procurement          |  |   |                    |     |     |     |                          |      |
| 1030-210                           | Structural Concrete Material Procurement       | 20       | 05-21-19 | 06-18-19  | 0           | 0          | Work Days |      |                                   |                                   |                                   | ▲   | Structural Concrete Material Procurement       |   |                    |     |     |     |                          |      |
| Site Prep/ Rough-in                |  | 26       | 05-17-19 | 06-27-19  | 3           | 0          | Weather   |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-215                           | Site Demo/ Clearing                            | 10       | 05-17-19 | 05-31-19  | 2           | 2          | Weather   |      |                                   |                                   | ▲                                 | Site Demo/ Clearing                       |  |   |                    |     |     |     |                          |      |
| 1030-225                           | Prep Building Pad/ Rough Grading               | 10       | 05-29-19 | 06-13-19  | 0           | 0          | Weather   |      |                                   |                                   | ▲                                 | Prep Building Pad/ Rough Grading          |  |   |                    |     |     |     |                          |      |
| 1030-235                           | Site Sewers                                    | 5        | 06-13-19 | 06-20-19  | 3           | 0          | Weather   |      |                                   |                                   |                                   | ▲   | Site Sewers                                    |   |                    |     |     |     |                          |      |
| 1030-250                           | Site Utilities                                 | 5        | 06-21-19 | 06-27-19  | 3           | 1          | Weather   |      |                                   |                                   |                                   |   | ▲  | Site Utilities                              |                    |     |     |     |                          |      |
| Parking Deck Construction          |  | 127      | 06-04-19 | 12-02-19  | 2           | 0          |           |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| Level 1                            |  | 35       | 06-04-19 | 07-23-19  | 0           | 0          |           |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-241                           | Foundations                                    | 12       | 06-04-19 | 06-24-19  | 0           | 0          | Weather   |      |                                   |                                   |                                   | ▲   | Foundations                                    |   |                    |     |     |     |                          |      |
| 1030-241                           | Form/ Pour Concrete Columns (Pour 1) - Level 1 | 5        | 06-18-19 | 06-25-19  | 0           | 0          | Weather   |      |                                   |                                   |                                   | ▲   | Form/ Pour Concrete Columns (Pour 1) - Level 1 |   |                    |     |     |     |                          |      |
| 1030-241                           | Underground Rough-in                           | 7        | 06-20-19 | 06-28-19  | 2           | 0          | Weather   |      |                                   |                                   |                                   | ▲   | Underground Rough-in                           |   |                    |     |     |     |                          |      |
| 1030-241                           | Form/ Pour Concrete Columns (Pour 2) - Level 1 | 5        | 06-25-19 | 07-01-19  | 2           | 0          | Weather   |      |                                   |                                   |                                   | ▲   | Form/ Pour Concrete Columns (Pour 2) - Level 1 |   |                    |     |     |     |                          |      |
| 1030-241                           | Column Curing (Pour 1) - Level 1               | 3        | 06-26-19 | 06-28-19  | 0           | 0          | Cal Days  |      |                                   |                                   |                                   | ▲   | Column Curing (Pour 1) - Level 1               |   |                    |     |     |     |                          |      |
| 1030-241                           | Strip Forms at Columns (Pour 1) - Level 1      | 2        | 07-01-19 | 07-02-19  | 0           | 0          | Weather   |      |                                   |                                   |                                   | ▲   | Strip Forms at Columns (Pour 1) - Level 1      |   |                    |     |     |     |                          |      |
| 1030-241                           | Column Curing (Pour 2) - Level 1               | 3        | 07-02-19 | 07-04-19  | 6           | 0          | Cal Days  |      |                                   |                                   |                                   | ▲   | Column Curing (Pour 2) - Level 1               |   |                    |     |     |     |                          |      |
| 1030-241                           | Finish Grade/ Prep Slab-on-Grade               | 10       | 07-05-19 | 07-22-19  | 0           | 0          | Weather   |      |                                   |                                   |                                   | ▲   | Finish Grade/ Prep Slab-on-Grade               |   |                    |     |     |     |                          |      |
| 1030-241                           | Strip Forms at Columns (Pour 2) - Level 1      | 2        | 07-05-19 | 07-08-19  | 3           | 3          | Weather   |      |                                   |                                   |                                   | ▲   | Strip Forms at Columns (Pour 2) - Level 1      |   |                    |     |     |     |                          |      |
| 1030-241                           | Pour Slab-on-Grade (Pour 1)                    | 1        | 07-11-19 | 07-11-19  | 2           | 1          | Weather   |      |                                   |                                   |                                   | ▲   | Pour Slab-on-Grade (Pour 1)                    |   |                    |     |     |     |                          |      |
| 1030-301                           | Pour Slab-on-Grade (Pour 2)                    | 1        | 07-15-19 | 07-15-19  | 3           | 3          | Weather   |      |                                   |                                   |                                   | ▲   | Pour Slab-on-Grade (Pour 2)                    |   |                    |     |     |     |                          |      |
| 1030-311                           | Pour Slab-on-Grade (Pour 3)                    | 1        | 07-23-19 | 07-23-19  | 0           | 0          | Weather   |      |                                   |                                   |                                   |   | ▲  | Pour Slab-on-Grade (Pour 3)                 |                    |     |     |     |                          |      |
| Level 2                            |  | 44       | 07-16-19 | 09-16-19  | 3           | 0          |           |      |                                   |                                   |                                   |   |  |   |                    |     |     |     |                          |      |
| 1030-301                           | Form/ Pour Beams/ Deck (Pour 1) - Level 2      | 8        | 07-16-19 | 07-26-19  | 0           | 0          | Weather   |      |                                   |                                   |                                   | ▲   | Form/ Pour Beams/ Deck (Pour 1) - Level 2      |   |                    |     |     |     |                          |      |
| 1030-311                           | Beam/ Deck Curing (Pour 1) - Level 2           | 3        | 07-26-19 | 07-28-19  | 0           | 0          | Cal Days  |      |                                   |                                   |                                   | ▲   | Beam/ Deck Curing (Pour 1) - Level 2           |   |                    |     |     |     |                          |      |
| 1030-321                           | Pull Post Tension Cables (Pour 1) - Level 2    | 1        | 07-29-19 | 07-29-19  | 0           | 0          | Weather   |      |                                   |                                   |                                   |   | ▲  | Pull Post Tension Cables (Pour 1) - Level 2 |                    |     |     |     |                          |      |

1030-3:Medina Parking Deck  
1030 11x17  
Run Date 03-21-19  
Data Date 01-28-19  
1 of 2





- ◆ Milestone
- ▲ Actual Work
- ▲ Remaining Work
- ▲ Critical Remaining Work

Medina City Hall Parking Structure  
Preliminary Baseline Master Schedule  
(03-21-19)



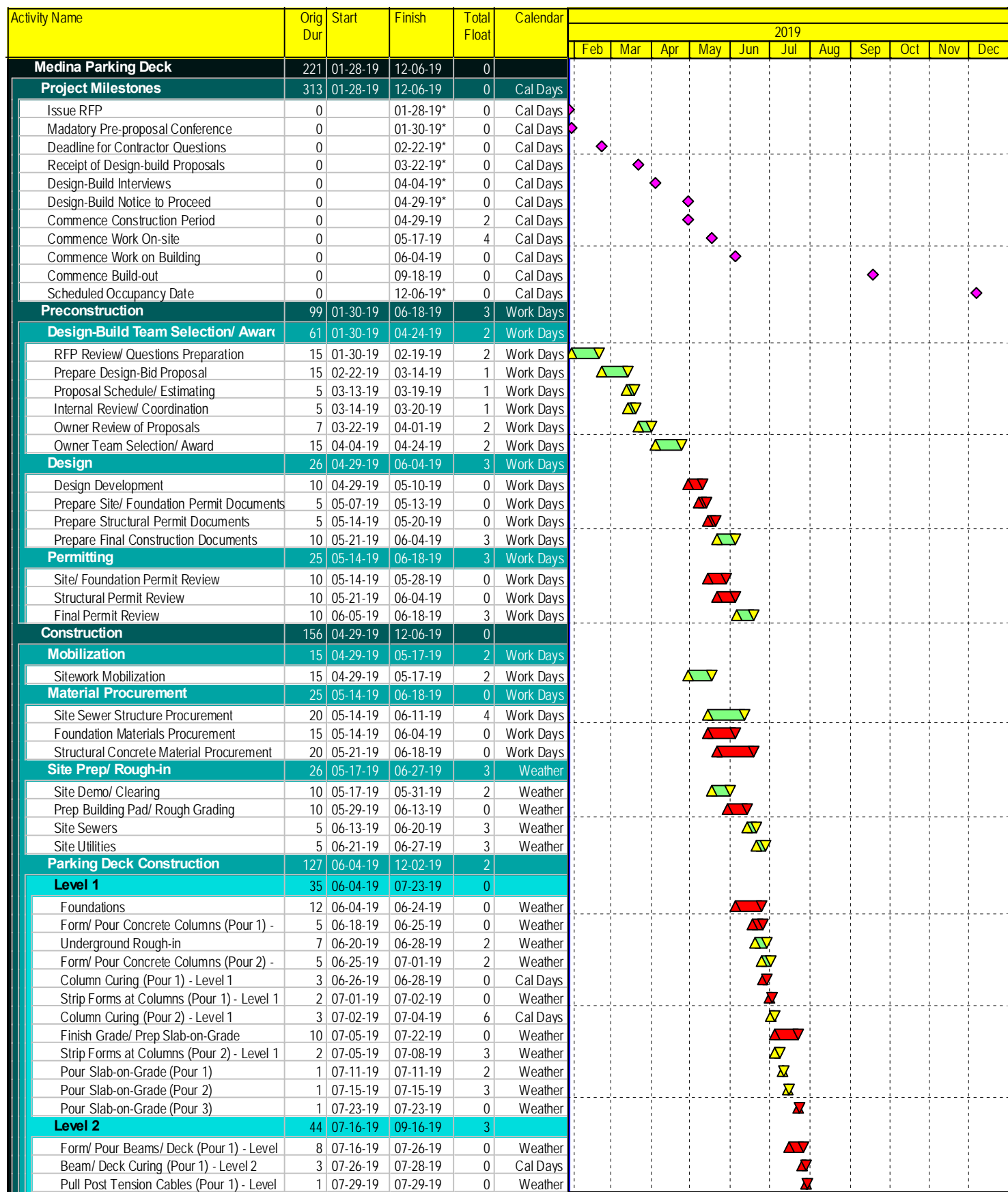
| Activity ID                    | Activity Name                                    | Orig Dur | Start    | Finish   | Total Float | Free Float | Calendar  | 2019 |     |     |     |     |     |  |  |     |     |     |     | 2020 |
|--------------------------------|--|----------|----------|----------|-------------|------------|-----------|------|-----|-----|-----|-----|-----|--|--|-----|-----|-----|-----|------|
|                                |  |          |          |          |             |            |           | Feb  | Mar | Apr | May | Jun | Jul | Aug  | Sep  | Oct | Nov | Dec | Jan |      |
| 1030-32                        | Form/ Pour Columns (Pour 1) - Level 2            | 5        | 07-30-19 | 08-05-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  Form/ Pour Columns (Pour 1) - Level 2        |  |     |     |     |     |      |
| 1030-32                        | Column Curing (Pour 1) - Level 2                 | 3        | 08-05-19 | 08-07-19 | 3           | 0          | Cal Days  |      |     |     |     |     |     |  Column Curing (Pour 1) - Level 2             |  |     |     |     |     |      |
| 1030-32                        | Form/ Pour Walls (Pour 1) - Level 2              | 5        | 08-08-19 | 08-15-19 | 11          | 0          | Weather   |      |     |     |     |     |     |  Form/ Pour Walls (Pour 1) - Level 2          |  |     |     |     |     |      |
| 1030-32                        | Strip Forms Deck/ Columns (Pour 1) - Level 2     | 3        | 08-08-19 | 08-12-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  Strip Forms Deck/ Columns (Pour 1) - Level 2 |  |     |     |     |     |      |
| 1030-32                        | Form/ Pour Beams/ Deck (Pour 2) - Level 2        | 8        | 08-08-19 | 08-20-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  Form/ Pour Beams/ Deck (Pour 2) - Level 2    |  |     |     |     |     |      |
| 1030-32                        | Walls Curing (Pour 1) - Level 2                  | 3        | 08-15-19 | 08-17-19 | 16          | 1          | Cal Days  |      |     |     |     |     |     |  Walls Curing (Pour 1) - Level 2              |  |     |     |     |     |      |
| 1030-32                        | Strip Forms Walls (Pour 1) - Level 2             | 2        | 08-19-19 | 08-20-19 | 9           | 6          | Weather   |      |     |     |     |     |     |  Strip Forms Walls (Pour 1) - Level 2         |  |     |     |     |     |      |
| 1030-32                        | Beam/ Deck Curing (Pour 2) - Level 2             | 3        | 08-20-19 | 08-22-19 | 0           | 0          | Cal Days  |      |     |     |     |     |     |  Beam/ Deck Curing (Pour 2) - Level 2         |  |     |     |     |     |      |
| 1030-32                        | Pull Post Tension Cables (Pour 2) - Level 2      | 1        | 08-22-19 | 08-22-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  Pull Post Tension Cables (Pour 2) - Level 2  |  |     |     |     |     |      |
| 1030-40                        | Form/ Pour Columns (Pour 2) - Level 2            | 5        | 08-23-19 | 08-29-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  Form/ Pour Columns (Pour 2) - Level 2        |  |     |     |     |     |      |
| 1030-42                        | Column Curing (Pour 1) - Level 2                 | 3        | 08-29-19 | 08-31-19 | 1           | 1          | Cal Days  |      |     |     |     |     |     |  Column Curing (Pour 1) - Level 2             |  |     |     |     |     |      |
| 1030-42                        | Strip Forms Deck/ Columns (Pour 2) - Level 2     | 3        | 08-29-19 | 09-03-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  Strip Forms Deck/ Columns (Pour 2) - Level 2 |  |     |     |     |     |      |
| 1030-42                        | Form/ Pour Walls (Pour 2) - Level 2              | 5        | 08-30-19 | 09-09-19 | 3           | 0          | Weather   |      |     |     |     |     |     |  Form/ Pour Walls (Pour 2) - Level 2          |  |     |     |     |     |      |
| 1030-42                        | Walls Curing (Pour 2) - Level 2                  | 3        | 09-10-19 | 09-12-19 | 5           | 0          | Cal Days  |      |     |     |     |     |     |  Walls Curing (Pour 2) - Level 2              |  |     |     |     |     |      |
| 1030-42                        | Strip Forms Walls (Pour2) - Level 2              | 2        | 09-13-19 | 09-16-19 | 3           | 3          | Weather   |      |     |     |     |     |     |  Strip Forms Walls (Pour2) - Level 2          |  |     |     |     |     |      |
| Level 3                        |  | 41       | 09-03-19 | 10-29-19 | 5           | 0          |           |      |     |     |     |     |     |  |  |     |     |     |     |      |
| 1030-32                        | Form/ Pour Beams/ Deck (Pour 1) - Level 3        | 8        | 09-03-19 | 09-16-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Form/ Pour Beams/ Deck (Pour 1) - Level 3          |     |     |     |     |      |
| 1030-32                        | Beam/ Deck Curing (Pour 1) - Level 3             | 3        | 09-16-19 | 09-18-19 | 0           | 0          | Cal Days  |      |     |     |     |     |     |  |  Beam/ Deck Curing (Pour 1) - Level 3               |     |     |     |     |      |
| 1030-32                        | Pull Post Tension Cables (Pour 1) - Level 3      | 1        | 09-19-19 | 09-19-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Pull Post Tension Cables (Pour 1) - Level 3        |     |     |     |     |      |
| 1030-41                        | Form/ Pour Walls (Pour 1) - Level 3              | 5        | 09-20-19 | 09-27-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Form/ Pour Walls (Pour 1) - Level 3                |     |     |     |     |      |
| 1030-40                        | Strip Forms Deck (Pour 1) - Level 3              | 3        | 09-20-19 | 09-24-19 | 7           | 2          | Weather   |      |     |     |     |     |     |  |  Strip Forms Deck (Pour 1) - Level 3                |     |     |     |     |      |
| 1030-42                        | Walls Curing (Pour 1) - Level 3                  | 3        | 09-27-19 | 09-29-19 | 0           | 0          | Cal Days  |      |     |     |     |     |     |  |  Walls Curing (Pour 1) - Level 3                    |     |     |     |     |      |
| 1030-42                        | Strip Forms Walls (Pour 1) - Level 3             | 2        | 09-30-19 | 10-01-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Strip Forms Walls (Pour 1) - Level 3               |     |     |     |     |      |
| 1030-42                        | Form/ Pour Beams/ Deck (Pour 2) - Level 3        | 8        | 09-30-19 | 10-11-19 | 5           | 0          | Weather   |      |     |     |     |     |     |  |  Form/ Pour Beams/ Deck (Pour 2) - Level 3          |     |     |     |     |      |
| 1030-42                        | Beam/ Deck Curing (Pour 2) - Level 3             | 3        | 10-12-19 | 10-14-19 | 7           | 0          | Cal Days  |      |     |     |     |     |     |  |  Beam/ Deck Curing (Pour 2) - Level 3               |     |     |     |     |      |
| 1030-42                        | Pull Post Tension Cables (Pour 2) - Level 3      | 1        | 10-15-19 | 10-15-19 | 5           | 0          | Weather   |      |     |     |     |     |     |  |  Pull Post Tension Cables (Pour 2) - Level 3        |     |     |     |     |      |
| 1030-42                        | Strip Forms Deck (Pour 2) - Level 3              | 3        | 10-16-19 | 10-18-19 | 5           | 0          | Weather   |      |     |     |     |     |     |  |  Strip Forms Deck (Pour 2) - Level 3                |     |     |     |     |      |
| 1030-50                        | Form/ Pour Walls (Pour 2) - Level 3              | 5        | 10-21-19 | 10-25-19 | 5           | 0          | Weather   |      |     |     |     |     |     |  |  Form/ Pour Walls (Pour 2) - Level 3                |     |     |     |     |      |
| 1030-52                        | Walls Curing (Pour 2) - Level 3                  | 3        | 10-25-19 | 10-27-19 | 8           | 1          | Cal Days  |      |     |     |     |     |     |  |  Walls Curing (Pour 2) - Level 3                    |     |     |     |     |      |
| 1030-52                        | Strip Forms Walls (Pour2) - Level 3              | 2        | 10-28-19 | 10-29-19 | 4           | 0          | Weather   |      |     |     |     |     |     |  |  Strip Forms Walls (Pour2) - Level 3                |     |     |     |     |      |
| Build-out                      |  | 53       | 09-18-19 | 12-02-19 | 2           | 0          |           |      |     |     |     |     |     |  |  |     |     |     |     |      |
| 1030-39                        | Masonry Walls - Level 1                          | 5        | 09-18-19 | 09-24-19 | 0           | 0          | Work Days |      |     |     |     |     |     |  |  Masonry Walls - Level 1                            |     |     |     |     |      |
| 1030-39                        | Electrical Rough-in - All Levels                 | 20       | 09-18-19 | 10-18-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Electrical Rough-in - All Levels                   |     |     |     |     |      |
| 1030-41                        | Storm Piping - All Levels                        | 10       | 09-25-19 | 10-08-19 | 5           | 0          | Work Days |      |     |     |     |     |     |  |  Storm Piping - All Levels                          |     |     |     |     |      |
| 1030-42                        | Erect/ Pour Stairs                               | 20       | 09-25-19 | 10-22-19 | 5           | 1          | Work Days |      |     |     |     |     |     |  |  Erect/ Pour Stairs                                |     |     |     |     |      |
| 1030-42                        | Fire Protection - All Levels                     | 10       | 10-02-19 | 10-15-19 | 5           | 1          | Work Days |      |     |     |     |     |     |  |  Fire Protection - All Levels                     |     |     |     |     |      |
| 1030-42                        | Painting - All Levels                            | 15       | 10-10-19 | 10-31-19 | 4           | 4          | Weather   |      |     |     |     |     |     |  |  Painting - All Levels                            |     |     |     |     |      |
| 1030-42                        | Lighting/ Electrical Finishes - All Levels       | 15       | 10-21-19 | 11-12-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Lighting/ Electrical Finishes - All Levels       |     |     |     |     |      |
| 1030-51                        | Deck Finishes/ Striping - All Levels             | 15       | 10-24-19 | 11-18-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Deck Finishes/ Striping - All Levels             |     |     |     |     |      |
| 1030-52                        | Misc Finishes (signage, stops, etc) - All Levels | 15       | 10-29-19 | 11-21-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Misc Finishes (signage, stops, etc) - All Levels |     |     |     |     |      |
| 1030-52                        | Final Cleaning - All Levels                      | 9        | 11-19-19 | 12-02-19 | 2           | 2          | Work Days |      |     |     |     |     |     |  |  Final Cleaning - All Levels                      |     |     |     |     |      |
| Shell Finishes                 |  | 34       | 10-03-19 | 11-25-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  |     |     |     |     |      |
| 1030-46                        | Masonry Veneer                                   | 30       | 10-03-19 | 11-19-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Masonry Veneer                                   |     |     |     |     |      |
| 1030-50                        | Windows/ Storefront                              | 10       | 10-22-19 | 11-05-19 | 2           | 0          | Weather   |      |     |     |     |     |     |  |  Windows/ Storefront                              |     |     |     |     |      |
| 1030-54                        | Exterior Signage                                 | 5        | 11-07-19 | 11-14-19 | 2           | 2          | Weather   |      |     |     |     |     |     |  |  Exterior Signage                                 |     |     |     |     |      |
| 1030-52                        | Misc Shell Finishes                              | 10       | 11-08-19 | 11-22-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Misc Shell Finishes                              |     |     |     |     |      |
| 1030-52                        | Final Cleaning - Shell                           | 8        | 11-14-19 | 11-25-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Final Cleaning - Shell                           |     |     |     |     |      |
| Site Finishes                  |  | 20       | 10-24-19 | 11-25-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  |     |     |     |     |      |
| 1030-515                       | Finish Grading                                   | 10       | 10-24-19 | 11-08-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Finish Grading                                   |     |     |     |     |      |
| 1030-530                       | Respread Topsoil                                 | 3        | 11-01-19 | 11-05-19 | 3           | 0          | Weather   |      |     |     |     |     |     |  |  Respread Topsoil                                 |     |     |     |     |      |
| 1030-540                       | Curbs/ Walks                                     | 5        | 11-04-19 | 11-11-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Curbs/ Walks                                     |     |     |     |     |      |
| 1030-550                       | Seeding/ Planting                                | 5        | 11-07-19 | 11-14-19 | 3           | 3          | Weather   |      |     |     |     |     |     |  |  Seeding/ Planting                                |     |     |     |     |      |
| 1030-560                       | Asphalt Pavement                                 | 5        | 11-12-19 | 11-19-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Asphalt Pavement                                 |     |     |     |     |      |
| 1030-575                       | Pavement Striping                                | 2        | 11-20-19 | 11-21-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Pavement Striping                                |     |     |     |     |      |
| 1030-580                       | Misc Site Finishes                               | 3        | 11-20-19 | 11-22-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Misc Site Finishes                               |     |     |     |     |      |
| 1030-595                       | Site Final Cleaning                              | 2        | 11-22-19 | 11-25-19 | 0           | 0          | Weather   |      |     |     |     |     |     |  |  Site Final Cleaning                              |     |     |     |     |      |
| Punch Lists/ Final Inspections |  | 10       | 11-22-19 |          |             |            |           |      |     |     |     |     |     |  |  |     |     |     |     |      |

1030-3:Medina Parking Deck  
1030 11x17  
Run Date 03-21-19  
Data Date 01-28-19  
2 of 2

-  Milestone
-  Actual Work
-  Remaining Work
-  Critical Remaining Work

Medina City Hall Parking Structure  
Preliminary Baseline Master Schedule  
(03-21-19)





1030-3: Medina Parking Deck

1030 8.5x11

Run Date 03-21-19

Data Date 01-28-19

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**Medina City Hall Parking Structure**  
**Preliminary Baseline Master Schedule**  
**(03-21-19)**

**Paetsch**  
Scheduling & Planning, LLC

**MIKE COATES**  
CONSTRUCTION CO., INC.

| Activity Name                               | Orig Dur  | Start           | Finish          | Total Float | Calendar         | 2019 |     |     |     |     |     |     |     |     |     |     |  |
|---|-----------|-----------------|-----------------|-------------|------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|   |           |                 |                 |             |                  | Feb  | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |  |
| Form/ Pour Columns (Pour 1) - Level 2       | 5         | 07-30-19        | 08-05-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Column Curing (Pour 1) - Level 2            | 3         | 08-05-19        | 08-07-19        | 3           | Cal Days         |      |     |     |     |     |     |     |     |     |     |     |  |
| Form/ Pour Walls (Pour 1) - Level 2         | 5         | 08-08-19        | 08-15-19        | 11          | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Strip Forms Deck/ Columns (Pour 1) - Lev    | 3         | 08-08-19        | 08-12-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Form/ Pour Beams/ Deck (Pour 2) - Level     | 8         | 08-08-19        | 08-20-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Walls Curing (Pour 1) - Level 2             | 3         | 08-15-19        | 08-17-19        | 16          | Cal Days         |      |     |     |     |     |     |     |     |     |     |     |  |
| Strip Forms Walls (Pour 1) - Level 2        | 2         | 08-19-19        | 08-20-19        | 9           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Beam/ Deck Curing (Pour 2) - Level 2        | 3         | 08-20-19        | 08-22-19        | 0           | Cal Days         |      |     |     |     |     |     |     |     |     |     |     |  |
| Pull Post Tension Cables (Pour 2) - Level   | 1         | 08-22-19        | 08-22-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Form/ Pour Columns (Pour 2) - Level 2       | 5         | 08-23-19        | 08-29-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Column Curing (Pour 1) - Level 2            | 3         | 08-29-19        | 08-31-19        | 1           | Cal Days         |      |     |     |     |     |     |     |     |     |     |     |  |
| Strip Forms Deck/ Columns (Pour 2) - Lev    | 3         | 08-29-19        | 09-03-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Form/ Pour Walls (Pour 2) - Level 2         | 5         | 08-30-19        | 09-09-19        | 3           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Walls Curing (Pour 2) - Level 2             | 3         | 09-10-19        | 09-12-19        | 5           | Cal Days         |      |     |     |     |     |     |     |     |     |     |     |  |
| Strip Forms Walls (Pour2) - Level 2         | 2         | 09-13-19        | 09-16-19        | 3           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| <b>Level 3</b>                              | <b>41</b> | <b>09-03-19</b> | <b>10-29-19</b> | <b>5</b>    |                  |      |     |     |     |     |     |     |     |     |     |     |  |
| Form/ Pour Beams/ Deck (Pour 1) - Level     | 8         | 09-03-19        | 09-16-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Beam/ Deck Curing (Pour 1) - Level 3        | 3         | 09-16-19        | 09-18-19        | 0           | Cal Days         |      |     |     |     |     |     |     |     |     |     |     |  |
| Pull Post Tension Cables (Pour 1) - Level   | 1         | 09-19-19        | 09-19-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Form/ Pour Walls (Pour 1) - Level 3         | 5         | 09-20-19        | 09-27-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Strip Forms Deck (Pour 1) - Level 3         | 3         | 09-20-19        | 09-24-19        | 7           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Walls Curing (Pour 1) - Level 3             | 3         | 09-27-19        | 09-29-19        | 0           | Cal Days         |      |     |     |     |     |     |     |     |     |     |     |  |
| Strip Forms Walls (Pour 1) - Level 3        | 2         | 09-30-19        | 10-01-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Form/ Pour Beams/ Deck (Pour 2) - Level     | 8         | 09-30-19        | 10-11-19        | 5           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Beam/ Deck Curing (Pour 2) - Level 3        | 3         | 10-12-19        | 10-14-19        | 7           | Cal Days         |      |     |     |     |     |     |     |     |     |     |     |  |
| Pull Post Tension Cables (Pour 2) - Level   | 1         | 10-15-19        | 10-15-19        | 5           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Strip Forms Deck (Pour 2) - Level 3         | 3         | 10-16-19        | 10-18-19        | 5           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Form/ Pour Walls (Pour 2) - Level 3         | 5         | 10-21-19        | 10-25-19        | 5           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Walls Curing (Pour 2) - Level 3             | 3         | 10-25-19        | 10-27-19        | 8           | Cal Days         |      |     |     |     |     |     |     |     |     |     |     |  |
| Strip Forms Walls (Pour2) - Level 3         | 2         | 10-28-19        | 10-29-19        | 4           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| <b>Build-out</b>                            | <b>53</b> | <b>09-18-19</b> | <b>12-02-19</b> | <b>2</b>    |                  |      |     |     |     |     |     |     |     |     |     |     |  |
| Masonry Walls - Level 1                     | 5         | 09-18-19        | 09-24-19        | 0           | Work Days        |      |     |     |     |     |     |     |     |     |     |     |  |
| Electrical Rough-in - All Levels            | 20        | 09-18-19        | 10-18-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Storm Piping - All Levels                   | 10        | 09-25-19        | 10-08-19        | 5           | Work Days        |      |     |     |     |     |     |     |     |     |     |     |  |
| Erect/ Pour Stairs                          | 20        | 09-25-19        | 10-22-19        | 5           | Work Days        |      |     |     |     |     |     |     |     |     |     |     |  |
| Fire Protection - All Levels                | 10        | 10-02-19        | 10-15-19        | 5           | Work Days        |      |     |     |     |     |     |     |     |     |     |     |  |
| Painting - All Levels                       | 15        | 10-10-19        | 10-31-19        | 4           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Lighting/ Electrical Finishes - All Levels  | 15        | 10-21-19        | 11-12-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Deck Finishes/ Striping - All Levels        | 15        | 10-24-19        | 11-18-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Misc Finishes (signage, stops, etc) - All L | 15        | 10-29-19        | 11-21-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Final Cleaning - All Levels                 | 9         | 11-19-19        | 12-02-19        | 2           | Work Days        |      |     |     |     |     |     |     |     |     |     |     |  |
| <b>Shell Finishes</b>                       | <b>34</b> | <b>10-03-19</b> | <b>11-25-19</b> | <b>0</b>    | <b>Weather</b>   |      |     |     |     |     |     |     |     |     |     |     |  |
| Masonry Veneer                              | 30        | 10-03-19        | 11-19-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Windows/ Storefront                         | 10        | 10-22-19        | 11-05-19        | 2           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Exterior Signage                            | 5         | 11-07-19        | 11-14-19        | 2           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Misc Shell Finishes                         | 10        | 11-08-19        | 11-22-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Final Cleaning - Shell                      | 8         | 11-14-19        | 11-25-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| <b>Site Finishes</b>                        | <b>20</b> | <b>10-24-19</b> | <b>11-25-19</b> | <b>0</b>    | <b>Weather</b>   |      |     |     |     |     |     |     |     |     |     |     |  |
| Finish Grading                              | 10        | 10-24-19        | 11-08-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Respread Topsoil                            | 3         | 11-01-19        | 11-05-19        | 3           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Curbs/ Walks                                | 5         | 11-04-19        | 11-11-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Seeding/ Planting                           | 5         | 11-07-19        | 11-14-19        | 3           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Asphalt Pavement                            | 5         | 11-12-19        | 11-19-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Pavement Striping                           | 2         | 11-20-19        | 11-21-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Misc Site Finishes                          | 3         | 11-20-19        | 11-22-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| Site Final Cleaning                         | 2         | 11-22-19        | 11-25-19        | 0           | Weather          |      |     |     |     |     |     |     |     |     |     |     |  |
| <b>Punch Lists/ Final Inspections</b>       | <b>10</b> | <b>11-22-19</b> | <b>12-06-19</b> | <b>0</b>    | <b>Work Days</b> |      |     |     |     |     |     |     |     |     |     |     |  |
| Punch List Inspections                      | 3         | 11-22-19        | 11-26-19        | 0           | Work Days        |      |     |     |     |     |     |     |     |     |     |     |  |
| Final Occ Inspections/ Corrections          | 10        | 11-22-19        | 12-06-19        | 0           | Work Days        |      |     |     |     |     |     |     |     |     |     |     |  |
| Punch List Corrections                      | 5         | 11-27-19        | 12-04-19        | 0           | Work Days        |      |     |     |     |     |     |     |     |     |     |     |  |
| Punch List Certifications                   | 2         | 12-05-19        | 12-06-19        | 0           | Work Days        |      |     |     |     |     |     |     |     |     |     |     |  |

1030-3:Medina Parking Deck

1030 8.5x11

Run Date 03-21-19

Data Date 01-28-19

2 of 2

**Medina City Hall Parking Structure**  
**Preliminary Baseline Master Schedule**  
**(03-21-19)**

**Paetsch**  
Scheduling & Planning, LLC

**MIKE COATES**  
CONSTRUCTION CO., INC.



### **3 – DESIGN (maximum 50 points)**

**3.A. Technical Criteria. The City needs to understand, appreciate, review and evaluate various functional, structural, and operational components of the project, including functional plan, site utilization plan, foundation system, structural system, building elevations, below grade waterproofing, deck seals and waterproofing, joint systems, etc.**

**Demonstrate the full creative and problem solving capabilities of the design-builder, including: How the parking structure will fit into the City's existing aesthetic; security features; layout of ancillary spaces; site layout and features, including storm water management; pedestrian and traffic flow; ADA compliance; signage; durability, maintenance and life cycle cost issues.**

**See Outline Specifications, Separately Attached**

**See Drawings, Separately Attached**

**3.B. Project description summary including design intent and number of spaces.**

|   |  |
|---|--|
| Structural Systems                          | <b><u>See Attachment 3A at the end of this Section 3</u></b> |
| Exterior Finishes                           | <b><u>See Attachment 3A at the end of this Section 3</u></b> |
| Plumbing System                             | <b><u>See Attachment 3B at the end of this Section 3</u></b> |
| Interior Hardware and Finishes              | <b><u>See Attachment 3A at the end of this Section 3</u></b> |
| Wall Systems                                | <b><u>See Attachment 3A at the end of this Section 3</u></b> |
| Deck Systems                                | <b><u>See Attachment 3A at the end of this Section 3</u></b> |
| Lighting Systems                            | <b><u>See Attachment 3C at the end of this Section 3</u></b> |
| Power Systems                               | <b><u>See Attachment 3C at the end of this Section 3</u></b> |
| Fire Protection Systems/Life Safety Systems | <b><u>See Attachment 3B at the end of this Section 3</u></b> |
| Vertical Transportation Systems             | Not Applicable   |
| Civil Site Systems                          | <b><u>See Attachment 3D at the end of this Section 3</u></b> |

**3.C. Outline Specifications in CSI Format. Indicate where the level of quality of materials exceeds the minimum established in the design criteria.**

**Three Sets of Outline Specifications are Separately Attached**

**3.D. Drawings**

**Two Full Sets and Three Half Sets of Drawings are Separately Attached**

|  |  |
|--|--|
| View from SE on a Presentation Board                 | Separately Attached; Also See Drawings, Page A-4.4 |
| View from SW on a Presentation Board                 | Separately Attached; Also See Drawings, A-4.5      |
| Site Plan  | See Drawings, Pages C-1 and C-2                    |
| Utility Plan   | See Drawings, Page C-3                             |
| Architectural Floor Plans for Each Level             | See Drawings, Pages PS-1.1 and PS-1.2              |
| Elevations of all Four Sides                         | See Drawings, Pages A-3.1 and A-3.2                |
| Transverse and Longitudinal Building Sections        | See Drawings, Pages A-4.1 and A-4.2                |
| Typical Panel and Wall Details                       | See Drawings, A-2.1                                |
| Typical Foundation Plan and Structural Framing Plans | See Drawings, Pages S-1.1, S-1.1A, S-1.2           |
| Plumbing Plan  | See Drawings, Pages FPHE-1.1, FPHE-1.2             |
| Electrical Plan                                      | See Drawings, Page E-1                             |

**3.E. Open area calculations for all elevations and a summary table indicating total building openness.**

See “OPENESS TABULATIONS” in Drawings, Pages PS-1.1 and PS-1.2.

**3.F. Tabulation of the gross and net square footage assignable and circulation square footage and cubic volume of the floor.**

See “OPENESS TABULATIONS” in Drawings, Pages PS-1.1 and PS-1.2.

**3.G. Exterior quality of appearance.**

Per Paragraph 5.A of the Design Criteria, paragraph 5.A, “(t)he parking structure will be a modern structure that must echo the historic character of the adjacent downtown buildings.” And, the general project description states that (t)his facility shall be sited ...so as to minimize its visual impact.” Because the project falls within the City’s Historic District, the project must be presented to the Historic Preservation Board. Our historical consultant, BSHM Architects, Inc., reviewed the design guidelines and interpreted the

same to mean that important buildings, like the Courthouse, were to have arched features, while ancillary buildings, like the various storefronts and this parking structure, were to have more linear features. Based upon the same, the parking structure was designed with linear features and stair towers made to resemble a typical downtown historic storefront. The predominate exterior finish material is brick.

**See Drawings, Separately Attached**

### **3.H. Design Features provided beyond those required in the RFP**

The design presented by Mike Coates Construction Co., Inc., Rich and Associates and Karpinski Engineering has several features which are above and beyond those required in the RFP, including the following:

- For both the 225 car design and the 204 car design, the Telecom Room and Janitor's Room are larger than required by the RFP.
- For both the 225 car design and the 204 car design, the structure will be able to accommodate a future elevator with minimal demolition.
- For both the 225 car design and the 204 car design, the structure includes the option of installing a snow removal gate at the Southeast corner of the building.
- For both the 225 car design and the 204 car design, handicap parking is located within the enclosed footprint of the parking structure.
- For both the 225 car design and the 204 car design, the number of parking spaces exceeds the 200 minimum set forth in the RFP.

~~~~~

#### **NOTE: Explanation of the 225 car parking structure vs. the 204 car parking structure**

The RFP design criteria calls for a maximum ramp slope of 5%. In order to achieve a ramp slope of 5% or less, the parking structure had to be lengthened, and the result produced a 225 car parking structure. This option is designated as Base Bid 1 in the cost submission.

We have also included a second base bid, i.e., Base Bid 2. In this option, a 204 car parking structure is proposed; but, the maximum ramp slope is 6%. If the 1% increase in maximum ramp slope is satisfactory, then there is a cost savings and the 200 car minimum is still satisfied. Other than the change in footprint and car capacity, the two options are otherwise identical in every way.

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## **ATTACHMENT 3A**

### **NARRATIVE - STRUCTURAL SYSTEMS, EXTERIOR FINISHES, INTERIOR HARDWARE AND FINISHES, WALL SYSTEMS AND DECK SYSTEMS**



## Project Description Summary

### **A. Structural Systems:**

The proposed structural system is cast-in-place post-tensioned concrete beams and slabs with moment frames, and conventionally reinforced concrete columns.

### **B. Exterior Finishes:**

Masonry at stair towers, columns, and walls.

### **C. Interior Finishes:**

Interior concrete finish is to be consistent with a Class B finish eliminating form marks and burrs.

### **D. Wall Systems:**

Wall systems include perimeter bumper walls.

### **E. Deck Systems:**

Deck systems consist of 7" cast-in-place post-tensioned slabs.

## **ATTACHMENT 3B**

### **NARRATIVE – PLUMBING SYSTEM, FIRE PROTECTION SYSTEMS/LIFE SAFETY SYSTEMS**

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Intended Fire Suppression Materials .....2

Plumbing Systems Overview .....3

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    Natural Gas.....3

    Sanitary Drainage .....3

Intended Piping Systems and Materials .....3

HVAC Systems Overview .....4

## **Sprinkler and Standpipe Systems**

Sprinkler coverage shall not be required by NFPA 13 or the Ohio Building Code based on the Open Garage classification.

OBC 905.3.1, Exceptions 2 and 3 detail the allowance for manual and manual dry standpipes in open parking garages and open parking garages subject to freezing. First, Class I manual standpipes are allowed in open parking garages where the highest floor is located not more than 150 feet above the lowest level of fire department vehicle access. Class I manual dry standpipes are allowed in open parking garages that are subject to freezing temperatures, provided that the hose connections are located as required for Class II standpipes in accordance with Section 905.5. The Class II standpipe hose connection spacing criteria is that they shall be located so that all portions of the building are within 30 feet of a nozzle attached to 100 feet of hose. Based on the current configuration of the stairs and parking, this 130 foot coverage requirement just barely covers the garage, so supplemental hose valves, located in the middle of the garage, will be included in addition to the stairs.

The standpipe mains and risers will be sized to deliver 100 psig residual pressure at the top of the most hydraulically remote standpipe, while flowing 500 gpm from the first stair and an additional 250 gpm for each additional stair to a limit of 1250 gpm. Inlet pressure is from the fire department connection at 150 psi.

Pressure at the 2 ½ inch fire hose valve on each level shall be a minimum of 100 psig, but not exceed 175 psig.

All fire suppression systems must be formally and successfully tested based on the requirements of NFPA prior to turnover for operational purposes.

## **Intended Fire Suppression Materials**

Pipe, tube and fittings shall be welded or seamless black steel as scheduled in NFPA 13 for all wet pipe systems. Whereas this is a dry system, utilize Schedule 40 for roll grooved and threaded applications.

Dry sprinkler piping shall be schedule 40 steel. There are some indications that galvanized piping within dry pipe systems may not perform as well as black steel piping for internal corrosion. Thus, it is proposed that black steel piping be allowed for the dry pipe systems.

Standpipe hose valves within the stairs and other exposed hose valves in public accessible areas shall be installed such that hose connections and valves do not protrude to prevent safety hazards to pedestrians.

All fittings and valves shall be minimum 250 psig rated where required due to pressure. Fire Department valves will be 2-1/2" size, rough brass.

Fire Department connection will consist of Storz type connections as dictated by the local fire department. Finish to be coordinated during design.

## **Plumbing Systems Overview**

### **Domestic Cold Water**

Domestic water will be sized based on available street pressure and capacity usage for service to a mop basin and the parking garage wash-down system. The main water service for the garage will have a water meter and reduced pressure backflow preventer located in a minimally heated Water Room.

The garage wash-down system will be for seasonal use and intended to be manually filled and drained for freeze protection purposes. The reduced pressure backflow preventer, fill and drain valves for the system shall also be located in the heated Water Room. The distribution will be horizontal on one level feeding vertical risers equipped with hose connection stations at each floor.

### **Domestic Hot Water**

Domestic hot water will be provided for the mop basin by a small electric water heater in the Water Room.

### **Natural Gas**

Natural gas is not required for this project.

### **Sanitary Drainage**

Sanitary waste will be provided to the building for the mop basin and floor drain located in the Water Room.

### **Garage Drainage**

Garage drainage will be designed for the requirement of storm drainage based on a rainfall rate of 4-inches per hour for the top deck. The sub decks shall have drains connecting to the interior downspouts. Drains will not have p-traps. Drain locations shall be driven by structural and architectural design to obtain proper slope. Drains shall be low profile large capacity with sediment buckets, specifically intended for parking structures.

## **Intended Piping Systems and Materials**

### **WATER PIPING**

Domestic Water – 2" and under

- Type L copper
- Soldered or pressed joints

Under-Slab domestic water

- Type K soft copper without joints or PEX-AL

Garage wash down – all sizes

- Schedule 80 CPVC pressure pipe and fittings with solvent weld joints

## **DRAIN, WASTE, AND VENT PIPING**

Gravity Sanitary and Storm / Garage Drainage (above slab)

- Cast iron no-hub
- For sizes through 2 inches, provide heavy duty 80 inch pound torque hubless soil pipe couplings. Provide Clamp-All Corporation Model 80 or Husky Series 4000, Ideal HD, Mission HW, or MG coupling conforming to FM1680 class one and ASTM C1540, or MG coupling.
- For sizes 2-1/2 inches and larger, provide heavy duty 120 inch pound torque hubless soil pipe couplings manufactured by Clamp-All Corporation Model 125, Ideal HD, conforming to FM1680 class one and ASTM C1540, or MG coupling.

Gravity Sanitary and Storm / Garage Drainage (below slab)

- Schedule 40 PVC DWV pipe and fittings
- Solvent welded joints

## **HVAC Systems Overview**

An electric unit heater will be provided for the Water Room to provide minimal heat for freeze protection purposes.

A ductless split air conditioning unit will be provided for the Electric / Tel Room, and will be in the configuration of cooling-only or heat pump for minimal heating during the winter. The condensing unit will sit in the garage, just outside of the Electric / Tel Room, and the air conditioning unit will be mounted on the wall of the Electric / Tel Room, above the door. The drain will be extended to the mop basin in the Water Room.

## **ATTACHMENT 3C**

### **NARRATIVE – LIGHTING SYSTEMS, POWER SYSTEMS**

## Electrical Systems

### Electrical Service

The electrical service will be coordinate with the utility company. The plan is to utilize a pole mounted transformer transition to underground to garage. CT cabinet and meter socket location to be per utility company requirements. Service to be 200 amp, 208/120 volt, 3 phase, 4 wire.

### Electrical Power Distribution - Normal

New main normal power panelboard will be provided for the parking garage to match the electrical service listed above, 200 amp, 208/120 volt, 3 phase, 4 wire. A service rated Surge Protection Device (TVSS) will be provided at the panelboard. Overcurrent protection devices will be the following:

- Thermal magnetic circuit breakers.

Panels will be sized to accommodate the future installation of electric vehicle charging stations. It is assumed (8) future Level 1 electric vehicle charging stations will be installed.

All feeders and branch circuits shall be copper. Copper branch circuit and feeder wiring will be 90°C., 600 volt, Type THHN/THWN-2. Type XHHW will also be acceptable for feeders.

A code compliant grounding electrode system will be provided in accordance with NEC Article 250 and all other related articles. The grounding electrode conductor will be sized in accordance with NEC Article 250.66. The minimum service grounding installation will include utilization of the metal underground water piping system and a ground rods. Underground metal water piping, concrete encased electrode and other made electrodes will be sufficiently bonded together to form the grounding electrode system. Grounding of the electrical system will be by means of an insulated grounding conductor installed with feeder and branch circuit conductors in all conduits. Grounding conductors will be sized in accordance with NEC Article 250.122. All terminations of the grounding conductors will be by means of solderless connections.

A rooftop UL Master Labeled passive lightning protection system will **NOT** be provided for the building. Surge protection devices will be installed for the electrical distribution system. It is assumed that any future parking equipment will be provided with integral surge protection devices for additional protection.

### Life Safety Power

Egress lighting which will include stairwell lighting and fixtures within the garage parking area will be provided with integral battery packs.

### Branch Circuit Power Distribution

A minimum of two duplex receptacles will be provided in the storage / MEP room. A minimum of one convenience receptacle will be provided within the garage entrance. A GFCI receptacle will be placed at each stairwell on each level.

New equipment (such as future parking equipment, small HVAC equipment and controls, small plumbing equipment and data / telecommunications equipment) will be provided with dedicated receptacles / connections and circuits. Neutral conductors will not be shared for any branch circuits, including lighting. Lighting will be circuited to a maximum of 1600 watts for 120 volt applications. Branch circuit conductors will be increased for voltage drop as required.

Conduit and wire will be provided to 8 parking spaces for electric vehicle charging stations. Level 1 charging stations is assumed as the RFP did not specify the level of charging. Level 1 charging stations are powered by a 120V, 20Amp connection.

Conduits installed exposed is the preferred method, however if conduits are embedded within the structure they will be PVC 40 with grounding wire. Exposed conduits will be PVC 40.



Exterior underground conduit will be schedule 40 PVC. Such conduit will be encased in concrete under drives or roadways, with a 3-inch envelope, minimum.

Conduit connections to motors and other vibrating equipment will be flexible metal "Seal-tite" type conduit.

All sleeves within concrete structure shall be Schedule 40 PVC.

### Lighting Systems

Ceiling mounted LED lighting fixture will be provided for the parking deck area. LED area lighting fixtures mounted to aluminum poles will be provided for the top deck. Parking deck fixtures will be aluminum, have tamper proof fasteners and provided with bird guards. The fixtures will be installed tight to the underside of deck.

LED light fixtures will be provided within stairwells and storage / MEP room. All fixtures will have non-corrosive housings and shall be provided with cold weather drivers.

Exit signs will be self-luminous with a 10 year service life.

### Lighting Control Systems

A lighting control system utilizing on/off, and dimming technology will be provided for parking garage in order to comply with new ASHRAE 90.1-2010 requirements. Parking area lighting along the perimeter shall be zoned separate from the interior zone and dimmed via daylight sensors. The lighting control system will include a central timeclock and photocells. The lighting control system will provide control over fixture zones and be capable of dimming the LED fixtures.

The Owner is interested in exploring integral sensors in order to further dim the lights based on occupancy. This additional control will be provided as an add alternate to the base garage bid.

The storage / MEP room will be provided with standard toggle switch due to safety reasons.

The lighting control system will be required to have functional testing as required by ASHRAE 90.1-2010 9.4.4.

### Fire Alarm System

Per OBC and NFPA 72 a fire alarm system is not required for open parking garages.

### Security Systems Rough-in

Conduit and rough-in back box systems will be provided. Pull wires will be provided in all conduit systems. Back boxes will be a minimum of 4" square. Minimum conduit sizes will be 3/4" for Security.

### Data / Telecommunications System Rough-in

Conduit and rough-in back box systems will be provided. Pull wires will be provided in all conduit systems. Back boxes will be a minimum of 4" square. Minimum conduit sizes will be 1".

**ATTACHMENT 3D**  
**NARRATIVE – CIVIL SITE SYSTEMS**

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## **CONSTRUCTION SITE SET UP / SWPPP**

Prior to all demolition and earthwork the contractor shall install all erosion control measures as called for in the Storm Water Pollution Prevention Plans. These items shall include silt fence and/or silt sock, stabilized construction entrance, employee parking area, fuel containment dyke, cement washout facility, construction debris dumpster, temporary sediment pond and diversion swales, dust control measures, and provide temporary seeding on disturbed areas that remain dormant after 14 days.

In addition the contractor shall install their construction staging area off of North Elmwood Avenue utilizing the City owned property. The construction staging area shall be enclosed with an 8 foot tall galvanized chain link fence with gates that lock. A field office shall be installed in the construction staging areas.

Access to all neighboring property including the existing parking lot to the east of the site and also to City Hall shall be maintained at all times. All adjacent properties shall be protected from damage from construction activities and repaired to original condition or better if impacted. Contractor shall contact OUPS to mark out their facilities on site prior to any work commencing.

## **SITE DEMOLITION**

The contractor shall remove all pavement including base and concrete curbs as shown on the pavement demolition plans. The contractor shall neatly saw-cut the pavement to be removed in particular along the south parking lot that is to remain. The saw-cut shall follow the property line between the two parcels.

In addition, an area of the existing City Hall parking lot off of North Elmwood will be milled a depth of 2-1/4 inches. The existing site lighting shall be removed and the existing wire pulled per NEC and NESC specifications. All existing conduits shall be capped and left in place. The contractor shall coordinate with Ohio Edison to remove the existing utility poles where shown on the plans including overhead wires. The existing 8-inch sewer pipe in the City Hall parking lot shall be removed to the limits shown on the plans. Finally, select trees on site and vegetation shall be removed.

## **SITE PAVEMENT**

The contractor shall install asphalt pavement where shown on the plans including a 6-inch ODOT Item 304 base. Asphalt pavement shall follow ODOT CMS Item 441 for both Surface and Intermediate courses. Tack Coat shall be applied between each layer of asphalt. The asphalt pavement that was milled in the City Hall parking lot shall be replaced with 2-1/4 inch ODOT Item 441 asphalt pavement consisting of a surface and intermediate course with tack coat applied to the milled surface and intermediate course. The new parking garage will require the City Hall parking lot off of North Elmwood to be widened to align the access drive with the garage entrance. The widened parking spaces will be constructed per the specification previously mentioned and include concrete curbs with 6-inch curb drains.

The south parking garage door will exit onto a new 8-inch reinforced concrete pavement per the City of Medina Commercial Driveway Construction details. A new curb along with an adjacent 4-inch concrete sidewalk will be installed along the east edge of the south driveway. A new curb cut and apron will be installed at the south entrance into the site. The west entrance into the site will have its concrete apron replaced also.

## **ADA ACCESSIBILITY**

The parking garage will have ADA accessible parking spaces on the first floor. In addition, the garage will be served by an ADA accessible sidewalk between City Hall and the garage and the south stair tower and the right of way along West Liberty Street. The accessible walk will have curb ramps where it crosses curbs.

## **SITE UTILITIES**

### **Sanitary Sewer**

Sanitary waste from the garage will be conveyed by a 6" PVC SDR 35 sanitary sewer pipe sloped at 1% minimum from a clean out on the west side of the garage to a new doghouse manhole on the existing sanitary sewer in North Elmwood.

### **Storm Sewer**

Garage drainage will be collected by the garage plumbing system and exit out of the garage on the south side of the building and enter an oil separator prior to the underground storm water management system. The existing 8-inch HDPE storm sewer pipe from the existing catch basin in the City Hall parking lot will need to be relocated around the new garage and reconnect to the existing pipe downstream on the northeast corner of the site.

### **Storm Water Management**

Storm water from the garage will be treated for oils by an oil and water separator prior to entering 3 rows of perforated 24-inch HDPE storm sewer pipes that will store and allow for water quality by infiltration into the surrounding soils. The outlet structure for the underground system connects to the existing 12-inch storm sewer that leaves the site to the south.

### **Fire Main Water**

The garage dry fire system is provided water via 1-1/2" Type K copper main that enters the garage on the west side from a tap on the 4-inch main in North Elmwood. In addition, two new hydrants are required on site near the garage fire department connection (FDC). A new 4" ductile iron pipe water main from North Elmwood and also West Liberty extends into the site to supply water to a new fire hydrant near the FDC. All fire hydrants shall be 6-inch and the mode per the City standard hydrant detail.

### **Electric**

Power is brought to the garage via underground concrete encased 5-inch conduits along the south driveway. The power drop for the site will be located off the relocated power pole at the south driveway entrance.

### **Telecommunications**

Spare conduits are provided for connection between the garage and the police station for the City's future use. In addition, spare conduits are extended out of the west side of the garage to undisturbed soil at a location that will allow for continuation in the future to North Elmwood.

### **Site Lighting**

New site LED lighting poles and fixtures will be installed on site per the model selected by the City. All light poles will be fed by power via a 2-inch schedule 40 underground conduit concrete encased.

### **Domestic Potable Water**

Domestic potable water is not required for the garage.

### **Natural Gas**

Natural gas is not required for this project.

## **4 – ADDED VALUE**

### **4.A. Narrative why this design should be selected over others.**

The team consisting of Mike Coates Construction Co., Inc., Rich and Associates, and Karpinski Engineering is the most qualified for the project because each aspect of the project will be addressed by a team member which is highly skilled, highly experienced in that particular service, and a leader in their respective profession; and, that collaboration will result in a well designed, well built, and quality parking structure which will serve the City of Medina for many years to come.

Founded in 1958, Coates is a general contractor which works throughout Northeastern Ohio and Western Pennsylvania, and also self-performs clearing, demolition, incidental earthwork, site utilities, site improvements, structural concrete (including parking decks), flat concrete, masonry, rough carpentry, finish carpentry, metal studs, drywall, acoustical ceiling systems, metal building systems, and the setting of industrial equipment. **Coates was recently awarded several State and Federal contracts based upon BEST VALUE, i.e., both qualifications and price:** These contracts include 2 ODOT facilities for the State of Ohio (approximately \$7 Million each), an \$8 Million indoor firing range for the United States Army Corps of Engineers in Vienna, Ohio, and a new \$30 Million Performing Arts Center at Slippery Rock University for Pennsylvania DGS. Coates also recently finished 2<sup>nd</sup> for a best value contract on a \$100 Million hospital project in Columbus for the Ohio Department of Mental Health. More to the point, two states and the federal government have chosen to work with Coates because of its qualifications, including building expertise, quality of workmanship, financial standing, credit rating, etc. **In a recent review of Coates by the US Army Corps of Engineers on a new \$9.5 Million 150 member Army Reserve Center constructed by Coates in Cranberry Twp., PA,** the US Army Corps of Engineers, an organization which handles construction for the federal government throughout the world, gave Coates an overall rating of “outstanding”; and, the evaluator further noted the following: **“Contractor’s site staff had a pride of workmanship that resulted in exceptional quality throughout the facility....Contractor performed a large percentage of the work with its own staff, including concrete, masonry, carpentry, wallboard, and acoustical ceilings, which enabled it to insure exceptional quality of workmanship in critical phases of the project....”** Coates’ track record of pushing jobs to completion is unequalled. Coates is a leader in safety, having won the coveted Joan Kovach Safety Leadership Award in 2009 from Ohio’s largest safety council. Coates has won numerous awards for quality, including the top award given by the International Masonry Institute. And, Coates has one of the best ratings offered by Dun and Bradstreet.

Rich and Associates is a full service parking consultant providing customized solutions to every type of parking need. For over 55 years they have developed innovative facilities designed to meet the specific challenges of businesses, municipalities, airports, institutions; as well as retail/entertainment developments throughout North America. Their experience includes the design of over 2,500 parking structures worldwide. As the

only company also involved in the financing, development, and management of parking, Rich knows exactly what goes into creating successful parking structures. Their experience in financing and managing their own parking and operations provides Rich with a clear understanding of how their designs will function over time. Richard C. (Dick) Rich, PE is recognized as one of the parking industry's most creative and innovative forces. In the early 1950's, there was only a handful of specialized professionals, with Dick Rich in the forefront of developing many design features taken for granted today. The list includes self-park garages, multi-use facilities, and major structures that are the parking standard in many U.S. cities. His design of the first mega-structure at O'Hare Airport in Chicago was once listed in the Guinness Book of World Records. Notable historical projects include the following: Stanwix Autopark in Pittsburgh, PA, one of the first mixed use garages; Central Oklahoma Transportation and Parking Authority Garage in Oklahoma City, OK, which included an enclosed shopping mall; Century City Center Garage in Los Angeles, CA, 6000 cars, the largest underground garage at the time; O'Hare International Airport Garage, Chicago, IL, 10,000 cars, the largest above ground single parking structure in the world at its completion; Riyadh International Airport Garage, Saudi Arabia, 5,000 cars; and the Lester B. Pearson International Garage in Toronto, Canada, the largest above grade structure at 13,500 cars.

Karpinski Engineering is one of the leading engineering consulting firms throughout the Midwest. The company has been serving clients throughout the United States since 1983. Karpinski offers a full range of consulting services for the delivery to its clients of comfortable buildings that are visually pleasing, user friendly and energy efficient. Their engineering services include: HVAC Engineering, Sustainable Design Services, Electrical Engineering, Facility Assessments, Civil Engineering, Security and Fire Safety Services, Technology Engineering, Fire Protection and Life Safety Services, Plumbing Design Services, Lighting Design and Consulting Services, and Commissioning. They have offices in Cleveland, Columbus, Akron-Canton, Jamestown and Pittsburgh. Notable projects include the following: Eaton Center, the West Akron Campus for First Energy Corporation, the Global and North American Headquarters for Goodyear Tire and Rubber, Cleveland Museum of Art Renovation and Addition, the Renovation and Expansion of Severance Hall, numerous projects for the Cleveland Clinic, Wexner Medical Center at the Ohio State University, etc.

Again, the team consisting of Mike Coates Construction Co., Inc., Rich and Associates and Karpinski Engineering is the most qualified for the project because each aspect of the project will be addressed by a team member which is highly skilled, highly experienced in that particular service, and a leader in their respective profession; and, that collaboration will result in a well designed, well built, and quality parking structure which will serve the City of Medina for many years to come.

#### **4.B Features above and beyond those required in the RFP**

The design presented by Mike Coates Construction Co., Inc., Rich and Associates and Karpinski Engineering has several features which are above and beyond those required in the RFP, including the following:

- For both the 225 car design and the 204 car design, the Telecom Room and Janitor's Room are larger than required by the RFP.
- For both the 225 car design and the 204 car design, the structure will be able to accommodate a future elevator with minimal demolition.
- For both the 225 car design and the 204 car design, the structure includes the option of installing a snow removal gate at the Southeast corner of the building.
- For both the 225 car design and the 204 car design, handicap parking is located within the enclosed footprint of the parking structure.
- For both the 225 car design and the 204 car design, the number of parking spaces exceeds the 200 minimum set forth in the RFP.

**END**