1. QUALITY

1.1. QUALITY ASSURANCE

Quality Assurance as a mean of checking the product conformity to specifications during processing will be obligated to ASRC's Quality Assurance staff and job management staff.
All necessary documentation and certification together with manufacturer testing procedures, where appropriate, will be provided for materials to be used in the permanent works in order to demonstrate compliance with the requirements of the specifications.

Incoming inspection on site will be performed by ASRC before calling for the Owner acceptance. Defected material(s) will be stringently rejected by Quality Assurance staff.

1.2. Quality control:

Quality Control as a mean of checking the final product conformity to specifications after processing will be a joint task for the Employer and ASRC, but firstly ASRC's job management staff obligation.
Testing of materials at the place of manufacturer and after delivery will be undertaken in accordance with the requirements of the Contract. An independent technical laboratory will be submitted for approval to carry out onsite testing of materials incorporated in the permanent works. All relevant test results, interpretive reports and certificates will be provided to the Owner.

2. Safety and Security

1.1. In order to minimize the risk of injury to the personnel and damage to property; stringent safety means will be applied:

a. Safe construction practice responding to the safety obligations and procedures in site area and through the execution of works.

b. Separate access to the Contractor work force if required under the contract terms, conditions and specifications.

c. Obtaining Permissions for the staff ahead of time, and provide spare cleared names to allow replacement –restricted and secured areas by military or civil security forces-.

d. Dump all excavated unsuitable materials to approved dump areas outside the site area or in approved vicinity.

e. Handling of equipment and materials in accordance with the manufacturer recommendations.

f. The correct storage and usage of hazardous materials.

g. Warning tape for excavated areas.

h. Warning Dimming lights for high structures.

i. Using safety wears such as eye glasses, hard hats and safety boots.

Detailed security and safety plan will be submitted under a separate cover upon request.

0.7 MANPOWER & PROPOSED ORGANISATION

Proposed Organization chart is Attached Separately reflecting the needed manpower which will be lead by a highly qualified project manager.

Detailed chart and histograms will be submitted for approval upon commencement of work.

Main office monitoring and support will be provided through audits performed by the Quality Assurance and HR Managers in collaboration with the authorized project manager. Main office support will be provided also when called for by the project manager and/or the Owner.

0.8 PRELIMINARY CONSTRUCTION EQUIPMENT LIST

The list is included in other section of our submittal.

0.9 Storage facilities:

Fenced and secured storage area will be located nearby a middle area of the work site pending on approval of G5 and properly prepared to receive the materials necessary for stockpiling.

Open storage will be provided in each location to stockpile the crushed and selected excavated materials stocked for further use.

0.10 Water and Electricity for the works:

ASRC will provide its site offices, works shops and work locations with water and power from the Water Authority of Jordan (Jordan Water Company) and JEPCO via paying the required fees of installing the necessary SAFE & RELIABLE set up to supply temporary power and water supplies until the demobilization is completed.

Where ever power supply is not available from the National Grid, ASRC will install mobile diesel generators with enough capacity to suffice the site demand. Generators will typically have standby set(s).

Water for the Works will be provided by water tankers (typically 12 m3 each) from private wells along the site.

Potable Water for the Workers will be provided by APPROVED water tankers (typically 12 m3 each) from Water Authority sources or from APPROVED private wells along the site. Potable Water will be stored in approved PE tanks and protected by sheds.

Preservation of the environment will be stringently controlled. Sanitary facilities will be provided to workmen by means of mobile toilets which could be moved according to needs of workforce. Sludge and wastewater will be collected and dumped in approved locations.

Temporary installations will be removed upon completion of the works.

0.11 SIGN BOARDS:

ASRC will install warning and informative Sign boards according to the specifications of the project, that will be provided and erected in locations to the approval of the Owner.

0.12 SITE SURVEYS:

The necessary bench marks and reference points will be established according to the bench marks which shall be given by the Owner at the commencement of the works.
Site survey will be referenced to the base line shown on drawings. Baselines will be established using most advanced survey instruments benefiting from recent satellite aided survey and data exchange.
Survey team will be supervised by **lead surveyor**, and consist of **2 survey crews**.
Typical survey crew will consist of:

1- One senior surveyor

2- One assistant junior surveyor

3- One chainman

4- One 4x4 double cabin light truck.

5- One total station set, one automatic level, measuring tapes c/w tools and umbrellas.

0.13 Pre construction survey and survey drawings:

0.13.1 Pre-construction survey and site plan:

Prior to starting any earth works, a site survey for the existing site will be undertaken and a plan of the area will be produced and submitted to the Owner. This site plan shall demonstrate the work area, with 10 m extension beyond the extreme boundaries, and shall consist of all relevant survey information, existing ground features, existing structures and locations of cross sections. The site plan will be drawn to a scale of 1:500.

0.13.2 Cross sections drawings: will be issued relevant to the site plan at intervals of 20 m for the original ground levels. The cross sections drawings will be drawn on a scale of 1:100. Any intermediate cross section for steep areas or special features will be produced and submitted.

0.13.3 Photographic and Dilapidation/Video surveys: a comprehensive photographic and Video survey of the site and adjacent properties and access roads will be undertaken in order to establish a permanent record of pre-construction conditions. Progress photos shall also be taken to document the events and show the progress of the works.

3. SCHEDULE

3.1. Initial Time schedule will be submitted with our bid.

3.2. A detailed Work breakdown structure to analyze the various elements of work and logic of time - resources correlative relations will be reflected in the Master Construction program, which will be amplification of the attached preliminary schedule prepared using critical path method, presentation in chart utilizing Primavera P3 software or Microsoft Project software, to the Client's option.

4. SCOPE: ASRC will tackle the following issues via the expected Method Statement:

4.1. Scope Management and definition of the Construction Works
4.2. Operational Management Plan of the project
4.3. Time Management: establishing time schedule and tackling the Long-Lead Procurement Items
4.4. Construction Methodologies for Major Works Elements.

5. Scope Management

5.1. ASRC is bidding for the scope announced by the employer for the upcoming tenders where at the location and work premises will be specified under the tender documents and will fully comply to the needs of the project.

5.2. Scope of the Construction Works

5.2.1. The scope of works will be explained in the tender documents , and summarized in approximate bill of quantities.

5.2.2. ASRC have the capability of maintaining and operating materials upon the works needs.

5.2.3. ASRC have experienced variable materials in executing the earthworks such as polymer modified bitumen.

6. Project Management Plan

ASRC will arrange regular meetings, at least weekly, with relevant stakeholders to ensure continuing communication about the ongoing construction operation and their impact on site operations.

PRECONSTRUCTION CONFERENCE

Introduction:

Preconstruction conferences are held after the paving contract has been awarded but before the "notice to proceed" has been given to the contractor. This meeting initiates verbal communication between the owner's representatives (agency personnel) and contractor personnel. The preconstruction conference (kick off meeting) can set the tone for the working relationship between the owner and contractor and establish the communication lines. The most important part of project planning, organization and execution is communication!

- ✓ **Participants and Purpose**

Participants in the preconstruction conference meeting should include all parties of the contract awarded in addition to concerned parties or their representatives.

The agency representative is responsible for convening and conducting the preconstruction conference as soon as possible after the contract has been awarded. The preconstruction meeting is held to review project requirements and to discuss project planning with the contractor. The scope of the project and contract documents should be discussed. This is an opportunity to discuss any non-routine construction practices that may be required.

The preconstruction conference is conducted to ensure all parties are aware of design, construction, and safety requirements. This meeting will help all parties understand the responsibilities of the owner's representatives and the contractor's personnel. The preconstruction conference is an opportunity to discuss issues upfront before construction begins (i.e., potential problem areas and means to create solutions). The contractor should provide and discuss the planned construction schedule.

Typical Discussion Items

Discussion items for the preconstruction conference should generally include issues relating to the project operations, security, safety, environmental factors, schedule, and construction plans. Specific items to review and discuss could include:

- ➢Project scope
- ➢Project specifications and drawings
- ➢Project schedule
- ➢Contractor and agency key personnel
- ➢Role of key personnel
- ➢Lines of authority: "chain of command"
- ➢Applicable permits and licenses
- ➢Project safety plan

- project security and access if restricted area.
- Environmental issues
- Utility locations
- Labor requirements
- Materials submittals
- Quality-control plan (QCP)
- Testing and sampling
- Test section requirements
- HMA mix designs
- Sub-grade preparation
- Sub-base and base course construction
- HMA plant production
- HMA transportation and mix delivery
- Surface preparation
- HMA laydown and compaction
- QC/QA requirements

Test Section

Prior to full HMA production, ASRC will construct a test section before HMA paving operations begin. The purpose of the test section is to evaluate the quality of the job mix formula (JMF), HMA plant production, transportation, laydown equipment and methods, and compaction techniques. Full HMA production cannot begin until an acceptable test section has been constructed and accepted by the owner or engineer.

Quality-Control Plan (QCP)

ASRC is responsible for establishing and maintaining an effective quality-control plan (QCP) that will be utilized during the period of the project to assure that all materials and construction conform to contract plans and specifications.

The purpose of the QCP is to enable the contractor to provide the necessary control that will adequately provide for the production of acceptable quality materials and to provide sufficient information to assure the contractor and engineer that specifications have been met. The contractor should submit the QCP prior to the preconstruction conference to allow the engineer to review the plan and make suggestions at the preconstruction meeting.

The QCP is the process that the contractor uses to ensure that mixture quality is controlled. This plan is very important to the success of the project. The government representative often uses the QC data as a key part of the acceptance plan. QCP plan needs to be approved and in place prior to start of construction.

Preconstruction Conference Agenda for Asphalt Paving Projects

The agenda for the preconstruction conference should include some discussion of the following items.
• Plans and Specifications
• Review scope of the work.
• Review any deviations from specifications.
• Review and approve procedures for change orders; supplemental agreements.

Construction

• Establish the relationship between sponsor and contractor. Review authority of project engineer and agency inspector.
• Materials acceptance testing is the responsibility of the sponsor. Quality-control testing is the responsibility of the contractor.
• No work should commence or be covered until approved by inspector. Prior to initiating acceptance testing, it should be the responsibility of contractor to provide quality-control testing. Discuss penalty clause for asphalt pavements.
• Contractor must obtain all applicable permits and licenses.
• Contractor provides protection and restoration of property.
• Discuss who is responsible for locating underground utilities and who should be contracted in case of emergency.
• Contractor should repair with identical material by skilled workers, any underground cables serving, weather bureau, etc.
• Contractor should maintain paved areas clear of all foreign debris resulting from hauling and construction.
• The contractor is responsible for maintaining record drawing revisions that develop from construction. Submit weekly construction reports.
• Discuss liquidated damages.

Safety During Construction

ASRC will review construction safety plan if applicable.

Contractor's Construction Schedule

- Testing Laboratories:

Testing laboratories proposed must have been approved by the MPWH/GTD

Preconstruction Conference Checklist

Items related to technical issues that should be discussed at the preconstruction conference are provided below. It is important that all parties involved in the construction understand their roles and the roles of others. If there are any questions involving the project, these should be cleared up during the preconstruction conference.

- General Items
- Construction schedule
- Chain of command
- Key personnel and roles
- Materials and mix design submittals
- field security
- Locate utilities
- Staging area
- Haul roads and field access points
- Asphalt construction workshop
- Sub-grade Preparation
- Review geotechnical report (soil borings)
- Cut and fill elevations and slopes
- Borrow and waste areas
- Fill material criteria
- Removal of unacceptable soils
- Proof-rolling requirements and acceptance criteria
- Compaction requirements and acceptance criteria
- Chemical stabilization
- Testing frequencies

- Sub-base/Base Course Construction
- Material properties and acceptance criteria
- Compaction requirements and acceptance criteria
- Placement equipment and procedures
- Thickness and grade acceptance criteria

- Proof-rolling requirements and acceptance criteria
- Grade survey
- Testing frequencies

HMA Plant Production Delivery

- Aggregate stockpile management
- Stockpile sampling and testing
- Calibration of HMA plant
- Proper loading of cold feed bins
- Storage silos and storage time
- Segregation
- Proper loading of trucks
- Release agents
- Tarp loads
- Haul time
- HMA mix testing procedures, frequencies, and acceptance criteria
- Surface Preparation
- Milling operations
- Brooming operations
- Paint removal
- Excess crack sealant removal
- Prime coat on base course
- Tack coat on HMA layers
- Repair areas
- Reflective crack issues
- HMA Laydown and Compaction
- Material transfer vehicles
- Grade control
- Paver speed
- Temperature: mix and ambient
- Condition of equipment
- Joint construction and acceptance criteria
- Layer thickness
- Rollers: speed, size, type
- Tender mixes
- Roller patterns
- Density requirements and acceptance criteria

Good communication between all parties involved in a project is necessary if a quality product is to be obtained. The preconstruction conference sets the tone for future communications. It is important that all aspects of the work be thoroughly discussed, potential problem areas be addressed, and any questions or concerns be dealt with. All answers may not be available at the preconstruction conference, but all can agree who will provide the answers and when they will be available. At the end of the conference, it is very important to know the point of contact for each party involved in the project.

7. Time management, Time Schedule (Works Program) and Long-Lead Procurement Items:

7.1. The program for the construction of the works will be submitted defining the WBS and the activities involved.

7.2. Among the major challenges in the program are: mobilization, site establishment, security clearance of staff and quality consistency.

7.3. ASRC owns asphalt batching plants which are currently operating in Amman and Aqaba and will provide its current operation and quality staff to maintain the high quantities of necessary and the degree of precise quality control.

7.4. Transport and installation of such plant will require 40 days until it comes in production if required under the tender documents. ASRC precisely knows how, when and where to obtain and supply the suitable materials.

7.5. Adequate supplies of appropriately graded aggregates will be supplied from local suppliers at a rate of 1000 M3/day.

7.6. ASRC has the past experience and technical know-how to apply extensive testing to ensure statistical consistency of the supplied materials likewise its current projects.

7.7. Continuous testing will be applied to insure that the initial batching of asphalt to ensure statistical consistency of bituminous material suitable for laying in the works.

7.8. ASRC thus will minimize the time for this long lead-in period for these various operations.

8. Construction Methodologies for Major Works Elements

ASRC will start with it immediately following the award of the contract During which ASRC will construct.

SAFETY AND HEALTH PROGRAM
PREPARED BY
(Abu Shreikh Roads Contracting Co.)

Updated
May 6, 2011

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EMERGENCY RESPONSE PLAN

This must be filled out BEFORE beginning work on each site.

FOR _____JOBSITE

CITY/LOCATION: _____

SUBDIVISION: _____

STREET NAME: _____

JOB ADDRESS: _____

JOB PHONE CONTACT:_____

EMERGENCY PHONE CONTACT NUMBERS

LOCAL FIRE DEPT/EMS AREA: _____

AMBULANCE SERVICE: _____

NEAREST MEDICAL_____

TREATMENT:_____

DIRECTIONS (EMS/Clinic/Dr.):_____

_____

_____

_____

_____

DIRECTIONS TO WORKSITE:_____

_____

EMERGENCY RESPONSE TO HAZARDOUS SUBSTANCES

FOR SMALL CONSTRUCTION COMPANIES NOT NORMALLY INVOLVED IN HAZARDOUS WASTE CLEANUPS.

If any substance is found of unknown origin, company policy is to **LEAVE IT ALONE**! Immediately evacuate the area, and contact the nearest hazardous material response team. Do not allow employees on site until declared safe by the response team.

FIRST AID

Arrangements must be made BEFORE starting the project, to provide for prompt medical response in the event of an emergency

In areas where severe bleeding, suffocation, or severe electrical shock can occur, a 3 to 4 minute response time is required

If medical attention is not available within 4 minutes, then a first aid trained person must be available on the jobsite at all times

An appropriate, weatherproof first aid kit must be on site. It must be checked weekly

Provisions for an ambulance or other transportation must be made in advance.

Contact methods must be provided

(ASRC) has designated (SAFETY PERSON OR FOREMAN) as having adequate training to render first aid in the event of a medical emergency in areas where emergency response time is in excess of 4-min. They will maintain appropriate first aid kits and check them weekly to assure they are properly stocked.

First aid kits are located at the following locations:

- _____
- _____

POLICY STATEMENT

It is (ASRC) belief that our people are our most important asset and the preservation of employee Safety and Health must remain a constant consideration in every phase of our business. We will provide the resources necessary to manage, control, or eliminate all safety and health hazards.

All employees are responsible for working safely and productively, as well as recognition and awareness of hazards in their work areas. Employees are also responsible for following safe work practices, including the use of Personal Protective Equipment (PPE) where necessary.

It is our belief that any safety and health program must have total employee involvement. Therefore, this program has management's highest priority, support, and participation.

(ASRC)

GOAL

Safety begins at the top and goes downward throughout the company. The primary goal of (ASRC) is to continue operating a profitable business while protecting employees from injuries, illness or harm. This can be achieved in part by delegating responsibility and accountability to all involved in this company's operation.

Responsibility: Having to answer for activities and results.
Accountability: The actions taken by management to insure the performance of responsibilities.

In other words, to reach our goal of a safe workplace everyone needs to take responsibility and be held accountable.

Benefits of achieving our goals are:

- Minimizing of injuries and accidents
- Minimizing the loss of property and equipment
- Elimination of potential fatalities
- Elimination of potential permanent disabilities
- Reductions in workers' compensation costs
- Reductions in operating costs
- Having the best Safety and Health conditions possible in the workplace.

MANAGEMENT COMMITMENT

The management of (ASRC) is committed to the company's safety policy, and to provide direction and motivation by:

- Appointing (SAFETY PERSON) as our Safety Coordinator.
- Establishing company safety goals and objectives.
- Developing and implementing a written Safety and Health program.
- Ensuring total commitment to the Safety and Health program.
- Facilitating employees' safety training.
- Establishing responsibilities for management and employees to follow.
- Ensuring that management and employees are held accountable for performance of their safety responsibilities.
- Establishing and enforcing disciplinary procedures for employees.
- Reviewing the Safety and Health program annually, and revising or updating as needed.

SAFETY COMMITTEE and SAFETY MEETINGS

The Committee shall consist of representatives from management and non-management employees with (SAFETY PERSON) as the chairman. The committee is a forum, created for the purpose of fostering safety and health through communication.

The responsibilities of Safety Committee Members include:

- Discussing safety policies and procedures with management and making recommendations for improvements.
- Reviewing accident investigation reports on all accidents and "near-misses".
- Identifying unsafe conditions and work practices and making recommendations for corrections.

All employees of (ASRC) shall attend and participate in the Weekly safety meetings. The Weekly safety meeting shall be conducted by (SAFETY PERSON). Problems that have arisen or that are anticipated shall be discussed along with any other safety and health topics. The meeting shall be kept a valuable educational experience by:

- Keeping the meetings moving.
- Starting and Stopping on time.
- Using illustrated material and demonstrations to make the point.
- Discussing each topic thoroughly, providing handouts if possible.
- Reviewing accidents, injuries, property losses, and "near misses".
- Evaluating accidents, injuries, property losses, and "near misses" for trends and similar causes to initiate corrective actions.

The Safety Coordinator must document the meetings using the form in Appendix A.

ASSIGNMENT OF RESPONSIBILITY

SAFETY COORDINATOR

(ASRC) has designated (SAFETY PERSON) as our Safety Coordinator. Their cell phone and office phone numbers are:

Office: (+9626) 5690484
Cell: 000000000000000000

It shall be the duty of the Safety Coordinator to assist the Supervisor/Foreman and all other levels of Management in the initiation, education, and execution of an effective safety program including the following:

- Introducing the safety program to new employees.
- Following up on recommendations, suggestions, etc., made at the Weekly safety meetings. All topics of safety concerns must be documented accordingly.
- Assisting the personnel in the execution of standard policies.
- Conducting safety inspections on a periodic basis.
- Addressing all hazards or potential hazards as needed.
- Preparing monthly accident reports and investigations.
- Maintaining adequate stock of first aid supplies and other safety equipment to insure their immediate availability.
- Making sure there is adequate number of qualified first aid certified people on the work site.
- Becoming thoroughly familiar with OSHA regulations and local and state safety codes.
- Defining the responsibilities for safety and health of all subordinates and holding each person accountable for their results through the formal appraisal system and where necessary, disciplinary procedures.
- Emphasizing to employees that accidents create unnecessary personal and financial losses.

SUPERVISOR/FOREMAN

The Supervisors and/or Foremen will establish an operating atmosphere that insures that safety and health is managed in the same manner and with the same emphasis as production, cost, and quality control.

- Regularly emphasizing that accident and health hazard exposure prevention are not only moral responsibilities, but also a condition of employment.
- Identifying operational oversights that could contribute to accidents which often result in injuries and property damage.
- Participating in safety and health related activities, including routinely attending safety meetings, reviews of the facility, and correcting employee behavior that can result in accidents and injuries.

- Spending time with each person hired explaining the safety policies and the hazards of his/her particular work.
- Ensuring that initial orientation of "new hires" is carried out by (SAFETY PERSON).
- Making sure that if a "Competent Person" is required, that one is present to oversee, and instruct employees when necessary.
- Never short-cutting safety for expediency, nor allowing workers to do so.
- Enforcing safety rules consistently, and following company's discipline and enforcement procedures.
- Conducting a daily, job-site safety inspection and correcting noted safety violations.

EMPLOYEES

It is the duty of each and every employee to know the safety rules, and conduct his work in compliance with these rules. Disregard of the safety and health rules shall be grounds for disciplinary action up to and including termination. It is also the duty of each employee to make full use of the safeguards provided for their protection. Every employee will receive an orientation when hired and receive a copy of the Company Safety and Health Program. Employee responsibilities include the following:

- Reading, understanding and following safety and health rules and procedures.
- Signing the Policies and Procedures Acknowledgement included in Appendix B.
- Wearing Personal Protective Equipment (PPE) at all times when working in areas where there is a possible danger of injury.
- Wearing suitable work clothes as determined by the supervisor/foreman.
- Performing all tasks safely as directed by their supervisor/foreman.
- Reporting ALL injuries, no matter how slight to their supervisor/foreman immediately, and seeking treatment promptly.
- Knowing the location of first aid, fire fighting equipment, and other safety devices.
- Attending any and all required safety and health meetings.
- Not performing potentially hazardous tasks, or using any hazardous material until properly trained, and following all safety procedures when performing those tasks.
- STOPPING AND ASKING QUESTIONS IF EVER IN DOUBT ABOUT THE SAFETY OF ANY OPERATION

DISCIPLINE/ENFORCEMENT

The (ASRC) seeks to establish and maintain standards of employee conduct and supervisory practices which will support and promote safe and effective business operations. These supervisory practices include administering corrective action when employee safety performance or conduct jeopardizes this goal. This policy sets forth general guidelines for a corrective action process aimed to document and correct undesirable employee behavior. Major elements of this policy include:

A. Constructive criticism/instruction by the employee's supervisor/foreman to educate and inform employees of appropriate safety performance and behavior.
B. Correcting employee's negative behavior to the extent required.
C. Informing the employee that continued violation of company safety policies may result in termination.
D. Written documentation of disciplinary warnings and corrective action taken.

Depending on the facts and circumstances involved with each situation, the company may choose any corrective action including immediate termination. However, in most circumstances the following steps will be followed:

1 **VERBAL WARNING** informally documented, by supervisor/foreman or safety coordinator for minor infractions of company safety rules. Supervisor/foreman or safety coordinator must inform the employee what safety rule or policy was violated and how to correct the problem.

2 **WRITTEN WARNING**, documented in employee's file. Repeated minor infractions or a more substantial safety infraction requires issuance of a written warning. Every attempt should be made to re-educate the employee on the desired performance. The employee should acknowledge the warning by signing the document before it is placed in their personnel file.

3 **SUSPENSION**, for three (3) working days. If employee fails to appropriately respond or management determines the infraction is sufficiently serious.

4 **TERMINATION**, for repeated or serious safety infractions.

CONTROL OF HAZARDS

Where feasible, workplace hazards are prevented by effective design of the job site or job. Where it is not feasible to eliminate such hazards, they must be controlled to prevent unsafe and unhealthy exposure. Once a potential hazard is recognized, the elimination or control must be done in a timely manner. These procedures include measures such as the following:

- Maintaining all extension cords and equipment.
- Ensuring all guards and safety devices are working.
- Periodically inspecting the worksite for safety hazards.
- Establishing a medical program that provides applicable first aid to the site, as well as nearby physician and emergency phone numbers.
- Addressing any and all safety hazards with employees.

FIRE PREVENTION

Fire prevention is an important part of protecting employees and company assets. Fire hazards must be controlled to prevent unsafe conditions. Once a potential hazard is recognized, it must be eliminated or controlled in a timely manner. The following fire prevention requirements must be met for each site:

- One conspicuously located 2A fire extinguisher (or equivalent) for every floor.
- One 2A conspicuously located fire extinguisher (or equivalent) for every 3000 sq/ft
- A conspicuously located, 10B fire extinguisher for everywhere more than 5-gallons of flammable liquids or gas are stored.
- Generators and internal combustion engines located away from combustible materials.
- Site free from accumulation of combustible materials or weeds.
- No obstructions or combustible materials piled in the exits.
- No more than 25-gallons of combustible liquids stored on site.
- No LPG containers stored in any buildings or enclosed spaces.
- Fire extinguishers in the immediate vicinity where welding, cutting or heating is being done.

TRAINING AND EDUCATION

Training is an essential component of an effective safety and health program addressing the responsibilities of both management and employees at the site. Training is most effective when incorporated into other education on performance requirements and job practices.

Training programs should be provided as follows:

- Initially when the safety and health plan is developed
- For all new employees before beginning work
- When new equipment, materials, or processes are introduced
- When procedures have been updated or revised
- When experiences/operations show that employee performance must be improved
- At least annually

Besides the standard training, employees should also be trained in the recognition of hazards - be able to look at an operation and identify unsafe acts and conditions. A list of typical hazards employees should be able to recognize may include:

- **Fall Hazards** - Falls from- Floors, Roofs and roof openings, Ladders (Straight and Step), Scaffolds, Wall openings, Tripping, Trenches, Steel Erection, Stairs, Chairs
- **Electrical Hazards**- Appliances, Damaged cords, Outlets, Overloads, Overhead High Voltage, Extension cords, Portable Tools (broken casing or damaged wiring), Grounding, Metal Boxes, Switches, Ground fault circuit interrupters(GFCI)
- **Housekeeping Issues** - Exits, Walkways, Floors, Trash, Storage of Materials (Hazardous and Non-Hazardous), Protruding Nails etc,.
- **Fire Hazards**- Oily-Dirty Rags, Combustibles, Fuel Gas Cylinders, Exits (blocked) Trips/Slips Stairs, Un-even flooring, Electrical cords, icy walkways
- **Health Hazards**- Silicosis, Asbestos, Loss of hearing, Eye injury due to flying objects

Employees trained in the recognition and reporting of hazards and supervisors/foremen trained in the correction of hazards will substantially reduce the likelihood of a serious injury.

RECORDKEEPING AND OSHA LOG REVIEW

In the event of a fatality (death on the job) or catastrophe (accident resulting in hospitalization of three or more workers) contact (SAFETY PERSON). Their office and cell-phone numbers are:

Office: (+9626) 5690484
Cell: 0000000000000000000

If an injury or accident should ever occur, you are to report it to your supervisor/foreman as soon as possible. A log entry and summary report shall be maintained for every recordable injury and illness. The entry should be done within 7 days after the injury or illness has occurred. The OSHA 300 or equivalent shall be used for the recording.

An OSHA recordable injury or illness is defined as an injury resulting in loss of consciousness, days away from work, days of restricted work, or medical treatment beyond first aid.

First Aid includes:

- Tetanus shots
- Band-aids or butterfly bandages
- Cleaning, flushing or soaking wounds
- Ace bandages and wraps
- Non-prescription drugs at non-prescription strength (Aspirin, Tylenol, Etc.)
- Drilling fingernails/toenails
- Eye patches, eye flushing and foreign body removal from eye with Q-tips
- Finger guards
- Hot or cold packs
- Drinking fluids for heat stress

An annual summary of recordable injuries and illnesses must be posted at a conspicuous location in the workplace and contain the following information: Calendar year, Civil Engineering Company-establishment name, establishment address, certifying signature, title, and date. If no injury or illness occurred in the year, zeroes must be entered on the total line.

ACCIDENT INVESTIGATION

Supervisors/Foreman

- Provide first aid, call for emergency medical care if required.
- If further medical treatment is required, arrange to have an employer representative accompany the injured employee to the medical facility.
- Secure area, equipment and personnel from injury and further damage.
- Contact Safety Coordinator.

Safety Coordinator

- Investigate the incident (injury)--gather facts, employee and witness statements; take pictures and physical measurements of incident site and equipment involved.
- Complete an incident investigation report form (Included in Appendix C) and the necessary workers' compensation paperwork within 24 hours whenever possible.
- Insure that corrective action to prevent a recurrence is taken.
- Discuss incident, where appropriate, in safety and other employee meetings with the intent to prevent a recurrence.
- Discuss incident with other supervisors/foremen and other management.
- If the injury warrants time away from work, insure that the absence is authorized by a physician and that you maintain contact with your employee while he/she remains off work.
- Monitor status of employee(s) off work, maintain contact with employee and encourage return to work even if restrictions are imposed by the physician.
- When injured employee(s) return to work they should not be allowed to return to work without "return to work" release forms from the physician. Review the release carefully and insure that you can accommodate the restrictions, and that the employee follows the restrictions indicated by the physician.

SAFETY RULES AND PROCEDURES

- No employee is expected to undertake a job until that person has received adequate training.
- All employees shall be trained on every potential hazard that they could be exposed to and how to protect themselves.
- No employee is required to work under conditions which are unsanitary, dangerous or hazardous to their health.
- Only qualified trained personnel are permitted to operate machinery or equipment.
- All injuries must be reported to your supervision/foreman.
- Manufacturer's specifications /limitations /instructions shall be followed.
- Particular attention should be given to new employees and to employees moving to new jobs or doing non-routine tasks.
- All OSHA posters shall be posted.
- Emergency numbers shall be posted and reviewed with employees
- Each employee in an excavation/trench shall be protected from cave-ins by an adequate protective system.
- Employees working in areas where there is a possible danger of head injury, excessive noise exposure, or potential eye and face injury shall be protected by Personal Protection Equipment (PPE).
- All hand and power tools and similar equipment, whether furnished by the employer or the employee, shall be maintained in a safe condition.
- All materials stored in tiers shall be stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling or collapse.
- The employer shall insure that electrical equipment is free from recognized hazards that are likely to cause death or serious physical harm to employees.
- All scaffolding shall be erected in accordance with the CFR 1926.451 subpart L. Standard guardrails for fall protection and ladders for safe access shall be used.
- All places of employment shall be kept clean, the floor of every workroom shall be maintained, so far as practicable, in a dry condition; standing water shall be removed. Where wet processes are used, drainage shall be maintained and false floors, platforms, mats or other dry standing places or appropriate waterproof footgear shall be provided.
- To facilitate cleaning, every floor, working place, and passageway shall be kept free from protruding nails, splinters, loose boards, and holes and openings.
- All floor openings, open sided floor and wall openings shall be guarded by a standard railings and toe boards or cover.
- The employer shall comply with the manufacturer's specifications and limitations applicable to the operation of any and all cranes and derricks.
- All equipment left unattended at night, adjacent to a highway in normal use, or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, to identify the location of the equipment.
- No construction loads shall be placed on a concrete structure or portion of a concrete structure or portion of a concrete structure unless the employer determines, based on information received from a person who is qualified in structural design, that the structure or portion of the structure is capable of supporting the loads.
- A stairway or ladder shall be provided at all personnel points of access where there is a break in elevation of 19 inches or more, and no ramp, runway, sloped embankment, or personnel hoist is provided.

EMPLOYEE EMERGENCY ACTION PLAN:

FIRE & OTHER EMERGENCIES

The following emergency action plan is appropriate only for small construction sites, larger sites should have a much more detailed plan.

1 **Emergency escape procedures**: Immediately leave the building through the closest practical exit. Meet up at the foremen's truck.

2 **Critical plant operations:** shut off the generator on your way out if possible, otherwise evacuate the building.

3 **Accounting for Employees:** Foreman/Supervisor is to account for all employees after emergency evacuation has been completed and assign duties as necessary.

4 **Means of reporting fires and other emergencies:** Dial 911 on the cell-phone, report the location of the emergency and provide directions to the responders.

5 **Further Information:** Contact the Safety Coordinator or further information or explanation of duties under the plan.

ALARMS SYSTEMS/EVACUATION: (ASRC) establishes the call: Fire, Fire, Fire: (el fuego, el fuego, el fuego) by any employee, as the signal to immediately evacuate the building/facility for: fire and other emergencies.

TRAINING: Before implementing the emergency action plan, a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees will be designated and trained.

The plan will be reviewed with each employee covered by the plan at the following times:

1 Initially when the plan is developed or upon initial assignment.

2 Whenever the employee's responsibilities or designated actions under the plan change.

3 Whenever the plan is changed.

The plan will be kept at the worksite and made available for employee review.

For those employers with 10 or fewer employees the emergency action plan may be communicated orally to employees and the employer need not maintain a written plan.

APPENDIX A SAFETY

MEETING MINUTES

Date: _____Job Name: _____

Topics: _____

Action Items: _____

Meeting Attended By:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
Print Name	**Signature**

APPENDIX B

POLICIES AND PROCEDURES ACKNOWLEDGEMENTS

I have read and understand the attached company policies and procedures and agree to abide by them. I have also had the duties of the position which I have accepted explained to me, and I understand the requirements of the position. I understand that any violation of the above policies is reason for disciplinary action up to and including termination.

Employee Signature

Date

APPENDIX C – ACCIDENT INVESTIGATION FORM

INCIDENT INFORMATION				
Date of Accident	Time	Day of Week ☐ S ☐ M ☐ T ☐ W ☐ T ☐ F ☐ S	Shift ☐ 1 ☐ 2 ☐ 3	Job Site

INJURED PERSON

Name:		Address:		
Age:	Phone:			
Job Title:		Supervisor/Foreman Name:		
Length of Employment at Company:		Length of Employment at Job:		
Employee Classification: ☐ Full Time ☐ Part Time ☐ Contract ☐ Temporary				

Nature of Injury				
☐ Strain/Sprain	☐ Bruising	☐ Dislocation	☐ Other (specify)	Injured Part of Body:
☐ Fracture	☐ Scratch/Abrasion	☐ Internal		
☐ Laceration/Cut	☐ Amputation	☐ Foreign Body	Remarks:	
	☐ Burn/Scald	☐ Chemical Reaction		

Treatment	Name and Address of Treating Physician or Facility
☐ First Aid	
☐ Emergency Room	
☐ Dr.'s Office	
☐ Hospitalization	

DAMAGED PROPERTY

Property, Equipment, or Material Damaged	Describe Damage
Object or Substance Inflicting Damage:	

INCIDENT DESCRIPTION

Describe what happened (attach photographs or diagrams if necessary)

ROOT CAUSE ANALYSIS (Check All that Apply)

Unsafe Acts		Unsafe Conditions		Management Deficiencies	
Improper work technique		Poor work area design or layout		Lack of written procedures or policies	
Safety rule violation		Congested work area		Safety rules not enforced	
Improper PPE or PPE not used		Hazardous substances		Hazards not identified	
Operating without authority		Fire or explosion hazard		PPE unavailable	
Failure to warn or secure		Inadequate ventilation		Insufficient worker training	
Operating at improper speeds		Improper material storage		Insufficient supervisor training	
By-passing safety devices		Improper tool or equipment		Improper maintenance	
Guards not used		Insufficient knowledge of job		Inadequate supervision	
Improper loading or placement		Slippery conditions		Inadequate job planning	
Improper lifting		Poor housekeeping		Inadequate hiring practices	
Servicing machinery in motion		Excessive noise		Inadequate workplace inspection	
Horseplay		Inadequate guarding of hazards		Inadequate equipment	
Drug or alcohol use		Defective tools/equipment		Unsafe design or construction	
Unnecessary haste		Insufficient lighting		Unrealistic scheduling	
Unsafe act of others		Inadequate fall protection		Poor process design	
Other:		Other:		Other:	

INCIDENT ANALYSIS

Using the root cause analysis list on the previous page, explain the cause(s) of the incident in as much detail as possible.

How bad could the accident have been?	What is the chance of the accident happening again?
☐ Very Serious ☐ Serious ☐ Minor	☐ Frequent ☐ Occasional ☐ Rare

PREVENTIVE ACTIONS

Describe actions that will be taken to prevent recurrence.	Deadline	By Whom	Complete

INVESTIGATION TEAM

Signature	Name	Position