



# Environmental Management Plan

## Albany West - Phase 1

**REVISION 2 - FINAL**



**Submitted to:**

The Department of Environmental Planning and Protection  
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**Submitted by:**

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**On behalf of:**

Albany Bahamas  
New Providence, The Bahamas

**28 September 2020**

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## 1. Executive Summary

[Albany Bahamas](#) is an existing luxury resort community on the western coast of New Providence Island in The Bahamas. It is currently constructed on 600 acres and includes a world-renowned golf course. The current proposed project, Albany West – Phase 1, is a development extension of the Albany Bahamas properties. The Albany West – Phase 1 project (the Project) is 16 acres located along South West Bay Road and South Ocean Boulevard adjacent to the Albany Bahamas original site. Caribbean Coastal Services Ltd. (CCS) was engaged by the Albany Bahamas proprietors to work through environmental permitting of the Project. After meeting with the Department of Environmental Planning and Protection (DEPP), CCS completed the Environmental Baseline Survey for the Project. CCS was invited to prepare an Environmental Management Plan (EMP) for the Project after the EBS was approved by the Department of Environmental Planning and Protection (DEPP)<sup>1</sup> on August 5<sup>th</sup>, 2020.

The EMP is an initial plan based on the project design, discussions with the Albany Bahamas proprietors and DEPP, the regulatory body managing EMPs in The Bahamas. Initial activities of the Project include demolition and land reclamation of the former Stuart Coves Dive Bahamas property and marina. Mitigation measures for potentially adverse environmental impacts during the construction phase of the Project were discussed in the EBS. These are further described in this EMP and the relevant monitoring plan is included to help guide monitoring of the site. Also included in the EMP are recommendations to limit negative impacts to the surrounding environment including use of a turbidity screen and turbidity monitoring during the marina reclamation exercise, watering the site to limit dust propagation off site, the use of natural buffers to limit impacts to ambient noise levels, the complete removal of invasive plant species of the site to limit further spread and the use of public communication means to lessen the negative impacts of the project on neighboring residents to the project site.

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<sup>1</sup> During the review process, BEST was legally subsumed by the Department of Environmental Planning and Protection.

## 2 Introduction

### 2.1 Geographic Location

The Albany West site (25° 0'21.13"N, 77°31'23.43"W) is located in the South-Western district of the island of New Providence in the Central Bahamas. The project site is immediately west of the current Albany Bahamas location, and immediately east of the Clifton Pier industrial areas, inclusive of Commonwealth Brewery and Bahamas Power & Light (BPL) Clifton Power Station.

Figure 1. Relative location of Nassau in the Bahamas Archipelago

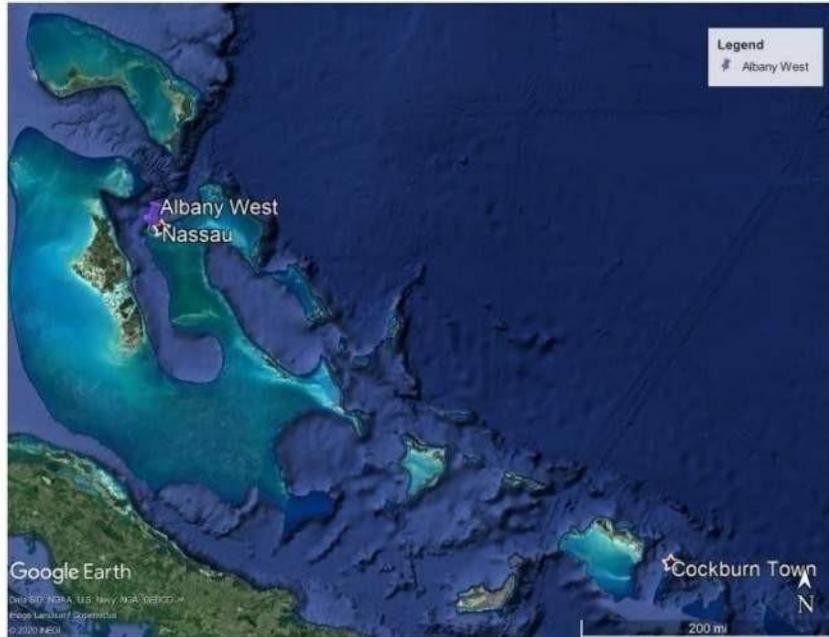
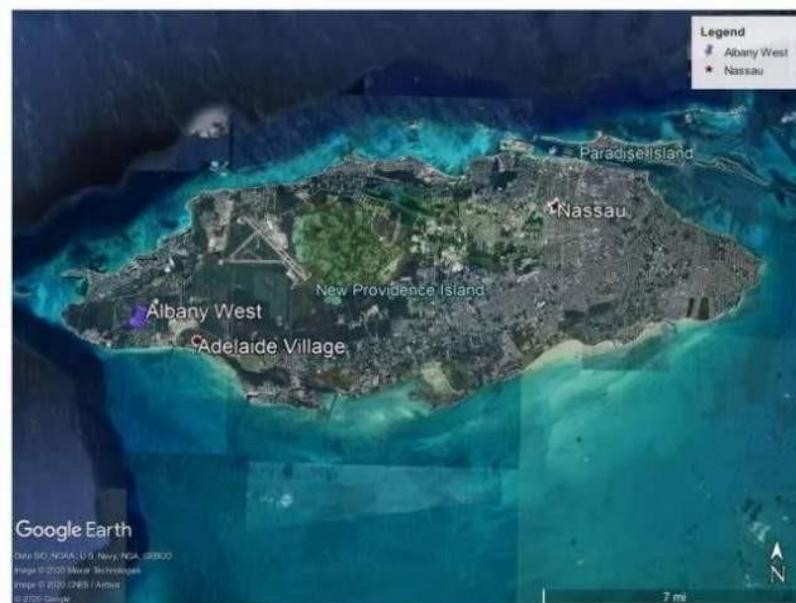


Figure 2. Relative location of Albany West on the island of New Providence



## 2.2 Purpose, Scope and Content

An EMP is a fluid document that adapts as the Project progresses. As such the purpose of the current EMP is to provide an initial detailed plan that ensures best environmental management practices are followed, and health risks associated with the construction and operation phases are reduced or avoided. It summarizes the potential environmental impacts described in the EBS and details the appropriate mitigation measures and described the appropriate monitoring plans. As the need arises, the EMP will be updated to reflect the project activities. Modifications of the EMP will be discussed with DEPP before it is incorporated in the document to ensure Albany West – Phase 1 remains in compliance with the regulations throughout its construction and operation. A revised final document will be shared with DEPP.

The scope of this EMP includes a description of the Albany West – Phase 1 site, potential environmental impacts of development, mitigation strategies to lessen environmental impacts, and plans to reduce health and safety risks of staff onsite during construction and operation. The results of this EMP will provide the Client, Contractor and Operations Management with details that help to avoid and/or mitigate detrimental environmental impacts and safety risks due to the proposed development, and therefore, assist with successful project execution.

## **3. Project Description**

The Project consists of a phased approach to the development of the former South Ocean Waterfront property, the Stuart Cove's property and the vacant lot along South West Bay road. Phase 1A of the project entails the demolition of all infrastructure within the South Ocean waterfront property, inclusive of all above and below ground infrastructure on the property, minus the sea wall and necessary below ground utilities along South West Bay road (WSC water mains and BPL fuel lines). Once demolition of all infrastructure is completed and solid waste disposed of in accordance with best practices and the Department of Environmental Health Services (DEHS), the vacant property will be section into seven (7) lots to be sold as private properties on the newly developing Albany West location.

The realignment of South West Bay road is proposed for Phase 1A of the project and will entail the redirecting the current road alignment into the disturbed forests north of its current location. The areas slated for the redirected road have been previously impacted by clearing and public dumping of trash, and partially serves as a parking area for Stuart Cove's facility. The realignment of the road will involve the removal of the BPL switch located at the entrance to South Ocean Estates, as well as the relocation of above ground power infrastructure to below ground for safety and aesthetics.

Phase 1B of the Albany West project entails the demolition of remaining infrastructure at the evacuated Stuart Cove site and adjacent lot, and the construction of condo units, club house and pool. This phase will also include the reclamation of the approximately 0.7 acre marina and is estimated to utilize approximately 17,347 cu yards of uncompacted fill (~ compacted volume 30,000 cu yards). The reclamation will not include the entrance channel for the existing marina, only the marina basin proper. The dive company has intentions of moving from its current location and will relocate its business prior to commencement of demolition activities. Once demolition of all infrastructure is completed and solid waste disposed of in accordance with best practices and the DEHS, construction of condo units, a beach club and pool will commence.

A golf cart path will be constructed to provide access from the current Albany West gate to the newly developed Albany West residential area and condos. The path will follow the perimeter of

the South Ocean Estates residential community bordering the existing Blue Shark Golf course, and lead to the entrance gate and security booth for Albany West. The golf cart path will enter the Albany West property through a subterranean path which will run beneath the newly directed road.

#### 4. Master Plan

Figure 3. Albany West Phase 1 beachfront properties



Figure 4. Albany West Phase 1 golf cart path



#### 5. Environmental Regulatory Bodies and Standards

5.1 Relevant Acts and Regulations

**Conservation and Protection of the Physical Landscape of The Bahamas Act, 1997 (Ch. 260)**

“An Act to make provision for the conservation and protection of the physical landscape of The Bahamas”,

- where, section 3 speaks to excavation and harvesting of protected trees.

**Town Planning Act, 1961 (Ch. 255)**

“An Act relating to town planning”,

- where, section 5 speaks to prescribed restricted areas and forbidding building activities.
- where, section 7 speaks to committee sanctioned development activities.

**Planning and Subdivision Act, 2010**

“An Act to combine, consolidate and revise the law related to town planning and law relating to the development of subdivisions and to provide for matters connected thereto”,

- where, section 3 speaks to the purpose of this Act which includes:
  - to provide planning for a controlled development system led by policy, land use designations and zoning;
  - the prevention of indiscriminate division and development of land;
  - to ensure the efficient and orderly provision of infrastructure and services to the built environment;
  - promoting sustainable development in a healthy natural environment;
  - to maintain and improve the quality of the physical and natural environment;
  - to protect and conserve the natural and cultural heritage of The Bahamas;
  - provide for planning processes that are fair by making them open, accessible, timely and efficient;
  - to recognize the decision-making authority and accountability of the Government in land use planning; and
  - to plan for the development and maintenance of safe and viable communities.

**Coast Protection Act, 1968 (Ch. 204)**

“An Act to make provision for the protection of the coast against erosion and encroachment by the sea and for purposes connected therewith”,

- where, section 8 speaks to approval for coastal protection work.
- where, section 9 speaks to the excavation of materials that compose of the seashore.

**Water and Sewerage Corporation Act, 1976 (Ch. 196)**

“An Act to establish a Water and Sewerage Corporation for the grant and control of water rights, the protection of water resources, regulating the extraction, use and supply of water, the disposal of sewage and for connected purposes”,

- where, section 3 speaks to government control of the production, extraction and use of water in the public interest.

**Environmental Health Service Act, 1987 (Ch. 232)**

“An Act to promote the conservation and maintenance of the environment in the interest of health, for proper sanitation in matters of food and drinks and generally, for the provision and control of services, activities and other matters connected therewith or incidental thereto”,

- where, section 12 speaks to solid and liquid waste treatment in accordance with government regulations.
- where, section 14 speaks to government notification of emissions or discharge, etc. of contaminant pollutants.

**Environmental Health Services (Collection and Disposal of Waste) Regulations, 2004 (Ch. 232)**

“These Regulations may be cited as the Environmental Health Services (Collection and Disposal of Waste) Regulations, 2004”,

- where, section 3 speaks to the provision of waste collection service.

- where, section 5 speaks to commercial waste.

**Environmental Planning and Protection Bill, 2019**

“A Bill for an Act to establish the Department of Environmental Planning and Protection, to provide for the prevention or control of pollution, the regulation of activities, and the administration, conservation and sustainable use of the environment and for connected purposes”.

**Marine Mammal Protection Act, 2005 (Ch. 244A)**

“An Act to make provision for the protection of marine mammals”,

- where, section 4 speaks to the prohibition of harassing, etc. of a marine mammal.

**Forestry Act, 2010**

“An act to provide the conservation and control of forests and for matters related thereto”

- where, section 7 speaks to the declaration of protected forests.
- where, section 10 speaks to the declaration of protected trees.

**Wild Bird Protection Act, 1952 (Ch. 249)**

“An Act to make provision for the protection of wild birds”,

- where, section 4 speaks to the killing or capture of wild birds during closed season.

**Wild Animals Protection Act, 1968 (Ch. 248)**

“An Act to make provision for the control of the taking and export of wild animals”,

- where, section 3 speaks to taking of capture of wild animals.

5.2 Government Agencies Involved in Permitting and Licensing

***Ministry of Public Works***

*The Ministry of Public Works maintains the physical infrastructure and natural environment of The Bahamas.*

***Department of Public Works***

The Department of Public Works maintains public infrastructure inclusive of government buildings, roads, docks, bridges and cemeteries.

***Department of Physical Planning***

The Department of Physical Planning manages town, physical, country and land use planning, zoning, private roads and subdivisions for New Providence and the Family Islands.

***Department of Lands and Surveys***

This department is responsible for planning, mapping and monitoring of crown land (i.e. where beaches begin and end, high water marks etc.).

***Water and Sewerage Corporation***

The Water and Sewerage Corporation is entrusted with managing, maintaining, distributing and developing the water resources of The Bahamas.

***Ministry of Environment & Housing***

*The Ministry of Environment and Housing serves to protect, conserve and manage the environment of The Bahamas. This ministry focuses on environmental control, solid waste management, public sanitation and the beautification of public areas such as parks and beaches.*

***Department of Environmental Health***

The Department of Environmental Health manages the disposal of all wastes and management of environmental pollution (on land or in water). This department also promotes planning and approves various measures designed to ensure wise use of the environment.

***Department of Environmental Planning and Protection (DEPP)***

DEPP manages environmental agreements and evaluates environmental impact assessments (EIA) and environmental management plans (EMP) for development projects within The Bahamas. The BEST Commission was subsumed by the Department of Environmental Planning and Protection.

***Ministry of Labour***

*The Ministry of Labour oversees and regulates labour relations within The Bahamas.*

***Department of Labour***

The Mission of the Department of Labour promotes good industrial relations between employer and employee while promoting a high level of employment.

***National Emergency Management Agency***

The National Emergency Management Agency (NEMA) aims to reduce life and property loss in the event of a natural disaster

***Office of the Prime Minister***

*The Office of the Prime Minister coordinates ministries, government and parliamentary business.*

***Antiquities, Monuments and Museum Corporation***

This quasi-governmental organization protects, preserves, and promotes the archaeology and historic cultural resources of The Bahamas.

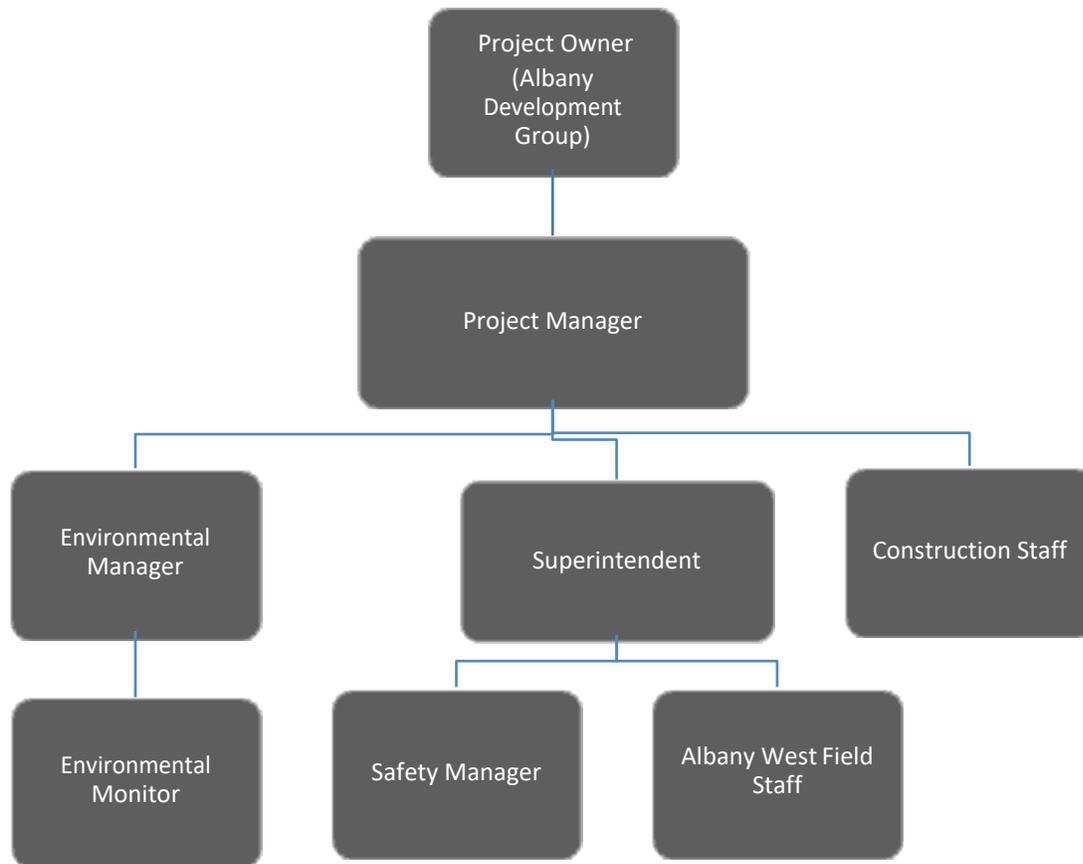
***The Bahamas National Trust***

The Bahamas National Trust is a legislated non-government organization charged with developing and managing the Bahamas National Park Systems.

## 6. Environmental Management Organization Structure

### 6.1 Organization and Responsibilities Chart

Figure 5. Albany West organization chart



The organization chart above clearly defines the roles and responsibilities of the developer, management and staff of the Albany West project with regards to EMP compliance and environmental monitoring. Essentially, all personnel inclusive of the developer should consider the long and short term effects of the development on the South Ocean residents and wider New Providence stakeholders. These roles and responsibilities are listed below:

## Albany West Phase 1 · Environmental Management Plan – Revision 2· 30 September 2020

- Project Owner
  - Assess the project’s performance to include environmental requirements.
  - Ensure adequate financial resources are available to implement and maintain the EMP.
- Project Manager
  - Ensure adequate resources are available to implement and maintain the EMP.
  - Report to the Project Owner (Albany Developers).
  - Responsible for construction and operations phases of the project while applying necessities required to comply with the best management practices produced in the EMP document.
- Environmental Manager
  - To ensure full compliance and reporting relative to the approved EMP and the conditions associated with the Certificate of Environmental Clearance.
  - To provide daily oversight of all environmental matters associated with the work.
  - The engagement of the Environmental Monitor, which is subject to review by the DEPP. (*The resume of the person to be engage is provided to ensure qualification and experience commensurate with the works*).
  - Implement the EMP in collaboration with the Environmental Monitor.
  - Provide adequate training to the Environmental Monitor.
  - Integrate environmental requirements and mitigation efforts into project planning, execution, and operation.
  - Ensure project personnel are aware of environmental requirements.
  - Oversee environmental inspection and monitoring activities.
  - Provide monitoring form with provided guidelines outlined in the EMP.
  - Oversee compliance reporting.
  - Submit reports and associated documentation to DEPP based on reporting schedule.
- Environmental Monitor
  - Implement the EMP in collaboration with the Environmental Manager.
  - Ensure the day-to-day environmental requirements are being achieved.
  - Accompany owner, site safety officer and agency inspectors during site visits.
  - Report to the Environmental Manager.
- Superintendent
  - Construction staff will adhere to existing plans and procedures and/or prepare their own policies and procedures that align with Albany West EMP to meet the environmental and safety requirements of the EMP.
  - Oversee health, safety and best environmental practices are met during construction phases.
- Safety Manager
  - Ensure that the safety measures explained in the EMP and by company standards are applied and followed by construction staff.
- Albany West Field Staff

- Will report to the Superintendent.
- Adhere to the requirements of the EMP as instructed by the Superintendent.
- Construction Staff
  - Will report to the Superintendent.
  - Comply with health and safety guidelines enforced by the on-site safety officer.

## **7. Environmental Management**

### *7.1 Potential Environmental Impacts*

The following impacts were previously described in the Environmental Baseline Statement approved by the Department of Environmental Planning and Protection via letter communication on August 5, 2020.

#### *7.1.1 Land Use Impacts*

Within the areas slated for Phase 1 development of Albany West, the site of the former South Ocean resort has been abandoned for many years and continues to deteriorate. The adjacent lot to the east is undeveloped and unoccupied. The demolition of the infrastructure for the development of residential lots and condos, and the availability of additional recreational activities in the south western New Providence will have positive and long term impact on current land use of the area. It is likely that the project will have direct, positive, long term impacts to the local aesthetic of the area. It is likely that the project will have direct, positive, long term impacts to the current land use of the area.

The Bahamas Power and Light (BPL) maintains a high pressure fuel line on the project site that connects the Clifton Pier Power Plant to the Blue Hill Road Power Station. The fuel line will remain on site in its current location during the construction and operation of the project. No construction will take place on top of the fuel line and Albany Development Group will ensure BPL has access to the fuel line to allow maintenance and or repairs as BPL deems necessary. Prior to construction activities, Albany Bahamas personnel will collaborate with BPL to adequately identify the fuel line on site to help prevent damage from heavy equipment once construction begins. Furthermore, Albany will adhere to a 10ft. setback to construct buildings from this line. Recommendations, protocols and mitigation strategies will be fully outlined in the project's EMP.

#### *7.1.2 Aesthetic Impacts*

Demolition of the unsightly property along South West Bay Drive will improve the aesthetic of the area. Neighboring residents in the South Ocean Estates and Royal Estates condominiums may experience temporary aesthetic impacts during demolition of South Ocean Resort and construction of condos, pool, clubhouse and the redirected South West Bay Drive, however these impacts will lessen with the completion of the demolition and construction activities. It is likely that the project will have direct, positive, long term impacts to the local aesthetic of the area.

#### *7.1.3 Erosion and Sediment Impacts*

During weather events where wind energy leads to increased turbulence, the visibility decreases in the marina at Stuart Cove's Dive Bahamas and the silt sediment on the benthic

habitat becomes suspended in the water column. Through tidal flushing the silt may be transported through the marina entrance. As a result, it can be expected that turbidity plumes in the immediate land reclamation area may flush beyond the marina entrance. This may temporarily negatively impact the adjacent beaches by reducing visibility on the beaches and reducing their aesthetic value. These impacts are not expected to persist beyond the construction period. To help mitigate against this, a silt curtain will be installed across the marina entrance prior to the land reclamation activity.

#### *7.1.4 Beach Impacts*

As mentioned previously, turbidity plumes as a result of depositing sediment in the marina may impact the adjacent beaches. The potential impact of increased turbidity in the area is reduced visibility, increased light attenuation, and decreased aesthetic value of the beaches adjacent to the property. The beach west of the marina entrance borders a private residence. Reducing the aesthetic value of this beach will have a negative socioeconomic impact. The beach east of the marina entrance borders the Albany West property boundary.

#### *7.1.5 Hydrological Impacts*

The marina entrance was reportedly dredged at regular intervals by the previous land user to deepen the channel. This indicates sand is deposited fairly regularly in the area. The project activities will not impact this natural process.

#### *7.1.6 Air Quality Impacts*

Dust generated from demolition and construction activities during Phase 1 development are likely to have a negative impact on air quality in the local areas surrounding the project site. Mechanical demolition of structures, removal of solid waste from site, land clearing, road grading and general construction activities all are dust generating activities. It is likely that impacts to air quality will be Short Term for the duration of demolition and construction activities. The intensity of air quality impact is weather dependent, as rainfall and wind direction will influence the travel of dust from the project site into the surrounding areas.

#### *7.1.7 Noise Impacts*

Noise generated from demolition and construction activities during Phase 1 development are likely to have a negative impact on ambient sound levels in the local areas surrounding the project site. Mechanical demolition of structures, removal of solid waste from site, land clearing, road grading and general construction activities all are noise generating activities. It is likely that impacts to ambient noise levels will be Short Term for the duration of demolition and construction activities.

#### *7.1.8 Habitat Fragmentation*

The terrestrial areas of the Phase 1 development of Albany West have all had previous developments of varying levels of scope and intensity. The former South Ocean Resort, the Stuart Cove's marina and parking areas and the adjacent vacant lot are all impacted sites retaining very little of the once naturally occurring vegetation, landscape and topography. The resort grounds, vacant lot, and Stuart Cove's parking area are overgrown by weedy invasive species, crowding out the native vegetation known to previously occupy these habitats. The land clearing activity during demolition of the project site will reduce source populations of invasive plant species along the south western shoreline, providing a direct, positive long-term benefit by fragmenting the invasive species populations, allowing the potential for native

vegetation to return to the site naturally or via landscaping of Phase 1 development areas.

#### *7.1.9 Habitat Loss and Degradation*

Adding sediment to the marina will result in direct loss of an estimated 0.6 acres of benthic habitat. While the area is exposed to significant boat traffic on a daily basis as function of the area's current use, sparse seagrass (*Thalassia testudinum*) grows on the benthos which can be observed from the surface. Fine sand covers the benthos where seagrass does not grow. Mounds of brown cyanobacteria and algae covered sand can be observed throughout the sparse seagrass. Removing this habitat will not impact a significant amount of species despite the presence of seagrass because the area is of poor habitat quality.

Habitat quality can be summarized as a function of the “availability of food, habitat size and the ability of species to move through the area to forage, reproduce and avoid unfavorable environments or seasons”. The former Stuart Cove's marina is not a significant source of food as evidenced by the sparse seagrass and the presence of cyanobacteria. The area is also not a reliable shelter for species as a result of the marine traffic in the marina.

#### *7.1.10 Impacts on Special features and Biodiversity*

Several range-restricted and winter migrant birds were observed within and around the Phase 1 area of the site during an Avian Wildlife resource survey in early March 2020. These species included the White-Crowned Pigeon, Bahama Woodstar, White-eyed Vireo, Cape May Warbler, Black-throated Blue Warbler, Worm-eating Warbler, Prairie Warbler, Gray Catbird, Mangrove Cuckoo and Rudy Turnstone. Despite the presence of these Avian species, the project poses little to no net impact on special ecological features of the site since no bird nests were found within the Phase 1 area, and because the ecological use of the surrounding areas that possess similar and more preferable features will remain intact during development. While the upland birds were observed in the vicinity of the newly proposed road, there is vast land coverage of broadleaf evergreen coppice forest outside of the project focus that can provide habitat and food resources to these organisms during the winter season. The adverse implications on the environmental features include:

- Habitat fragmentation
- Changes in land cover and use
- Increased human traffic
- Possible increase of pollution and sedimentation of terrestrial and marine communities during construction work and
- Potential decrease in biodiversity of avian and other terrestrial wildlife due to habitat loss.

It is likely that the project will have positive, long-term impacts by removing invasive species such as Casuarina, White Ink Berry and Brazilian Pepper to allow more native plants species to occupy these new areas. This would also lead to positive, long-term benefits allowing for healthy ecological features that will increase biodiversity.

Prior to commencement of demolition activities, preclearance surveys will be conducted of the existing buildings, terrestrial and marine foreshore areas to identify protected bird species and their nesting areas, as well as possible turtle nests. Identified nesting birds will be removed and relocated by contacting the qualified personnel of Ardastra Gardens Conservation Center and/or The Bahamas National Trust. Identified sea turtle nests can be caged or relocated with authorization by the relevant authorities and by qualified individuals.

*7.1.11 Marine Resource Impacts*

Demersal fish and other animal species were reportedly rarely observed in the area. This is not unexpected as the marina is used seven (7) days a week by several large vessels. As a result, reclaiming this area will not have an adverse impact on many demersal species.

Juvenile grunt species (*Haemulon sp.*) and damselfishes (*Abudefduf saxatilis*) were occasionally observed feeding on food scraps that would inadvertently fall in the marina during lunch periods near the Stuart Cove's dive shop and grill. An example photo of these species is shown in Figure 6. Once the land reclamation activity begins these species will swim out of the marina away from the disturbance. These species are not resident in the marina. As a result, the impact of the land reclamation activity to these species will be negligible.

*7.1.12 Wildlife Impacts*

Resident and migratory birds who utilize the overgrown weedy vegetation for foraging will be temporarily impacted during land clearing and demolition activities as the noise, dust and heavy equipment will discourage their presence on the Project. These impacts are negligible as there are diverse foraging habitats surrounding the project site for birds to utilize during the demolition and construction phase of the project.

Prior to commencement of demolition activities, preclearance surveys will be conducted of the existing buildings, terrestrial and marine foreshore areas to identify protected bird species and their nesting areas, as well as possible turtle nests. Identified nesting birds will be removed and relocated by contacting the qualified personnel of Ardastra Gardens Conservation Center and/or The Bahamas National Trust. Identified sea turtle nests can be caged or relocated with authorization by the relevant authorities and by qualified individuals.

*7.1.13 Fire and Hurricane Risks*

The remaining infrastructure of the South Ocean Resort present a fire hazard to the surrounding environment, inclusive of the residential communities in close proximity to the site. The derelict buildings although stripped of most equipment and furniture, contains dry decaying wood, paper backed sheet rock and plaster tape, and densely overgrown vegetation with heavy leaf litter and debris. In its current state the property is a major fire risk to the area. Demolition of the relict infrastructure will provide a direct and beneficial impact to the local areas surrounding the site, having a permanent impact on fire risks related to the abandoned property.

*7.1.14 Solid Waste & Hazardous Waste Impacts*

Solid waste generated during demolition and construction activities will be disposed of in accordance to best practices and regulation set forth by DEHS. An Asbestos Containing Material analysis and lead in paint analysis was conducted on building materials to be demolished, confirming the absence of both hazardous materials from the project site.

*7.1.15 Water and Wastewater Impacts*

During construction and operation WSC will be the main potable water supply. Potable restrooms will be made available on site that will be pumped by an independent contractor daily. The impact on water and wastewater is negligible.

*7.1.16 Socio-economic Impacts*

The socioeconomic impact is positive for the project. During construction approximately 100

temporary jobs will be generated in Phase 1A and approximately 300 in Phase 1B. As the project phases are rolled out additional jobs will be made available.

## 8. Recommendations and Mitigation Strategies

### 8.1 Geology

#### - Land Clearing

During land clearing a silt fence will be installed between the coast and the area to be cleared for the construction of the lots to prevent runoff from washing on the beach. The type of silt fence used will depend on the slope gradient of the site and the duration the fence is expected to remain in place. The installation method is also variable based on the aforementioned factors. The final decision on the type of silt fence will be determined by the contractor. A general rule of thumb the contractor should consider is the posts are an important control for the silt fence. The 1:1 ratio should be followed when considering the depth to drive the posts in the ground. If the silt fence is expected to support a load of 2ft of sediment and water, then the posts should be driven 2ft in the ground<sup>2</sup>. The type of posts used should also be carefully considered as well.

#### *Fuel Line*

The BPL high pressure fuel line will remain on site in its current location during the construction and operation of the project. Albany Bahamas will ensure BPL has access to the fuel line to permit the necessary maintenance and or repairs as BPL deems necessary. Prior to construction activities, Albany Bahamas personnel will meet with BPL on site to map the route of the fuel line on the site to help prevent damage from heavy equipment once construction begins. Signs will be installed at intervals along the fuel line similar to the sign shown below.

*Figure 6. Example of Caution sign that will be displayed along fuel line*



The length of the fuel line will be identified for the duration of the project to help avoid damaging the fuel line. The BPL fuel line will be flagged by BPL staff to aid in identification. . In the event that the fuel line is damaged, the Superintendent will be notified immediately. The Superintendent will communicate with BPL point of contact to initiate emergency repair of the fuel line.

<sup>2</sup> <https://www3.epa.gov/npdes/pubs/siltfences.pdf>

<sup>3</sup> <http://www.meshfencepanels.com/sale-11883884-galvanized-construction-site-fencing-with-infilled-welded-mesh-60-x-150-x-3mm.html>

<sup>4</sup> <https://www.linklanden.com/application/construction-fence.html>

Figure 7. Examples of wired construction fences <sup>3</sup> & <sup>4</sup>.



— Excavation

Trenches created on site through excavation will be lined with construction mesh fencing to avoid accidental falls by staff and associated injuries on site. To avoid damage of the existing underground utilities, prior to trenching or excavation activities the as-built surveys of the site will be reviewed and sensitive below ground infrastructure identified with highly visible flagging. The As Built Survey of the site is provided in Appendix A.

Figure 8. Construction mesh fence<sup>5</sup> or Jersey barriers<sup>6</sup> to be installed around trenches.



— Land Reclamation

*Methodology*

All waste and infrastructure, including pilings and moorings, will be removed from the existing basin prior to the commencement of reclamation works. Due to the property geometry, reclamation will commence at the eastern end and progress towards the proposed reconfigured channel. Prior to reclamation, a sheet pile will be installed at the western end of the marina basin. A small staging area will be created to the east of the existing basin. This staging area will allow for stockpiling of fill material, as well as equipment storage. As reclamation progresses westward, the staging area will expand.

Excavators will be used for reclamation work, as well as the use of hydraulic compaction. The fill will be added to the existing basin and compacted reducing the amount of water available inside of the basin.

<sup>5</sup> <https://www.dreamstime.com/construction-site-orange-safety-net-fence-as-barrier-over-trench-street-excavation-image115379241>

<sup>6</sup> <https://otwsafety.com/branded-construction-sites-to-win-more-work/>

Dump trucks will transport fill material to site and dump the material at the designated staging area. All dump trucks entering and leaving the construction site hauling materials will be covered at all times during transportation. The front-end loader will be used to transport the material from the stockpile, to the marina basin. Initial compaction will be performed by the loader to the approximate high water mark. Fill placement thereafter will be conducted in accordance with the geotechnical engineering requirements to achieve the necessary compaction. Operation and maintenance of heavy machinery will comply with guidelines provided in Section [9. Health & Safety](#).

#### *Turbidity Control*

To prevent fine sediment being transported into the coastal area, the proposed retaining structure at the eastern boundary of the proposed reconfigured channel will be constructed prior to commencement of reclamation works. Additionally, a turbidity curtain will be installed across the width of the channel. The turbidity curtain will provide a second line of defense, as well as prevent possible overwash resulting from reclamation activities from introducing suspended fine sediment into the coastal area. A Turbidity Monitoring Report is included in Appendix B.

#### 8.2 Terrestrial Resource Management

There currently exist little terrestrial resources to represent healthy and highly diverse native populations of flora and fauna in the Phase 1 area. Nonetheless, strict measures would be put in place to protect these resources and minimize potential impacts mentioned in the EBS of the project.

Protocols for identifying and, if necessary, transplanting notable and protected species of plants, relocating, and barricading active bird and turtle nests and breeding bird colonies will be employed before any land clearing is done. These protocols would include preclearance surveys of the existing buildings, terrestrial and marine foreshore areas to identify protected bird species and their nesting areas, as well as possible turtle nests. The environmental monitoring report will include such discoveries (the Environmental Monitoring Form/Checklist is located in Appendix C).

Identified nesting birds will be removed and relocated by contacting the qualified personnel of Ardastra Gardens Conservation Center and/or The Bahamas National Trust. Identified sea turtle nests can be caged or relocated with authorization by the relevant authorities and by qualified individuals. This process includes conducting nest surveys and/or outfitting nests with self-releasing screens/cages. The goal of this marking method is to clearly identify the nest area and protect it from human activities such as construction activities.

First, visually inspect the site to determine whether a nest exists. The entire disturbed area (where digging has occurred) should be outlined with four perimeter stakes. The nest site should be marked with a radius of at least 3 ft. or up to 10 ft., depending on the construction activity, centered at the approximate location of the clutch – nests on most beaches can be marked with a smaller area. The stakes should extend about 36 in. above the sand. To further identify the nest site, a surveyor's ribbon can be tied from the top of one stake to another to create a clearly identified perimeter around the nest site. Additionally, a nest sign can be attached to one of the stakes used to create the perimeter<sup>7</sup>. The option of nest relocation is possible but may cause adverse effects if eggs are to be removed. The nest may be relocated only if it is certain that the nest will be lost otherwise.

The Environmental Manager will provide the grounds crew with educational materials providing photographs and pamphlets about notable species of plants and animals to look out for while conducting pre-assessments and land clearing activities. Information regarding Avian studies will be given as necessary to reflect the different seasons and indicators for Neotropic winter migrants, summer breeding migrants and breeding resident birds that are key contributors to the biodiversity and citizen science programs in the area. Also highlighted in the educational materials will be invasive and exotic species that will need to be removed from the site, including Australian Pine, Hawaiian Seagrape, Brazilian Pepper and Trailing Daisy. The use of native Bahamian species will be incorporated into the Project development to minimize water demanding landscape species and reduce additional water and nutrient supplements.

### 8.3 Marine Resource Management

Marine resource management by the Project team will focus on preventing mortality of marine species, where possible, and maintaining habitat and ecosystem integrity of the beach during the demolition, construction and operation phases. The beach abuts the former Stuart Cove's Dive Bahamas marina entrance. Heavy equipment will not be permitted to drive on the beach without written consent from the Albany Development Group.

#### Demolition

During demolition and construction all construction tools will be secured to prevent the equipment from inadvertently falling in the marina. All employees will be directed to secure materials appropriately. Before demolition activities begin a fence or other suitable barrier will be erected around the site between the marina and the buildings slated to be demolished. The barrier will prevent construction debris from entering the marina and moving beyond the marine entrance to the adjacent beach. If debris falls in the marina, then the Environmental Monitor will ensure it is removed posthaste. Demolition will be directed inland to help prevent demolition debris from falling in the marina. Debris will be collected in land away from the marina until collection and will be transported to the New Providence landfill.

#### Construction

To avoid impacting the beach during construction, sheet piles will be installed in the marina parallel to the western boundary of the marina. A Type 3 Turbidity Curtain for tidal waters will be installed beyond the marina boundary as shown in the figure below. The sheet piles and turbidity curtain will be installed before fill is introduced as a part of the land reclamation activity. This combination of turbidity barriers should prevent the formation of turbidity plumes beyond the marina entrance. The reclamation will not include the entrance channel for the existing marina, only the marina basin. No heavy equipment will be allowed to operate on the beach without expressed written consent of the Albany Development Group.

Turbidity readings will be taken at 25 meters, 50 meters, and 70 meters to ensure turbidity remains below required environmental standards. If the turbidity increases above 29 NTU, then the land reclamation activity will stop, and a perimeter check will be conducted by the Environmental Monitor. Gaps or openings in the turbidity barrier(s) will be repaired before the land reclamation restarts. A barrier at the vegetation line along the coast will help prevent construction debris from entering the water along the coast.

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<sup>7</sup> Florida Fish and Wildlife Conservation Commission. (2016). Florida fish and wildlife conservation commission marine turtle conservation handbook.

The land reclamation activity will negatively impact benthic sessile and or slow-moving species in the marina. Demersal species will migrate from the area as the land reclamation activity progresses. As a result, the mitigation described focuses on the benthic species in the marina. The initial phases of the land reclamation activity will focus on relocating sea cucumbers or conch observed in the area to the beach habitat beyond the marina boundary. While these species were not observed during the EBS assessment, Stuart Coves Dive Bahamas employees indicated that these species were sometimes observed in the canal. Prior to the installation of sheet piles, the sea floor is to be swept for organisms to be removed out of the area of impact. Potential relocation sites are identified in the figure above. A report of the relocation activity will be submitted to DEPP. The installed turbidity barrier will act as a barrier to prevent the relocated species from returning to the site while the marina is being filled.

Figure 9. Turbidity barrier locations and tentative relocation sites

-  Proposed relocation site for benthic species if present in the marina.
-  Sheet Pile
-  Turbidity Curtain
-  Barrier along vegetation line between construction site and the coast
-  Fence between demolition site and marina



A healthy functioning sand dune is important to a functioning beach system. To maintain the integrity of the beach, the sand dune will be maintained by removing invasive species, see Invasive Species Management section.

Once the lots are cleared a suitable construction setback approved by the Ministry of Public Works will be incorporated for buildings on the lots east of the former Stuart Cove's site. Additionally, vehicles will not be permitted on the beach without written consent from the Albany Development Group.

8.4 Air Quality Management

Baseline air quality measurements were collected with an Igeress Air Quality Detector. Air quality readings were collected August 17, 2020 at the Stuart Cove’s location near the channel entrance and along the beach foreshore on the opposite side of the Stuart Cove channel. Site ambient air quality results reflect that of ‘Fresh’ air quality with a pollution rating of 001 (Table 1).

*Table 1. Ambient air quality readings taken August 17, 2020.*

| <b>Parameter</b>  | <b>1<sup>st</sup> Reading</b> | <b>2<sup>nd</sup> Reading</b> |
|---|-------------------------------|-------------------------------|
| Overall Air Pollution Level   | 001 (Fresh)                   | 001 (Fresh)                   |
| Formaldehyde - HCHO   | 0.009 mg/m <sup>3</sup>       | 0.015 mg/m <sup>3</sup>       |
| Temperature   | 33°C                          | 36°C                          |
| Humidity  | 68%                           | 62%                           |
| Total Volatile Organic Compound - TVOC                                | 0.038 mg/m <sup>3</sup>       | 0.063 mg/m <sup>3</sup>       |
| PM 2.5 - Particulate Matter with a diameter less than 2.5 micrometers | 004 µg/m <sup>3</sup>         | 003 µg/m <sup>3</sup>         |
| PM 1.0 - Particulate Matter with a diameter less than 1 micrometer    | 003 µg/m <sup>3</sup>         | 002 µg/m <sup>3</sup>         |
| PM 10 - Particulate Matter with a diameter less than 10 micrometers   | 004 µg/m <sup>3</sup>         | 003 µg/m <sup>3</sup>         |

It is likely that the ambient air quality of the site will be impacted by increased dust particles in the air due to the use of motor vehicles and other heavy equipment during construction of the proposed development. In addition to dust, the use of machinery will generate fumes and some fine particles (particulate matter). The Environmental Monitor on site will continue to monitor the air quality, ensuring that construction activities do not exceed ambient air quality readings previously recorded, or to avoid excessive dust accumulation on site and distribution within the surrounding community.

Construction activity air quality control measures include:

- A water truck will frequent the site as needed to lightly spray the ground and stockpiles to prevent sand or dust transport by wind.
- On-site vehicles will adhere to the speed limit of 15 mph to prevent excessive particle movement
- Regular maintenance of on-site vehicles and equipment is required to prevent excessive fuel exhaust.
- Vehicles transporting fill or stockpile material will transfer material slowly to avoid created dust clouds on site as much as possible. Also, Albany will create a haul road for construction material transportation. This road will be watered as necessary to suppress dust. All laden trucks must be covered whether entering or leaving the site.
- Installation of barrier around the site to reduce dust transport from the site to adjacent areas. An example is a screen mesh fabric affixed to a chain link fence is shown below.

*Figure 10. Example of construction site watering and boundary chain link fence with mesh material affixed.<sup>8</sup>*



Operation air quality control measures include:

- Regularly scheduled equipment maintenance for all facilities and machinery at Albany West to prevent fuel emissions (Example: generators, HVAC system).
- Regularly scheduled maintenance of on-site vehicles.
- Appropriate signage in areas the prohibit smoking from staff and guests.

#### 8.5 Water Quality Management

Water quality management is related to the discussion on the turbidity barriers in the Marine Resource Management section. Turbidity will be monitored during demolition and reclamation of the marina to ensure the water quality is not impacted negatively by the project activities. Baseline turbidity measurements will be recorded to help maintain the preconstruction turbidity levels of the beach. Turbidity measurements will be taken daily during land reclamation activities at the marina. The results will be reported weekly to the Department of Environmental Planning and Protection by the Environmental Monitor.

#### 8.6 Energy Management

The EBS describes the Project as having a long term positive benefit on the energy infrastructure because BPL electrical supply lines will be relocated underground during construction to help prevent damage of the lines during hurricanes or strong wind events. It is important that the relocation of the lines do not lead to long term power outages during the transition from above ground to below ground. The Site Manager will work closely with the BPL personnel to reduce the power outages during this process. As the need arises scheduled electrical disconnections required during the relocation will be communicated to stakeholders prior to the disconnection.

The Department of Environmental Planning and Protection recommends that a development should show options of how it will reduce 30% of its energy consumption. The Phase1 development is not expected to have power from BPL until later in the project. Until, generators will be used during the construction in Phase1. Once power is installed later in the development, LED lights and solar power will be used to achieve a 30% reduction of energy. This includes the lighting of the golf course path, street lights, spot lights and the installation of LED lights throughout the development.

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<sup>8</sup> <https://bosstek.com/dust-control-for-industrial-sites/>

### 8.7 Invasive Species Management

Invasive species will be removed from the site during the land clearing activity. The invasive flora will be moved to a temporary holding site in a dumpster. The dumpster will be located on the site removed from the coast and the marina. The dumpster will be emptied by a contractor once it is full. To prevent the return of invasive species during operation, native species will be incorporated in the landscaping of the property. Native vegetation will be designed to integrate with the existing Albany Bahamas aesthetic.

*Figure 11. Invasive species on the project site along the coast.*



### 8.8 Spill Management

Fuel spill kits will be on-site to prevent accidental oil or fuel spills. These spill kits are to be located near the channel entrance, beach foreshore and with easy access within the terrestrial construction zone. Universal, Hazardous Material (Hazmat) and Oil spill kits will be on site and contain the following:

Universal Spill Kit – Used for non-hazardous types of liquids (e.g. coolants, solvents and anti-freeze)

- 30-gallon overpack salvage drum
- Universal sorbent socks
- Universal sorbent pillows
- Gloves
- Safety goggles
- Disposal bags

Oil Spill Kit – Used for grease and oil-based liquids (e.g. hydrocarbons and grease)

- Sorbent booms for oil/fuel containment and recovery in the marine environment.
- Oil-only sorbent socks
- Gloves
- Goggles

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- Disposable bags
- Oil-only defender pads
- 5-30 gallon container with screw-top lid.

Hazmat Spill Kit – Used to absorb aggressive, corrosive liquid chemicals. This can also be used to absorb water and oiled based liquids.

- Absorbent pads
- absorbent socks
- Gloves
- Caution tape
- Disposable bags

On site spills will be classified as either marine or terrestrial based on the location of the spill. Once identified proper containment practices and materials will be used to remove the spill within the affected area as quickly as possible. The source of the spill will be identified and stopped immediately. Staff will be trained on the identification and removal of spills on site (both marine and terrestrial). Construction staff training will include identification of the various spill kits on site and which is appropriate for each type of spill. This training will also include the donning of proper Personal Protective Gear (PPE) prior to clean-up activities to avoid health and safety issues associated with fuel, oil or hazardous waste substances. A spill management form will be used to record the incident and identify staff on duty (Figure 12).

Figure 12. Example of the Albany West Spill Report Form.

| <b>Albany West Spill Report Form</b>                      |                           |
|---|---------------------------|
| Date: _____   | Weather Conditions: _____ |
| Albany West Staff on Duty: _____                          |                           |
| Contact Information: _____                                |                           |
| <b><u>Spill Details</u></b>                               |                           |
| Type of Spill/ Product: _____                             |                           |
| Marine or Terrestrial: _____                              |                           |
| Description of Spill Location of Spill: _____             |                           |
| Spill Estimated Quantity: _____                           |                           |
| Remediation Method: _____                                 |                           |
| Disposal Method: _____                                    |                           |
| Cause of Spill: _____                                     |                           |
| _____   |                           |
| _____   |                           |
| Prevention Method Employed: _____                         |                           |
| _____   |                           |
| _____   |                           |
| Please identify spill location on the map provided below: |                           |



Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Please attach photographs of spill activity.*

Signed by:

*(Insert Signature Here)*

Site Safety Manager.

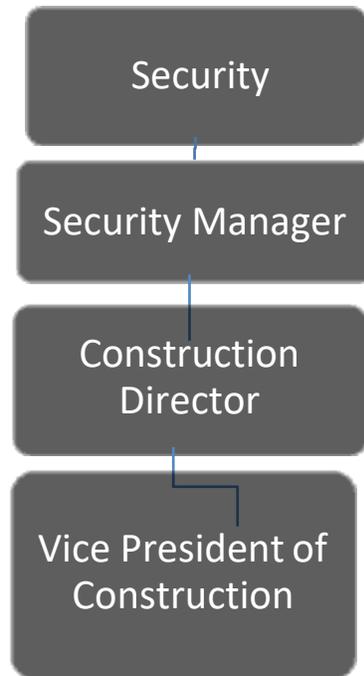
The appropriate authorities will be contacted to protect the nearby stakeholder communities from intentionally or unintentionally encroaching on a spill environment and to help contain and clean-up spills. For example, if the BPL fuel line located along South Ocean Drive is punctured, BPL will be contacted immediately to contain the spill and account for loss of diesel fuel due to the spill. It is essential that the management of the Albany West follow specification explained by the following spill management for the development:

- Identify and organization chart with clearly defined personnel roles. Each person should be well informed of their tasks. Most importantly, an overseer / manager should be appointed.
- All Albany West personnel should be well trained in the spill management.
- Proper safety procedures should follow. All personnel should wear suitable safety gear before approaching fuel or other hazardous waste material.
- Mitigation techniques should be used. Which include proper materials for the type of spill (Oil, universal or hazardous waste).
- All spills should be reported to local officials immediately.
- Photos should be taken of the spill to illustrate the extent and type.
- The public should be notified to avoid injuries or spread of waste.
- Spills should be contained and removed as soon as possible.
- Disposal will include directives from the Department of Environmental Health Services.

- Restoration efforts should be made within the impacted environment.
- Regular inspections within the impacted area should be made and documented to give an account for the existing environment after the clean-up.

**Emergency Contact List:**

In the event emergency services are required due to an accident, fire or medical emergency, the incident should be reported immediately by calling 919 or 911. Specific contact information for the nearest emergency centers are provided below:



- Security
  - Any emergency at Albany is reported to security (Security e-mail address: [security@albanybahamas.com](mailto:security@albanybahamas.com) / (242) 676-6003).
- Security Management
  - A security manager will be stationed on site day and night. Contact persons are Bradly Moss and Gervase Munroe.
- Construction Director
  - If security cannot be contacted, the Construction Director should be contacted. (e-mail address: [mellsworth@albanybahamas.com](mailto:mellsworth@albanybahamas.com)).
- Vice President of Construction
  - If the Construction Director is unavailable the Vice President of Construction should be contacted. (e-mail address: [jjohnston@albanybahamas.com](mailto:jjohnston@albanybahamas.com))

Community Emergency contacts provided below:

Cable Beach Police Station (242) 327-8800

In the event urgent maintenance is required due to a major spill, the Cable Beach Police Station will be contacted (see above) as well as the Department of Environmental Health (see below):

Department of Environmental Health Services (DEHS)  
(242) 322-8037 or 323-2295

Princess Margaret Hospital (242) 322-2861  
Doctor’s Hospital (242) 302-4600

In the event that urgent maintenance is required due to an accidental fuel leak by the Bahamas Power & Light Company (BPL) fuel line, BPL will be contacted:

Blue Hill & Tucker Road Power Station (242) 302-1000  
Blue Hill Power Station (242) 341-5515

8.9 Wastewater Management

Portable sewage waste receptacles (Porta Pottys) will be available on site and located away from the immediate coastline or water bodies to avoid pollution run off to the nearest marine environment. Prior to demolition, the existing underground septic tank at Stuart Cove will be emptied and decommissioned in association with DEPP and DEHS guidelines.

During operation sewage, drainage and other wastewater will be collected and disposed of within industry accepted septic tanks on the property.

8.10 Solid Waste Management

Solid waste generated from construction and operations phases are categorized by the following:

*Table 2. Solid Waste Categories*

| Solid Waste Type/Material   | Developmental Phase |
|---|---------------------|
| Demolition waste (concrete, wood, roofing, appliances, tile, paint chips, rebar, sheetrock, metals)                 | Construction        |
| Clearing of vegetation (mostly invasive and some native)  | Construction        |
| Domestic (plastic, glass, cardboard, paper, rubber)   | Operation           |
| Construction debris (plastic, paper, concrete, rebar, metal, wood, rubber, hazardous waste – paint & vehicle fluid) | Construction        |

Solid waste generated on site will be identified and stored in the appropriate classification stock pile. Waste will be located at a designated solid waste area on site away from immediate construction for ease of sorting and transportation. Preferably, construction waste bins that can hold approximately 40 cubic yards of waste will be available for use and used to transport solid waste to the public landfill (Figure 13). Waste from the project site will be disposed of according to best practices and regulations put forth by The Department of Environmental Health Services (DEHS) Solid waste products will be loaded onto the assigned dump truck and covered to avoid loss of solid waste products during transportation. To ensure public transparency and best management practices are met, each solid waste deposit must return a solid waste ticket to the site safety officer. This ensures that this waste is disposed of with the appropriate agency and not dumped recklessly.

*Figure 13. An Example of a suitable Construction Waste Bin for solid waste disposal.*



Appropriate recycling practices will be followed during construction to avoid as much waste as possible. Waste handling will be discussed with the Superintendent and Project manager prior to the commencement of the construction phase. Furthermore, the Superintendent will present/discuss various options for efficient use of demolition waste materials, construction materials and other options to reduce construction waste. The Albany Safety Officer will be present on site to ensure solid waste guidelines are in practice on site.

A waste generation form is required to calculate accurate waste amounts on site during construction and operation. This helps the public landfill and the Project Manager determine the impacts of generated waste from this project.

Figure 14. Example of on-site solid waste transportation form.

| <b>Albany West Waste Form</b>     |                                     |                                     |
|-----------------------------------|-------------------------------------|-------------------------------------|
| Date:                             |                                     |                                     |
| Truck License Plate Number:       |                                     |                                     |
| Name of Driver:                   |                                     |                                     |
| Waste Truck covered?    Yes    No |                                     |                                     |
| Waste Type                        | Origin<br>(Construction/Demolition) | Estimated Volume of waste (cu. Yd.) |
|                                   |                                     |                                     |
|                                   |                                     |                                     |
| Signed by:                        |                                     |                                     |
| Site Safety Officer               |                                     |                                     |

### 8.11 Hazardous Waste Management

According to the United States Environmental Protection Agency (EPA), hazardous waste is defined as waste that meets the characteristics of a hazardous waste. A characteristic of hazardous waste is a property when present in waste, indicates that this particular waste product poses a sufficient threat to merit regulation as hazardous<sup>9</sup>.

EPA established four hazardous waste characteristics: ignitability, corrosivity, reactivity and toxicity:

- Ignitability – Wastes that are hazardous due to the ignitability characteristic include liquids with flash points below 60 °C, non-liquids that cause fire through specific conditions, ignitable compressed gases and oxidizers<sup>10</sup>.
- Corrosivity – Wastes that are hazardous due to the corrosivity characteristic include aqueous wastes with a pH of less than or equal to 2, a pH greater than or equal to 12.5 or based on the liquids ability to corrode steel<sup>11</sup>.
- Reactivity – Wastes that are hazardous due to the reactivity characteristic may be unstable under normal conditions, may react with water, may give off toxic gases and may be capable of detonation or explosion under normal conditions or when heated<sup>12</sup>.
- Toxicity – Wastes that are hazardous due to the toxicity characteristic are harmful when ingested or absorbed. Toxic wastes present a concern as they may be able to leach from waste and pollute groundwater<sup>13</sup>.

<sup>9</sup> <https://www.epa.gov/hw/defining-hazardous-waste-listed-characteristic-and-mixed-radiological-wastes>

<sup>10</sup> <https://www.epa.gov/hw/background-document-hazardous-waste-characteristic-ignitability>

<sup>11</sup> <https://www.epa.gov/hw/background-document-hazardous-waste-characteristic-corrosivity>

<sup>12</sup> <https://www.epa.gov/hw/background-document-hazardous-waste-characteristic-reactivity>

<sup>13</sup> <https://www.epa.gov/hw-sw846/sw-846-test-method-1311-toxicity-characteristic-leaching-procedure>

Proper handling and disposal of hazardous waste on site consists of the presence of properly trained staff that is equipped with adequate personal protective equipment (PPE). This includes protective eyewear, gloves, masks, mask filters and full body disposable suit as illustrated in the figure below. Any hazardous waste generated on property will require notification to DEPP and the department's approval regarding disposal. Hazardous waste generated due to construction activities or existing hazardous waste from the previous development will be disposed of following DEHS guidelines. Adequate disposal will consist of properly sealing the hazardous waste and transported in a secured vehicle to the local landfill. Waste tickets will be collected to ensure proper disposal of the hazardous waste materials were followed.

*Figure 15. Example of hazardous waste PPE. (Source: nueoffshore.com)*



It was determined in consultation with DEPP that Asbestos and Lead testing be carried out on infrastructure to be demolished in Phase 1 of the Albany West development. Results determined no asbestos was detected in the samples collected from the former South Ocean Resort waterfront property. Lead samples analyzed contained less than 0.008% lead concentration by weight, all falls within the allowable limits of lead concentration on paint established by the US EPA. This determination reduces the immediate threat of exposure to these hazardous waste materials during demolition on site.

The presence of the BPL fuel line which runs parallel to the proposed site and along South Ocean Blvd., poses a possible threat of hazardous waste exposure due to accidental rupture during the

construction phase of this project. Best management practices and spill management are detailed in [Section 8.8 – Spill Management](#).

Remediation of hazardous waste within the Stuart Cove Maintenance Area has been performed by the previous occupants and local consultant ECL Ltd . The removal of oil drums, boat material and other potentially hazardous waste will be removed prior to the start of construction activity. If during land excavation visible staining or odors due to remaining ground contamination is observed, additional remediation activities will be performed to mitigate against continued impact.

Hazardous waste remediation within these upland areas includes the following<sup>14</sup>.

- Excavation – Removal of contaminated soil from the ground, and then either treating or properly disposing of it. Tested topsoil will be distributed the containment area and replace the contaminated soil.
- Treatment - According to the EPA, “Treatment approaches can include: flushing contaminants out of the soil using water, chemical solvents, or air; destroying the contaminants by incineration; encouraging natural organisms in the soil to break them down; or adding material to the soil to encapsulate the contaminants and prevent them from spreading.”
- Containment – to avoid possible contamination to the surrounding soil composites.
- Blending – The blending of contaminated soil with clean soil may reduce the contaminant concentration and reduce pollutant levels.

## **9. Health and Safety**

Health and Safety will be guided by the Albany West Health and Safety Program (HSP). The HSP Supervisor has the authority and responsibility for implementing the provisions of Albany West HSP. All managers and supervisors are responsible for implementing and maintaining the HSP in their work areas and for answering worker questions about the HSP. A copy of this HSP is available from each manager and supervisor.

Due to the recent global pandemic known as Covid-19, specific protocols will be included in Appendix D.

### **SECTION 1 – GENERAL HEALTH AND SAFETY PROGRAM**

#### *Program Implementation and Responsible Person*

The Health and Safety Program (HSP) Supervisor has the authority and responsibility for implementing the provisions of this program for Albany West. All managers and supervisors are responsible for implementing and maintaining the HSP in their work areas and for answering worker questions about the HSP. A copy of this HSP is available from each manager and supervisor.

#### *Job Site Start Up – General and Subcontractors*

It is the responsibility of Albany West to ensure that our jobsites are consistent in the start-up procedures. This HSP contains a checklist that identifies the documentation required to be maintained, collected and organized throughout the duration of the project. Albany West requires all subcontractors to maintain the HSP at the jobsite. The subcontractor’s HSP and Code of Safe

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<sup>14</sup> <https://www.hazardouswasteexperts.com/what-you-need-to-know-about-soil-contamination-2/>

Practices will be the guidelines used by their employees. Subcontractors may review for reference the Albany West HSP and Code of Safe Practices to understand the standards of the company. However, the Albany West HSP and Code of Safe Practices shall not be intended as the sole practice guide used by subcontractors.

The subcontractor's authorized, competent and/or qualified person(s) will be identified to the Albany West Supervisor. In the event there is a safety concern, the Supervisor will address the issue with the subcontractor's designated person.

#### *Supervisor Responsibility*

Supervisors (**also known as superintendents, foremen, managers**) are responsible and held accountable for safety and health in their areas of supervision. This includes:

1. Remain informed about company and OSHA safety and health regulations affecting the operations you supervise.
2. Ensure that each employee is able to safely complete each task to which he is assigned and performs these tasks in a safe manner.
3. Ensure equipment and machines are maintained in safe operating condition. Whenever equipment is involved in an accident, regardless of how minor, secure the equipment in a safe location until an investigation is completed. Only after the equipment has been inspected and deemed safe, may it be returned to service.
4. Investigate incidents and injuries that have occurred as soon as reasonably possible, identify the corrective action necessary to prevent a similar incident or injury from occurring, reporting of injuries to the corporate office within 24 hours of occurrence of an injury.
5. Ensure that all employees follow all safety and health regulations and work practices, including using personal protective equipment and completing all required safety training.
6. Complete required daily job safety analysis, weekly site safety inspections and other delegated safety duties.
7. Reporting to work under the influence of alcohol or drugs of any type (including over the counter drugs that "may cause drowsiness") or using drugs or alcohol during work hours is immediate cause for dismissal. Remove any employee under the influence from the job site immediately and prepare a written report to be placed in his/her personnel file.
8. Always act professionally, dress appropriately.

#### *Employee Responsibility*

Employees are responsible for the following:

1. Follow all Albany West safety and health requirements and safe work practices, including using personal protective equipment where required and complete all required safety and health training.
2. Report to your site supervisor, any unsafe or unhealthy conditions with the work site. It is the policy of Albany West to encourage all employees to report hazards existing at their jobsite to their supervisor or the Responsible Person so that corrective action can be taken in a timely manner. Employees who report such conditions will not be disciplined nor will they suffer any reprisals due to their actions.
3. Report to your site supervisor, any unsafe equipment or work environment.
4. Employees shall see that all equipment guards and other protective devices are in the proper places and adjusted or shall report deficiencies promptly to your site supervisor.
5. Each tool or piece of equipment has a specific purpose and use (i.e. screwdrivers are not chisels; electric cords are not ropes, etc.). Altering the specific use of a tool is unsafe.

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6. Whenever you or the equipment you operate is involved in an accident, regardless of how minor, report it immediately to your site supervisor.
7. Reporting to work under the influence of alcohol or drugs of any type (including over the counter drugs that “may cause drowsiness”) or using drugs or alcohol during work hours is immediate cause for dismissal.
8. Always act professionally, dress appropriately. No baggy pants or sweatpants. Wear shirt with sleeves (no tank tops) and ankle high work boots (no tennis shoes, flip flops, etc.).
9. If you are unsure about how to perform a task that has already been explained to you, ask for additional instruction **before** you start working.
10. Be aware of what you intend to do **before** you start.

Your attention to and participation in the following guidelines will help considerably in eliminating job hazards and ensure a safe workplace for all employees. If you do not understand any of the policies outlined above, it is your responsibility to discuss each issue with your supervisor before you begin working. Your signature on this document ensures Albany West that you fully understand and comprehend the responsibilities and are able to follow them while performing as an employee of our company.

Dated \_\_\_\_\_

Print Name: \_\_\_\_\_

Signature: \_\_\_\_\_

***Compliance***

Albany West management is responsible for ensuring that all safety and health policies and procedures are clearly communicated and understood by all of our employees. Managers and supervisors shall enforce the rules fairly and uniformly.

All Albany West employees are responsible for using safe work practices, for following all directives, policies and procedures, and for assisting in maintaining a safe work environment.

Albany West system of ensuring that all workers comply with the rules established in our IIPP and Code of Safe Practices and to maintain a safe work environment include:

- Informing workers of the provisions of our HSP;
- Evaluating the safety performance of all workers;
- Recognizing employees who perform safe and healthful work practices;
- Providing training to workers whose safety performance is deficient;
  - Disciplining workers for failure to comply with safe and healthful work practices; and
  - Conducting recurring training that is relevant to our trade practices.

The Albany West IIPP and Hazard Assessment Checklist is attached in Appendix E..

***Policy Communication***

Albany West recognizes that open, two-way communication between management and staff and on-site supervisors and workers on health and safety issues is essential to an injury-free, productive workplace. The following system of communication is designed to facilitate a continuous flow of safety and health information between management and staff in a form that is readily understandable and consists of one or more of the following checked items:

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- New worker orientation including a discussion of safety and health policies and procedures.
- Review of our HSP.
- Workplace safety and health training programs.
- Regularly scheduled safety meetings.
- Effective communication of safety and health concerns between workers and supervisors, including translation where appropriate.
- Posted or distributed safety information to include but is not limited to our Code of Safe Practices.
- A system for workers to anonymously inform management about workplace hazards.
- We communicate with and instruct our employees orally about general safe work practices and with respect to hazards unique to each employee's job assignment.

The Health and Safety Supervisor will meet with our management and field teams, prepare written records of the safety and health management meetings, review results of the periodic scheduled inspections, review investigations of accidents and exposures and makes suggestions to management for the prevention of future incidents, review investigations of alleged hazardous conditions, and submit recommendations to assist in the evaluation of employee safety suggestions.

**Hazard Assessment**

Albany West will conduct periodic inspections to identify and evaluate workplace hazards and shall be performed by competent observer(s) in the following areas of the workplace. Competent Observers will be identified on a project by project basis utilizing the following format.

*Table 3. Hazard Observer form. \* If no Hazard has been identified then No Hazard Identified should be written in this column.*

| Date<br>(day/month/yr.) | Time | Competent<br>Observer (Full<br>name) | Assessment<br>Area | Description<br>of Hazard<br>Identified, if<br>any. * |
|-------------------------|------|--------------------------------------|--------------------|--|
|                         |      |                                      |                    |  |
|                         |      |                                      |                    |  |
|                         |      |                                      |                    |  |

Periodic inspections are performed daily and;

- A. When we initially established our HSP;
- B. When new equipment, processes, procedures or substances which present potential new hazards are introduced into our workplace;
- C. When new, previously unidentified hazards are recognized;
- D. When occupational injuries and illnesses occur;
- E. When we hire and/or reassign permanent or intermittent workers to processes, operations, or tasks for which a hazard evaluation has not been previously conducted; and
- F. Whenever workplace conditions warrant an inspection.

Periodic inspections consist of identification and evaluation of workplace hazards utilizing

applicable sections of the attached Hazard Assessment Checklist and any other effective methods to identify and evaluate workplace hazards.

*Hazard Correction*

Unsafe or unhealthy work conditions, practices or procedures shall be corrected by Albany West supervisors in a timely manner based on the severity of the hazard(s). Hazards shall be corrected according to the following procedures:

- A. When observed or discovered;
- B. When an imminent hazard exists, which cannot be immediately abated without endangering employee(s) and/or property, Albany West site supervisor will remove all exposed workers from the area except those necessary to correct the existing condition. Workers necessary to correct the hazardous condition shall be provided with the necessary protection; and
- C. All such actions taken and dates they are completed shall be documented on the appropriate form, Hazard Assessment and Correction Record.

*Accident/Exposure Investigations*

Albany West has established the following procedures for investigating workplace accidents and hazardous substance exposures to include:

- Visiting the accident scene as soon as possible;
- Interviewing injured workers and witnesses;
- Examining the workplace for factors associated with the accident/exposure;
- Determining the cause of the accident/exposure;
- Taking corrective action to prevent the accident/exposure from reoccurring; and
- Recording the findings and corrective actions taken.

Any incident whether or not involving personal injury (Albany West workers, subcontractor workers, or the general public) and/or property damage, indicates a potential breakdown in the Injury and Illness Prevention Program. The incident should be quickly and thoroughly investigated. All investigations will also be uploaded into the Albany Development systems software for review and filing.

Since the difference between minor and major accidents is often small (i.e. a “nick” from a power saw could have been an amputation), **ALL INCIDENTS SHOULD BE INVESTIGATED AND REPORTED.** Even near misses should be reviewed and reported. All incidents or accidents involving Albany West employees and equipment should be reported immediately to the site supervisor. A written report should be completed. This report should be turned into the main office within 24 hours.

NOTE: Serious personal injuries (fatalities, hospitalization of more than 24-hour observations, amputation or disfigurement) and severe property damage (estimated losses in excess of \$5,000) should immediately be reported to the site supervisor and The Health and Safety Supervisor.

1. Call for appropriate emergency help (paramedic, ambulance, fire department);
2. Make sure the scene is secure and not endangering any other workers;
3. Obtain witnesses’ names, addresses, telephone numbers and written statements when possible;
4. Take pictures of the accident area and surrounding location, get as much detail as

- possible;
5. Do not move anything except where necessary to protect rescuers and aid the injured. Make sure the area is safe before touching or moving anything;
  6. Keep the area clear of sightseers;
  7. For their own safety, keep the media out of the immediate area. Tell them a representative from the office will give a statement when appropriate.

*Purpose of Accident Investigation*

1. To help management identify potential hazards that may exist at other jobs;
2. To determine the accident root cause so similar accidents can be prevented;
3. To pinpoint problem areas and improve methods;
4. Point out the need for additional training;
5. To obtain facts that may eliminate or reduce settlements in third party liability lawsuits;
6. To improve worker morale by showing our company's interest in preventing future injuries is a priority.

*Determining Causes*

Find all causes. Nearly all accidents result from a combination of physical hazards and unsafe work practices.

1. Investigate accidents as soon as possible, while physical conditions are the same and facts are clear;
2. Interview the injured employee, if possible;
3. Interview witnesses;
4. Find facts vs. faults;
5. Test statements against actual physical conditions.

*Corrective Action*

1. Decide on a practical solution for eliminating each cause of the accident;
2. Implement corrective measures as soon as possible;
3. Review the accident and corrective measures at the next safety meeting;
4. Follow-up to assure controls are adequate.

*Training & Instruction*

All Albany West employees, including managers and supervisors, shall have training and instruction on general and job-specific safety and health practices. Training and instruction shall be provided as follows:

1. When the HSP is first established;
2. To all new employees, except for construction workers who are provided training through a Mow/OSHA approved construction industry occupational safety and health training program;
3. To all employees given new job assignments for which training has not previously been provided;
4. Whenever new substances, processes, procedures, or equipment are introduced to the workplace and represent a new hazard;
5. Whenever we are made aware of a new or previously unrecognized hazard;
6. To supervisors to familiarize them with the safety and health hazards to which workers under their immediate direction and control may be exposed; and

7. To all employees with respect to hazards specific to each employee's job assignment.
8. To any employee requiring retraining.

Workplace safety and health practices include, but are not limited to, the following:

1. Explanation of our HSP, emergency action plan and fire prevention plan, and measures for reporting any unsafe conditions, work practices, injuries and when additional instruction is needed.
2. Use of appropriate clothing, including gloves, footwear, and personal protective equipment.
3. Information about chemical hazards to which our employees could be exposed and other relevant hazard communication program information.
4. Availability of toilet, handwashing and drinking water facilities.
5. Provisions for medical services and first aid including emergency procedures.

In addition, Albany West will provide specific instructions to all workers regarding hazards unique to their job assignment, to the extent that such information was not already covered in other training.

#### *Orientation Safety Training*

An employee's overall safety attitude will be greatly influenced by what he/she learns about Albany West's safety program during his/her first few hours on the job. Each new hire should:

1. Be aware of Albany West commitment to employee safety and receive a copy of Albany West's "Code of Safe Practices".
2. Be aware of the potential hazards associated with his/her job and the safety precautions to be taken including the availability and use of personal protective equipment and guards.
3. Review Albany West's Health and Safety Program and Code of Safe Practices.
4. Know the procedures for reporting accidents, receiving medical attention, and know the location of the first aid kit.
5. Review the safety bulletinboard.
6. Receive follow up training on a regular basis or as his/her job functions change.

#### *Toolbox Meetings*

Toolbox meetings are an effective way of making all workers aware of the need for job safety on a continuing basis. They help reinforce Albany West's commitment to safe production.

The Albany West site supervisor will provide weekly toolbox topics for each jobsite. The success of toolbox meetings depends upon the positive attitude and advance preparation of the leader. A copy of the minutes of each meeting is to be maintained at the jobsite. Here are some general guidelines for toolbox meetings:

1. Hold meetings daily, preferable at the same time for staff to receive their directives for the day.
2. The first toolbox meeting on a job should review general safety rules and potential hazards as well as emergency procedures.
3. Get feedback from the workers. Ask questions. Get opinions. Act quickly on good suggestions and tell what steps were taken at the next meeting.
4. Talk constructively.
5. When possible, use props (damaged ladder, signage).
6. Use the forms provided for documenting these meetings. Make sure that you get an

- attendance list at each meeting.
7. Incorporate designated times for environmental and safety training
  8. OSHA standards are provided as supplemental information.
  9. The team may select a new superintendent every week based on discussions in this meeting.

Additional training will be provided to supervisors to familiarize them with the safety and health hazards to which employees under their immediate direction and control may be exposed. It is the responsibility of the site supervisor to ensure that each Albany West worker receives adequate training before beginning work and on a continuing basis during his/her employment with Albany West. The primary objectives are to establish a clear concept of the employee's safety responsibilities, familiarity with the potential hazards involved, and knowledge of safety rules and proper job procedures. Training applies to experienced, as well as novice or inexperienced workers. Employees with previous experience may not be familiar with Albany West's specific safety procedures. The new worker may be placed with an experienced Albany West employee who is known to have a good safety record and familiar with our policies.

#### *Specialized Hazards Training*

All employees should be aware of the general and specific hazards of the jobs they will be performing. The employee will be required to:

1. Be aware of safe work procedures and safety equipment required.
2. Demonstrate proficiency in the area of work.
3. Have up-to-date training certificates as required.
4. Know appropriate CPR/First Aid procedures in the event of injury.

#### *Training Subjects*

At Albany West, workers must be trained in the following subjects based upon their designated responsibilities:

- Albany West Code of Safe Practices.
- Confined Spaces.
- Proper scaffold erection.
- Overhead electric power lines and maintaining safe working clearances.
- Inspection of all equipment prior to use.
- Good housekeeping, fire prevention, safe practices for operating any construction equipment.
- Safe procedures for cleaning, repairing, servicing and adjusting equipment and machinery.
- Safe access to working areas.
- Protection from falls.
- Trenching and excavation.
- Proper use of powered tools.
- Guarding of belts and pulleys, gears and sprockets, and conveyor nip points.
- Machine, machine parts, and prime movers guarding.
- Lock-out/Tag-out procedures
- Power tool operation and safety
- Unsafe weather conditions
- Materials handling
- Fall protection from elevated locations.

- Use of elevated platforms, including condors and scissor lifts.
- Driver safety.
- Slips, falls, and backinjuries.
- Ergonomic hazards, including proper lifting techniques and working on ladders or in a stooped posture for prolonged periods at one time.
- Personal protective equipment.
- Respiratory equipment.
- Hazardous chemical exposures.
- Hazard communication.
- Physical hazards, such as heat/cold stress and noise
- Bloodborne pathogens and other biological hazards.
- Other specific job hazards such as: traffic control and flagging procedures.

*Documentation and Recordkeeping*

We have taken the following steps to implement and maintain our HSP:

1. Records of hazard assessment inspections, including the person(s) or persons conducting the inspection, the unsafe conditions and work practices that have been identified and the action taken to correct the identified unsafe conditions and work practices, are recorded on a Hazard Assessment and Correction Form; and
2. Documentation of safety and health training for each worker, including the worker's name or other identifier, training dates, type(s) of training, and training providers are recorded on a Worker Training and Instruction Form. We also include the records relating to worker training provided by a construction industry occupational safety and health program approved by OSHA.

Inspection records and training documentation will be maintained according to the following checked schedule:

1. For one (1) year, except for training records of employees who have worked for less than one year which are provided to the worker upon termination of employment.
2. The medical record for each employee shall be preserved and maintained for at least the duration of employment plus five (5) years, except for employees who have worked for less than (1) year. Albany West need not retain records beyond the term of employment if they are provided to the less than 1-year employee upon the termination of employment.
3. Employee Exposure Records. Each employee exposure record shall be preserved and maintained for at least five (5) years, except that:
  - a. Background data to environmental (workplace) monitoring or measuring, such as laboratory reports and worksheets, need only be retained for one (1) year and a summary of other background data relevant to interpretation of the results are retained for at least five (5) years.

*Disciplinary Policy*

Albany West is committed to providing a safe and healthful place to work for our employees and subcontractors and their employees. All workers will be expected to know our safety policies and to comply with the safety guidelines. Any worker found in violation of the safety and health procedures will be subject to disciplinary action. Albany West is sincere in its efforts to provide a safe place to work for all workers on our jobsites. Our employees and subcontractors will be made

aware of Albany West 's safety and health policies and will be required to conform to these standards. All employees and subcontractors who do not comply with the safety requirements may be removed from the project at the discretion of Albany West 's site supervisor(s).

It is every employee's responsibility to verbally notify the site supervisor of *any* safety infraction and it is the site supervisor's responsibility to report it to Albany West. The following guidelines for disciplinary action will be enforced when there is a violation of our safety and health procedures/system. However, the site supervisor or any company representative with authorization has the discretion to use any one of the following disciplinary actions in any order depending on the severity of the violation:

1. The first violation will be a verbal warning explained to the employee, including required corrective action and a written warning. Severe violations may result in termination on the first infraction.
2. The second violation will be a written warning using the Safety Warning Notice. The employee will be retained, and both the warning and retraining will be documented and maintained in the employee's file.
3. The third violation will be a termination.

Albany West would rather have its employees and subcontractors cooperate with the safety and health policies than take disciplinary action. The cooperation of everyone involved should be solicited. If the cooperation is not forthcoming, then disciplinary action will be necessary. At any time, if the violation is deemed serious, Albany West reserves the right to remove any worker from the site permanently for just cause.

## **SECTION 2 – CODE OF SAFE PRACTICES**

### *Code of Safe Practices*

All persons shall follow these safe practice rules, render every possible aid to safe operations, and report all unsafe conditions or practices to the foreman or Supervisor. The term "worker" and "employee" refer to Albany West employees.

1. Employees shall observe and follow these safe practices rules.
2. Employees shall report any unsafe conditions or practices to the foreman or site supervisor.
3. Foremen and/or site supervisor(s) take such action as is necessary to make sure employees observe the safe practice rules.
4. Employees shall be given accident prevention instructions at least every 10 working days once a week is preferred.
5. Evaluate your workspace to determine if any spaces are "confined spaces" and enter only if you are trained and authorized to do so.
6. Anyone under the influence of drugs or intoxicating substances which impair an employee's ability to safely perform his/her duties will not be allowed to work.
7. Horseplay, scuffling, and other acts which tend to endanger the safety or well-being of employees is prohibited.
8. Work will be well planned in advance and supervised to prevent injuries in the handling of materials and/or equipment.
9. No one shall knowingly be permitted to work while their ability or alertness is impaired by fatigue, illness, or other causes that might expose any employee or worker (Albany West or a subcontractor) to injury.

10. Employees shall not enter ditches, manholes, underground vaults, chambers, tanks, silos, or other similar places that receive little ventilation, unless it has been determined safe to enter.
11. Employees are instructed to ensure that all guards and other protective devices are in proper places and adjusted and will report deficiencies promptly to the foreman or site supervisor.
12. Be aware of activities around you that could become pinch points. Be aware of the tools you use that can cause pinch points.
13. Awareness and common sense are your best methods of prevention of pinch points. Always wear safety gear and PPE (proper gloves and footwear).
14. Crowding or pushing when boarding or leaving any vehicle or machinery or other conveyance shall be prohibited.
15. Workers shall not handle or tamper with any electrical equipment, machinery, or air or water lines not within the scope of their duties, unless they have received instructions from their foreman or site supervisor, and both agree that the worker is trained and understands the proper use of the equipment.
16. Report all injuries immediately to the foreman or site supervisor so that medical or first aid treatment can be arranged.
17. When lifting heavy objects, use the large muscles of the leg instead of the smaller muscles of the back.
18. Do not wear tennis shoes, flip flops, sandals or worn or damaged footwear to any jobsite. Wear a leather type work boot that covers the ankle.
19. Do not throw materials, tools, or other objects from buildings or structures until proper precautions are taken to protect others from falling objects.
20. Employees shall cleanse thoroughly after handling hazardous substances and follow the instructions from the manufacturer and from the foreman or site supervisor.
21. Face a ladder and use both hands while climbing.
22. Do not carry items in either hand when climbing a ladder.
23. Gasoline shall not be used for cleaning purposes.
24. No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel until you have been told that no possibility of explosion exists.
25. When carrying material, watch for and avoid obstructions, loose material, etc.
26. If you are required to lift heavy objects, use proper lifting methods by balancing the load and lifting with the legs. If necessary, get help.
27. Any damage to scaffolds, falsework, or other supporting structures shall be immediately reported to the foreman or site supervisor and repaired before use.
28. Employees shall not ride in the back of pickup trucks or on tailgates.
29. Listen for audible back up alarms from heavy equipment. Always be aware of where equipment is operating and keep a safe distance.
30. All project employees will be subject to fair and consistent disciplinary action for policy noncompliance.
31. Persons not directly involved with the construction of this project shall not enter the site without obtaining permission from the Albany West Supervisor and completing a visitor release form, if required.
32. Materials must not be stored within six feet of floor openings or within ten feet of open floor edges.
33. Materials on roofs and open floors must be secured to prevent them from being windblown.

34. Rebar, conduit, pipe and other impalement type hazards need to have the ends protected with MoW/OSHA approved impalement protective covers.

#### *Tools & Equipment*

1. All tools and equipment shall be maintained in good condition.
2. Damaged tools/equipment shall be removed from service and tagged "DEFECTIVE."
3. Only appropriate tools shall be used for the job.
4. Hand tools & small tools and equipment need to be functional and utilized in the manner intended by the manufacturer.
5. Portable electric tools shall not be lifted or lowered by the power cord. Use ropes.
6. Plug electrical equipment into appropriate wall receptacles or into an extension of only one cord of similar size and capacity. Three-pronged plugs shall be used to ensure continuity of ground.
7. Electric cords shall not be exposed to damage from vehicles. Never use a damaged cord.
8. In locations where the use of a portable power tool is difficult, the tool shall be supported by means of a rope or similar support of adequate strength.

#### *Welding & Cutting*

1. All welding and cutting operations will be performed by qualified individuals. The individual's employer will ensure that the person has received the required training and takes the necessary precautions.
2. Fire extinguishers will be located within 25 feet of the welding or cutting operations.
3. Fuel gases and oxygen cylinders will be stored in an upright position and secured so they cannot fall or be knocked over.
4. Electrical welding equipment will have proper internal and external grounds.
5. Proper Personal Protective Equipment will be worn while welding or cutting.
6. Oxygen cylinders will be stored away from fuel gases, flammable or combustible materials when they are not being used. At least 20 feet of clear space is required, or a five-foot-high fire resistive barrier with a 1/2-hour fire rating.
7. When required, the employer will assign an individual to serve as a fire watch. The individual will stay at the area where the hot work was being performed at least one-half hour after the welding and/or cutting operations has ceased.
8. LPG cylinders will not be stored inside of the building. They will be stored in a well-ventilated area, away from ignition sources.

#### *Machinery & Equipment*

1. Only authorized employees shall operate Albany West machinery or equipment.
2. You are never authorized to operate another subcontractor's equipment or machinery unless you are trained/qualified and receive written permission from the subcontractor.
3. Albany West prohibits employees from operating machinery if that employee has not received proper training and authorization, even if the employee is asked to do so at the job site.
4. Loose or frayed clothing, long hair, jewelry, finger rings, etc., shall not be worn around moving machinery or other sources that can snag it on machinery controls.
5. Machinery shall not be serviced, oiled, repaired or adjusted while in operation, except on equipment that is designed or fitted with safeguards to protect the person performing the work.
6. Employees will inspect any heavy equipment before the start of each shift and daily.

7. Albany West requires that all safety messages on heavy equipment are legible. Notify the site supervisor if you cannot read the labels so that they can be replaced.
8. Employees are not allowed to operate equipment that they have not been trained to operate.
9. A seat belt should always be worn during equipment operation to prevent serious injury.
10. Heavy equipment may move unexpectedly and without warning. Before leaving the equipment lower the work tool to the ground, lock operator controls, shut off the engine and remove the key.
11. Keep equipment and attachments a safe distance from electrical power and lines.
12. Keep the equipment free from foreign material. Remove debris, oil, tools, and other items that do not belong on the equipment.
13. Know the appropriate work site hand signals and the personnel that are authorized to give the hand signals.
14. All repairs must be made before vehicles are placed in service.
15. Roll over protection structures (ROPS) on vehicles and heavy equipment must be used. On equipment with open ROPS wear a hard hat, protective glasses and other protective equipment as required.

#### *Traffic Control*

1. Flaggers shall be trained in the proper methods of flagging and controlling traffic.
2. Flaggers shall wear florescent vests and have a stop/slow paddle and other appropriate equipment for flagging and controlling traffic.
3. Flaggers should always position themselves in a manner that allows them an escape route from traffic that is not complying with a flagger's instruction.
4. If you do not have proper training, you cannot be a flagger even if asked to do so at the job site.
5. Training must be documented in accordance with MoW/OSHA regulations.

#### *Asbestos*

No Albany West employee shall work with or around asbestos unless specifically trained and authorized to do so. Any material suspected of containing asbestos or lead shall be reported to the Supervisor or foreman immediately, who will thereby notify the site safety supervisor.

#### *Chemicals*

Labels on materials and chemical containers must be read before use and the instructions for proper use, handling, and personal protective equipment must be followed.

Wash thoroughly after handling hazardous substances and follow all special instructions from authorized sources regarding this matter.

Hands should be thoroughly cleaned just prior to eating if they have been in contact with hazardous, toxic, or similar substances.

#### *Confined Space Entry (Construction)*

Employees shall not enter manholes, underground vaults, chambers, tanks, silos, or other similar places that receive little ventilation, unless it has been determined by the competent person that it is safe to enter. Authorization from the Albany West Supervisor/project manager or The Health and Safety Supervisor is required for entry into confined spaces, trenches or enclosed areas that may contain a hazardous atmosphere. All employees shall read and follow the confined space

entry procedures contained in the Safety Program.

### *Cranes & Rigging*

1. Cranes shall not be operated in such a manner that any part of the equipment or its load is permitted to come within ten feet of low voltage electrical lines. Any crane work near high voltage electrical lines shall be performed under the high voltage electrical safety policy.
2. Operators of mobile and tower cranes must have a valid certificate to operate the type of crane used.
3. All cranes and accessory gear that exceeds three (3) tons must be certified annually by a licensed certifier.
4. A signal person shall be provided when a load is not in full view of the crane operator.
5. Cranes must be inspected before each shift and daily.
6. A load rating chart must be posted at a location that is readily visible to the operator.
7. Outriggers must be used according to certified agent requirements.
8. A fire extinguisher rated 10:BC shall be accessible to the crane operator.

### *Slings & Attachments*

1. Slings and attachments must be inspected prior to the start of work and daily for damage or defects.
2. The manufacturer's label with load capacity listed must be attached to the sling.
3. Damaged or defective slings must be removed from service.
4. Slings must not be overloaded.
5. Slings must be padded to protect against damage from sharp loads.
6. Employees shall not work under suspended loads.

### *Electrical*

Albany West personnel shall perform no repairs, maintenance, construction, or service work involving energized electrical circuits or equipment.

- Electrical cords shall be inspected prior to each use. Electrical cords shall not be exposed to damage from vehicles. Damaged cords must be immediately removed from service and repaired or destroyed. Only trained electricians shall perform work on an energized circuit.
- Only GFCI equipped temporary power will be used at the jobsite.
- Anyone that works on electrical equipment requires very specific training and authorization. No Albany West employee shall have authorization to work on electrical equipment at any time. Every effort should be made to have the electrical subcontractor at the project site install, maintain, test, and inspect all temporary power systems and GFCI receptacles.
- All temporary power systems and GFCI receptacles must be tested at least every 30 days and the documentation for that test kept on file at the project. This documentation is to include the unit number of the item being tested, the test date, results, and name of the person conducting the test.
- It is Albany West 's policy to purchase only double insulated tools, and to provide only GFCI protected circuits on all of our projects. If, however, there is a need to use a non-double insulated tool, or non-GFCI protected circuits, the Assured Grounding Program must be followed. All properly tested and maintained GFCI protected circuits used with double insulated tools are exempt from this program.

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- For all 120 volt AC single-phase equipment, receptacle cord sets and portable hand tools falling under the program, the following steps apply:
- Visual inspections shall be made daily before the use of any electrical hand tools, equipment, extension cords, etc. Any damaged equipment shall be returned to the yard for repair.
  - Equipment ground conductor continuity tests and electrical continuity and polarity tests shall be performed by a qualified electrician, as follows:
    - Before first use of new equipment;
    - Before equipment is used after any incident which may have caused any damage.
- All repaired equipment must pass all continuity tests satisfactorily before returning to service.
- All equipment, tools and cords that are to be maintained under this program, shall be marked, tagged, or color-coded to ensure timely inspections.
- All equipment, tools and cords that are covered under this program, shall be tested at least every 90 days.
- Documentation that contains the unit number of the item being tested, the date, results, and name of the person conducting the test, shall be kept at the project site.
- Any equipment, tools, or cords not passing all continuity tests satisfactorily shall be removed from service and turned in to the supervisor for repair.

### *Training*

OSHA regulations require employers to train employees about electrical safety and hazards. These training requirements apply to all employees who face a risk of electric shock. All such employees will receive training and be familiar with safety related work practices that pertain to their respective job assignments. This training will be conducted at the new employee orientation held at the project site. The project Supervisor will ensure that all such training has been completed.

Required Topics are:

- Electrical Hazards: What are they and how to avoid or eliminate them?
- Power Tools: Inspection and use, proper storage and handling.
- Temporary Power: Inspection of cords and boxes, GFCI testing, routing of cords.
- Cords: Inspection for damage, proper routing to avoid vehicle and pedestrian traffic.
- Lights: Proper installation, maintenance and routing.
- Permanent Power Installations being constructed: Live circuits, live wiring, energized panels and equipment.
- Demolition: Assume hot, Lock-Out Tag-Out (LOTO), testing.
- Welding: Current path and proper grounding.
- The effects of electricity and electrical shock on the body.
- Albany West 's policy to not work on or repair electrical tools, systems, or equipment.
- Lock-Out Tag-Out procedures for electrical equipment and systems specific to the project site.

### **Elevating Work Platforms Boom Lifts**

- Employees shall be trained in the safe operation of a boom lift before operating on the job site.
- All employees working in an articulating and straight arm type boom lift shall wear a full body harness, and lanyard.

- The lanyard shall be attached to a manufacturer designed and approved attachment point inside the basket.
- Unless specified by the manufacturer, top and mid-rails are not to be used as attachment points for lanyards.

### *Scissor Lifts*

- Employees shall be trained in the safe operation of a scissor lift before operating on the job site.
- Employees working in a scissor lift are not required to wear PFAS unless required by the manufacturer or the general contractor.
- Manufacturer railings are considered fall protection.
- At no time shall an employee climb on the rails or above the floor of the unit.
- Ladders shall not be used in the unit.
- Employees shall lower the scissor lift to the down position before moving the lift to a new work location.

### *Positioning Systems*

These allow workers, at elevation, to have their hands free to work.

- Positioning systems alone (without a fall arrest system) are allowed as the sole source of fall protection for ROD BUSTERS ONLY.
- Positioning systems can be, and often are, included as part of the PFAS.
- Positioning systems attach to the wearer at the O-rings located on each hip.
- No Albany West employee will use positioning alone as the sole source of fall protection.
- Positioning lanyards may be made from rope, webbing, chain, or cable.
- Various hooks are used to facilitate positioning, the most common being a "Pelican Hook".
- "Pelican Hooks" are legal, as long as the hook has a double locking action built in.
- All hooks used in any type of fall protection, must be the double locking type.
- Double locking is defined as requiring two distinct actions to open the device.

### *Fall Protection*

- Employees must be properly trained before using fall protection equipment.
- Employees shall wear a complete personal fall arrest system which includes an anchor point, lanyard and full body harness.
- All anchor points shall be capable of supporting 5,000 pounds.
- Always inspect fall protection equipment before each use.
- Never reduce the length of a lanyard with a knot.
- Never attach two lanyards together.
- Only one person can be tied off to a single anchor point.
- Do not use rope or nylon lanyards near sharp surfaces.

### *Fitness for Duty*

No one shall knowingly be permitted or required to work while their ability or alertness is so

impaired by fatigue, illness, or other causes that it might unnecessarily expose them or others to injury.

Employees should advise our supervisor of any limitations that might impede their required duties.

#### *Forklifts*

- All employees that operate a forklift must be trained and certified prior to any operations. Operators shall read the operating manual for each specific model of forklift they operate.
- Seatbelts shall always be worn while operating a forklift. No riders are permitted anywhere on the lift.
- Approved and certified man baskets are permitted only if the manufacturer has approved the basket for use with that model of forklift. Employees must use the man baskets per manufacturer's recommendations. Employees shall be tied off whenever working in a man basket to an approved anchor point.
- The operator is responsible for all mechanical and safety inspections daily.
  - The operator must ensure that the back-up alarm is in working condition prior to use at all times. The operator must use a spot tower where the back-up alarm is not working or where there is any doubt as to safe backing operations.

#### *Hearing Protection*

Employees working in loud environments shall wear proper hearing protection when needed.

Employees shall make every effort to reduce or eliminate the cause of the noise where possible.

#### *Ladders*

- All ladders shall be used and set-up properly.
- "A-Frame" ladders shall not be used while leaning against the work. The legs must be spread apart, and spreaders locked prior to use.
- Aluminum ladders shall not be used on site at any time
- Employees must not stand on the "Top Cap" or the top step of an "A-Frame" ladder.
- Extension ladders shall extend above the landing three feet and shall be secured prior to use.
- Face ladders while climbing and descending always maintaining a 3-point contact.
- Job-built ladders shall be constructed under the supervision of a competent person, using select or good quality grade Douglas fir lumber free of knots, splits, or cracks.
- Employees shall not carry tools or materials while climbing ladders.
- All ladders shall be inspected prior to each work shift. Damaged or defective ladders shall be immediately tagged and removed from service and repaired or destroyed.

#### *General Requirements*

- Albany West personnel will use only Type 1 or Type 1A portable ladders.
- All ladders will be inspected by yard personnel prior to project site delivery.
- All ladders will be inspected by the user prior to each work shift.
- All "A-Frame" type ladders shall be opened, and the spreaders locked while being used.
- Two or more people shall not work from the same ladder unless it is specifically designed for two people. Training should be given before employees use a two-person stepladder.
- All straight and extension ladders will be tied off when the ladder is set up.
- Only non-metallic, approved ladders shall be used during electrical operations where employees may meet electrical circuits or systems.
- Job-built ladders shall be fabricated per the regulations in MoW/OSHA, Title 8 CCR 1675.

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- The ladder's side rails shall extend 36 inches above the landing.
- All extension, straight and job-built ladders shall be tied, blocked, or otherwise secured to prevent an accidental displacement.
- Employees shall be prohibited from carrying equipment or materials, which prevent the safe use of ladders.
- Employees shall be required to face the ladder when ascending and descending.  
Employees shall always use both hands and feet when climbing a ladder, always maintaining 3 points of contact.

### *Scaffolding*

- Employees working from scaffolding shall be trained in the hazards associated with scaffolding and its safe use.
- A competent person will check the scaffolding prior to use and daily.
- Guardrails shall be installed on all open sides and ends as the primary means of fall protection on scaffolding.
- At no time shall any employee leave a partially assembled or unsafe scaffold unattended without tagging the scaffold out of use and notifying the competent person and Supervisor.
- Any scaffolding defects or damage shall be reported immediately to the competent person or Supervisor and no one shall use the scaffold until it is determined safe.
- No employee shall use any scaffold that is unsafe.
- Scaffolding, when properly erected and used, provides a platform with railing from which employees can safely work.

### *Tools and Equipment*

- All tools and equipment shall be maintained in good condition.
- Damaged tools or equipment shall be removed from service and tagged "DEFECTIVE." Only appropriate tools shall be used for the job.
- Portable electric tools shall not be lifted or lowered by means of the power cord. Ropes shall be used.
- In locations where the use of a portable power tool is difficult, the tool shall be supported by means of a rope or similar support of adequate strength.
- Tools and power cords must be inspected for damage or defects before each use.
- Any problem found with any tool must be reported to a supervisor and corrected before being put into service.
- Guards and other safety devices on tools and equipment must be kept in place and working properly.
- Specific training and certification are required for the operation of powder-actuated tools. Each employee shall inspect their personal tools or company-furnished tools before using them each day to ensure that they are in good working condition. Damaged or defective tools must be returned to the yard and tagged for repair.

### *Trenching, Excavating and Shoring Procedure*

- Trenches 4' or deeper shall have an access/egress ladder every 25'.
- Any trench 5' or deeper shall be protected by a means of sloping, benching or shoring.
- No employee shall enter a trench 4' or deeper until it has been inspected by a competent person.
- Protective systems (i.e. sloping, benching or shoring) shall be based on soil type A, B or C.

- Spoil piles shall be kept at least 2' from the excavation or trench.

*Vehicles*

- Only authorized persons shall operate company vehicles.
- Before operating vehicles, a check to ensure components are working and adjusted properly: Taillights, headlights, and signal lights, mirrors, windshield wipers, back-up alarms, etc.
- Do not work under vehicles supported by jacks or chain hoists without protective blocking that will prevent injury if jacks or hoists should fail.
- No worker can ride outside of the cab of any truck without a seat provided by the manufacturer that includes a seat belt. Arms or legs should never be dangled over the sides. Workers should never ride on fenders, tailgates, running boards, or loads.
- The parking brake must be set, and the ignition turned off when a vehicle is parked. Vehicles must not be left unattended until after the motor has been shut-off, parking brakes set, and doors locked.

## **SECTION 3 – HEALTH and SAFETY PROGRAMS**

### **Health and Safety Programs**

- The Albany West HSP must be on the jobsite at all times.
- Required permits shall be kept on the job site.
- It is the policy of Albany West that our company is required to manage, implement and follow the Safety Plans set forth in this document. It is also the policy of Albany West that all subcontractors are required to manage, implement and follow their respective Safety Plans and that they provide Albany West with a copy of their most recent safety documentation. Safety is a cooperative undertaking requiring participation by every person on the job site. Failure by an Albany West employee or a subcontractor's employee to comply with safety rules set forth in our safety programs will be grounds for retraining, discipline, stopping work or termination of our contract and removal from the job site. Supervisors shall take the necessary action to assure compliance by employees with all applicable local, MoW/OSHA, Federal, safety regulations and safety rules and practices.

Each subcontractor shall provide the Albany West Supervisor with the name and phone number of the *responsible individual* they designate for ensuring compliance with their Safety Plan and Code of Safe Practices before starting work on an Albany West job site. Subcontractors will familiarize themselves with the Albany West Code of Safe Practices and in the event the subcontractor's Code of Safe Practices does not set out specific guidelines for a situation that arises on our job site(s), the subcontractor shall enforce the Albany West policy.

The subcontractor's designated *responsible individual* shall have the full responsibility of enforcing all safety policies and procedures set forth in their Safety Plan and Code of Safe Practices and comply with all applicable State and/or Federal safety regulations.

The Health and Safety Supervisor is the *responsible individual* for establishing procedures and ensuring compliance with the Albany West 's Safety Plan and Code of Safe Practices.

### *Jobsite Safety*

Jobsite injuries are a major concern for workers, property owners and contractors. Albany West employees must learn proper work habits and have a thorough understanding of our policies and procedures as well as be familiar with OSHA safety regulations on the work site. Albany West is committed to ongoing safety programs. These efforts serve to substantially reduce accidents, Albany West 's liability, and valuable time lost on work projects.

**Supervisors are responsible for:**

1. Ensuring those employees under their supervision receives the required training.
2. Providing training for each jobsite to ensure that all employees understand the protocol, timeline and responsibilities.
3. Evaluating new employees in the environment to ensure they are complying with your instruction and that they remain safe.
4. Ensuring that all equipment is inspected and tested monthly by a responsible individual.
5. Ensure that all subcontractors have safety plans, a Code of Safe Practices and have identified a responsible individual for the management and implementation of their plans.

**Employees are responsible for:**

1. Listening to the daily instructions and asking questions if you do not understand.
2. Inspect any equipment assigned to you to make sure it is working properly and is not damaged.
3. Watch for and report any unsafe conditions.
4. Do not do any job that you are asked to do by someone other than your supervisor(s).

Regular safety visits to the job-sites will be made to ascertain that all safety precautions are being properly met by Albany West and the subcontractors. A written record of each visit will be made; one copy will be given to the Supervisor and one copy will be turned in to the main office.

**ELECTRICAL SAFETY PROGRAM**

*Understanding Electricity*

Electrical equipment is used on a construction site daily. The basic flow of electricity involves 3 steps:

- Starts from a generating source (plug in)
- Travels through conductors (wires)
- Arrival to the equipment

If these three steps in the continuous and uninterrupted flow of electricity are in place, we have what is called a circuit.

*Considering the Hazards*

The main concern with electrical safety is to not come in contact with the flow of electricity within the 3 steps; otherwise you could receive a shock that could seriously harm you.

Hazards to be aware of include:

- Shock if your body becomes a part of the electrical circuit.
- Burns to both the inside and outside of the body upon contact.
- Arcing that may cause fire problems on site if there is contact with flammable liquid or fumes.
- Explosion due to electricity providing a source of ignition to flammables.
- Fires which are caused by the high resistance of inhibiting of electricity in wires. Examples that make it difficult for the flow of electricity in wires include necks, kinks, or improperly spliced and connected wires to switches these can cause fire.

*General Causes of Electrical injury and How to Prevent Them*

On a construction site, the common electrical hazard has to do with ground fault electrical shock. This means that electricity is somehow released into the ground and allowed to travel to anywhere

or to anything that conducts electricity. This includes human beings as well. Therefore, to reduce/prevent occurrence of this, Ground Fault Circuit Interrupters (GFCI) are used. The GFCI's are like a watchdog that monitors the imbalanced flow of electricity between the three steps (plus-in, wire and equipment). If there is an imbalance that poses a threat, the GFCI automatically shuts off/down the generating source. Note however, that the GFCI cannot protect a person from line to line hazards, i.e.: holding 2 hot or 1 hot and one neutral wire. The GFCI is for protection from the flow of electricity that escapes from the electrical source into the ground and to a good conductor, i.e.: like a human being.

Most injuries are caused by:

- Unsafe equipment
- Unsafe workplaces which are a result of environmental factors.
- Unsafe work practices and lack of knowledge to prevent injuries and protect workers:
- Make sure all necessary guards are in place and in good condition
- Use electrical protective devices such as GFCI's.
- Use appropriate PPE when necessary.

Work in a safe manner and in accordance with local and relevant international regulations and training given.

### *Inspections*

It is very important that employees understand the importance of electrical safety. The best way to make sure of that is to instill the importance of inspecting the equipment they will be using and the area they will be working in. This includes inspecting:

- Temporary wiring and wiring on equipment to make sure they are in good condition;
- Plug ins and receptacles that are not a part of the permanent building;
- Equipment connected by cord and plug that is available to employees;
- Equipment that runs off of a combustion engine that is available to employees.

### **Tagging out / Locking Out (See Accidental Tags)**

#### *Tagging Out*

If there is defective equipment on site or at the facility it must be tagged to indicate it is out of order. With a uniform tag that reads, "Out of Service" or "Do Not Use." It should then be removed from service until it is replaced or repaired.

#### *Locking Out*

If it is applicable and a piece of equipment is out of order the source of energy should be blocked/isolated to prevent activation of the equipment.

#### *Maintenance*

Servicing and repairs should only be done by a qualified person designated by Albany West or by a third party (outsourced) depending on the repair that is required. Large equipment will normally be sent out to a third party to be serviced or repaired.

#### *Guarding*

As per OSHA regulations, any live parts of electrical equipment operating at 50 volts or greater must be guarded. Guards must not be removed or bypassed. They must be in good working condition. If there is a guard that is not working properly this should be reported to the acting foreman and the equipment should be taken out of service until it is repaired.

### *Temporary Wiring*

Since construction sites must utilize temporary wiring on a larger scale than other occupations it is important to keep up with their maintenance. In inspecting them it is important to know what to look for. The employee inspecting must make sure the insulation is in good condition. This means that there are no breaches throughout the length of the cord to prevent exposure of wiring or conductors at any time. There should be no deterioration of the insulation or the cord. Temporary wiring must have their ground in place. If it does not comply with this it must be marked or tagged and taken out of service by means of replacing or properly repairing.

### *Circuit Protection Devices*

As mentioned previously, there are several protection devices such as GFCI's, fuses and circuit breakers that act as "watchdogs" for abnormalities in the flow of electricity. The purpose of these fuses and circuit breakers is to recognize over capacity currents and monitor the amount of current that the circuit will carry. These "watchdogs" automatically open or break the circuit (flow of electricity) when the wiring has exceeded its capacity to handle the size of the flow. MoW/OSHA grounding requirements specifically state that each 15/20 ampere receptacle must have a grounding contact, which is connected to an equipment grounding conductor.

## **Grounding of Electrical Equipment**

The three-pronged plug is used to allow a path for dangerous fault currents to return to the ground at the plug in/socket/original source of the electricity. The ground of any cord or equipment must always be in place. The ground shall not be removed. If the ground is removed during normal working activity the cord or equipment shall be tagged out and removed from service until it is repaired properly or replaced. Albany West will adhere to all applicable regulations.

### *Preventive Maintenance*

In order to prevent harm to workers, it is important to maintain electrical tools and equipment as well, it is critical that workers wear appropriate and ANSI approved personal protective equipment.

### *Training*

A good form of protection is a good training program. Most workers have respect for electricity. However, it is critical that employers be provided with training on basic electrical principles and that they know how to check, maintain and store electrical equipment on site.

To train workers to recognize if:

- A repair is required
- Loose connections are anywhere
- There is defective insulation anywhere.

To have workers trained to routinely check equipment is a part of the loss prevention approach we emphasize at Albany West. Employees must learn proper work habits and have a thorough understanding of our policies and procedures as well as be familiar with OSHA safety regulations on the work site. Albany West is committed to ongoing safety programs. These efforts serve to substantially reduce accidents, Albany West's liability, and valuable time lost on work projects.

## **Personal Protective Equipment (PPE)**

Proper work attire includes t-shirt with 4” sleeve, and leather work boots with a nail guard/shank (non-metallic preferred) . Additional protective footwear (metatarsal covers, rubber boots, etc.) will be determined by job task.

#### *Head Protection*

Head protection is required for employees at all times.

#### *Eye Protection*

In addition to safety glasses, employees shall wear a face shield when cutting or grinding due to the hazard of flying objects and debris. In the case of a splash hazard, chemical goggles must be worn.

#### *Hearing Protection*

In areas of high noise, while operating certain equipment, hearing protection is provided and must be worn.

#### *Respiratory Protection*

To control atmospheric contamination and/or occupational diseases, injuries or illnesses that can be caused by breathing contaminated air, respiratory equipment and appropriate control measures must be provided to protect the health of each employee. The need for respiratory protection is determined by:

1. The Material Safety Data Sheets
2. Air monitoring of the work area if required.

It is our goal to implement and maintain a respiratory protection program that will:

1. Enhance the protection of worker health.
2. Promote more effective use of respirators by selecting appropriate respirators for use in the workplace and fit testing to ensure proper fit. The respirator must allow for eye protection and communication.
3. Inspection of respiratory protection equipment must be conducted before and after each use. If proper repairs cannot be made to the unit, it will be removed from service.
4. Cleaning and disinfecting of non-disposable respiratory protection shall be done after each use following the manufacturer’s guidelines if available. As a rule, remove filters, cartridges or canisters and replace where necessary. Rinse remaining components in warm water with a mild detergent or cleaning solution as recommended by the manufacturer. The cleaner must contain a disinfecting agent.
5. Respiratory protection equipment must be properly stored.

#### *Respiratory Classification*

Before employees can use respiratory equipment, they must be:

1. Fit tested for proper use by a competent person;
2. Pass a medical respiratory evaluation.

The classification of particulate respirators is subdivided into three categories:

1. **Particulate Filtering Face Piece Respirators** –These are disposable respirators because the entire respirator or face mask is discarded when it becomes unsuitable for further use

- due to considerations of hygiene, excessive resistance, or physical damage.
2. **Half-Faced Respirators** –Reusable respirators because the face piece is cleaned and reused but the filter cartridges are discarded and replaced when they become unsuitable for further use.
  3. **Powered Air-Purifying Respirators (PAPRs)** – A battery-powered blower moves the air flow through the filters.

*Fall Protection*

All employees working on construction sites who may be exposed to fall hazards in the course of their daily activities are covered by this program. This program will also apply to non-site personnel, visitors and any individual on site who may be exposed to a fall hazard.

This program is intended to reduce and eventually eliminate the occurrences of fall-related injuries during the performance of employee work activities. This program will address all fall hazards which can reasonably be expected to occur prior to the performance of work and will provide the guidance to control or eliminate those hazards. Through effective administration, enforcement, training and evaluation of related incidents, this program will be modified until all injuries are effectively controlled.

*Six Foot Fall Exposure Rule*

Each site supervisor, foreman and employee **must** take action to prevent, restrain or arrest any fall risk that is greater than six feet. Falls typically occur when a person steps through/into an opening or falls from an elevated structure. The three main accepted types of fall protection systems:

1. Guardrails
2. Safety nets and
3. Harnesses (personal fall arrest systems).

*Table 4. Different types of fall safety equipment and their recommended usage:*

|                     |   |
|---------------------|---|
| <b>Class 1</b>      | Body belts (single or double D-ring) are designed to restrain a person in a hazardous work position and to reduce the possibility of falls. They should not be used when fall potential exists; positioning only. |
| <b>Class 2</b>      | Chest harnesses are used when there are only limited fall hazards (no vertical free fall hazard), or for retrieving persons such as removal of persons from a tank or a bin.                                      |
| <b>Class 3</b>      | Full body harnesses are designed to arrest the most severe free falls.  |
| <b>Class 4</b>      | Suspension belts are independent work supports used to suspend a worker, such as boatswain’s chairs or raising or lowering harnesses.   |
| <b>Rope Lanyard</b> | Offers some elastic properties for all arrest; used for restraint purpose.  |
| <b>Web Lanyard</b>  | Ideal for restraint purposes where fall hazards are less than 2 feet.   |
| <b>Cable</b>        | Designed for corrosive or excess heat environments and must be  |

|                                     |   |
|-------------------------------------|---|
| <b>Positioning Lanyards</b>         | used in conjunction with shock absorbing devices.   |
| <b>Shock Absorbers</b>              | When used, the fall arresting force will be greatly reduced if a fall occurs.   |
| <b>Rope Grabs</b>                   | A deceleration device which travels on a lifeline used to safely ascend or descend ladders or sloped surfaces and automatically, by friction, engages the lifeline and locks to arrest the fall of an employee. |
| <b>Retractable Lifeline Systems</b> | Gives fall protection and mobility to the user when working at height or in areas where there is a danger of falling.   |
| <b>Safety Nets</b>                  | Can be used to lessen the fall exposure when working where temporary floors and scaffolds are not used and the fall distance exceeds 25 feet.   |
| <b>Rail Systems</b>                 | When climbing a ladder, rail systems can be used on any fixed ladder as well as curved surfaces as a reliable method of fall prevention.  |

Fall protection training is very important to help mitigate risk of workplace falls by teaching our employees how to use safety equipment properly. Fall protection training of all employees will occur during the following times:

- At the time of hire.
- When the program is first developed.
- When the program is modified.
- When employee responsibilities change.
- Specifics for each jobsite.
- Tailgate meetings.
- After disciplinary action.

Fall Prevention/Protection methods, equipment and controls are in place for your protection and it is each Supervisor/foreman/employees' responsibility to understand the six-foot exposure rule and the appropriate fall protection equipment to use for each project in order to reduce and eliminate serious injury.

*Hierarchy of Fall Prevention Controls*

All fall-related hazards will be identified prior to any employee beginning a work activity. Any fall related hazard that is identified will be dealt with in the following manner:

- Hazard eliminated through engineering design.
- Hazard controlled through alternative work methods.
- Personal fall protection equipment/systems utilized.

*Leading Edge Work*

A Leading Edge is an “unprotected side and edge” during periods when it is not actively and continuously under construction. Each employee who is working near a leading edge 6 feet or more above lower levels shall be protected from falling by guardrail systems, personal fall arrest systems, or other approved means as deemed necessary by the competent person based upon the site conditions.

Albany West may develop and implement a fall protection plan which meets OSHA requirements if it is demonstrated that it is infeasible or creates a greater hazard to use guardrail systems, safety net systems, or fall arrest systems.

#### *Training*

All employees who could reasonably be expected to become exposed to fall hazards will be trained in the identification and control of those hazards.

Any employee who knowingly violates fall prevention procedures will be disciplined according to Albany West's Disciplinary Policy and/or his supervisor's discretion.

Each employee will be instructed in fall prevention by a competent person. Employees will be trained in the fall protection systems and equipment, how to identify fall hazards, and special fall hazards. In the event an employee does not understand the procedures of fall hazards, the employee must notify his supervisor and further training will be provided.

#### *Training Documentation*

All employees trained in fall prevention will be documented in the following manner:

- The date of the training.
- The employee's printed name.
- The employee's signature.
- The name of the trainer.
- The specific subjects covered in the training session.

#### *Personal Fall Arrest System*

- Horizontal lifelines must be installed under the supervision of a qualified person and have a safety factor of 2.
- Lanyards and vertical lifelines must have a 5,000lbs minimum breaking strength.
- Lifelines must be protected from damage.
- When vertical lifelines are used, each person must have separate lifelines.
- Self-retracting lifelines and lanyards that limit free fall to 2' must have a 3,000lb tensile strength, when fully extended.
- Lifelines, lanyards, and belts must be made of synthetic fibers.
- Anchorages must be separate of suspended platforms and have a 5,000lbs capacity.
- Lanyards must be of the shock absorbing type; body harness must limit force to 1,800lbs.
- Lanyards must be rigged to limit falls to 4'. The anchor end should be secured above the waist.
- Personal Fall Arrest System components must be inspected before use and must not be used to hoist materials. Also, a documented inspection of the PFAS must be done twice a year by a competent person.
- PFAS must not be attached to a guardrail.
- Prompt rescue must be provided in the event of a fall.

#### *Fall Restraint System*

- Fall restraint is required in any aerial lift (scissor lift, zoom boom, etc.) that has a manufacturer-provided anchorage point.
- Body belts can only be used for positioning systems.
- Anchorages must support 4 times the intended load. Manufacturer-provided anchorage points are marked inside of the platform. **DO NOT TIE OFF TO GUARDRAILS.**
- Restraint must be rigged so that you cannot fall over the edge. An 8' web lanyard SRL

- (“yo-yo”) will best accomplish fall restraint in an aerial lift.
- Inspect prior to use and as other conditions warrant.
- Remove defective equipment from use.

*Positioning Device System*

- System must be rigged so that you cannot free fall more than 2’.
- Inspect prior to use and as other conditions warrant.
- Remove defective equipment from use.

*Anchor Points DO’S*

- Understand that a total fall protection system is only as good as its weakest link.
- Involve all the “necessary” professionals” in the project planning process.
- Realize that there are often many ways to provide anchorage for the same task. Examine all options.
- Select an anchorage/connector that can support 5,000lbs for a single tie-off point for one person or use other certified engineering information.
- Consider how many workers must be protected and at what points over the life of the project.
- Limit the fall to the shortest possible distance.
- Select an anchorage directly overhead whenever possible to avoid swing fall injury.
- Include shock absorbing lanyards or devices to provide an additional level of safety.
- Consider how a rescue plan would be performed.
- Plans consider ongoing work.
- Know what is available. Choose compatible equipment.
- Work with manufacturers to find the best combination of equipment.
- Keep abreast of new and better methods.

*Anchor Points DON'TS*

- Do not select anchorages where you could strike a lower structure.
- Do not use anchorages where sharp objects or rough edges could cause excessive wear on equipment.
- Do not use anchorages where equipment could contact high heat or harmful chemicals.
- Do not create or improvise anchorages without first determining whether they could compromise structural integrity.
- Do not use anchorages that will cause a load to be applied to the snap hook keeper or snap hook lock.
- Do not use anchorages that will not allow the snap hook keeper to close completely and lock.
- Do not join multiple lanyards together to reach an anchorage.
- Do not wrap a lanyard around a beam or other anchorage and attach it back on itself, unless specifically designed for that purpose.
- Do not allow more than one worker to tie off to the same anchorage unless it is designed to hold more.
- Do not select anchorages on your own unless you have had adequate training.

*Harness Inspection*

For harness inspection, perform the following procedures for all harness straps.

**Belts and Rings:** Beginning at one end, holding the body side of the belt toward you, grasp the belt with your hands 6-8” apart. Bend the belt in an inverted U. The surface tension resulting makes damaged fibers or cuts easier to see. Follow this procedure the entire length of the belt or harness. Watch for frayed edges, broken fibers, pulled stitches, cuts, or chemical damage.

**D-rings:** Check the d-ring and d-ring metal wear pad (if any) for distortion, cracks, breaks, and rough or sharp edges. The d-ring bar should be at a 90-degree angle with the long axis of the belt and should pivot freely. Check the back D-ring for an indication. Many harnesses will have a red tag that rips out and is visible. This means the harness has been involved in a fall and should be taken out of service and replaced.

**Attachments and Buckles:** Note any unusual wear, frayed, or cut fibers, or distortion of the buckles or D's. Rivets should be tight and unmovable with fingers. Body side rivet base and outside rivet burr should be flat against the material. Bent rivets will fail under stress.

**Inspect for frayed or broken strands.** Broken webbing strands generally appear as tufts on the webbing surface. Any broken, cut, or burned stitches will be readily seen.

**The tongue or billet of the belts** receives heavy wear from repeated buckling and unbuckling. Inspect for loose, distorted, or broken grommets. Belts should not have additional punched holes.

**Tongue Buckle:** Buckle tongues should be free of distortion in shape and motion. They should overlap the buckle frame and move freely back and forth in their socket. Roller should turn freely on frame. Check for distortion or sharp edges.

**Friction Buckle:** Inspect the buckle for distortion. The outer bars and center bars must be straight. Pay special attention to corners and attachment points of the center bar.

#### *Lanyard Inspection*

When inspecting lanyards, begin at one end and work to the opposite end. Slowly rotate the lanyard to the entire circumference is checked. Spliced ends require particular attention. Hardware should be examined under procedures also detailed below.

**Snaps:** Inspect closely for hook and eye distortions, cracks, corrosion, or pitted surfaces. The keeper (latch) should seat into the nose without binding and should not be distorted or obstructed. The keeper spring should exert sufficient force to firmly close the keeper. Keeper locks must prevent the keeper from opening when the keeper closes.

**Thimbles:** The thimble must be firmly seated in the eye of the splice, and the splice should have no loose or cut strands. The edges of the thimble must be free of sharp edges, distortion, or cracks. **Steel Lanyard:** While rotating the steel lanyard watch for cuts, frayed areas, or unusual wearing patterns on the wire. Broken strands will separate from the body of the lanyard.

**Web Lanyard:** While bending webbing over a pipe or mandrel, observe each side of the webbed lanyard. This will reveal any cuts or breaks. Swelling, discoloration, cracks, charring are obvious signs of chemical or heat damage. Observe closely for any breaks in the stitching.

**Rope Lanyard:** Rotation of the rope lanyard while inspecting from end-to-end will bring to light any fuzzy, worn, broken, or cut fibers. Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout,

following a short break-in period.

**Shock Absorbing Devices:** The outer portion of the pack should be examined for burn holes and tears. Stitching on areas where the pack is sewn to D-rings, belts, or lanyards should be examined for loose strands, rips, and deterioration.

**Self-Retracting Lanyard/Lifeline (SRL, “yoyo”):** The casing should be examined so that no parts are missing, and the label is legible. The web or cable lanyard must be pulled out all the way to inspect the quality and to ensure it pulls out and retracts easily. Look for a red indicator near the snap hook which tells you that the SRL has been involved in a fall. If you find any indication of a fall, the SRL must be taken out of service to be inspected and recertified by the manufacturer before it can be returned to service.

#### *Visual Indications of Damage to Webbing and Lanyards*

**Heat:** In excessive heat, nylon and polyester become brittle and have a shriveled brownish appearance. Fibers will break when flexed. Nylon should not be used above 200 degrees F. Polyester should not be used above 180 degrees F.

**Chemical:** Change in color usually appears as a brownish smear or smudge. Transverse cracks appear when bent over mandrel, loss of elasticity.

**Molten Metal or Flame:** Webbing strands fuse together. Hard shiny spots. Hard and brittle feel. Nylon will not support combustion, however polyester will.

**Paints and Solvents:** Paint which penetrates, and dries restricts movement of fibers. Drying agents and solvents in some paints will appear as chemical damage.

**Cleaning:** Basic care of all safety equipment will prolong the durable life of the unit and will contribute toward the performance of its vital safety function. Proper storage and maintenance after use are as important as cleansing the equipment of dirt, corrosives, or contaminants. Storage areas should be clean, dry, and free of exposure to fumes or corrosive elements.

**Nylon and polyester:** Wipe off all surface dirt with a sponge dampened in plain water. Squeeze the sponge dry. Dip the sponge in a mild solution of water and commercial soap or detergent. Work up a thick lather, with a vigorous back and forth motion. Then wipe dry with a clean cloth. Hang freely to dry, away from excessive heat.

**Drying:** Equipment should dry thoroughly without close exposure to heat, steam, or long periods of sunlight.

#### *Storage of Fall Protection Equipment and Systems*

Proper storage procedures will be followed on all Albany West projects to assure fall protection equipment and systems maintain effective use. The following guidelines will be used for storage on all of our projects:

- Do not store personal fall arrest equipment or systems near solvents, paint, grease, oil, acid or any substance which could deteriorate synthetic fiber.
- Return all personal fall arrest equipment after each shift in a place designed by the senior site manager.
- Do not place personal fall arrest equipment in the bottom of gang boxes used for storage

of other tools or equipment.

*A Competent Person Must Know:*

1. Approved full body harness and lanyards shall be worn by those employees whose work exposes them to falling in excess of 6 feet from the perimeter of a structure, through shaft ways and openings, sloped roof surfaces steeper than 7:12, or other sloped surfaces steeper than 40 degrees not otherwise adequately protected under the provisions of these orders.
2. Where practical, the anchor end of the lanyard shall be secured at a level not lower than the employee's waist, limiting the fall distance to a maximum of 4 feet.
3. If an employee's duties require horizontal movement, rigging shall be provided so that the attached lanyard will slide along with the employee. Such rigging shall be provided for all suspended staging, outdoor advertising sign platforms, floats, and all other catwalks, or walkways 6 feet or more above the ground level beneath.
4. Any lanyard, safety belt, or drop line involved in a fall, shall be immediately removed from service and shall not be used again for employee safeguarding.
5. All safety belts, harnesses, and lanyards shall be labeled as meeting requirement contained in ANSI A10.14-1975, Requirements for Safety Belts, Harnesses, and Lanyards, Lifelines and Drop Lines for Construction and Industrial Use.
6. Body harnesses must be used for restraint and/or fall arrest and where vertical free fall hazards exist.
7. Personal fall arrest systems shall be rigged so that an employee can neither free fall more than 4 feet or contact any lower level.
8. Each restraint system shall be inspected daily or before each use by a competent person according to the manufacturer's recommendation. Equipment showing any defect shall be withdrawn from service immediately.
9. Each unit shall be visually inspected for defects prior to each use and particular attention should be directed to the following types of damage: cuts, cracks, tears or abrasions, undue stretching, overall deterioration, mildew, operational defects, heat, acid or corrosion, defective or distorted snap-hooks or faulty springs.
10. All items used as a component of, or in conjunction with, harnesses should also be examined by a competent person every three months, or more frequently and the inspection recorded.
11. When work is performed from thrust outs or similar locations, such as trusses, beams, purlins, or plates of 4-inch nominal width, or greater, at elevations exceeding 15 feet above ground, water surface, or floor level below and where temporary guardrail protection is impractical, employees shall be required to use approved harnesses with attached lanyard.
12. Personnel using SRLs (self-retracting lifelines/lanyard or "yoyos") must be told to work directly underneath the SRL casing when possible and avoid excess horizontal travel.
13. Personal fall arrest systems must be inspected prior to each use for wear, damage and defects and inspected by a competent person at least twice a year, in accordance with the manufacturer's recommendations, with inspection dates documented.

9.1 Storm Management

In The Bahamas Tropical Storms and Hurricanes are the predominant type of storms experienced. Tropical storm systems progress to hurricanes as they intensify in wind speed. As a result, this section speaks to a phased hurricane preparedness and action plan for the construction site.

An employee will be assigned the role of storm tracker who will be responsible for notifying the Site Manager of the storms progress. Once a Hurricane Warning is released by the Bahamas Department of Meteorology (<https://met.gov.bs/>), the hurricane prepared plan will be initiated. The Site Manager will assign a person in charge who will be responsible for implementation of the Hurricane Plan. The Hurricane Plan is a series of checklists to make preparing for and recovering from the storm as straightforward as possible. There will be weekly check in meetings place during the Hurricane season (June 1 to November 20), to discuss the Hurricane Action Plan and the team members' roles and responsibilities.

Before the storm checklist

- Make a list of names, addresses and phone numbers for vendors and contractors who can provide recovery services or supplies.
- Meet with BPL to establish procedures to follow in the event of exposed / damaged fuel line
- Keep evacuation routes open for all vehicles.
- Back up all important critical computer data. Store data backup offsite.
- Unplug and move computers to as high an elevation as possible, in the middle of a room and away from windows
- Fully charge all devices and batteries.
- Remove loose jobsite materials and debris that could become projectiles, and clean the jobsite daily
- Have garbage in dumpsters and other containers consolidated and properly disposed and remove dumpsters from the site.
- To minimize damage, finish work on partially completed structures. For example, secure decking; install hurricane straps and required tie straps; complete permanent connections to the extent possible; repair roof deficiencies (such as flashing, drains, gutters, scuppers, penetrations), etc.
- Move materials that cannot be relocated or secured otherwise to shipping containers/storage boxes. Cover all materials that cannot be relocated and elevate them to at least 4 inches above the floor to reduce water damage exposure.
- Ensure that construction trailers and shipping containers/storage boxes are properly anchored and tied down. If anchors are not available, use concrete filled drums with embedded reinforcing steel loops and tether at least at three locations for each trailer or storage container.
- Stop all material deliveries
- Consider having cash available for recovery operations. If telephone and power are out, cash may be the only accepted form of payment. Cash may be required for food, materials, fuel, paying contractors or even paying employees.
- All construction equipment mats should be tied together and anchored.
- Protect incomplete underground utilities, processes and drainage piping from flotation and the infiltration of sand and silt.
- Backfill excavations if feasible.
- Make a video/photographic record of the jobsite and surrounding properties to document the project condition and status prior to the storm.
- Fuel all vehicles and emergency equipment (such as generators)
- Once the site is secure, instruct subcontractors and employees to vacate the jobsite and not to return until the danger has passed.
- Establish a meeting place, if possible, for key recovery members.

*Supplies Required for Preparation* (The supply list will be refined by the site manager and safety officer as needed)

- Tracking Form (See below).
- Sand bags
- Generators
- Fuel
- Water
- Plywood (no less than 5/8" exterior rated)
- Shoring and bracing to provide support to incomplete structures
- Pumps
- Rope
- Wire
- Netting
- Plastic Sheeting
- Garbage Bags
- Concrete Anchors (to secure netted items to concrete floors)
- Ground Anchors for Office Trailers and Shipping Containers and/or 55 gallon Drums filled with Concrete
- Miscellaneous Hardware and Fasteners
- Duct Tape

*Table 5. Tracking Form*

| Task to be completed | Individual assigned | Contact Information | Required completion date | Date completed |
|----------------------|---------------------|---------------------|--------------------------|----------------|
|                      |                     |                     |                          |                |
|                      |                     |                     |                          |                |

**Post Hurricane checklist**

- Ensure that a safety manager is present prior to beginning a hurricane recovery operation
- Maintain proper first aid equipment and clean water to aid in disinfection.
- Recovery personnel must be equipped with appropriate personal protective equipment (PPE). This should include, but not be limited to, hardhats, steel-toed boots, eye protection, gloves, respirators, chemical protective suits, etc.
- Use caution regarding protruding materials that could injure employees
- Be aware of displaced wildlife that can be a hazard to personnel following a storm event and carry disease. If wildlife is displaced, the site manager will inform the environmental monitor who will contact DEPP immediately.
- Document damage before cleanup or repair in writing, using photos or videos to supplement the report. Each subcontractor will prepare a damage assessment report in writing within 24-28 hours of returning to site and providing these reports to the site manager.
- The site manager will establish repair priorities after reviewing the various subcontractor reports. Identify critical hazards that must be abated prior to allowing the entire construction staff to resume construction.
- Barricade and clearly identify unsafe areas to prevent entry. If a barricade is not feasible, a guard will be assigned to the area to prevent unauthorized entry until the hazard is eliminated.
- Investigate the site for dangerous conditions, such as collapse, live wires, leaking gas,

pipng damage or situations that could start a fire.

*Supplies Required for Recovery* (The supply list will be refined by the site manager and safety officer as needed.)

- Cameras
- Pumps
- chainsaws, axes, blades, fasteners, hammers, tape, wrenches, propane tanks, grill for cooking and boiling, whistle, wheelbarrow, shovels, ladders, handsaws, flashlights, etc.
- Adequate fire extinguishers
- Garbage Bags
- Satellite phones (cell phone service may not be available)
- Plastic sheeting / Tarps and temporary roof repair materials / Roofing paper Garbage Bags Power Cords Temporary housing (supplied as needed) First Aid Medical Equipment
- Dumpsters
- Batteries
- Fuel
- Bleach / Disinfectant
- Protective clothing and equipment
- Binoculars Lumber, screws, nails, powder actuated fastener
- Cash should be on hand for food, supplies, equipment
- Mops, brooms, squeegees and absorbents
- Temporary Housing (tents or mobile homes),
- Sleeping bags

See also section [Emergency Action Plan](#).

## 9.2 Safety Hazards

See [SECTION 3 – HEALTH and SAFETY PROGRAMS](#).

## 9.3 Fire/ Explosion Risk

No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel, even if there are some openings, until it has first been determined that no possibility of explosion exists and authority for the work is obtained from the foreman or Supervisor. Employees should be aware of the locations of fire extinguishers that have been provided throughout the project and know- how to use them. A five-pound ABC rated fire extinguisher must be readily available while welding, burning, cutting or using flammable gases or liquids.

Smoking is not permitted around gasoline or other flammable liquids or gases. Equipment must be turned off before refueling. Gasoline must be stored and transported only in approved safety containers and gasoline must not be used for cleaning purposes. Compressed gas cylinders must be kept secured, upright, capped and separated when not in use. Empties should be marked and returned to the storage area for pickup.

### *Fire Prevention*

This Fire Prevention Plan has been developed by Albany West to identify potential fire hazards or sources of ignition, to establish procedures which minimize the risk of fire in the workplace, and to describe construction site fire suppression system requirements.

The plan was written in compliance with MoW/OSHA requirements. In general, the health and

safety of Company personnel depends upon a thorough knowledge of their surroundings, the work they perform, the hazards posed, a sincere safety conscientiousness, good judgment, and common sense. This written Fire Prevention Plan is designed with four fundamental objectives:

1. To identify potential fire hazards and potential ignition sources.
2. To establish proper handling and storage practices for potentially flammable or combustible materials, as well as other control procedures to minimize the risk of fire.
3. To identify fire protection equipment or systems to be used in response to a fire.
4. To describe fire suppression system-related requirements associated with building construction, alteration or demolition.

The overall goal of this plan is to minimize personal injury and property damage. It is Albany West's policy for all employees to follow the requirements set forth in this Fire Prevention Plan.

#### *Duties*

It is the responsibility of each employee to ensure the overall administration and implementation of this Fire Prevention Plan. It is each person's responsibility to assist in:

1. Identify and evaluate potential fire hazards and sources of ignition, including but not limited to activities such as welding, smoking, hot surfaces, and storage of flammable materials.
2. Establish and/or review control procedures to include fire protection equipment as needed and ensure sufficient numbers of extinguishers are at each job site.
3. Ensure compliance with the work practices and procedures specified in this plan.
4. Ensure that employees receive training on this program and that the training is up to date.
5. Establish a monthly schedule for regular fire safety inspections.
6. Ensure that records of training, fire protection inspections including those performed by the local fire department, and corrective measures as necessary, are properly maintained as required by this plan and the Injury and Illness Prevention Program.
7. Ensure the maintenance of equipment and systems installed to prevent or control ignition or fires, including systems at sites under construction, alteration or demolition.
8. Identify and control the accumulation of flammable or combustible waste materials.

#### *Control of Potential Fire Hazards and Ignition Sources*

Common fire hazards include flammable and combustible materials, smoking, torches, welding, sparks, fuel, grease, and electrical systems.

#### *Maintenance of Fire Extinguishers and Systems*

Safe and unobstructed access to firefighting equipment must be maintained at all times. Fire extinguishers must be kept fully charged, inspected monthly and serviced annually. Records of annual maintenance will be retained for one year after the last entry or the life of the shell, whichever is less.

- One fire extinguisher must be provided for every 3000 square feet of floor area or fraction thereof.
- Portable fire extinguishers for Class A fires will be provided so that the travel distance for employees to any extinguisher is 75 feet or less. Class A extinguishers are used on fires involving ordinary combustibles, such as wood, cloth, and paper.
- Portable fire extinguishers for Class B fires will be provided so that the travel distance from

the Class B hazard area to any extinguisher is 50 feet or less. Class B extinguishers are used on fires involving liquids, greases, and gases.

- Portable fire extinguishers for Class C hazards will be provided on the basis of the appropriate pattern for the existing Class A or Class B hazards. Class C extinguishers are used on fires involving energized electrical equipment.
- Portable fire extinguishers or other containers of Class D extinguishing agent will be provided so that the travel distance from the combustible metal working area to any extinguishing agent is 75 feet or less. Portable fire extinguishers for Class D hazards are required in those combustible metal working areas where combustible metal powders, flakes, shavings, or similarly sized products are generated at least once every two weeks. Class D extinguishers are used on fires involving metals such as magnesium, titanium, zirconium, sodium, and potassium.

If water fed firefighting equipment is present, a supply of water sufficient in volume, duration and pressure must be maintained.

#### *Flammable and Combustible Liquids*

Only approved containers and portable tanks will be used for flammable and combustible liquids. Storage in excess of 25 gallons of flammable liquids or 60 gallons of Class III liquids must be within cabinets complying with the requirements of NFPA 30. Not more than 25 gallons of flammable liquids may be stored in safety cans outside of a flammable liquid's storage room or storage cabinet. Areas where flammable or combustible liquids are transferred in quantities of 5 gallons or greater, at one time, must be separated by a distance of 25 feet or a one-hour-rated fire wall from other operations.

Bonding and grounding practices must be employed during dispensing of flammable liquids. Flammable liquids must be kept in closed containers when not actively in use.

Flammable liquids may be used only in areas where there are no flames or other sources of ignition.

#### *Control of Accumulation of Flammable and Combustible Waste Materials, Housekeeping*

- Employees shall regularly inspect their work areas and promptly remove and properly dispose of accumulations of combustible materials.
- Office and shop employees shall ensure that the aisles and workspaces remain clear and free of flammable or combustible trash.
- Suitable clearances shall be maintained below sprinkler heads for storage.
- Access to electrical switches and controls shall remain clear.
- There shall be no excessive accumulation of paper, rags, sweepings, or debris.
- Exits and fire door closures shall remain unobstructed and in good working order.

#### *Training*

This Fire Prevention Plan shall be reviewed with each employee (full-time, part-time and temporary) upon initial assignment. This review shall include, at a minimum, the topics listed below.

1. The nature and classes of fire.
2. Responsibilities for fire prevention as outlined in this plan.
3. Potential fire hazards (materials, processes) to which the employee may be exposed.
4. Proper methods for controlling fire hazards.

- 5 Location, care and proper use of portable fire extinguishers.

Training of all employees in Albany West 's Fire Prevention Plan will occur during the following times:

- At time of hire.
- When the program is first developed.
- When the program is modified.
- When employee responsibilities change.
- Specifics for each jobsite
- If retraining is required by employees who have violated any policy or does not understand it.
- All training will be documented in accordance with the company's Injury and Illness Prevention Program.

### *Maintenance*

Fire safety inspections shall be conducted on a regular basis as determined by the Responsible Person or his/her designated representative. These items should be checked at the time of any other safety audit or inspection.

The inspections shall verify that the fire hazards and ignition sources are properly controlled as required by this Plan. If corrective actions are required, they will be documented in accordance with Albany West 's Injury and Illness Prevention Program. The fire safety inspection shall be documented. All inspection records will be documented in accordance with Company's Injury and Illness Prevention Program.

### *Fire Safety – General Procedures*

Supervisors are responsible for instructing the employees in the procedures implemented for specific job site locations.

1. Fire extinguishers and applicable fire suppression equipment will be located in easily accessible locations and remain visible at all times.
2. Building exits will be clearly identified and kept free from obstructions.
3. General work areas will be kept clean and free of unnecessary clutter.
4. Discarded packing material or scrap will not be allowed to accumulate in open areas.
5. Sufficient number of wastebaskets and/or trash receptacles (including noncombustible containers) will be accessible in all work areas.
6. Floors will be swept or vacuumed to prevent accumulation of combustible materials.
7. Equipment will be kept clean (avoid buildup of fluids, grease, etc.).
8. Designated "NO SMOKING" areas will be observed.
9. Signs will be clearly posted in areas where flammable or combustible liquids are stored.

### 9.4 Accidents

#### *Globally Harmonized System*

Formerly called the Hazardous Communication Program (HazCom), Albany West is implementing the Globally Harmonized System ("GHS") adopted by the United Nations as part of the company's comprehensive Injury and Illness Prevention Program. The GHS serves as a formal method of conveying important information regarding hazardous substances to all employees who may potentially be exposed during the performance of their job duties.

#### *Program Responsibilities*

Albany West shall maintain at each jobsite, in written and/or electronic format, a GHS which describes the use of labels and other forms of warning, Safety Data Sheets (“SDS”), and employee information and training as follows:

1. Obtain current SDS forms for all hazardous substances in the workplace and make them available to employees for review.
2. Review incoming SDS forms for completeness and for new and significant health/safety information.
3. Maintain the chemical inventory (list of hazardous substances) to ensure it is kept up-to-date and that an SDS has been obtained for each product on the list.
4. Ensure that employees are provided with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area.
5. Ensure all employees exposed to hazardous substances are trained on the provisions and requirements of the GHS.
6. Confirm that all training is properly documented, and that recordkeeping is accomplished in compliance with MoW/OSHA requirements.
7. Maintain the written GHS in a current form. Make changes/updates as necessary to reflect the company’s present practices with regard to implementing the GHS.

Jobsite supervisor(s) are responsible for maintaining SDSs for products used at the jobsite, container labeling (as necessary), and ensuring that workers at the site have received the appropriate GHS training.

*List of Hazardous Substances*

An inventory (hazardous substances list) of all known hazardous substances present at the facility and/or used at the worksite by workers has been developed. The list includes the work area, product name, chemical composition, health and physical hazard codes, and approximate quantity on hand of each substance. A copy of the written and/or electronic chemical inventory is to be placed in the binder with the SDS collection or on a computer or mobile (iPad) device.

On a periodic basis, the GHS Administrator compares the inventory list with the SDSs on file to ensure that there is a GHS for every hazardous substance on the worksite. Specific information pertaining to each of the listed hazardous substances can be obtained by reviewing the appropriate Safety Data Sheet.

Listed in the table below are some of the known hazardous substances common to similar jobsites. Specific information on each hazardous substance can be obtained by reviewing the Material Safety Data Sheets.

*Note: This is not a comprehensive list of all possible hazardous substances on the project site. Each project is different and has different hazardous substances. The project supervisor will monitor, review, and list substances which may affect employees at the project site.*

*Table 6. Known hazardous substances common to most of our jobsites*

|                  |                    |             |                |
|------------------|--------------------|-------------|----------------|
| Limestone        | Crystalline Silica | Fly Ash     | Aluminum Oxide |
| Amorphous Silica | Calcium Oxide      | Iron Oxide  | Acetylene      |
| Concrete Cure    | Portland Cement    | Silica Sand | Form Release   |

|           |          |             |          |
|-----------|----------|-------------|----------|
| Diesel    | Gasoline | Solvents    | Grease   |
| Motor Oil | Oxygen   | Spray Paint | Asbestos |

### **Heat Illness Prevention Plan (HIPP)**

The Site Safety Supervisor assigned to each jobsite are the persons that have authority and responsibility for implementing the provisions of this program at each Albany West location.

#### *Temperature Triggers*

It is important to be aware of the 80/95 Temperature Triggers to prevent heat illness.

**80°:** If the temperature is expected to reach 80° or above, based on the National Weather Service forecast as of 5 p.m. the previous day, specific heat illness prevention procedures will be implemented. (See *Provisions for Access of Shade and Handling a Heat Wave*)

#### *High Heat*

**95°:** 95° is considered a “high heat temperature” and requires specific prevention procedures. (See *High Heat Procedures*)

Effective training in the following topics shall be provided to each supervisory and non-supervisory employee before the employee begins work that should reasonably be anticipated to result in exposure to the risk of heat illness.

#### *Procedures for Provisions of Water*

1. Drinking water containers (of five to 10 gallons each) will be brought to the site by the site supervisor or a person he has designated, so that at least one quart per hour per employee is available at the start of the shift and for the entire shift. All workers whether working individually or in smaller crews, will have access to fresh, pure and suitably cool drinking water, free of charge.
2. Paper cone rims or bags of disposable cups and the necessary cup dispensers will be made available to workers and will be kept clean until used.
3. As part of the Effective Replenishment Procedures, the water level of all containers will be checked periodically (e.g. every hour, every 30 min), and more frequently when the temperature rises, by the site supervisor or his designated person. Water containers will be refilled and replenished with fresh, pure and suitably cool water, when the water level within a container drops below 50 percent. Additional water containers (e.g. five gallon bottles) will be carried, to replace water as needed. Albany West employees will have plenty of water on site at all times to facilitate the needs of all employees.
4. Ice will be carried in separate containers, so that when necessary, it will be added to the drinking water to keep it cool.
5. Water containers will be placed as close as practicable to the workers (given the working conditions and layout of the worksite), to encourage the frequent drinking of water. If field terrain prevents the water from being placed as close as possible to the workers, bottled water or personal water containers will be made available, so that workers can have drinking water readily accessible.
6. Water containers will be relocated to follow along with the crew, so drinking water will remain readily accessible.
7. Water containers will be kept in sanitary condition.
8. Daily, workers will be reminded of the location of the water coolers and of the importance

of drinking water frequently. When the temperature meets or exceeds 95 degrees Fahrenheit, brief 'tailgate' meetings will be held each morning to review with employees the importance of drinking water, the number and schedule of water and rest breaks and the signs and symptoms of heat illness.

9. Audible devices (such as whistles or air horns) will be used to remind employees to drink water.
10. During employee training and tailgate meetings, the importance of frequent drinking of water will be stressed.
11. Management and supervisors shall instruct employees of the importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot, and employees are likely to be sweating more than usual in the performance of their duties.

#### *Procedures for Access to Shade*

1. Shade structures will be opened and placed as close as practicable to the workers when the temperature equals or exceeds 80 degrees Fahrenheit. Shaded areas will be either open to the air or provided with ventilation or cooling. Albany West will be prepared to provide shade even if the forecast is for temperature highs below 80 degrees. When the temperature is below 80 degrees Fahrenheit, access to shade will be provided promptly, when requested by an employee. Note: The interior of a vehicle may not be used to provide shade unless the vehicle is air-conditioned, and the air conditioner is on.
2. When the temperature equals or exceeds 80 degrees Fahrenheit, shade will be available on site at the beginning of the shift to accommodate all employees on recovery or rest periods, and those on site taking meal periods.
3. Shade must not expose employees to unsafe or unhealthy conditions and must not deter or discourage access or use.
4. Employees must be able to sit comfortably and fully shaded without touching each other.
5. Employees must be able to reach the shaded area within a 2-½ minute walk and never greater than ¼ mile, whichever is shorter.
6. There must always be enough shade to accommodate employees who seek to cool off.
7. Daily, workers will be informed of the location of the shade structures and will be encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating. Such access to shade will be permitted at all times. An individual employee who takes a preventative cool-down rest:
  - a. will be monitored and asked if he or she is experiencing symptoms of heat illness;
  - b. will be encouraged to remain in the shade; and
  - c. will not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than 5 minutes in addition to the time needed to access the shade.
  - d. If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest or during a preventative cool-down rest period, Albany West will provide appropriate first aid or emergency response.
8. Shade structures will be relocated to follow along with the crew and they will be placed as close as practical to the employees, so that access to shade is provided at all times.
9. In situations where trees or other vegetation are used to provide shade, the thickness and shape of the shaded area will be evaluated, before assuming that sufficient shadow is being cast to protect employees.
10. In situations where it is not safe or feasible to provide access to shade (e.g., during high winds), a note will be made of these unsafe or unfeasible conditions, and of the steps that

will be taken to provide shade upon request.

11. In situations where it is not safe or feasible to provide shade, a note will be made of these unsafe or unfeasible conditions, and of the steps that will be taken to provide alternative cooling measures but with equivalent protection as shade.

#### *Supervisor Procedures for Monitoring the Weather*

1. The site supervisor will be trained and instructed to check in advance the extended weather forecast. Weather forecasts can be checked with the aid of the internet (<https://met.gov.bs/> ) or by checking available weather apps. The work schedule will be planned in advance, taking into consideration whether high temperatures, a heat wave, precipitation or storms is expected. This type of advance planning should take place all throughout the construction phase.
2. Prior to each workday, the forecasted temperature and humidity for the worksite will be reviewed and will be compared against the US National Weather Service Heat Index to evaluate the risk level for heat illness. Determination will be made of whether or not workers will be exposed at a temperature and humidity characterized as either “extreme caution” or “extreme danger” for heat illnesses. It is important to note that the temperature at which these warnings occur must be lowered as much as **15 degrees** if the workers under consideration are in direct sunlight.
3. Prior to each workday, the supervisor will monitor the weather (using <https://met.gov.bs/> with the aid of a simple thermometer) at the worksite. This critical weather information will be taken into consideration, to determine, when it will be necessary to make modifications to the work schedule (such as stopping work early, rescheduling the job, working at night or during the cooler hours of the day, increasing the number of water and restbreaks).
4. A thermometer will be used at the worksite to monitor for sudden increases in temperature, and to ensure that once the temperature reaches or exceeds 80 degrees Fahrenheit, shade structures will be opened and made available to the workers. In addition, when the temperature equals or exceeds 95 degrees Fahrenheit, additional preventive measures such as the High Heat Procedures will be implemented.

**Handling a Heat Wave** –when the outside air temperature reaches **80 degrees** Fahrenheit or more.

1. Workers will be allowed and encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating. Such access to shade will be permitted at all times.
2. Albany West employees will be observed for alertness and signs and symptoms of heat illness. When the site supervisor is not available, an alternate responsible person may be assigned, to look for signs and symptoms of heat illness. Such a designated observer will be trained and know what steps to take if heat illness occurs.

**“High Heat” Procedures** – High Heat is defined as when the outside air temperature reaches **95 degrees** Fahrenheit or more.

High heat procedures are additional preventative measures that Albany West will use when the temperature equals or exceeds **95 degrees** Fahrenheit.

1. Employees must be provided with a minimum 10-minute cool-down period every two hours.

2. To the extent practicable, Albany West will ensure that effective communication (voice, observation, cell phone, etc.) is available so that employees at the work location can contact a supervisor when observing heat prevention measures
3. Albany West will observe employees for alertness and signs or symptoms of heat illness.
4. Albany West will ensure effective employee observation/monitoring by implementing one or more of the following:
  - a. Supervisor or designee observation of 20 or fewer employees, or
  - b. Mandatory buddy system whereby each employee will be assigned a “buddy” to be on the lookout for signs and symptoms of heat illness and to ensure that emergency procedures are initiated when someone displays possible signs or symptoms of heat illness, or
  - c. Regular frequent communication with our employees working by themselves or in smaller groups (via phone or two-way radio if the reception in the area is reliable), or
  - d. Other effective means of observation.
5. Albany West will designate one or more employees on each worksite as authorized to call for emergency medical services and allow other employees to call for emergency services when no designated employee is available.
6. Throughout the work shift, Albany West will remind employees (and the employee will take responsibility for) drinking plenty of water.
7. Albany West will hold pre-shift meetings before the commencement of work to review the high heat procedures, encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary.

#### *Procedures for Acclimatization*

Acclimatization is the temporary and gradual physiological change in the body that occurs when the environmentally induced heat load to which the body is accustomed is significantly and suddenly exceeded by sudden environmental changes. The body needs time to adapt when temperatures rise suddenly, and an employee risks heat illness by not taking it easy when a heat wave strikes or when starting a new job that exposes the employee to heat to which the employee’s body hasn’t yet adjusted. Inadequate acclimatization can be significantly more perilous in conditions of high heat and physical stress.

1. At Albany West we will monitor the working conditions of our employees, and we will act effectively when conditions result in sudden exposure to heat their employees are not used to.
2. The weather will be monitored daily. The site supervisor will be on the lookout for sudden heat wave(s) or increases in temperatures. For purposes of this section, “heat wave” means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least 10 degrees Fahrenheit higher than the average high daily temperature in the preceding five days.
3. For new employees, the intensity of the work will be lessened during a two-week break-in period (such as scheduling slower paced, less physically demanding work during the hot parts of the day and the heaviest work activities during the cooler parts of the day (early-morning or evening). Steps taken to lessen the intensity of the workload for our new employees will be documented.
4. The site supervisor will be extra-vigilant with new employees and stay alert to the presence of heat related symptoms. New employees will be closely observed by a supervisor or designee to watch closely for discomfort or symptoms of heat illness for the first 14 days of the employee’s employment.

5. During a heat wave, all employees will be observed closely (or maintain frequent communication via phone or radio), to be on the look-out for possible symptoms of heat illness.
6. Employees and supervisors will be trained on the importance of acclimatization, how it is developed and how these company procedures address it.

*Procedures for Emergency Response*

Albany West will implement effective emergency response procedures including:

1. Albany West will ensure that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor or emergency medical services when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable. If an electronic device will not furnish reliable communication in the work area, Albany West will ensure a means of summoning emergency medical services. Checks will be made to ensure that these devices are functional prior to each shift.
2. Prior to assigning a crew to a particular jobsite, Albany West workers and the site supervisor will be provided a map of the site, along with clear and precise directions (such as streets or road names, distinguishing features and distances to major roads), to be given to emergency responders to avoid a delay of emergency medical services.
3. Prior to assigning a crew to a particular worksite, efforts will be made to ensure that a qualified and appropriately trained and equipped person is available at the site to render first aid if necessary.
4. Prior to the start of the shift, a determination will be made of whether or not a language barrier is present at the site and steps will be taken (such as assigning the responsibility to call emergency medical services to the site supervisor or an English speaking worker) to ensure that emergency medical services can be immediately called in the event of an emergency.
5. If a supervisor observes, or any employee reports, any signs or symptoms of heat illness in any employee, the supervisor will take immediate action commensurate with the severity of the illness.
6. If the signs or symptoms are indicators of severe illness (such as, but not limited to, decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior, or convulsions), Albany West will implement emergency response procedures by calling 911.
7. When an Albany West employee is exhibiting signs or symptoms of heat illness, the employee will be monitored and will not be left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services in accordance with Albany West procedures. Steps will be taken immediately to keep the stricken employee cool and comfortable once emergency service responders have been called (to reduce the progression to more serious illness).
8. At remote locations such as lots or undeveloped areas, the site supervisor will designate an employee or employees to physically go to the nearest road or highway where emergency responders can see them. If daylight is diminished, the designated employee(s) shall be given reflective vest or flashlights in order to direct emergency personnel to the location of the worksite, which may not be visible from the road or highway.
9. If necessary, the stricken employee will be transported to a place where they can be reached by an emergency medical provider.
10. During a heat wave or hot temperatures, workers will be reminded and encouraged to

immediately report to their site supervisor any signs or symptoms they are experiencing.

11. Employees and our site supervisors training will include every detail of these written emergency procedures.

#### *Handling a Sick Employee*

1. When an Albany West employee displays possible signs or symptoms of heat illness, a trained first aid worker or site supervisor will check the sick employee and determine whether resting in the shade and drinking cool water will suffice or if emergency service providers will need to be called. A sick worker will not be left alone in the shade, as he or she can take a turn for the worse!
2. When an employee displays possible signs or symptoms of heat illness and no trained first aid worker or supervisor is available at the site, emergency service providers will be called.
3. Emergency service providers will be called immediately if an employee displays signs or symptoms of heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face), does not look OK or does not get better after drinking cool water and resting in the shade. While the ambulance is in route, first aid will be initiated (cool the worker: place the worker in the shade, remove excess layers of clothing, place ice pack in the armpits and groin area and fan the victim). Do not let a sick worker leave the site, as they can get lost or die before reaching a hospital!
4. If an employee does not look suitable for work and displays signs or symptoms of severe heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face), and the worksite is located more than 20 minutes away from a hospital, call emergency service providers, communicate the signs and symptoms of the victim and wait for further instructions from the emergency dispatcher.

#### *Procedures for Employee and Supervisor Training*

Supervisors will be trained prior to being assigned to supervise other workers. Training will include Albany West 's written procedures and the steps site supervisors will follow when employees' exhibit symptoms consistent with heat illness.

1. Effective training in the following topics will be provided to each supervisory and non-supervisory employee before the employee begins work that should reasonably be anticipated to result in exposure to the risk of heat illness:
  - a. Albany West 's procedures for complying with the MoW/OSHA Heat Illness Prevention Regulation standard, including, but not limited to, Albany West 's responsibility to provide water, shade, cool-down rests, and access to first aid as well as the employee's right to exercise their rights under this standard without retaliation.
  - b. The concept, importance and methods of acclimatization.
  - c. The different types of heat illness, the common signs and symptoms of heat illness, and appropriate first aid and/or medical responses to the different types of heat illness, and in addition, that heat illness may progress quickly from mild symptoms and signs to serious and life threatening illness.
2. Site supervisors will be trained on how to track the weather at the job site (by monitoring predicted temperature highs and periodically using a thermometer). Site supervisors will be instructed on, how weather information will be used to modify work schedules, to increase number of water and rest breaks or cease work early if necessary.
3. Employees will be trained on the steps that will be followed for contacting emergency medical services, including how they are to proceed when there are non-English speaking

workers, how clear and precise directions to the site will be provided and the importance of making visual contact with emergency responders at the nearest road or landmark to direct them to their worksite.

4. When the temperature exceeds 95 degrees Fahrenheit, short ‘tailgate’ meetings will be held to review the weather report, to reinforce heat illness prevention with all workers, to provide reminders to drink water frequently, to inform them that shade can be made available upon request and to remind them to be on the lookout for signs and symptoms of heat illness.
5. New employees will be assigned a “buddy” or experienced coworker to ensure that they understand the training and follow company procedures.

#### *Heat Illness Defined*

Heat illness is a serious medical condition that occurs when the body cannot cope with the heat and can include the following symptoms:

- Heat Cramps
- Heat Exhaustion
- Heat Syncope
- Heat Stroke

#### *Causes of Heat Illness*

- Certain working conditions and the **environmental conditions** contribute to heat illness. These risk factors include:
  - Air temperature
  - Relative humidity
  - Radiant heat from the sun and other sources
  - Conductive heat sources such as the ground
  - Air movement (or lack of)
  - Workload severity and duration
  - Protective clothing worn by person
  - Personal protective equipment worn by person
  - Pre-existing medical condition.
- In addition to environmental risk factors, there are personal risk factors that can contribute to heat illness, these include:
  - Age – the very old and the very young are more susceptible to the heat.
  - Weight – people who are overweight are more at risk for heat illness
  - Physical Fitness – if you have a low level of physical fitness, you are more susceptible to the heat.
  - Metabolism
  - Degree of Acclimatization – if you have not been working in the heat for very long, you are not used to it.
  - Prescription Drugs – certain prescription drugs dehydrate you, so you need to drink more water if you are taking these prescriptions.
  - Water consumption – consuming water prior to work and throughout the day will reduce your risk for heat illness.
  - Alcohol consumption – alcohol dehydrates the body.
  - Caffeine consumption – caffeine (found in coffee and energy drinks like “Rockstar” and

“Red Bull”) dehydrates the body.

- Or other conditions that affect the body’s water retention or physiological responses to heat.

**Your personal risk factors may put you at a higher risk of developing heat illness.**

If you have any **personal risk factors** you must be especially cautious in the heat:

- Drink plenty of water
- Acclimate to the weather
- Report any signs of heat illness to your supervisor immediately
- The most important thing you can do to prevent heat illness is drink plenty of water: small quantities and frequent intervals.

*Thirst is not an indicator of dehydration – if you are thirsty you are already dehydrated.*

*Types of Heat Illnesses*

**Heat Cramps** –are caused by performing hard physical labor in a hot environment. Painful spasms of the muscles are caused by the body’s loss of salt and by lack of water replenishment. Excess salt can build up in the body if water is not replaced.

**Treatment:** Drink water, rest in the shade, get near a fan, spray the person with water and massage the cramp. Severe cramps require medical attention.

**Heat Syncope (Fainting)** – a person who is not acclimated to hot environments and who stands erect and immobile in the heat may faint. Blood Vessels in the skin and in the lower part of the body dilate which may cause blood to pool there rather than return to the heart to be pumped to the brain causing dizziness or fainting. One of the greatest dangers of this condition is hitting your head on a sharp object after having fainted.

**Treatment:** This condition is usually short-lasting and greatly improves after lying down in a cool environment. However, if the fainting lasted for more than a minute, or is accompanied by changes in mental state, get immediate medical attention call 911 or your company procedure.

**Heat Exhaustion-** Results from loss of fluid through sweating and not drinking enough fluids. Signs of heat exhaustion include cool, moist, pale flushed or red skin; heavy sweating; headache; nausea or vomiting; dizziness; giddiness and extreme weakness or fatigue. The skin is clammy and moist while body temperature will be near normal or slightly elevated.

**Treatment:** Get the person to cooler area, if fully awake water may be administered slowly, remove tight clothing and apply cool compresses, **if they refuse water, vomit, or lose consciousness get immediate medical attention by calling 911 and notifying your Supervisor.**

**Heat Stroke is the most serious heat illness.** This occurs when the body’s system of temperature regulation fails, and the body temperature rises to critical levels. This is a MEDICAL EMERGENCY! Immediately dial 911 and notify your Supervisor if a coworker shows these signs and symptoms.

**Signs and Symptoms:** Sweating stops, confusion, irrational behavior, loss of consciousness, convulsions, (usually) hot, dry skin and high body temperature (**105.8 F**) which may lead to death.

***Remember Heat Stroke is a Medical Emergency!***

Victims of heat stroke usually die unless treated promptly. Their medical outcome depends on prompt first aid - how quickly you can cool them down - and the victim's physical health.

Before Help Arrives – Have them lie down in a shady area or get them indoors

Soak clothing in cool water or remove clothing and gently apply cool water to the skin followed by fanning to stimulate sweating. Apply ice packs to the groin and armpits.

***Recordkeeping and Posting Requirements***

The following safety related records are to be maintained at each jobsite. A separate binder for recordkeeping is suggested.

1. On-site daily safety meeting (printed out);
2. The Site Safety Supervisor will periodically audit daily pre-lift safety meetings;
3. Forward a copy to the Albany West office;
4. Weekly Toolbox Meetings will be held when there are two or more employees at a worksite;
5. Safety Inspection Checklist;
6. Accident/Incident Investigation Reports.

**Correcting Unsafe or Unhealthy Conditions and Work Practices**

All unsafe and/or unhealthy work conditions or work practices identified will be evaluated and corrected in a timely manner. Personnel will not be required or permitted to work under conditions that post a clear or imminent hazard. Once corrected, written documentation of the action taken will be forwarded to and maintained in the main office. When an imminent hazard exists, which cannot be immediately corrected without endangering employees and/or property, the following steps will be followed:

1. Remove all potential endangered employees from the area;
2. Provide employees responsible to correct the condition with necessary safeguards;
3. Correct the problem;
4. Document and date the Corrective Action taken and forward to The Health and Safety Supervisor.

***Emergency Crisis Response***

In the event of an emergency, or a situation that could evolve into an emergency, management must be notified immediately. During the new-hire orientation, employees will be advised of the company Emergency Action Plan and the procedures implemented for responding to emergencies, to include fire/explosion; natural disasters; earthquake; chemical leak, spill or threatened release; bomb threat; domestic terrorism or civil disturbance. When beginning work at a new jobsite, employees will be informed of procedures implemented for responding to emergencies at that specific location. The alarm system that will be used to initiate evacuation of the jobsite will be identified.

When a jobsite evacuation is initiated, employees:

- must proceed to the designated assembly area;
- are not to stop and pick up personal belongings when exiting the jobsite/structure;
- are not to block areas that would be considered access for emergency vehicles;
- will not be allowed to re-enter the job site/structure without clear indication that it is safe to

do so;

- cannot leave the assembly area unless advised to do so by a designated employee or supervisor;
- will be instructed not to respond to news media, contact with the media is limited to management only

The most important focus of an emergency is the protection of human life.

## **Emergency Action Plan**

This Emergency Action Plan has been developed for the safe and efficient egress of employees during an emergency situation such as fire, explosion, earthquake, bomb threat, threatened release, domestic terrorism, or chemical spill/leak. This Emergency Action Plan is designed with three fundamental objectives:

1. To facilitate a safe evacuation of company employees to a pre-designated safe meeting point in the event of an emergency to ensure that all our employees are accounted for.
2. To minimize the potential for personal injury during an evacuation.
3. To establish methods or procedures to minimize loss of property including buildings and equipment.

It is company policy for all employees to follow the requirements set forth in this Emergency Action Plan, which will be kept in the office, job truck or crane, and available for employee review.

### *Responsible Person*

It is the responsibility of the site supervisor to ensure the overall implementation of the Emergency Action Plan and to direct the following tasks for the project site:

- Identify and evaluate potential emergencies at the project site that may require personnel evacuations;
- Establish and/or review procedures for emergencies;
- Ensure that employees receive training on this program and that the training is up to date;
- Ensure compliance with the safety and health work practices as specified in the Safety Program and this Plan;
- Ensure that records of training, inspection, and corrective measures, are properly maintained.

### *Training*

Training of all employees regarding the Emergency Action Plan will occur at the following times:

- At the beginning of the project when the program is first developed;
- When new employees are hired;
- When the program is modified;
- When employee responsibilities change;
- When retraining is deemed necessary.

Training for the project site will be documented by the site supervisor.

### *Emergency Procedures*

An emergency is an unforeseen combination of circumstances that calls for immediate action. An emergency generally creates a sense of panic and confusion at a time when prompt action and clear thinking is essential. In an emergency, seconds can be the difference between life and death. That is why it is important to be prepared for the emergencies that can occur.

### *Employee Responsibilities*

It is the responsibility of every employee at the jobsite to know:

- Your site supervisor will train you how to protect yourself in each type of emergency. This training occurs at toolbox safety meetings. In addition, you may be required to attend additional training regarding emergency procedures.
- Your site supervisor will train you how to report an emergency. You must follow the procedures given to you for your safety as well as the safety of others.
- Your site supervisor will train you on the proper sequence of actions to take if an emergency occurs. You must follow the sequence of actions for your safety as well as the safety of others.
- The location of emergency equipment (e.g., fire extinguisher, first aid kit, emergency telephone number, etc.) in or near your work area or crane.
- If an emergency occurs, you must be sure that the area is safe before you enter the area where the injured employee is. Get proper authorities involved immediately. Property is always of secondary importance.

### *Types of Emergencies*

Potential emergencies that are possible to occur at the workplace include:

- Trench collapse or cave-in;
- Fire
- Hurricane
- Chemical spill, leak, or threatened release explosion
- Power outage
- Others (e.g., flood, earthquake, bomb threat, domestic terrorism, etc.)

### *Reporting Emergencies*

Emergencies must be reported promptly. Regardless of the type of emergency, use one of the methods of reporting listed below that will produce the quickest and most effective response.

1. Call 911 or 919 and give the following information:
  - a. Your name, telephone number, your exact location and any special directions of how to find the victim or incident;
  - b. Description of the emergency, need for paramedic, ambulance, fire department, police department, etc.;
  - c. Wait for questions. **DO NOT HANG UP!**
2. Call the office on the phone or radio;
3. Notify the local Albany West main office immediately;
4. The site supervisor needs notification so a company representative can be sent immediately if needed;
5. Notify the general contractor assigned to the job.

Accident scenes must be safe to enter. Once safe and secured, preserve and investigate the scene as soon as possible to ensure accuracy. The project supervisor should take photos of the scene to aid in the investigation.

- Call project site emergency numbers;
- Notify appropriate owner/client representatives;
- Notify appropriate subcontractor representatives.
- Elements of the Project Site Evacuation Program
- Know all means or methods by which to sound an alarm or otherwise alert workers of an emergency.
- Provide instructions as to the various evacuation routes and assembly locations.
- Provide specific instructions as to employee and supervisor actions and responsibilities if an emergency occurs.

Examples:

- Stay calm, do not panic.
- Exit as quickly as possible without stopping to gather personal belongings.
- Proceed to assembly point.
- Supervisors must direct others to leave when an evacuation has been sounded.
- Designated employees will check to see that no one has been left behind, particularly where the alarm may not be audible.
- Once in the designated assembly area, supervisors will take a head count to verify that everyone has evacuated the emergency area.
- Keep access clear for emergency equipment. Do not congregate in roadways or near building access points.
- Do not re-enter the emergency area until the "All Clear" has been given.

At no time should information concerning the emergency be given to members of the news media until a company representative has approved it for release. Contact with the media is limited to designated personnel.

#### *Rescue and Medical Duties*

Only trained employees are to perform emergency first aid. Those employees who are trained in first aid and CPR and are authorized to perform those duties. Outside emergency response services (911 or 919) is the primary source of critical medical treatment.

#### *Emergency Phone Numbers*

The "Emergency Contact List" shall be provided to field supervisors. Emergency phone numbers are used for emergencies only and shall not be distributed to any individuals outside of approved company business.

#### *Main Office Notification*

In the event of a serious injury or incident, the following notifications shall be made:

- Immediately notify the office of Albany West. It will be the responsibility of the site supervisor to distribute the report to the appropriate people.
- If a subcontractor is involved in an accident, have the subcontractor's foreman fill out a report and give a copy to the Albany West site supervisor. If serious in nature, a separate

Albany West investigation is needed.

- Forward the subcontractor's accident investigation report to Albany West 's main office.

#### *Office Personnel*

1. Report all safety hazards to management for correction.
2. Keep desk and work areas clean and orderly.
3. Wipe up spills immediately to prevent slips and falls.
4. Keep electrical and telephone cords out of aisles.
5. Keep all drawers closed when not in use. Never open more than one file drawer at a time.
6. Store heavy items at waist level in order to avoid unnecessary reaching or bending when lifting is required.
7. Be attentive when using scissors, paper cutters, staples, and other sharp items that could cause unnecessary cuts and lacerations.
8. Keep floor clear of sharp objects and other debris that could result in injury.
9. Do not overload electrical circuits.
10. Know where fire extinguishers and emergency exits are located. Know how to properly use a fire extinguisher.
11. Learn the proper procedures for reporting fires and other emergencies.
12. All equipment that has moving parts (i.e., copy machines, blueprint copiers, and printers) should be properly guarded to prevent hands, hair, and clothing from being caught in the moving parts.
13. When using video display terminals (VDT's), position the VDT so that there are no reflections from bright lights and windows. Request a non-glare screen, if needed.
14. Avoid musculoskeletal stress by taking your breaks, stretching exercises and practicing correct posture. Report any concerns or required workspace corrections to your Supervisor.
15. Always be on guard for conditions and practices that could result in an injury occurring.

#### *Housekeeping – General Requirements*

1. General waste, scraps, debris and rubbish shall be cleared from work area, passageways and stairs and in and around buildings on a daily basis.
2. All stairways, gangways and access ways shall be kept free of materials, supplies and obstructions at all times.
3. Tools, material, extension cords, hoses and/or debris shall not be strewn about in a manner which may cause tripping or other hazards.
4. Oil, grease, or other hazardous materials shall not be allowed to accumulate so as to prevent slipping or fire hazards.
5. Keep area around cranes free of debris, materials and tripping hazards.

#### *Disposal*

1. Metal or other approved containers shall be provided in adequate numbers to handle waste and rubbish disposal.
2. Garbage and other hazardous waste such as caustics, acids, and toxic materials shall be stored in approved, covered containers. Containers are to be appropriately labeled as to contents.
3. Employees, while cleaning up, shall not throw or drop materials from upper levels to lower levels or to the ground unless disposal are provided, or the area below is barricaded or secured.

*Storage*

1. Nails, wire ties, and other accessories will either be removed or bent over on form lumber or any other used lumber at the time of stripping or dismantling.
2. Materials shall be maintained in safe, neat stockpiles for ease of access and to prevent collapse or falling.

*Hearing Conservation – Scope and Purpose*

Increased attention is being paid to the problem of excessive noise in industry. Noise can be defined as “any unwanted sound.” The intensity of noise is commonly expressed in terms of decibels (DBA) and measured by a sound level meter. Medical authorities state that continuous exposure to noise levels above 90 DBA for eight-hour days, five days a week may endanger a person’s hearing. The safe period of exposure to a noise level is directly related to the level of noise.

Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in the table below when measured on the A-scale of a standard sound level meter at slow response.

When employees are subjected to sound levels exceeding those listed in Table 4, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of the table, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table.

*Table 7. Permissible Noise Exposure*

| <b>Exposure Per Day (Hours)</b> | <b>Sound Level DBA inHours</b> |
|---------------------------------|--------------------------------|
| <b>8</b>                        | 90                             |
| <b>6</b>                        | 92                             |
| <b>4</b>                        | 95                             |
| <b>3</b>                        | 97                             |
| <b>2</b>                        | 100                            |
| <b>1 ½</b>                      | 102                            |
| <b>1</b>                        | 105                            |
| <b>½</b>                        | 110                            |
| <b>¼ or less</b>                | 115                            |

*Hearing loss will result from over-exposure to excessive noise levels.*

Only after Engineering Controls to reduce noise levels have been considered, will ear protectors to individual workers be made. There are two types of ear devices: the plug type and the muff type. The proper individual fitting of both types of ear protectors is critical as any leakage can seriously impair efficiency.

*Engineering Controls*

Engineering Controls are put into place to reduce employee noise exposures, if practical, before the alternative of a hearing protection device is used. Examples of engineering controls include construction of enclosures around the noise-producing equipment, enclosures for personnel to shield them from the noise, process changes or system redesign, equipment repair, and

replacement of equipment. Careful cost-effectiveness analysis of these controls is required to assess their feasibility. Engineering controls should reduce or attenuate the noise levels enough that hearing protection is not necessary or is minimally required. For short term projects, engineering controls are not cost effective and proper ear protection is required. If the project is long-term and the engineering control would eliminate the need for cumulatively costly hearing protection, then the engineering control is cost-effective and will be considered.

#### *Hearing Protection*

Hearing protection will not reduce the sound of machinery and equipment completely, but if properly fitted will reduce excessive noise to a tolerable and safe level. Unusual equipment noises or warning alarms will not sound as loud but will be loud enough to attract personnel attention. There are different types of ear protectors ranging from glass wool, waxed cotton, or foam insert disposable plugs to earmuffs. While ear plugs are worn in the ear blocking the auditory canal, earmuffs fit over the ears to reduce noise transmitted through the surrounding bone structure. The choice of protection depends on the type of noise, the job, and comfort.

Albany West will provide hearing protection to all employees exposed to an 8-hour TWA of 85 dB(A) or greater. The hearing protectors will be provided at no cost to the employee.

Training on the use and care of hearing protectors must be provided to all employees who are issued them. Instructions must be provided to all employees in construction due to the variable nature of the work conditions.

The noise reduction rating (NRR) is listed on the hearing protection device. This rating reflects the maximum amount of noise reduction (attenuation) that can be achieved for the wearer when using the device as directed. Actual workplace or field use noise exposure reduction may be less since protection is highly dependent on user training, motivation, and utilization.

For dual protection (i.e., ear plugs and muffs) add 5 dB to the Noise Reduction Rating of the higher- rated protector. Where it appears that the attenuation of the hearing protector is not sufficient to reduce employee noise exposures below required levels, the site supervisor should determine if a greater degree of employee protection is necessary.

#### *Vehicle and Truck Safety*

The definition of “**Vehicle**” includes but is not limited to trucks, semis and cranes.

1. Only qualified, licensed operators may operate company owned, leased or rented **Vehicles**. Prior to assigning a **Vehicle** to an employee, a check shall be made to determine the employee has a current, valid driver's license without prior violations or points, proper class certification, and minimum auto insurance required by the Government of The Bahamas. A copy of this license will be placed in the employee's personnel file. All **Vehicles** transporting material must comply with city, county or state laws pertaining to weight, height, length and width. If permits are required for these loads, they shall be obtained.
2. Operating Company owned, leased or rented **Vehicles** or equipment while under the influence of alcohol or drugs is prohibited.
3. Wearing a seat belt is required for all operators, drivers, and passengers of company owned, rented or leased **Vehicles** and equipment.
4. Island or national safety inspections of **Vehicles**, when required, will be obtained and decals posted on **Vehicle**.
5. Company owned, rented or leased **Vehicles** will not be used off the project except for company business. However, there are cases where certain individuals are assigned a **Vehicle** with permission to drive the **Vehicle** between the project and their residence. This permission will be granted on an individual basis and the use of **Vehicles** other than

described above will not be tolerated.

6. Persons not employed by the company will not operate a company owned, rented or leased **Vehicle**.
7. **Vehicles** used to transport explosives, gasoline, fuel oils or other flammable material will not be allowed to haul passengers other than those authorized by supervisor.
8. Smoking will not be allowed on, in or within 50 feet of **Vehicles** hauling fuel oils, gasoline or explosives.
9. No person shall ride with arms or legs outside of the **Vehicle**, in a standing position on the **Vehicle** body, or on running boards or seated on side fenders, cabs, cab shields, **Vehicle** bed, or on the load.
10. No **Vehicle** shall be driven at a speed greater than is reasonable and proper, with due regard for weather, traffic, intersections, width and character of the roadway, type of motor **Vehicles**, and any other existing condition.
11. Do not use any motor **Vehicle** or equipment having an obstructed view to the rear unless:
  - a. The **Vehicle** or equipment has a backup alarm audible above the surrounding noise level or;
  - b. The **Vehicle** or equipment is backed up only when an observer signals that it is safe to do so.
12. No personnel shall be permitted to get off or on moving **Vehicles** or equipment.
13. Other operators (individuals other than the employee assigned to the **Vehicle**) will not be allowed to operate equipment unless authorized by the site supervisor.
14. The employee assigned to the **Vehicle** is personally responsible for the safe movement and/or operation of equipment.
15. No equipment will be operated beyond its safe load or operational limits.
16. No unauthorized personnel will be allowed to ride on equipment. This will include the riding of loads, headache ball, fenders, etc. Everybody needs to be in a seat with a seatbelt as designed for that vehicle.
17. Operators using signalpersons should make sure that the signalpersons can be seen that they understand signals prior to moving equipment and that they are aware of overhead structures, electrical lines, etc.

#### *Subcontractor Vehicles and Equipment*

Subcontractors will be responsible for managing and implementing all safety policies and procedures for their vehicles and equipment. In addition, they shall understand that:

1. No unsafe **Vehicles** or equipment will be allowed in construction areas. Where compliance is refused, the site supervisor shall be notified immediately.
2. Subcontractor employees shall follow established safety procedures in operation, inspection and maintenance of **Vehicles** and equipment.
3. It is the responsibility of the subcontractor's designated responsible individual to visually inspect the **Vehicles** and equipment before starting work and report any unsafe condition or practices to the site supervisor. Equipment not in compliance with applicable safety standards shall not be permitted to be put in operation.

#### *Delivery of Material - Subcontractors*

1. When trucks arrive to deliver subcontractor material or equipment, only authorized employees are to perform the unloading operations and the yard supervisor and/or responsible individual designated by the subcontractor will oversee this operation.
2. Before tie-downs are loosened, the load is to be inspected by the yard supervisor and/or responsible individual designated by the subcontractor for shifted material or any situation

that could cause injury. If a dangerous situation is observed, the load must be stabilized before unloading begins.

### Sanitation Requirements

One separate toilet/washing facility shall be provided for each 20 employees. Washing stations will have soap, single use towels, and be located so that any time a toilet is used, the user can readily wash. Albany West stresses the importance of hand washing. Employees are instructed to wash their hands after work, prior to eating, drinking or smoking. Frequent hand washing is the easiest way to prevent illness.

### Signs and Barricades

Signs and barricades are important, if not critical, to the safety of our workers.

- **Signs** are the warnings of hazard, temporarily or permanently affixed or placed, at locations where hazards exist.
- **Barricades** are intended to obstruct or deter the passage of persons or vehicles.
- **Tags** are temporary signs, usually attached to a piece of equipment or part of a structure, to warn of existing or immediate hazards.

## ACCIDENT PREVENTION SIGNS AND TAGS

### General

Signs and symbols shall be visible at all times when work is being performed and shall be removed or covered promptly when the hazards no longer exist.

Figure 16. Example of the type of sign that should be visible on site when work is being performed.



### Danger Signs

Danger signs shall be used only where an immediate hazard exists. Danger signs shall have red as the predominating color for the upper panel; black outline on the borders; and a white lower panel for additional sign wording

Figure 17. Example of Danger Signs.



### Caution Signs

Caution signs shall be used only to warn against potential hazards or to caution against unsafe practices. Caution signs shall have yellow as the predominating color; black upper panel and borders; yellow lettering

Figure 18. Example of Caution Sign.



**Accident Prevention Tags**

This section applies to all accident prevention tags used to identify hazardous conditions and provide a message to employees with respect to hazardous conditions.

Tags shall be used as a means to prevent accidental injury or illness to employees who are exposed to hazardous or potentially hazardous conditions, equipment or operations which are out of the ordinary, unexpected or not readily apparent. Tags shall be used until such time as the identified hazard is eliminated or the hazardous operation is completed. Tags need not be used where signs, guarding or other positive means of protection are being used.

Figure 19. Example of Prevent Tags



Specifications for accident prevention tags similar to those shown in the table below.

Table 8. Examples for specifications of accident prevention tags.

| Basic Stock<br>(Background) | Safety Colors<br>(Ink) | Copy Specification<br>(Letters) | Examples |
|-----------------------------|------------------------|---------------------------------|----------|
| White                       | Red                    | Do Not Operate                  |          |

|        |               |                            |  |
|--------|---------------|----------------------------|--|
| White  | Black and Red | Danger                     |   |
| Yellow | Black         | Caution                    |   |
| White  | Black         | Out of Order<br>Do Not Use |  |

**Signaling**

Flagmen shall be provided with and shall wear a red or orange warning garment while flagging. Warning garments worn at night shall be of reflectorized material.

A flagger or flaggers shall be utilized at locations on a construction site where barricades and warning signs cannot control the moving traffic. Unless this section provides differently, the number of flaggers required and matters regarding the deployment of the flagger or flaggers shall be according to the Ministry of Works and Road Traffic Department standards, in addition to applicable international standards and best practices.

When a flagger or flaggers are required, they shall be placed in relation to the equipment or operation so as to give effective warning.

Placement of warning signs shall be according to the Manual.

Flaggers shall wear warning garments such as vests, jackets, or shirts manufactured in accordance with the requirements of the American National Standards Institute (ANSI)/International Safety Equipment Association (ISEA) 107-2004, High Visibility Safety Apparel and Headwear.

*Figure 20. Flagger attire.*



During the hours of darkness, flaggers' stations shall be illuminated such that the flagger will be clearly visible to approaching traffic and flaggers shall be outfitted with reflectorized garments manufactured in accordance with the American National Standards Institute (ANSI).

Albany West shall select the proper type (class) of high visibility safety apparel for a given occupational activity by consulting, ANSI or American Traffic Safety Services Association (ATSSA). Flaggers shall be trained in the proper fundamentals of flagging moving traffic before being assigned as flaggers. Signaling directions used by flaggers shall conform to the Manual. The training and instructions shall be based on the Manual and work site conditions and also include the following:

1. Flagger equipment which must be used,
2. Layout of the work zone and flagging station,
3. Methods to signal traffic to stop, proceed or slow down,
4. Methods of one-way traffic control,
5. Trainee demonstration of proper flagging methodology and operations,
6. Emergency vehicles traveling through the work zone,
7. Handling emergency situations,
8. Methods of dealing with hostile drivers,
9. Flagging procedures when a single flagger is used (when applicable),

Documentation of the training shall be maintained as required by Section 3203, Injury Illness and Prevention Program of the General Industry Safety Orders.

Flaggers shall be trained by persons with the qualifications and experience necessary to effectively instruct the employee.

#### *Aerial Lifts, Boom Lifts and Elevated Platforms*

Aerial devices, such as cherry pickers and boom trucks, may be vehicle-mounted or self-propelled and used to position employees.

General safety requirements for the use of aerial devices (cherry pickers and boom trucks) are as follows:

1. Only authorized persons may operate aerial devices;
2. Aerial devices must not rest on any structure;
3. Controls must be tested before use;
4. Workers must stand only on the floor of the basket. No planks, ladders, or other means are allowed to gain greater heights;
5. A fall protection system must be worn and attached to the boom or basket;
6. Brakes must be set when employees are elevated;

7. An aerial lift truck must not be moved when an employee is on the elevated boom platform.

Information must be displayed on the aerial devices as follows:

1. Manufacturer's name, model and serial number;
2. Rated capacity;
3. Operating instructions;
4. Cautions and restrictions, and
5. Load chart, if applicable.

Devices must be designed to applicable American National Standards Institute (ANSI) standards.

#### *Elevating Work Platforms*

Elevating work platforms, such as vertical towers and scissors lifts, are designed to raise and to hold a work platform in a substantially vertical axis. Operation requirements are as follows:

An operations and inspection manual must be available where the platform is in use. The following must be displayed on each unit:

Safe operation restrictions;

1. Manufacturer's name, model and serial number;
2. Rated capacity;
  - a. Maximum travel height;
  - b. Operating instructions;
  - c. A statement that the unit is in compliance with listed ANSI standards.
3. Employees must be instructed in proper (safe) use of the platform.
4. The platforms must have guardrails 42 in. ± 3 in. high. When guardrails are lower than 39 in. high, personal fall protection is required.

#### *Inspection*

Lifts must be inspected by a competent person prior to every operation. Ensure guardrails and safety chains are in place. Check for visual oil and fuel leaks. Controls must be properly marked and legible. Proper capacity ratings must be posted. Proper ignition system (key, etc.) must be operational. Check ground and platform controls for proper operation, if applicable.

#### *Training*

Personnel must be shown safe operational procedures for lifts. An operator manual must be provided with the aerial lift.

#### *Operational Requirements*

Lift controls must be tested each day prior to use to determine that they are in safe working order. Brakes must be set, and outriggers positioned on flat, solid surfaces. Wheel chocks should be used on inclines. Boom and basket load limits must be checked and not exceeded (usually two (2) employees and their necessary tools). Employees must tie-off with a full body harness and lanyard to the basket, but never to adjacent pole, structure, etc. Never place extended lifts in travel path of overhead cranes. Employees must stand on the floor of the basket. They should never be allowed to sit or climb on its sides or use planks, ladders, etc., for a work position. Scissor lifts must never be moved with the platforms up. Outriggers must be in the stored position before any aerial lift is moved. Do not operate lifts while batteries are being charged in place.

#### *Environmental Concerns*

When lifts are used inside buildings, consideration must be given to carbon monoxide emissions. Lifts that are propane driven or have air purifying scrubbers generate far less carbon monoxide. To prevent oil leakage on floor, install plastic type catch cloth under carriage of equipment.

*Forklifts*

1. Only trained and authorized operators shall be permitted to operate forklifts. Training shall be conducted at least every three years for operators and instructors.
2. Certification. The employer shall certify that each operator has been trained and evaluated as required by this section. The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation
3. Unauthorized personnel shall not be permitted to ride on forklifts.
4. Unattended forklift shall have the load engaging means fully lowered, controls neutralized, power shut off, and brakes set. On an incline, the brakes shall be set, and the wheels blocked.
5. A safe distance shall be maintained from the edge of ramps or platforms while operating on any elevated dock.
6. Brakes shall be set, and wheels blocked on trucks, trailers or railroad cars while loading or unloading.
7. The forklift shall have an overhead guard for protection against falling objects.
8. Only approved forklifts shall be used in hazardous locations.
9. Personnel safety platform shall be firmly secured to lifting carriage and/or forks. Personnel on platform shall have the means to shut off power to the forklift.

*Inspection*

A pre-operation safety inspection shall be performed at the beginning of each shift by the operator.

1. Forklift shall be tagged and taken out of service when defects are found.
2. Only certified mechanics are permitted to perform repairs.

*Forklift Types*

There are eleven types of forklifts which are designated for use as follows:

|    |  |                              |           |
|----|--|------------------------------|-----------|
| D  | Diesel   |                              |           |
| DS | Diesel Additional Safeguards DY  | Diesel Temperature Limited   | EElectric |
| ES | Electric Additional Safeguards EE  | Electric Completely Enclosed |           |
| EX | Electric Permissible G Gas   |                              |           |
| GS | Gas Additional Safeguards LP   | Liquid Propane               |           |
| LP | Liquid Propane Additional Safeguards Only approved forklifts shall be used in hazardous areas. |                              |           |

*Fuel Handling and Storage*

1. The storage and handling of liquid fuels such as gasoline and diesel shall be in accordance with NFPA Flammable and Combustible Liquids
2. The storage and handling of liquefied petroleum gas fuel shall be in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases regulations.

*Changing and Charging Batteries*

1. Charging of batteries shall be in approved locations.
2. Facilities shall be provided for flushing and neutralizing spilled electrolyte, for fire protection, for protecting charging apparatus from damage and for adequate ventilation for

- dispersal of fumes gassing batteries.
3. Appropriate lifting equipment shall be provided for handling batteries.
  4. Reinstalled batteries shall be secured to forklift.
  5. Smoking shall be prohibited in battery charging areas.
  6. Precautions shall be taken to prevent open flames, sparks or electric areas in battery charging areas.
  7. Tools and other metallic objects shall be kept away from the top of uncovered batteries.
  8. Appropriate personal protective equipment will be provided and worn by employees assigned to changing and charging batteries.

### *Asbestos Policy*

Asbestos refers to six naturally occurring, fibrous, hydrated mineral silicates that differ in chemical composition. Asbestos fibers are commonly referred to as actinolite, amonite, anthophyllite, chrysotile, crocidolite and tremolite. You may encounter asbestos at a construction site in the following applications/areas:

- Excavations where asbestos-bearing rock outcroppings are at or near the surface;
- Fireproofing for steel-frame high rise buildings;
- Pipe and boiler insulation;
- Insulators of electrical conductors, plaster, cement, drywall and taping compounds;
- Floor tile and tile adhesives;
- Acoustical ceilings (tiles and spray on);
- Asbestos cement piping, shingles, and panels;
- Roofing felt and sealing compounds.

Asbestos has been linked to serious illnesses and can only enter the human body through inhalation or ingestion. It cannot pass through the skin; thus, it is harmful when airborne. It will become airborne when the material it is contained in is broken apart, sanded, scraped, etc.

Every effort should be made to determine if a project site has had an asbestos survey and subsequent abatement/encapsulation, if needed, **BEFORE** any personnel arrive on site to begin construction activities. Buildings owners must communicate any knowledge of the presence and location of Asbestos Containing Materials (ACM) and/or Presumed Asbestos Containing Material (PACM).

To prevent exposure to our employees, other workers on the construction site and the general public, if you suspect the presence of ACM or PACM at a construction site immediately take the following steps:

- Clear all people out of the area;
- Seal off the area and post signage warning of the PACM;
- Notify the site supervisor of the PACM.

When a site supervisor has been informed of an area which contains PACM, he/she must take the following steps:

1. Ensure that the ACM area has been secured from unauthorized entry;
2. Notify Albany West Project Manager and/or the on-site owner representative;
3. Maintain the barriers to the PACM until told to remove them by Albany West management.

When a Project Manager of Albany West has been notified of PACM he/she must take the following steps:

1. Notify the owner's representative that a PACM area has been discovered and that work has been suspended;
2. If the owner says the area has previously been surveyed and is clear of ACM, explain that work will remain suspended until Albany West has had time to review such report. (Project Manager needs to obtain copy of report for our records);
3. If the owner does not know if the area has been surveyed, explain that all work will remain suspended until a complete asbestos survey has been conducted and results obtained;
4. If the owner asks for advice, state that Albany West will not contract to have a survey done or contract for the abatement/encapsulation if required. Advise the owner to contact an environmental engineer to perform a survey;
5. Notify Albany West's site supervisor or The Health and Safety Supervisor of the situation.

Work will resume on the site once abatement/encapsulation has been completed and Albany West management is satisfied that the presumed material did not contain asbestos.

Albany West employees will not conduct asbestos abatement. If it is determined that asbestos must be removed from an area, professionals trained in asbestos abatement will conduct the work. If Albany West workers enter the PACM area, they must wear respirators and certain protective clothing depending on the concentration of asbestos in the area. When all asbestos is removed, the area must be thoroughly cleaned using a HEPA dust collector or vacuum and wet cleaned. No dry sweeping is permitted under any circumstances. All asbestos materials must be properly disposed of in leak-tight containers and removed from the site. All certified asbestos workers are familiar with the intricacies and exceptions to these rules, and they must follow every regulation to ensure the maximum level of safety for our workers.

#### *Confined Space Entry Program*

##### *Definition of a Confined Space*

- A space which can be bodily entered to perform work;
- Has limited means of entry and exit;
- Is not designed for continuous human occupancy.

##### *Permit Required Confined Space*

A Permit-Required Confined Space has one or more of the following characteristics:

- Contains or has the potential to contain a hazardous atmosphere;
- Contains a material that has the potential for engulfing an entrant;
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section; or
- Contains any other recognized serious safety or health hazard such as: 19. Toxic gases above the Permissible Exposure Limit (PEL) 20. Oxygen deficiency (Less than 19.5% Oxygen by volume) 21. Oxygen enrichment (Over 23.5% Oxygen by volume)
- Potential for engulfment
- Flammable gas above 10% of the Lower Explosive Limit (LEL) 24. Potential for Immediately Dangerous to Life or Health (IDLH) atmospheres 25. Sloped floors which may

pin and cause asphyxiation

If the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated without entry into the space, the permit space may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated.

Ignition Sources: A fire or explosion can occur due to:

- Static Electricity
- Metal Friction
- Unapproved lamps or electrical equipment
- Cigarettes
- Sparks from grinding or welding

Toxic Contaminants:

- Above Threshold Limit Value (TLV) should be considered a serious potential hazard
- IDLH conditions pose serious danger to workers
- Contaminants may already be inside the space and/or introduced by work operations – ***even in brand new lines!***

Oxygen Deficient Atmosphere: May occur as a result of:

- The work being done (welding)
- Chemical reactions (rusting)
- Bacterial decomposition

May also occur by displacement of another gas – examples include using Nitrogen or Carbon Dioxide to inert an atmosphere.

Low Oxygen Symptoms When Oxygen level is at:

- 16%- Rapid Breathing, drowsiness
- 14%- Faulty judgment, rapid fatigue
- 12% - Unconsciousness
- 6% - Death

\* Know your crew so you can recognize symptoms of Low Oxygen levels! \*

### *General Requirements*

Using the Confined Space Safety Checklist:

1. Evaluate your workplace to determine if any spaces are Permit Required Confined Space.
2. Review the past and current uses of the Confined Space.
3. Take into account the physical characteristics, configuration, and location of the Confined Space.
4. Take into account what work you will be doing in the space: what tools you will be using, what chemicals etc.

Identified hazards need to be evaluated by a qualified person with respect to:

- scope of the hazard
- likelihood of hazard occurrence
- potential for changing conditions
- strategies for eliminating or controlling hazards
- emergency response capabilities

If “Permit Required Confined Spaces” are found, a means of warning employees about the existence of these spaces and the fact they are dangerous is required. This can be done with a tailgate meeting, safety huddle, and/or signs:

**DANGER  
PERMIT REQUIRED CONFINED SPACE  
DO NOT ENTER**

1. Inform employees of the confined spaces in the workplace and their hazards.
2. Prevent unauthorized entry into confined spaces.
3. Conduct training and establish proficiency for all employees for safe entry into and working within and around confined spaces.
4. Use Entry Procedure provided at the end of this section.

*Assignment of Responsibilities Employer*

- Identify employee job duties
- Identify Permit Required Confined Spaces
- Provide Personal Protective Equipment (PPE)
- Administer the Confined Space Program
- Assist Supervisors in determining and identifying Confined Spaces
- Conduct approved training programs for employees
- Evaluate instruments and equipment to be used in confined spaces
- Analyze conditions where hazards exist
- Review and update program as necessary
- Evaluate requests for entries
- Issue entry permits
- Maintain necessary documentation
- Provide annual refresher training
- Provide contractors and subcontractors with information on the hazards of entry
- Provide written Safety Rules
- Provide written Emergency Procedures
- Provide pertinent information regarding operations in and around the confined space
- Must ensure and certify that employees have the skills, knowledge and understanding necessary to perform their assigned duties in a competent manner

*Supervisor*

- Request training for new employees
- Identify hazards
- Understand consequences of hazard exposure
- Ensure entry permit is issued before entry

- Ensure pre-entry requirements are met
- Ensure permit is completed and posted
- Authorize worker entry
- Ensure acceptable entry conditions are maintained
- Terminate or cancel permits when entry is completed, or new condition exists
- Provide employee training in First Aid and CPR for rescue operations

***Entrant***

- Adhere to established procedures
- Know Confined Space hazards
- Know signs, symptoms and consequences of exposure
- Use personal protective equipment and monitoring instrumentation
- Enter only when trained to do so
- Enter only when appropriate safeguards are established (rescue provision)
- Advise employer of potential hazards
- Maintain constant communication with attendant
- Evacuate immediately if conditions become unsafe

***Attendant (for Permit Required Confined Spaces)***

- Remain outside of the ConfinedSpace
- Be trained in rescue operations: perform non-entry rescues
- Summon help in case of an emergency
- Communication: Remain in constant communication; if out of visual range, must remain in audible contact
- Must be trained in First Aid and CPR
- Keep unauthorized persons away
- Perform monitoring as required
- Evacuate if hazards are detected
- Evacuate if signs or symptoms of overexposure occur
- Do not enter/leave area unless trained person takes over as attendant

***Off-Site Rescue Teams: Should be familiar with:***

- Site lay-out
- Confined Space hazards
- Emergency response
- Practice scenarios
- Response time within 5 minutes

***Non-Permit Required Confined Space Entry Procedure***

1. Begin filling out Non-Permit Required Confined Space Safety Checklist form. Note the location of the Confined Space; describe the work to be performed, and who will be performing the work.
2. Perform an initial air test and record your findings on the Safety Checklist. Make sure that the Air Monitor has been calibrated recently and a bump test has been performed. If you do not know how to do this, consult your supervisor for training.
3. Isolate any sources of energy.

4. Ventilate if necessary.
5. Test the air again after isolation and ventilation.
6. Post “Confined Space – Do Not Enter” sign, clip Safety Checklist to sign.
7. Make sure proper PPE is worn for the work to be performed in the space: hard hat, gloves, face shield, welding helmet, etc.

*Permit-Required Confined Space Entry Procedure*

1. Control unauthorized access
2. Post sign at point of entry: “Danger – Permit Required Confined Space, Authorized Entrants Only.”
3. Blinding/Flushing of energy sources:
  - a. Pipes/lines must be disconnected, blinded, or blocked off
  - b. Physical locks are placed on breakers, valves and chains
  - c. Space shall be emptied, flushed or purged of flammable or hazardous substances to the extent feasible
4. Air Testing
  - a. Test air initially and periodically with calibrated monitor to determine whether dangerous and/or oxygen deficiency exists, record on Entry Permit.
  - b. Eliminate ignition source introduction until the hazardous condition has been eliminated
  - c. Obtain Hot Work Permit for ignition producing activities
5. Air Monitoring
  - a. If a toxic atmosphere is suspected, you must test or provide adequate protection for worker if above PEL for the substance
  - b. CO and H<sub>2</sub>S are most common toxics in Confined Space entry
  - c. Record testing/monitoring results on Entry Permit.
  - d. Employees shall have access to the monitoring results
  - e. If dangerous air contamination and/or Oxygen deficiency *does not* exist, entry into the space requires that: Air Monitoring shall be done periodically to ensure safe conditions are maintained. For example: before shift, after breaks, after lunch.
6. Retrieval Systems
  - a. Approved retrieval system shall be set up and nearby (tripod).
  - b. Inspect and test safety, rescue, and retrieval equipment prior to use.
  - c. The retrieval system shall be attached to the workers using an approved harness and line.
  - d. Wristlets may be used if it can be demonstrated that a harness is not feasible or creates a greater hazard or in addition to harness.
  - e. Retrieval line must be attached to a properly rated mechanical device or fixed point outside the permit space (tripod).
  - f. The mechanical device must be available to retrieve personnel from a vertical type, permit space 5 or more feet deep.
  - g. Lines and ropes should be configured within the space so as to not pose additional hazards to the entrant(s).
7. Entry Permit
  - a. Shall authorize entry only by designated and trained workers, into a specific Confined Space and for a specific purpose.
8. Ventilation

Recommended positive ventilation before and during all Confined Space entries.

- a. Where no fixed ventilation system exists, use a portable, explosion proof mechanical

- blower
- b. Place the blower intake line so that the make-up air is not taken from a contaminated environment (near running equipment, etc.)

### *Scaffolds*

All work platforms, either temporary or permanent, including scaffolds shall provide all employees a safe surface upon which to complete their work tasks. Albany West and its subcontractors are responsible for placing all work platforms and scaffolds used on the site and are responsible for their safety. The employees will not use any platforms or scaffolds they consider unsafe.

### *Purpose*

Work platforms and scaffolds have a multitude of safety considerations that must be attended to, or an equipment failure with severe injuries might result from the lack of this attention. Additionally, falls from these types of work surfaces account for a large percentage of deaths and serious injuries.

Equipment maintenance, installation and fall protection are key safety practices of this scaffold policy. Scaffolds will be erected and dismantled under the direct supervision of a Qualified Person.

### *Definitions*

Tube and Coupler Scaffold: An elevated platform assembly consisting of tubing which serves as posts, bearers, braces, ties, and runners. A base supporting the posts and special couplers which serve to connect the uprights and to join the various members.

Tubular Welded Frame Scaffold: A sectional, panel, or frame metal scaffold substantially built up of prefabricated welded sections which consist of posts and horizontal bearers with intermediate members. Panels of frames shall be braced with diagonal or cross braces.

Mobile Tubular Welded Scaffold: Tubular welded frame scaffolds mounted on heavy duty castors having locks to preclude undesirable rolling.

Handrails: Horizontal pieces of pipe installed at a height of 42 to 45 inches above the working platform to protect personnel from falls.

Midrails: Horizontal pieces of pipe installed knee high (approximately 21 inches) above the working platform to further protect personnel from falls.

Toeboards: Horizontal 1 inch by 4 inch or wider boards mounted on edge to protect from tools rolling off the deck.

Planks: Wooden planks 2 inch by 10 inch or wider used for scaffold decking at the working levels, made of Scaffold Grade (structural plank 2200 psi) lumber.

Ties and Bracing: Common construction wire used to tie scaffold to building, etc. #12 wire may be used if doubled, or a single looped #10 wire.

Cleats: Wooden “stops” attached to the bottom side of each end of the planks to prevent longitudinal movement of the planks.

Light Duty Scaffolds: 25 pounds per square foot of work platform. Medium Duty Scaffolds: 50 pounds per square foot of work platform. Heavy Duty Scaffolds: 75 pounds per square foot of

work platform.

Special Duty Scaffolds: exceeding 75 pounds per square foot of work platform as determined by a Qualified Person or a Civil Engineer currently registered in The Bahamas and experienced in scaffold design.

### *Responsibility*

The Albany West Supervisor, his designee or the subcontractor's designated responsible individual shall be accountable for assuring that the scaffold and all accessories comply with our policies and OSHA standards by performing a daily inspection before employees use scaffolding/platforms.

The subcontractors' designated responsible individual will provide the Albany West Supervisor (with a JHA) and the subcontractor's employees with information related to compliance with their policies and OSHA standards before use.

Only subcontractors who employ a Qualified Person that is knowledgeable of the scaffold requirements shall be allowed to dismantle scaffolding and move it to another work area or to a storage area upon completion of the job.

The subcontractor shall be responsible for any required MoW/OSHA Scaffold Permits, when required.

### *Inspection Tips*

The following listed items are presented to provide employees a guide for inspection of the platforms and scaffolding before usage. When an employee observes any item listed below, the employee must notify his/her supervisor and not use the platforms or scaffolds before any deficiency is corrected.

- Visually inspect a scaffold before use, especially if no one else is using it.
- Inspect all equipment components before using. Never use equipment that is damaged or deteriorated in any way.
- Avoid using rusted equipment, as its strength is not known.
- Inspect surface of proposed location for soil stability, levelness, obstructions, and electrical hazards.
- Inspect wood components for grade and strength.
- Inspect erected scaffolds regularly to be sure they are maintained in a safe condition and that the base plates have not settled.
- Ensure that maximum intended working load for each scaffold is posted in a conspicuous location at the jobsite or provided to each supervisory employee who shall have it readily available at the jobsite.

### *General Requirements*

- Review equipment for adequate sills for scaffold posts to distribute the load as required.
- Incomplete scaffolds will be "red" tagged by the contractor responsible (or otherwise identified). The warning tag should provide hazard warnings and PPE requirements if employee or inspectors will be required to use the scaffold. Contractor's employees will be instructed to read warning tags before using scaffolds.
- Stationary metal scaffold legs shall rest upon manufacturer's steel base plates, 2 inches by 10 inch scaffold grade wooden blocks (mud sill plates) are required when resting on earth

to assure the safety factor of four is maintained. Base plates must always be used.

- Use adjusting screws instead of blocking to adjust to uneven conditions whenever possible.
- Plumb and level all scaffolds as the erection proceeds. Do not force braces to fit. Level the scaffold until proper fit can be made easily.
- Fasten all braces securely with manufacturer's securement pins, not nails.
- On wall scaffolds, place and maintain anchors securely between structure and scaffold at least every 20 feet of horizontal length and every 20 feet of vertical height.
- If scaffolds are to be partially or fully enclosed, specific precautions must be taken to assure frequency and adequacy of ties securing the scaffolding due to the increased load conditions resulting from the effects of wind, snow, and ice.
- Freestanding scaffold towers must be restrained from tipping by guying or other means if it is higher than 3 times the least base dimension.
- All appropriate horizontal and diagonal braces must be installed before an employee uses the scaffold.
- Equip all planked or staged areas with guardrails 42 inches to 45 inches high, midrail approximately 21 inches high, and toeboard 4 inches in height along all open sides and ends of the scaffold platforms. The maximum deflection of the top rail when a load of 200 pounds is applied in any direction at any point on the top rail shall not exceed 3 inches.
- Scaffolds must be equipped with an access ladder or equivalent safe means of access.  
Use
- landing platforms with all access ladders higher than 30 feet. Offset the ladder location at each landing. Single or double cleat ladders shall not exceed 30 feet in length.
- Take appropriate precautions to ensure power lines and electrical conductors are not closer than the safe and legal distance from any scaffolding.
- All planking shall be scaffold grade as recognized by grading rules for the species of wood used.
- Platform planks shall be laid with their edges close together smooth platform will be tight, with no spaces through which tools or parts can fall. All scaffold platforms shall be at least two planks wide. Laminated planking (plywood) or equivalent strength of scaffold grade planking may be placed over planks to eliminate spaces created when the platform is built around piping or other obstructions.
- Where planking is lapped, each plank shall lap its support at least 12 inches and be secured from movement with #9 wire or equivalent as required to insure stability.
- All scaffolding accessories shall be used and installed in accordance with manufacturer's recommended procedures. Scaffolds, frames, and their components manufactured by different companies shall not be intermixed.
- Where persons are required to work or pass under the scaffold, scaffolds shall be provided with a screen between the toeboard and the guardrail extending along the entire opening consisting of #18 gauge US standard wire ½ inch mesh or the equivalent.
- The maximum intended load for each scaffold shall be posted at a conspicuous location at each jobsite or be provided to each supervisory employee who shall have it readily available at all times.

#### *Mobile Scaffolds*

- The height of rolling scaffolds must be equal to or less than three times the minimum base dimension. Outriggers may be installed to increase the minimum base dimensions.
- Locking devices must be installed on casters and locked prior to personnel using the

- scaffold. At least two of the casters shall be swivel type.
- Tools and material shall be removed or secured prior to moving the scaffold tower. Personnel must not be on scaffold being moved.
- Be aware of overhead power lines.

#### *Training of Personnel*

Each jobsite shall have at least one person designated the Qualified Person to perform scaffold training and inspection. All personnel shall participate in Awareness Training in the proper and safe use of work platforms or scaffolding. This training can be led by the Qualified Person and will include, but not be limited to the following guidelines:

- Do not climb on scaffold bracing unless it is designed and documented by the manufacturer for this purpose.
- Do not use ladders or makeshift devices on top of scaffolds to increase the height.
- Do not move rolling scaffolds with people or loose materials on them.
- Keep your weight inside the scaffold tower while working.
- Do not carry tools or parts in your hands or pockets when ascending the access ladder. Utilize tool belts, tool bucket, and rope or other acceptable means to raise and lower such items.
- Do not throw scrap materials down from elevated locations. Lower with rope or use other acceptable means.
- Scaffolds shall not be used for storage of material, except material currently being used.
- Do not overload scaffolds.
- Ladders or equivalent safe access shall be provided for employee entry onto the scaffold deck level.

#### *Recommended Procedures*

All scaffolds erected, used, loaded and maintained should have a copy of the Manufacturer's Published Guidelines and Data covering Procedures. Albany West will provide a copy of those procedures for verification purposes. If the Manufacturer's Guidelines are not available or if deviations from the guidelines are necessary, then:

- a. A Scaffold design with Drawings and Specifications should be drafted and stamped by a Qualified Person (Registered Professional Engineer) with a copy issued to us for verification purposes.

All Scaffolds and related components of the scaffold(s) should be in good, clean condition and inspected daily prior to use.

In addition to the Manufacturer's Published Procedures and/or the Qualified Person's Stamped Design, the scaffold must meet the safety requirements as published by the applicable Regulatory Agency such as OSHA or the Corps of Engineers, etc.

#### *Lock Out / Tag Out*

The following procedures must be followed during the servicing or maintenance of machines, to avoid the unexpected start-up of the machinery or equipment, or the release of stored energy, which could cause injury to employees.

Specific procedures will vary, depending upon (1) whether the source of hazardous energy is electrical, hydraulic, pneumatic, mechanical, thermal, or chemical, and (2) how many employees are affected. Lockout procedures describe the energy sources, location of disconnects, type of

disconnects, special hazards and special safety precautions.

Only trained and authorized employees will repair, replace, or adjust equipment. No employee is permitted to remove locking devices or tags from machinery, equipment, or circuits, unless they are responsible for the initial lockout/block out and the proper procedures have been followed for re-energizing the machinery or equipment.

The following SIX STEPS are a review of basic steps for safely de-energizing equipment:

1. Clear all personnel to safety
2. Clear away tools and materials from the equipment
3. Isolate all the equipment's energy sources
4. Lockout devices and re-energize systems, following written procedures
5. Release or restrain any stored energy by grounding, blocking, bleeding down, etc.
6. Make sure that the area is clear of all personnel, and then test the equipment to make sure that it will not operate.

*Restoring Equipment to Service:*

1. Clear all personnel to safety
2. Make sure all equipment components are intact, including safety guards and devices
3. Remove each lockout device using the correct removal sequence
4. Make a visual check before restoring energy to make sure that everyone and everything is clear of the equipment
5. Verify that equipment controls are in neutral.

Under no circumstance should work be performed on machinery or equipment that does not have a specific policy developed to address proper Lock Out/Tag Out (LOTO) procedures.

*Dig Alert*

It is required for any Albany West jobsite doing excavation in soil of any kind. The owner As-Built drawings for underground utilities will be reviewed and if necessary, the local utility companies will be notified to locate underground utilities.

*Lighting and Illumination*

Where the use of artificial light is required, it shall be maintained while workers are entering or leaving the area.

1. Areas requiring the continuous use of artificial light shall be inspected regularly and defective lamps replaced.
2. Temporary lights shall be equipped with guards to prevent accidental contact with the bulb. Guards are not required when the construction of the reflector is such that the bulb is deeply recessed.
3. Approved explosion proof electrical lighting shall be the only means used for artificial illumination in areas where flammable liquids, vapors, fumes, dust or gases are present and are creating a potential explosion hazard.
4. In addition to providing the required illumination intensities, consideration should be given to the selection and placement of lights which will provide minimum glare, eliminate harsh shadows and provide adequate illumination to work efficiently and safely.
5. Exposed empty light sockets and broken bulbs shall not be permitted.
6. Adequate light shall be provided throughout the building and in all work areas throughout the project, particularly passageways and stairways, and wherever necessary to avoid a hazard due to lack of light. Low voltage (12V) lighting shall be used in moist and/or other

hazardous locations such as drums, tanks and vessels. However, 120-volt lights may be used if protected by a ground-fault circuit interrupter.

### *Back Injury Prevention*

The National Safety Council's Accident Facts reports that back injuries generate the highest frequency of disabling injuries on the job. Construction is one of the high-risk industries for lower back injury. All Albany West employees need to know how to lift correctly and what can happen if they do not.

### *Back Injury Statistics*

One half of workers suffering from a back injury had lifted 60 pounds or less and carried the object for one minute or less. Over one-half of these injured workers had no previous back injury.

### *Protection from Back Injuries*

Knowing your own personal limits is an essential part of protecting yourself from back injuries. The pain and limitations from back injuries can be prevented by following these simple guidelines:

#### The four principals of proper lifting techniques:

1. Keep the load in front of you.
2. Keep the load close.
3. Bend at the knees, keeping the pelvis tucked and lift with the legs.
4. Never twist while lifting.

#### Hazard Avoidance

- If the load is too heavy or awkward, get someone to help you lift it.
- If it is still too heavy, get a piece of equipment to move it.
- Make sure you have good footing and a clear path of travel.
- Set the load down using the same techniques as lifting.

#### Project Site Follow-Up

Back injuries are the easiest injury to prevent if the site supervisor/foreman will encourage and reinforce the following:

- Stretching and conditioning should be conducted prior to starting work.
- Back injury prevention techniques will be periodically included at weekly toolbox training meetings.
- Incorporate feedback from employees regarding suggestions toward ways to improve back safety and lifting requirements.
- Demonstrate the basic lifting techniques to workers that are lifting something wrong.

**ANY BACK INJURY, NO MATTER HOW MINOR, SHOULD BE REPORTED TO YOUR PROJECT SUPERVISOR IMMEDIATELY.**

### *Back Safety – Material Handling*

Material handling is a job everyone does. It is easier and faster to do it the safe way rather than the hard, unsafe way. Proper lifting techniques must be observed when manually handling any size, shape, or weight of materials. The following safe practices will help:

- Do not move it twice if once will do. Plan your work!
- Get down close to the load (bend your knees, do not stoop).

- Keep your back straight.
- Lift gradually, using your legs, without twisting or jerking.
- Get help for bulky or heavyloads.
- Motorized or special handling equipment shall be used to move heavy or bulky objects to prevent needless backinjuries.
- Use gloves, aprons or pads when handling materials which are rough, sharp, hot or cold, or which are covered with hazardous substances.
- When moving a load, be sure you can see where you are going. Push do notpull.
- When carrying long objects like pipe or lumber, keep the leading end close to the ground.
- Pile materials on a strong level base. Interlock so the pile will not come part. Chock around stock so it cannot roll.

*Ladders*

Definitions

**Ladders.** A ladder is an appliance usually consisting of two side rails joined at regular intervals by crosspieces called steps, rungs, or cleats, on which a person may step in ascending or descending.

**Extension Ladder.** An extension ladder is a non-self-supporting portable ladder adjustable in length. It consists of two or more sections traveling in guides or brackets so arranged as to permit length adjustment. Its size is designated by the sum of the lengths of the sections measured along the siderails.

**Step Ladder.** A step ladder is a self-supporting portable ladder, nonadjustable in length, having flat steps and a hinged back. Its size is designated by the overall length of the ladder measured along the front edge of the side rails.

**Portable Ladders:** Generally designed for one-person use to meet the requirements of the person, the task, and the environment. When selecting a ladder for use, consideration shall be given to the ladder length or height required, the working load, the duty rating, worker position to the task to be performed, and the frequency of use to which the ladder will be subjected.

*Selection*

Ladders shall be selected, and their use restricted to the purpose for which the ladder is designed. Single-rail ladders shall not be used.

- A. Scaffolds or other worker positioning equipment shall be used when work cannot be safely done from ladders.
- B. Portable ladders are generally designed for one-person use to meet the requirements of the person, the task, and the environment. When selecting a ladder for use, consideration shall be given to the ladder length or height required, the working load, the duty rating, worker position to the task to be performed, and the frequency of use to which the ladder will be subjected. Ladders shall be used according to the following table.

*Table 9. Ladder duty classifications*

| Duty Rating      | Ladder Type | Working Load (Pounds) |
|------------------|-------------|-----------------------|
| Special Duty     | IAA         | 375                   |
| Extra Heavy-Duty | IA          | 300                   |

|                    |     |     |
|--------------------|-----|-----|
| <b>Heavy-Duty</b>  | I   | 250 |
| <b>Medium-Duty</b> | II  | 225 |
| <b>Light-Duty</b>  | III | 200 |

- Except where permanent stairways, temporary stairways, suitable ramps or runways are provided, ladders must be provided to give safe access to all elevations.
- Employees shall be instructed and required to ascend/descend ladders in the proper manner; facing the ladders and holding on the side rails with both hands, maintaining three points of contact. Material shall be raised or lowered with a line or hoisting equipment and not carried in one hand while ascending or descending.
- Manufactured ladders must conform to appropriate safety codes. (ANSIA-14.1)
- Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use.
- The use of portable, metal ladders should be restricted to areas which do not pose electrical hazards.
- Extension ladders should be placed so the horizontal distance at the bottom of the ladders is not less than one quarter (1/4) of the vertical distance to the top support. Ladders shall not be used in a horizontal position as platforms, runways, scaffolds or as support for other materials.
- Extension ladders in use shall be blocked, tied or otherwise secured to prevent movement or displacement.
- Ladders with broken or missing rungs and steps, broken or split side rails or other faulty and defective parts must not be used. When discovered with such defects, *ladders shall be immediately withdrawn from service and marked for destruction or repair.*
- Wooden Ladders shall not be painted in such a manner as to hide the grain structure, deterioration, or defects. Ladders may be kept coated with a suitable transparent preservative material. (Cross-grain in rungs, cleats and steps is notpermitted.)
- The side rails and cleats or rungs of ladders must be kept clear and free of lines, hoses, cables, wires, oil, grease and debris.
- Wood side rails must be seasoned, straight grained wood, free from shakes, checks, decay or other defects which will impair their strength. Low density woods shall not be used.
- When not in use, all ladders should be stored under suitable cover. When stored horizontally, both ends, and the middle will be supported to prevent sagging and warping of the rails.
- If a ladder is to provide the only means of access or exit from a working area for 25 or more employees, or simultaneous two-way traffic is expected, 375a double cleat ladder should be installed.
- Extension and Step ladders used on smooth floor or other smooth surfaces must be equipped with non-slipping bases or otherwise secured to prevent displacement.
- Extension Ladders shall be of sufficient length to project not less than three feet (36") above the landing except where such an extension would present a hazard.
- Ladders shall not be placed in passageways, doorways, driveways or any location where they may be displaced by other work activities, unless protected by barricades or guards.
- Step ladders shall not be used as single ladders or in the partially closed position.
- The area around the top and bottom of a ladder shall be kept clear.
- Employees shall not sit, kneel, step or stand on the, topcap or the step below the topcap of

- a step ladder.
- When working from a ladder, one hand should always be free to allow a firm grip on the ladder. Exception - both hands may be used when working through the rungs of a ladder.
- Always face a ladder when ascending or descending.
- Do not climb on the rear side of a stepladder.
- Planks shall not be used on the top cap or the step below the topcap of a step ladder.
- The lashing of ladders together to increase the length of the ladder is prohibited.
- Always have free use of both hands while ascending and descending ladders.
- The side rails and cleats or rungs of ladders must be kept clear and free of lines, hoses, cables, wires, oil, grease and debris.
- Single portable ladders over thirty feet in length shall not be used. If greater heights are to be reached, separate ladders shall be used with intermediate landing platforms provided.
- Ladders should not be used for working except for limited periods of time. Ladders are primarily for ascending or descending from one level to another. Where work requires the use of tools and materials, or the job is of considerable duration, it is advisable to use a platform stepladder, scaffold or some other acceptable working base.
- Ladder manufacturer labels shall be legible.
- Portable ladders should be placed so that the side rails have a secure footing. The top rest should be rigid and have ample strength to support the applied load. The top of the ladder shall be nailed, or otherwise securely fastened, to prevent movement.
- Uniform step spacing shall be used and must not exceed more than twelve inches (12").

Figure 21. OSHA Quick Card showing Portable Ladder safety Tips.





## Portable Ladder Safety Tips

Falls from portable ladders (step, straight, combination and extension) are one of the leading causes of occupational fatalities and injuries.

- Read and follow all labels/markings on the ladder.
- Avoid electrical hazards! – Look for overhead power lines before handling a ladder. Avoid using a metal ladder near power lines or exposed energized electrical equipment.
- Always inspect the ladder prior to using it. If the ladder is damaged, it must be removed from service and tagged until repaired or discarded.
- Always maintain a 3-point (two hands and a foot, or two feet and a hand) contact on the ladder when climbing. Keep your body near the middle of the step and always face the ladder while climbing (see diagram).
- Only use ladders and appropriate accessories (ladder levelers, jacks or hooks) for their designed purposes.
- Ladders must be free of any slippery material on the rungs, steps or feet.



3-Point Contact

- Do not use a self-supporting ladder (e.g., step ladder) as a single ladder or in a partially closed position.
- Do not use the top step/rung of a ladder as a step/rung unless it was designed for that purpose.

(continued on reverse)

*Tools*

1. Only non-sparking tools shall be permitted in locations where sources of ignition may cause fire or explosion.
2. Tools shall be used only for the purpose for which they were designed.
3. Defective or unsafe tools shall be replaced and turned in for repair immediately. A "Do Not Use" or "Defect" tag shall be placed on such equipment and appropriate record made of determination.
4. When working overhead, unused tools shall be kept in containers or otherwise secured to prevent them from falling. Tools shall not be left in passageways, access ways, walkways or on ramps, platforms, stairways or scaffolds where they can create a tripping hazard.
5. Throwing or dropping of tools to another area of level shall be prohibited.
6. When not in use, tools shall be stored in suitable tool rooms, toolboxes, racks or other containers.
7. All power operated tools designed to accommodate guards shall be equipped with such guards when in use.
8. Tools must be kept clean and free from oil and grease to prevent slipping.
9. If workers prefer to furnish their own tools, your tools must be clearly marked, approved by the project manager and must conform to the requirements demanded for satisfactory, efficient work and for safety. Lost or stolen tools are not the responsibility of Albany West.
10. The supervisor is responsible for the safe condition of tools and equipment used by employees, including tools and equipment which may be furnished by employees.

*Hand Tools*

*Cutting Tools*

1. Utility knives, window scrapers and other sharp tools shall not be carried in pockets. Keep them in your utility box or in a proper tool holder.
2. Cutting tools may not be used for any other purpose than what they are intended (e.g. screwdriver, hammer).
3. Sharpening tools should be done by qualified person. Notify your supervisor if any tools require sharpening.
4. Eye protection should be worn to prevent eye injuries from flying splinters or chips when using cutting or scraping tools.

*Hacksaws*

1. The metal to be cut should be in a firm, secure position. A rolling piece of metal may break the brittle blade and cause an injury.
2. A sharp blade with fine teeth should be used to cut hard metal and a sharp blade with coarse teeth should be used to cut soft metal.
3. The metal in hacksaw blades is brittle and breaks easily and should not be bent or otherwise stressed so that it may break and cause injuries.
4. Do not attempt to sharpen a hacksaw blade. Get a new one. The manufacturer sharpens the blade and then hardens it.
5. Select the proper blade to cut metal to prevent breaking the blade and possible injury.
6. To start a cut safely, be sure the blade is taut on the frame. Score the cutting line with two (2) or three (3) up strokes.
7. To complete a cut, use pressure on the forward or cutting stroke. Stay clear of falling pieces to avoid foot injuries.
8. A coat of oil or anti-rust will protect the hacksaw when not in use.

### *Hammers*

1. The right weight and type of hammer should be selected for each job.
2. When working with hammers where there is danger of chips or other flying objects, eye protection should be worn.
3. Use the hammer head to strike the work. It is hardened for this purpose and may be checkered or scored to prevent slipping. Grasp a hammer near the end of the handle. The hand will stand a better chance of escaping injury in case of a miss or if something gives.
4. Hold nails near the head with the thumb and forefinger to start the drive. The fingers will likely be driven away in case of a miss and not crushed.
5. Use the claws of a hammer to draw nails - not to strike objects. When withdrawing nails, use a wood block under hammerhead to lessen handle leverage.
6. A steel hammerhead may cause sparks if striking against metal. Remember, sparks may ignite flammable mixtures of air and vapors or air and explosive dusts. Special hammers made of non-sparking metals should be used when conditions described above are known or suspected.
7. Keep hammers free from oil and grease.
8. Hammer handles should be free of splinters and made of hickory, ash or maple. A band of friction tape around the end of the handle will keep it from slipping out of your hand. Handles should be wedged squarely and securely into the head. A mixture of two (2) parts linseed oil and one (1) part turpentine is used to coat wooden handles.
9. Redress any hammerhead that becomes marred.

### *Hand Saws*

1. Saw cuts and splinter injuries should receive immediate first aid attention as lumber can carry tetanus germs.
2. Keep the saw teeth sharp and properly set to prevent the saw from choking in the cut.
3. A crosscut saw has teeth angled to cut across wood grain, not with the grain.
4. A rip saw has teeth angled to cut with the grain.
5. Start to cut slowly until the saw takes a smooth bite. Guide the saw initially with the thumb while taking one (1) or two (2) long, slow strokes to make an active groove.
6. Use a steady support to saw a piece of lumber. Stand in a position so the saw will not strike the knee or leg on a cutthrough.

### *Screwdrivers*

1. Screw drivers should not be used as a chisel, pry or wedge.
2. Screw drivers should be used in a manner such that the hand will not be punctured or will not strike the work piece in case of a slip.
3. Use the proper size and type of screwdriver for the kind of screw to be driven.
4. Screwdrivers slip when not securely held or the user is off balance. The work piece should not be held by hand. Secure the work piece with clamps or a vise.
5. While working around electrical equipment, wear protective equipment or use an insulated screwdriver to avoid shock. Use safety glasses to avoid flashburns.
6. Replace a split screwdriver. Dress a screwdriver tip if it becomes dull or chipped. Use other tools for work that a screwdriver is not designed to do.

### *Sharp-Edged Tools*

Tools with sharp edges such as saws, axes, scythes, knives, chisels, awls, wood planes and drill

bit should have the cutting edge guarded or covered when in storage or being carried.

1. Sharp-edged tools should be used so that the cutting edge is stroked or pointed away from the body.
2. The piece being cut should be secured in a vise or other safe manner.
3. Keep tools sharp and properly oiled or use an anti-rust coating material. A tool in good condition helps prevent injuries.
4. Stroke sharp-edged tools away from the body.
5. Protect materials from damage by sharp edged tools.
6. Eye protection should be used when there is danger from flying objects.

#### Wrenches

1. The right size and type of wrench should be selected for each job.
2. Hammering on a wrench or the use of extension pipes "cheaters" is dangerous, can break the wrench and is not a safe work practice.
3. The teeth of pipe wrenches should be kept clean and sharp to avoid chips.
4. Wrenches used improperly may break, slip or spread. Hammering a wrench may break the handle; so will extension of the handles to get more leverage. Check on other ways to do the job.
5. An adjustable wrench has more parts. Inspect the knurl pin and the adjustable jaws. Replace defective parts.
6. Workers should be positioned to avoid striking hands or body parts in case the wrench slips or falls.
7. Do not use a shim to make jaws fit. This is an unsafe practice. Get a wrench that fits.
8. When working at high levels, do not place wrenches where they can be jarred or accidentally knocked into machinery or fall on employees.
9. Use extensions and universal joints when reaching for difficult parts with a wrench. Then keep hands out of danger zones.

#### *Power Tools - General*

1. All power tools and similar equipment shall be maintained in a safe condition.
2. Do not issue nor permit the use of unsafe tools.
3. Power tools that are designed to accommodate guards shall be equipped with such guards when in use.
4. Employees using hand and power tools and exposed to hazards of falling, flying, abrasive and splashing objects or exposed to harmful dust, fumes, mist, vapors or gases shall be provided with, trained in their use and required to utilize approved personal protective equipment.
5. Tools shall be used only for the purpose for which they were designed.
6. Defective or unsafe tools shall be replaced and turned in for repair immediately.

#### *Electrical Power Tools*

1. Electric power operated tools shall either be of the approved double-insulated type or grounded in accordance with the National Electric Code.
2. The use of the electric cord for hoisting or lowering electric tools is an unsafe practice and should not be permitted.
3. All handheld powered platen sanders, grinders with wheels 2-inch diameter or less, routers, planers, laminate trimmers, nibblers, shears, scroll saws and jigsaw with blade shanks 1/4 of an inch wide or less may be equipped with only a positive "on-off" control.

4. All handheld powered drills, tappers, fastener drivers, horizontal, vertical and angle grinders with wheels greater than 2 inches in diameter, disc sanders, belt sanders, reciprocating saws, saber saws and other similar operating powered tools shall be equipped with a momentary contact "on-off" control and may have a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.
5. All other handheld powered tools such as circular saws, chain saws and percussione tools without positive accessory holding means shall be equipped with a constant pressure switch that will shut off the power when the pressure is released.

#### *Pneumatic Powered Tools*

1. Hose lines shall be so placed to eliminate tripping hazards.
2. Pressure shall be shut off and exhausted from the line before disconnecting the line from any tool or connection.
3. Safety clips, chains, wires or other retainers shall be used to secure sections of hose together and to secure the hose to the power source and the tool to the hose in order to prevent dangerous whipping in case of disconnection or failure.
4. Compressed air shall not be used for cleaning purposes unless the pressure is reduced to 30 p.s.i. or less. This rule does not apply for concrete form mill scale, green cutting, and similar cleaning operations. Personnel involved in these operations shall be provided with adequate personal protective equipment including safety goggles or face shield, hearing protection, etc.

#### *Pressure Reducing Regulators*

1. Pressure regulators including the gauges, shall be in proper working order while in use, if not, remove from service.
2. Regulators shall be an approved type for the type of gas to be utilized.
3. The working pressure of acetylene shall not be adjusted above 15 psig as it becomes more unstable to safely use.
4. When a pressure reducing regulator is attached to a compressed gas cylinder, the cylinder valve should be opened just slightly at first so that the regulator can take on pressure slowly, after which the valve may be turned open to its normal position. If the regulator takes on pressure to suddenly it can damage the regulator and pressure gauges. The operator shall stand to the side of the glass covered gauges and not in front of them.

#### *Hose and Hose Connections*

1. Fuel gas hose and oxygen hose shall be easily distinguishable from each other. The two shall not be interchangeable.
2. Unnecessarily long lengths of hose should be avoided. The hose needs to be protected from being run over by equipment or other damage.
3. All hose shall be inspected at the start of the shift for leaks. Immersing in water under normal pressure is a method to check for leaks. Hose when worn at connection should be cut off and connections reinserted. Breaks in the hose should be cut out and a splice inserted. New connections shall be installed by a knowledgeable person using proper/approved compression fittings. Repairing hose with tape is prohibited.
4. Defective hose or hose in doubtful condition shall not be used. Hose subjected to a flashback shall be taken out of service.

#### **Laydown Area**

The operation of a laydown yard to facilitate the construction project can often present hazards that are overlooked. Little attention may be given to the planning and day-to-day tasks for the laydown yard. This lack of attention not only creates difficulties with the storage and access of equipment, materials, and tools; but can adversely impact the overall safety and productivity of the entire worksite.

There are four main components of the laydown yard:

1. The site itself;
2. The equipment onsite;
3. The materials onsite, and;
4. The people working onsite.

#### *The Construction Laydown Yard*

Site security is the first area of concern on any site. The laydown yard should be completely enclosed by some type of fence to prevent any unauthorized entry. Nothing should be stored next to the fence. A space of several feet should be left open next to the fence so that the fence can be inspected on a regular basis. Post signs at the main entrance and at the laydown yard to direct people to check in at the main office/trailer. Unauthorized people wandering around a site can cause unnecessary damage to equipment and materials.

#### *Equipment*

Heavy Equipment on any construction project creates hazards unique to their use, and the laydown yard is no exception. Keep the laydown yard organized. Storing, maintaining and repairing equipment on site takes up space. It is best to have designated areas for these activities whenever possible to allow the most efficient use of the yard.

#### *Materials*

The physical layout of equipment and supplies is very important in eliminating many of the hazards associated with a laydown yard. A site plan should be drawn prior to anything being delivered. This plan should identify all the utilities (gas, electric and water). If there are going to be buildings onsite, they should be situated so they have the least impact on the daily operations of the laydown yard.

The types of materials stored on site will determine the hazards. Gasoline, motor oil, diesel fuel, solvents, epoxies, paints, glues may be stored onsite. Contact the local fire department to assist in setting up a laydown yard regarding flammable hazards. This will save time and money.

Any material that has the risk of becoming a pollutant either to the water system or the soil should be stored in an area that has secondary containment protection. In many cases, if contaminate soil is to be stockpiled onsite, a soils management plan will have to be developed. Also, any onsite storm drains should be evaluated and the proper safe guards put in place to protect them from any contaminants that could be washed into them unexpectedly.

Traffic lanes should be identified and kept clear in case of an onsite emergency. Once the traffic lanes are established and the individual storage site(s) are identified, some type of lighting plan should be developed.

#### *People*

Managing people is an important task on any project. The work environment of the laydown yard is constantly changing. This requires people to be well trained and knowledgeable in the work practices required to operate a laydown yard. Workers should be trained to use each piece of equipment they are expected to use. Fire safety, small tool use and the proper use of care of PPE

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are also areas in which they should be proficient.

### *Containers*

Storage cabinets shall be designed and constructed to limit the internal temperature to not more than 325°F when subjected to a ten-minute fire test using the standard time temperature curve as set forth in Standard Methods of Fire Tests of Building Construction and Materials, NFPA No. 251-1972. All joints and seams shall remain tight and the door shall remain securely closed during the fire test.

Cabinets shall be labeled in conspicuous lettering, “**FLAMMABLE -KEEP FIRE AWAY.**”

Metal cabinets constructed in the following manner shall be deemed to comply when: The bottom, top, door and sides of cabinet shall be at least No. 18 gage sheet iron and double walled with 1 1/2-inch air space. Joints shall be riveted, welded or made tight by some equally effective means. The door shall be provided with a three-point lock, and the door sill shall be raised at least two inches above the bottom of the cabinet.

- Approved metal storage cabinets are acceptable.
- Cabinets must be labeled in conspicuous lettering “Flammable – Keep Fire Away.”
- No more than 60 gallons of flammable or 120 gallons of combustible liquids shall be stored in any one storage cabinet. Not more than three such cabinets may be in a single storage area.
- Approved safety cans must be used for handling, storage, and use of flammable liquids.
- Outdoor portable tanks shall not be nearer than 20 feet from any building. Individual portable tanks over 1,100 gallons shall be separated by a 5 foot clear area.

## **Overhead Electric Power Lines**

### *General*

#### *Protection from Electric Shock*

- Suitable protective equipment or devices shall be provided and used on or near energized equipment for the protection of employees where there is a recognized hazard of electrical shock or burns.
- When protective insulating equipment is used, it shall comply with the MoW/OSHA Electrical Safety Orders.
- In lieu of other protective equipment, barricades shall be used to provide protection from exposed, energized equipment.
- Before work is begun, Albany West employees shall ascertain by inquiry, direct observation, or by instruments, whether any part of an energized electric power circuit, exposed or concealed, is so located that the performance of the work may bring any person, tool or machine into physical or electrical contact with the electric power circuit.
  1. Where such circuits exist, a legible marking shall be made indicating the presence and location of the energized circuit(s), or warning signs shall be posted.
  2. The Albany West supervisor/competent person shall advise employees of the location of such energized circuits, the hazards involved, and the protective measures to be taken.

### *Low Voltage*

- Only qualified persons shall work on electrical equipment or systems.
- Only qualified persons shall be permitted to perform any function in proximity to energized

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overhead conductors unless means to prevent accidental contact have been provided.

**High Voltage Workspace:**

- The minimum depth of clear working space about electrical equipment, such as switchgear, motor controllers, etc., shall not be less than set forth in Table 2932 unless otherwise specified in the MoW/OSHA safety orders. Clearances shall be measured from the energized parts if parts are exposed or from the enclosure front or opening, if parts are enclosed.

*Table 10. Minimum Depth of Clear Working Space at Electric Equipment, Over 600 Volts*

| <b>MINIMUM CLEAR DISTANCE FOR CONDITIONS</b> |                    |               |                    |               |                    |               |
|--|--------------------|---------------|--------------------|---------------|--------------------|---------------|
| <b>Nominal Voltage to Ground</b>             | <b>Condition 1</b> |               | <b>Condition 2</b> |               | <b>Condition 3</b> |               |
|  | <b>Feet</b>        | <b>Meters</b> | <b>Feet</b>        | <b>Meters</b> | <b>Feet</b>        | <b>Meters</b> |
| <b>601-2500</b>                              | 3                  | 0.9           | 4                  | 1.2           | 5                  | 1.5           |
| <b>2501-7500</b>                             | 4                  | 1.2           | 5                  | 1.5           | 6                  | 1.8           |
| <b>7501-25,000</b>                           | 5                  | 1.5           | 6                  | 1.8           | 9                  | 2.8           |
| <b>25,001-75kv</b>                           | 6                  | 1.8           | 8                  | 2.5           | 10                 | 3.0           |
| <b>Above 75kv</b>                            | 8                  | 2.5           | 10                 | 3.0           | 12                 | 3.7           |

- Where the conditions are as follows:

Condition 1 - Exposed energized parts on one side and no energized or grounded parts on the other side of the working space, or exposed energized parts on both sides effectively guarded by suitable wood or other insulating material. Insulated wire or insulated busbars operating at not over 300 volts are not considered energized parts. Non-shielded insulated conductors shall be considered as exposed energized parts.

Condition 2 - Exposed energized parts on one side and grounded parts on the other side. Concrete, brick, plaster, or tile walls will be considered as grounded surfaces.

Condition 3 - Exposed energized parts on both sides of the workspace (not guarded as provided in Condition 1) with the operator between.

- Exceptions:

1. Workspace will not be required behind enclosed equipment such as dead-front switchboards or control assemblies provided there are no renewable or adjustable parts; such as fuses, switches, etc., on the back, and provided all connections are accessible from locations other than the back. Where rear access is required to work on the de-energized parts on the back of enclosed equipment, a minimum working space of 30 inches horizontally shall be provided.
2. Minimum depth of clear working space in front of electric equipment with a nominal voltage to ground above 25,000 volts may be the same as that for 25,000 volts under Conditions 1, 2 and 3 for installations built before April 16, 1981.

Suitable space shall be provided and maintained about electrical equipment to permit ready and safe operation and maintenance of such equipment. Where energized parts are exposed, the minimum clear workspace shall not be less than 6 1/2 feet (1.98 m) high (measured vertically from the floor or platform), nor less than 3 feet (914 m) wide (measured parallel to the equipment). The depth shall be as required in subsection 2932(a). In all cases, the workspace shall be

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adequate to permit at least a 90-degree opening of doors or hinged panels.

If switches, cutouts, or other equipment operating at 600 volts, nominal, or less, are installed in a room or enclosure where there are exposed energized parts or exposed wiring operating at over 600 volts, nominal, the high-voltage equipment shall be effectively separated from the space occupied by the low-voltage equipment by a suitable partition, fence, or screen. However, switches or other equipment operating at 600 volts, nominal, or less, and serving only equipment within the high-voltage vault, room, or enclosure may be installed in the high-voltage enclosure, room, or vault if accessible to qualified persons only.

The following requirements apply to the entrances to all buildings, rooms, or enclosures containing exposed energized parts or exposed conductors operating at over 600 volts, nominal:

1. The entrances shall be kept locked unless they are always under the observation of a qualified person; and
  2. Permanent and conspicuous warning signs shall be provided, reading substantially as follows: "DANGER - HIGH VOLTAGE - KEEP OUT."
- Pipes or ducts that are foreign to the electrical installation and that require periodic maintenance or whose malfunction would endanger the operation of the electrical system may not be located in the vicinity of service equipment, metal-enclosed power switchgear, or industrial control assemblies. Protection shall be provided where necessary to avoid damage from condensation leaks and breaks in such foreign systems.

*Passageway and Open Spaces:*

- Suitable barriers or other means shall be provided to ensure that the workspace for electrical equipment will not be used as a passageway during periods when energized parts of electrical equipment are exposed.

*Entrances and Access to Workspace:*

- At least one entrance, not less than 24 inches wide and 6 1/2 feet high shall be provided to give access to the working space about electrical equipment.
  1. On switchboard and control panels exceeding 48 inches in width, there shall be one entrance at each end of such boards unless the location of the switchboards and control panels permits a continuous and unobstructed way of exit travel, or unless the work space required in Section 2932(a) is doubled.
  2. Where one entrance to the working space is permitted under the conditions described in subsection 2931(a)(1), the entrance shall be located so that the edge of the entrance nearest the switchboards and control panels is at least the minimum clear distance given in Table 2932 away from such equipment.
  3. Where bare energized parts at any voltage, or insulated energized parts above 600 volts, nominal, to ground are located adjacent to such entrance, they shall be suitably guarded.
- Permanent ladders, or stairways, shall be provided to give safe access to the working space around electrical equipment installed on platforms, balconies, mezzanine floors, or

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in attic or roof rooms or spaces.

**Provisions for Preventing Accidents Due to Proximity to Overhead Lines**

- General. No person, firm, or corporation, or agent of same, shall require or permit any employee to perform any function in proximity to energized high-voltage lines; to enter upon any land, building, or other premises and there engage in any excavation, demolition, construction, repair, or other operation; or to erect, install, operate, or store in or upon such premises any tools, machinery, equipment, materials, or structures (including scaffolding, house moving, well drilling, pile driving, or hoisting equipment) unless and until danger from accidental contact with said high-voltage lines has been effectively guarded against.
- Clearances or Safeguards Required. Except where overhead electrical distribution and transmission lines have been de-energized and visibly grounded, the following provisions shall be met:
  1. Over Lines - The operation, erection, or handling of tools, machinery, apparatus, supplies, or materials, or any part thereof, over energized overhead high-voltage lines shall be prohibited.

Exception: 1 - Tower cranes (Hammerhead) installed not closer than the minimum clearances set forth in Table 9, whereon the trolley or boom travel is controlled by limit switches which will prevent carrying a load over energized overhead high-voltage lines or within a horizontal distance closer than the minimum clearances set forth in Table 9.

*Table 11. Boom-type lifting, or hoisting equipment clearances required from energized overhead high-voltage lines.*

| Nominal voltage (Phase to Phase) | Minimum Required Clearance (Feet) |
|----------------------------------|-----------------------------------|
| 600.....50,000                   | 10                                |
| Over 50,000.... 75,000           | 11                                |
| Over 75,000.....125,000          | 13                                |
| Over 125,000....175,000          | 15                                |
| over 175,000....250,000          | 17                                |

2. The operation, erection, handling, or transportation of tools, machinery, materials, structures, scaffolds, or the moving of any house or other building, or any other activity where any parts of the above or any part of an employee's body will come closer than the minimum clearances from energized overhead lines as set forth in Table 10 shall be prohibited.

Operation of boom-type equipment shall conform to the minimum clearances set forth in Table 9, except in transit where the boom is lowered and there is no load attached, in which case the distances specified in Table 10 shall apply.

3. Boom-type lifting or hoisting equipment. The erection, operation or dismantling of any boom-type lifting or hoisting equipment, or any part thereof, closer than the minimum clearances from energized overhead high-voltage lines set forth in Table 2 shall be prohibited.

4. Storage. The storage of tools, machinery, equipment, supplies, materials, or apparatus under, by, or near energized overhead high-voltage lines is hereby expressly prohibited if at any time during such handling or other manipulation it is possible to bring such tools, machinery, equipment, supplies, materials, or apparatus, or any part thereof, closer than the minimum clearances from such lines as set forth in Table 10.
  - The specified clearance shall not be reduced by movement due to any strains impressed (by attachments or otherwise) upon the structures supporting the overhead high-voltage line or upon any equipment, fixtures, or attachments thereon.
  - Any overhead conductor shall be considered to be energized unless and until the person owning or operating such line verifies that the line is not energized, and the line is visibly grounded at the work site.

Table 12. General Clearances Required from Energized Overhead High-Voltage Conductors

| Nominal voltage<br>(Phase to Phase) | Minimum Required<br>Clearance (Feet) |
|-------------------------------------|--------------------------------------|
| 600..... 50,000                     | 6                                    |
| over 50,000....345,000              | 10                                   |
| over 345,000....750,000             | 16                                   |
| over 750,000... 1,000,000           | 20                                   |

### **Temporary Power Testing Program**

#### *Policy*

It is the policy of the company to provide safe temporary power. This testing program is mandatory and shall be enforced.

#### *Scope*

This procedure shall apply on all jobsites where the company provides temporary power.

#### *Procedure: Ground-Fault Circuit Interrupter (GFCI)*

- All 120-volt, single-phase 15- and 20-ampere receptacle outlets on construction sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have approved GFCIs for personnel protection.
- Company employees using permanent wiring of the building or structure shall use a portable GFCI.
- Visual inspection of all electrical equipment shall be made on a daily basis by the user. If any equipment is found to be defective, it shall be “red tagged” noting the problem and the job foreman shall be notified. The job foreman shall notify the shop of the need for replacement and monitor the replacement. The job foreman shall use tool transfer sheets for all returned items noting damage on the tool transfersheet.

#### *Procedure: Testing Procedure*

- The Job Foreman is designated to coordinate and ensure the Testing Procedure is done on a quarterly basis. An employee from the tool department will be available to assist the

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foremen each quarter in performing the testing and replacement of defective temp power boxes and/or cords and the immediate removal of them from service.

- Tests shall be performed on all cords, Temp Power Boxes & associated Receptacles which are not a part of the permanent wiring of the building or structure. All records of testing, replacements or repairs shall be given to the foremen with an additional copy being sent back to the shop with the timecards. The original copy of the test records shall be kept by the tool department manager.
- Each receptacle shall be tested for correct operation using a UL Rated GFCI and circuit tester. The individual conducting the test shall first read through the manual of the tester and then proceed with the test. When the tester is plugged into the temporary power the circuit being tested should “trip”, interrupting power when exposed to a 5-7mA leak. If the power is not interrupted, the test failed, and the receptacle must be taken out of service or replaced by a qualified electrician.
  - All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.
- Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor shall be connected to its proper terminal.
- All required tests shall be performed:
  1. Before first use.
  2. Before equipment is returned to service following any repairs.
  3. Before equipment is used after any incident which can be reasonably suspected to have caused damage (for example, when a cord set is run over).
  4. At quarterly intervals (approximately 3 months), except that cord sets and receptacles which are fixed and not exposed to damage shall be tested at intervals not exceeding 6 months.
    - The job foreman shall not make available or permit the use by employees of any equipment which has not met these four requirements.
    - Tests performed as required in the “1050-10-2 Temp Power Cord & Box Quarterly Testing” shall be recorded. This test record shall identify cords, Temp Power Scatter Boxes & associated Receptacles that passed the test and shall indicate the interval for which it was tested. This record shall be kept by means of color coding and logged per the quarter on the “1050-10-2 Temp Power Cord & Box Quarterly Testing”.

The table below lists a color code that is to be used. Colored plastic or vinyl electrical tape is placed on both ends of cords & Temp Power Scatter Boxes to denote the month that the tests were performed.

*Table 13. Color code for the "1050-10-2 Temp Power Cord & Box Quarterly Testing"*

| <b>Month Tested</b> | <b>Color of tape to apply to cord or leg of Temp Power Box</b> |
|---------------------|--|
| <b>January</b>      | <i>White for Winter</i>  |
| <b>February</b>     |  |
| <b>March</b>        |  |
| <b>April</b>        | <i>Green for Spring</i>  |
| <b>May</b>          |  |

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|                  |                        |
|------------------|------------------------|
| <b>June</b>      |                        |
| <b>July</b>      | <i>Red for Summer</i>  |
| <b>August</b>    |                        |
| <b>September</b> |                        |
| <b>October</b>   | <i>Orange for Fall</i> |
| <b>November</b>  |                        |
| <b>December</b>  |                        |

*Procedure: Training*

All field personnel shall be trained to identify electrical hazards and in the procedures of this program. The first Weekly Safety Meeting of every quarter shall cover this program.

**Demolition Safety Plan**

The purpose of this plan is to ensure safety for all construction personnel performing demolition work and who are exposed to many hazardous conditions and materials. There should also be heightened awareness for the safety of the general public and the property of others. All Albany West employees, contractors, and subcontractors must follow the requirements of this program during all demolition projects.

This program outlines control measures that must be implemented as part of the existing program to plan for a successful and safe demolition project. Those supervising demolition activities should be familiar with the OSHA 29CFR1926, Sub-part T, as well as all State and Local requirements that apply to demolition work. Demolition safety requires all contractors to adhere to safe work practices. The site will be secured by fencing around the project site perimeter and posted warning signs will be visible.

Once demolition work has started, there will be additional safety requirements for various activities. Potential hazards include, but are not limited to:

- Occupational Health Hazards;
- Explosions;
- Premature Collapse; and
- Fire.

Appropriate personal protective equipment (PPE) is available on-site. The minimal PPE requirements shall be:

- Hard Hats
- Safety Glasses
- Reflective Vests
- Leather Work Gloves
- Respiratory protection when working with dust and exposed tomold
- Hearing protection when working with certain tools and equipment
- Steel-toed Work Boots

*Public Protection required:*

- Pedestrian walkways or roadways that may need to be relocated.
- Walkways or roadways should be well lit and kept clear of equipment and debris.

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- Sidewalk sheds may be necessary to protect pedestrians from overhead hazards.
- Special controls or procedures may be necessary if a portion of the structure is occupied.
- The project is entirely protected with security fencing. The gates should be kept closed at all times throughout the demolition work. Security will also be located on site and at the main entry point to control entry.
- The location of all electric, gas, water, sewer and communication lines should be identified, and the lines shut off before work is started.
- The local one-call system should be notified. Above and below-ground tanks should be protected or removed.
- Chillers will be emptied and isolated.
- Locations of pits or open holes should be identified and barricaded.

***General Demolition Safety Requirements:***

Only those stairways, passageways and ladders designated as means of access to the structure shall be used. Other access ways shall be indicated as Not Safe for Access & Closed at All Times. Access to a floor where work is in progress shall be through a separate lighted, protected passageway. During demolition, continuing, documented inspections by a competent person shall detect hazards resulting from weakened or deteriorated floors, walls, or loosened material. NO employee shall be permitted to work where such hazards exist until they are corrected by shoring, bracing, or other means.

***Debris Removal:***

Primary removal in towers will be in elevator shafts and in the interior courtyards. Once a floor is cleared from demolition, the competent person shall ensure that the next lower floor is safe and openings for removal into the courtyard are properly guarded to prevent falls. When dropping materials into the courtyards, the lower access shall be adequately barricaded from entry. The drop areas will be properly guarded with standard guardrails. Any chute opening into which debris is dumped shall be protected by a guardrail that is 42 inches above the floor or other surface on which personnel stand to dump the material. This also applies to any space between the chute and the edge of openings in the floors through which the debris will pass. When the debris is dropped through openings in the floors without chutes, the openings and the area onto which the material is dropped shall be enclosed with barricades not less than 42 inches high and not less than six (6) feet back from the protected edge of the opening above. Debris removal shall not be permitted in lower areas until debris handling ceases on the floors above. All material chutes and sections that are at an angle of more than 45 degrees from horizontal shall be enclosed except for openings equipped with closures at or above floor level for the insertion of materials. When operations are not in progress, the area surrounding the discharge end of a chute shall be closed. Where material is dumped from mechanical equipment or wheelbarrows, a toeboard or bumper, not less than four (4) inches thick and six (6) inches high shall be attached at each chute opening. Chutes shall be designed and constructed of such strength as to eliminate failure due to impact of materials and debris loaded therein. The storage of waste and debris on any floor shall not exceed the allowable floor load. Storage space to which material is dumped shall be blocked off, except for openings for the removal of materials, and such openings shall be kept closed when material is not being removed. Floor openings shall have curbs or stop-logs to prevent equipment from running over the edge. As duct work and pipe penetrations are removed, the open holes will be covered and protected to prevent falls, trips, and dropping of loose material below.

9.5 Malfunctions

See [SECTION 2 – CODE OF SAFE PRACTICES](#)

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## 10. Public Consultation

Public consultations will be guided by the Department of Environmental Planning and Protection and the Ministry of Public Works. During the public consultation, details of the project will be made available including the protection environmental impacts and prescribed mitigation activity for the environmental impact. Through the Grievance Response Mechanism described in section 12, the public will have the opportunity to both express their concerns and have their concerns addressed.

## 11. Environmental Education and Outreach

The Albany West development will educate the construction workers involved with the land clearing phase on how to identify protected or endangered species on site. This will help avoid destruction of these species during the construction phase of the project. Key features of the protected species will be shared with the team along with photographs to reinforce the information shared with the construction team. It is expected that once the employees learn the protected species, this knowledge will be transferred beyond the construction site. Furthermore, protected or endangered trees designated for preservation will be tagged with a weather proof, highly viable marker as part of a protected tree inventory. These trees will also be protected by a highly visible physical barrier. Educational outreach for the construction staff will commence on the first day of works as provided in the draft Albany West Construction Schedule below. The final schedule will be updated and submitted pending approval of the EMP from DEPP. The Albany West Environmental Training Outline is attached in Appendix F.

Table 14. Draft construction schedule

| <b>Albany West Construction Schedule - DRAFT</b> |             |                 |
|--|-------------|-----------------|
| <b>Activity</b>                                  | <b>Date</b> | <b>Duration</b> |
| <b>Mobilisation</b>                              | 15-Oct-20   |                 |
| <b>Clearing and Grubbing</b>                     | 15-Oct-20   | 1 week          |
| <b>Demolition</b>                                | 22-Oct-20   | 8 weeks         |
| <b>End of Demo Activities</b>                    | 17-Dec-20   |                 |

Invasive species will be removed during the land clearing phase. Employees will be trained to identify invasive species and educated about the importance of their removal.

During operation Albany West will include native vegetation in the landscaping. At designated location on site, informative signage will be affixed to some of the vegetation to help residents and visitors learn about the native vegetation on site. Signage will identify the species using both the common and scientific name and an interesting fact about the species. For example,

Lignum vitae or *Guaiaicum sanctum*  
National tree of The Bahamas

## 12. Public Grievances

Public grievances are complaints or concerns expressed by stakeholders related to the development of the project. A website will be made available to the general public to express grievances related to the project. The website will be drafted or posted prior to commencement of works and will include a copy of the project's Environmental Management Plan.

The general public may also email grievances to [security@albanybahamas.com](mailto:security@albanybahamas.com). Complainants will have the option to remain anonymous if grievances are submitted through the website. Signage will be installed near the boundary of the project site informing the general public of the option to express grievances via the website or by email. Grievances will be addressed within a two-week time period after they are recorded. Once a complaint is registered an email acknowledgement will be sent to the complainant. The complaint will be sorted and directed to the appropriate department for resolution. If the resolution is straightforward, it will be communicated to the complainant. If the resolution is more involved, the proposed resolution will be communicated to the complainant and the appropriate steps taken to begin to address the grievance. In the event the complainant is satisfied with the resolution, Albany Bahamas will request an email or written confirmation that the complaint is resolved. In the event that complainant is not satisfied with the solution offered, Albany Bahamas representatives will meet with the complainant to help resolve the concern. Both grievances expressed by stakeholders and the response plan will be shared with the Department of Environmental Planning and Protection on a monthly basis.

The following form will be used to record Public Grievances. The same information will be collected on the website. A PDF version of the form will be made available for download from the website. Hard copies of the form can be submitted to the Security office

Reference Number: (Unique number for each grievance submitted) \_\_\_\_\_

Date submitted: (Date the form is submitted to Albany Bahamas) \_\_\_\_\_

Full Name: First and Last name or write Anonymous \_\_\_\_\_

Contact Information: Phone or Email \_\_\_\_\_

Description of Grievance: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Proposed Resolution: Describe what you think would resolve the issue. This will not be a required field in the form in hard copy or digital copies.

Would you like to be contacted to discuss the resolution to your grievance? Yes\_No

If yes and would like to remain anonymous, please state how you would like to be contacted. \_\_\_\_\_

Please email completed form to [security@albanybahamas.com](mailto:security@albanybahamas.com).

### **13. Conclusion**

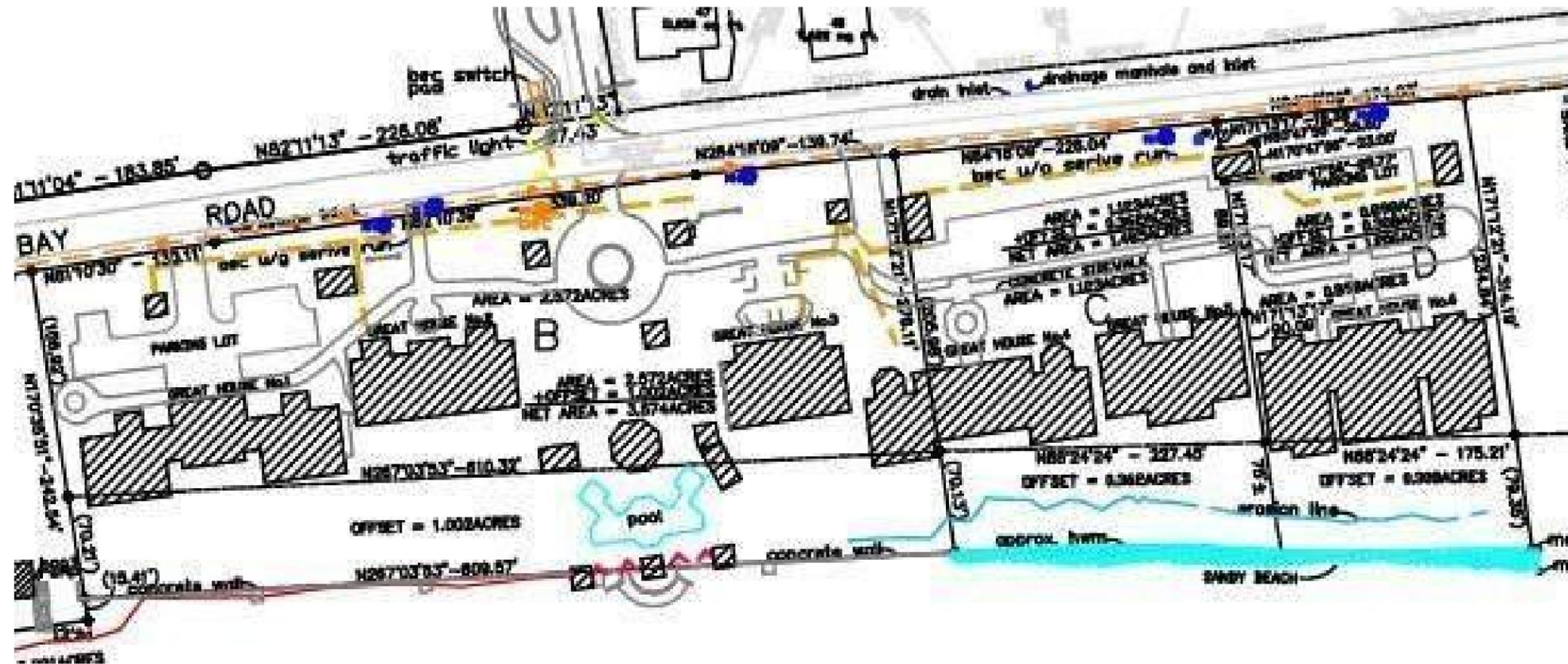
Albany Bahamas a long standing commitment to respect the environment through its construction and operation phases. It will continue to operate in such a way during the construction of the Albany West Phase 1 development. With sufficient turbidity monitoring and sediment control during the land reclamation and lot clearing activities, the construction of the Albany West Phase 1 project should have minimal to no negative impacts on the marine environment. Through invasive species removal and educating the project team on native vegetation, Albany aims to reduce the impact of the development in the western coast of New Providence. Once the development is complete, Albany Bahamas will begin the Environmental permitting process for the Phase 2 of the Albany West project.

## 14. Appendices

### Appendix A – Albany West As Built Survey Plan

# AS-BUILT SURVEY PLAN NEW PROVIDENCE – BAHAMAS

SURVEYED AT THE INSTANCE OF THE NEW SOUTH OCEAN DEVELOPMENT COMPANY, LTD. DATE: OCTOBER 24th, 2007.



## LEGEND:

- ⊙ SURVEY MARKER FOUND
- SURVEY MARKER ADOPTED
- COMPUTED SURVEY MARKER
- SANDY BEACH
- ROCKY SHORELINE
- HWM HIGH WATER MARK
- LWM LOW WATER MARK
- LOOSE STONE WALL
- TRAFFIC LIGHT
- MH ● DRAINAGE MANHOLE
- MH ● SEWER MANHOLE
- MH ● CABLE BAHAMAS MANHOLE (UNDERGROUND FIBER OPTICS LINE)
- MH ● B.E.C. MANHOLE (UNDERGROUND DIESEL LINE (2 PIPE LINES))
- TRANS. B.E.C. TRANSFORMER PAD
- B.E.C. BAHAMAS ELECTRICAL CORPORATION
- B.E.C. UTILITY POLE WITH OVERHEAD LINE
- w/v WATER VALVE
- u/g UNDERGROUND
- EDGE OF PAVEMENT (ASPHALT)
- CHAIN LINK FENCE
- GOLF CART PATH (8FT. WIDE)
- DIRT PATH
- G PUTTING GREEN
- T TEE GREEN
- S SAND TRAP
- LANDSCAPING (PLANTERS)
- BATELCO BAHAMAS TELECOMMUNICATIONS CORPORATION
- R.O.W. RIGHT OF WAY
- ⊕ CENTER LINE

### BAHAMAS GEOMATICS LIMITED

ADVANCED SURVEYING, MAPPING & CONSULTING SERVICES  
#8 MOSELEY LANE, P.O. BOX N-4557 NASSAU, BAHAMAS

TEL./FAX (242) 394-4863 EMAIL: yameelay@hotmail.com  
TOLL FREE 888-250-4039

Plan by: EMILE J. LEDEE

Excerpt of relevant section of the "As Built Survey Plan" completed by Bahamas Geomatics Limited.

**Appendix B – Turbidity Monitoring Report**

**Caribbean Coastal Services Ltd.**

Lot 57, Airport Industrial Park | P. O. Box CB-11524 Nassau, Bahamas

Tel: 242-327-5348 | Fax: 242-327-4981

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## Turbidity Monitoring Report

Sampler Name: \_\_\_\_\_

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

Area Location (Description): \_\_\_\_\_

\_\_\_\_\_

| Parameter   | Background Sample | Compliance Sample |
|---|-------------------|-------------------|
| <b>Location</b> (Station ID)  |                   |                   |
| <b>Weather</b>  |                   |                   |
| Conditions (e.g., clear, rainy, cloudy, overcast, etc.)                         |                   |                   |
| Air Temperature (°F)  |                   |                   |
| Wind Speed (mph)  |                   |                   |
| Wind Direction  |                   |                   |
| <b>Sea Conditions</b>   |                   |                   |
| Tidal Stage (e.g., high, low, incoming, outgoing, slack, etc.)                  |                   |                   |
| Wave Height (ft)  |                   |                   |
| <b>Turbidity</b> (Depth of Sample to be taken at mid-depth below water surface) |                   |                   |
| Time at Sample Analysis   |                   |                   |
| Instrument Calibration (Date)   |                   |                   |
| Turbidity (NTU) <b>First Reading</b>  |                   |                   |
| Difference<br>(= Compliance – Background)                                       |                   |                   |
| Time at Sample Analysis   |                   |                   |
| Turbidity (NTU) <b>Second Reading</b>   |                   |                   |
| Difference<br>(= Compliance – Background)                                       |                   |                   |
| <b>Average Difference</b>   |                   |                   |

If the Average Difference between the Compliance Sample and Background Sample is greater than 20 NTUs (*i.e.*, the Compliance Sample is more than 20 NTUs above the Background Sample), the CONTRACTOR shall immediately cease construction activities until corrective measures have been taken and the turbidity has returned to acceptable levels.

**Appendix C – Albany West Environmental Monitoring Checklist**

**Caribbean Coastal Services Ltd.**

Lot 57, Airport Industrial Park | P. O. Box CB-11524 Nassau, Bahamas

Tel: 242-327-5348 | Fax: 242-327-4981

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# Environmental Monitoring Checklist

Observer: \_\_\_\_\_

Site Description: \_\_\_\_\_

Location: \_\_\_\_\_ Air Temperature (°F): \_\_\_\_\_

Date: \_\_\_\_\_ Time Started: \_\_\_\_\_ Time Ended: \_\_\_\_\_

Weather (Sunny, Cloudy, Partly Cloudy, Rain, Thunderstorm):  
\_\_\_\_\_

Turbidity reading: \_\_\_\_\_

## Types of Construction Activities

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Excavation            | <input type="checkbox"/> Erosion and Sediment Control | <input type="checkbox"/> Air Pollution/Dust Control |
| <input type="checkbox"/> Limestone Rock Import | <input type="checkbox"/> Waste/Hazardous Material     | <input type="checkbox"/> Water/Drains Issues        |
| <input type="checkbox"/> Land clearing/Grading | <input type="checkbox"/> Noise Pollution              | <input type="checkbox"/> Oil spill                  |
| <input type="checkbox"/> Fueling               | <input type="checkbox"/> Perimeter Fence Secured      | <input type="checkbox"/> Building construction      |

## 1. Site Safety and Health

### 14.1. Site Safety and Health

|     | Components   | Compliance w/ EMP |    | N/A | Remarks (Reference location, photos, and GPS coordinates if applicable, good practices, problem observed, and proposed corrective/preventative procedures) |
|-----|--|-------------------|----|-----|--|
|     |  | Yes               | No |     |  |
| i   | Appropriate usage of Personal Protective Equipment (PPE).          |                   |    |     |  |
| ii  | Appropriate signages installed for restricted and hazardous areas. |                   |    |     |  |
| iii | Adequate Freshwater drinking supplies.                             |                   |    |     |  |
| iv  | Proper disposal of spoils  |                   |    |     |  |

|   |                      |  |  |  |  |
|---|----------------------|--|--|--|--|
| v | Flag Men in position |  |  |  |  |
|---|----------------------|--|--|--|--|

### 14.2. Groundwater Management

|     | Components  | Compliance w/ EMP |    | N/A | Remarks (Reference location, photos, and GPS coordinates if applicable, good practices, problem observed, and proposed corrective/preventative procedures) |
|-----|---|-------------------|----|-----|--|
|     |   | Yes               | No |     |  |
| i   | Fueling and oil storage distant from waterbodies and/dewatering.                              |                   |    |     |  |
| ii  | Adequate secondary containment for fuel and oil tanks.  |                   |    |     |  |
| iii | Adequate drainage system/prevention method to prevent onsite run off into nearby waterbodies. |                   |    |     |  |
| iv  | Discovery of underground tank/space   |                   |    |     |  |

### 14.3. Air Quality Management

|     | Components   | Compliance w/ EMP |    | N/A | Remarks (Reference location, photos, and GPS coordinates if applicable, good practices, problem observed, and proposed corrective/preventative procedures) |
|-----|--|-------------------|----|-----|--|
|     |  | Yes               | No |     |  |
| I   | Watering of construction sites to minimize dust generated. |                   |    |     |  |
| li  | Equipment properly maintained to reduce emissions.         |                   |    |     |  |
| iii | On-site vehicles not exceeding 15mph.                      |                   |    |     |  |

### 14.4. Waste Management

|     | Components   | Compliance w/ EMP |    | N/A | Remarks (Reference location, photos, and GPS coordinates if applicable, good practices, problem observed, and proposed corrective/preventative procedures) |
|-----|--|-------------------|----|-----|--|
|     |  | Yes               | No |     |  |
| i   | Good housekeeping practices and general cleanliness of site. |                   |    |     |  |
| ii  | Adequate on-site sanitary facilities.                        |                   |    |     |  |
| iii | Proper disposal of mobile toilet wastewater.                 |                   |    |     |  |

|      |   |  |  |  |  |
|------|---|--|--|--|--|
| iv   | Sewage being properly disposed of, with no drainage into marine or freshwater bodies.   |  |  |  |  |
| v    | Covered laden trucks upon entry and exit of the site.   |  |  |  |  |
| vi   | Appropriate waste (ie. Used oil, chemical, hazardous, vegetative and solid waste) storage containers being used, properly labeled and sealed. |  |  |  |  |
| vii  | Proper collection and disposal of construction and hazardous wastes (licensed collectors, manifests).   |  |  |  |  |
| viii | Secondary equipment used to collect spills during fluid removal or transfer.  |  |  |  |  |
| ix   | Spill kits and absorbents easily accessible for quick spill response.   |  |  |  |  |
| x    | Solid waste ticket receipts recorded for landfill disposal for onsite waste management.   |  |  |  |  |

#### 14.5. Erosion and Sedimentation Control

|    | <i>Components</i>                                      | <i>Compliance w/ EMP</i> |           | <i>N/A</i> | <i>Remarks (Reference location, photos, and GPS coordinates if applicable, good practices, problem observed, and proposed corrective/preventative procedures)</i> |
|----|--|--------------------------|-----------|------------|---|
|    |  | <i>Yes</i>               | <i>No</i> |            |   |
| i  | Proper sorting of spoils at stockpile management site. |                          |           |            |   |
| ii | Silt fence inspection. (weekly inspection)             |                          |           |            |   |

## 2. Biological Resource Management: Terrestrial and Marine

### 2.1. Terrestrial Resources

|      | Components  | Compliance w/ EMP |    | N/A | Remarks (Reference location, photos, and GPS coordinates if applicable, good practices, problem observed, and proposed corrective/preventative procedures) |
|------|---|-------------------|----|-----|--|
|      |   | Yes               | No |     |  |
| i    | Pre-clearing vegetation assessment completed.   |                   |    |     |  |
| ii   | Protected and endemic trees identified, and GPS logged.   |                   |    |     |  |
| iii  | Trees flagged   |                   |    |     |  |
| iv   | Buildings examined for bird nesting sites or existing wildlife  |                   |    |     |  |
| v    | Vegetative waste collected and contained for mulching/recycling.                                      |                   |    |     |  |
| vi   | The stockpile of vegetative waste does not exceed 6 cubic yards.                                      |                   |    |     |  |
| vii  | Removal and proper disposal of Invasive Sand Dune species of plants.                                  |                   |    |     |  |
| viii | Active/Inactive bird nest discovery.  |                   |    |     |  |
| ix   | Identification and GPS logging of rare, endemic, and migratory bird species, and other notable fauna. |                   |    |     |  |

### 2.2. Marine Resources

|     | Components  | Compliance w/ EMP |    | N/A | Remarks (Reference location, photos and GPS coordinates if applicable, good practices, problem observed, and proposed corrective/preventative procedures) |
|-----|---|-------------------|----|-----|---|
|     |   | Yes               | No |     |   |
| i   | Identification commercially important species in the mangrove area and beaches. |                   |    |     |   |
| ii  | Identification of invasive marine species.                                      |                   |    |     |   |
| iii | Sea turtle nesting area identified, and GPS logged.                             |                   |    |     |   |

|    |  |  |  |  |  |
|----|--|--|--|--|--|
| iv | Shorebird nesting area identified, and GPS logged.                   |  |  |  |  |
| v  | Removal and proper disposal of Invasive Sand Dune species of plants. |  |  |  |  |

## 5. Environmental Incident(s) and Emergencies/Health Accident(s)

|    | <i>Components</i>   | <i>Compliance w/ EMP</i> |           | <i>N/A</i> | <i>Remarks (Reference location, photos and GPS coordinates if applicable, good practices, problem observed, and proposed corrective/preventative procedures)</i> |
|----|---|--------------------------|-----------|------------|--|
|    |   | <i>Yes</i>               | <i>No</i> |            |  |
| i  | Proper maintenance and availability of fire extinguishers and first aid resources.  |                          |           |            |  |
| ii | Accident & Emergency log – Any reported Safety, Health or Environmental incidents requiring outside interference of emergency response officials. |                          |           |            |  |

Additional Comments:

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Reported by:

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Environmental Monitor

**Appendix D – Albany Covid 19 Construction Site Operation Procedures**

**Caribbean Coastal Services Ltd.**

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## COVID 19 ~ Construction Site Operating Procedures –



This Plan has been written to cover all aspects of Albany Marina Development Construction Works. This may be subject to change and further revisions as further and better information becomes available from the various sectors including The Governmental Departments, occupational health service, public health and social services, labor authorities, Professional Bodies inc OSHA and employers' associations.

It is incumbent upon you whether the Employing Business Ownership, Management or Employee within the Business to read this document carefully (and any further revisions) and abide by the requirements stated herein.

- 1) **COVID 19 Signs & Symptoms**
- 2) **COVID 19 How is it Spread**
- 3) **COVID 19 How Long can the Virus Survive**
- 4) **Recommencement of Business**
- 5) **Traveling to Site & Returning to Work**
- 6) **Visitors**
- 7) **Precautions for Preventing Spread of Infection (Working in Owner Occupied Units)**
- 8) **Precautions for Preventing Spread of Infection (Working on the Construction Site)**
- 9) **Self-Isolation**
- 10) **Meetings**
- 11) **Site Rules (including COVID 19 update)**
- 12) **Site Report Requirements**
- 13) **Physical Distancing Risk Assessments**
- 14) **Procedure for dealing with First Aid Accidents**
- 15) **PPE (Personal Protective Equipment)**
- 16) **Hand Washing & Communal Toilet Facilities**
- 17) **Canteens and Eating Arrangements**
- 18) **Cleaning & Cleaning Products**
- 19) **Enforcement**
- 20) **BCCEC Recommendations on Construction Industry COVID 19 Protocols**

### **1) COVID 19 Signs & Symptoms**

The following symptoms may develop in the 14 days after exposure to someone who has COVID-19 infection:

- dry cough
- sore throat
- difficulty in breathing
- tiredness
- fever
- headache and body aches

Generally, these infections can cause more severe symptoms in people with weakened immune systems, older people, and those with long-term conditions like diabetes, cancer and chronic lung disease.

### **2) COVID 19 How is it Spread**

From what we know about other coronaviruses, spread of COVID-19 is most likely to happen when there is close contact (6 feet or less) with an infected person. It is likely that the risk increases the longer someone has close contact with an infected person.

Droplets produced when an infected person exhales, coughs or sneezes containing the virus are the main means of transmission.

There are two main routes by which people can spread COVID-19:

- infection can be spread to people who are nearby (within 6 Feet) such that droplets could be inhaled into the lungs.
- it is also possible that someone may become infected by touching a surface, object or the hand of an infected person that has been contaminated with respiratory secretions and then touching their own mouth, nose, or eyes (such as touching door knob or shaking hands then touching own face)

### **3) COVID 19 How Long can the Virus Survive**

How long any respiratory virus survives will depend on a number of factors, for example:

- what surface the virus is on
- whether it is exposed to sunlight
- differences in temperature and humidity
- exposure to cleaning products

Under most circumstances, the amount of infectious virus on any contaminated surfaces is likely to decrease significantly over 72 hours.

We know that similar viruses are transferred to and by people's hands. Therefore, regular hand hygiene and cleaning of frequently touched surfaces will help to reduce the risk of infection.

#### 4) Recommencement of Business

There are several factors that will dictate & determine when the business can return to work and to what degree.

- Lifting of Government Restrictions for Major Construction Sites
- Implementation of Albany COVID Back to Work additional safety measures & protocols necessary for receiving returning workforce.
- Lifting of Flight Restrictions (for returning & specialist workers).
- Availability of Manufactured Goods & Materials.
- Availability of Workers due to sickness.

It is important that Individuals stay away from work even if they have only mild symptoms or have had to take simple medication (e.g. paracetamol, ibuprofen) which may mask the symptoms.

- Albany is an Operational Hotel with residents and guests on property. Workers will be expected to remain strictly within the confines of the jobsite.**

#### 5) Traveling to Site & Returning to Work

Care should be taken to ensure that physical distancing is maintained wherever practicable whether ~

- Travelling as a passenger within a car, on the back of an open truck or company van.
- Travelling on a Jitney / public transport.
- Wherever possible workers should travel to site alone.
- Other means of transport to avoid public transport e.g. cycling, motor bike.

At the entry points onto the Premises Albany Operations reserves the right to check the temperatures of all individuals. Any individuals showing high temperature (100.4 deg F) / fever will not be allowed onto the premises.

Any workers in close contact (sharing a ride) with any individuals showing signs of high temperature will also be restricted from entering the site.

Every individual returning to work will be required to complete and submit personal information prior to being admitted back onto site (\*See COVID Back to Work Registration Document).

#### 6) Visitors

A visitor is someone who intermittently visits the jobsite and may be based in Nassau or Overseas  
All non-essential visitors should stay away from the jobsite.

Every visitor will be required to complete and submit personal information prior to being admitted back onto site (\*See COVID Back to Work Registration Document).

#### 7) Precautions for Preventing Spread of Infection (Working in Owner Occupied Units)

When working within an owner occupied unit, please ensure the following protocol is maintained.

- Ensure that as a minimum an N95 (or similar standard) face mask is worn.
- Remove and dust & debris immediately and any surfaces that you have contacted are cleaned with a suitable disinfectant.
- Ensure that lightweight / latex gloves are worn.
- Ensure that overshoes are worn.

## **8) Precautions for Preventing Spread of Infection (Working on the Construction Site)**

### **Actions for Employees:**

- Every worker on the jobsite will be expected to wear a mask which is designed to cover the nose and mouth. There is no minimum requirement / standard as long as the masks fits tightly to the face and is held securely in place by straps so that it allows the worker to carry out relevant activities without fear of the face mask becoming loose or being dislodged. (\*See Albany Poster: Instructions for Proper Use of Disposable Face Masks)
- Disposable face masks should be disposed of properly, and reusable washable face masks should be washed regularly.
- Every worker on the jobsite will be expected to practice good hygiene protocol including washing hands regularly (using soap and water ideally for 4 mins) at the wash stations located around the construction site. Workers are to ensure that hand towels are disposed of correctly into a garbage bin located near the wash station. Workers are to ensure they wash their hands thoroughly after rest room breaks & before taking food breaks.
- Workers are encouraged to avoid touching their face, eyes or eating food with unwashed hands.
- In instances where Face Masks have been temporarily removed i.e. Lunch Breaks, Wash Breaks etc, Individuals are required to cover their mouth and nose with a tissue if they cough or sneeze. Tissues should be disposed of immediately in garbage bins provided. If tissues are not available, individuals are encouraged to cough or sneeze into their arm / elbow. It is not appropriate for anybody to sneeze into their hands.
- Every worker where practicable will ensure that physical distancing of 6 ft is maintained. Where this is not practical due to the nature of the work, individuals should attempt to avoid physical contact. Individuals should also not loiter / gather in groups.
- There will be a maximum number of passengers in a Betamax at any one time of 3 individuals
- There will be a maximum number of workers in a Fraco lift at any time of 4 individuals.
- There will be a maximum number of passengers in an elevator of 2 individuals at any time.
- There will be a maximum number of workers in a Boom Lift of 2 individuals at any time.
- When employees are using the communal restrooms, they are to ensure that physical distancing is adhered to at urinals & washbasins
- When employees are using the canteen facility, they are to ensure that physical distancing measures are adhered to. Ideally employees should pack their own food.
- Workers are to ensure that no disposable drink bottles / cans are brought into the buildings.
- Where practical, ensure that tools are not shared. Clean tools regularly after use. Workers are encouraged not to share pencils, pens, tape measures, levels etc.
- Any individual feeling unwell or showing any signs or symptoms are expected to self isolate at home for 14 days.
- Workers cannot loiter and gather in groups (unless a specific job task requires it). Workers are encouraged not to shake hands or offer any form of welcome which will involve physical contact.

- Workers will be encouraged not to leave the Albany Premises at lunch breaks (or at any other time during normal working hrs) unless prior authorization has been given by Albany Management. Anybody leaving may not be given access back onto property for the remainder of the day.

**Actions for Albany:**

- Albany will place posters / notices around the jobsite as a reminder of the expected level of hand sanitation & hygiene.
- Albany will place additional hand wash stations & hand cleaner at convenient locations around the jobsite (in addition to the existing facilities).
- Albany will employ COVID enforces to ensure that minimum standards are being maintained.
- Albany will provide additional garbage bins within each lobby for disposal of tissues, gloves, masks and any other personal waste products.
- Albany will increase occurrences of cleaning to offices & toilet facilities.
- Albany will ensure that any individual showing any signs or symptoms are sent home.
- Albany will routinely clean frequently touched surfaces.
- Albany will ensure sufficient car Parking arrangements are available for additional cars .
- Albany will provide hand sanitizer where hand washing facilities are unavailable (subject to availability).
- Albany will regularly clean Office facilities, Lunch facilities & Hand Washing facilities and check sufficient levels of soap, sanitizer and hand towels are maintained. Albany will also regularly dispose of waste at hand wash stations.
- Albany will, where practicable, introduce staggered start and finish times to reduce congestion at lunch times.
- Albany will continually monitor the scopes of works being undertaken & where necessary reduce the number of workers in an area at any one time. Albany will review and extend the schedule duration as necessary.

**9) Self-Isolation; Symptomatic Cases; Testing & Contact Tracing**

Anyone who develops any of the following symptoms, please stay at home and book in immediately to have a COVID test

**Most common symptoms:**

- Fever
- Dry cough
- Tiredness

**Less common symptoms:**

- Aches and pains
- Sore throat
- Diarrhea
- Conjunctivitis
- Headache
- Loss of taste or smell
- A rash on skin, or discoloration of fingers or toes

**Serious symptoms:**

- Difficulty breathing or shortness of breath
- Chest pain or pressure
- Loss of speech or movement

If after testing, an individual has a Positive test returned, it is essential that contact tracing is carried out with the employing company providing details of where the Positive case has been working and which individuals / companies they have been in direct contact with.

In terms of hierarchy of RISK, Albany have developed the following criteria. Any individual that is considered High or Medium Risk through the contact tracing protocol is to be sent immediately for testing by their employing company whether symptomatic or not. Low risk cases can be at the discretion of the individual & employing company.

**High RISK:**

- An individual that has been working closely with the Positive case (within the 6ft physical distancing parameters whether wearing masks or not)

**Medium RISK:**

- An individual that has been working in the same area / vicinity as the Positive case (but not closer than 6ft physical distancing parameters)
- An individual that regularly touches the same surfaces as a Positive case i.e. shares the same office facility

**Low RISK:**

- All other scenarios
  
- If an individual reports in sick (symptomatic) we request that the main representative of each company advises HOWARD COLBON Albany's health and safety manager and provides details of the units / area on site where the individual has been working on site for the period of 14 days leading up to the date the individual reported in sick so that the H&S manager can identify any similar possibly related cases.
- If the symptomatic case returns a Positive COVID-19 RT (PCR) test result the company is required to test all known coworkers that may be at RISK
- Albany request that each employing company share the names of the Positive testing individual and provide a test result for each testing person whether Negative or Positive. Albany will keep the names of individuals anonymous and will only share details of the Case individuals contact tracing. In this instance Albany will reach out to specific companies and provide relevant details of individuals that we consider are High or Medium Risk.
- If an individual has been identified as High or Medium Risk, we request that they leave the site immediately and book in for a COVID-19 test.
- In line with government guidelines, if an individual has displayed mild or moderate symptoms, using the symptom based strategy, after a period of 10 full days following symptom onset, the individual may discontinue isolation / quarantine without having to take a further test. If individuals suffer a severe illness, it is recommended that the individual may discontinue isolation / quarantine after a period of 20 days following symptom onset. If an individual is immunocompromised it is recommended that a further test is taken prior to discontinuing

quarantine. Persons who test Positive but never develop symptoms can discontinue isolation 10 days after the date of the Positive test.

Notwithstanding the foregoing, it is understood that the CDC recommends extending this period to 14 days, and therefore, out of an abundance of caution, and to aid administration efforts, Albany insist that the earliest an Individual can return to site following receipt of a Positive COVID-19 test result is 14 calendar days following the date of the test.

We implore all companies to openly report cases as soon as possible notwithstanding the fact that it may take a further period of time to complete your own internal investigations.

#### **10) Meetings & Shared Offices**

- All meetings will be held via an internet meeting platform (video conference or via telephone).
- Tool Box Talks and Inductions will be held outside with a maximum number of 10 individuals at any one time.
- When speaking to somebody or providing instructions, ensure that Physical Distancing is maintained.
- Where practical, individuals in shared offices should be separated by a physical screen and/or separated by a minimum of 6ft
- Ideally individuals should not be sharing offices. If it is possible for an individual to work from home, then plans should be made accordingly.

#### **11) Site Rules (including COVID 19 update)**

- Every worker on return to work will be required to do the following~
- Provide Back to Work Registration Information.
- Have a Tool Box Talk specifically relating to COVID 19 safety requirements.
- Read & sign the Albany Site Rules updated with COVID 19 amendment.

#### **12) Site Registration Requirements**

- Prior to sending any worker to the jobsite, every Employing Contractor will be required to submit Site Registration details of the worker(s). Access will not be provided if the workers have not been pre authorized.
- Visitors to site will be required to submit a travel log before visiting site. Visitors must have a specific reason for travel. Unnecessary travel must be avoided.

#### **13) Physical Distancing Risk Assessments**

- There are a number of activities to be performed on site that will require Individuals to work in teams (in close proximity to each other) given the size of room or physical weight / difficulty of task. Albany will continually assess the Risks of these activities and may at any time consider & propose alternative approaches, using mechanical aids, reducing the number of workers in an area, deferring an activity in favor of another.

- Contractors are encouraged to also be proactive and identify ways in which physical distancing can be maintained.

#### **14) Procedure for dealing with First Aid Accidents**

- Albany have reviewed and assessed the First Aid procedures and provided guidelines for trained First Aiders that may be expected to administer First Aid during COVID 19 (\*see Albany Recommendations for Treating First Aid Incidents).
- Albany will ensure First Aid Kits are sufficiently stocked including mouth guards for CPR.
- When dealing with and minor cuts or abrasions, make sure the area is sterile and before treating, wear latex gloves.
- Trained personnel to administer First Aid procedures.

#### **15) PPE (Personal Protective Equipment)**

- In addition to the standard requirement for Hard Hats, Hi Vis Vest or Tee Shirt, eye protection, gloves and footwear, the following standards for face masks & PPE applies.
- When working in Occupied units an N95 face mask or similar must be worn at all times. It is also necessary to wear gloves and overshoes.
- When working on the Construction Site a suitable Face Mask must be worn at all times.
- Re-usable Face Masks should be thoroughly cleaned after use and not shared between workers. Disposable Face Masks should be disposed of properly.

#### **16) Hand Washing & Communal Toilet Facilities**

- Albany have increased the number of hand wash stations around the jobsite.
- As a minimum standard, all workers are required to wash hands with soap & water before entering or leaving the site, before eating and after using the rest room.
- Albany will monitor & control the number of people using toilet facilities at any one time.
- All individuals are required to Wash Hands with soap & water on a regular basis.

#### **17) Canteens and Eating Arrangements**

- Albany will continually review and monitor the location of the Lunch Vendors, the cleanliness of the Lunch Vendors, the seating arrangements, the wash stations at the lunch vendors and the number of individuals using the Lunch Vendor facilities at any one time.
- Albany will review break times and stagger between trades as necessary to reduce congestion and contact at all times.
- All individuals are required to Wash Hands before and after meal breaks.
- Waste from Hand cleaning facilities and general Lunch packaging waste will be removed at regular intervals.

- When removing masks during meal breaks, workers are expected to keep them on their heads. If completely removed, workers are to ensure that the face mask does not come into contact with any communal surface.
- Workers are encouraged to bring pre-prepared meals and refillable drinking bottles from home. Albany will provide additional locker facilities for workers. No food or disposable drink bottles are allowed within the Building.
- Workers are required to maintain physical distancing at break times sitting 6 feet apart from each other whilst eating and avoid all contact.
- Where catering is provided on site, it should provide pre-prepared and wrapped food only, eating utensils, cups etc should all be disposable.
- Drinking water & Ice should be provided by the Employing Contractor, as sharing of these will not be permissible at this time.
- Tables should be cleaned between each use.
- All rubbish should be put straight in the bin and not left for someone else to clear up.
- Communal microwaves, kettles, coffee machines should be cleaned down with sanitizer cloths before and after each use.

### **18) Cleaning & Cleaning Products**

- Enhanced cleaning procedures should be in place across the site, particularly in communal areas and at touch points including:
- Taps and washing facilities, Toilet flush and seats, Door handles and push plates, Hand rails on staircases and corridors, Lift and hoist controls, Machinery and equipment controls, Food preparation and eating surfaces, Photocopiers, printers & other office equipment, Kettles, coffee makers & microwaves etc.
- Refer to Albany standard procedures for cleaning regime during COVID.

### **19) Enforcement**

- As part of the monitoring and enforcement strategy, Albany will employ a dedicated Safety Officer who will oversee all matters relating to COVID enforcement.
- Albany will introduce a welfare attendant at each Toilet Facility. They are responsible for ensuring physical distancing and staggering of individuals using the washroom facilities.
- Albany Safety Officer / COVID enforcer will monitor as appropriate that all individuals are complying with the site rules.
- Albany Safety Officer / COVID enforcer will monitor lunch breaks, queue's entering and leaving the Building, queue's at Betamax lifts, proper use of stairs for accessing and egressing the Building.
- Any worker found contravening COVID specific site rules will be warned. 3 warnings for any infringement of the rules will lead to expulsion off site for the individual for a period of time (to be determined)
- In relation to the wearing of face masks Albany will be issuing specific warnings for violations. In the instance that an individual is seen working in complete isolation without a mask, that individual will receive a warning. If an individual is working in close proximity will a coworker

other person(s) and is seen not wearing a mask, that person will receive a warning and be expelled from site for 1 full day.

- Any worker returning to work after a period of 1 week or more away from the jobsite will need to complete a Return to Work Registration Document.
- Albany will set up a COVID safety committee comprising 4 representatives from Albany and 4 representatives from our Trade Contractors. The committee will be responsible for the continual review of Government Guidelines and updates from the CDC & WHO and implement changes to the plan accordingly.

**20) Bahamas Government Construction Industry COVID 19 Protocols**

- In conjunction with this document please also read the COVID-19 protocols for Construction Industry document as issued by the Office of the Prime Minister of the Bahamas in May2020.

**Appendix E – Albany West Development IIPP and Hazard Assessment**

**Caribbean Coastal Services Ltd.**

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**Albany West**

**IIPP**

INJURY AND ILLNESS PREVENTION PROGRAM

# INJURY AND ILLNESS PREVENTION PROGRAM (IIPP)

## Purpose

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The purpose of the IIPP (Injury and Illness Prevention Program) is to ensure employee safety and health while achieving environmental compliance with The Department of Environmental Planning and Protection.

## Scope

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This IIPP applies to all employees working on the Albany West Phase 1 Development and to all operations performed on site.

## Policy Statement

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The personal safety and health of each Albany West Phase 1 employee is paramount. Prevention of occupationally induced injuries and illnesses is of such consequence that it will be given precedence over operating productivity, whenever necessary. To the greatest degree possible, management will provide all mechanical and physical activities required for personal safety and health, in keeping with the highest standards.

## Responsibilities

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The Project's Safety Manager is the Albany West Phase 1 Injury and Illness Prevention Program (IIPP) administrator, who has the authority, responsibility and overall accountability for the comprehensive implementation of this IIPP.

Managers and Supervisors shall implement and maintain the IIPP in the work area and answer all employee inquiries about the IIPP. Each manager and supervisor will have a copy of this IIPP and will ensure that each employee has a copy of this IIPP.

## Safety Communication

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Open, two-way communication between management and employees concerning health and safety is required in order to have a workplace that is both productive and free from hazards.

The system of communication as outlined below will facilitate an uninterrupted flow of health and safety information between management and employees in a manner that is easy to understand.

The communication system should be comprised of the following elements:

- New hire orientation will provide new employees with the proper information about safety and health policies and procedures,
- IIPPs, workplace safety and health training programs will be regularly reviewed with the staff,
- Safety meetings will occur on a regularly scheduled basis,
- Employees and supervisors will effectively communicate safety and health concerns,
- Safety information will be posted in visible areas and/or distributed,
- A system must be implemented so that employees can report safety and health problems or hazards effectively and anonymously without fear reprisal or reprimand,

Periodic inspections to assess identified workplace hazards will be performed by competent observers in the following workplace areas:

- The Safety Manager shall serve as inspector and provide daily safety review of the project sites.
- The Site Superintendent will be responsible for performing safety evaluations of the project sites on an as needed basis.

Periodic inspections involve the identification and assessment of workplace hazards. Applicable documentation must be used, along with other methods that have been deemed effective in the identification and evaluation of workplace hazards.

Periodic inspections are to be conducted according to the following:

- Any time that potentially hazardous substances, procedures or equipment is introduced into the workplace,
- When previously unidentified hazards are recognized,
- Whenever a work-related injury or illness occurs,
- When employees (both temporary and permanent) are hired or reassigned to processes, operations or tasks that have yet to undergo a hazard evaluation,
- Any time the company feels that workplace conditions warrant an inspection.

#### Employee Compliance

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- Management holds the responsibility of ensuring that all safety and health related policies and procedures have been communicated to all employees and that the employees understand all information provided to them.
- Both managers and supervisors will enforce all rules fairly and uniformly.
- Employees will comply with the IIPP by taking advantage of all applicable incentives, training and retraining.

The systems used to ensure all employees comply with rules to maintain a safe work environment include:

- Providing employees with the provisions of the IIPP,
- Making sure that the safety of each employee's work is properly evaluated,
- Recognizing those employees who engage in safe and healthful work practices,
- Training employees who fail to adhere to safety performance guidelines,
- Taking disciplinary action against employees who fail to comply with the safety guidelines.

#### Code of Safe Practices

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All persons shall follow these safe practice rules, render every possible aid to safe operations, and report all unsafe conditions or practices to the foreman or Supervisor. The term "worker" and "employee" refer to Albany West employees:

1. Employees shall observe and follow these safe practices rules.
2. Employees shall report any unsafe conditions or practices to the foreman or site supervisor.
3. Foremen and/or site supervisor(s) take such action as is necessary to make sure employees observe the safe practice rules.
4. Employees shall be given accident prevention instructions at least every 10 working days once a week is preferred.
5. Evaluate your workspace to determine if any spaces are "confined spaces" and enter only if you are trained and authorized to do so.
6. Anyone under the influence of drugs or intoxicating substances which impair an employee's ability to safely perform his/her duties will not be allowed to work.
7. Horseplay, scuffling, and other acts which tend to endanger the safety or well-being of employees is prohibited.
8. Work will be well planned in advance and supervised to prevent injuries in the handling of materials and/or equipment.
9. No one shall knowingly be permitted to work while their ability or alertness is impaired by fatigue, illness, or other causes that might expose any employee or worker (Albany West or a subcontractor) to injury.
10. Employees shall not enter ditches, manholes, underground vaults, chambers, tanks, silos, or other similar places that receive little ventilation, unless it has been determined safe to enter.
11. Employees are instructed to ensure that all guards and other protective devices are in proper places and adjusted and will report deficiencies promptly to the foreman or Site Superintendent.
12. Be aware of activities around you that could become pinch points. Be aware of the tools you use that can cause pinch points.
13. Awareness and common sense are your best methods of prevention of pinch points. Always wear safety gear and PPE (proper gloves and footwear).
14. Crowding or pushing when boarding or leaving any vehicle or machinery or other conveyance shall be prohibited.
15. Workers shall not handle or tamper with any electrical equipment, machinery, or air or water lines not within the

- scope of their duties, unless they have received instructions from their foreman or site supervisor, and both agree that the worker is trained and understands the proper use of the equipment.
16. Report all injuries immediately to the foreman or site supervisor so that medical or first aid treatment can be arranged.
  17. When lifting heavy objects, use the large muscles of the leg instead of the smaller muscles of the back.
  18. Do not wear tennis shoes, flip flops, sandals or worn or damaged footwear to any jobsite. Wear a leather type work boot that covers the ankle.
  19. Do not throw materials, tools, or other objects from buildings or structures until proper precautions are taken to protect others from falling objects.
  20. Employees shall cleanse thoroughly after handling hazardous substances and follow the instructions from the manufacturer and from the foreman or site supervisor.
  21. Face a ladder and use both hands while climbing.
  22. Do not carry items in either hand when climbing a ladder.
  23. Gasoline shall not be used for cleaning purposes.
  24. No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel until you have been told that no possibility of explosion exists.
  25. When carrying material, watch for and avoid obstructions, loose material, etc.
  26. If you are required to lift heavy objects, use proper lifting methods by balancing the load and lifting with the legs. If necessary, get help.
  27. Any damage to scaffolds, falsework, or other supporting structures shall be immediately reported to the foreman or site supervisor and repaired before use.
  28. Employees shall not ride in the back of pickup trucks or on tailgates.
  29. Listen for audible back up alarms from heavy equipment. Always be aware of where equipment is operating and keep a safe distance.
  30. All project employees will be subject to fair and consistent disciplinary action for policy noncompliance.
  31. Persons not directly involved with the construction of this project shall not enter the site without obtaining permission from the Albany West Supervisor and completing a visitor release form, if required.
  32. Materials must not be stored within six feet of floor openings or within ten feet of open floor edges.
  33. Materials on roofs and open floors must be secured to prevent them from being windblown.
  34. Rebar, conduit, pipe and other impalement type hazards need to have the ends protected with MoW/OSHA approved impalement protective covers.

#### Inspections, Hazard Assessment, Control & Correction

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Site-specific inspections for each non high-hazard location where employees are present shall be conducted and recorded at least monthly. Site's, which are considered high-hazard, shall be inspected either on a weekly or daily basis (determined by safety administrator) generating inspection records with each inspection. Based upon the severity of the hazard, unsafe or unhealthy work conditions will be corrected in a timely fashion according to the following procedures:

- When an imminent hazard exists that cannot be abolished immediately without posing risk to employees and/or property occurs, employees are to be removed from the area. Only those employees who are needed to correct the condition are exempt,
- Those employees needed to correct the hazardous condition will be provided with the required protection equipment,
- All actions and dated of completion will be documented on the designated forms.

#### Incident (Accident) Investigation

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The following procedures will be implemented to investigate workplace accidents and possible substance exposures:

- The accident scene must be visited as soon as possible,
- Injured workers and witnesses will be interviewed,
- The cause of the accident and/or exposure will be determined,
- Corrective actions will be taken to prevent recurrence of the accident or exposure,
- The findings of the investigation will be documented and the appropriate corrective actions will be taken.

#### Training and Instruction

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Employees, managers, and supervisors must have training and instruction in both general and job specific safety and health

practices before or at the time of their initial job assignments.

Training and instruction will be provided as follows:

- At the time when the IIPP is first established,
- For every new employee as they undergo new hire training,
- Employees who are in construction are provided training through an OSHA approved construction industry occupational safety and health training program,
- All employees that have new job assignments for which they have not been previously trained,
- When new substances, processes, procedures and/or equipment that poses new hazards are introduced to the workplace,
- When the employer has been advised of a new or previously unidentified hazard.

All supervisors will have training to familiarize them with the health and safety hazards that pose potential risks to workers who are under their immediate direction and control. Every employee will receive training on the particular hazards involved in their job assignment. Workplace safety and health training shall include, but are not limited to, the following:

- Disclosure of the IIPP, action plan for emergencies, fire prevention plan and methods for reporting injuries as well as unsafe working conditions and practices,
- Proper use of protective clothing including gloves, footwear and personal protection equipment,
- Disclosure of the chemical hazards to which employees may be potentially exposed, along with other hazard program information,
- The location of toilets, hand washing stations and water drinking facilities,
- The provision of medical services, first aid and emergency procedures,
- Specific instruction to all employees about hazards, which are unique to their job assignment, in instances where the information was not provided in other training.

#### Record Keeping | Documentation

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The following steps have been taken or are being taken to implement and maintain the IIPP:

- Records of hazard inspections detailing the person(s) who conducted the inspections, the unsafe conditions and work practices that have been identified and the corrective action implemented to ameliorate the unsafe conditions and work practices, all of which is recorded on the hazard assessment and correction forms,
- Documentation of safety and health training for each employee, including the names of each employee, the dates of training, the type of training and the training providers,
- Inspection records and training documentation will be maintained for one year, except for those employees that have worked for less than one year.

# HAZARD IDENTIFICATION CHECKLIST

The following checklist and abatement record (at bottom of this document) can be used to identify, evaluate and abate (correct) hazards in your workplace. The checklist covers a wide variety of workplace safety and health hazards. All of the topics covered in the checklist may not apply to your particular workplace. When evaluating your workplace use the sections of the checklist that “do” apply to your workplace and work activities.

## GENERAL WORK ENVIRONMENT

- Are all worksites clean and orderly?
- Are work surfaces kept dry or appropriate means taken to assure the surfaces are slip-resistant?
- Are all spilled materials or liquids cleaned up immediately?
- Is combustible scrap, debris and waste stored safely and removed from the worksite promptly?
- Is accumulated combustible dust routinely removed from elevated surfaces, including the overhead structure of buildings?
- Is combustible dust cleaned up with a vacuum system to prevent the dust going into suspension?
- Is metallic or conductive dust prevented from entering or accumulation on or around electrical enclosures or equipment?
- Are covered metal waste cans used for oily and paint-soaked waste?
- Are all oil and gas fired devices equipped with flame failure controls that will prevent flow of fuel if pilots or main burners are not working?
- Are paint spray booths, dip tanks and the like cleaned regularly?
- Are the minimum number of toilets and washing facilities provided?
- Are all toilets and washing facilities clean and sanitary?
- Are all work areas adequately illuminated?
- Are pits and floor openings covered or otherwise guarded?

## PERSONAL PROTECTIVE EQUIPMENT

- Are protective goggles or face shields provided and worn where there is any danger of flying particles or corrosive materials?
- Are approved safety glasses required to be worn at all times in areas where there is a risk of eye injuries such as punctures, abrasions, contusions or burns?
- Are employees who need corrective lenses (glasses or contacts lenses) in working environments with harmful exposures, required to wear only approved safety glasses, protective goggles, or use other medically approved precautionary procedures?
- Are protective gloves, aprons, shields, or other means provided against cuts, corrosive liquids and chemicals?
  
- Are hard hats provided and worn where danger of falling objects exists?
- Are hard hats inspected periodically for damage to the shell and suspension system?
- Is appropriate foot protection required where there is the risk of foot injuries from hot, corrosive, poisonous substances, falling objects, crushing or penetrating actions?
- Are approved respirators provided for regular or emergency use where needed?
- Is all protective equipment maintained in a sanitary condition and ready for use?
- Do you have eye wash facilities and a quick drench shower within the work area where employees are exposed to injurious corrosive materials?
- Where special equipment is needed for electrical workers, is it available?
- When lunches are eaten on the premises, are they eaten in areas where there is no exposure to toxic materials or other health hazards?
- Is protection against the effects of occupational noise exposure provided when sound levels exceed those of the OSHA noise standard?

## **WALKWAYS**

- Are aisles and passageways kept clear?
- Are aisles and walkways marked as appropriate?
- Are wet surfaces covered with non-slip materials?
- Are holes in the floor, sidewalk or other walking surface repaired properly, covered or otherwise made safe?
- Is there safe clearance for walking in aisles where motorized or mechanical handling equipment is operating.
- Are spilled materials cleaned up immediately?
- Are materials or equipment stored in such a way that sharp projectiles will not interfere with the walkway?
- Are changes of direction or elevations readily identifiable?
- Are aisles or walkways that pass near moving or operating machinery, welding operations or similar operations arranged so employees will not be subjected to potential hazards?
- Is adequate headroom provided for the entire length of any aisle or walkway?
- Are standard guardrails provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground?
- Are bridges provided over conveyors and similar hazards?

## **FLOOR AND WALL STAIRWAYS**

- Are floor openings guarded by a cover, guardrail, or equivalent on all sides (except at entrance to stairways or ladders)?
- Are toeboards installed around the edges of a permanent floor opening (where persons may pass below the opening)?
- Are skylight screens of such construction and mounting that they will withstand a load of at least 200 pounds?
- Is the glass in windows, doors, glass walls that are subject to human impact, of sufficient thickness and type for the condition of use?
- Are grates or similar type covers over floor openings such as floor drains, of such design that foot traffic or rolling equipment will not be affected by the grate spacing?
- Are unused portions of service pits and pits not actually in use either covered or protected by guardrails or equivalent?
- Are manhole covers, trench covers and similar covers, plus their supports, designed to carry a truck rear axle load of at least 20,000 pounds when located in roadways and subject to vehicle traffic?
- Are floor or wall openings in fire resistive construction provided with doors or covers compatible with the fire rating of the structure and provided with self-closing feature when appropriate?

## **STAIRS & STAIRWAYS**

- Are standard stair rails or handrails on all stairways having four or more risers?
- Are all stairways at least 22 inches wide?
- Do stairs have at least a 6'6" overhead clearance?
- Do stairs angle no more than 50 and no less than 30 degrees?
- Are stairs of hollow-pan type treads and landings filled to noising level with solid material?
- Are step risers on stairs uniform from top to bottom, with no riser spacing greater than 7-1/2 inches?
- Are steps on stairs and stairways designed or provided with a surface that renders them slip resistant?
- Are stairway handrails located between 30 and 34 inches above the leading edge of stair treads?
- Do stairway handrails have a least 1-1/2 inches of clearance between the handrails and the wall or surface they are mounted on?
- Are stairway handrails capable of withstanding a load of 200 pounds, applied in any direction?
- Where stairs or stairways exit directly into any area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping into the path of traffic?
- Do stairway landings have a dimension measured in the direction of travel, at least equal to width of the

stairway?

- Is the vertical distance between stairway landings limited to 12 feet or less?

### **ELEVATED SURFACES**

- Are signs posted, when appropriate, showing the elevated surface load capacity?
- Are surfaces elevated more than 30 inches above the floor or ground provided with standard guardrails?
- Are all elevated surfaces (beneath which people or machinery could be exposed to falling objects) provided with standard 4-inch toeboards?
- Is a permanent means of access and egress provided to elevated storage and work surfaces?
- Is required headroom provided where necessary?
- Is material on elevated surfaces piled, stacked or racked in a manner to prevent it from tipping, falling, collapsing, rolling or spreading?
- Are dock boards or bridge plates used when transferring materials between docks and trucks or rail cars?

### **EXITING OR EGRESS**

- Are all exits marked with an exit sign and illuminated by a reliable light source?
- Are the directions to exits, when not immediately apparent, marked with visible signs?
- Are doors, passageways or stairways, that are neither exits nor access to exits and which could be mistaken for exits, appropriately marked "NOT AN EXIT", "TO BASEMENT", "STOREROOM", and the like?
- Are exit signs provided with the word "EXIT" in lettering at least 5 inches high and the stroke of the lettering at least 1/2 inch wide?
- Are exit doors side-hinged?
- Are all exits kept free of obstructions?
- Are at least two means of egress provided from elevated platforms, pits or rooms where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable, or explosive substances?
- Are there sufficient exits to permit prompt escape in case of emergency?
- Are special precautions taken to protect employees during construction and repair operations?
- Is the number of exits from each floor of a building, and the number of exits from the building itself, appropriate for the building occupancy load?
- Are exit stairways which are required to be separated from other parts of a building enclosed by at least two hour fire-resistive construction in buildings more than four stories in height, and not less than one-hour fire resistive construction elsewhere?
- When ramps are used as part of required exiting from a building, is the ramp slope limited to 1-foot vertical and 12 feet horizontal?
- Where exiting will be through frameless glass doors, glass exit doors, storm doors, and such are the doors fully tempered and meet the safety requirements for human impact?

### **EXIT DOORS**

- Are doors that are required to serve as exits designed and constructed so that the way of exit travel is obvious and direct?
- Are windows that could be mistaken for exit doors, made inaccessible by means of barriers or railings?
- Are exit doors openable from the direction of exit travel without the use of a key or any special knowledge or effort, when the building is occupied?
- Is a revolving, sliding or overhead door prohibited from serving as a required exit door?
- Where panic hardware is installed on a required exit door, will it allow the door to open by applying a force of 15 pounds or less in the direction of the exit traffic?
- Are doors on cold storage rooms provided with an inside release mechanism that will release the latch and open the door even if it's padlocked or otherwise locked on the outside?
- Where exit doors open directly onto any street, alley or other area where vehicles may be operated, are

- adequate barriers and warnings provided to prevent employees stepping into the path of traffic?
- Are doors that swing in both directions and are located between rooms where there is frequent traffic, provided with viewing panels in each door?

### **PORTABLE LADDERS**

- Are all ladders maintained in good condition, joints between steps and side rails tight, all hardware and fittings securely attached, and moveable parts operating freely without binding or undue play?
- Are non-slip safety feet provided on each ladder?
- Are non-slip safety feet provided on each metal or rung ladder?
- Are ladder rungs and steps free of grease and oil?
- Is it prohibited to place a ladder in front of doors opening toward the ladder except when the door is blocked open, locked or guarded?
- Is it prohibited to place ladders on boxes, barrels, or other unstable bases to obtain additional height?
- Are employees instructed to face the ladder when ascending or descending?
- Are employees prohibited from using ladders that are broken, missing steps, rungs, or cleats, broken side rails or other faulty equipment?
- Are employees instructed not to use the top 2 steps of ordinary stepladders as a step?
- When portable rung ladders are used to gain access to elevated platforms, roofs, and the like does the ladder always extend at least 3 feet above the elevated surface?
- Is it required that when portable rung or cleat type ladders are used the base is so placed that slipping will not occur, or it is lashed or otherwise held in place?
- Are portable metal ladders legibly marked with signs reading "CAUTION" "Do Not Use Around Electrical Equipment" or equivalent wording?
- Are employees prohibited from using ladders as guys, braces, skids, gin poles, or for other than their intended purposes?
- Are employees instructed to only adjust extension ladders while standing at a base (not while standing on the ladder or from a position above the ladder)?
- Are metal ladders inspected for damage?
- Are the rungs of ladders uniformly spaced at 12 inches, center to center?

### **HAND TOOLS & EQUIPMENT**

- Are all tools and equipment (both, company and employee-owned) used by employees at their workplace in good condition?
- Are hand tools such as chisels, punches, which develop mushroomed heads during use, reconditioned or replaced as necessary?
- Are broken or fractured handles on hammers, axes and similar equipment replaced promptly?
- Are worn or bent wrenches replaced regularly?
- Are appropriate handles used on files and similar tools?
- Are employees made aware of the hazards caused by faulty or improperly used hand tools?
- Are appropriate safety glasses, face shields, and similar equipment used while using hand tools or equipment that might produce flying materials or be subject to breakage?
- Are jacks checked periodically to assure they are in good operating condition?
- Are tool handles wedged tightly in the head of all tools?
- Are tool cutting edges kept sharp so the tool will move smoothly without binding or skipping?
- Are tools stored in dry, secure location where they won't be tampered with?
- Is eye and face protection used when driving hardened or tempered spuds or nails?

### **PORTABLE (POWER OPERATED) TOOLS & EQUIPMENT**

- Are grinders, saws, and similar equipment provided with appropriate safety guards?

- Are power tools used with the correct shield, guard or attachment recommended by the manufacturer?
- Are portable circular saws equipped with guards above and below the base shoe?
- Are circular saw guards checked to assure they are not wedged up, thus leaving the lower portion of the blade unguarded?
- Are rotating or moving parts of equipment guarded to prevent physical contact?
- Are all cord-connected, electrically operated tools and equipment effectively grounded or of the approved double insulated type?
- Are effective guards in place over belts, pulleys, chains, and sprockets, on equipment such as concrete mixers, air compressors, and the like?
- Are portable fans provided with full guards or screens having openings 1/2 inch or less?
- Is hoisting equipment available and used for lifting heavy objects, and are hoist ratings and characteristics appropriate for the task?
- Are ground-fault circuit interrupters provided on all temporary electrical 15 and 20 ampere circuits, used during periods of construction?
- Are pneumatic and hydraulic hoses on power-operated tools checked regularly for deterioration or damage?

### **ABRASIVE WHEEL EQUIPMENT GRINDERS**

- Is the work rest used and kept adjusted to within 1/8 inch of the wheel?
- Is the adjustable tongue on the top side of the grinder used and kept adjusted to within 1/4 inch of the wheel?
- Do side guards cover the spindle, nut, and flange and 75 percent of the wheel diameter?
- Are bench and pedestal grinders permanently mounted?
- Are goggles or face shields always worn when grinding?
- Is the maximum RPM rating of each abrasive wheel compatible with the RPM rating of the grinder motor?
- Are fixed or permanently mounted grinders connected to their electrical supply system with metallic conduit or other permanent wiring method?
- Does each grinder have an individual on and off control switch?
- Is each electrically operated grinder effectively grounded?
- Before new abrasive wheels are mounted, are they visually inspected and ring tested?
- Are dust collectors and powered exhausts provided on grinders used in operations that produce large amounts of dust?
- Are splashguards mounted on grinders that use coolant, to prevent the coolant reaching employees?
- Is cleanliness maintained around grinder?

### **POWDER ACTUATED TOOLS**

- Are employees who operate powder-actuated tools trained in their use and carry a valid operator's card?
- Do the powder-actuated tools being used have written approval of the Division of Occupational Safety and Health?
- Is each powder-actuated tool stored in its own locked container when not being used?
- Is a sign at least 7" by 10" with bold type reading "POWDER-ACTUATED TOOL IN USE" conspicuously posted when the tool is being used?
- Are powder-actuated tools left unloaded until they are actually ready to be used?
- Are powder-actuated tools inspected for obstructions or defects each day before use?
- Do powder-actuated tools operators have and use appropriate personal protective equipment such as hard hats, safety goggles, safety shoes and ear protectors?

### **MACHINE GUARDING**

- Is there a training program to instruct employees on safe methods of machine operation?
- Is there adequate supervision to ensure that employees are following safe machine operating procedures?
- Is there a regular program of safety inspection of machinery and equipment?

- Is all machinery and equipment kept clean and properly maintained?
- Is sufficient clearance provided around and between machines to allow for safe operations, set up and servicing, material handling and waste removal?
- Is equipment and machinery securely placed and anchored, when necessary to prevent tipping or other movement that could result in personal injury?
- Is there a power shut-off switch within reach of the operator's position at each machine?
- Can electric power to each machine be locked out for maintenance, repair, or security?
- Are the noncurrent-carrying metal parts of electrically operated machines bonded and grounded?
- Are foot-operated switches guarded or arranged to prevent accidental actuation by personnel or falling?
- Are manually operated valves and switches controlling the operation of equipment and machines clearly identified and readily accessible?
- Are all emergency stop buttons colored red?
- Are all pulleys and belts that are within 7 feet of the floor or working level properly guarded?
- Are all moving chains and gears properly guarded?
- Are splashguards mounted on machines that use coolant, to prevent the coolant from reaching employees?
- Are methods provided to protect the operator and other employees in the machine area from hazards created at the point of operation, ingoing nip points, rotating parts, flying chips, and sparks?
- Are machinery guards secure and so arranged that they do not offer a hazard in their use?
- If special hand tools are used for placing and removing material, do they protect the operator's hands?
- Are revolving drums, barrels, and containers required to be guarded by an enclosure that is interlocked with the drive mechanism, so that revolution cannot occur unless the guard enclosure is in place, so guarded?
- Do arbors and mandrels have firm and secure bearings and are they free from play?
- Are provisions made to prevent machines from automatically starting when power is restored after a power failure or shutdown?
- Are machines constructed so as to be free from excessive vibration when the largest size tool is mounted and run at full speed?
- If machinery is cleaned with compressed air, is air pressure controlled and personal protective equipment or other safeguards used to protect operators and other workers from eye and body injury?
- Are fan blades protected with a guard having openings no larger than 1/2 inch, when operating within 7 feet of the floor?
- Are saws used for ripping, equipped with anti-kick back devices and spreaders?
- Are radial arm saws so arranged that the cutting head will gently return to the back of the table when released?

### **LOCKOUT BLOCKOUT PROCEDURES**

- Is all machinery or equipment capable of movement, required to be de-energized or disengaged and blocked or locked out during cleaning, servicing, adjusting or setting up operations, whenever required?
- Is the locking-out of control circuits in lieu of locking-out main power disconnects prohibited?
- Are all equipment control valve handles provided with a means for locking-out?
- Does the lockout procedure require that stored energy (i.e. mechanical, hydraulic, air,) be released or blocked before equipment is locked-out for repairs?
- Are appropriate employees provided with individually keyed personal safety locks?
- Are employees required to keep personal control of their key(s) while they have safety locks in use?
- Is it required that employees check the safety of the lock out by attempting a start up after making sure no one is exposed?
- Where the power disconnecting means for equipment does not also disconnect the electrical control circuit:
- Are the appropriate electrical enclosures identified?
- Is means provide to assure the control circuit can also be disconnected and locked out?

## WELDING, CUTTING & BRAZING

- Are only authorized and trained personnel permitted to use welding, cutting or brazing equipment?
- Do all operator have a copy of the appropriate operating instructions and are they directed to follow them?
- Are compressed gas cylinders regularly examined for obvious signs of defects, deep rusting, or leakage?
- Is care used in handling and storage of cylinders, safety valves, relief valves, and the like, to prevent damage?
- Are precautions taken to prevent the mixture of air or oxygen with flammable gases, except at a burner or in a standard torch?
- Are only approved apparatus (torches, regulators, pressure-reducing valves, acetylene generators, manifolds) used?
- Are cylinders kept away from sources of heat?
- Is it prohibited to use cylinders as rollers or supports?
- Are empty cylinders appropriately marked their valves closed and valve-protection caps on?
- Are signs reading: DANGER NO-SMOKING, MATCHES, OR OPEN LIGHTS, or the equivalent posted?
- Are cylinders, cylinder valves, couplings, regulators, hoses, and apparatus keep free of oily or greasy substances?
- Is care taken not to drop or strike cylinders?
- Unless secured on special trucks, are regulators removed and valve-protection caps put in place before moving cylinders?
- Do cylinders without fixed hand wheels have keys, handles, or non-adjustable wrenches on stem valves when in service?
- Are liquefied gases stored and shipped valve-end up with valve covers in place?
- Are employees instructed to never crack a fuel-gas cylinder valve near sources of ignition?
- Before a regulator is removed, is the valve closed and gas released form the regulator?
- Is red used to identify the acetylene (and other fuel-gas) hose, green for oxygen hose, and black for inert gas and air hose?
- Are pressure-reducing regulators used only for the gas and pressures for which they are intended?
- Is open circuit (No Load) voltage of arc welding and cutting machines as low as possible and not in excess of the recommended limits?
- Under wet conditions, are automatic controls for reducing no-load voltage used?
- Is grounding of the machine frame and safety ground connections of portable machines checked periodically?
  
- Are electrodes removed from the holders when not in use?
- Is it required that electric power to the welder be shut off when no one is in attendance?
- Is suitable fire extinguishing equipment available for immediate use?
- Is the welder forbidden to coil or loop welding electrode cable around his body?
- Are wet machines thoroughly dried and tested before being used?
- Are work and electrode lead cables frequently inspected for wear and damage, and replaced when needed?
- Do means for connecting cables' lengths have adequate insulation?
- When the object to be welded cannot be moved and fire hazards cannot be removed, are shields used to confine heat, sparks, and slag?
- Are firewatchers assigned when welding or cutting is performed, in locations where a serious fire might develop?
- Are combustible floors kept wet, covered by damp sand, or protected by fire-resistant shields?
- When floors are wet down, are personnel protected from possible electrical shock?
- When welding is done on metal walls, are precautions taken to protect combustibles on the other side?
- Before hot work is begun, are used drums, barrels, tanks, and other containers so thoroughly cleaned that no substances remain that could explode, ignite, or produce toxic vapors?
- Is it required that eye protection helmets, hand shields and goggles meet appropriate standards?
- Are employees exposed to the hazards created by welding, cutting, or bracing operations protected with personal protective equipment and clothing?

- Is a check made for adequate ventilation in and where welding or cutting is preformed?
- When working in confined places are environmental monitoring tests taken and means provided for quick removal of welders in case of an emergency?

### **COMPRESSORS & COMPRESSED AIR**

- Are compressors equipped with pressure relief valves, and pressure gauges?
- Are compressor air intakes installed and equipped to ensure that only clean uncontaminated air enters the compressor?
- Are air filters installed on the compressor intake?
- Are compressors operated and lubricated in accordance with the manufacturer's recommendations?
- Are safety devices on compressed air systems checked frequently?
- Before any repair work is done on the pressure system of a compressor, is the pressure bled off and the system locked-out?
- Are signs posted to warn of the automatic starting feature of the compressors?
- Is the belt drive system totally enclosed to provide protection for the front, back, top, and sides?
- Is it strictly prohibited to direct compressed air towards a person?
- Are employees prohibited from using highly compressed air for cleaning purposes?
- If compressed air is used for cleaning off clothing, is the pressure reduced to less than 10 psi?
- When using compressed air for cleaning, do employees use personal protective equipment?
- Are safety chains or other suitable locking devices used at couplings of high pressure hose lines where a connection failure would create a hazard?
- Before compressed air is used to empty containers of liquid, is the safe working pressure of the container checked?
- When compressed air is used with abrasive blast cleaning equipment, is the operating valve a type that must be held open manually?
- When compressed air is used to inflate auto tires, is a clip-on chuck and an inline regulator preset to 40 psi required?
- Is it prohibited to use compressed air to clean up or move combustible dust if such action could cause the dust to be suspended in the air and cause a fire or explosion hazard?

### **COMPRESSED AIR RECEIVERS**

- Is every receiver equipped with a pressure gauge and with one or more automatic, spring-loaded safety valves?
- Is the total relieving capacity of the safety valve capable of preventing pressure in the receiver from exceeding the maximum allowable working pressure of the receiver by more than 10 percent?
- Is every air receiver provided with a drainpipe and valve at the lowest point for the removal of accumulated oil and water?
- Are compressed air receivers periodically drained of moisture and oil?
- Are all safety valves tested frequently and at regular intervals to determine whether they are in good operating condition?
- Is there a current operating permit issued by the Division of Occupational Safety and Health?
- Is the inlet of air receivers and piping systems kept free of accumulated oil and carbonaceous materials?

### **COMPRESSED GAS & CYLINDERS**

- Are cylinders with a water weight capacity over 30 pounds equipped with means for connecting a valve protector device, or with a collar or recess to protect the valve?
- Are cylinders legibly marked to clearly identify the gas contained?
- Are compressed gas cylinders stored in areas which are protected from external heat sources such as flame impingement, intense radiant heat, electric arcs, or high temperature lines?
- Are cylinders located or stored in areas where they will not be damaged by passing or falling objects, or subject to tampering by unauthorized persons?

- Are cylinders stored or transported in a manner to prevent them creating a hazard by tipping, falling or rolling?
- Are cylinders containing liquefied fuel gas, stored or transported in a position so that the safety relief device is always in direct contact with the vapor space in the cylinder?
- Are valve protectors always placed on cylinders when the cylinders are not in use or connected for use?
- Are all valves closed off before a cylinder is moved, when the cylinder is empty, and at the completion of each job?
- Are low pressure fuel-gas cylinders checked periodically for corrosion, general distortion, cracks, or any other defect that might indicate a weakness or render it unfit for service?
- Does the periodic check of low pressure fuel-gas cylinders include a close inspection of the cylinders' bottom?

### **HOIST & AUXILIARY EQUIPMENT**

- Is each overhead electric hoist equipped with a limit device to stop the hook travel at its highest and lowest point of safe travel?
- Will each hoist automatically stop and hold any load up to 125 percent of its rated load, if its actuating force is removed?
- Is the rated load of each hoist legibly marked and visible to the operator?
- Are stops provided at the safe limits of travel for trolley hoist?
- Are the controls of hoists plainly marked to indicate the direction of travel or motion?
- Is each cage-controlled hoist equipped with an effective warning device?
- Are close-fitting guards or other suitable devices installed on hoist to assure hoist ropes will be maintained in the sheave grooves?
- Are all hoist chains or ropes of sufficient length to handle the full range of movement for the application while still maintaining two full wraps on the drum at all times?
- Are nip points or contact points between hoist ropes and sheaves which are permanently located within 7 feet of the floor, ground or working platform, guarded?
- Is it prohibited to use chains or rope slings that are kinked or twisted?
- Is it prohibited to use the hoist rope or chain wrapped around the load as a substitute, for a sling?
- Is the operator instructed to avoid carrying loads over people?
- Are only employees who have been trained in the proper use of hoists allowed to operate them?

### **INDUSTRIAL TRUCKS - FORKLIFTS**

- Are only trained personnel allowed to operate industrial trucks?
- Is substantial overhead protective equipment provided on high lift rider equipment?
- Are the required lift truck operating rules posted and enforced?
- Is directional lighting provided on each industrial truck that operates in an area with less than 2 foot candles per square foot of general lighting?
- Does each industrial truck have a warning horn, whistle, gong or other device which can be clearly heard above the normal noise in the areas where operated?
- Are the brakes on each industrial truck capable of bringing the vehicle to a complete and safe stop when fully loaded?
- Will the industrial truck's parking brake effectively prevent the vehicle from moving when unattended?
- Are industrial trucks operating in areas where flammable gases or vapors, or combustible dust or ignitable fibers may be present in the atmosphere, approved for such locations?
- Are motorized hand and hand/rider trucks so designed that the brakes are applied, and power to the drive motor shuts off when the operator releases his/her grip on the device that controls the travel?
- Are industrial trucks with internal combustion engine operated in buildings or enclosed areas, carefully checked to ensure such operations do not cause harmful concentration of dangerous gases or fumes?

### **SPRAYING OPERATIONS**

- Is adequate ventilation assured before spray operations are started?
- Is mechanical ventilation provided when spraying operation is done in enclosed areas?
- When mechanical ventilation is provided during spraying operations, is it so arranged that it will not circulate the contaminated air?
- Is the spray area free of hot surfaces?
- Is the spray area at least 20 feet from flames, sparks, operating electrical motors and other ignition sources?
- Are portable lamps used to illuminate spray areas suitable for use in a hazardous location?
- Is approved respiratory equipment provided and used when appropriate during spraying operations?
- Do solvents used for cleaning have a flash point of 100E F or more?
- Are fire control sprinkler heads kept clean?
- Are "NO SMOKING" signs posted in spray areas, paint rooms, paint booths, and paint storage areas?
- Is the spray area kept clean of combustible residue?
- Are spray booths constructed of metal, masonry, or other substantial noncombustible material?
- Are spray booth floors and baffles noncombustible and easily cleaned?
- Is infrared drying apparatus kept out of the spray area during spraying operations?
- Is the spray booth completely ventilated before using the drying apparatus?
- Is the electric drying apparatus properly grounded?
- Are lighting fixtures for spray booths located outside of the booth and the interior lighted through sealed clear panels?
- Are the electric motors for exhaust fans placed outside booths or ducts?
- Are belts and pulleys inside the booth fully enclosed?
- Do ducts have access doors to allow cleaning?
- Do all drying spaces have adequate ventilation?

### **ENTERING CONFINED SPACES**

- Are confined spaces thoroughly emptied of any corrosive or hazardous substances, such as acids or caustics, before entry?
- Before entry, are all lines to a confined space, containing inert, toxic, flammable, or corrosive materials valved off and blanked or disconnected and separated?
- Is it required that all impellers, agitators, or other moving equipment inside confined spaces be locked-out if they present a hazard?
- Is either natural or mechanical ventilation provided prior to confined space entry?
- Before entry, are appropriate atmospheric tests performed to check for oxygen deficiency, toxic substance and explosive concentrations in the confined space before entry?
- Is adequate illumination provided for the work to be performed in the confined space?
- Is the atmosphere inside the confined space frequently tested or continuously monitor during conduct of work?
- Is there an assigned safety standby employee outside of the confined space, whose sole responsibility is to watch the work in progress, sound an alarm if necessary, and render assistance?
- Is the standby employee or other employees prohibited from entering the confined space without lifelines and respiratory equipment if there are any questions as to the cause of an emergency?
- In addition to the standby employee, is there at least one other trained rescuer in the vicinity?
- Are all rescuers appropriately trained and using approved, recently inspected equipment?
- Does all rescue equipment allow for lifting employees vertically from a top opening?
- Are there trained personnel in First Aid and CPR immediately available?
- Is there an effective communication system in place whenever respiratory equipment is used and the employee in the confined space is out of sight of the standby person?
- Is approved respiratory equipment required if the atmosphere inside the confined space cannot be made acceptable?
- Is all portable electrical equipment used inside confined spaces either grounded and insulated, or equipped with ground fault protection?

- Before gas welding or burning is started in a confined space, are hoses checked for leaks, compressed gas bottles forbidden inside of the confined space, torches lighted only outside of the confined area and the confined area tested for an explosive atmosphere each time before a lighted torch is to be taken into the confined space?
- If employees will be using oxygen-consuming equipment such as salamanders, torches, furnaces, in a confined space, is sufficient air provided to assure combustion without reducing the oxygen concentration of the atmosphere below 19.5 percent by volume?
- Whenever combustion-type equipment is used in confined space, are provisions made to ensure the exhaust gases are vented outside of the enclosure?
- Is each confined space checked for decaying vegetation or animal matter, which may produce methane?
- Is the confined space checked for possible industrial waste, which could contain toxic properties?
- If the confined space is below the ground and near areas where motor vehicles will be operating, is it possible for vehicle exhaust or carbon monoxide to enter the space?

## **ENVIRONMENTAL CONTROLS**

- Are all work areas properly illuminated?
- Are employees instructed in proper first aid and other emergency procedures?
- Are hazardous substances identified which may cause harm by inhalation, ingestion, skin absorption or contact?
- Are employees aware of the hazards involved with the various chemicals they may be exposed to in their work environment, such as ammonia, chlorine, epoxies, and caustics?
- Is employee exposure to chemicals in the workplace kept within acceptable levels?
- Can a less harmful method or product be used?
- Is the work area's ventilation system appropriate for the work being performed?
- Are spray painting operations done in spray rooms or booths equipped with an appropriate exhaust system?
- Is employee exposure to welding fumes controlled by ventilation, use of respirators, exposure time, or other means?
- Are welders and other workers nearby provided with flash shields during welding operations?
- If forklifts and other vehicles are used in buildings or other enclosed areas, are the carbon monoxide levels kept below maximum acceptable concentration?
- Has there been a determination that noise levels in the facilities are within acceptable levels?
- Are steps being taken to use engineering controls to reduce excessive noise levels?
- Are proper precautions being taken when handling asbestos and other fibrous materials?
- Are caution labels and signs used to warn of asbestos?
- Are wet methods used, when practicable, to prevent the emission of airborne asbestos fibers, silica dust and similar hazardous materials?
- Is vacuuming with appropriate equipment used whenever possible rather than blowing or sweeping dust?
- Are grinders, saws, and other machines that produce respirable dusts vented to an industrial collector or central exhaust system?
- Are all local exhaust ventilation systems designed and operating properly such as airflow and volume necessary for the application? Are the ducts free of obstructions or the belts slipping?
- Is personal protective equipment provided, used and maintained wherever required?
- Are there written standard operating procedures for the selection and use of respirators where needed?
- Are restrooms and washrooms kept clean and sanitary?
- Is all water provided for drinking, washing, and cooking potable?
- Are all outlets for water not suitable for drinking clearly identified?
- Are employees' physical capacities assessed before being assigned to jobs requiring heavy work?
- Are employees instructed in the proper manner of lifting heavy objects?
- Where heat is a problem, have all fixed work areas been provided with spot cooling or air conditioning?
- Are employees screened before assignment to areas of high heat to determine if their health condition might make them more susceptible to having an adverse reaction?

- Are employees working on streets and roadways where they are exposed to the hazards of traffic, required to wear bright colored (traffic orange) warning vest?
- Are exhaust stacks and air intakes located that contaminated air will not be recirculated within a building or other enclosed area?

### **FLAMMABLE & COMBUSTIBLE MATERIALS**

- Are combustible scrap, debris and waste materials (i.e. oily rags) stored in covered metal receptacles and removed from the worksite promptly?
- Is proper storage practiced to minimize the risk of fire including spontaneous combustion?
- Are approved containers and tanks used for the storage and handling of flammable and combustible liquids?
- Are all connections on drums and combustible liquid piping, vapor and liquid tight?
- Are all flammable liquids kept in closed containers when not in use (e.g. parts cleaning tanks, pans)?
- Are bulk drums of flammable liquids grounded and bonded to containers during dispensing?
- Do storage rooms for flammable and combustible liquids have explosion-proof lights?
- Do storage rooms for flammable and combustible liquids have mechanical or gravity ventilation?
- Is liquefied petroleum gas stored, handled, and used in accordance with safe practices and standards?
- Are liquefied petroleum storage tanks guarded to prevent damage from vehicles?
- Are all solvent wastes and flammable liquids kept in fire-resistant covered containers until they are removed from the worksite?
- Is vacuuming used whenever possible rather than blowing or sweeping combustible dust?
- Are fire separators placed between containers of combustibles or flammables, when stacked one upon another, to assure their support and stability?
- Are fuel gas cylinders and oxygen cylinders separated by distance, fire resistant barriers or other means while in storage?
- Are fire extinguishers selected and provided for the types of materials in areas where they are to be used?
- Class A: Ordinary combustible material fires.
- Class B: Flammable liquid, gas or grease fires.
- Class C: Energized-electrical equipment fires.
- If a Halon 1301 fire extinguisher is used, can employees evacuate within the specified time for that extinguisher?
- Are appropriate fire extinguishers mounted within 75 feet of outside areas containing flammable liquids, and within 10 feet of any inside storage area for such materials?
- Is the transfer/withdrawal of flammable or combustible liquids performed by trained personnel?
- Are fire extinguishers mounted so that employees do not have to travel more than 75 feet for a class "A" fire or 50 feet for a class "B" fire?
- Are employees trained in the use of fire extinguishers?
- Are extinguishers free from obstructions or blockage?
- Are all extinguishers serviced, maintained and tagged at intervals not to exceed one year?
- Are all extinguishers fully charged and in their designated places?
- Is a record maintained of required monthly checks of extinguishers?
- Where sprinkler systems are permanently installed, are the nozzle heads directed or arranged so that water will not be sprayed into operating electrical switchboards and equipment?
- Are "NO SMOKING" signs posted where appropriate in areas where flammable or combustible materials are used or stored?
- Are "NO SMOKING" signs posted on liquefied petroleum gas tanks?
- Are "NO SMOKING" rules enforced in areas involving storage and use of flammable materials?
- Are safety cans used for dispensing flammable or combustible liquids at a point of use?
- Are all spills of flammable or combustible liquids cleaned up promptly?
- Are storage tanks adequately vented to prevent the development of excessive vacuum or pressure as a result of filling, emptying, or atmosphere temperature changes?

- Are storage tanks equipped with emergency venting that will relieve excessive internal pressure caused by fire exposure?
- Are spare portable or butane tanks, which are used by industrial trucks stored in accord with regulations?

## **FIRE PROTECTION**

- Do you have a fire prevention plan?
- Does your plan describe the type of fire protection equipment and/or systems?
- Have you established practices and procedures to control potential fire hazards and ignition sources?
- Are employees aware of the fire hazards of the material and processes to which they are exposed?
- Is your local fire department well acquainted with your facilities, location and specific hazards?
- If you have a fire alarm system, is it tested at least annually?
- If you have a fire alarm system, is it certified as required?
- If you have interior standpipes and valves, are they inspected regularly?
- If you have outside private fire hydrants, are they flushed at least once a year and on a routine preventive maintenance schedule?
- Are fire doors and shutters in good operating condition?
- Are fire doors and shutters unobstructed and protected against obstructions, including their counterweights?
- Are fire door and shutter fusible links in place?
- Are automatic sprinkler system water control valves, air and water pressures checked weekly/periodically as required?
- Is maintenance of automatic sprinkler system assigned to responsible persons or to a sprinkler contractor?
- Are sprinkler heads protected by metal guards, when exposed to physical damage?
- Is proper clearance maintained below sprinkler heads?
- Are portable fire extinguishers provided in adequate number and type?
- Are fire extinguishers mounted in readily accessible locations?
- Are fire extinguishers recharged regularly and noted on the inspection tag?
- Are employees periodically instructed in the use of extinguishers and fire protection procedures?

## **HAZARDOUS CHEMICAL EXPOSURES**

- Are employees trained in the safe handling practices of hazardous chemicals such as acids, caustics, and the like?
- Are employees aware of the potential hazards involving various chemicals stored or used in the workplace-- such as acids, bases, caustics, epoxies, and phenols?
- Is employee exposure to chemicals kept within acceptable levels?
- Are eye wash fountains and safety showers provided in areas where corrosive chemicals are handled?
- Are all containers, such as vats and storage tanks labeled as to their contents--e.g. "CAUSTICS"?
- Are all employees required to use personal protective clothing and equipment when handling chemicals (i.e. gloves, eye protection, and respirators)?
- Are flammable or toxic chemicals kept in closed containers when not in use?
- Are chemical piping systems clearly marked as to their content?
- Where corrosive liquids are frequently handled in open containers or drawn from storage vessels or pipelines, is adequate means readily available for neutralizing or disposing of spills or overflows properly and safely?
- Have standard operating procedures been established and are they being followed when cleaning up chemical spills?
- Where needed for emergency use, are respirators stored in a convenient, clean and sanitary location?
- Are respirators intended for emergency use adequate for the various uses for which they may be needed?
- Are employees prohibited from eating in areas where hazardous chemicals are present?
- Is personal protective equipment provided, used and maintained whenever necessary?
- Are there written standard operating procedures for the selection and use of respirators where needed?

- If you have a respirator protection program, are your employees instructed on the correct usage and limitations of the respirators?
- Are the respirators NIOSH approved for this particular application?
- Are they regularly inspected and cleaned sanitized and maintained?
- If hazardous substances are used in your processes, do you have a medical or biological monitoring system in operation?
- Are you familiar with the Threshold Limit Values or Permissible Exposure Limits of airborne contaminants and physical agents used in your workplace?
- Have control procedures been instituted for hazardous materials, where appropriate, such as respirators, ventilation systems, handling practices, and the like?
- Whenever possible, are hazardous substances handled in properly designed and exhausted booths or similar locations?
- Do you use general dilution or local exhaust ventilation systems to control dusts, vapors, gases, fumes, smoke, solvents or mists which may be generated in your workplace?
- Is ventilation equipment provided for removal of contaminants from such operations as production grinding, buffing, spray painting, and/or vapor decreasing, and is it operating properly?
- Do employees complain about dizziness, headaches, nausea, irritation, or other factors of discomfort when they use solvents or other chemicals?
- Is there a dermatitis problem--do employees complain about skin dryness, irritation, or sensitization?
- Have you considered the use of an industrial hygienist or environmental health specialist to evaluate your operation?
- If internal combustion engines are used, is carbon monoxide kept within acceptable levels?
- Is vacuuming used, rather than blowing or sweeping dusts whenever possible for clean up?
- Are materials, which give off toxic asphyxiant, suffocating or anesthetic fumes, stored in remote or isolated locations when not in use?

#### **HAZARDOUS SUBSTANCES COMMUNICATION**

- Is there a list of hazardous substances used in your workplace?
- Is there a written hazard communication program dealing with Material Safety Data Sheets (MSDS) labeling, and employee training?
- Who is responsible for MSDSs, container labeling, employee training?
- Is each container for a hazardous substance (i.e. vats, bottles, storage tanks,) labeled with product identity and a hazard warning (communication of the specific health hazards and physical hazards)?
- Is there a Material Safety Data Sheet readily available for each hazardous substance used?
- How will you inform other employers whose employees share the same work area where the hazardous substances are used?
- Is there an employee training program for hazardous substances?
- Does this program include:
  - An explanation of what an MSDS is and how to use and obtain one?
  - MSDS contents for each hazardous substance or class of substances?
  - Explanation of "Right to Know"?
  - Identification of where employees can see the employer's written hazard communication program and where hazardous substances are present in their work area?
  - The physical and health hazards of substances in the work area, how to detect their presence, and specific protective measures to be used?
  - Details of the hazard communication program, including how to use the labeling system and MSDSs?
  - How employees will be informed of hazards of non-routine tasks, and hazards of unlabeled pipes?

#### **ELECTRICAL**

- Are your workplace electricians familiar with the OSHA Electrical Safety Orders?
- Do you specify compliance with OSHA for all contract electrical work?

- Are all employees required to report as soon as practicable any obvious hazard to life or property observed in connection with electrical equipment or lines?
- Are employees instructed to make preliminary inspections and/or appropriate tests to determine what conditions exist before starting work on electrical equipment or lines?
- When electrical equipment or lines are to be serviced, maintained or adjusted, are necessary switches opened, locked-out and tagged whenever possible?
- Are portable electrical tools and equipment grounded or of the double insulated type?
- Are electrical appliances such as vacuum cleaners, polishers, vending machines grounded?
- Do extension cords being used have a grounding conductor?
- Are multiple plug adapters prohibited?
- Are ground-fault circuit interrupters installed on each temporary 15 or 20 ampere, 120 volt AC circuit at locations where construction, demolition, modifications, alterations or excavations are being performed?
- Are all temporary circuits protected by suitable disconnecting switches or plug connectors at the junction with permanent wiring?
- Is exposed wiring and cords with frayed or deteriorated insulation repaired or replaced promptly?
- Are flexible cords and cables free of splices or taps?
- Are clamps or other securing means provided on flexible cords or cables at plugs, receptacles, tools, and equipment and is the cord jacket securely held in place?
- Are all cord, cable and raceway connections intact and secure?
- In wet or damp locations, are electrical tools and equipment appropriate for the use or location or otherwise protected?
- Is the location of electrical power lines and cables (overhead, underground, underfloor, other side of walls) determined before digging, drilling or similar work is begun?
- Are metal measuring tapes, ropes, handlines or similar devices with metallic thread woven into the fabric prohibited where they could come in contact with energized parts of equipment or circuit conductors?
- Is the use of metal ladders prohibited in area where the ladder or the person using the ladder could come in contact with energized parts of equipment, fixtures or circuit conductors?
- Are all disconnecting switches and circuit breakers labeled to indicate their use or equipment served?
- Are disconnecting means always opened before fuses are replaced?
- Do all interior wiring systems include provisions for grounding metal parts of electrical raceways, equipment and enclosures?
- Are all electrical raceways and enclosures securely fastened in place?
- Are all energized parts of electrical circuits and equipment guarded against accidental contact by approved cabinets or enclosures?
- Is sufficient access and working space provided and maintained about all electrical equipment to permit ready and safe operations and maintenance?
- Are all unused openings (including conduit knockouts) in electrical enclosures and fittings closed with appropriate covers, plugs or plates?
- Are electrical enclosures such as switches, receptacles, junction boxes, etc., provided with tight-fitting covers or plates?
- Are disconnecting switches for electrical motors in excess of two horsepower, capable of opening the circuit when the motor is in a stalled condition, without exploding? (Switches must be horsepower rated equal to or in excess of the motor hp rating).
- Is low voltage protection provided in the control device of motors driving machines or equipment, which could cause probably injury from inadvertent starting?
- Is each motor disconnecting switch or circuit breaker located within sight of the motor control device?
- Is each motor located within sight of its controller or the controller disconnecting means capable of being locked in the open position or is a separate disconnecting means installed in the circuit within sight of the motor?
- Is the controller for each motor in excess of two horsepower, rated in horsepower equal to or in excess of the rating of the motor it serves?
- Are employees who regularly work on or around energized electrical equipment or lines instructed in the cardiopulmonary resuscitation (CPR) methods?
- Are employees prohibited from working alone on energized lines or equipment over 600 volts?

## **NOISE**

- Are there areas in the workplace where continuous noise levels exceed 85 dBA? (To determine maximum allowable levels for intermittent or impact noise, see Title 8, Section 5097.)
- Are noise levels being measured using a sound level meter or an octave band analyzer and records being kept?
- Have you tried isolating noisy machinery from the rest of your operation?
- Have engineering controls been used to reduce excessive noise levels?
- Where engineering controls are determined not feasible, are administrative controls (i.e. worker rotation) being used to minimize individual employee exposure to noise?
- Is there an ongoing preventive health program to educate employees in safe levels of noise and exposure, effects of noise on their health, and use of personal protection?
- Is the training repeated annually for employees exposed to continuous noise above 85 dBA?
- Have work areas where noise levels make voice communication between employees difficult been identified and posted?
- Is approved hearing protective equipment (noise attenuating devices) available to every employee working in areas where continuous noise levels exceed 85 dBA?
- If you use ear protectors, are employees properly fitted and instructed in their use and care?
- Are employees exposed to continuous noise above 85 dBA given periodic audiometric testing to ensure that you have an effective hearing protection system?

## **FUELING**

- Is it prohibited to fuel an internal combustion engine with a flammable liquid while the engine is running?
- Are fueling operations done in such a manner that likelihood of spillage will be minimal?
- When spillage occurs during fueling operations, is the spilled fuel cleaned up completely, evaporated, or other measures taken to control vapors before restarting the engine?
- Are fuel tank caps replaced and secured before starting the engine?
- In fueling operations is there always metal contact between the container and fuel tank?
- Are fueling hoses of a type designed to handle the specific type of fuel?
- Is it prohibited to handle or transfer gasoline in open containers?
- Are open lights, open flames, or sparking or arcing equipment prohibited near fueling or transfer of fuel operations?
- Is smoking prohibited in the vicinity of fueling operations?
- Are fueling operations prohibited in building or other enclosed areas that are not specifically ventilated for this purpose?
- Where fueling or transfer of fuel is done through a gravity flow system, are the nozzles of the self-closing type?

## **IDENTIFICATION OF PIPING SYSTEMS**

- When nonpotable water is piped through a facility, are outlets or taps posted to alert employees that it is unsafe and not to be used for drinking, washing or other personal use?
- When hazardous substances are transported through above ground piping, is each pipeline identified at points where confusion could introduce hazards to employees?
- When pipelines are identified by color painting, are all visible parts of the line so identified?
- When pipelines are identified by color painted bands or tapes, are the bands or tapes located at reasonable intervals and at each outlet, valve or connection?
- When pipelines are identified by color, is the color code posted at all locations where confusion could introduce hazards to employees?
- When the contents of pipelines are identified by name or name abbreviation, is the information readily visible on the pipe near each valve or outlet?

- When pipelines carrying hazardous substances are identified by tags, are the tags constructed of durable materials, the message carried clearly and permanently distinguishable and are tags installed at each valve or outlet?
- When pipelines are heated by electricity, steam or other external source, are suitable warning signs or tags placed at unions, valves, or other serviceable parts of the system?

### **MATERIAL HANDLING**

- Is there safe clearance for equipment through aisles and doorways?
- Are aiseways designated, permanently marked, and kept clear to allow unhindered passage?
- Are motorized vehicles and mechanized equipment inspected daily or prior to use?
- Are vehicles shut off and brakes set prior to loading or unloading?
- Are containers or combustibles or flammables, when stacked while being moved, always separated by dunnage sufficient to provide stability?
- Are dock boards (bridge plates) used when loading or unloading operations are taking place between vehicles and docks?
- Are trucks and trailers secured from movement during loading and unloading operations?
- Are dock plates and loading ramps constructed and maintained with sufficient strength to support imposed loading?
- Are hand trucks maintained in safe operating condition?
- Are chutes equipped with sideboards of sufficient height to prevent the materials being handled from falling off?
- Are chutes and gravity roller sections firmly placed or secured to prevent displacement?
- At the delivery end of rollers or chutes, are provisions made to brake the movement of the handled materials.
- Are pallets usually inspected before being loaded or moved?
- Are hooks with safety latches or other arrangements used when hoisting materials so that slings or load attachments won't accidentally slip off the hoist hooks?
- Are securing chains, ropes, chockers or slings adequate for the job to be performed?
- When hoisting material or equipment, are provisions made to assure no one will be passing under the suspended loads?
- Are Material Safety Data Sheets available to employees handling hazardous substances?

### **TRANSPORTING EMPLOYEES & MATERIALS**

- Do employees who operate vehicles on public thoroughfares have valid operator's licenses?
- When seven or more employees are regularly transported in a van, bus or truck, is the operator's license appropriate for the class of vehicle being driven?
- Is each van, bus or truck used regularly to transport employees, equipped with an adequate number of seats?
- When employees are transported by truck, are provision provided to prevent their falling from the vehicle?
- Are vehicles used to transport employees, equipped with lamps, brakes, horns, mirrors, windshields and turn signals in good repair?
- Are transport vehicles provided with handrails, steps, stirrups or similar devices, so placed and arranged that employees can safely mount or dismount?
- Are employee transport vehicles equipped at all times with at least two reflective type flares?
- Is a full charged fire extinguisher, in good condition, with at least 4 B:C rating maintained in each employee transport vehicle?
- When cutting tools with sharp edges are carried in passenger compartments of employee transport vehicles, are they placed in closed boxes or containers which are secured in place?
- Are employees prohibited from riding on top of any load, which can shift, topple, or otherwise become unstable?

## **CONTROL OF HARMFUL SUBSTANCES BY VENTILATION**

- Is the volume and velocity of air in each exhaust system sufficient to gather the dusts, fumes, mists, vapors or gases to be controlled, and to convey them to a suitable point of disposal?
- Are exhaust inlets, ducts and plenums designed, constructed, and supported to prevent collapse or failure of any part of the system?
- Are clean-out ports or doors provided at intervals not to exceed 12 feet in all horizontal runs of exhaust ducts?
- Where two or more different type of operations are being controlled through the same exhaust system, will the combination of substances being controlled, constitute a fire, explosion or chemical reaction hazard in the duct?
- Is adequate makeup air provided to areas where exhaust systems are operating?
- Is the intake for makeup air located so that only clean, fresh air, which is free of contaminants, will enter the work environment?
- Where two or more ventilation systems are serving a work area, is their operation such that one will not offset the functions of the other?

## **SANITIZING EQUIPMENT & CLOTHING**

- Is personal protective clothing or equipment, that employees are required to wear or use, of a type capable of being easily cleaned and disinfected?
- Are employees prohibited from interchanging personal protective clothing or equipment, unless it has been properly cleaned?
- Are machines and equipment, which processes, handle or apply materials that could be injurious to employees, cleaned and/or decontaminated before being overhauled or placed in storage?
- Are employees prohibited from smoking or eating in any area where contaminants are present that could be injurious if ingested?
- When employees are required to change from street clothing into protective clothing, is a clean changeroom with separate storage facility for street and protective clothing provided?
- Are employees required to shower and wash their hair as soon as possible after a known contact has occurred with a carcinogen?
- When equipment, materials, or other items are taken into or removed from a carcinogen regulated area, is it done in a manner that will not contaminate non-regulated areas or the external environment?

## **TIRE INFLATION**

- Where tires are mounted and/or inflated on drop center wheels is a safe practice procedure posted and enforced?
- Where tires are mounted and/or inflated on wheels with split rims and/or retainer rings is a safe practice procedure posted and enforced?
- Does each tire inflation hose have a clip-on chuck with at least 24 inches of hose between the chuck and an in-line hand valve and gauge?
- Does the tire inflation control valve automatically shut off the airflow when the valve is released?
- Is a tire restraining device such as a cage, rack or other effective means used while inflating tires mounted on split rims, or rims using retainer rings?
- Are employees strictly forbidden from taking a position directly over or in front of a tire while it's being inflated?

## **EMERGENCY ACTION PLAN**

- Are you required to have an emergency action plan?
- Does the emergency action plan comply with requirements of T8CCR 3220(a)?
- Have emergency escape procedures and routes been developed and communicated to all employees?
- Do employees, who remain to operate critical plant operations before they evacuate, know the proper

procedures?

- Is the employee alarm system that provides a warning for emergency action recognizable and perceptible above ambient conditions?
- Are alarm systems properly maintained and tested regularly?
- Is the emergency action plan reviewed and revised periodically?
- Do employees know their responsibilities:
- For reporting emergencies?
- During an emergency?
- For conducting rescue and medical duties?

## **INFECTION CONTROL**

- Are employees potentially exposed to infectious agents in body fluids?
- Have occasions of potential occupational exposure been identified and documented?
- Has a training and information program been provided for employees exposed to or potentially exposed to blood and/or body fluids?
- Have infection control procedures been instituted where appropriate, such as ventilation, universal precautions, workplace practices, and personal protective equipment?
- Are employees aware of specific workplace practices to follow when appropriate? (Hand washing, handling sharp instruments, handling of laundry, disposal of contaminated materials, reusable equipment.)
- Is personal protective equipment provided to employees, and in all appropriate locations?
- Is the necessary equipment (i.e. mouthpieces, resuscitation bags, and other ventilation devices) provided for administering mouth-to-mouth resuscitation on potentially infected patients?
- Are facilities/equipment to comply with workplace practices available, such as hand-washing sinks, biohazard tags and labels, needle containers, detergents/disinfectants to clean up spills?
- Are all equipment and environmental and working surfaces cleaned and disinfected after contact with blood or potentially infectious materials?
- Is infectious waste placed in closable, leak proof containers, bags or puncture-resistant holders with proper labels?
- Has medical surveillance including HBV evaluation, antibody testing and vaccination been made available to potentially exposed employees?
- Training on universal precautions?
- Training on personal protective equipment?
- Training on workplace practices, which should include blood drawing, room cleaning, laundry handling, clean up of blood spills?
- Training on needlestick exposure/management?
- Hepatitis B vaccinations?

## **ERGONOMICS**

- Can the work be performed without eyestrain or glare to the employees?
- Does the task require prolonged raising of the arms?
- Do the neck and shoulders have to be stooped to view the task?
- Are there pressure points on any parts of the body (wrists, forearms, back of thighs)?
- Can the work be done using the larger muscles of the body?
- Can the work be done without twisting or overly bending the lower back?
- Are there sufficient rest breaks, in addition to the regular rest breaks, to relieve stress from repetitive-motion tasks?
- Are tools, instruments and machinery shaped, positioned and handled so that tasks can be performed comfortably?
- Are all pieces of furniture adjusted, positioned and arranged to minimize strain on all parts of the body?

## **VENTILATION FOR INDOOR AIR QUALITY**

- Does your HVAC system provide at least the quantity of outdoor air required by the State Building Standards Code, Title 24, Part 2 at the time the building was constructed?
- Is the HVAC system inspected at least annually, and problems corrected?
- Are inspection records retained for at least 5 years?

## **CRANE CHECKLIST**

- Are the cranes visually inspected for defective components prior to the beginning of any work shift?
- Are all electrically operated cranes effectively grounded?
- Is a crane preventive maintenance program established?
- Is the load chart clearly visible to the operator?
- Are operating controls clearly identified?
- Is a fire extinguisher provided at the operator's station?
- Is the rated capacity visibly marked on each crane?
- Is an audible warning device mounted on each crane?
- Is sufficient illumination provided for the operator to perform the work safely?
- Are cranes of such design, that the boom could fall over backward, equipped with boomstops?
- Does each crane have a certificate indicating that required testing and examinations have been performed?
- Are crane inspection and maintenance records maintained and available for inspection?

# HAZARD ASSESSMENT | ABATEMENT RECORD

This hazard assessment | abatement record shall be kept on file for at least 1 year after the hazard has been abated or mitigated.

All hazards should be corrected as soon as possible, based on the severity of the hazard. If a serious imminent hazard cannot be immediately corrected, evacuate personnel from the area and restrict access until the hazard can be addressed.

Supervisor/Safety Coordinator Name: \_\_\_\_\_ Telephone: \_

Supervisor/Safety Coordinator Signature: \_\_\_\_\_ Date: \_\_\_\_\_

| Description and Location of Unsafe Condition | Date Discovered | Required Action and Responsible Party | Completion Date |        |
|--|-----------------|---------------------------------------|-----------------|--------|
|  |                 |                                       | Projected       | Actual |
|  |                 |                                       |                 |        |
|  |                 |                                       |                 |        |
|  |                 |                                       |                 |        |
|  |                 |                                       |                 |        |
|  |                 |                                       |                 |        |

# INCIDENT INVESTIGATION RECORD

This incident (accident, illness, exposure, etc.) investigation record shall be kept on file for at least 1 year after the date of occurrence. All affected employees and applicable third parties shall be provide a copy of incident records upon request.

| Incident Information                     |                           |
|--|---------------------------|
| Name(s) of Affected Employee(s):         | Date of Incident:         |
| Work Area of Affected Employee(s):       | Date Investigation Began: |
| Describe Nature of Incident:             |                           |
| Part(s) of Body Affected:                |                           |
| Describe Medical Treatment Administered: |                           |
| Witness Information                      |                           |
| Witness #1 Name:                         | Phone:                    |
| Witness's Description of Incident:       |                           |
| Witness's Signature:                     |                           |
| Witness #2 Name:                         | Phone:                    |
| Witness's Description of Incident:       |                           |
| Witness's Signature:                     |                           |

## Investigation Results

List contributing factors/root causes:

Was a mandatory safe work practice violated?

Yes

No

Was the unsafe condition, practice or protective equipment problem corrected immediately?

Yes

No

If no, what has been done to ensure correction?

Do additional mandatory safe work practices need to be implemented?

Yes

No

If yes, please describe safe work practice:

List corrective actions taken and date implemented:

Signature of Investigator:

Date:

Signature of Person Responsible for Corrective Actions:

Date:





# Hazard Assessment Checklist<sup>1</sup>

Location: \_\_\_\_\_

Inspected by: \_\_\_\_\_

Date and Time: \_\_\_\_\_

1. To use this form correctly, you must look at each item and tick the appropriate box. If correction action is required then selection yes by placing a check mark in the box (  Yes ). If correction action is not required then place a check mark in the no box (  No ).
2. If the item is not relevant to the type of project activity or phase of the project during the inspection, place a check mark in the Not Applicable box (  N/A ).
3. If a corrective action is required, you must describe the required corrective action.
4. The person responsible for ensure the corrective action is completed should be listed by First and Last name.

| <b>Health Hazards</b>  |   |   |                                |
|--|---|---|--------------------------------|
| <b>Chemical Hazards</b>  |   |   |                                |
| Review Safety Data Sheet (SDS) <sup>2</sup> and product labels to identify chemicals in your workplace that have low exposure limits, are highly volatile, or are used in large quantities or in unventilated spaces. Identify activities that may result in skin exposure to chemicals. |   |   |                                |
|  | <b>Corrective Action Required</b>   | <b>Describe Corrective Action, if necessary</b> | <b>List Person responsible</b> |
| Chemicals are correctly labelled and stored  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |                                |
| Emergency numbers are displayed  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |                                |
| Adequate ventilation for fumes and dust  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |                                |
| Person protective equipment and clothing are available   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |                                |
| Emergency eyewash, showers are available   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |                                |
| SDS are available  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |   |                                |
| <b>Physical Hazards</b>  |   |   |                                |

<sup>1</sup> <https://www.osha.gov/shpguidelines/hazard-identification.html#ai6>

<sup>2</sup> <https://www.msdsolnline.com/sds-search/>

Identify any exposures to excessive noise (areas where you must raise your voice to be heard by others), elevated heat (indoor and outdoor), or sources of radiation (radioactive materials, X-rays, or radiofrequency radiation).

|  | Corrective Action Required  | Describe Corrective Action, if necessary | List Person responsible |
|--|---|--|-------------------------|
|  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |                         |
|  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |                         |
|  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |                         |

**Biological Hazards**

Determine whether workers may be exposed to sources of infectious diseases, molds, toxic or poisonous plants, or animal materials (fur or scat) capable of causing allergic reactions or occupational asthma.

|  | Corrective Action Required  | Describe Corrective Action, if necessary | List Person responsible for Corrective Action |
|--|---|--|---|
| Do workers work garbage, soils, waste?     | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |   |
| Is there a possibility of cuts, abrasions? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |   |
|  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |   |

**Ergonomic Hazards**

Examine work activities that require heavy lifting, work above shoulder height, repetitive motions, or tasks with significant vibration.

|   | Corrective Action Required  | Describe Corrective Action, if necessary | List Person responsible for Corrective Action |
|---|---|--|---|
| Is there high rates of repetitive motion?                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |   |
| Are workers exposed to vibrations?  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |   |
| Do workers have to maintain the same position for extended periods of time? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |   |
| Is there adequate space around machines?                                    | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |   |
| Are workers involved in manual lifting, carrying, pushing, pulling?         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |   |

**Qualitative Exposure Assessments**

When possible, using air sampling or direct reading instruments.

|  | Corrective Action Required  | Describe Corrective Action, if necessary | List Person responsible for Corrective Action |
|--|---|--|---|
|  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |   |
|  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  |   |

Location: \_\_\_\_\_

Inspected by: \_\_\_\_\_

Date and Time: \_\_\_\_\_

| <b>Identify Safety Hazards</b>      |  |   |
|-------------------------------------|--|---|
| <b>General housekeeping</b>         |  |   |
| 1                                   | Area is tidy and well kept   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 2                                   | Work areas suitably illuminated and lights in walkways   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 3                                   | Handwashing/ Sanitizations stations are available and maintained   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 4                                   | Exits are clearly visible and free from obstruction  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 5                                   | First aid kits are fully supplied and sanitary   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 6                                   | Location of first aid kits are known to people   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| <b>Slip, trip, and fall hazards</b> |  |   |
| 7                                   | Building entrances, aisles, and work areas are free of trip and fall hazards.                                    | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 8                                   | Entrance mats are in place, and extended mats are used during wet weather.                                       | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 9                                   | No tripping hazards present. Walkways are clear of all materials, cords, wires, paper, and equipment             | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 10                                  | Carpets and rugs are secure and in good condition.   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 11                                  | Floors are clean, dry, and free slippery materials.  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 12                                  | Stairways, ramps, and corridors are illuminated.   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 13                                  | Stairways, ramps, and corridors are clear and free of stored materials.  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 14                                  | Stair treads are in good condition.  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 15                                  | Ramps have non-slip surfaces.  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 16                                  | Handrails and guardrails are present where required and are in good condition.                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 17                                  | Aisle lights are functioning properly.   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| <b>Electrical hazards</b>           |  |   |
| 18                                  | Cords and plugs are in good condition; no exposed internal wires or taped wires                                  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 19                                  | Extension cords are only used temporarily  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 20                                  | No multi extension cord or extension cord to surge device usage  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 21                                  | Outlets and switches cover plates are present.   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 22                                  | Breakers and fuse switches are identified.   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 23                                  | Ground fault circuit interrupters are in use in wet areas  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 24                                  | Electrical panels are free of obstructions have a clearance of 30" to each side and a clearance of 36" in front. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| <b>Fire Protection</b>              |  |   |

|    |   |   |
|----|---|---|
| 25 | Emergency phone numbers are posted near a phone   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 26 | Fire extinguishers are mounted, accessible, fully-charged and serviced within the last 12 months  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 27 | Fire extinguishers, alarm pulls, sprinkler risers, and sprinklers heads are free of obstructions. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 28 | Intercom or emergency communication equipment is operational.                                     | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 29 | Occupancy limits are posted near the main exit of large rooms and assembly areas.                 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 30 | Evacuation maps are posted  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 31 | Flammable and combustible materials are stored away from ignition sources                         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 32 | Exit doors can be effortlessly opened   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 33 | First aid and Fire Equipment signs are posted   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |

**Appendix F – Albany West Educational Training Outline**

**Caribbean Coastal Services Ltd.**

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## ALBANY WEST DEVELOPMENT – ENVIRONMENTAL TRAINING OUTLINE

Purpose: To adequately inform the Albany West Development construction staff on potential environmental impacts associated with the development, environmental legislation, and industry best practices.

The Environmental Training Outline shall include information on the following topics of discussion:

- Baseline Environment of the Project Site
- Potential Environmental Impacts Related to Project
- Best Management Practices:
  - Terrestrial Resource Management – birds & nests, turtles & nests, protected trees
  - Water Quality Management (inclusive of wastewater)
  - Spill response and incident reporting
  - Fire Prevention
  - Air Quality Management - Dust, Noise, Odors
  - Waste Management
  - Pollution Prevention
- Personal Protective Equipment (PPE)
- Emergency & First aid procedures
- Exposure response & incident reporting
- Material Safety Data Sheets
- Hazards Assessment