WORK PLAN

for

Alamo Auditorium Demolition

prepared for the

MONTGOMERY COUNTY COMMISSIONERS

DES

CIVIL & ENVIRONMENTAL ENGINEERING

September 2024

DES Project Number MO-Alamo Auditorium PER

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0.0 INTRODUCTION

The Town of Alamo, Indiana is located on the Western edge of Montgomery County Indiana. The Montgomery County Commissioners have developed a plan to demolish a degraded concrete structure just outside the limits of the Town. The concrete structure was previously a gymnasium which served the local community and school. Another small wood structure exists on site in an equally deteriorated condition. This document contains a work plan to assist in the completion of identified tasks as part of the building demolition. If this work plan has a deficiency which results in confusion on behalf of the contractor, the contractor should contact the construction manager to clarify any areas of confusion.

0.1 Project Need

The existing concrete structure has been sitting abandoned for approximately 35 years and it is no longer feasible to repair the historic building to its former condition. The building roof has fully collapsed inward creating a dangerous environment for the community and an unsightly structure for those travelling through Alamo. The decision was made by Montgomery County Commissioners to fully demolish the structure and return the site to a natural vegetated state.

0.2 Location

The demolition activities will take place in Alamo Indiana more particularly at the following address: 3971 S. West Street Alamo, Indiana 47916. The state parcel id for the site is 54-12-23-400-021.000-018. The project will be contained to a defined project area of 41,000 SQ.FT. See the Preliminary Engineering Report (P.E.R.) for additional info regarding project location and defined project area.

0.3 Contractor Recordation Requirements

Contractor shall fill out a daily log sheet with a short description of daily activities completed. If no work is completed then the daily log sheet should state such. At the end of each week the daily log sheet should be emailed to the Construction manager for the project. If weekly log sheets are not submitted pay will be withheld until log sheets are submitted. Daily log sheets can be obtained through the construction manager for this project.

1.0 DEMOLITION

The following demolition plan has been developed to assist in the demolition process for the Alamo gymnasium. The demolition plan has been broken down into 3 primary steps.

1. Mobilization of all equipment to site & entrance Construction
2. Clearing of all debris and overgrowth 30' on all sides of structure.
3. Demolition of structures.

1.1 Mobilization of all Equipment to Site & Temporary Entrance

Before work can begin equipment will need to be transferred to the site. If a road closure is needed to unload large equipment off of trailers, contractor shall contact Montgomery County sheriff department to schedule the road closure location and time. Equipment should be staged on site in an orderly fashion.

1.2 Clearing of All Debris and Overgrowth 30' on All Sides of Structure

Prior to large demolition activities the site needs to be cleaned and prepared to provide a safe work environment. A large accumulation of debris has built up around the building. Debris should be cleared and sorted into the appropriate container. Overgrowth has occurred on and around the building, in order to maintain proper visibility throughout the site any small trees and shrubs should be removed within 30' of the building. Large trees shall remain undisturbed and work around to the best of the contractor's ability. Overgrown grasses and weeds shall be knocked down to provide a visible working environment.

1.3 Demolition of Structures

1.3.1 Protection

- Perform demolition in such manner as to eliminate hazards to persons and property; to minimize interference with use of adjacent areas, utilities and structures or interruption of use of such utilities; and to provide free passage to and from such adjacent areas of structures.
- Provide safeguards, including warning signs, barricades, temporary fences, warning lights, and other similar items that are required for protection of all personnel during demolition and removal operations.
- Maintain fences, barricades, lights, and other similar items around exposed excavations until such excavations have been completely filled.
- Prevent spread of flying particles and dust. Sprinkle debris with water to keep dust to a minimum. Do not use water if it results in hazardous or objectionable condition such as, but not limited to; ice, flooding, or pollution. Vacuum and dust the work area daily.
- Fire and safety rules to be observed in performance of work, include following:
- No wall or part of wall shall be permitted to fall outwardly from structures.
- If multi-level building is being demolished, maintain at least one stairway in each structure in usable condition to highest remaining floor. Keep stairway free of obstructions and debris until that level of structure has been removed.

- Wherever a cutting torch or other equipment that might cause a fire is used, provide and maintain fire extinguishers nearby ready for immediate use. Instruct all possible users in use of fire extinguishers.
- Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work. The contractor shall take necessary precautions to avoid damages to existing items to remain in place, to be reused. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under this contract. Do not overload structural elements.

1.3.2 Demolition Procedure

Before any structure demolition can begin the contractor should ensure that all utilities have been fully disconnected from the site. It shall be the responsibility of the contractor to notify all utility suppliers of intended demolition.

Structure demolition shall begin with the secondary structure on site. This structure is wooden and filled with loose debris. Windows within the structure should be removed and recycled accordingly. After the removal of windows, the structure can be demolished in a safe manner and disposed of accordingly. See Section 2.0 Material Disposal for instructions regarding proper material disposal.

Once the full demolition and removal of debris has been completed for the secondary structure, demolition of the primary structure may commence. Glass within the Primary structure shall be removed and recycled accordingly. Tires that exist within the basement of the structure shall be removed and recycled accordingly. Once tires and glass have been removed from the structure full building demolition may commence. Building shall be demolished beginning with the lean-to style structure built on the North side of the primary structure. The lean to was constructed with lumber and metal sheeting which has partially collapsed. The wooden addition should be torn down and disposed of accordingly. The area should be cleaned up fully before beginning the next stage of demolition. The primary structure demolition should be completed using a steel wrecking ball to knock the structure walls and remaining roof into the center of the structure, centralizing debris and minimizing hazards. If contractor prefers to use an alternative method to demolish the building it must first be approved through the project construction manager. During all concrete demolition water misting shall occur to minimize air pollutants from shattered concrete. Method of demolition shall comply with E.P.A. Fugitive Dust Requirements including all arrangements and costs for spraying water on demolition. Once the entire building has been demolished into the basement of the structure. Pieces of the structure can be safely removed and disposed of accordingly. Once all loose pieces of building have been removed from the basement of the structure a jack hammer and excavator shall be used to remove the remaining basement floor and exterior building steps. Any found underground piping shall be removed in its entirety.

The buried concrete tank on the west end of the building shall be demolished and fully removed from the site.

See OSHA Standards related to demolition activities in the Appendix of this report.

1.4 Well Abandonment (if Well is Found on Site)

No well locations are currently known on site, this does not guarantee that no well exists on site. If during project activities an abandoned well is found on site, it should be abandoned in accordance to 312 I.A.C. 13-10-2. If an abandoned well is found on site the contractor should immediately notify the construction manager.

2.0 MATERIAL DISPOSAL

Multiple different materials are currently present on site and will need to be dealt with in different manners. All refuse removed from the site shall be disposed of at an approved landfill or disposal facility. Debris, including brick, concrete, stone, metals and similar materials shall become property of Contractor and shall be disposed of by him daily, to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in areas specified by the construction manager. Remove all concrete slabs below grade. Contractor shall dispose debris in compliance with applicable federal, state or local permits, rules and/or regulations.

The primary materials found on site are listed below

1. Tires
2. Wood
3. Metals
4. Concrete
5. Municipal waste
6. Asbestos & hazardous Materials
7. Plastics, Styrofoam, Glass, Cardboard, ETC

2.1 Tires

Tires primarily exist within the basement of the primary structure. Tires should be removed by hand and hauled to a local recycling facility.

2.2 Wood

Wood exists throughout the building both attached and unattached to the structure. Wood should be hauled off site as construction waste.

2.3 Metals

Metal roofing and municipal waste exist throughout the site and should be isolated and recycled whenever possible. Several metal recycling facilities exist within Montgomery and surrounding counties which will pay for these materials.

2.4 Concrete

Concrete is the primary waste material for this project. Broken concrete chunks shall be hauled off and properly disposed of. Concrete crushing may not occur on site due to the creation of air pollutants in the form of crystalline silica dust which can cause respiratory harm.

2.5 Municipal Waste

Municipal waste should be loaded into the onsite roll off dumpster and hauled offsite to the local waste municipality. Ensure the dumpster is leak proof to keep all contents contained.

2.5 Asbestos & Hazardous Materials

Asbestos has been confirmed to be in several locations within the building. All asbestos should be removed by a licensed professional prior to beginning demolition activities. Proof shall be submitted to the construction manager that a professional Asbestos removal company was utilized. If additional materials that may contain asbestos are found on site. They should be tested by a licensed professional and dealt with accordingly. Notify construction manager of any additional asbestos materials found on site. Please see the Preliminary Engineering report associated with this project for additional information regarding asbestos found inside the building.

2.6 Plastics, Styrofoam, Glass, Cardboard, ETC.

Recyclable materials should be sorted from debris whenever possible and taken to nearest recycling facility. This will reduce municipal waste being hauled to the landfill minimizing municipal waste fees as well as providing an environmental benefit to the project.

3.0 REGRADING/SEEDING/PLANTING/EROSION CONTROL

Once all demolition activities have been completed the site should be thoroughly inspected to ensure all debris and waste has been properly discarded and the ground is prepared for site regrading.

3.1 Site Regrading

Once the site has been properly prepared fill dirt should be hauled onto site to begin filling in the basement of the structure and any other low areas as a result of demolition activities. The amount of clean fill dirt required is approximated at 1,250 cubic yards but has the potential to be greater or less than this amount. Contractor is responsible for keeping track of total yardage brought to the site and bill the county accordingly. Dirt should be hauled in and spread across the depressed areas until the area is within 6" of final grade. Final grade shall be determined in field by the construction manager assigned to this project. Six inches of topsoil is to be brought in as a final step to prepare for re-vegetation of the site. Water should continue to flow from the North side of the site to the Southwest of the site after all grading is completed.

3.2 Reseeding of Disturbed Soils

Disturbed soils will persist throughout the project area and will not be limited to the footprint of the structures. Any disturbed and compacted soils throughout the project area should be tilled to a depth no greater than 4 inches in preparation for reseeding. Once the full site has been tilled no heavy equipment should be permitted on site as it will result in the re-compaction of soil. Native grasses should be planted throughout the site and covered with straw to encourage growth. Planted seed should be watered twice per week for the first 3 weeks to ensure growth. If a rainfall event occurs within 12 hours of the planned watering the watering may be postponed to the next available time.

3.3 Planting of Native Pollinator Plants

Pollinators play an important role in daily life and should be supported whenever possible. It is the belief of the engineer and of County officials that pollinator plants should be planted on site to benefit local pollinators and the community. These plants will be visually appealing and assist in the beautification of Alamo. The selected pollinator plants that are to be planted on site are specified within the P.E.R. Proper planting procedures should be followed for each individual plant. Plants should be watered twice per week for the first three weeks to ensure growth. If a rainfall event occurs within 12 hours of the planned watering the watering may be postponed to the next available time.

3.4 Erosion Control Measures

The demolition and regrading activities planned for this project will cause soil and particulates on site to become unstable and susceptible to erosion. To prevent sediment from travelling offsite 300' of silt fence is to be trenched in along the Southern edge of the property to contain sediments from flowing offsite and onto the nearby roadway. Silt fence should be

installed in a manner which meets the silt fence standards attached in the appendix of this document. Care should be taken throughout the demolition and regrading processes to keep all material onsite and prevent tracking of soils onto roadways. If needed a wheel wash station should be installed near the site entrance to prevent sediment from being tracked onto roadways.

4.0 PROJECT COORDINATION

Project coordination is pivotal to ensure all parties complete tasks correctly and in a timely manner while minimizing the negative impact on the public. Project coordination will be a cooperative effort between the contractor and the construction manager. Up to 5 project meetings will be conducted either on or off site. Contractor is expected to arrive on time for all project meetings. The construction manager will be onsite multiple times a week to communicate with contractor and oversea the demolition process. Any project concerns should immediately be brought up to the construction manager. In conjunction with the daily reports completed by the contractor, the construction manager will also complete progress reports to ensure a full documentation of the process.

4.1 Construction Manager Contact Information

The selected construction manager for this project is DES Engineering out of Crawfordsville Indiana. Any questions regarding this job should be directed towards DES. Contact information for the firm construction managers are below.

Roger Azar P.E.

Phone: 317-373-7175

Email: roger@des-eng.com

Luke Gill E.I.T.

Phone: 765-592-5433

Email: Luke@des-eng.com

5.0 PPE HAZARD ASSESSMENT

5.1 What is a PPE Hazard Assessment?

A personal protective equipment (PPE) hazard assessment is an evaluation of your workplace that helps you determine what hazards your employees are exposed to and what PPE they need to protect themselves. A hazard assessment should include:

- The jobs (or tasks) that your employees do
- The hazards your employees are exposed to
- Where the hazards are located
- The likelihood that those hazards could injure your employees
- The severity of a potential injury
- The types of PPE necessary to protect your employees from those hazards

5.2 Why Should you do a PPE Hazard Assessment?

There are three reasons:

1. A hazard assessment will help you find hazards at your workplace.
2. A hazard assessment will help you determine what personal protective equipment your employees need for protection.
3. OSHA requires that you do one.

5.3 What are OSHA's Requirements for PPE Hazard Assessments?

If you are a general industry, construction, or agricultural employer you must determine if your workplace has hazards that you cannot eliminate or control without PPE. If there are such hazards, you must:

- Select the PPE that protects your employees from the hazards
- Communicate your selection decisions to each employee
- Ensure that the PPE fits each employee
- Require your employees to use their PPE when they are exposed to the hazards

General industry employers must also prepare a document that says they have done the hazard assessment. The document must include:

- A heading that says the document is a "certification" of the hazard assessment
- The name of the workplace evaluated
- The name of the person certifying the hazard assessment was completed
- The date of the hazard assessment

5.4 When is PPE Necessary?

PPE is necessary when your employees are exposed to a hazard that you cannot eliminate or control any other way.

Although PPE is another way to control a hazard, it is only a barrier between the hazard and the worker. When PPE does not properly fit a worker or the worker does not use it correctly, the worker risks exposure.

Before you purchase PPE, know what hazards it protects against and be sure it fits the person using it. If you are unsure, ask someone who is familiar with the type of PPE you need — especially when you are selecting respirators or chemical-protective clothing.

Always train employees how to wear, use, and maintain their PPE before they use it the first time. Training must also include the types of PPE that are necessary and the limitations of the PPE.

5.5 What types of PPE may be Necessary

Your hazard assessment should determine if your employees need any of the following types of PPE:

- Eye and face protection
- Fall protection
- Foot protection
- Hand protection
- Head protection
- Hearing protection
- Leg protection
- Respiratory protection
- Torso and abdominal protection

The table below shows these basic types of PPE and gives examples of hazards they control.

PPE	Typical hazards controlled
Torso Protection	• Harmful or hazardous temperatures and humidity • Hot splashes from molten metal and other hot liquids • Impacts from tools, machinery, and materials • Hazardous chemicals • Ionizing radiation
Eye and face protection	• Dust, dirt, metal, or wood chips from chipping, grinding, sawing, hammering, and from power tools • Chemical splashes from corrosive substances, hot liquids, and solvents • Objects such as tree limbs, chains, tools, and ropes that swing into the eyes or face • Radiant energy from welding and harmful rays from lasers
Head protection	• Overhead objects that could fall • Exposed pipes or beams • Energized electrical equipment
Foot protection	• Heavy objects such as barrels or tools that might roll onto or fall on a worker's feet • Sharp objects such as nails or spikes that could pierce the soles or uppers of ordinary shoes • Molten metal • Hot, wet, or slippery surfaces • Energized electrical equipment
Leg protection	• Hot substances • Dangerous chemicals • Cuts from chain saws
Hand Protection	• Harmful or hazardous temperatures • Chemicals that can be absorbed into the skin or cause burns • Energized electrical equipment • Mechanical equipment that can cause bruises, abrasions, cuts, punctures, fractures, or amputations
Hearing	• Excessive noise
Respiratory protection	• Harmful substances and below normal concentrations of oxygen in the air. What makes a substance harmful depends on its toxicity, chemical state, physical form, concentration, and the period of time one is exposed. Examples include particulates, gases and vapors, and biological organisms.
Fall protection	• Falls from unguarded surfaces more than 10 feet above a lower level or any height above dangerous equipment.

This is not a conclusive list and is intended as a baseline for hazard identification and PPE use. The contractor shall identify remedies for each scenario presented.

5.6 How to do a PPE Hazard Assessment

Do a baseline survey to identify workplace hazards

A baseline survey is a thorough evaluation of your entire workplace – including work processes, tasks, and equipment – that identifies safety and health hazards. A complete survey will tell you what the hazards are, where they are, and how severe a potential injury could be.

Suggestions:

- Use safety data sheets (SDS) to identify chemical hazards. A safety data sheet has detailed information about a hazardous chemical's health effects, its physical and chemical characteristics, and safe handling practices.
- Review equipment owner and operator manuals to determine the manufacturer's safety warnings and recommended PPE.
- Do a job-hazard analysis. A job-hazard analysis (JHA) is a method of identifying, assessing, and controlling hazards associated with specific jobs. A JHA breaks down a job into tasks. You evaluate each task to determine if there is a safer way to do it. A job-hazard analysis works well for jobs with difficult-to-control hazards and jobs with histories of accidents or near misses. JHAs for complex jobs can take a considerable amount of time and expertise to develop. You may want to have a safety professional help you.
- Have an experienced safety professional survey your workplace with you.

Evaluate your employees' exposures to each hazard identified in the baseline survey

Consider the employee's task, the likelihood that the employee would be injured without PPE, and the severity of a potential injury.
An example:

The task: A worker uses a plasma cutter to remove the bottom of a 55-gallon drum that contains traces of motor oil. His only PPE is a pair of synthetic gloves. The outcome: The drum explodes and the worker receives severe burns on his face and hands.

An effective PPE hazard assessment would produce the following information:

Task: Using a plasma cutter.

Hazards: The plasma-cutting arc produces hot metal and sparks, especially during the initial piercing of the metal. It also heats the work piece and the cutting torch. Never cut closed or pressurized containers such as tanks or drums, which could explode. Do not cut containers that may have held combustibles or toxic or reactive materials unless they have been cleaned, tested, and declared safe by a qualified person.

Likelihood of injury without PPE: High

Severity of a potential injury: Life-threatening burns

PPE necessary for the task:

- Body: dry, clean clothing made from tightly woven material such as leather, wool, or heavy denim

- Eyes and face: safety glasses with side shield or face shield; welding helmet with shaded eye protection for welding tasks
- Feet: high-top leather shoes or boots
- Hands: flame-resistant gloves

General industry employers: After you do a hazard assessment, document it.

Your document must include the following information:

- A heading that says the document is a "certification" of the hazard assessment
- The name of the workplace evaluated
- The name of the person certifying the hazard assessment was completed
- The date of the hazard assessment
- The name of the person certifying the hazard assessment was completed
- The date of the hazard assessment

Your document can be as simple as this one.

PPE hazard assessment certification

Workplace evaluated: _____

Person certifying the evaluation: _____

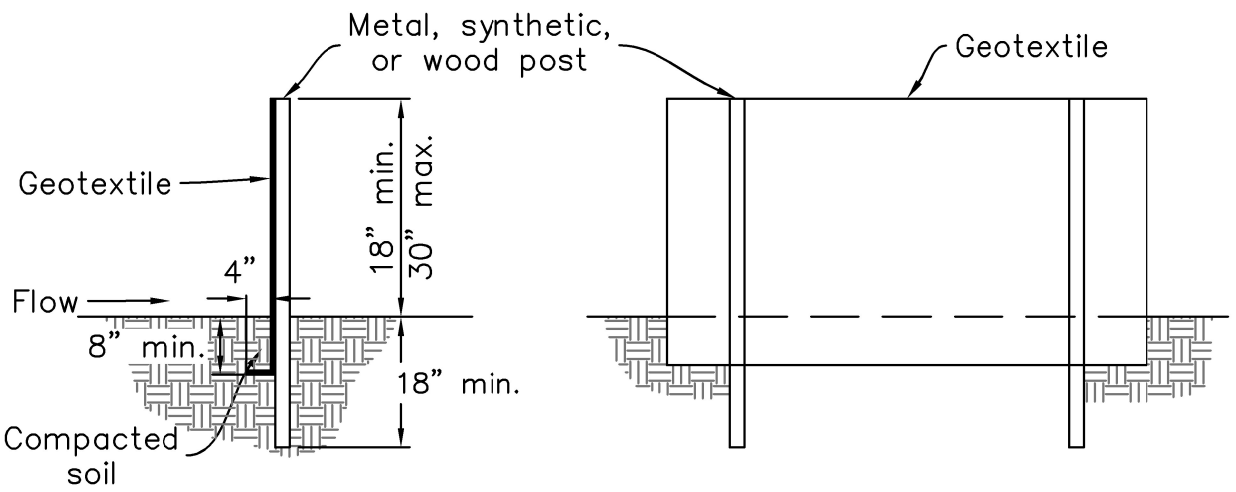
Hazard assessment date: _____

Do regular workplace inspections

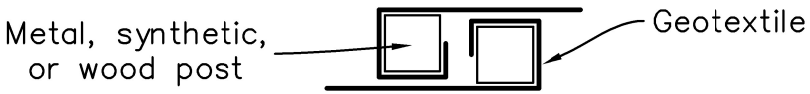
Regular inspections tell you whether you have eliminated or controlled existing hazards, and help you identify new hazards. Quarterly inspections by employees trained in hazard recognition is a good way to get the job done.

Look for new hazards whenever you change equipment, materials, or work processes. Determine what hazards could result from the changes and how to control them. If your business works at multiple sites, you may need to do a hazard assessment at each site.

APPENDIX



SILT FENCE JOINT DETAIL



SILT FENCE

Scale: None

INSTALLATION

Silt fencing is not recommended for use a a diversion and shall not be used across a stream, channel, ditch, swale, or any area of concentrated flow.

Layout the silt fence so that it runs parallel to the contour of the slope and at least 10 feet beyond the toe of the slope. Turn the ends of the fence up slope so that the contact between the ground and fence terminates at a higher elevation than the lowest point of the fence.

Dig an minimum 8 inch deep flat bottomed or V–shaped trench and follow manufacturers recommendations. Use as long of runs as possible to reduce the number of joints needed.

MAINTENANCE

Inspect fence weekly and after each storm event. Replace any portions or areas of fence that become damaged, decompose, or become ineffective immediately.

Remove deposited sediment when it reaches half the height of the fence at the lowest point of the fence or when fabric begins to bulge, whichever occurs first.

After the contributing area has be successfully stabilized, remove silt fencing and sediment deposits, return to grade, and stabilize.

DES

CIVIL & ENVIRONMENTAL ENGINEERING

DES DETAIL SHEET A

Designed By: DES
Drawn By: DES
Checked By: DES

Revision:

1

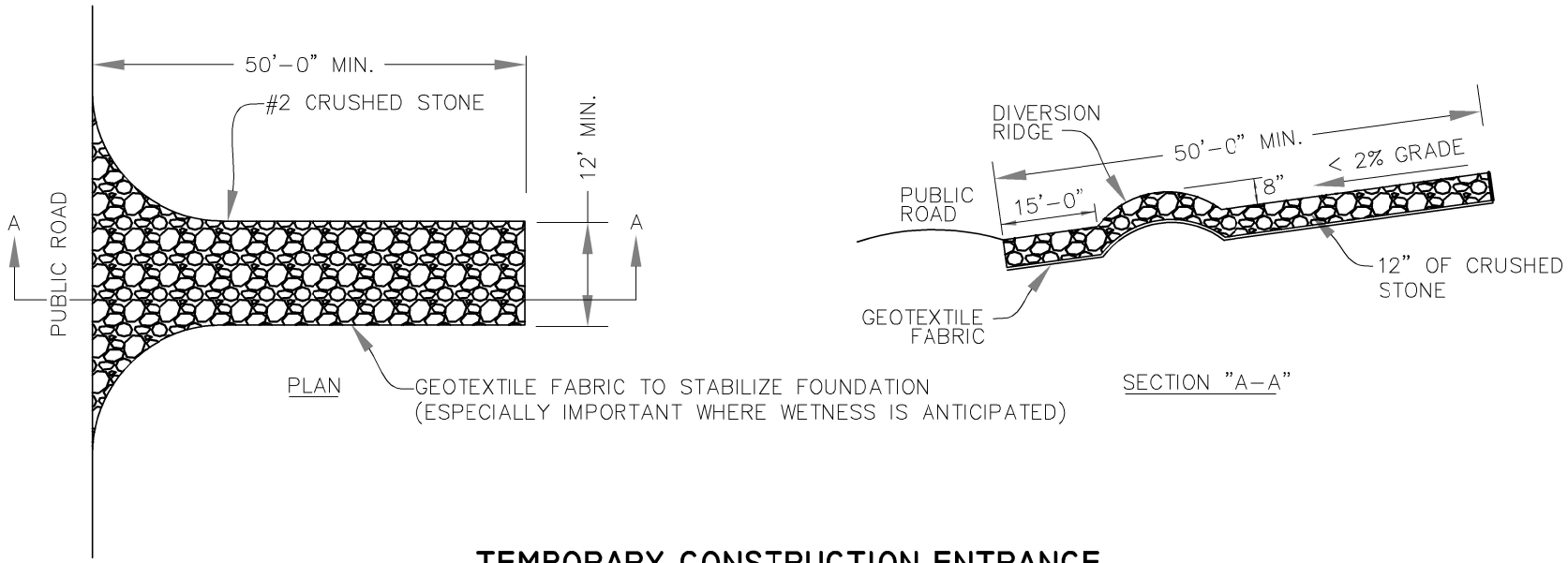
2

3

Stamp & Signature

ROGER A. YZAR
REGISTERED
No. 11300571
STATE OF
INDIANA
PROFESSIONAL ENGINEER

A



TEMPORARY CONSTRUCTION ENTRANCE

Scale: None

1. Place 6 inches for #2 crushed stone over geotextile fabric on a stable subgrade
2. Construct drive at least 12 feet wide and 50 feet long or the distance to the work site
3. Add stone as needed to maintain at least 6 inches of clean depth

DES CIVIL & ENVIRONMENTAL ENGINEERING

DES DETAIL SHEET B

Designed By: DES
Drawn By: DES
Checked By: DES

Revision:

Stamp & Signature

ROGER A. IZAR REGISTERED No. 11300571 STATE OF INDIANA PROFESSIONAL ENGINEER

B

[redacted]

Conducting the Job Hazard Analysis (JHA) is a relatively simple process that involves the following basic steps: 1) Determine the various Tasks that the employee will perform, 2) Identify the Potential Hazards associated with each task, 3) Determine which Controls are necessary to minimize or eliminate the potential hazards.

The JHA should be developed by both the employee(s) and their supervisor. Employees often have a "front lines" perspective on the job and its associated risks while the supervisor can add insight on which controls are feasible and effective.

By signing and dating this form, employees and supervisors certify that both JHA and task-specific training has been performed.

Section A: JHA Description

Employee's Job Description:	**Department:**
Comments / Notes: (i.e. hazardous materials required, tools required, special precautions)	
Employee Name / Signature:	**Date:**
Supervisor Name / Signature:	**Date:**

Section B: Hazard Identification and Evaluation

EMPLOYEE'S TASKS	**POTENTIAL HAZARDS** Examples in Section C	**RECOMMENDED CONTROLS** Examples in Section D
Example 1: Sweep Floors	Awkward posture	Rotating schedule, limit time exposure/duration
Example 2: Grinding Metal Parts	Metal in eyes, flying sparks, cut hand on burr	Guarding, goggles, leather gloves
1		
2		
3		
4		

5		
6		
7		
8		
9		
10		

☐ Continued on attached sheet

Section C: Examples of Hazards

Physical Hazards	Chemical / Biological	Human Factors
◦ Slips / Trips / Falls ◦ Struck by / Against / Caught ◦ Cutting / Stabbing ◦ Heat / Cold / Weather ◦ Noise / Vibration ◦ Radiation / Burn ◦ Confined Space ◦ Electrical Hazard ◦ Pressurized System	◦ Toxic ◦ Flammable ◦ Corrosive ◦ Oxidizing ◦ Explosive ◦ Compressed Gas ◦ Biological Agent	◦ Repetitive Task ◦ Awkward Posture ◦ Manual Lifting ◦ Carrying ◦ Pushing / Pulling ◦ Poor Visibility ◦ Overnight / Shift Work

Section D: Examples of Controls

1. Elimination **2. Substitution** **3. Engineering Controls** a. Local Exhaust Ventilation b. Circuit Protection c. Guarding / Enclosure d. Lock Out e. Interlocks f. Ergonomic Design **4. Administrative Controls** a. Maintenance Schedule / Logs b. Rotating Schedule c. Limit time exposure/duration	**5. Personal Protective Equipment (PPE)** a. Protective Eyewear (e.g. impact-resistant spectacles / goggles) b. Gloves (nitrile, leather) c. Face Protection (face shield) d. Hard Hat / Bump Cap e. Respirator (APR / SAR / half / full) f. Protective Footwear g. Hearing Protection h. Protective Clothing (apron, lab coat, leather chaps) i. Fall Arrest / Restraint Harness

TEMPLATE

Standard Operating Procedure (SOP) for Worksites

[Equipment/Procedure/Process Name]

This is an SOP template and is not complete until: *1) adequate and complete specific information is entered below; 2) the SOP is added to your Site Health and Safety Plan (HASP) and 3) the SOP has been signed and dated by the relevant personnel.*

Department:	Click here to enter text.
Date SOP was approved by Supervisor:	Click here to enter a date.
Principal Investigator 1:	Click here to enter text.
Phone:	Click here to enter text.
Principal Investigator 2:	Click here to enter text.
Phone:	Click here to enter text.
Safety Coordinator:	Click here to enter text.
Phone:	Click here to enter text.
Location(s) covered by this SOP:	Click here to enter text. *(Building/Room Number)*

Type of SOP: ☐ Equipment ☐Procedure ☐Process

1. **Purpose:**

[Identify the intended use of the equipment and/or procedure or process]

2. **Procedure/Scope:**

[Identify when the SOP is to be followed] AND

[Include the procedure and specify any particular or unique hazardous stages]

3. **Personnel:**

[Identify the personnel involved]

4. **Personal Protective Equipment (PPE):**

[Identify the correct PPE to be used by the personnel involved]

Hand Protection: [Specify type]

Eye Protection: [Specify type]

Footwear: [Specify type]

Skin and Body Protection: [Specify type]

Respiratory Protection: [Specify type]

Other PPE Measures: [Specify type]

5. **Equipment and Supplies**

[List any equipment or supplies needed]

6. **Engineering Controls**

[Describe the engineering controls that will be implemented]

7. **Calibration/Certification: (Only applies equipment SOP)**

[Describe any calibrations/certifications and who is responsible for these]

8. **Repair & Maintenance: (Only applies equipment SOP)**

[Contact information for repairs or in case of a malfunction]

9. **First Aid Procedures**

If an accident happens the following documents must be completed:

- Care for the injured person
- Dial **911** and wait with the injured person until help arrives.

10. **Other Emergencies**

Medical or Life Threatening Emergency – Dial **911**

Non-Life Threatening Emergency – [Instructions on how to handle a non-life threating injury]

11. **References**

[Include any references useful to employees]

12. **Training Requirements**

[List specific training to be given by PI or safety coordinator AND any Bridge LMS training]

Documentation of Training (signature of all users is required)

- Prior to conducting any work related to this SOP, the designated personnel must be provided with training specific to the hazards involved in working with the equipment/procedure/or process.

- The Principal Investigator must provide this SOP to all personnel involved.

- The Principal Investigator must ensure that his/her personnel have attended appropriate safety training and refresher training as needed.

I have read and understand the content of this SOP:

Name	Signature	Date

Principal Investigator SOP Approval

By signing and dating here, the PI, Supervisor, or designee certifies that the Standard Operating Procedure (SOP) is accurate and effectively provides standard operating procedures for all personnel involved.

_____

Signature Printed Name/Title Date

TAILGATE MEETING SAFETY FORM

Instructions

To be competed by supervisor prior to beginning of a new job, when changes in work procedures or personnel occur, or when additional hazards arise. Retain copy for at least 1 year and file with your Site Health & Safety Plan (HASP).

NAME AND LOCATION OF PROJECT OR WORK ACTIVITY:

TOPICS/HAZARDS and SITE CONTROLS DISCUSSED:

INFORMAL TRAINING CONDUCTED:

NAMES OF EMPLOYEES:

Supervisor signature & date: _____

A.1 OSHA Standard Number 1926.850 – Preparatory operations.

1926.850(a)
Prior to permitting employees to start demolition operations, a survey shall be made, by a competent person, of the structure to determine the condition of the framing, floors, and walls, and possibility of unplanned collapse of any portion of the structure. Any adjacent structure where employees may be exposed shall also be similarly checked. The employer shall have in writing evidence that such a survey has been performed.

1926.850(b)
When employees are required to work within a structure to be demolished which has been damaged by fire, flood, explosion, or other cause, the walls or floor shall be shored or braced.

1926.850(c)
All electric, gas, water, steam, sewer, and other service lines shall be shut off, capped, or otherwise controlled, outside the building line before demolition work is started. In each case, any utility company which is involved shall be notified in advance.

1926.850(d)
If it is necessary to maintain any power, water or other utilities during demolition, such lines shall be temporarily relocated, as necessary, and protected.

1926.850(e)
It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in any pipes, tanks, or other equipment on the property. When the presence of any such substances is apparent or suspected, testing and purging shall be performed and the hazard eliminated before demolition is started.

1926.850(f)
Where a hazard exists from fragmentation of glass, such hazards shall be removed.

1926.850(g)
Where a hazard exists to employees falling through wall openings, the opening shall be protected to a height of approximately 42 inches.

1926.850(h)
When debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped shall be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above. Signs,

warning of the hazard of falling materials, shall be posted at each level. Removal shall not be permitted in this lower area until debris handling ceases above.

1926.850(i)
All floor openings, not used as material drops, shall be covered over with material substantial enough to support the weight of any load which may be imposed. Such material shall be properly secured to prevent its accidental movement.

1926.850(j)
Except for the cutting of holes in floors for chutes, holes through which to drop materials, preparation of storage space, and similar necessary preparatory work, the demolition of exterior walls and floor construction shall begin at the top of the structure and proceed downward. Each story of exterior wall and floor construction shall be removed and dropped into the storage space before commencing the removal of exterior walls and floors in the story next below.

1926.850(k)
Employee entrances to multistory structures being demolished shall be completely protected by sidewalk sheds or canopies, or both, providing protection from the face of the building for a minimum of 8 feet. All such canopies shall be at least 2 feet wider than the building entrances or openings (1 foot wider on each side thereof), and shall be capable of sustaining a load of 150 pounds per square foot.

A.2 OSHA Standard Number 1926.851- Stair's passageways, and ladders

1926.851(a)
Only those stairways, passageways, and ladders, designated as means of access to the structure of a building, shall be used. Other access ways shall be entirely closed at all times.

1926.851(b)
All stairs, passageways, ladders and incidental equipment thereto, which are covered by this section, shall be periodically inspected and maintained in a clean safe condition.

1926.851(c)
In a multistory building, when a stairwell is being used, it shall be properly illuminated by either natural or artificial means, and completely and substantially covered over at a point not less than two floors below the floor on which work is being performed, and access to the floor where the work is in progress shall be through a properly lighted, protected, and separate passageway.

A.3 OSHA Standard number 1926.852 - Chutes

1926.852(a)
No material shall be dropped to any point lying outside the exterior walls of the structure unless the area is effectively protected.

1926.852(b)
All materials chutes, or sections thereof, at an angle of more than 45 deg. from the horizontal, shall be entirely enclosed, except for openings equipped with closures at or about floor level for the insertion of materials. The openings shall not exceed 48 inches in height measured along the wall of the chute. At all stories below the top floor, such openings shall be kept closed when not in use.

1926.852(c)
A substantial gate shall be installed in each chute at or near the discharge end. A competent employee shall be assigned to control the operation of the gate, and the backing and loading of trucks.

1926.852(d)
When operations are not in progress, the area surrounding the discharge end of a chute shall be securely closed off.

1926.852(e)
Any chute opening, into which workmen dump debris, shall be protected by a substantial guardrail approximately 42 inches above the floor or other surface on which the men stand to dump the material. Any space between the chute and the edge of openings in the floors through which it passes shall be solidly covered over.

1926.852(f)
Where the material is dumped from mechanical equipment or wheelbarrows, a securely attached toe-board or bumper, not less than 4 inches thick and 6 inches high, shall be provided at each chute opening.

1926.852(g)
Chutes shall be designed and constructed of such strength as to eliminate failure due to impact of materials or debris loaded therein.

A.4 OSHA Standard Number 1926.853 – Removal of materials through floor openings.

Any openings cut in a floor for the disposal of materials shall be no larger in size than 25 percent of the aggregate of the total floor area, unless the lateral supports of the removed flooring remain in place.

Floors weakened or otherwise made unsafe by demolition operations shall be shored to carry safely the intended imposed load from demolition operations.

A.5 OSHA Standard Number 1926.854 – Removal of walls, masonry sections, and chimneys.

1926.854(a)
Masonry walls, or other sections of masonry, shall not be permitted to fall upon the floors of the building in such masses as to exceed the safe carrying capacities of the floors.

1926.854(b)
No wall section, which is more than one story in height, shall be permitted to stand alone without lateral bracing, unless such wall was originally designed and constructed to stand without such lateral support, and is in a condition safe enough to be self-supporting. All walls shall be left in a stable condition at the end of each shift.

1926.854(c)
Employees shall not be permitted to work on the top of a wall when weather conditions constitute a hazard.

1926.854(d)
Structural or load-supporting members on any floor shall not be cut or removed until all stories above such a floor have been demolished and removed. This provision shall not prohibit the cutting of floor beams for the disposal of materials or for the installation of equipment, provided that the requirements of 1926.853 and 1926.855 are met.

1926.854(e)
Floor openings within 10 feet of any wall being demolished shall be planked solid, except when employees are kept out of the area below.

1926.854(f)
In buildings of "skeleton-steel" construction, the steel framing may be left in place during the demolition of masonry. Where this is done, all steel beams, girders, and similar structural supports shall be cleared of all loose material as the masonry demolition progresses downward.

1926.854(g)
Walkways or ladders shall be provided to enable employees to safely reach or leave any scaffold or wall.

1926.854(h)

Walls, which serve as retaining walls to support earth or adjoining structures, shall not be demolished until such earth has been properly braced or adjoining structures have been properly underpinned.

1926.854(i)
Walls, which are to serve as retaining walls against which debris will be piled, shall not be so used unless capable of safely supporting the imposed load.

A.6 OSHA Standard Number 1926.855 - Manual removal of floors.

1926.855(a)
Openings cut in a floor shall extend the full span of the arch between supports.

1926.855(b)
Before demolishing any floor arch, debris and other material shall be removed from such arch and other adjacent floor area. Planks not less than 2 inches by 10 inches in cross section, full size undressed, shall be provided for, and shall be used by employees to stand on while breaking down floor arches between beams. Such planks shall be so located as to provide a safe support for the workmen should the arch between the beams collapse. The open space between planks shall not exceed 16 inches.

1926.855(c)
Safe walkways, not less than 18 inches wide, formed of planks not less than 2 inches thick if wood, or of equivalent strength if metal, shall be provided and used by workmen when necessary to enable them to reach any point without walking upon exposed beams.

1926.855(d)
Stringers of ample strength shall be installed to support the flooring planks, and the ends of such stringers shall be supported by floor beams or girders, and not by floor arches alone.

1926.855(e)
Planks shall be laid together over solid bearings with the ends overlapping at least 1 foot.

1926.855(f)
When floor arches are being removed, employees shall not be allowed in the area directly underneath, and such an area shall be barricaded to prevent access to it.

1926.855(g)
Demolition of floor arches shall not be started until they, and the surrounding floor area for a distance of 20 feet, have been cleared of debris and any other unnecessary materials.

A.7 OSHA Standard Number 1926.856 – removal of walls, floors, and material with equipment.

1926.856(a)
Mechanical equipment shall not be used on floors or working surfaces unless such floors or surfaces are of sufficient strength to support the imposed load.

1926.856(b)
Floor openings shall have curbs or stop-logs to prevent equipment from running over the edge.

1926.856(c)
Cranes, derricks, and other mechanical equipment. Employers must meet the requirements specified in subparts N, O and CC of this part.
[75 FR 48135, Aug. 9, 2010; 77 FR 49730, Aug. 17, 2012; 78 FR 23843, April 23, 2013]

A.8 OSHA Standard Number 1926.857 – Storage

1926.857(a)
The storage of waste material and debris on any floor shall not exceed the allowable floor loads.

1926.857(b)
In buildings having wooden floor construction, the flooring boards may be removed from not more than one floor above grade to provide storage space for debris, provided falling material is not permitted to endanger the stability of the structure.

1926.857(c)
When wood floor beams serve to brace interior walls or free-standing exterior walls, such beams shall be left in place until other equivalent support can be installed to replace them.

1926.857(d)
Floor arches, to an elevation of not more than 25 feet above grade, may be removed to provide storage area for debris: Provided, that such removal does not endanger the stability of the structure.

1926.857(e)
Storage space into which material is dumped shall be blocked off, except for openings necessary for the removal of material. Such openings shall be kept closed at all times when material is not being removed.

A.9 OSHA Standard Number 1926.858 – Removal of steel construction.

1926.858(a)
When floor arches have been removed, planking in accordance with 1926.855(b) shall be provided for the workers engaged in razing the steel framing.

1926.858(b)
Cranes, derricks, and other hoisting equipment. Employers must meet the requirements specified in subparts N and CC of this part.

1926.858(c)
Steel construction shall be dismantled column length by column length, and tier by tier (columns may be in two-story lengths).

1926.858(d)
Any structural member being dismembered shall not be overstressed.

[75 FR 48135, Aug. 9, 2010; 77 FR 49730, Aug. 17, 2012; 78 FR 23843, April 23, 2013]

A.10 OSHA Standard Number 1926.859 – Mechanical demolition

1926.859(a)
No workers shall be permitted in any area, which can be adversely affected by demolition operations, when balling or clamming is being performed. Only those workers necessary for the performance of the operations shall be permitted in this area at any other time.

1926.859(b)
The weight of the demolition ball shall not exceed 50 percent of the crane's rated load, based on the length of the boom and the maximum angle of operation at which the demolition ball will be used, or it shall not exceed 25 percent of the nominal breaking strength of the line by which it is suspended, whichever results in a lesser value.

1926.859(c)
The crane boom and loadline shall be as short as possible.

1926.859(d)
The ball shall be attached to the loadline with a swivel-type connection to prevent twisting of the loadline, and shall be attached by positive means in such manner that the weight cannot become accidentally disconnected.

1926.859(e)
When pulling over walls or portions thereof, all steel members affected shall have been previously cut free.

1926.859(f)
All roof cornices or other such ornamental stonework shall be removed prior to pulling walls over.

1926.859(g)
During demolition, continuing inspections by a competent person shall be made as the work progresses to detect hazards resulting from weakened or deteriorated floors, or walls, or loosened material. No employee shall be permitted to work where such hazards exist until they are corrected by shoring, bracing, or other effective means.

Contractor:		Alamo Building Demolition Daily Activity Log		
Lead Site Foreman:				
Construction Manager:				
Monday Date:	Weather and site conditions:		# of employees on site	
	Activities performed:			
Tuesday Date:	Weather and site conditions:		# of employees on site	
	Activities performed:			
Wednesday Date:	Weather and site conditions:		# of employees on site	
	Activities performed:			
Thursday Date:	Weather and site conditions:		# of employees on site	
	Activities performed:			
Friday Date:	Weather and site conditions:		# of employees on site	
	Activities performed:			
Note: Log is to be submitted to listed construction manager at the end of each work week. Pay applications will not be approved until all log sheets are received.				
Site Foreman Signature_____			**Date:**_____	

CONSTRUCTION SAFETY PLAN

For

Project	Alamo Building Demolition
Address	3971 S. West Street
	Alamo Indiana, 47916

Subcontractor	
Phone	

Inspecting the Construction Safety Plan

Responsibility of Site Supervisor

1. Check the Construction Safety Plan and associated Work Method Statements are completed.
2. Take action to correct the situation if you identify that the above has not been complied with.
3. If a circumstance outside your control is preventing you from ensuring the above, report the issue to your manager and/or the Principal Contractor.

Construction Safety Plan Instruction Sign-Off

Please sign to indicate that you have read and understood the instructions

Site Foreperson	(print name in capital letters)	Date	Signature
Site Supervisor	(print name in capital letters)	Date	Signature

CONSTRUCTION SAFETY PLAN

Company Name	
Office	
Telephone	

Location of workplace: _____

_____

_____

Details of construction activities: _____

_____

_____

This Plan will remain in force for a period of 12 months from (insert date) or until a significant change occurs which will require the Plan/Document to be reviewed prior to the expiry date.

Or

For a specific site/project, in which case the Plan/Document will only remain in force for the construction period of that project.

Start Date _____ Completion Date _____

Signature_____**Date** _____

Manager

Note: This Plan is provided as a model only and is to be assessed and expanded on to meet the site-specific needs of (company name), to fulfil its obligations under current Workplace Health, Safety and Environmental Legislation.

Disclaimer

Any advice and information contained in this document is given in good faith and no person should rely on the contents without referring to all current relevant Legislation, and Standards for Workplace Health, Safety and the Environment.

The management and employees of (insert company name) and any other person or organization contributing to this document, expressly disclaim all and any liability and responsibility, to any person in respect of anything done or omitted to be done by any such person in reliance, whether wholly or partially, upon the whole or any part of the contents of this document.

STANDARD FORMS

- Site Specific Induction Record
- Site Specific Induction Checklist
- Visitor Induction Form
- Work Method Statement Evaluation
- Hazard and Risk Assessment Form
- Work Scheduling Program
- Incident Notification Form
- Hazard, Unsafe Condition, Damage Report
- Emergency Contact Information
- Hazardous Substance Register
- Scaffolding Handover Certificate
- Request for Electrical Safety Inspection of an Overhead Electrical Service
- Plant and Equipment Register
- Prescribed Occupation "Certificates of Competency" Register
- Electrical License Register
- Hot Work Permit
- Permit to Dig
- Project Emergency Procedures
- Environmental Control Management Plan
- Sediment Transport Control – "Sediment Fence"
- Sediment Transport Control – "Sediment Barriers"
- Sediment Transport Control – "Hay and Straw Bales"
- Sediment Transport Control – "Shake-down Areas"
- General Site Management Work Procedure SG-1

Note: All work is to be carried out in accordance with the Standards for Health, Safety and the Environment and current Workplace, Health and Safety and Environmental Legislation, which will take precedence over this plan if a lower standard is stated within the plan.

The following *Construction Safety Plan* provides management procedures for the health and safety of all personnel on site and at the workplace and is to be followed at all times and read in conjunction with current Workplace Health, Safety and Environmental Legislation and US Standards for Health, Safety and the Environment.

1.0 Inductions

All personnel are to undergo relevant safety inductions prior to coming onto and/or starting work at the workplace and/or on site.

a) **Principal Contractor's Site-Specific Inductions** conducted by a designated representative of *(insert company name)* as the principal contractor, will induct ALL personnel coming onto the site to carry out work. A written record of the date of the induction and the name/details of the worker inducted, and the categories/content of the induction is to be recorded on a *Site-Specific Induction Checklist* and kept on-site for reference purposes.

b) *(insert company name)* **Employees Site Specific and Work Method Statement Inductions** conducted by a designated representative of *(company name)* as the principal contractor and employer will induct all *(company name)* personnel coming onto the site to carry out work and will discuss all safety aspects of the *Construction Safety Plan/Work Method Statement* relevant to the persons work prior to commencing work on site. A written record of the date of the induction and the name/details of the worker inducted is to be made and the categories/content of the Induction is to be recorded on a *Site-Specific Induction Checklist* and kept on-site for reference purposes.

c) **Contractor's Workplace, Site Specific and Work Method Statement Inductions** conducted by the subcontractors for their employees in relation to individual trade and company standard work procedures and work methods which is also to incorporate *(company name)*'s Health, Safety and Environmental requirements.

d) **General Safety Induction**. All site personnel must produce a current *General Safety Induction Card/Documentation* prior to starting any work on- site.

e) **Visitor's Induction.** All visitors must undergo a *Visitor's Induction* prior to coming onto the site and they must be accompanied by a designated *(company name)* representative at all times whilst on the site/workplace.

Attachments to be created by *(company name)*:

- *Site Specific Induction Form*
- *Site Specific Induction Checklist*
- *Visitor's Induction Form*

2.0 Construction Safety Plans and Work Method Statements

- *Construction Safety Plans* identifying risks and detailing proposed control measures are to be prepared by (company name) as principal contractor for a construction workplace if any or all of the following criteria form part of the construction/building project/contract prior to construction work commencing on site. A copy of the Plan is to be given to each contractor/relevant person for each project trade package and the safety aspects of the Plan relevant to the person's work are to be discussed with that person prior to commencing work on site:

  a) **Construction Work** where the estimated final price of the work at practical completion is more than $50,000.00

  b) **Demolition Work – Prescribed Activity -** Irrespective of cost.

  c) **Asbestos Removal Work – Prescribed Activity -** Irrespective of cost.

  d) **Other High Risk Construction Activities** ***(but not limited to):***
  - Personnel entering trenches more than 4-feet in depth.
  - Use of explosives (excluding powder-actuated hand-held fastening tools).
  - Work near an exposed energized electrical installation.
  - Work on or adjacent to a road.
  - Using confined spaces.
  - Using hazardous substances.
  - Movement of powered mobile plant at the workplace.
  - Work at heights where a person can fall:
    - At least 6 feet if the work IS NOT housing construction work.
  - Work on roofs with a pitch of more than 26°.

  e) **Other Activities** as designated by *(company name)* site management where the work is considered to be of a hazardous/high risk nature and has the potential to cause death or injuries to personnel and/or damage to plant, equipment, structures etc.

- *Work Method Statements* are to be prepared and submitted to (company name) site management prior to work commencing on site by contractors who will be performing any of the following tasks associated with work they are to undertake on a (company name) construction workplace (irrespective of cost):

  a) **Demolition Work – Prescribed Activity**

  b) **Asbestos Removal Work – Prescribed Activity**

  c) **Other High Risk Construction Activities*) (But not limited to):***
  - Personnel entering trenches more than 4 feet in depth.
  - Use of explosives (excluding powder-actuated hand-held fastening tools).
  - Work near an exposed energized electrical installation.
  - Work on or adjacent to a road.
  - Using confined spaces.
  - Using hazardous substances.
  - Movement of powered mobile plant at the workplace.
  - Work at heights where a person can fall:
    - At least 6 feet if the work IS NOT housing construction work.
  - Work on roofs with a pitch of more than 26°.

  d) **Other Activities** as designated by *(company name)* site management where the work is considered to be of a hazardous/high risk nature and has the potential to cause death or injuries to personnel and/or damage to plant, equipment, structures etc.

  e) The contractor's *Work Method Statement* (WMS) is to be evaluated by *(company name)* site management on a *Work Method Statement Evaluation Form* to ensure the contractor is in compliance with current Workplace Health and Safety Legislation and *(company name)* Health, Safety and Environmental Standards.

- Any work procedures to be carried out by inducted (company name) personnel and are not covered by

this *Construction Safety Plan/Work Method Statement* document are to be addressed and documented on a *Work Method Statement* (or appropriate equivalent) and approved by (company name) site management prior to the work proceeding.

- Risk assessments are to be conducted and recorded on a *Hazard and Risk Assessment Form* to identify potential risks to the health and safety of personnel and/or any potential risk of damage to equipment. Appropriate control measures are to be formulated and recorded to minimize and/or eliminate the risk of injury and/or damage.

- Copies of the contractor's *Work Method Statements* and *(company name)'s Construction Safety Plan* are to be kept on site or in a readily accessible location by the contractor, for perusal by their workers.

Attachments to be created by *(company name)*:

- *Work Method Statement*
- *Work Method Statement Evaluation*
- *Hazard and Risk Assessment*

3.0 Scheduling of Works

- A works program (if required by (company name) site management) will be prepared by the contractor outlining services/tasks and their estimated start and completion dates.

- The contractor shall be responsible for and shall be deemed to have made provision for the work and expense of coordination of their works with those performed by others, to minimize or eliminate potential safety hazards.

Attachments to be created by *(company name)*:

- *Works Scheduling Program*

4.0 Hazard Identification, Reporting and Accident Procedures

- All work-related injuries, illnesses, dangerous events, incidents etc. are to be reported to site management who will record and investigate the occurrence on an *Incident Notification Form* to record the incident for assessment and investigation.

- Personnel are to inspect all machinery, equipment, tools, scaffolds, excavations, confined spaces etc. to ensure they are safe and without risk to the health and safety of themselves or others before using or entering them.

- All hazards, unsafe conditions, defective items, damage to property or equipment are to be reported to site management, barricaded and/or removed from service immediately they are detected. Site management is to complete a *Hazard, Unsafe Condition, Damage Report* to record the hazard etc. for assessment and rectification.

- Risk assessments are to be undertaken prior to commencing any task to assess the risk of injury and/or damage to plant and equipment. If the risk has not already been assessed and a work procedure/method has not been formulated then a *Risk Assessment Form* is to be completed as well as a *Work Method Statement* taking into account the order of control measures as listed below from most preferred (1) to least preferred (6):
    - **(1) Elimination** – Eliminate the hazard, remove it from site etc.
    - **(2) Substitution** – Substitute the item/hazard/procedure for an item/procedure that is less hazardous and poses a lesser risk to personnel etc.
    - **(3) Engineering** – Change design of the workplace, equipment or work process – eg. noise prevention/suppression cabinets, mechanical aids for manual handling.
    - **(4) Isolation** – Isolate or separate the hazard from the person – eg. screens or barriers, move or enclose equipment.
    - **(5) Administration** – Job rotation/reduction in exposure by working less hours in hazardous environment, provide training and supervision etc.
    - **(6) Personal Protective Equipment (PPE)** – Hearing protection, safety glasses, respiratory protection equipment etc.

- Daily safety inspections are to be carried out by a (company name) site management representative where a permanent (company name) site management representative presence is on site and a *Daily Workplace Safety Inspection Report/Checklist* is to be completed and remain on the site project/safety file.

Attachments to be created by *(company name)*:

- *Incident Notification Form*
- *Hazard, Unsafe Condition, Damage Report*
- *Emergency Contact Information*
- *Work Method Statement*
- *Hazard and Risk Assessment*

5.0 Manual Handling

- Lifting and handling of materials is to be done in a safe and sensible manner so as not to cause injury. Personnel are not to participate in manual handling activities if they have not been properly trained, or have an existing or previous injury which will hinder them, or will be aggravated by lifting, pushing, pulling etc.

- If the material/item is considered to be too heavy or awkward to handle by one person, assistance in the form of team lifting, a crane, forklift, hand trolley, wheelbarrow or other suitable mechanical devices are to be used. If it is possible the plant items/tools/equipment etc. that are to be lifted and/or moved are to be disassembled into individual manageable pieces (eg. oxygen/acetylene plant, saws from saw benches) and moved to the required location/position where they are to be reassembled.

- Contractors and employees are to ensure they are familiar with correct manual handling techniques and are physically capable of carrying out the tasks they are to perform otherwise they are to request training.

- Contractors will be responsible for all materials handling equipment (eg. cranes, forklifts) relating to their contract, unless specified otherwise.

- Mechanical means such as cranes, forklifts, materials lifts and/or other suitable load shifting equipment is to be used to lift and/or move equipment that is awkward and/or is heavy from ground level to and/or between different levels of elevated areas.

6.0 First Aid

- A suitable first aid kit will be located in the (company name) site office for emergency use by all site personnel.

- Contractors are to ensure a suitable first aid kit is supplied and kept in each vehicle or in close proximity to the contractor's work area, irrespective of whether (company name) has supplied first aid kits on site.

- All first aid treatment is to be reported to site management for recording on an *Incident Notification Form*.

7.0 Personal Protective Equipment

Site personnel are to wear appropriate Personal Protective Equipment (PPE) for the tasks they are to perform where it is not practical to control risk of injury by other means.

- Safety helmets are to be worn at all times when working with cranes, heavy equipment, or in areas where personnel are working at heights or in trenches and there is the possibility of injuries from falling objects and/or in other designated hazardous areas.

- Appropriate safety footwear (steel-toe shoes or enclosed with protective toe caps) is to be worn on site at all times.

- Eye, hearing and respiratory protection is to be used at all times during hazardous operations which may cause injury or exceed statutory requirements (eg. cutting compressed sheeting/ treated timber/concrete/blocks, using nail guns or explosive power tools, power saws, jackhammers, drills).

- UV protection (eg. long sleeve shirts, wide brim hats, 15+ sunscreen) is to be worn for protection against harmful exposure to the sun.

- Gloves and protective clothing are to be worn in areas of risk to prevent injury from contact with hazardous substances, and sharp or abrasive objects etc.

- All PPE requirements are to be assessed for each application and supplied accordingly by the contractor.

- All defective equipment is to be removed from service immediately upon detection.

- Contractors are to supply all appropriate PPE and must ensure their employees have received appropriate instruction in the correct selection, use, storage and maintenance of personal protective equipment prior to use.

8.0 Hazardous Substances

- Contractors are to have current *Material Safety Data Sheets* (MSDS) for all hazardous substances that are to be used at the site/workplace. The MSDSs are to be kept in a *Hazardous Substance Register* which is to contain a description of the substance along with all other relevant details. This register and its contents must be available for perusal by the subcontractor's employees.

- A copy of the contractor's *Hazardous Substance Register* and MSDSs are to be given to (company name) prior to bringing or using the substances on site.

- Personnel using/mixing/spraying hazardous substances (eg. paint, solvents, pesticides) are to:
    - Comply with all safety requirements/instructions/safe handling information and wear appropriate PPE as required by the relevant *MSDS.*
    - Ensure they are familiar and experienced with the chemical/substance and have received adequate training in its use.
    - Ensure there is no risk to the health and safety of themselves, other workers and the general public.
    - If substances are decanted/transferred into another container, the second container must be adequately labelled unless the entire contents are used immediately.
- All hazardous substances are to be used, stored and disposed of in accordance with the relevant *Material Safety Data Sheet* (MSDS).

- All hazardous substances are to be assessed before use to ascertain what degree of risk the substance poses to personnel.

- If asbestos products are identified, or suspected to be present during construction work, then competent and experienced personnel are to be engaged to inspect, record, remove or make safe the offending materials in accordance with current Legislation and Standards.

Attachment:

- *Hazardous Substance Register*

9.0 Ladders, Trestle Ladders and Planks

- All ladders are to be in good condition, inspected before use, meet current US Standards and/or statutory requirements, have a minimum 300-pound load rating and be manufactured for industrial use and must be suitable for the application/use.
  Note: All identification markings/labels MUST be clearly visible and not defaced in anyway.

- Extension or single ladders must extend 3 feet above the level served, be set at an angle of 75° (1:4) to the horizontal and MUST BE SECURED at the top at all times and preferably at the bottom if practical.

- Ladders used for electrical installation where there is a possibility of the circuits becoming energized are to be made of a non-conductive material.

- All ladders are to be fitted with non-slip feet and suitable precautions are to be taken when ladders are to be used on unstable or sloping ground, near power lines, or in other hazardous situations.

- Ladders are not to be used near unprotected openings in floors, shafts, stairwells etc.

- Personnel must not work or climb above the third top rung or step from the top on ladders.

- The length of ladders MUST NOT EXCEED the following dimensions:
  - Single ladder – 20 feet
  - Extension ladder (other than for electrical work) – 25 feet
  - Extension ladder used to do electrical work – 30 feet

- Extension, single and stepladders are not to be used to support scaffold planks or any other type of platform under any circumstances. Extension, single, step and trestle ladders and scaffold planks are only to be used in accordance with manufacturer's specifications and Statutory Authority's requirements.

- **Extension and single ladders** are to be used primarily for access and are only to be used to undertake permitted work from under the following circumstances:
  - To carry out work (permitted work) at any height where the risk of injury is minimal.
  - Persons are to have at least 3 limbs (eg. 2 feet and 1 hand) holding, wrapped around or standing on the ladder or holding onto a secure and stable object (eg. wall frame, fascia board) at all times; OR
  - Persons are restrained by suitable means not attached to the ladder (eg. fall arrest system) that will prevent them from falling.
  - Only if the work to be undertaken is of a minor nature (eg. light work, changing light bulbs, cutting in) and the time required to carry out the work is limited to short periods and any equipment can be operated using one hand while on the ladder.
  - High risk tools are not to be used. (eg. large grinders, power saws, explosive power operated tools).
  - Only if there is no other practical way or means to carry out the task, and/or the risk of injury is minimal.
  - Only after a risk assessment has been carried out and work procedures are put in place.
  - Electric ARC welding is not to be carried out from ladders at any time.

- **Stepladders** are to be used for access and are only to be used to undertake work from under the following circumstances for:
  - Stepladders are only to be used in a fully opened and locked position and placed on a level and stable foundation.
  - Only if the work to be undertaken is of a minor nature (eg. light work, changing light bulbs, cutting in) and the time required to carry out the work is limited to short periods.
  - Only if there is no other practical way or means to carry out the task, and/or the risk of injury is minimal.
  - Only after a risk assessment has been carried out and work procedures are put in place.
  - Electric ARC welding is not to be carried out from ladders at any time.

- **Trestle Ladders and Aluminum Scaffold Planks** must only be used as follows:
  - The work platform height MUST NOT EXCEED 16 feet.
  - Only after a risk assessment has been carried out to determine what work procedures are to be put in place.
  - Appropriate work methods, handrails, outriggers/stabilizers including handrail stop ends etc. are to be in place (similar and/or equivalent to *Tommy Tucker Trestles Safety System*) if a person can fall at least 10 feet for housing work or 6.5 feet for other work, and/or if the fall can result in a serious injury irrespective of height.
  - Trestles are only to be placed on a level and stable foundation and secured/prevented by appropriate means against moving and/or toppling over (eg. bracing, counter weights, tying to stable structure).
  - Minimum work platform width must be 2 planks wide (1.5 feet) and locked together with plank clamps and secured against dislodgment (similar and/or equivalent to *Tommy Tucker Trestles - Safety Plank Clamp*). If plank clamps are not used, then aluminum planks are to be supported at a maximum span of 10 feet and/or in accordance with manufacturer's specifications. Planks are to have a slip-resistant surface and are NOT to be placed on an angle greater than 7° (slope of 1 to 8) to the horizontal. Planks are to overhang their end supports by not less than 0.5 feet and not more than 1 foot.
  - The duty loading of the work platform is not to be exceeded manufacturer's specifications; and the platform MUST only be used for work of a light nature where large quantities of tools and equipment are not required.
  - The trestles, planks and handrail safety systems are to be erected and used in accordance with manufacturer's requirements and are only to be used as ACCESS and WORK PLATFORMS and ARE NOT to be used as edge protection at any time.

- Tools and equipment etc. are not to be carried up or down ladders (extension, single or step) at any time unless secured to a tool belt etc. Operators are to have both hands free to ensure they have adequate grip on the ladder to prevent the possibility of falling while ascending or descending. Tools and equipment that cannot be operated by one hand only, while carrying out work involving a ladder MUST NOT be used under any circumstances unless the person is restrained by appropriate means to ensure stability and prevent a fall. High risk tools such as grinders, jackhammers, nail guns and explosive power operated tools are not to be used at any time on ladders.
- Work on ladders irrespective of height and type:
  - Personnel are not to lean out and/or over-reach while working from ladders.
  - Personnel are to remain approximately in the center between the sides of the ladder from when the person is fully on the ladder, carrying out permitted work on the ladder to when the person leaves the ladder.

10.0 Scaffolding

- **Modular/tube and coupler scaffolding** with a working platform height up to 13 feet must only be erected by competent and experienced personnel. Personnel with the relevant scaffolding *Certificate of Competency* must erect modular/tube and coupler scaffolding with a working platform height above 13 feet.

- **Mobile scaffolding** with a working platform height up to 13 feet must only be erected by competent and experienced personnel. Personnel with the relevant scaffolding *Certificate of Competency* must erect mobile scaffolding with a working platform height above 13 feet.

- Erection procedures and a diagrammatic plan of the scaffolding is to be provided to site management by the supplier/erecter and kept on site or be readily accessible for perusal by anyone who will be using the scaffolding.

- **Scaffolding with a work platform height of 13 feet or more** is to have a *Scaffolding Handover Certificate* completed by the competent person erecting the scaffolding certifying that it is erected as per manufacturer's specifications and plans, complies with all relevant standards and legislative requirements and is suitable for the intended purpose.

- **Scaffolding systems** are to be erected as per manufacturer's specifications on stable and level surfaces/footings around the internal/external faces of buildings, structures etc. to provide a stable work and/or access platform and/or edge protection to roof and other elevated areas. The gap between the work platform and the roofline and/or wall/working surface is not to exceed 0.75 feet.

- The scaffold work platform height below the edge of a roofline is to comply with the following:

  (1) The maximum distance between the working platform and the underside of the roofline edge for roof pitches LESS than 26 degrees is NOT to exceed 3 feet.

  (2) For pitches greater than 26 degrees the working platform is to be as near as possible to the underside of the edge of the roofline but is not to be greater than 1 foot below the underside edge.

  (3) The top rail of the scaffolding edge protection for roof workers is to be located between 3 feet and 4 feet above the outer edge of the roofline to provide adequate protection against falls.

- Personnel erecting scaffolding at 6 feet or above are to be prevented and/or restrained by suitable means to prevent falling or they must work from an erection platform with edge protection and accessed by approved stairways or ladders within the internal confines of the scaffold framing.

- Guardrails (top and mid), toe boards and/or mesh panels, brick guards, etc. are to be erected around work platforms of scaffolds if personnel or objects can fall more than 6 feet or the fall etc. could result in a serious injury irrespective of height.

- Containment screening consisting of approved mesh lined internally with an approved prescribed lining (if required) is to be securely attached to exposed external surfaces and/or other exposed surfaces of the scaffolding where there is a possibility of injury to persons or damage to vehicles etc. from falling objects onto footpaths, roadways and adjoining tenancies etc.

- Scaffolding is to be complete and inspected prior to use and is not to be altered or components removed by unauthorized personnel unless the person/s erected the structure and/or they have written authorization from (company name) site management.

- Suitable access and egress (ladders, stairways, ramps, etc.) is to be provided to each work platform. Workers must not climb on the framing of scaffolds at any time.

- Base plates are to be fitted to the base of each supporting standard. Suitable sole plates may also be required if the ground/surface stability is questionable.

- The number of personnel, tools and quantities of building materials on the work platform is to be monitored to ensure the duty loading of the platform is not exceeded, and sufficient, clear access is provided.

- Ladders, saw stools, drums or pallets etc, are not to be used on the work platform to gain extra height.

- Personnel, unsecured equipment and tools are to be removed from the work platform of mobile scaffolds prior to moving them. Wheels on mobile scaffolds are to be fitted with locking devices and engaged before use.

- Where castors on mobile scaffolds incorporate adjustable legs the gradient of the supporting surface/ground must not exceed 5° unless provision is made to take the load off the castors during use of the mobile scaffold (i.e. use fixed base plates with adjustable legs).

- Personnel working from scaffolding and in particular mobile scaffolding and trestles and planks are to ensure the scaffolding is correctly erected, suitable for the application and is to be secured and/or other measures taken to ensure the structure will not topple over. Personnel are also instructed that they are to position the scaffold work platform directly under or as close to the work area as possible so that personnel do not have to reach out past guardrails to carry out work that can increase the potential for the scaffolding to topple/tip over and increase the possibility of injuries to personnel.

Attachment:

- *Scaffolding Handover Certificate*

11.0 Confined Spaces

- Entry will not be permitted to confined spaces or like areas until the following criteria has been fulfilled:
  - A risk assessment has been carried out to ascertain the degree of risk associated with the confined space and determine if any or all of the following procedures are to be implemented; and
  - A documented *Work Method Statement* detailing control measures and work procedures has been prepared detailing means of entry and exit, air quality sampling, rescue training, first aid requirements and record keeping in accordance with the current Legislation, US applicable Standards and/or Statutory Requirements; and
  - Adequate ventilation and/or breathing equipment are supplied (if required); and
  - Only trained and competent personnel are to be engaged in confined space activities; and
  - An approved *Confined Space Work Permit* has been obtained from management.
- Ensure fuel-powered plant, machinery or equipment is not used in or near enclosed, basement or confined space areas.
- Fume/gas extraction equipment is to be used to vent areas where there are nuisance vapors and/or potentially toxic fume/gas build-ups and natural ventilation is inadequate.

12.0 Electrical Equipment and Installations

- All electrical work, without exceptions, shall be completed in accordance with State, Federal, and all applicable US Standards for electrical work.

- A licensed electrical contractor is to repair/upgrade and perform any electrical connections/disconnects at the project site.

13.0 Machinery/Plant/Equipment Vehicles and Tools

- All speed limits, traffic rules, signs and directions are to be obeyed at all times within the site and surrounding areas. Motor vehicles, trucks etc. are not to be overloaded or carry loads in excess of legal dimensions/weight without the appropriate permits, signs, lights etc.

- All vehicles, equipment etc. are to have the required current registration, certification, be adequately maintained, have all guards effective and operational, be suitable for the application and comply with current Local and US Standards and/or Statutory requirements.

- Operators of machinery are to ensure they are aware of any hazards that may put their safety at risk (eg. overhead power wires, stay wires, underground services, unstable ground) prior to commencing work. Operators must ensure a clear safety exclusion zone is maintained around machine operations at all times.

- Machinery and vehicles etc. are to be operated in accordance with statutory requirements and manufacturer's instructions and all operators are to be experienced and hold a current relevant certificate of competency, license and/or have documented evidence of experience applicable to the item they are to operate.

- Seat belts where fitted, must be worn at all times during operation and buckets, blades, implements etc. must be lowered when not in use. Operators are not to leave the operating position of machinery/vehicles unless the engine has been turned off and parking brakes etc. have been engaged.

- Fuel powered equipment are not to be used in or near areas where exhaust/toxic fumes can accumulate such as in enclosed and/or internal rooms, car parks, basements, structures, in or near excavations, pits and/or any other areas that have limited means of natural and/or mechanical ventilation that can adequately disperse any fume build-up.

- Lifting gear (slings, lifting chains etc.) is not to be overloaded and must be checked before use for visible signs of damage and/or wear. Hook or load riding is not permitted and passengers must not ride on machinery not intended for the carrying of personnel.

- Lifting operations involving cranes are to be under the direction of a competent and experienced “dogger” at all times.

- Personnel are to wear approved safety harnesses attached by lanyards to suitable anchor points within the work platform/box while operating and/or working from boom type elevating work platforms (eg. cherry pickers) or workboxes attached to and/or suspended from cranes etc. Only approved purpose built/manufactured and certified workboxes/work platforms, lifting devices or attachments are to be used for moving personnel, equipment and materials.

- Personnel are not to exit or enter the work platform/box of elevating work platforms (scissor or boom type) or crane workboxes while they are in the elevated position.

- Boom type elevating work platforms over 30 feet must be operated by a person who is the holder of a *Certificate of Competency*. Operators of boom type elevating work platforms with a boom length less than 30 feet and scissor lifts must have received instruction in their correct operating procedures prior to use.

- Personnel working around and/or directing machinery on site are to wear high visibility clothing.

- Items/materials that are to be cut, drilled, routed, planned and/or shaped in any way by a power tool are to be securely clamped to a stable work bench etc. to prevent movement.

14.0 Working at Heights

- A risk assessment is to be conducted prior to commencing any height work to assess the degree of risk and formulate work procedures and control measures necessary to carry out the tasks in a manner that will minimize/eliminate any risk to the health and safety of personnel.

- Guard railing, edge protection, scaffolding, travel restraint devices, work platforms and appropriate work procedures (systems of work to minimize risk), whichever is identified by the *Risk Assessment/Work Method Statement* are to be in place while working at heights (eg. on roofs, erecting roof trusses) and/or above obstructions/projections where there is a possibility of falls resulting in serious injuries from:
  - 6 feet or more for non-housing work.
  - Or if the fall could result in death or injury irrespective of height.

- Edge protection is to have engineer's/manufacturer's certification, be suitable for the application and erected in accordance with manufacturer's/supplier's specifications.

- If fall arrest systems are used, the vertical fall distance from the work surface/platform to the lower ground level or obstruction is to be assessed when determining if the use of a fall arrest system is suitable to ensure the person does not hit the ground or object when using the system. An approved and documented rescue system and procedures must be in place when fall arrest systems are to be used.

- Anchorage points for fall arrest systems are to have the minimum capabilities:
  - One person – limited free fall 12kN.
  - One person – free fall – 15kN.
  - Two persons – free fall – 20kN.

- Where travel restraint devices and work methods are used, tether lines are to be shortened and fixed in such a manner to suitable anchor points that ensures the person/s cannot place themselves in a fall situation.

  Note: Personnel are NOT to use fall arrest or travel restraint systems or carry out associated work unless they have received appropriate training in and are competent in the correct procedures and use of height safety, travel restraint or fall arrest equipment and systems.

- All travel restraint/fall arrest equipment/components are to be inspected by a competent person at six (6) monthly intervals and a written record of the inspection is to be kept. Any damaged or defective components/equipment is to be removed from service.

- All height work should be carried out from enclosed environments (eg. scaffolds, elevating work platforms) where practical.

- Structural stability/soundness of the building/structure is to be assured prior to personnel commencing roofing operations or any other height work.

- At no time are items to be thrown up or down to other workers on different levels. All items are to be lifted to other levels by appropriate lifting methods/systems.

- Only competent and experienced personnel are to be engaged in activities involving height work.

15.0 Housekeeping/Miscellaneous

- Work areas are to be kept clean and tidy with all trash and waste to be removed and placed in appropriate receptacles on a daily or regular basis. The site/work area is to be left in a safe condition on termination of daily work, so as not to pose a hazard to other workers or the public.

- Alcohol, drugs or substances of abuse are not to be brought onto or consumed at the workplace or on site. Any personnel who appear to be, or are visibly and/or physically affected by alcohol, drugs or substances of abuse will not be permitted to carry out any work on site.

- Personnel may be instantly dismissed and removed from the workplace, if they are found to be under the influence of, or consuming alcohol or substances of abuse during working hours, or while in charge of, or operating machinery, plant, vehicles, tools or equipment.

- All nails, bolts, rebars or other protrusions are to be removed, bent/cranked over and/or protected.

- Glass bottles are not permitted in the workplace or on site at any time.

- Appropriate fire extinguishers are to be attached to, or kept in close proximity to any heat producing or welding equipment during use.

- Fire extinguishers are to be checked, tested and tagged by competent personnel at the prescribed intervals.

- All trade waste, trash, cement blocks, vegetation cuttings etc. that could pose a hazard to equipment, personnel or the public are not to be left unattended or unprotected on roadways, public footpaths or access ways.

- Operators of nail guns and explosive powered operated tools are to ensure signs warning of the use of these tools are displayed in conspicuous locations to warn of the danger. Safety exclusion zones are to be defined and barricaded behind or below work areas, if there is a possibility/danger of nails/projectiles passing through the material being worked on and endangering other workers.

- Direct acting explosive power operated power tools are not to be used on (company name) construction sites or workplaces. Only piston type indirect acting explosive power operated power tools are to be operated/used in accordance with (company name)'s guidelines.

- Personnel drilling holes or using nail guns etc. are to ensure that services (eg. power, gas, water) are not located in the immediate work area behind, or in walls/floors etc. where there is a possibility of the drill or fixing coming into contact with, or penetrating the service.

- Excessive airborne dust from cutting and/or grinding operations etc. is to be reduced using misting methods or other applicable airborne-reducing methods.

- All contaminated water, solvents and any other liquid and/or powered/solid waste generated as the result operations is to be removed from the site for disposal in a designated waste disposal facility.

- Violations of safety rules and requirements will be addressed as follows:
    - 1st offence - verbal warning.
    - 2nd offence - written warning.
    - 3rd offence - instant dismissal and/or removal from site.

16.0 Competent Personnel and Training

- Personnel are not to carry out any works that are considered unsafe, they are not familiar with, have not been trained to perform or are not licensed to do, if in doubt ask your supervisor or (company name)'s site management.

- Personnel working in prescribed occupations are to be experienced and hold current relevant certificates of competency, or if in training they are to be supervised by a suitably qualified and competent person and a record is to be kept of their training.

- Trades personnel must be competent, experienced and should hold appropriate trade qualifications. Apprentices and trainees are to be supervised at all times by suitably qualified and experienced trades or other relevant personnel.

- All work is to be carried out in accordance with Statutory Requirements, US applicable Standards and recognized industry work practices and methods.

- Electrical contractors are to be licensed for all employees and subcontractors carrying out electrical work on (company name) construction sites and workplaces.

17.0 Barricades, Hoardings, Signs and Site Access

- (company name) personnel and/or contractors are to ensure barricades, fencing, hoardings, signs etc. (whichever is appropriate) are erected to prevent access by unauthorized personnel to the site or hazardous work areas during construction and/or hazardous operations.

- Barricades/hoardings/fencing are to be of a standard and construction that clearly defines and restricts all unauthorized personnel from entering the work area and exclusion zones and are to be erected in accordance with Statutory Authorities' and manufacturers' requirements. Access points must be kept closed at all times when personnel are not using them to enter and exit the work area.

- Distances out from the building or structure for erection and designated heights of barricades, fencing or hoardings are to be in accordance with (company name) Standards.

- Hoardings, fence panels etc. are to be designed, manufactured and erected to withstand imposed wind loadings that may be present on the site particularly if the structure is of solid construction or has shade cloth or similar material fixed to the external face.

- Hoardings, fence panels etc. are to be secured/fixed/erected in such a manner that they will not topple over or dislodge as a result of reasonable force from contact with materials or personnel and/or windy conditions etc.

- (company name) personnel and/or contractors are to ensure exclusion zones are defined and barricaded below areas where personnel are working at heights and there is a risk of injury from falling objects etc.

- Barricades etc. are not to be crossed over, pulled down or removed by unauthorized personnel at any time.

- Protective caps are to be fitted to the tops of star pickets at all times to prevent injuries.

- Barricading and/or mesh fencing is to be a minimum height of 3 feet and is to be kept taut at all times and supported at maximum intervals of 8 feet. If the barricading or mesh fencing cannot be kept taut between supports than a top wire is to be used and the mesh is to be attached to the top wire by means of cable ties etc.

- Appropriate mandatory and warning signs must be erected at entrances and at other conspicuous locations on the fencing, barricading to inform personnel as to the nature of the site and the health and safety requirements for entry onto the site.

- Personnel are to ensure all visitors report to the site office/supervisor or other designated person on arrival. Visitors are not permitted on site unless they have obtained permission from site management and are accompanied by site management representative or other inducted site personnel.

- Employees and subcontractors arranging services or delivery of materials to site are to advise the relevant suppliers/delivery drivers of the site safety requirements.

- At no time are hazardous or incomplete stairways, floor/slab edges, or penetrations to be left unprotected without suitable barricades, signs and/or edge protection in place. Access doorways are to have signs erected, barricaded and locked to prevent access to areas, where landings and stairways have been removed or are in an unsafe condition.

18.0 ARC Welding, Oxy/Acetylene and LPG Equipment/Services

Note: *Hot Work Permits* are to be completed and approved prior to any hot work being carried out in buildings and/or in other designated areas to prevent fire and ensure firefighting/protection equipment is not inadvertently activated due to excess smoke and heat being generated. The *(company name)* site manager is to approve all permits prior to any hot work being carried out.

- Personnel are to ensure welding screens, signs, barricades etc. are in place, where practical to protect other personnel from welding flashes etc.
- Appropriate personal protective equipment is to be worn during welding, heating or cutting activities.
- Adequate exclusion zones around and below welding/cutting operations are to be kept clear and defined with barricades and signs.
- An appropriate fire extinguisher must be securely fixed to or kept in close proximity to all electric ARC welding, oxy/acetylene and LPG welding, heating and cutting plants.
- Oxy/acetylene plants are to be fitted with flash back arrestors at the regulators (minimum requirement) and stored upright in an approved trolley or secured by other suitable means.
- The maximum length of oxygen/acetylene delivery hoses is not to exceed 50 feet. Oxygen/acetylene hoses are to be totally uncoiled and oxy/acetylene equipment is not to be operated while hoses are wrapped around the cylinders or trolley.
- Oxy/acetylene cylinders are to be placed and secured upright in an approved gas cylinder storage cabinet with appropriate external venting whilst being transported in vans and/or enclosed vehicles with limited or insufficient ventilation.
- Gas cylinders irrespective of contents are to be transported in an upright position with the valves uppermost and secured to prevent dislodgment unless specified otherwise by the supplier/manufacturer and/or Statutory Authority.
- Cylinders irrespective of the contents are to be turned off at the control valve fitted to the cylinder prior to relocating the cylinder/s at the workplace. This provision also applies while cylinders (empty or full) are being transported in vehicles.
- Gas hoses, cylinders, gauges, fittings, ARC welding leads etc. are to be in a serviceable condition, suitable for the application, operating and cylinder pressures used as per manufacturer's specifications and must be inspected prior to use.
- Oils, greases and similar based compounds, incompatible thread/sealing tapes and compounds or any other unapproved/incompatible chemicals or materials are not to be used on gas equipment especially near any equipment that will come into contact with oxygen.

19.0 Demolition of Existing Structures, Walls etc.

- Suitable signs, barricades, fencing or hoardings etc. (whichever is appropriate) are to be erected around the perimeter of the demolition work area to prevent access by unauthorized personnel.

- Demolition and work procedures are to be planned by a competent, qualified and experienced person, to ensure the safety of personnel and prevent structure failure during erection.

- The building framing/structure is to be demolished/removed in a systematic manner and is not to be left in an unsafe condition at any time, so as it would pose a risk to the health and safety of site personnel or the public.

- All services (eg. power, water, gas) are to be located, disconnected and/or made safe by competent and experienced trades personnel prior to demolition work commencing in the respective work areas.

- The site is to be inspected by competent and experienced personnel prior to any demolition works, to identify any hazardous materials or conditions that could pose a risk to the health and safety of site personnel. The nature and location of each hazard is to be recorded, along with the work methods and procedures that will be used to overcome the hazards. A copy of these records and procedures are to be kept on-site for perusal by demolition personnel. Personnel are to be warned of any hazardous conditions or materials that have been identified or uncovered and these must be removed or eliminated before demolition/renovation can proceed.

- Demolition contractors are to hold the necessary certifications for demolition work. Supervision of the prescribed activity must be directly supervised by a competent person, for demolition at all times. The contractor's workers and subcontractors are to be competent and experienced in the work they are to undertake and are to hold relevant applicable qualifications, Licenses and Certificates of Competency.

  Note: All plumbing and electrical work is to be performed by qualified and competent personnel who are the holders of current relevant trade licenses/competencies.

- The removal of asbestos containing materials (ACM) shall be performed by a certified and registered ACM remediation contractor/company.

20.0 Excavations, Trenches, Pits and Manholes

- A *Permit to Dig* is to be completed and secured from the local jurisdiction by the person/contractor who is to carry out the excavation/trenching work and is to be approved by site management prior to any work being undertaken.

- All existing underground services MUST be located and recorded within the Safety Plan before excavations commence. Contractors and (company name) employees are not to commence excavations without prior approval of (company name)'s site management/supervisor. DIAL 811 for utilities locates BEFORE YOU DIG; and also contact other relevant sources and Local Authorities.

- If electrical services are present then the person carrying out the excavation work is not to commence any work at or near the service until the following prescribed information has been received in writing from site management:
    - Location of the service.
    - Type of the service.
    - Depth of the service.
    - Whether the service is or is not alive.
    - Restrictions, work procedures to be followed in doing the work.

- Excavations and openings in working surfaces must be adequately defined and protected with suitable fencing, hoardings, barricades, signs and/or hole covers whichever is the most appropriate. Taut barricading is to be erected at a minimum distance of 6 feet out from the edge of the excavation.

- Excavations near driveways, footpaths, roads, buildings and/or other structures are to be planned by a competent person and control measures implemented to ensure the stability of the item is not compromised and personnel are not placed at risk by collapse of the structure or route.

- Trenches and excavations more than 4 feet in depth, or dependent on site and workers conditions, may require shoring, benching or battering due to soil instability etc. and each situation must be assessed and a risk assessment carried out before personnel enter the excavation. If control measures to prevent trench collapse are required than a *Work Method Statement* (if procedures are not already covered in this workplan) is to be formulated and approved prior to any work commencing and/or prior to any personnel entering the trench/excavation.

- All excavations, trenches etc. GREATER than 4 feet in depth must have all sides shored, benched or battered unless certified in writing by a geo-technical engineer that the trench/excavation walls are safe from collapse. Excavations greater than 4 feet in depth are to have a *Work Method Statement* (if procedures are not already covered in this workplan) formulated and approved prior to any work commencing and/or prior to any personnel entering the trench/excavation.

- Shoring that is commercially manufactured is to be engineer designed, suitable for the use and erected in accordance with manufacturer's specifications. Non-commercial shoring must be designed and approved by a competent person prior to use.

- Safe access is to be provided in all excavations where personnel are required to work. If ladders are to be used for access, they are to be placed no more than nine 30 feet apart.

- Excavations are to be planned and supervised by competent and experienced personnel and are to be inspected daily by an experienced person to ensure subsidence, water seepage, cracks etc. are not present and compromising excavation/trench stability. Personnel are to ensure there is no risk to the health and safety of themselves or others before entering trenches or excavations etc.

 Machinery, equipment, materials and excavated soil are to be kept back a minimum of 3 feet from the edges of all excavations or at a distance defined by a 45-degree line extending from the internal corner of excavation base to the surface whichever is the greater.

 Fuel powered machinery is not to be used in or near excavations/trenches etc. to prevent carbon monoxide/fume build up.

 All materials, equipment, work methods and procedures are to meet current US Standards and/or Statutory requirements.

 Work in pits and manholes is to be assessed on an individual basis taking into account access, the location of the pit/manhole and possibility of hazards such as:

- **Needles, syringes, glass, blades and scalpels etc**. - use of appropriate tongs, grabs, scoops, sharps containers, gloves, overalls, work methods etc.
- **Contaminated water, sewage, gases and flammable liquids** - use of appropriate liquid waste disposal contractors, gas detectors etc.
- **Snakes and spiders etc**. - Do not aggravate snakes, let them move of their own free will. Spray spiders with suitable insect spray and/or remove with broom, shovel or another suitable device.

 Open pits and manholes are not to be left unguarded at any time.

21.0 Environmental Requirements

- Prior to carrying out any work that has the potential to harm or contaminate the environment, site management is to refer to (company name)'s Environmental Standards and the associated standard procedures and work processes to ensure compliance.

- Sediment transport control where excavations are required to be undertaken is to be assessed to control run-off, sediment/silt discharge onto roadways or into drains, waterways etc. Some sediment transport control measures are as follows:
    - **Sediment fence**: A sediment fence is constructed of a geotextile filter fabric supported by posts and reinforced by wire mesh.
    - **Hay and straw bales**: Hay and straw bales can be used in much the same way as the sediment fence.

- Pumping out/disposal of water from manholes, pits and excavations etc. is to be undertaken as follows:
    - Uncontaminated water: If the water contained in the manhole/pit is not identified/considered to be contaminated, then the water can be pumped out, but the discharge point of the delivery hose is to have a filter attachment (eg. a sediment bag, geotextile material sock or other suitable temporary filter medium) to capture any debris/sediment that may be present in the waste water.
    - If the uncontaminated and sediment free waste water is to be discharged onto an unpaved area, then it should be over a grassed area (eg. nature strip) taking necessary precautions to prevent soil erosion or damage to plants etc. and/or discharge into the drainage system. If the waste water is to be discharged onto a paved area, then a geotextile should be established at the drainage inlet point to capture any sediment not caught in the initial filtering process.
    - Contaminated water: If the water contained in the manhole/pit is suspected or identified as being contaminated in anyway, then a licensed waste disposal/transport contractor is to be engaged to pump out the suspect waste water from the pit for disposal at a recognized and/or approved disposal facility.

- Recording: A record is to be kept of the estimated quantity of waste water pumped out and/or disposed of, the location of the manhole/pit from which it came as well as the means, method and procedures undertaken to dispose of the waste water.

- Machinery and other sources of noise pollution can be controlled by some of the following means:
    - Sound deadening/proofing of machinery.
    - Working out of hours provided owners/tenants of adjacent or adjoining properties/buildings will not be affected and hours of work are not in contravention of relevant Statutory and Local Authorities' requirements.
    - Erection of noise deflection/containment barriers.
    - Ensure machinery exhaust/muffler system is effective and functional.
    - Substitution of fuel powered equipment for electrically powered equipment if practical.

- Airborne dust from unstable or dry unpaved/non vegetated ground surface areas of the construction site and/or soil stockpiles is to be controlled by means of wetting down or covering with a suitable medium.

- Excessive mud and sediment that may become attached to the underside of the body and wheels of vehicles while on the construction site during wet and muddy conditions is to be removed on the site to prevent transportation of the mud etc. to paved roadways/access-ways etc. Run off from the wash-down area is to be contained by sediment/silt control fences or other suitable and approved means.

- Conservation issues in relation to flora and fauna are to be monitored and individual control measures will be put in place to eliminate/minimize any impact construction operations will have on the environment at the workplace. Prior to work commencing all necessary permits/requirements are to be obtained from the relevant Statutory Authorities (eg. IDEM, IDNR, Local Authorities) in relation to work that has the potential to disturb flora growth and fauna habitats and/or the work is to be carried out in a protected area.

- Excavated areas are to be reinstated to the requirements and satisfaction of the relevant governing authority that has jurisdiction over the workplace where the work has been carried out. Work at the workplace requiring permits is only to be carried out within the conditions outlined in the permits and any other identified ancillary works outside of these guidelines are not to be undertaken until written permission has been obtained from the necessary authority.

- Excavation in unprotected areas of flora growth and fauna habitats is to be undertaken with the same degree of care that is required on forestry or park reserves to prevent the unnecessary disturbance or destruction of the environment.

22.0 Removal of Bonded Asbestos Containing Materials (ACM)

- **Asbestos Containing Material (ACM)** means any material, object, product or debris that contains asbestos.

- **ACM related work** means any work that involves working on (drilling, cutting, scraping, cleaning, repairing etc), removing or working in close proximity to, installed ACM.

- **Bonded ACM** means asbestos containing materials (ACM) containing a bonding compound reinforced with asbestos fibers.

- Refer to the State regulatory requirements prior to carrying out any work to determine the type and location of any ACM (eg. asbestos-cement sheeting, vinyl tiles) that may be present. Please refer to the most recent ACM inspection report to verify the presence/location of ACM.

- Any ACM suspect materials/products must be removed and disposed of as ACM in accordance with (company name) Standards and Legislative requirements.

- The need for air monitoring is to be determined and documented by a competent person who is independent of the person responsible for the removal work, prior to any ACM related work being carried out.

- All work involving ACM (removal, drilling, cutting of penetrations, scraping, repairing and/or clean-up etc.) is to be performed prior to any demolition activities.

- **Barricades/fencing and signage** – isolation of the asbestos work area:
    - There should always be two boundaries for ACM related work. The boundary of the asbestos work area and the boundary of a 'buffer' zone around the asbestos work area which for removal work is called the asbestos removal site.
    - The positioning of barriers should be determined by the risk assessment process and documented in the work method statement.
    - The boundaries of the asbestos work area and the surrounding 'buffer' zone must be clearly defined by the strategic placement of barriers and the display of applicable signage. As a minimum requirement signage must warn persons entering the site and/or work area that:
        - ACM related work is in progress.
        - The inhalation of asbestos fibers is a hazard.
        - Entry is restricted to authorized persons only.
        - Respiratory protection is essential (the efficiency of the required respiratory protection must also be stated).
        - Other essential Personal Protective Equipment (PPE) that must be worn.
        - Specific workplace health and safety requirements that may apply.

- Every effort shall be made to minimize the generation and spread of dust. When handling and stacking bonded ACM (eg. asbestos-cement sheeting), care should be taken to avoid abrasive actions, which may result in the release of asbestos fiber. Special care shall be taken when removing loose ACM pieces/fiber/debris from areas adjacent to the asbestos work area to ensure that asbestos dust is not released into the atmosphere.

- Power tools shall not be used except for the removal/unscrewing of fasteners only.

- *Bonded* ACM shall be removed with minimal breakage and where applicable lowered to the ground and is not to be dropped from any height under any circumstances.

Certificate to Perform Asbestos Removal Work

- Asbestos removal work must only be performed by the holder of a current Business Certificate to perform the prescribed activity of asbestos removal work issued by the State of Indiana.

Certificate to Supervise Asbestos Removal Work

- Asbestos removal work must be directly supervised by a person who is the holder of a current certificate as a competent person to supervise the performance of the prescribed activity of asbestos removal work issued by the State of Indiana.

- Bonded ACM chips, pieces, debris, dust and residues shall be removed from wall cavities, the ceiling space, support timbers, and all applicable surfaces interior of the asbestos work area prior to demolition work.

- Personnel are to decontaminate when leaving the asbestos work area and shower and/or wash thoroughly prior to leaving the workplace. Tools and equipment being used for removal of asbestos shall be thoroughly decontaminated on completion of work and/or prior to being removed from the asbestos work area.
  Note: On no account shall contaminated work clothing be worn outside the defined asbestos work area.

- Personnel working with bonded ACM shall observe a high standard of hygiene and good housekeeping to ensure that their exposure to asbestos dust is minimal and that asbestos dust is not transferred from the asbestos work area to other areas.

- Personnel shall not eat, drink or smoke in the asbestos work area.

- An approved vacuum cleaner [fitted with high efficiency particulate air (HEPA) filtration] should be maintained on site to assist with decontamination of personnel, tools, equipment and for cleaning site amenities.

- Prior to removal from the asbestos work area, decontaminate all tools, equipment and HEPA vacuum cleaners in the allocated decontamination area at the boundary to the asbestos work area:
  - **(1)** Vacuum all tools and equipment prior to wet wiping and removing them from the decontamination area at the boundary to the asbestos work area.
  - **(2)** Vacuum down the outside of the vacuum cleaner and remove the dust collection bag from the vacuum cleaner, seal it and place it in an asbestos waste disposal bag while still within the decontamination area at the boundary to the asbestos work area.
  - **(3)** Fit a new waste collection bag to the vacuum cleaner and place the unit and attachments in a suitable size 200-micron (0.2mm) asbestos bag or 200-micron (0.2mm) plastic packaging for storage, seal and mark as being *asbestos contaminated* and store the unit until required.

  Note: Asbestos HEPA vacuum cleaners are not to be used for any other purpose other than asbestos work.

- Bonded ACM sheeting, debris, residues, used coveralls, disposable respirators, respirator cartridges, drop sheets, wet-wipe cloths, used vacuum bags and the like shall be regarded as asbestos waste and prepared for disposal in accordance with the statutory requirements.

- Waste may be accumulated on site for the duration of the removal in plastic lined metal containment or stacked on two layers of plastic drop sheets (minimum thickness of plastic containment sheeting/wrapping is to be 200 microns [0.2mm]). Stored waste shall be kept damp and covered at all times.

- Prepared waste shall be removed from the site as soon as is practicable in a safe manner and covered for transportation. All asbestos waste shall be disposed of at an approved landfill disposal site.

- To achieve final completion of the project, (company name) shall require verification that the waste has been disposed of and transported in accordance with the requirements of this specification. A *Waste Transport Certificate* duly completed by all three (3) parties will be the documentation/verification required to verify the asbestos waste has been removed, transported and disposed of in accordance with the Environmental Protection Agency Guidelines.

23.0 Additional Requirements

- Contractor is required to ensure that all Federal, State, and Local Permits are secured by the contractor to perform the designated demolition, ACM removal, site grading, and restoration work.
- Contractor is responsible to verify that all utilities are properly disconnected from the site prior to demolition.
- Contractor shall coordinate work schedule with local authorities, fire departments, police, and local residents on a weekly basis, at a minimum, or as needed.
- Contractor is responsible for any missing sections of this plan that are applicable, but not presented hereinto. Contractor shall provide supplemental addenda to this plan as necessary.

Note: Any activity, work procedure or method that is considered hazardous and/or high risk and poses a risk to the health and safety of personnel and is NOT covered in this *Construction Safety Plan* or associated *Work Method Statement*/s or in (company name)'s Health Safety and Environmental Standards, is to have a risk assessment undertaken and appropriate work methods and control measures formulated and implemented.

Notes