SUMMERS-TAYLOR, INC.

EMPLOYEE SAFETY
&
HEALTH PROGRAM

1. Certification, Responsibility, and Identification of Personnel

   A. Our Previous Chief Safety Officer is Jason Renner. He developed the ESHP and has the following certifications: OSHA 30 Hr., ATSSA Flagger Instructor, ATSSA Traffic Control Supervisor, ARTBA Safety Supervisor Advanced Academy certificate, TOSHA Hazard Communication, 40 Hr. Hazwoper, Crane Operator & Rigging, Blasting Safety & Regulations, Explosives Control & Compliance, Confined Space and Competent Person Excavation/ Trenching. Jesse Jacobsen is the new Safety Manager for Summers Taylor Inc.

   B. Onsite Safety Personnel: Robert Holly, Scott Fuller have been given the authority to take prompt corrective actions to eliminate hazards, including the authority to stop work. The individuals have each attended an OSHA 10 hr. class. Documentation is available.

   C. Summers-Taylor, Inc's Traffic Control Coordinator is Tommy Franklin. He can be reached 24/7 at 423-791-5822.

2. Chain of Command:

   R. T. (Rab) Summers – President
   Grant Summers – President
   Ted Bryant – Executive Vice President
   Scott Fuller – Vice President of Operations
   Danny Matthews – Vice President of Engineering
   Jesse Jacobsen – Safety/Personnel Officer
   Superintendents
   Foremen

3. <u>Emergency Contacts</u>:

   EMS – 911
   Police/Sheriff – 911
   Fire – 911
   Hazardous Materials Spill – 800-424-9300
   Jesse Jacobsen - 423-791-5158 available 24/7
   Robert Holly - 423-791-5110 available 24/7
   Scott Fuller – 423-791-5106 available 24/7

TABLE OF CONTENTS

HEALTH AND SAFETY POLICY

The safety and well being of our employees and all personnel working on our projects are paramount. Summers-Taylor, Inc. is committed to implementing and fostering an Injury Free Environment (IFE) throughout our entire organization. IFE is a corporate mindset where no injury is acceptable and safety is not optional. In Summers-Taylor, Inc., safety has become personal to each of us and is becoming a way of life. We value and respect every worker. Performing work in a manner that presents risk of injury is not how we conduct our business. All injuries are preventable when safety becomes an everyday personal value. Committing to an Injury Free Environment is not just the right choice; it's really the only choice.

R. T. (Rab) Summers
President

EMPLOYEE SAFETY AND HEALTH MANAGEMENT PROGRAM

The purpose of Summers-Taylor's Employee Safety and Health Management Program (ESHP) is to assist project management, supervision, subcontractors and workers in understanding Summers-Taylor's Injury Free Environment philosophy and the health and safety expectations and requirements for its projects.

The Summers-Taylor Project Team is responsible for the implementation and execution of this Safety and Health Management Program.

INJURY FREE ENVIRONMENT (IFE)

Summers-Taylor, Inc. is committed to an Injury Free Environment. IFE is the shared corporate and individual belief that safety is a value, not compromised by cost or schedule. Everyone has the right to go home safely at the end of the day.

Injury Free Environment holds three basic premises:

- All incidents and injuries are preventable; no level of incident or injury is acceptable or tolerated.
- Injury Free operations are possible in construction; a prevailing mindset and conviction exists to do the right thing and what is necessary to achieve that state.
- Elevate safety awareness daily; a journey of continuous improvement to advance safety and achieve a heightened state of awareness where workers choose to be responsible and accountable for their own safety and the safety of their co-workers.

RESPONSIBILITY AND ACCOUNTABILITY

Everyone associated with this project must understand their responsibilities with regards to health and safety on this project. With the responsibilities defined, project management, supervision, subcontractors and workers will be held accountable for their health, and safety performance.

- Project Management includes Project Executive, Project Director, Project Manager, Project Engineer, and EHS Director. **First-line Supervision includes General Superintendents, Superintendents, Field Engineers, General Foreman and Foreman.

Safety & Health Management Program:

Project Management*

Will Ensure That**:**	The ESHP is understood, implemented, and strictly complied with and that Summers-Taylor, Subcontractors, vendors, or third party individuals working or having business at this project are in conformance to the ESHP.
First Line Supervision** Will Ensure That:	The SHMP is fully understood, implemented in work planning and communicated to workers. The project is compliant to the ESHP
Worker Will:	Understand the contents of the ESHP and follow the established rules and procedures.
Site Safety Representative Will:	Advise project management and supervision as to status and conformance with the project SHMP. Support in administration of the ESHP.

<u>Work Practices</u>:

Project Management* Will Ensure That:	First-line supervision is communicating safe work practices to workers.
First-Line Supervision** Will Ensure That:	All work tasks are properly communicated to workers and complied with.
Worker Will:	Follow all safe work practices as communicated to them by their supervisor.
Site Safety Representative:	Assess project is compliant with safe work practices and federal, state, local and company regulations, rules and procedures.

<u>Site-Specific Safety Rules</u>:

Project Management* Will Ensure That:	The site-specific safety rules and procedures are implemented and enforced.
First-Line Supervision** Will Ensure That:	The site-specific safety rules and procedures are understood and implemented.
Site Specific Safety Rules: (Cont'd)	
Worker Will:	Understand and follow the site-specific safety rules and procedures.

Site Safety Representative Will:	Assess project conformance to site-specific safety rules and procedures.

Orientation:

Project Management* Will Ensure That:	Resources are available to conduct a proper orientation. They participate in orientation process.
First-Line Supervision** Will Ensure That:	They participate in orientation process and provide trainees with site tour before reporting to work assignment.
Worker:	Will attend orientation prior to beginning work. Understand and follow the site-specific safety rules and procedures.
Site Safety Representative Will:	Support project management and first line supervision in the development and administration of the orientation.

Training:

Project Management* Will Ensure That**:**	Resources are available to implement safety and health training. Training programs are developed and implemented.
First-Line Supervision** Will Ensure That:	They received a project-specific supervisor safety orientation prior to start of work. All workers under their direction are properly trained in hazard recognition and safe work practices.
Worker Will:	Attend required project safety and health training. Understand and follow the work practices and guidelines discussed during the training.
Site Safety Representative Will:	Assess that project management, first-line supervision and workers have received proper health and safety training. Assist project supervision in training workers on hazard recognition and safe work practices.

Safety Planning:

Project Management* Will Ensure That:	National pre-qualification system is being properly utilized for contractor selection. All first-line supervision identifies, evaluate, and control the work site hazards, and resources are available to implement controls.

First-Line Supervision**
Will Ensure That: All hazards are identified, evaluated and controlled and addressed in
Daily Pre-Task Plans. Institute a daily assessment program to identify, evaluate and correct work site hazards.

Worker Will: Understand the hazards of the work and follow the safe practices and controls developed for those hazards.

Site Safety Representative Will: Assist in evaluating hazards and determining methods of eliminating or reducing the hazard.

Incidents:

Project Management*
Will Ensure That: All incidents are investigated properly and thoroughly.

First-Line Supervision**
Will Ensure That: They conducted a thorough and proper incident investigation and develop solutions to prevent similar occurrences.
Worker Will: Cooperate and participate in the incident investigation and contribute ideas and solutions.

Site Safety Representative Will: Assist first-line supervision in investigating incidents. Maintain monthly incident statistics.

SAFETY REGULATIONS

Summers-Taylor, Inc. and subcontractors shall comply with all applicable government regulations, specific client rules and regulations, and this Safety and Health Management Program. If any of these standards, requirements, rules or procedures conflict, the most stringent one will prevail.

NOTIFICATION OF UNSAFE OR HAZARDOUS CONDITIONS

Each worker on this project has the right and responsibility to notify project management or supervision of any unsafe or hazardous condition that may be present without fear of retribution.

Project management or supervision will take immediate action to correct or remove any hazard brought to their attention.

Summers-Taylor, Inc. incorporates a Deviation Ticket System Appendix S, which institutes monetary penalties to contractors for those at-risk behaviors that are deemed unsafe. The decision to impose a monetary penalty fine rests solely on the Summers-Taylor person who believes that the particular at-risk behavior deserves a fine attachment to it. The amount of the deviation ticket depends on the severity or potential severity of the at-risk behavior not only to the contractors' own workers but to all individuals that may be put at risk by the at-risk behavior due to the offending contractor's non-compliance. All monetary deviations that are not satisfactorily rectified as described on the remediation section of the deviation ticket will result in a back charge to the offending contractor and will come out of his/her next month's requisition.

DISCIPLINARY PROGRAM

At-risk behavior on this project that could contribute to an incident or injury will not be tolerated. Each worker has an individual responsibility to work safely, and each first-line supervisor is responsible to correct at-risk behavior of workers under their direction.

At-risk behaviors considered immediately Dangerous to Life or Health that may result in immediate termination from the project, consist of, but are not limited to:

- Failure to follow the Fall Protection Policy
- Failure to follow the Substance Abuse Policy
- Possession of firearms, explosives or dangerous weapons
- Theft and other criminal activity
- Entering or allowing to enter an unprotected trench or excavation
- Failure to follow lockout/tag out procedures
- Fighting, horseplay, or practical joking

- Entering or allowing to enter, a confined space without following procedures
- Unsafe and/or reckless operation of motorized vehicles or equipment

For those acts or practices not considered Immediately Dangerous to Life or Health, the following will apply:

- First occurrence: Verbal, written warning and/or re-training
- Second occurrence: Written warning, re-training, suspension, or termination from the project
- Third occurrence: Termination from the project

INCIDENT AND NEAR MISS REPORTING AND INVESTIGATION

Every incident and near miss will be reported immediately to Summers-Taylor, Inc. and documented using the Incident Notification & Investigation Form (Appendix C). The Summers-Taylor Project Team will contact their EHS representative immediately and use the online reporting system to initiate the formal notification process before the end of the day. The Summers-Taylor Project Team will notify the Summers-Taylor Environmental Health and Safety Department of any incident or near miss and will thoroughly investigate to determine the probable root cause(s). Preventive action will be required to eliminate future occurrences.

An incident is defined as any unplanned or undesired event that results in or has the potential to result in a work-related injury/illness, property damage, or disruption of business where the cause was from human errors of omission or commission.

A **near miss** is any situation that has the potential to result in a work-related injury/illness, property damage, serious environmental impact, or disruption of business under slightly difference circumstances.

Summers-Taylor, Inc. and/or subcontractor first-line supervision will be involved in the investigation of incidents and near misses. The Incident Notification and Investigation form must be completed and submitted to the Summers-Taylor Environmental Health and Safety Department within 24 hours of the occurrence. Injured workers shall be accompanied to the medical facility by a supervisor.

POST INCIDENT REVIEW MEETING

Upon completion of the incident investigation or observation of a major nonconformance Summers-Taylor may require a post incident review meeting. At this meeting, the Summers-Taylor project team and Summers-Taylor senior project management, supervision, and involved subcontractor(s) will discuss the nonconformance, root causes, and corrective action plans.

SUBSTANCE ABUSE POLICY

Summers-Taylor, Inc. is providing a safe, drug-free work place for all employees. This policy applies to all Summers-Taylor, subcontractor at any tier, vendor and other third party employees, including management working on or visiting this project.

Drug and alcohol abuse on and off the job can contribute both to incidents and to greater risk for all individuals employed on this project, as well as the general public. All work tasks on Summers-Taylor projects will be considered safety-sensitive.

The following are prohibited on Summers-Taylor projects:

- Being under the influence of any amount of alcohol or illegal drugs
- The use, sale, offer to sell, purchase, transfer, distribution or possession of illegal drugs, drug paraphernalia or alcohol products

Each subcontractor will promote a Drug Free Workplace with their employees and will communicate what constitutes prohibited activities during the safety orientation.

Any worker who suffered or contributed to a work-related injury or illness, which required treatment by a physician or other medical facility or was involved in an accident where damage to property occurred, will be testing for drugs and alcohol within three (3) hours of the incident.

Subcontractors will ensure all workers involved in an accident have a post incident drug/alcohol test and will report the results to Summers-Taylor. At a minimum, drug and alcohol test will follow current NIDA five panel guidelines and alcohol test will follow DOT guidelines.

Workers that refuse to test, stall be tested, are uncooperative with collectors, or attempt to alter a urine specimen will be considered positive and immediately removed from the project.

SAFETY PLANNING

CREW DAILY PRE-TASK PLAN

A Daily Pre-Task Safety Plan will be completed daily by each crew performing work on this project (Appendix F)

Each first-line supervisor will analyze task(s) to be performed by their crew and identify the work sequences, hazards, training, controls and emergency action plans necessary to protect workers from the identified hazards.

- The work will be broken down into individual steps (i.e. all the steps the work crew will have to take in order to complete that task); the known hazards associated with the work; and the hazard controls (tools, safety equipment, safety rules, safe work practices, etc.) This is a time for workers to provide input into the safety plan.

- First-line supervisors will review the plan with their respective work crew so that each worker is aware of what work activities will occur during the shift, what hazards to be aware of and how to properly control or eliminate those hazards. Each worker will sign the plan stating that they understand the work activities, hazards and controls. This is also an acknowledgment that each worker agrees to work according to the plan. The completed pre-task plan shall be posted in a conspicuous location near the work activity.

Those tasks with similar work can use prior pre-task plans, but the plan must still be dated and reviewed with crewmembers at the beginning of the shift. If the scope of work changes or a new hazard appears during the work, the first-line supervisor will stop their crewmembers and revise the pre-task plan.

ORIENTATION, TRAINING AND MEETINGS

To promote and ensure an Injury Free Environment, health and safety training is a requirement for all Summers-Taylor and subcontractor workers assigned to this project.

Foreman Orientation

All foremen are recommended to mobilize to the site prior to their crew so they can receive specific training and review of the permits, forms, and procedures required by the ESHP as well as project specific information necessary to adequately coordinate their work and prepare their crews.

Employee New Hire Orientation

Every worker shall attend an environmental, health and safety orientation conducted by Summers-Taylor which will provide general health and safety information and project specific work rules and procedures.

Daily and Weekly Safety Meetings

All workers assigned to this project will participate in safety meetings conducted by their employer. Summers-Taylor reserves the right to remove subcontractor management/supervision personnel who do not regularly attend and/or conduct weekly safety meetings on the project.

Safety meetings should communicate any incidents that occurred on the project, safety concerns, new work activities, new and continuing potential hazards and the like.

Health and Safety Training

In addition to the site specific health and safety orientation, OSHA requires that workers receive specific task training. To help comply with OSHA minimum worker training requirements and assist in achieving an Injury Free workplace, a training matrix has been included in this Safety & Health Management Program to assist in the identification of applicable training requirements. This is for reference only and shall not be considered all inclusive.

Summers-Taylor may evaluate orientations and training periodically to verify they are being properly conducted and that the contents adequately cover the standards, policies, rules, and procedures contained in the Safety & Health Management Program or OSHA standards.

Project management or supervision will communicate the health and safety policies, rules, and procedures to all vendors and third party individuals having business on this project.

Appendix D or equivalent shall be used to document safety training on this project.

Project Specific Safety Orientation:

Who Needs Training:	All project management, supervision, and workers entering the project.
What Training is Needed:	Safety rules and procedures contained in the Employee Safety & Health Program (ESHP), site-specific emergency action plan, each worker's responsibilities, disciplinary program, and warm up and stretching exercises.

Hazard Communication:

Who Needs Training:	All workers entering the project.
What Training is Needed:	Hazard Communication Basic Training (Refer to Hazard Communication Program in this (ESHP)

Hazardous Chemical or Substance:

Who Needs Training:	Workers exposed to a hazardous chemical or substance
What Training is Needed:	Specific Hazard Communication Training (Refer to Hazard Communication Program in this (ESHP)

Respiratory Protection:

Who Needs Training:	Workers required to wear respiratory protection, including common dust masks.
What Training is Needed:	OSHA 29CRF 1910.134 & 139 or 1926.103

Fall Protection:

Who Needs Training:	Any worker who might be exposed to a fall hazard
What Training is Needed:	* The nature of fall hazards * Procedures for erecting, disassembling, maintaining and inspecting fall protection systems * Use and operation of : guardrail systems, personal fall arrest systems, safety monitoring systems, controlled access zones and other protection when used * Procedures for handling equipment and erection of overhead protection * Fall protection standards

PPE:

Who Needs Training:	Workers using PPE
What Training is Needed:	Refer to section on PPE or regulatory standards

Forklifts:

Who Needs Training:	Operators of powered industrial trucks
What Training is Needed:	* Types of trucks operate * Hazards of the workplace * Hands-on performance evaluation

Confined Spaces:

Who Needs Training:	Any worker attending to, supervising, entering or working within a confined space
What Training is Needed:	* Hazards of the space * Duties of entrants * Air monitoring

Permit-Required Confined Spaces:

Who Needs Training:	Any worker attending to, supervising, entering or working within a confined space.
What Training is Needed:	* Hazards of the space * Duties of entrants, attendants, supervisors * Measures used to eliminate or control hazards * Air monitoring requirements * Emergency procedures/rescue equipment * Communications * Permitting procedure * PPE

Excavations/Trenches:

Who Needs Training:	Workers entering or working within an excavation/trench
What Training is Needed:	* Hazards of the space (slides, cave-ins, water accumulation, etc.) * Safe means of access/egress *Proper support system procedures (erection, maintenance, disassembly and inspection)

Lockout/Tagout:

Who Needs Training:	Workers affected by hazardous energy sources
What Training is Needed:	* Nature of known hazardous energy sources * Project-specific Lockout/Tagout procedures

Gas Welding & Cutting:

Who Needs Training:	Workers conducting gas welding and/or cutting
What Training is Needed:	* The safe use of fuel gas

Arc Welding & Cutting:

Who Needs Training: Workers conducting arc welding and/or cutting

What Training is Needed:
* What to do with unattended machines and electrode holders
* Operations around water
* Shielding arc welding

Hot Work:

Who Needs Training: Workers conducting hot work activities

What Training is Needed:
* Hazards of the area
* Permits
* Duties of Fire Watch
* How to use a fire extinguisher

Scaffolding:

Who Needs Training: Workers working from scaffolding

What Training is Needed:
* The nature of any known hazards
* Proper erection, maintenance and disassembly of fall protection systems
* Falling object protection
*Material/equipment handling from scaffold
* Maximum load-carrying capacity
* Scaffold tagging system
* Access and egress

Crane Baskets:

Who Needs Training: Workers working from crane baskets

What Training is Needed:
* Safe work rules
*100% fall protection
* Lift plans contents
* Emergency procedures

PROJECT SPECIFIC SAFE WORK REQUIREMENT

The project specific safe work requirements are the minimum requirements for this project. The purpose of these requirements is to ensure an Injury Free Environment and compliance of regulatory standards and regulations. Summers-Taylor believes by concentrating on four main focus areas, incidents and near misses could be reduced. Those four main areas are personal protective equipment, housekeeping, fall protection and ladders.

BLASTING

The transporting, handling, storing, and use of explosives, blasting agents and blasting equipment shall be directed and supervised by a licensed contractor. The licensed contractor shall designate a person knowledgeable and with proven experience and ability in blasting operations as their on-site blaster.

All personnel who participate in blasting operations shall receive initial training in basic explosives safety. Individuals shall receive additional training in explosives safety commensurate with the assigned responsibilities.

Prior to the use, storage or handling of explosives, a job-specific blasting plan shall be prepared by a licensed contractor and submitted to Summers-Taylor for approval.

The job-specific Blasting Plan shall be site-specific and shall at minimum address the following:

- Designation of a qualified individual as the Blaster who has authority over all actions and operations related to blasting. List the names, qualifications, and detailed responsibilities for all personnel involved with the blasting or who will otherwise be responsible for transporting, handling or storing the explosives. List all incidental personnel and other personnel authorized to be within the danger zone during blasting operations.
- Dates and location of blasting.
- Type and quantity of explosives and detonating or initiating devices to be used at the site. An inventory of explosives and blasting agents stored at the site shall be maintained.
- Means of transporting explosives and provisions for storing and securing explosives on site.
- Obtaining all applicable permits and licenses.
- Minimum acceptable weather and static conditions and consideration for stray radio frequency energy and electrical currents where electrical initiation will be used.
- Standard procedures for handling, setting, wiring and firing explosives charges
- List of required PPE.
- Minimum standoff distances/means for clearing/controlling access to blast danger areas.
- Procedures for handling misfires and other unusual occurrences.

- Means of annunciation and timing for pre-blast notification and “all clear” after blast.

In addition to the Blasting Plan, the licensed contractor will develop and Emergency Action Plan which shall include:

- Phone numbers of local emergency response organizations (rescue, ambulance, fire department, police)
- Location and phone number of nearest medical services facility
- Actions to be taken when a person is injured.
- A copy of a material safety data sheet (MSDS) for each explosive or other hazardous material expected to be used.
- Personnel not listed on the blasting plan shall not be allowed on site without approval of the blast officer. All personnel shall receive a safety briefing prior to entering the blast area. A roster shall be maintained of all personnel within the blast area.
- A copy of the blasting plan shall be maintained at the blasting site(s) and office locations.

CAISSONS

When a worker(s) must enter a caisson, a qualified person will develop a detailed work plan. The plan will include but not be limited to:

- Type of shield to be used
- Means of access for the worker(s)
- Method of atmosphere monitoring to be used
- Training to be provided to worker(s)

When worker(s) are required to enter a caisson four (4) feet in depth or greater, the workplace will be considered a “permit-required” confined space. All requirements of the confined space section of this ESHP and OSHA 29 CRF 1910.146 will be strictly followed.

Guardrails must be erected around the caisson opening(s) when the sleeve does not extend 42-inches above ground level.

All worker(s) required to work or enter a caisson will receive confined space entry training and understand the contents of the written work plan.

CONCRETE CONSTRUCTION

All vertical and horizontal rebar, form stakes, metal and/or plastic conduit, and/or small pipe stub-ups will be protected with approved caps or other industry accepted alternatives to protect against impalement and injury.

Workers that will operate vibrators, pump nozzles, and concrete buckets will wear appropriate eye and foot protection. It is highly recommended that long sleeve shirts be worn to protect against exposure of concrete to the bare skin and the possibility of concrete burn and contract dermatitis.

Workers engaged in vertical rebar assembly shall comply with the project six-foot fall protection rules. Positioning devices alone are not approved fall protection but can be used in conjunction with personal fall protection equipment.

Walkways along form walls will be constructed in accordance with OSHA scaffold and fall protection standards.

Pre-fabricated forms and form making material will be stacked neatly at all times. When stripping concrete forms, all material will be immediately removed and stacked in an orderly manner. Forming material or debris will not block walkways and aisles. Subcontractor will remove rebar, tie-wire and other debris from the work area daily.

No employee is permitted to ride a concrete bucket.

Ensure that reinforcing steel and forms for walls, piers, columns, stairs and similar vertical structures are adequately supported to prevent overturning and collapse and are designed and installed under the supervision of a qualified person.

Ensure that uncoiled wire mesh is adequately secured to prevent recoiling.

Equip buckets with a discharge device that an employee can operate without being exposed to the load. Equip buckets with safety devices to prevent premature or accidental dumping, and ensure that the release is self-closing.

Follow safe rigging practices when handling concrete buckets.

When using bull floats, inspect the area to ensure there is no energized equipment or power lines nearby that the handles could touch.

Concrete buggy handles must not extend beyond the wheels on either side of the buggy.

Rotating-type, powered concrete trowels shall be equipped with dead-man controls that automatically shut down the equipment when the operator's hands are removed from the controls.

Finishers shall wear kneepads and impervious gloves when hand finishing concrete.

CONFINED SPACE

Workers may be required to work in an area that is defined as a confined space. A confined space

is any space large enough and so configured that a person can bodily enter and perform work; has limited openings for entry and exit; and was not designed for continuous human occupancy. This may also be referred to as a Non Permit Required Confined Space. A Permit Required space meets these criteria *and* has a potentially uncontrollable hazard.

Permit Required confined spaces may include, but are not limited to:

- Storage tanks
- Excavations and trenches
- Ventilation and exhaust ducts
- Sewers
- Manholes
- Underground vaults and utility tunnels
- Pipelines
- Pits and tubs
- Open top spaces more than four feet in depth

All spaces shall be considered Permit Required unless the contractor can prove otherwise. No contractor will allow a worker to enter or work in any space that meets the definition of a confined space without developing a detailed Confined Space Entry Permit (Appendix l or equivalent) and written entry plan. Refer to OSHA 29CFR 1910.146 for further direction. This Permit shall be filled out for all entries and will provide the documentation necessary to reclassify the space as Non Permit Required where possible.

The Confined Space Entry Plan will be submitted to Summers-Taylor for review and issuance of a Confined Space Entry Permit.

Prior to working in any confined space, a competent person will determine what hazards exist. Any operating system or equipment will be locked out and tagged to prevent accidental operation. Contact the operating facility representative prior to any confined space entry work.

Permit required confined spaces will have the atmosphere tested and a permit completed and authorized prior to any worker entering the space. The atmosphere will be tested for oxygen deficiency, toxic gases or vapors, and combustible or flammable gases or vapors according to the hazard analysis and/or information provided by the client.

Prior to any worker entering a confined space, he/she will be trained in the following and records submitted to Summers-Taylor prior to commencement of the work:

- Contents of the Confined Space Entry Plan
- Known hazards in the confined space
- Emergency procedures in case of an emergency
- Correct use of personal protective equipment when required
- Hot Work Permit if required

- Atmosphere testing requirements
- Lockout/Tagout procedures
- Fall protection if required

CRANES AND CRIBBING

The Federal Aviation Administration (FAA) requires a permit on construction cranes any time that they will exceed 200 feet in height, and/or when are placed within 20,000 feet (3.79 miles) of an airport regardless of height. The FAA requires FAA Form 7460-1 to be submitted at least 30 days before or more before the following: 1. the date the proposed construction is to begin, 2. the date an application for a construction permit is to be filed.

The FAA requires that 4 copies of the FAA Form 7460-1 be sent to the local regional FAA Director.

Mobile Cranes

No crane will be brought onto the project without a current annual inspection by a qualified third party and applicable load charts. A copy of the current annual inspection will remain in the crane at all times.

Crane operators will perform daily, monthly and annual inspections in accordance with the manufacturer's requirements and make them available upon request.

Crane operators on this project will be certified by a nationally recognized crane operator certification organization.

All cranes will be equipped with anti-two block devices on both the load and whip lines.

All cranes shall be equipped with adequate swing radius protection.

Use of crane baskets will not be allowed on this project without prior approval of the Summers-Taylor Environmental Health and Safety Department.

Subcontractor supervision will review the safe operations of the crane with each operator. The crane operator shall be responsible to inspect and familiarize himself with the location(s) of materials to be loaded on existing structures.

The crane manufacturer's operating manual, instructions and load charts for the specific crane configuration will be used to determine the safe operation of that crane. The manufacture develops load charts under ideal conditions not accounting for things like wind loading, snow or ice, out of level conditions, inadequate soil compaction, age of equipment, etc.

Therefore, the following guidelines should be adhered to:

1. The ground where the crane will be setup must be solid and able to support the weight of the loaded crane. Determine if underground utilities exist near where the crane will be set up.
2. Ensure the crane is level 360° and maintained during operation.
3. Extend outriggers fully or set per the manufacturer's recommendation for a particular life configuration. Weight must be off the tires.
4. Before a lift, determine the load weight, radius and load capacity. Crane capacity charts are the ideal gross capacity of the crane at certain boom lengths, boom angles and load radius from the crane center pin.
    a. Deductions to the net capacity should be made per manufacturers load chart or operating manual for attachments such as jibs (stowed or attached), headache balls, wind, less than ideal setups, etc. to determine the load that can be safely lifted.
    b. Additional deductions to the net capacity are the weight of the crane' load block, rigging and amount of load line required to make the lift. Some manufacturers include the load line in their load charts but others like Manitowoc do not.
5. A designated, qualified person will determine the load weight. Note: OEM drawings listing the equipment or machinery assemblies are not always accurate. Refer to the shipping weight or have the equipment or machinery assembly weighed.
   Calculate all structural loads and determine the center of gravity.
6. Determine the radius from the center pin of the crane to the load using a steel ruler.
7. Determine the boom length, counterweight and crane configuration to determine the correct load chart.
8. Position the hook over the "Center of Gravity" of the load before starting the lift.
9. Distance from overhead electrical will be a minimum of ten feet. The higher the kV level the greater the distance. When working near electrical sources (overhead lines or lighting), the crane should be grounded and a safety spotter required.

A written critical lift or rigging plan is required for any lift where:

- The load is greater than 85% of the crane capacity as configured for the lift or as defined by the crane manufacturer.
- Two or more cranes are used.
- Any non-routine or critical equipment lift (the Project Manger/Superintendent or Safety Supervisor determines any lift to be non-routine). Critical equipment may include equipment that meets one of the following criteria:
    - The load item, if damaged or upset, would result in a release into the environment of radioactive or hazardous material exceeding the established permissible environmental limits.
    - The load item is unique and, if damaged, would be irreplaceable or not repairable and is vital to a system, facility or project operation.
    - The cost to replace or repair the load item, or the delay in operations of

having the load damaged, would have a negative impact on the facility, or organization, or budget to the extent that it would affect program commitments.

- A lift not meeting the above criteria shall also be designated critical if mishandling or dropping of the load would cause any of the above noted consequences to nearby installations or facilities.
- Further site-specific criteria may be developed to supplement those cited above and may include loads which require exceptional care in handling because of size, weight, close-tolerance installation or high susceptibility to damage as well as lifts using multiple pieces of lifting equipment.

Appendix P or its equivalent shall be used and submitted to Summers-Taylor a minimum of 5 days prior to the lift for review.

A written crane dismantling plan is required for the dismantling of any crane.

Outriggers - Blocking

Cribbing or mats under outrigger pads should be of sufficient size and properly placed to ensure adequate soil bearing as required by the manufacture and the following guidelines:

Tower Crane

The Federal Aviation Administration (FAA) requires a permit on construction cranes any time that they exceed 200 feet in height, and/.or when they are placed within 20,000 feet (3.79 miles) of an airport regardless of height. The FAA requires FAA Form 7460-1 to be submitted at least 30 days before or more before the following: 1. the date the proposed construction is to begin, 2. the date an application for a construction permit is to be filed.

The FAA requires that 4 copies of the FAA Form 7460-1 be sent to the local regional FAA Director.

No employee will work or travel on any part of the crane boom without proper personal fall arrest equipment. No worker will be allowed to climb the tower or get on the boom when the crane is in operation.

Crane operators will perform daily tower crane safety inspections and the crane rental company will perform other maintenance and inspections in accordance to manufacturer recommendation.

A qualified third party will inspect all structural components in accordance with manufacturer's recommendations.

Hoisting ropes must be shortened by the removal of ten feet at the dead end after every three months of use unless otherwise specified by the manufacturer.

No load will be swung over any public street that is occupied by the general public unless authorized by local authorities.

Prior to a load being swung over other workers, the first-line supervisor using the crane will provide a lookout that shall sound an alarm as the load is moved across the work area. The lookout shall wear a fluorescent orange vest or other similar high-visibility garment.

A written crane dismantling plan is required for the dismantling of any crane.

Refer to Non Mandatory Appendix Q for guidelines for the erection of tower cranes.

DEMOLITION

Prior to start of any demolition work, the contractor must ensure a competent person has performed an engineering survey of the building or area to be demolished to determine the condition and location of utilities, whether hazardous materials exist, means and methods of performing the work, sequencing, etc. No work will commence until a written engineering survey has been completed and submitted to Summers-Taylor.

Debris and material shall not be dropped through walls, floor holes, windows or other elevated work areas without the area below being barricaded and properly signed. Under no circumstances shall materials be dropped more than 20 feet without using a chute.
Debris chutes shall have a substantial gate at all elevated openings.

If demolition of a building will involve implosions, the demolition contractor shall submit to Summers-Taylor a detailed safety plan to specifically address site preparation, installation of explosives, debris/dust control and blaster qualifications.

See Non Mandatory Appendix R for Pre-demolition guidelines.

ELECTRICAL

No work will be performed on any energized electrical circuit, bussbars, equipment, or panels unless an approved written work plan is developed in accordance with Chapter 1 of NFPA 70E and submitted to Summers-Taylor Inc. for review prior to performance of work.

Electrical equipment and tools used on this project shall be inspected by a competent person to prevent any worker from receiving an accidental electrical shock. This rule will apply to all cord sets, portable electrical equipment, tools and appliances not part of any permanent building or structural electrical systems.

All temporary cords will be three wire types S, ST, SO, or STO with 16 or heavier wire gauge.

Ground Fault Circuit Interrupters (GFCI)

All cord sets and cord-plug electrical equipment, tools or appliances that are 120 volts will be connected to a ground fault circuit interrupter (GFCI). No cord set or cord-plug electrical equipment, tool or appliance will be plugged directly into any permanent building or structural electrical systems not equipped with a GFCI. Exemptions are office equipment and appliances in site offices.

When the source of electricity is from a two-wire, single-phase portable or vehicle mounted generator rated not more than 5KW, a GFCI is not required, as long as the generator is insulated from the frame and all other grounded surfaces.

Each worker, after plugging in his/her tool and /or extension cord, shall test and reset the GFCI device being used to ensure it is working properly with each use. If the GFCI device is not functioning properly he/she will repeat the process until a properly working GVCI device is found. He/She will report the defective GFCI device to his/her supervisor.

Double-Insulated Tools

Double-insulated tools are allowable if the case bears the Underwriter Laboratories "double-insulated" label. Tools where this label has been removed, painted over or otherwise not readable must be removed from service.

Inspection Program

An inspection program must be established to inspect all cord sets, portable electrical equipment, tools and appliances as described below and before first use, before returned to service following any repair, and after an incident that could have caused damage.

Daily Inspection:
Each cord set, attachment cap, plug, and receptacle of cord sets, portable electrical equipment, tools or appliances connected by a cord and plug, will be visually inspected daily by workers for external damage, such as deformed or missing ground pins, insulation damage, frayed wires or indications of possible internal damage. Exceptions include cord sets and receptacles that are fixed to the permanent electrical systems and are not exposed or damaged.

Any electrical equipment, tool appliance or cord set that is damaged or defective will be immediately removed from service and tagged out as defective equipment for repair. A qualified electrician will repair tagged electrical items.
Quarterly Inspection:

All cord sets, receptacles and cord-plug connected electrical equipment, tools, or appliances not part of the building or structure's permanent wiring, will have the following performed each quarter:

- ♦ Visually inspect for damage or missing ground pin
- ♦ Inspect insulation for damage
- ♦ Inspect for frayed or exposed wires
- ♦ Inspect for signs of internal damage

General Electrical Rules

All cord sets will be elevated above the work surface when practical.

Wire, nails or other conductive material will not be used to hang or attach cord sets or welding leads.

Cord sets that cross roadways will be protected from damage by vehicle and equipment traffic by devices such as hose bridges.

Light stringers and halogen lamps will have the light bulbs protected from accidental contact or breakage and will be hung per manufacturer specifications.

UL approved covers are required on all panels, load centers, pull boxes, etc...prior to energizing. Necessary steps will be taken to prevent unauthorized or unqualified workers access to energized electrical parts or equipment.

EQUIPMENT AND VEHICLES

Motor vehicles that may access any airport airside area will be equipped with a two-way radio on the FAA Ground Traffic Control frequency.

Heavy equipment (cranes, forklifts, dump trucks, excavators/back hoes, man-lifts, etc.) used on this project will be inspected prior to use and comply with applicable OSHA and ANSI standards, which will be documented.

Forklifts will be equipped with rollover devices.

Equipment that is equipped with a windshield will be free of cracks or other visible damage.

All equipment will be equipped with rollover protective structures (ROPS).

Seatbelts are required to be worn at all times when provided in moving equipment.

Only company and/or delivery vehicles used for the sole purpose of conducting work tasks on-site are permitted in construction areas. Vehicles one ton or greater and equipment used on-site must have an audible backup alarm. The drive and all passengers of any vehicle will wear seat belts.

No equipment or vehicle will be used to transport personnel unless it is specifically designed to do so. This includes beds of pickup trucks.

Equipment operators are responsible to check their equipment daily to verify it is working properly.

As a minimum, each operator will check:

- ♦ Brakes
- ♦ Lights
- ♦ Backup alarm & Horn
- ♦ Hydraulic systems
- ♦ Steering mechanism
- ♦ Operating controls
- ♦ Mirrors
- ♦ Fire extinguisher
- ♦ Limit switches
- ♦ Leaks

Equipment operators will possess the required training, certification and licenses as required by law for the equipment that they are required to operate.

EXCAVATION AND TRENCHING

Prior to any disruption of ground, excavation or trenching on this project, the following will be performed:

- ♦ Summers-Taylor Inc. shall request locations for existing underground private utilities from the Owner.
- ♦ Contractors shall notify public utility locating authorities.
- ♦ The contractor will identify the competent person and submit qualifications for review and approval by Summers-Taylor Inc.
- ♦ The competent person will analyze the soil of the work area to determine the condition and type of soil to ascertain proper sloping or shoring requirements.
- ♦ An excavation permit (Appendix J or equivalent) is completed and approved by a Summers-Taylor Inc. representative prior to breaking ground.

During excavation or trenching operations on this project, the following requirements will be followed:

- ♦ All trenches and excavations will be barricaded and signage posted at the work area.
- ♦ Fall protections shall be provided for excavations six feet (6) or more in depth.
- ♦ Trenches or excavations will be sloped or benched in accordance with local rules and regulations, and as determined by the competent person.
- ♦ Supporting systems (i.e. shoring, piling, trench boxes, etc) will be utilized for all trenches and excavations where sloping or benching could not be performed.
- ♦ Spoil piles and all other material will be placed a minimum of two (2) feet from the edges of all trenches or excavations.
- ♦ When underground utilities are suspected, they will be located first by hand digging.
- ♦ Adequate access must be maintained at all times during trenching or excavating activities. Access points will be placed such that no worker travels more than (25) feet in any direction.
- ♦ The competent person will inspect excavations and trenches at the beginning of each day before work begins and when conditions change.

- ♦ Excavations in Type C soil will not be benched.
- ♦ Excavations and trenches four (4) feet or greater in depth will be evaluated for atmospheric hazards to determine whether permit required confined space requirements apply.
- ♦ A registered professional engineer must design all excavation over 20-feet in depth.

FALL PREVENTION/PROTECTION

This project is committed to the philosophy of 100% continuous fall protection whenever workers are exposed to fall hazards of six (6) feet or greater.

In the event any deviation of this fall protection procedure is required, the Environmental, Health and Safety Director and Account Executive will be required to approve.
Summers-Taylor Inc., subcontractors, vendors, or other third party individuals will take all practical measures to eliminate, prevent, and control fall hazards. All work will be planned with the intent to eliminate identified fall hazards. When a fall hazard has been identified and cannot be eliminated, then effective means of all protection will be implemented.

Acceptable fall protection systems include the following:

- ♦ Guardrail systems
- ♦ Safety Netting
- ♦ Positioning Device Systems
- ♦ Protection from Falling Objects
- ♦ Covers for Floor, Roof and Wall Openings
- ♦ Personal Fall Arrest Systems

Workers exposed to fall hazards that cannot be eliminated will be equipped, trained and given periodic refresher training in fall protection to minimize the adverse effects of accidental falls. Fall protection training records shall be maintained on the project and available for review by Summers-Taylor Inc.

On this project, 100% FALL PROTECTION MEANS PROTECTED FROM FALLS AT ALL TIMES WHEN WORKING AT OR ABOVE SIX (6) FEET. This means it is mandatory for all trades, including but not limited to:

- ♦ Structural steel erection (bolt up and connectors)
- ♦ Decking Operations
- ♦ Re-bar assembly
- ♦ Concrete forming
- ♦ Pre-cast erection
- ♦ Masonry
- ♦ Carpentry
- ♦ Scaffold erection/disassembly
- ♦ Roofing

Workers may work from ladders without personal fall protection when the following criteria are met with no exception:

- ♦ Working height does not exceed (12) feet
- ♦ Work can be performed without reaching (worker remains inside the area between the vertical side rails)
- ♦ Work does not involve working within (15) feet or above an open side, leading edge, or shaft, even if the edge has a proper guardrail.

Personal Fall Arrest Systems will consist of a full-body harness meeting ANSI requirements, double lanyard with shock absorbing device or retractable lifeline, locking snap hook and anchorage points meeting OSHA regulations.

Workers will not tie off to a perimeter cable or wire rope handrail unless engineered for such use.

When wire rope is used to construct guardrail systems, at least 1/4" diameter cable shall be used with cable clamps as required by wire rope manufacturers.

Subcontractors will submit all engineered documentation on horizontal lifelines to Summers-Taylor Inc. for review and approval. All horizontal lifelines will be installed under the direct supervision of a qualified person.

The use of personal fall arrest systems requires the submission of a Rescue Plan for each condition.

Lanyards will not be tied back to themselves unless the lanyard is specifically manufactured to tie back to itself.

If any component of a guardrail system must be removed, a Summers-Taylor Inc. Guardrail Removal Permit must be issued (Appendix E). Any contractor that must remove a fall protection system in the course of their work will be responsible for immediately replacing the protective system.

Floor openings 2-inches or greater and all wall openings will be guarded or covered with an appropriate cover or guardrail. Floor covers will be secured to the floor to prevent easy removal. The floor or wall cover will be properly marked with a Danger sign stating, **"COVER-DO NOT REMOVE".**

Elevated work will address protection from falling objects if work is permitted below.

FIRE PROTECTION/ PREVENTION

Fire Protection

Temporary fire protection measures such as fire extinguishers, temporary hose lines, and temporary standpipes are required during construction.

The Project Team shall develop a Fire Protection Plan in accordance with OSHA 29 CFR 1926 Subpart F

Fire extinguishers will be:

- ♦ Conspicuously located
- ♦ Inspected monthly
- ♦ Protected from freezing
- ♦ Placed within the immediate area of any welding/cutting operation or flammable liquid storage area
- ♦ Placed within five (5) feet whenever gasoline operated equipment is used

If a fire extinguisher is discharged for any purpose, it should be reported to Summers-Taylor Inc.

Each temporary building and trailer (shops, field offices, storage boxes, etc.) will have its own appropriately sized and located class ABC fire extinguisher.

Access to fire hydrants and extinguishers will be maintained at all times. Clear access to buildings and other structures will be maintained at all times.

Fire Prevention

Temporary buildings located within another building or structure shall be constructed of non-combustible material or have a fire resistance rating of one (1) hour. Plastic tarps or covers (visqueen) used for any purpose inside an occupied building or where welding, cutting, or open flame is present will be made of fire retardant material.

Combustible refuse from construction operations will not be burned or dumped anywhere on the construction site. Such refuse will be removed at frequent intervals, as needed. Storage of large quantities of construction debris will be placed in metal dumpsters.

Storage of compressed gases will include:

- ♦ Valves, regulators and hoses removed with valve caps securely on.
- ♦ Secured upright at all times, including when transported in vehicles.
- ♦ Fuel and oxygen cylinders separated by a minimum of (20) feet.
- ♦ Empty cylinders stored separate from full cylinders: no cylinders in use.

Only approved high flash point solvents are to be used for cleaning purposes.

Oily rags and waste are to be stored separately in metal containers fitted with self-closing lids. Trash and refuse must be placed in trash containers provided for this purpose.

Fire and Flammable Liquid Storage and Dispensing

Use of low flash point solvents is discouraged.

Methylene chloride is a known carcinogen and solvents containing it are prohibited.

Flammable and Combustible Liquids will be stored, dispensed and used in accordance with OSHA and NFPA Requirements.

- ♦ When stored outside then they cannot be within (20) feet of any structure or must be in a properly constructed storage locker whenever possible (no more than a total of (25) gallons flammable and combustible liquids can be stored outside of an approved locker).

- Stored in approved portable containers marked as to contents and ownership.
- Posted with "NO SMOKING" signs.
- Outside storage areas kept free of weeks and other combustible material.
- Storage of flammables will be in an enclosure away from open flame, heat, direct sun or other sources of ignition.

All storage tanks/drums will be placed in a berm or other secondary containment. Berms will be lined with a minimum 6-mil plastic sheeting that is fuel resistant. PVC linings are not allowed.

Summers-Taylor Inc. will designate vehicle refueling locations and procedures.

Fuel and flammable liquid tanks, drums, or barrels will have the proper DOT placard and be labeled as to content.

All fuel storage tanks and compressed gas cylinders will be protected from vehicle traffic.

All fuel dispensing points shall be located away from storm drains and wetlands. The following is required:

- Portable 20 lb ABC fire extinguisher no closer than (25) feet or further than (75) feet from the fueling point.
- No Smoking signs posted.
- Self-locking fuel nozzle prohibited
- Spill kit stored nearby
- Tanks will be grounded and when dispensing flammable liquids, the containers will be bonded.

FLAGGING

All Summers-Taylor, Inc. employees will be trained and certified for flagging operation. Employees shall pass a written exam and a demonstration given by Jason Renner (certified ATSSA Flagging Instructor). Summers-Taylor, Inc. will ensure that all subcontractors use trained and certified flagman when working on Summers-Taylor, Inc. projects.

HAND AND POWER TOOLS

All hand and power tools will be kept in good condition with regular maintenance. Hand and power tools are to be operated according to manufacturer's instructions and guidelines and the personal protective equipment appropriate for the hand or power tool will be worn.

Hand Tools

- Impact tools such as chisels, wedges, etc. are not to have mushroomed heads.
- Wooden handles will not be splintered or cracked
- Pocketknives will not be used for stripping wire.

Electric Tools

- ♦ Never lift or carry a power tool by its cord.
- ♦ Guards and safety switches will not be removed or made inoperative.
- ♦ Electric tools must have a three-wire cord unless it is double insulated.

Portable Abrasive Wheel Tools

- ♦ Guards will not be removed
- ♦ Grinding disks and wheels will be checked to verify they are the correct one for the grinder and rpm

Pneumatic Tools

- ♦ Air hoses ½ inch in diameter or greater will have a safety excess valve installed at the source of air.
- ♦ Clips, whips or retainers are required at each air hose coupling and to prevent attachments from being ejected from the tool.
- ♦ Only the pneumatic nail guns requiring the muzzle to be pressed against the work surface to fire, are allowed.
- ♦ Hose couplings will be secured to prevent displacement.
- ♦ Pneumatic nail guns shall be disconnected from the air supply when unattended.

Powder Actuated Tools

- ♦ Workers will be trained to operate a powder actuated tool and required to carry their training card at all times.
- ♦ Fired cartridges shall be placed in a container or bucket and properly disposed.
- ♦ The powder-actuated tool must not be able to fire until it is placed against the surface with a force of (5) pounds or greater.
- ♦ Misfire cartridges are to be placed in water for (5) five minutes.

HIGHWAY SAFETY

All workers and supervision shall wear high visibility vests when working on T.D.O.T. projects. Workers assigned as flagmen will be trained and certified in accordance with the Manual Uniform Traffic Control Devices.

All workers and supervision will follow all T.D.O.T. safety requirements, regulations, and specifications as well as local and federal regulations regarding highway safety.

HOT WORK

Hot work is defined as the use of open flames, other heat sources and/or spark producing devices in areas where combustible or flammable materials are present and/or where there is potential for

explosion or fire.

Hot work activities include burning, welding, cutting, grinding or other operations that produce a flame or sparks. Prior to performing "Hot Work" operations, workers will obtain a Hot Work Permit (Appendix H or equivalent) from Summers-Taylor Inc.

A Hot Work Permit is valid only for only the date and shift that is stated on the permit.

The following precautionary measures will be taken when a Hot Work Permit is required:

- Grating, openings, etc. will be completely covered in such a way to prevent sparks and slag when falling to a level below.
- Fire extinguisher in the immediate area of work.
- No flammable or combustible material stored within (35) feet in any direction
- Combustible/flammable materials that cannot be moved must be covered with fire blankets or other suitable material.
- Worker(s) designated for continuous fire watch will be identified, trained, equipped, and remain for a minimum of one-half hour after hot work has ended.
- Follow confined space entry procedures, if required.

Workers will be trained prior to performing any hot work in the following, as a minimum.

- A review of the work to be performed
- Precautions to be taken
- Emergency procedure in case of fire
- How to use the fire extinguisher

HOUSEKEEPING

The Summers-Taylor Inc. Policy on housekeeping is that all equipment, tools or materials will be stored, stacked, located, placed, temporarily spotted or set up to prevent an incident or injury which could occur in the work area. The area will give the direct and obvious impression of a clean and orderly work place.

Project management, supervision, workers, vendors and third party persons will maintain all work locations in an orderly and clean manner at all times.

Debris and loose material capable of causing damage to aircraft will not be placed or blown into any area where there is aircraft operation.

Mud and dirt tracked onto public streets or alleyways will be removed continuously during the workday.

The following are the minimum housekeeping requirements for this project:

- Access walkways, roadways, and fire lanes will not be blocked with material, tools, ladders, scaffolds, welding leads, air hoses or electrical cords.
- Electrical extension cords, light stringers, air hoses, and welding leads will be elevated above walkways a minimum of seven (7) feet or the area marked with signage stating

" TRIP HAZARD".

- ♦ Welding rods, nuts, bolts, and washers will be kept in proper containers.
- ♦ Shackles, slings, chokers, ladders, and safety equipment will be removed from the work area when not needed and properly stored.
- ♦ Trash containers will be placed at appropriate locations.
- ♦ All nails will be removed from scrap and form lumber and swept up daily.
- ♦ Rubbish, trash, and debris will be removed from the work area daily.

At all locations where drinking water is dispensed, an adequate trash container will be located for disposal of used drinking cups.

LADDERS & STAIRWAYS

Stairways having four or more risers or rising 30 inches or more shall have a stair rail system 36 inches high on each unprotected side

Metal pan stairs shall not be used until the pans are filled to prevent a tripping hazard.

Ladders, stairs, or ramps will be provided when there is a change in elevation of 19 inches or greater.

Ladders used on this project will meet the requirements established in OSHA 1926.1050.

Workers will be trained on the safe use of ladders.

Ladders are required to ascend or descend truck beds and/or trailers.
Ladders will extend past the bearing point no less than 36 inches.

Ladder landings shall remain clear of all obstacles and obstructions to allow easy access on and off the ladder.
Fall Protection while working from a ladder is addressed in the Fall Protection section.

Each contractor is required to inspect ladders daily prior to use. Ladders with broken or bent rungs, steps, or side rails will be immediately destroyed and removed from the project.

When ladders are used to access upper levels, they must be secured to prevent displacement.

Aluminum ladders are not allowed.

All ladders will be heavy-duty type with a minimum capacity rating of 250 lbs.

Stepladders

Stepladders will not be used as straight ladders.

Stepladders will only be used with the spreaders fully extended and spreader bar locked in place.

Workers will not stand on the top or top step of the stepladder.

Workers will not straddle the top of a stepladder or stand on the back of a stepladder unless designed for this use.

Straight/Extension Ladders

Ladders will be set up so the horizontal distance at the bottom is not less than 1/4 of the vertical distance to the bearing point.

Workers will not stand on the top three rungs of a ladder. No worker will work when his/her knees are above the top of the ladder.

All straight ladders will have non-skid feet at the base.

Job Made Ladders

Job-made ladders shall be constructed for intended use. If a ladder is to provide the only means of access or exit from a working area for 25 or more employees, or simultaneous two-way traffic is expected, a double cleat ladder shall be installed.

Job-made ladders will be constructed in accordance with OSHA and ANSI standards.

LASERS

Precautions will be taken to ensure all workers that will use a laser are trained in proper use and the hazards associated with lasers. Each worker is to be issued a qualification card, which must be carried by the worker and available upon request by Summers-Taylor Inc.
No worker will install, adjust, or operate any laser equipment, without a valid qualification card.

Standard Laser warning signs will be placed around the perimeter of the area the laser it being used. No laser equipment will be used that does not contain a label, indicating make, maximum output, and beam spread.

Whenever a laser is not in use, shutters or caps will be used and the laser turned off.

When performing internal alignment, lasers will only be guided by mechanical or electronic means.

No laser beam will be directed at any worker.

When environmental conditions exist such as rain, fog, snow or extremely dusty conditions, use of lasers will not be permitted.

Workers using lasers will use appropriate eye protection.

LEAD

When welding, cutting, burning, grinding, chipping, abrasive blasting or rivet busting on painted or coated surfaces, a pre-assessment will be required to determine if the surface(s) contain lead-based paint. If sampling results for lead-bases paint are positive for 0.02% lead by weight, OSHA Standard 29 CFR 1926.62 will be followed.

An initial hazard assessment is required and will be performed to determine worker exposure levels. The assessment will involve personal sampling of a representative group of workers performing different tasks unless historical data is available. During the initial exposure assessment, workers will wear protective clothing and the proper respiratory protection until the results of the assessment are known.

Copies of sampling results will be made available to Summers-Taylor Inc. Are sampling of a work are will not to be used for determining worker exposure levels.

If sampling results indicate the exposure limits are above 30 µg/m_ but below 50 µg/m_, the following are required:

- Written compliance plan
- Medical surveillance (Blood Lead)
- Personal monitoring
- Hazard communication training for lead

If sampling results are above 50 µg/m_, the following are required:

- Written compliance plan
- Engineering controls
- Respiratory protection
- Protective clothing
- Medical surveillance
- Clean change rooms and showers
- Clean lunchrooms
- Warning signs
- Training

Each worker is to be notified in writing of their blood and/or personal monitoring results within five (5) working days after the results are known.

Barricades, enclosures, track mats and/or ventilation protocols shall be provided to ensure the protection of the other workers, members of the public or building occupants.

LOCKOUT/TAGOUT

Each contractor/subcontractor will establish a lockout/tagout procedure to ensure that workers are not exposed to the hazards from moving machinery or equipment and those hazards posed by an energized source (pneumatic, steam, hydraulic, chemical, etc). Refer to Appendix O.

Safety locks and tags will be applied to all circuits, switches, valves, isolating devices and any other energy sources to ensure equipment, machinery, or processes that have been considered functioning, changed or could otherwise be operable have been rendered non-operational or de-

energized.

No person will remove another worker's safety lock or attempt to energize any piece of equipment, machinery or process that has been locked out and tagged.

De-Energizing Equipment and Processes

A Summers-Taylor Inc. Representative will coordinate with the operating facility representative when any energized equipment or process must be de-energized.

The Summers-Taylor Inc. representative and operating facility representative will identify all circuits and sources of energy that require locking and tagging to make the equipment or process inoperable. The operating facility representative will notify their personnel that may be affected by the de-energizing. The first-line supervisor for each affected overseeing the work will sign out sufficient safety locks to lockout the piece of equipment or process.

The following procedures shall be followed:

1. The operating facility representative and first-line supervisor(s) will make certain the operating controls to the equipment, machinery or process are in the "off" or "neutral" position.

2. Once the operating controls are in the "off" or "neutral" position, the operating facility representative will place a safety lock and tag on the energy isolating device(s) first.

3. The first-line supervisor(s) will apply their safety lock to each of the isolating devices that provides power or other energy to the machinery, equipment or process. The first-line supervisor(s) will also apply a visible warning tag. The tag will contain the name of the first-line supervisor(s), company, date and phone number.

4. Once the first-line supervisor(s) have placed their safety lock(s) and tag(s) on the energy-isolating device, all affected workers will then apply a safety lock and tag to the energy-Isolating device. Alternatively, the first-line supervisor may place the key(s) to their equipment safety lock(s) in a safety lock box, place their individual safety lock and tag on the safety lock box, and then have each affected worker place their safety lock and tag on the lock box.

5. Prior to any work being performed on the piece of equipment, machinery, or process, the operating facility representative and first-line supervisor will verify that it is inoperable. The operating facility representative will attempt to operate the piece of equipment machinery, or process. After verifying it is inoperable, the switch will be returned to the "off" or "neutral" position.

Stored or residual energy will be dissipated by whatever means are necessary. Capacitors will be discharged and high capacitance elements short-circuited and grounded by a qualified electrician.

Re-Energizing Equipment and Processes

When the required work is completed and the machinery, equipment, or process can be returned to

service, the first-line supervisor will contact the operating facility representative to notify of completed work operations.

The first-line supervisor will make a visual inspection of the equipment, machinery, or process to insure all workers have completed their work and equipment, tools and other material is removed from the area.

After confirming all workers, materials, tools and other equipment are out of the area, the operating controls are still in the "off" or "neutral" position, and each worker has removed their safety lock and tag, the first-line supervisor will remove their safety lock and tag from each of the isolating devices.
If a worker fails to remove this or her safety lock at the completion of the job or assigned duties, their immediate supervisor will immediately notify management and the Summers-Taylor Inc. Environmental Health and Safety Department. ***Every attempt should be made to contact the worker and require them to return to the project to remove their lock.*** If the worker is unwilling or cannot return to the project, it must be verified that he/she is not physically at the project before the safety lock can be removed. All safety lock removal incidents will be investigated following the incident investigation process and disciplinary action may occur.

The management representative will notify the operating facility representative that the equipment, machinery or process is clear to be energized.

De-Energizing Fluid Processes

Any vessel, pip, hose or process that contains a hazardous liquid or gas will be purged with nitrogen or flushed before work begins as described in the pre-task plan for the activity.

A management representative will co-ordinate with operating facility representative when any fluid process requires de-energizing.

The management representative and operating facility representative will identify all valves or gates and where blanks are required to be installed to isolate the work area. The operating facility representative will notify their personnel that may be affected by the de-energizing.

The first-line supervisor overseeing the work will sign out sufficient safety locks and tags to completely isolate the system.

The operating facility representative and first-line supervisor will verify that each valve or gate is in the "off", "neutral" or closed position.

Once the vale or gate is in the "off", "neutral" or closed position, the operating facility representative will place a safety lock on the valve, or gate first. Then the first-line supervisor will apply a safety lock to each valve or gate. The first-line supervisor will also apply a visible warning tag. The tag will contain the name of the first-line supervisor, company, date and phone number.

Once the first-line supervisor has placed their safety lock(s) and tag(s) on the energy-isolating device, all affected workers will then apply a safety lock and tag to the energy-isolating device. Alternatively, the first-line supervisor may place the key(s) to their equipment safety lock(s) in a safety lock box, place their individual safety lock and tag on the safety lock box and then have each affected worker place their safety lock and tag on the lock box. The required blanks will be placed

at this time.

Prior to commencing work, the operating facility representative and first-line supervisor will verify the system and all piping, hoses, valves and processes are de-energized and that any stored energy is dissipated or restrained.

Welded valve connections should have the valve handles removed and the stem tagged “DO NOT OPERATE”.
All other valves and isolating devices must be physically prohibited from being operated.

Hydraulic and pneumatic equipment or machinery will be blocked to prevent movement.

Re-Energizing Fluid Processes

When the required work is completed and the system can be returned to service, the first-line supervisor will contact the operating facility representative to notify of completed work operations.

The first-line supervisor will make a visual inspection of the area to ensure all workers; equipment, tools and materials are removed from the area.
After confirming all workers, equipment, tools and materials are removed from the area, the vales and gates are in the “off,” “neutral” or “closed” position, and each worker has removed their safety lock and tag, the first-line supervisor will remove their safety lock and tag from each of the isolating devices.

The management representative will notify the operating facility representative that the system is ready to be energized.

MAINTENANCE AND PROTECTION OF TRAFFIC

There will be no temporary blocking or occupying of any street or alleyway without prior approval of Summers-Taylor Inc. and local authorities.

When it becomes necessary to temporarily close a public street or alley, a written traffic control plan is required showing how the closure will occur and submitted to Summers-Taylor Inc. for review. Refer to the Manual of Uniform Traffic Control Devices (MUTCD) Part VI when developing a traffic control plan.

At a minimum, the written Traffic Control Plan will contain:

- Time the street(s) will be required to be closed.
- Detail drawing showing temporary signage, tapers, etc.
- Detail plan illustrating detour routes for traffic impacted by the closed streets.

All workers and supervision will wear high visibility attire in accordance with the ANSI requirements.

Workers assigned as flagmen will be trained as recommended in the Manual of Uniform Traffic Control Devices and state DOT. Trained flagmen are required to direct all construction traffic entering and leaving the project site.

Work that fails to follow the traffic control plan or occupies a city street or sidewalk without authorization will have the work stopped.

MASONRY CONSTRUCTION

A limited access zone is required to be in place prior to the construction of any masonry wall.

Masonry walls over eight (8) feet in height shall be adequately braced to prevent collapse and remain in place until permanent support is in place.

MATERIAL HANDLING AND STORAGE

All equipment, tools, materials, or apparatuses will be stored, stacked, located, placed, temporarily spotted, or set up for manipulation in such a manner as to render it highly improbable that an incident or injury could occur in the work area. The area will give the direct and obvious impression of a clean and orderly work place.

All materials shall be handled and used with care and caution to prevent incidents or injuries. All employees shall follow all material handling regulations set forth by any local, state, or federal agency.

MOLD CONTROL

Necessary steps will be taken to prevent the formation of mold from occurring in the work and storage areas. Mold will occur when there is water and a source of nutrient (i.e. wall board, wood, and/or other building material).

Work will be planned to:

Prevent moisture accumulation

Double check points where moisture may enter:

- Doors
- Windows
- Flashings and caulking
- Waterproof membranes (proper lapping at joints) and corners
- Roofing systems and penetrations

Properly store material

- Dry location
- Off the ground
- Loose tarps or sheets to allow air flow

Have drying equipment readily available

- Fans
- De-humidifiers
- Wet-dry vacuum

If mold is observed notify Summers-Taylor Inc. such that an evaluation of the exposure can be made and

an abatement plan developed.

NIGHT WORK

Summers-Taylor, Inc. shall follow all local, state and federal regulations regarding Night Work.

All employees shall wear high visibility apparel when performing night work. All equipment shall be equipped with lights and retroreflective tape. All traffic control devices shall be retroreflectorized and/or illuminated or both in accordance to the MUTCD guildelines. All flagging stations shall be illuminated if flagging operations are used. Employees shall use extreme caution and safety when working at night.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

All Summers-Taylor Inc., subcontractors, vendors, and third party individuals will at a minimum wear the following personal protective equipment without exception while on this project (except in office and lunch areas).

Head Protection

Hard hats will be worn at all times on this project; in addition the following rules apply:

- Hard hats will be worn in accordance with manufacturer requirements.
- Company name displayed on hardhat.
- Hardhats that have a manufacturer date of five (5) years or greater will not be used on this project.
- Meets ANSI Z89.1 requirements

Eye and Face Protection

Eye and Face Protection Safety glasses with side-shields that meet ANSI Z87 criteria are to be worn at all times. Workers with prescription glasses must meet ANSI Z87 requirements or will be required to wear over the glasses (OTG) safety eyewear.

In addition, the following eye/face protective equipment must be used when performing the following work activities:

Activity	**Safety Equipment**
Welding	Welding Hood and Safety Glasses
Burning	Burning Goggles with Shield
Abrasive grinding or cutting	Face Shield and Safety Glasses
Drilling	Goggles or Face Shield and Safety Glasses
Reaming	Face Shield and Safety Glasses
Chemical Handling	Goggles and Face Shield
Molten Materials	Goggles and Face Shield
Corrosive Liquids	Goggles and Face Shield

Concrete Pouring	Safety Glasses

Foot Protection

Sturdy work boots that are in good condition must be worn (heel and sole will not show excessive wear). Tennis shoes, sandals, or other street-type shoes are not allowed, even if they have steel toes.

High Visibility Attire

Every worker, visitor, and vendor will wear high-visibility attire at all times. ANSI reflectivity requirements must be complied with when working in traffic and/or at night.

Work Attire

Shirts will have a minimum sleeve length of three (3) inches. Tank tops and cut-off shirts are not permitted.

Long trousers are required that fit properly around the waist and ankles. Trousers that are worn low on the hips or thigh are not allowed. The length of the trouser will be such as to not present a tripping hazard. Shorts are not permitted.

Respiratory Protection

A competent person will determine if a hazard exists requiring respiratory protection prior to start of work. Written documentation supporting this hazard assessment will be made available to Summers-Taylor Inc. upon request.

Whenever respiratory protection is deemed required or requested by a worker on this project, the requirements outlined in OSHA 29 CFR 1926.103 will be followed, which include:

1. Have affected workers complete a Medical Questionnaire for Respirator Use.

2. Submit questionnaires to a Physician or Licensed Health Care Professional (PLHCP) for review and further testing.

    a. Once medical approval to wear a respirator is received from the PLHCP.
    b Select the appropriate type of respirator to protect workers from the hazard(s).
    c. For air purifying respirators, choose the appropriate filter/cartridge.
    d. For supplied air respirators, ensure breathing air source provides "Grade D" breathing air.
    e. Train affected workers about the specific type(s) of respirator(s) being used.
    f. Fit-test the workers with the specific type(s) of respirator being used.

If a worker desires to voluntarily wear a filtering face piece (dust mask) and a respirator is not required, the first-line supervisor must inform the worker bout the limitations of the selected respirator. Voluntary Use of a Disposable Respirator Form or equivalent shall be used (Appendix N). ***NOTE: disposable dust masks are prohibited for protection of silica exposure.***

Hearing Protection

Approved hearing protection will be worn as specified in posted areas and while working with or around

high-noise level producing machines, tools, or equipment. A good rule to follow is: When you must raise your voice to be heard, you need hearing protection. Exposure to impulsive or impact noise will not exceed 140dB noise level.

Duration per day, hours	Sound Level dBA Slow Response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

Impulsive or Impact Noise

Equipment or Tools	Sound Level Created
Pneumatic Chip Hammer	103-113
Jack Hammer	102-1111
Concrete Joint Cutter	99-102
Chop Saw	88-102
Stud Welder	101
Bulldozer	93-95
Crane	90-96
Hammer	87-95
Backhoe	84-93

Above hearing exposure based on an eight (8) hour exposure

Hand Protection

Hand and finger protection shall be specifically addressed in the development of project specific safety plans and daily task plans. The appropriate protection shall be identified. Each employer's competent person shall assist in recommending the correct glove for the task. Workers are encouraged to wear gloves at all times to prevent hand and finger injuries.

Additional Protections

Summers-Taylor Inc. may require workers to wear additional personal protective equipment to reduce the likelihood of work related injury or illness.

PILE DRIVING

No pile driving work will occur until verification that no underground utilities exists in those areas where piles will be driven or existing underground utility locations have been verified by hand or vacuum excavation

Fall protection will be required when personnel climb leads over six feet.

Hose connections will be secured by at least ¼ inch diameter chain or equivalent wire rope to prevent whipping.

Stirrups will be provided on sheet piling to aid in guiding the pile in place.

For pile other than sheet piles, a driving head or bonnet is required to bell the head.

Stop blocks are required for the leads to prevent the hammer from striking the head block.

A designated signalman will be assigned to give direction to the winch-men.

Equipment will meet the OSHA Construction standards on cranes and derricks.

Pits or excavations that piles are being driven into shall be properly braced, sheet-piled or sloped and barricades shall be provided.

When pile tops are cut, operations will stop for a distance not less than the longest pile that is to be cut.

When driving jacked piles, the pits will be provided with ladders and curbs to prevent materials from falling into the pit.

PRECAST CONCRETE

A competent person is required who will be responsible for the inspection of all rigging and

hardware and the supervision of the rigging of precise concrete members.

Unloading of Precast Concrete Members

Prior to precast concrete members being unloaded, the following will occur:

- Inspect all rigging and hardware
- Ensure load is stable before releasing binders
- Ensure precast member is properly rigged

Placement of Precast Concrete Members

Precast members are not to be moved over other workers

Worker(s) involved in the setting or connecting of precast members will strictly adhere to the 100% fall protection policy with no exception

No worker(s) will use their hands to reach under a precast member to adjust a shim or bearing pad

Post-tensioning Operations

No worker(s) except those essential to the post-tensioning operation, will be permitted behind the jack. Warning signs and barriers will be erected to limit access to the post-tensioning area during post-tensioning operations.

PRESUMED ASBESTOS CONTAINING MATERIAL (PACM)

If presumed asbestos-containing material (PACM) is found during performance of the work, the following procedure will be followed:

- Workers observing PACM shall immediately stop work
- Warn other workers nearby of the disturbed or damaged material
- Contact your immediate supervisor
- Barricade the immediate area around the disturbed or damaged material
- Do not enter the barricaded area until the area is deemed safe by Summers-Taylor, Inc. or subcontractor

Summers-Taylor, Inc. Project Team will investigate and develop an action plan that may include testing PACM and/or abating suspected material.

ONLY A LICENSED CONTRACTOR WILL REPAIR AND CLEANUP DISTURBED OR DAMAGED MATERIAL.

PROJECT ENTRY AND EXIT

All Summers-Taylor, Inc. employees, subcontractors, delivery personnel, etc. shall check in and out at the job site trailer with Project Management/Lead Supervision when entering and exiting the project. Employees, subcontractors, delivery personnel, etc. shall locate Project Management/Lead Supervision to enter and exit the project when there is no job site trailer on site.

RIGGING

Riggers must be properly trained and qualified to rig material or equipment lifted by a crane.

Hooks will be equipped with safety latches. Safety latches on hooks that are disabled and/or shakeout ("pelican") hooks will not be used unless in compliance with Subpart R 29CFR1926.

All rigging equipment and spreader bars shall have a manufacturer's tag or otherwise professionally engineered noting its safe working load. Rigging equipment and spreader bars not tagged or marked will be immediately removed from the project.

All rigging will be inspected daily before each shift by the qualified rigger and documented in writing. Inspection reports will be made available to Summers-Taylor, Inc. for inspection.

SCAFFOLDING

All scaffolding used on this project will meet the requirements established in Subpart L of OSHA 29 CFR 1926.

Each contractor using scaffolds must designate a scaffolding competent person to direct and supervise the erection and dismantling of all scaffolding on this project. The competent person will sign and attach one of the following color-coded scaffold tags to each scaffold:

- **Green Tag: Scaffolding complete and ready for use.**
- **Red Tag: Scaffolding incomplete and not for use.**
- **Yellow Tag: Scaffolding usable but personal fall protection required.**

Scaffolding will be inspected daily by the competent person prior to use and sign the tag at the time of inspection. The Daily Scaffold Safety Inspection Report (Appendix L) will be used to document these inspections.

Workers required to work from scaffolding will receive training on the following:

- Nature of any known hazards, such as electrical, fall or falling objects.
- Correct method of erecting, maintaining, and disassembling fall protection systems.
- Falling object protection system.
- Proper handling of equipment or material on the scaffold.
- Maximum load-carrying capacity of the scaffold.
- Any other pertinent requirements about the scaffold.

During erection and dismantling of scaffolding, if deviation from the fall protection procedure is required, the Environmental Health and Safety Director and Account Manager will be required to

approve.

Records must be maintained of scaffolding training and be available for review by Summers-Taylor, Inc.

Prior to erection, all scaffolding components shall be inspected for defects and any damaged components will not be used.

Scaffolding will be erected on a firm foundation/footing. Scaffold poles, legs, posts, framed and uprights will bear on metal base plates, and mud sills

Scaffold legs, poles, posts, frames and uprights will be pinned or locked to prevent uplift.

No scaffold will be enclosed unless a qualified engineer designs and approves the attachment to the adjacent structure

Scaffold platforms will be constructed with no space between the platform components. The space between the platform components and the scaffold uprights will not exceed one inch.

Because of special circumstances such as building a scaffold around a pipe, the space opening between the scaffold and the object/structure cannot exceed 9 ½ inches.

Scaffold planks shall extend past the horizontal support a minimum of six inches and not more than 12 inches unless cleated or restrained by hooks.

Scaffold plank will not be overlapped unless:

- Overlap occurs at a horizontal support
- The minimum planking overlap is 12 inches

Scaffold plank will be only scaffolding-grade planking.

Ladders or stairs must be used to access any scaffold platform that is more than two feet above or below the point of access. End frames of tubular welded scaffold can be used as a ladder if the following criteria are used:

- Specifically designed and constructed as ladder rungs
- Rung length of at least eight inches
- Spacing between rungs not to exceed 16 ¾ inches
- A walk through frame or gate is provided for access at each landing

No worker will climb up or down a scaffold using the cross bracing.

Workers working below scaffolding will also be protected from falling objects. Scaffold will be equipped with toe plates, screening, debris netting, catch platforms, or a canopy structure.

Aerial Lifts

The gates of aerial lifts will be properly engaged whenever the lift is in use.

Travel in aerial lifts is prohibited while platform is elevated

Aerial lifts shall not be used as material hoists unless the load is contained within the basket and meets the lift's rated capacity. The lift shall not be modified for hoisting material unless the manufacturer approves it in writing.

Suspended Scaffolds

A competent person will evaluate suspended scaffolding and anchorages and suspension lines before each use.

Workers working from suspended scaffolding will wear a full body harness attached to an independent vertical lifeline.

When welding is required from swing stage scaffolding, the scaffold will be grounded and suspension ropes protected.

Mobile Scaffolds

Interior or dry wall scaffolding (Perry or Baker type scaffolding) greater than one section high will be equipped with outriggers. All other built-up scaffolding will follow the four to one rule.

Wheels on mobile scaffolding will be locked in place when workers are working from it (self propelling is prohibited).

Scissor lifts shall be used in accordance with 1926.452 (w).

Mast-Climbing Work Platforms (ANSI A92.9-1993)

An erection and dismantling plan shall be provided by the manufacturer and submitted to Summers-Taylor, Inc. prior to mobilization.

Fall protection shall be provided when wall openings exist on the façade of the building in front of the work platform, the distance to the façade exceeds that permitted, the platform passes as in-set in the façade or it extends past the façade.

In accordance with ANSI requirements, unless the scaffold is equipped with an emergency decent device an evacuation plan from the platform must be developed.

Building access is prohibited underneath scaffold platforms.

System specific training must be provided to all workers who will be on the work platform.

SILICA

Workers that perform any of the following work tasks must be protected from exposure to silica dust unless historical data or real time monitoring indicates it isn't necessary:

- Chipping, hammering, or mixing of refractory
- Abrasive blasting using silica sand as a blasting medium
- Abrasive blasting of concrete regardless of the type of medium
- Sawing, hammering, drilling, grinding, or chipping of concrete or masonry products
- Chipping, hammering, or mixing of concrete grout
- Demolition of concrete of masonry structures
- Dry sweeping or compressed air blowing of concrete, masonry, rock or sand dust

Workers performing any of the above tasks who could be exposed to silica dust shall receive training regarding health hazards associated with silica.

Acceptable engineering controls will be used when exposure to silica is likely. Examples of acceptable engineering controls are:

- Substitute blasting medium for less hazardous material with less that 1% silica
- Maintain an effective dust control program
- Use internal blast-cleaning machines
- Wet saw
- Use water through the drill stem

When acceptable engineering controls cannot be used, workers will wear respiratory protection, protective coveralls and gloves. Respirators equipped with NIOSH approval for the exposure level. Respirators must have at least a N95, R95, or P95 filter, per NIOSH recommendations

Note: ***The common dust mask is not permitted for silica protection.***

Workers will also comply with these hygiene requirements when exposed to silica:

- No eating, drinking or using tobacco products in areas where silica dust is present.
- Always wash hands and face before eating, drinking or using tobacco products after working around silica dust.

First-line supervisors should consult their safety representative or the Summers-Taylor, Inc. Environmental Health and Safety Department for further information or assistance.

STEEL ERECTION

No steel erection will begin without a written Notice to Commence Steel Erection (Appendix K) from Summers-Taylor, Inc.
Workers engaged in steel erection activities including but not limited to connecting, decking and bolt up are *not exempt* from Summers-Taylor, Inc. 100% fall protection requirements when working from six feet or greater.

Perimeter safety cable installed by steel erector will remain in place unless otherwise instructed by Summers-Taylor, Inc.

Training records indicating workers have received required steel erection training will be maintained at the project and available for review by Summers-Taylor, Inc. Environmental Health and Safety.

All steel deliveries will be coordinated with the Summers-Taylor, Inc. Project Team to ensure maintenance of traffic around the project is maintained.

Design criteria for any multi-lift device that may be used on this project will be available on the project for review by the Summers-Taylor, Inc. Environmental Health and Safety department.

Work will be planned that no load will be swung over the public, other workers or occupied structures. Exceptions must be reviewed and approved by Summers-Taylor, Inc.

During bolt-up activities all steps will be taken to protect workers below from falling objects.

- Excavations and trenches four feet or greater in depth will be evaluated for atmospheric hazards to determine whether permit required confined space requirements apply.
- A registered professional engineer must design all excavation over 20-feet in depth.

TEMPORARY BARRICADES

Temporary barricades will be erected to warn or protect workers whenever hazards or processes such as those listed below are encountered on this project. This list includes, but is not limited to the following:

- Floor or wall openings
- Working above other workers
- Open excavations/trenches
- Unguarded equipment
- Overhead loads
- Closed stairwells
- Exposure to vehicular traffic
- Low light work areas
- Startup operations and testing of equipment/systems
- Process hazards such as systems, etc.

When barricading is required, the following guidelines should be followed:

- **Yellow "Caution" tape** is used to limit the passage of workers through the barricaded area. This barricading should only be used to protect workers from hazards that are not severe or the potential for severe injury or death is unlikely.
- **Red "Danger" tape** is used to prohibit the passage of unauthorized workers through the barricaded area. This barricading should be used to protect workers from hazards that have the potential to cause serious injury or death. Danger tape is not to be used if the hazards cannot be eliminated or removed during in a single work shift.
- **Rigid barricades** are used when protection is required beyond a work shift or longer. It will be used to protect workers from unguarded moving machinery/equipment, vehicular or heavy equipment traffic and low light conditions. Rigid barricading will consist of

standard guardrail, temporary chain link fencing, tube and coupler scaffold members with blue construction fencing attached and concrete barriers.
- **Radiation "Danger" Tape** is used to identify x-raying operations and warn of a radiation hazard in the area.

When using "Caution" or "Danger" tape barricading:
- Install at least six feet from excavations, trenches, holes, leading edges and floor or wall openings.
- Install a standard "Caution" or "Danger" sign that identifies the hazard at regular intervals around the barricaded area and the name and contact information that erected the barricade
- Do not impede stairs, walkways, driveways or aisles without notifying Summers-Taylor, Inc. and identifying alternative passageways

When using rigid barricading:
- Support construction fencing to prevent tipping or sagging.
- Install pins in concrete barriers whenever there is a danger of vehicles or heavy equipment striking them
- Provide adequate access to the work area

When work is complete and the hazard is eliminated, remove the barricading immediately.

Workers who enter a "Danger" or "Radiation" barricaded work area without authorization will be subject to disciplinary action up to and including termination.

WELDING AND CUTTING

When burning or welding using compressed gases, flame arrestors will be installed on both the torch side and regulator side of the oxygen and gas hoses.

Arc Welding and Cutting

Welding current return circuits or grounds must carry their current without hot or sparking contacts and without passage of current through equipment or structures. Specifically, welding current must be allowed to pass through any of the following materials:

- Acetylene, fuel gas, oxygen or other compressed gas cylinders.
- Tanks or containers used for gasoline, oil or other flammable or combustible material.
- Pipes carrying compressed air, steam, gasses or flammable or combustible liquids.
- Conduits carrying electrical conductors.
- Chains, wire ropes, metal hand railings or ladders, machines, shafts, bearings, or weighing scales.

Whenever practical, all arc welding and cutting operations shall be shielded by non-combustible or flame-proof screens.

The ground for the welding circuit shall be mechanically strong and electrically adequate for the service required and should be attached directly to the work piece.

When possible, electrode and ground cables shall be supported to prevent obstructions interfering with the safe passage of workers.

Cables with worn insulation may not be used.

Gas Welding, Cutting and Soldering

A suitable cylinder cart, chain or other secure non-flammable fastening shall be used to keep cylinders from being knocked over while in use.

Cylinders of oxygen shall not be stored next to cylinder of acetylene or other fuel gas. They shall be separated by 20 feet or by a non-combustible barrier, with a ½ hour fire rating.

Oxygen cylinders, cylinder valves, couplings, regulators, hose and apparatus shall be kept free of and sway from oil and grease. Oil or grease in the presence of oxygen under pressure may ignite violently.

Empty cylinders shall have their valves closed. Valve protection caps shall always be in place except when cylinders are in use or connected for use.

When moving cylinders by a crane or derrick, a cradle, boat or suitable platform shall be used. Slings, hooks or electric magnets shall not be used. Valve protection caps shall always be in place.

Compressed gas cylinders, empty or full, shall be secured in an upright position at all times except, if necessary, for short periods of time while cylinders are actually being moved. Empty cylinders should be marked EMPTY or MT for identification.

Regulators and hoses shall be frequently inspected for leaks, worn places and loose connections. Regulators shall also be checked for operable gauges.

Approved flash arresters shall be provided in both oxygen and acetylene hoses at the regulator connection.

QUALITY OF LIFE REQUIREMENT

SMOKING POLICY

Summers-Taylor encourages a Smoke-Free Workplace. No worker will smoke any tobacco product within any building or structure on this project designated as Smoke-Free. In Smoke-Free workplaces, smoking is only authorized in designated areas or inside your personal vehicle, if permitted, while on the Owner's property. Workers that violate this rule will be subject to immediate termination.

SANITATION

Toilet Facilities

Adequate chemical toilets are available on the jobsite for the use of workers.

Chemical toilets shall be serviced often enough to prevent overflowing, creation of an unsanitary condition, a health hazard or nuisance, and shall be maintained in good repair so as to prevent leakage of the contents to the surrounding ground or onto the floor or other portions of the structure.

Drinking Water

Contractors will provide daily, fresh clean drinking water to their employees. Drinking water will be dispensed in containers with a tight sealing lid and labeled as Drinking Water. Drinking water containers are to be cleaned daily.

Adequate cups will be made available at each drinking water container. Cups will be stored in a durable clean dispenser. A trash can or other type receptacle will be provided to collect used cups. Contractors are responsible for cleaning up around the water container area.

The dipping of cups into the container, storing soda cans and bottles, drinking directly from the spout, placing of hands or material into drinking water is prohibited.

EMERGENCY PROCEDURES

Each contractor shall develop an Emergency Action Plan; each project team shall develop the following:

- Owner requirements and procedures
- Summers-Taylor Crisis Management and site logistics protocols
- Coordination with local emergency response personnel

The Emergency Action Plan will be posted throughout the jobsite and communicated to workers during the Safety Orientation and weekly safety meetings.

BUILDING EVACUATION

Exit signs shall be conspicuously posted along evacuation routes.

A signal or alarm shall be designated to initiate evacuation. Temporary pull stations should be considered.

Personnel should de-energize tools and equipment and observe their work area for fellow workers in need of assistance.

Observe stairs for safe passage before accessing.

Report any hazardous conditions that are known to exist within the building to your supervisor.

A plan view drawing will be developed for each project's evacuation plan. This drawing will clearly identify the following:

- Building footprint
- Primary and secondary assembly areas
- Exists
- Fire alarm pull stations or air horn locations
- Site telephones
- Stairs
- Fire extinguishers
- Summers-Taylor's project office
- First aid kit locations
- Emergency numbers

MEDICAL EMERGENCY

During the safety orientation, workers will be given information on how to summon medical assistance in case of a medical emergency. Workers should know the following information:

Emergency Phone Number:

Project Address:

City:

When reporting a medical emergency, the worker will state their name, the nature of the

emergency, the severity of the emergency and where assistance is needed. A worker may be required to meet medical personnel and guide them to where the emergency is located.

PLEASE REMEMBER NOT TO MOVE AN INJURED WORKER BEFORE MEDICAL ASSISTANCE ARRIVES UNLESS FURTHER INJURY IS POSSIBLE.

FIRE

In case of a fire, workers will evacuate their work area immediately and report to the predetermined assembly area.

After reporting the fire, workers will evacuate the work area and report to the pre-determined assembly area that was stated during the safety orientation.

SEVERE WEATHER

Should weather conditions such as severe thunderstorms or tornadoes develop around or near this project, workers will follow the direction of their immediate supervisor. Work in areas where severe weather events are possible will have a contingency plan in place.

EMERGENCY ACTION PLAN

Project Management will ensure the Emergency Action Plan is communicated to all workers during orientation. Specific emergency procedures and emergency phone numbers will be posted in lunch areas, near all telephones and on project bulletin boards.

The plan shall be reviewed periodically by Summers-Taylor to ensure continued accuracy and applicability. Daily Pre-Task Plans shall also address emergency egress on a daily basis from each work area.

THIS PLAN SHALL BE REVIEWED BY ALL WORKERS AND POSTED WITH A SITE PLAN IN PROMINENT LOCATIONS ACCESSIBLE TO ALL WORKERS.

PROJECT NAME:

_____

WORK LOCATION:

_____

1. This is a project specific Emergency Action Plan communicating evacuation procedures, specific alarms, and assembly points, should an emergency evacuation become necessary because of severe weather, fire, hazardous chemical release, explosion or other emergencies that could cause worker harm.

2. It is each worker's responsibility to familiarize themselves with evacuation routes, alarms and assembly points in case an emergency evacuation of the work area is required.

3. **Caution:** Evacuation routes, alarms or assembly points for one emergency may differ from
another emergency.

4. **IN CASE OF FIRE OR MEDICAL EMERGENCY**:

   Emergency Phone Number:

   Alarm or Notification:

   Evacuation Route:

   Primary Assembly Point:

   Secondary Assembly Point:

5. **IN CASE OF SEVERE WEATHER:**

   Alarm or Notification:

   Evacuation Route:

   Assembly Point:

6. **IN CASE OF A CHEMICAL RELEASE OR EXPLOSION:**

   Alarm or Notification:

   Evacuation Route:

   Primary Assembly Point:

   Secondary Assembly Point::

   Spill Kit Location:

   Remediation Contact:

7. Workers will immediately evacuate their work area upon hearing the alarm or being notified of the emergency and ordered to evacuate. No worker is exempt from evacuation even if the evacuation is a drill.

8. Workers are required to report immediately to their designated assembly point and be accounted for. Failure to report may cause another to risk danger in an effort to search for

you. Do not leave the project without prior authorization from first-line supervision.

9. Summers-Taylor employee will call the identified Remediation Company to respond to chemical spills that require outside attention. An agreement must be made with the Remediation Company prior to identifying them as the remediation contact.

PROJECT HAZARD COMMUNICATION PROGRAM

All workers on this project are entitled to know the properties and potential safety and health hazards of chemicals or substances that they may come in contact with on this project.

Each project will develop a written project specific Hazard Communication Plan. This plan will be posted in a location where workers can easily access and review the plan.

Each subcontractor will submit to Summers-Taylor a Master Chemical and Substance Inventory List and a copy of the Material Safety Data Sheet (MSDS) of all known hazardous chemicals that are in their work area. Prime subcontractors will be responsible for obtaining all sub-tier subcontractors Master Chemical and Substance Inventory Lists/MSDS and forwarding to Summers-Taylor.

The Master Chemical and Substance Inventory List (Appendix G) or equal will be maintained, even if they do not have or will not use any hazardous chemicals or substances. *This is an OSHA requirement*.

Subcontractors will maintain a project specific MSDS on location for each hazardous chemical or substance listed on the Master Chemical and Substance Inventory List. Prime subcontractors will be responsible to ensure all sub-tier subcontractors have their project specific MSDS sheets at the project.

It will be the responsibility of each worker's supervision or project manager to assure Material Safety Data Sheets are received prior to, or at the time of delivery of, a hazardous chemical.

Project management and first-line supervision will ensure all hazardous chemicals are properly labeled in accordance with the MSDS. Containers that hazardous chemicals have been transferred into for the use during a single work shift will be labeled as to contents.

Every worker on this project shall receive instruction from their employer on their Hazard Communication Program, the location of the Master Hazardous Chemical and Substance Inventory list, the location of the Material Safety Data Sheets, labeling requirements and specific safety or health instructions about the hazardous chemical or substance.

Recommended minimum Hazard Communication Training will consist of:

1. The contents of the program

2. Prior to use of or the potential exposure to any hazardous chemical or substance, workers are to be instructed in:

   - Physical and health hazards
   - Procedures to protect against the hazards
   - Engineering and administrative controls
   - Personal protective equipment
   - Emergency procedures in case of exposure or accidental spill

3. Labeling requirements

4. Whenever a new chemical or substance is introduced in the workplace, workers will be briefed of its hazards.

The client, vendors and subcontractors that may have business in or near a work area will be notified that hazardous chemicals are being used and the hazards they may encounter.

If a worker believes they have encountered a hazardous chemical or substance unfamiliar to them, they will immediately notify their supervisor. Project management or supervision will attempt to identify the hazardous chemical or substance and initiate all precautions to handle and dispose of this material, if required, and to properly protect workers.

HAZARD COMMUNICATION PLAN

THIS PLAN WILL BE REVIEWED BY ALL SUMMERS-TAYLOR WORKERS AND POSTED IN A PROMINENT LOCATION ACCESSIBLE BY ALL WORKERS. THIS PLAN IS A SUPPLEMENT TO THE PROJECT-SPECIFIC HEALTH AND SAFETY PROGRAM.

PROJECT NUMBER: **PROJECT NAME:**

PROJECT LOCATION:

This a project specific Hazard Communication Plan ensuring that information on hazardous chemicals and substances is communicated to workers in accordance with OSHA 29 CFR 1926.59 and the Summers-Taylor Hazard Communication Safety Program

1. An inventory of known hazardous chemicals and substances used on this project has been conducted and listed on the Master Chemical and Substance Inventory which is located and can be reviewed at:

2. A copy of the Material Safety Data Sheets (MSDS) for known hazardous chemicals and substances used on this project are located and can be reviewed at:

3. If a copy of a MSDS cannot be located, contact your Project Manager, Superintendent, Foreman or Summers-Taylor Environmental Health and Safety Department at:

4. Project management and first line supervision are responsible for obtaining MSDS and ensuring they are received prior to, or at the time of delivery of, a hazardous chemical.

5. Hazardous chemicals will be properly labeled in accordance with the MSDS. Containers that hazardous chemicals have been transferred into for use during a single work shift require secondary labeling.

6. Workers who work with, or may be potentially exposed to, a hazardous chemical or substance will be informed of the physical and health hazards and procedures to protect against those hazards. Included in the procedures are engineering and administrative controls, personal protective equipment, and emergency instructions for accidental exposure, emergency evacuations, or spill containment of the hazardous chemical or substance.

7. When new hazardous chemicals or substances are introduced into the work environment, workers will be informed of the physical and health hazards.

8. Employers, who may be working in a Summers-Taylor work area where workers could be exposed to a hazardous chemical or substance, will be informed of where that hazardous chemical or substance is in use.

9. Workers performing non-routine tasks will be informed of chemical hazards associated with the work activity and the appropriate protection measures.