



Construction Safety Manual

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DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

MIAMI, FLORIDA

CONSTRUCTION SAFETY MANUAL

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Policy Statement

It is the policy of the Department of Transportation and Public Works (DTPW) and Miami-Dade County (MDC) to maintain a safe working environment for all employees and the public. The Construction Safety Program has been designed in accordance with the William-Steiger Occupational Safety and Health Act of 1970. The success of the safety program requires the full support of every employee and contractor working on the DTPW system.

Regardless of the urgency or monetary cost of a job; all safety precautions must be observed. Prevention of personal injury or damage to property and equipment must always remain paramount in the minds of every employee and contractor.

PREFACE

THE CONSTRUCTION SAFETY MANUAL (CSM) is one of the Miami-Dade County (MDC) Contract Documents. Contractors are required to assure that all employees, subcontractors, and their suppliers/vendors, while on the work site and in the conduct of MDC contractors, comply with the provisions of the CSM and the minimum standards set forth under the William-Steiger Occupational Safety and Health Act of 1970 and as amended, the Construction and General Industry Standards (29CFR1926/1910), and all other applicable Federal, State and Local laws. The Contractors are expected to be familiar with the contents applicable to their operations. The provisions set forth in this CSM will be strictly enforced. Non-compliance with the CSM will be treated the same as non-compliance with any contract provision. Willful or repeated noncompliance shall result in the suspension of part or all work.

Safety at the work site shall be the sole responsibility of the Contractor. The CSM shall be used as a guide in developing the Contractor's Accident Prevention Program. The Contractor shall assume full responsibility for compliance with all applicable Federal, State and Local safety related regulations and for complying with this Construction Safety Manual during the performance of all activities.

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A. DEFINITIONS

The following definitions apply for the purpose of this Construction Safety Manual.

ACCIDENT - An unforeseen event or occurrence which causes death, injury or damage to property.

ACCIDENT PREVENTION PROGRAM (APP) - A program designed to provide for the protection to life and health of employees and other persons; and for the prevention of damage to property, materials, supplies and equipment. The Contractor's APP shall be developed by the Contractor using the Contractor's Safety Manual as a guide. Once approved by MDC, the Contractor's APP shall be used by the Contractor and his subcontractors to insure the safe prosecution of the work.

ALARM CONDITION - Any abnormal condition that requires the attention or intervention of responsible personnel or an individual monitoring the transit system operations.

ANOMALY - Deviation from nominal performance, which does not cause a significant, effect on system performance but does warrant investigation and/ or repair.

AUDIT - Formal or official examination and verification.

AUTOMATIC - A term applied to a system, subsystem, or device which has the inherent capability to function without direct manual participation.

CENTRAL CONTROL - That place where train control or train supervision is accomplished for the entire Metrorail and Metromover system, the train command center.

CENTRAL DISPATCH - That place where bus, rail or mover supervision or dispatcher is accomplished for the entire transit system.

COMPETENT PERSON - A person who is capable of identifying existing or predicting hazards in the surroundings, or working conditions which are unsanitary, hazardous or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them.

CONSTRUCTION SAFETY - The optimum degree of safety within the constraints of construction effectiveness, time and cost through specific application of safety management throughout all phases of the construction.

CONSTRUCTION SAFETY MANUAL (CSM) - This manual, issued as a contract document by the Department of Transportation and Public Works (DTPW), to be used as a guide by the Contractors in developing the Accident Prevention Program.

CONTRACTOR'S AUTHORIZED SAFETY REPRESENTATIVE - The person designated as authorized safety representative who will be responsible for work site safety and for reporting all insurance claims. On contracts of over \$5 million in award amount this person shall have full-time safety responsibility, unless deemed by the Office of Safety and Security that due to the nature of the work, part-time oversight is adequate. On contracts of under \$5 million award amount, the person may have part time safety responsibility, unless deemed by the Office of Safety and Security that the nature of the work necessitates full-time safety oversight. Whether part-time or full-time, this person shall NOT report to the Contractor's superintendent.

CONTRACT DRAWINGS - The plans, profiles, typical cross-sections, general cross-section, elevations, schedules and details which show locations, character and dimensions of the work.

CONTRACTING OFFICER - The Director, Department of Transportation and Public Works.

CONTRACTOR - The individual, firm, partnership, corporation, or combination thereof, private, municipal, or public, including joint ventures which, as an independent contractor, has entered into a contract with MDC, who is referred to throughout the Contract Documents by singular in number and masculine in gender.

DEGRADATION - Falling from an initial level to a lower level in quality or performance.

EMERGENCY - A situation which is life threatening or which can cause serious damage on or in the immediate vicinity of any transit facility, structure, bus or train.

EMPLOYEE - A person employed by the Contractor or Subcontractor.

ENGINEER - MDC or its authorized representatives, including but not limited to the Resident Engineer; the Contracting Officer's Representatives and the Engineer of Record.

EQUIPMENT FAILURE - The state in which equipment no longer meets the minimum acceptable specified performance and cannot be restored through operator adjustment or control.

FTA - Federal Transit Administration, formerly UMTA.

FAILURE - An inability to perform an intended function.

HAZARD - Any real or potential condition that can cause injury or death; or damage to or loss of equipment or property.

HAZARD MANAGEMENT (LOSS CONTROL) - An element of the system safety management function that evaluates the safety effects of potential hazards considering acceptance, control, or elimination of such hazards with respect to expenditure or

resources. (The feasibility of hazard elimination must be considered in light of financial, legal, and human considerations).

HAZARD SEVERITY - A qualitative measure of the worst potential consequences that could be caused by a specific hazard.

Category I - Catastrophic. May cause death, serious injury/illness or major system loss.

Category II - Critical. May cause injury/illness, or major system damage.

Category III - Marginal. May cause minor injury/illness, or minor system damage.

Category IV - Negligible. Will not result in injury/illness, or system damage.

HAZARD INDEX - A quantitative measure, combining the numerical probability of occurrence with a hazard severity.

HAZARD RESOLUTION - The analysis and subsequent actions taken to reduce, to the lowest level practical, the risk associated with an identified hazard.

HAZARD PROBABILITY - The probability that a hazard will occur during the planned life of the system. Hazard probability may be expressed in quantitative or qualitative terms. An example of a hazard probability ranking system is:

- A Frequent
- B Reasonably Probable
- C Occasional
- D Remote
- E Improbable

IMMINENT DANGER - Refers to any condition or practice where there is reasonable certainty that a danger exists that can be expected to cause death or serious physical harm and/or serious property damage immediately or before the danger can be eliminated through normal enforcement procedures.

INCIDENT - An unforeseen event or occurrence which does not necessarily result in injury or property damage.

MAINTENANCE - All actions necessary for retaining an item in or restoring it to an operable condition.

MALFUNCTION - Any anomaly or failure wherein the system, subsystem, or component fails to function as intended.

MDC - Miami-Dade County - DTPW is a Department of Miami-Dade County (MDC). MDC is governed by an Executive Mayor, elected countywide, and a Board of County Commissioners (BCC), elected by districts (13). The DTPW Director reports to the Miami-Dade County Mayor. According to Miami-Dade County Administrative Order

No. 3-8 (effective 7/7/1981), under the authority of Sections 4.01 and 4.02 of the Miami-Dade County Charter - The Transportation Coordinator is empowered to enforce a Policies and Procedures Manual for Procurement and Construction Management which is consistent with this and other Administrative Orders, the Dade County Code and other applicable laws, regulations and contract agreements, and to approve and issue the procedures necessary for its implementation.

DTPW - Department of Transportation and Public Works, Miami-Dade County, located at Overtown Transit Village, 701 NW 1st Court 17th Floor, Miami, FL 33136

MISHAP - An unplanned event or series of events that result in death, injury, occupational illness, or damage to or loss of equipment or property. (See also ACCIDENT).

OFFICE OF SAFETY AND SECURITY (OSS) - Department of Transportation and Public Works, Miami-Dade County, located at 111 NW 1 Street, 4th Floor, Miami, Florida 33128.

OPERATOR - That person having direct and immediate control of the movement of a vehicle or machinery.

OPERATING TIME - The time period between turn-on and turn-off of a system, subsystem, component or part during which time operation is as specified. Total operating time is the summation of all operating time periods.

OSHA - The Occupational Safety and Health Administration. An agency of the U.S. Government which sets standards to provide for the safety of employees in the workplace. The area office is located in Plantation, Florida, phone (954) 424-0242.

PERSONAL PROTECTIVE EQUIPMENT (PPE) - Equipment designed and worn to provide protection against hazard to some part of an employee's body. Example of PPE are safety glasses, respirators, hard hats, gloves etc. All PPE used at DTPW work sites must comply with applicable OSHA standards.

POWER RAIL - A rail mounted on insulators alongside the running surfaces, which provides Metromover traction power for train propulsion.

PROCEDURES - Established methods to perform a series of tasks.

RELIABILITY - The probability that the system or subsystem will perform satisfactorily for a given period of time when used under stated conditions.

REPAIR - The maintenance activity, which restores a failed item to operable state.

RISK - An expression of possible loss over a specific period of time or number of operational cycles. It may be indicated in terms of hazard severity and probability.

RISK MANAGEMENT - The Internal Services Department, Risk Management Division, Miami-Dade County, is located at 111 NW 1st Street, Suite 2340, Miami, Florida 33128; phone 305-375-4280.

RULE - A law or order authoritatively governing conduct or action.

SAFE - Secure from danger or loss.

SAFETY - A reasonable degree of freedom from those conditions that can cause injury or death to personnel; damage to or loss of equipment or property; and freedom from danger.

SAFETY CHECKLIST - A list for examining the safety aspect of equipment, procedures and personnel.

SAFETY DEVICES - Protective devices, which do not alter the fundamental nature of a hazard but which, do control the extent of the hazard in some manner.

SAFETY CRITICAL - A designation placed on a system, subsystem, element component device, or function denoting that satisfactory operation of such is mandatory to assurance of patron, personnel, equipment, or facility safety. Such a designation dictates incorporation of special safety design features.

SAFETY MANAGEMENT - An element of management that establishes safety programs requirements and ensures the planning, implementation and accomplishment of task and activities to achieve work place safety.

SAFETY PROGRAM - The combined task and activities of safety management and safety engineering that enhance operational effectiveness by satisfying the safety requirements in a timely, cost-effective manner throughout all phases of the work.

SAFETY SUBCONTRACTOR - A subcontractor who satisfies the Florida Department of Labor and Employment Security Industrial Safety and Health Program, Chapter 38F-44, and is duly approved by MDC.

SECURITY PROGRAM - A security program proactively manages risks with the overall goal of optimizing security for customers, employees, and assets. This optimization is achieved through the synergistic relationship of planning, operations, physical security, and equipment and technology. The inter-relationship of these elements allows for a means of managing risks or vulnerabilities allowing for mitigation or elimination.

SECURITY PROGRAM PLAN (SPP) - A program designed to provide guidelines to implement security procedures and describe the contractors' commitments and specific actions proposed to provide a secure project site. The Contractor's SPP shall be developed by the Contractor using the Contractor's Safety Manual as a guide. Once approved by MDC, the Contractor's SPP shall be used by the Contractor and his subcontractors to insure the safe prosecution of the work.

SERVICE CONTRACTS/CONTRACTOR - Those operations that are providing any services, or repair, replacement or maintenance functions that are indigenous to the construction process on the work site.

STATE - The State of Florida.

SUBCONTRACTOR - Any person, firm or corporation, other than the employees of the Contractor, who contracts with the Contractor to furnish labor and/or materials under this Contract. The contractor shall be responsible for ensuring that their subcontractors comply with this manual.

SUPPLIER/VENDOR - Those entities whose sole responsibility to the project is the delivery of goods or materials, exclusive of direct labor.

SYSTEM - A composite of people, procedures and equipment operating in a specific environment to accomplish a specific mission or task.

THIRD RAIL - A rail mounted on insulators alongside the running rail which provides Metrorail traction power for train propulsion.

TRANSIT SYSTEM - A transportation system comprised of fleets of motor buses and electrically propelled transit vehicles and all of their operational/support personnel and systems (e.g. maintenance facilities, tracks, structures, etc.) utilized for the mass movement of passengers within a metropolitan area.

UNUSUAL OCCURRENCE - An unforeseen event or incident which does not necessarily result in injury or property damage.

UNSAFE CONDITIONS - Any condition which if not corrected will endanger human life or property.

WARNING DEVICES - Sensors that monitor or detect conditions and provide visible and/or audible alerting signals as desired for selected events.

WORK SITE - The area enclosed by the limit of work indicated in the Contract Documents and boundaries of local streets and public easements in which the Contractor is to perform the work under the Contract. It shall also include areas obtained by the Contractor for use in connection with the Contractor, when contiguous to the limit of work.

B. CONTRACTOR'S ACCIDENT PREVENTION PROGRAM (APP) & SECURITY PROGRAM (SPP) PLANS

1) OBJECTIVES OF THE ACCIDENT PREVENTION PROGRAM

- to achieve an injury-free experience for the Project.
- to achieve maximum property conservation.
- to reduce direct and indirect costs.

Accomplishing the above objectives will provide for:

- a) A greater efficiency as a result of a safer working environment.
- b) A reduction of the construction work interruptions which develop when unsafe environments are created and when accidents occur.

2) METHODS OF ATTAINING OBJECTIVES:

Effectiveness of the Accident Prevention Program depends on the comprehensive participation and cooperation extended by all participants in support of the basic requirements listed below.

The Contractor's Authorized Safety Representative shall be informed immediately of any recognized hazards or potential hazards, related to health & safety, which may impact on the effectiveness of the Project's Accident Prevention Program that cannot be handled promptly as set forth herein, and report such to the Engineer.

The major accident prevention requirements are:

- a) Initiation and maintenance of programs, plans, training, etc. as necessary to comply with the requirements of this manual, and applicable Federal, State and Local standards.
- b) Allocating manpower, as required, for professional safety personnel assistance.
- c) Planning and coordinating all work to avoid personnel injury, property damage and loss of productive time.
- d) Establishing and maintaining a system for prompt detection, reporting, and correction or control of unsafe practices and unsafe conditions.
- e) Assuring the availability, and enforcing the use of appropriate personal protective equipment.

- f) Establishing and maintaining an effective and comprehensive system of tools and equipment inspection and maintenance including records required by applicable regulations or internal directives. The tool and equipment inspection and maintenance program shall include all employee-owned items brought onto the work site.
- g) Establishing and supporting an educational and job skill-training program designed to foster and maintain accident prevention knowledge and cooperation at all levels of employment by:
 - 1. providing for new employee's orientations.
 - 2. conducting targeted subject safety meetings.
 - 3. posting adequate safety and health requirements for all operations.
 - 4. maintaining a list of adequately trained and licensed employees authorized to operate specific equipment.
 - 5. maintaining a list of the trained and certified crane operators.
 - 6. maintain a list of employees who have been certified in accordance with Florida Department of Transportation to perform flagging operations and placement of traffic signs or devices (cones, barricades, warning signs, etc.).
 - 7. maintain a list of "Competent Person" employees who satisfy OSHA standard requirements to perform specific functions under the OSHA standards. A partial list of standards that require a competent person is included in appendix G of this CSM.
 - 8. investigating all accidents to determine causes (s) and taking prompt, reasonable and prudent necessary action to eliminate or control responsible factors.
- h) Providing visitor control and hazard protection.
- i) Providing work site security.
- j) Establishment and maintenance of a first aid and/or medical facility.
- k) Controlling the safe placement of materials or equipment received, or used, consistent with the traffic control pattern established and progression of construction on the work site
- l) Providing maintenance of traffic control plans and procedures consistent with the work to be performed in accordance with the Contract Documents.
- m) Providing work site fire prevention/protection in coordination with local authorities and applicable standards.
- n) Establishment and maintenance of an effective program in accordance with Federal, State and Local regulations for the storage, use, and disposal of hazardous substances.
- o) Conducting accident/incident investigations.

3) **MDC AND THE ENGINEER:**

a) The Engineer will:

1. Receive from the Contractor an Accident Prevention Program and Security Program Plan no later than 25 days after approval of Award Recommendation by the Board of County Commissioners and no less that 15 days before the projected date for notice to proceed of the Contract. The Contractor shall assume full responsibility for compliance with all applicable Federal, State and Local safety related regulations and for complying with this Construction Safety Manual during the performance of all work performed prior to the approval of the Contractor's Accident Prevention Program and Security Program Plan. (See definition of Accident Prevention and Security Program).
2. verify that Contractor plans and executes the work in compliance with the stated objectives of the Accident Prevention Program, Security Program Plan and applicable regulations.
3. authorize work site inspections by MDC representatives to monitor Contractor compliance with this manual.
4. require prompt remedial action to correct substandard or illegal safety and/or health conditions reported or observed by MDC representatives.
5. verify that the Contractor has adequate fire prevention/ protection equipment; contained in ready-operating status at all times.
6. verify that the Contractor has temporary lighting and power systems during the construction phase set up and utilized in such a manner as to reduce hazards to a minimum.
7. ascertain that trained first aid personnel are available and certified for their work.
8. verify that good housekeeping procedures are maintained at all times by the Contractor and subcontractors.
9. establish procedures for the reporting of all fire incidents or damages as stated herein.
10. instruct the Contractor to establish an identification program for all employees at the work site.
11. verify that the Contractor reports all accidents immediately, as required by this manual and State and Federal regulations.
12. instruct the Contractor that employee access to unauthorized or restricted areas on Metromover or Metrorail property requires that the Contractor provide prior notification to, and receive authorization from Central Control and communicate DTPW Operational Requirements as follows:

- DTPW shall have the right to stop any work or construction activities that effects the safety of the DTPW patrons and or facilities or normal DTPW operations. DTPW will exercise reasonable advance notice, except for any

matters related to immediate system concerns which will require no advance notice.

- Construction work which may have any impact on the Metrorail/Metromover Systems may be scheduled during the Non-Peak Operating Hours or Non-Passenger Hours. Non- Peak Operating Hours are defined as weekdays prior to 6:30 A.M. or after 7:00 P.M. and between 10 A.M. and 3 P.M.; and all day Saturday and Sunday. Non-Passenger hours are defined as Monday through Sunday 12:30 A.M. to 4:30 A.M. Passenger hours may change without notice.
 - Construction work that may impact weekend or special operational conditions will be limited. Schedule requirements will be addressed on a project by project basis where the individual scheduling need of the project can be evaluated with respect to the operations of the DTPW system.
 - The DTPW Roadway Protection Plan (RWP) applies to all DTPW personnel and approved contractors conducting work activities on-track or near the Metrorail right-of-way, to include the Lehman Center Metrorail Operations & Maintenance Facility Yard tracks.
 - All employees, contractors and visitors who require access on DTPW right-of-way shall be trained in Roadway Worker Protection.
13. establish procedures for timely reporting/notification to OSS for accidents and injuries.

4) CONTRACTOR: The Contractor Shall:

- a) Submit in writing to the Engineer an Accident Prevention Program and Security Program Plan for approval no later than 25 days after approval of Award Recommendation by the Board of County Commissioners and no less than 15 days before the projected date for notice to proceed of the contract. Provide the name, qualifications, and a "24 hour" phone number of the Contractor's Authorized Safety Representative who shall devote his time to the work site as defined by the definitions section of this Construction Safety Manual. No work on the work site shall begin until MDC approves the Contractor's authorized safety representative. The Contractor shall assume full responsibility for compliance with all applicable Federal, State and local safety related regulations and for complying with this Construction Safety Manual during the performance of all work performed prior to the approval of the Contractor's Accident Prevention Program. (See definition of Accident Prevention and Security Program). For furnish and install equipment contracts (non-construction), the stated approval period will commence ten (10) days prior to the beginning of work on the work site.

- b) Substantiate in writing to the Engineer that the Contractor's Authorized Safety Representative possesses at least two years of construction safety experience, is a managerial supervisory capacity, related to the work contemplated under this Contract.
- c) Maintain responsibility for project safety on the work site for his own or subcontractor's employees at any time, under any circumstances.
- d) After approval of the Contractor's Authorized Safety Representative, the Contractor, his Authorized Safety Representative and the Engineer will be required to attend a meeting with the DTPW staff. At that time, a formal presentation and discussion of the Accident Prevention Program will be conducted.
- e) Follow all of the requirements and procedures of the Accident Prevention Program.
- f) Promptly provide the Engineer with a detailed written submission of the safety and/or health hazards not consistent to his work at the work site and a detailed program to control all such hazards. Such program must be consistent with the Accident Prevention Program and conform in all respects to all legal and safety requirements, including those of OSHA and Federal, State, and Local regulations. All such programs must be approved by the Engineer prior to the commencement of this work.
- g) Require each new employee, before he starts work, to be oriented by his supervisor on the safety and health rules, procedures, and requirements established for the work task (s) to be performed and procedures to be adhered to. Tool-box safety meetings are not an acceptable substitute for new employee orientation. The name of the employee and orientation date shall be on record at the work site.
- h) Provide an overall traffic control plan for pedestrians, vehicular traffic and construction operations; and establish a general visitor control program.
- i) Set up and implement a program to protect persons and property in the event of emergencies.
- j) Complete supervisory investigation reports of all injuries.
- k) Require supervisory employees and subcontractors to attend monthly supervisor's safety meetings.
- l) Schedule weekly "tool-box" safety sessions to be held by the job foremen for all employees. A record including date, employee attendance, and subject covered shall be kept of these meetings for the duration of the Construction

Project. The Engineer shall be advised of the time and location of the scheduled meetings. (See Appendix B for suggested format). The meeting should be used to review safety and health rules and procedures, applicable Federal, State or Local standards, and to discuss any problems related to safety at the work site. This would include information as to storage, use and disposal of hazardous materials at the work site.

- m) Schedule and preside at safety meetings to be held monthly at which appropriate supervisory staff of the Contractor and subcontractors will be required to attend. The Engineer shall be advised of the time and location of the scheduled meetings.
- n) Take immediate action to correct unsafe practices and unsafe conditions.
- o) Report to the Engineer and observed conditions or violations of job safety regardless of weather they are within the observer's power or responsibility to correct.
- p) Assure that supervisory employees at all levels have a good working knowledge of applicable safety and health standards as they pertain to their areas of supervisory control and encourage all supervisory personnel and employees to improve their accident prevention awareness.
- q) Provide the establishment of first aid facilities for treatment of employees.
- r) Obtain a personal copy of the OSHA Construction Industry Standards 29CFR1926 and OSHA General Industry Standards 29CFR1910 to be available for the Contractor's reference as required by this manual. (The OSHA standards may be obtained free, or at a minimal cost, by contacting the OSHA area office, phone (954) 424-0242, in Plantation).
- s) Ensure that prior to accessing restricted areas on Metrorail or Metromover property; he has provided proper notifications to and received proper authorization from Central Control through the Engineer.
- t) Ensure that during all times that employees are at the work site, an acceptable and reliable means of communication with local emergency response personnel is available.
- u) In addition to complying with this manual, comply with all applicable safety & health governmental standards including the OSHA Construction Industry Standards 29CFR1926/1910, the Florida Right to Know Law, the Federal Hazard Communication Act, Florida Worker's Compensation Laws, etc. Maintain the necessary documentation, program, and/or training required by such standards.

- v) Ensure all of his subcontractors, and subcontractor's employees, comply with the requirements of this Manual and applicable Federal, State and Local regulations.
- w) Comply with the current edition of the Florida Building codes unless specifically exempt, in writing by the Engineer.

5) **EMERGENCIES**

For the purposes of the Accident Prevention Program, emergencies are classified as follows:

- a) A fire, or major hazardous material leak or spill, requiring the response of the local fire or environmental protection department.
- b) Unplanned collapse of equipment used in the course of construction.
- c) Unplanned collapse of a substantial part of any structure at the work site.
- d) Any serious accident involving an employee.
- e) Any serious accident involving a member of the public.
- f) Any other occurrence which would require immediate protection of life or property.

6) **HOW TO REPORT AN ACCIDENT TO THE DTPW ENGINEER:**

- a) The Contractor and all other participants in the Program shall instruct their employees and all other concerned personnel in how to report an accident which must include, at a minimum, the following procedures:
 1. Report the matter immediately to the supervisor who shall arrange for first aid or other required emergency medical treatment.
 2. In the event of serious injury or a death, in the absence of emergency first aid facilities on the work site, the supervisor of the injured employee is to arrange for necessary treatment. There shall be full compliance with all requirements of the Contractor's insurance carrier(s) with regard to accident reporting.
 3. The emergency phone number is: **911**

4. Within eight (8) hours after the death of any employee as a result of a work-related incident and/or within twenty-four (24) hours after the in-patient hospitalization of one or more employees or an employee's amputation or an employee's loss of an eye, as a result of a work-related incident, the Contractor's Authorized Safety Representative shall, shall notify:
 - a. Office of the Area OSHA Director (954) 424-0242.
 - b. The project Engineer.
5. The employer of any injured employee shall be required to complete the Notice of Injury Form, as required by State of Florida Worker's Compensation Division. (See appendix A).
6. The employer of any injured employee shall be required to record all work related injuries as required by OSHA 29CFR1904.
7. The supervisor of the injured employee shall be responsible to immediately report the injury to the Engineer, to fill out the Supervisor's Report of Accident (Appendix A), and make it and the notice of Injury report available to the Engineer.
8. All participants in this Accident Prevention Program shall cooperate fully in the investigation of any accident and/or occurrence.
 - b) The contractors and other participants in the Accident Prevention Program shall instruct employees and all other concerned personnel of the following procedures if there is loss or damage to property of others, including damage to equipment or tools being used at the work site.
 1. Promptly report the loss or damage to the office of the Contractor's Authorized Safety Representative.
 2. In the event of a substantial loss or damage to the property of others, the Contractor is to immediately notify the Contractor's Authorized Safety Representative and the Engineer.
 3. There shall be full compliance with all requirements of the Contractor's insurance carrier (s) with regard to property loss and damages.

DTPW SECURITY REQUIREMENTS

All Contractors are required to submit for review and approval a Security Program Plan (SPP), as defined in this Manual. This SPP shall provide guidelines to implement security procedures and describe the contractors' commitments and specific actions proposed to provide a secure project site. The Security Program Plan shall include, at a minimum:

- Procedures for inspecting/controlling perimeter security.
- Procedures for restricting who may visit the project site.
- Procedure for performing internal background checks.
- Procedure for overseeing security with respect to deliveries and other short-term visitors.
- Acknowledgement that the contractor and its sub-contractors will following Transit Administration Policy (TAP) POL-SS-015 Contractor/Subcontractor Issuance of Identification Badge Policy in this Manual.
- Procedure for ensuring contractor and its sub-contractors are following TAP POL-SS-015.
- Procedure for conducting periodic security meetings. These meetings shall discuss/include, at minimum, threats or vulnerabilities identified by the contractor, sub-contractor, and/or any of its respective personnel. These threats or vulnerabilities shall be documented as deficiencies and a plan of corrective action will be prepared and tracked until the deficiency is eliminated or satisfactorily mitigated.
- Procedures for monitoring world-wide security threats and national security warnings and alerts.
- Emergency security procedures.
- Procedures for preparing, issuing, and reporting security incidents.

The following is an excerpt from TAP POL SS-015. TAPs are reviewed and revised, if necessary, on an annual basis and it is the responsibility of the contractor to follow all requirements as listed in the latest TAP related to the respective functions.

7.0 Requirements

- 7.1 DTPW facilities, which are considered critical infrastructure and essential to security and public safety includes, but are not limited to, Metrorail and Metromover stations, anywhere above or beneath the guideway and the thirty feet extension in either direction immediately adjacent to the Metrorail or Metromover superstructure, anywhere within a DTPW Park & Ride lot or garage, bus terminals, DTPW maintenance facilities, and storage yards. To obtain a new or renewed DTPW Contractor/Subcontractor Photo ID card, the following process must be followed:
 - 7.1.1 The DTPW Project Manager shall submit an e-mail to the DTPW Human Resources Recruitment Section advising that they have a contractor/subcontractor requiring a DTPW Contractor/Subcontractor Photo ID.

7.1.2 The DTPW Human Resources Recruitment Section will require the following information in the e-mailed request:

- Name of the Contractor/Subcontractor/Company.
- Name of the Company's/Contractor's/Subcontractor's **EMPLOYEE** requiring the DTPW Contractor/Subcontractor Photo ID.
- Title/name of the DTPW project the Company/Contractor/Subcontractor employee will be performing services on/for; and
- The name(s) of the DTPW Project Manager(s) with whom the DTPW Human Resources Recruitment section and the Office of Safety and Security personnel should communicate regarding the DTPW Contractor/subcontractor Photo ID and status.

7.1.3 In addition to the information in section 7.1.1 the electronic mail request must also include the following Chart of Account information:

Chart of Account Information
Name of Contractor Employee:
Company/Contractor/Vendor Name:
Fund: ET001
Department: TP19010000
Account: 5330160000
Grant: <i>if applicable</i>
Project: <i>if applicable</i>
Activity: <i>if applicable</i>

7.1.4 The DTPW Office of Safety and Security Section will provide an available appointment schedule. The appointment is to schedule the contractor's/subcontractor's employee, for whom the DTPW contractor/subcontractor Photo ID has been requested, for finger printing and background check.

7.1.5 The Office of Safety and Security will provide an appointment and copy the DTPW Human Resources Recruitment section.

7.1.6 The DTPW Office of Safety and Security **should not** contact the contractor/subcontractor. It is the Project Manager's responsibility to communicate this information either to the contract company or directly to the contractor's/subcontractor's personnel, as appropriate.

7.1.7 The contractor/subcontractor is expected to show up at the appointment date and time provided due to the limited amount of availability. The contractor's/subcontractor's employee will visit the DTPW Office of Safety and Security on the appointed date and time to be processed for fingerprinting and background check.

7.1.8 Once the DTPW Human Resources Recruitment section receives the results of the background/fingerprint check from the Florida Department of Law Enforcement, they will notify the DTPW Office of Safety and Security, who will send a representative to pick up the actual results for review.

- 7.1.9 The DTPW Office of Safety and Security will review the results of the background check performed and decide as to the contractor's/subcontractor's employee eligibility to receive a DTPW Contractor/Subcontractor Photo ID. The DTPW Office of Safety and Security will have sole discretion on approving or denying the request for a DTPW Contractor/Subcontractor Photo ID based on the results of the background check.
- 7.1.10 After review and determination, the DTPW Office of Safety and Security will contact the DTPW Project Manager and advise of the results (approval or denial). If approved, the Office of Safety & Security will contact the DTPW Project manager to schedule the contractor's/subcontractor's employee for an appointment to issue the DTPW Contractor/Subcontractor Photo ID.
- 7.1.11 If the review results in a denial of the issuance of a DTPW Contractor/Subcontractor Photo ID, the DTPW Project Manager will also be notified of this denial and the reasons for it.

Requests for a DTPW **Contractor/Subcontractor** Photo ID may be denied for the following reasons:

- Any forcible felony (or any felony conviction within the previous ten (10) years), sexual, or domestic violence conviction
- Been discharged from the military under any conditions other than honorable.
- Any history of irresponsible behavior including but not limited to an unreasonable driving record, or a problem employment record as determined by the county contract administrator or designee.
- Any criminal activity listed in 49 US Code of Federal Regulations (CFR) section 1542.209, Disqualifying Criminal Offenses and 19 CFR 122.183, Denial of Access.

8.0 Display of ID card

- 8.0.1 All contractor's and subcontractor's personnel **must always** display their DTPW Contractor/Subcontractor Photo ID prior to entry, and at all times, while on DTPW property.
- 8.0.2 Contractor's and subcontractor's personnel are subject to identification checks by any authorized DTPW agent at any time while on DTPW property. **THE CONTRACTOR'S/SUBCONTRACTOR'S EMPLOYEE SHALL COMPLY WHEN ASKED TO IDENTIFY THEMSELVES.**
- 8.0.3 Any personnel not in possession of their ID card will be denied access to DTPW property, or if already on property, will immediately be escorted off DTPW property until such time as he/she can display proper DTPW Contractor/Subcontractor Photo ID.
- 8.0.4 DTPW Contractor/Subcontractor Photo ID may be confiscated at any time by DTPW contracted security, the DTPW supervising project manager, or the Office of Safety and Security personnel.

- 8.0.5 The DTPW Contractor/Subcontractor Photo ID may not be utilized for free transit except in the performance of the duties under which the Contractor/Subcontractor has been retained.
- 8.0.6 The DTPW Contractor/Subcontractor Photo ID is the property of DTPW and shall be returned to the DTPW Project Manager or the DTPW Office of Safety and Security upon completion of the assignment for which the credential was originally issued.

9.0 Limit of Duration of Contractor/Subcontractor Photo ID card

- 9.0.1 The DTPW Project Manager shall submit the contract name, contract number, and anticipate end of the contract for which the contractor employee is being provided the Contractor/Subcontractor ID.
- 9.0.2 DTPW Contractor/Subcontractor Photo ID Cards shall be valid for the term of the contract for which the contractor employee is receiving the Contractor/Subcontractor ID. This date will be printed on the Contractor/Subcontractor ID.
- 9.0.3 If the contract exceeds the original end-date provided by the DTPW Project Manager, the DTPW Project Manager must submit another electronic mail to the DTPW Office of Safety & Security, Inventory Control Specialist, with the new, anticipated contract end date. This action will result in the Contractor/Subcontractor being processed for a new Contractor/Subcontractor photo ID card, meaning that the Contractor/Subcontractor employee must repeat the process of fingerprinting and background check. This will require the DTPW Project Manager to schedule appointments with the Contractor/Subcontractor for fingerprinting.
- 9.0.4 Any contractor or subcontractor who fails to comply with Section 9.0.3, above, will be strictly prohibited from entering any DTPW property until such time as a new Contractor/Subcontractor Photo ID card has been issued to him/her.

10.0 Distribution and Implementation

- 10.1 Hard copy original of this policy will be stored in the DTPW Safety & Security files and a PDF copy shall be posted on the DTPW Employee Hub/TransitNet website.

A. DTPW Contractor Access to DTPW Facilities

1. Contractor's must be in possession of a photo identification card issued by DTPW noting them as CONTRACTOR's (*refer to TAP POL-SS-015 Contractor/Subcontractor Issuance of Identification Badge Policy as referenced in this Manual*).
2. Contractor's requiring access to critical areas **MUST BE ACCOMPANIED BY A DTPW EMPLOYEE (escort) WITH AUTHORIZED ACCESS TO THAT AREA AT ALL TIMES. AT NO TIME MAY A CONTRACTOR BE LEFT UNSUPERVISED IN ANY CRITICAL OR SENSITIVE AREA.**

These areas include, but are not limited to, bus and mover central control, bus dispatch, William Lehman Yard Tower, traction power substations, switchgear rooms, train control rooms, electrical rooms, telephone rooms, computer server rooms, video monitoring areas, and communications rooms.

3. All DTPW employees who are involved in any way with contractor employees are to ensure that these security requirements are provided to those employees. DTPW project managers and/or employees are to also assist contractors in meeting those requirements.

B. Termination of Contractor Services:

1. Contractor employees are to retain their Contractor Photo Identification Card until such time as the services or project for which the Card was issued is completed or the contract is completed, suspended or terminated. This anticipated date will be printed on the Contractor Photo Identification Card. Upon completion of the project or contract, all photo identification cards issued to contractor personnel shall be returned to DTPW. The DTPW project manager/staff person assigned to escort the contractor, or responsible for the management of the project, shall assume responsibility for collecting these cards and returning them to the DTPW Office of Safety and Security. The Contractor Photo Identification Card may also be returned to the DTPW, Office of Safety and Security.

C. Security of DTPW Credentials Issued to Contractor Personnel:

Loss or theft of a DTPW Contractor Photo Identification Card shall be reported immediately as indicated below.

1. Report Procedures:

- a. The contractor employees will notify the DTPW project manager/supervisor/liaison that the identification card has been lost. The DTPW project manager/supervisor/liaison shall request a police case number if appropriate.
- b. The DTPW Supervisor shall forward a memorandum through the chain of command to the Personnel Department, no greater than 24 hours after the initial report of loss, reflecting the following:
 1. Contractor/Firm Name, employees name and assignment.
 2. Circumstances of the loss or theft.
 3. Police Case Number, if applicable; and
 4. DTPW supervisor's approval of issuance of a duplicate identification card. A Non-Refundable replacement shall apply.
 5. The contractor employee will have to comply with all of the requirements outlined in *TAP POL-SS-015 Contractor/Subcontractor Issuance of Identification Badge Policy*

VISITOR IDENTIFICATION

A. Definition:

Visitors are defined as:

- Persons who do not possess the appropriate credentials to identify themselves as employees, agents, or contractors of DTPW (i.e., Employee Photo Identification Card).

B. Registration:

1. Visitors at any DTPW facility will be required to register at the security desk and obtain a visitor's pass. The pass will be displayed conspicuously on their outermost clothing, at the upper chest area while in the facility.
2. DTPW Employees shall not allow any unauthorized persons to enter any DTPW facility, including yard gates, buildings, or other secure entrances. As necessary, DTPW employees may direct visitors to the security desk or, as necessary, request intervention by security personnel. A DTPW employee entering an area is to ensure that each secured door is closed behind them and that no one else enters.

C. Logbook and DTPW Visitor's Log:

1. Desk/Entrance personnel will maintain the DTPW Visitor's Log and Post Logbook. Visitors will not be permitted to make entries.
2. Before issuing a pass, desk personnel will record the following information: visitor's name, driver's license number, purpose of visit, name of DTPW escort, arrival time and the date of visit on the Miami-Dade Transit Visitor's Log. The security officer shall then initial the entry.
3. The security officer shall then exchange a Visitor's Badge for any acceptable form of identification. (acceptable forms of identification are outlined in Section E. **Acceptable Forms of Identification** below).
4. Upon return of the pass, desk personnel will return the visitor's identification and record the visitor's departure time on the DTPW Visitor's Log and the Post Logbook.

D. Acceptable Forms of Identification:

All visitors are required to present one of the acceptable identifications as noted below. **NO OTHER FORMS OF IDENTIFICATION ARE ACCEPTABLE:**

- Driver license ("International Driver's Licenses" **ARE NOT** valid forms of identification);
- Federal, state, or local GOVERNMENT issued photo identification cards; or
- Any form of official government photographic identification; or United States issued passport.

Any one of these forms of identification is acceptable and will be retained by the security officer until the return of the visitor's pass.

NOTE: PRIVATE AND/OR CORPORATE IDENTIFICATION BADGES SHALL NOT SUBSTITUTE AS ACCEPTABLE FORMS OF IDENTIFICATION.

E. Group Tour Identification:

1. **Group Tours must be pre-approved by the DTPW, Office of Safety and Security.** The individual in charge of a group tour shall furnish required information, identification, and a roster of the group by name. The roster will be stapled to the DTPW Visitor's Log and the Post Log-Book as a permanent attachment. The name of the individual in charge of the group, the name of the escort, and any relevant information, will be entered in the logbook.
2. Visitor's Badges for each member of the tour will be issued to the individual in charge with verbal instructions that all members of the group must remain together while at the DTPW facility. The security officer will verify the number of people in the group before issuing a pass and again upon return of the passes.
3. The DTPW liaison assigned to the group is responsible for ensuring that all guests on DTPW property remain together. The liaison must also ensure that all group parties are accounted for at the end of any tour/visit.
4. Because only a limited supply of Visitor's Badges are maintained at DTPW facilities, DTPW divisions anticipating extraordinarily large groups should notify the DTPW Office of Safety and Security at least 7-business days PRIOR to the visit to ensure that there is a sufficient number of Visitor Identification badges available.

F. Parcel Inspections:

The security officer is authorized to inspect and retain any parcel that visitors may have in their possession. If the visitor or employee refuses to permit inspection, a pass will not be issued nor shall access be granted. A representative of the office, which the visitor desires to visit, will be required to meet the visitor at the entrance and provide the security officer with required information. The security officer will decide to allow entrance or contact his supervisor for resolution.

G. Access To DTPW Facilities - GENERAL:

1. Visitors, with proper identification, who request entry to any DTPW Facility/building between the hours of 5:00 p.m. and 8:00 a.m. must wait at the security desk until the office to be visited can provide an escort.
2. The following procedures apply to visitors in need of access to two or more floors to perform maintenance, repairs, and other activities:
 - a. During normal business hours, contracted security staff will verify a

- visitor's request for a pass by contacting the DTPW employee the visitor is requesting to see.
- b. After normal business hours, pre-planned activity requires notification of the DTPW Office of Safety and Security to coordinate the activities/visit with the contracted security staff. If the after-hours visitor requires access to sensitive/access-controlled areas and no such unit personnel are available; access may be denied the visitor.
 - c. All maintenance, service, and repair activities will be coordinated through the requesting division or their designee. All service, repair, work order, or delivery receipts will be signed and retained by the requesting division or their designee.
3. **Emergency service personnel, i.e., law enforcement, fire and/or medical personnel responding to emergencies SHALL NOT require any form of pass or Visitor's Badge. The requesting party shall notify the duty officer and have a representative stand-by to escort responding units.**
4. At termination of each shift, the security officer will account for all passes and submit a summary (by floor/location/office/etc.) of outstanding passes to the new, incoming security officer.
5. When a pass is outstanding for more than eight hours, the security officer will attempt to locate the visitor to whom the pass was issued.
- The security officer will contact his/her supervisor to advise that a VISITOR's PASS is unaccounted for.
 - The security officer will then conduct a physical search of the complex for the visitor.
- a. If the visitor cannot be located, the security officer will submit complete details to their shift supervisor and the DTPW Office of Safety and Security for investigation. Any identification left by the visitor will be handled as FOUND PROPERTY and delivered to the DTPW Office of Safety and Security as soon as practicable.
 - b. A representative of the DTPW Office of Safety and Security will attempt to locate the visitor, recover the visitor's pass, and investigate circumstances of the incident.
6. Any employee who observes an individual in a facility without an appropriate visitor pass or DTPW Employee Photographic Identification Card, will be responsible for assisting and/or escorting the individual to the security desk **OR** contacting the facility security officer for intervention.
7. When a visitor is observed in an area not authorized by his/her pass, the observing employee will escort the visitor to the authorized destination or to the security officer **OR** contact the facility security officer for intervention.

H. Package and Equipment Deliveries:

1. All deliveries to DTPW facilities should be addressed to a specific division or individual within the department and must be logged in at the security control point for each facility.
2. Prior to allowing entrance of any deliverable item, the addressee of the item will be contacted to ascertain if the respective recipient is expecting the delivery and will accept delivery. Individuals who arrive at an DTPW facility with deliverable items that are not accepted by a specific individual, or a representative of their requested receiver, will be denied entry.
3. Should bulk items require maneuvering by the delivery personnel, that individual shall be escorted at all times while on DTPW property. The DTPW escort shall then ensure the delivery person has left DTPW property and not left any unauthorized items behind.
4. Personal items such as food deliveries and/or any other personal deliverable items must be met at the security control point by the addressee. **FOOD DELIVERIES ARE NOT ALLOWED ON DTPW PROPERTY.** The intended recipient must coordinate and meet any food delivery person at the general entrance to the facility.
5. **DTPW and/or its contracted security personnel reserves the right to inspect any vehicle entering or exiting any DTPW facility.**

I. Food Deliveries:

1. Any visitor who comes to our facilities for food delivery, or any other personal type delivery, shall be met at the facility entrance by the employee who ordered the delivery. The delivery person shall NOT be allowed into the facility under any circumstances.

J. Remote Button/Access Control:

In instances where remote entry buttons are used at secure facilities, the entry button is NOT be utilized **unless** there is direct observation of the person entering. Direct observation includes **direct visual observation** or observation of closed-circuit television monitors only.

C. GENERAL SAFETY AND HEALTH PROVISIONS

- 1) The Contractor shall ensure employees do not work under conditions, which are unsanitary, hazardous, or dangerous to their health or safety.
- 2) The Contractor shall initiate and maintain such programs as may be necessary to comply with this manual, and all applicable government regulations.
- 3) Such programs shall provide for the frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by the Contractors; and shall include a program for the performance of work, to promote its orderly and expeditious progress and ensure its safe completion within the prescribed time.
- 4) The use of any machinery, tool, material or equipment not in good working order, or which has had a safety feature removed or tampered with, is prohibited. Such machine, tool, material or equipment shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from the work site.
- 5) The Contractors shall permit only those employees qualified by training or experience to operate equipment and machinery. Applicable laws requiring employee to have a current license or certification (i.e., Class A Commercial Drivers License, etc.) to operate equipment are to be complied with.
- 6) The Contractor shall be solely responsible for the performance of the work in a manner, which will not create safety hazards, objectionable noise or other nuisance to the public.
- 7) Employees of the Contractor or subcontractors who are found to be intoxicated or appear to be under the influence of alcohol or drugs (other than as prescribed by a doctor) while on the work site shall be removed from the work site by the Contractor for the duration of the Contract. Employees who are found to be in possession of alcohol or drugs (other than as prescribed by a doctor) at the work site shall be removed from the work site by the Contractor for the duration of the Contract. An employee who is under a doctor's care and taking prescription drugs should inform his supervisor of same to determine if restrictions should be imposed.
- 8) Prior to the start of, and during the course of, any work, above or below ground level, the Contractor shall make a through survey of the entire work site to determine the type and locations of all utilities or other lines on the work site. The Contractors must verify this information by notifying the Underground Utilities Notification Center at 1-800-432-4770, other utilities not members of the Underground Utilities Notification Center, and notify the

Engineer.

- 9) The Contractor shall instruct employees as to any precautions and procedures to be followed while working in the proximity of any utility or power line.
- 10) The Contractor shall develop and have readily available at the work site an emergency plan with the locations of any utility or line shut-offs or disconnects so that if any emergency arises, immediate action may be taken.
- 11) The Contractor will be required to identify and provide a notification procedure for all contingencies where cutting off a utility could adversely affect any operation or render inoperative any protective apparatus in the surrounding area.
- 12) All structural repairs, alterations or reconstruction of any equipment used on the work site shall be certified in accordance with all applicable laws and regulations.
- 13) Portable toilets shall be chemical type or equal and shall be located convenient to work crews and maintained in proper sanitary conditions at all times.
- 14) Construction operations will normally be confined to those hours between dawn and dusk. Any work done other than during daylight hours must be approved by the Engineer. In requesting approval during other than daylight hours, the Contractor must present a written statement outlining the special precautions to be taken to control the extraordinary hazards presented by night work. This program shall include, but not limited to such items as supplementary lighting of work areas, illuminated barricades, proper supervision, availability of medical facilities, and security precautions.
- 15) Emergency lighting facilities, (i.e. battery operated or equivalent) shall be required in all construction areas where normal light failures would cause employees to be subjected to hazardous conditions. Such systems shall be maintained monthly.
- 16) Employees required to enter into confined or enclosed spaces shall be instructed as to the nature of the hazards involved, the precautions to take, and the use of protective and emergency equipment. The Contractor shall comply with all regulations applicable for working in dangerous or potentially dangerous areas.
- 17) The use of torpedo or salamander type heaters are prohibited.
- 18) No open burning of any kind shall be permitted without permits from appropriate local authorities and the Engineer.
- 19) Flammable storage cabinets shall be labeled in conspicuous lettering "Flammable - Keep Fire Away" and "No Smoking".

D. MEDICAL SERVICES AND FIRST AID

- 1) At least one person who has valid certificates in first-aid training from either the U.S. Bureau of Mines, the American Red Cross, or equivalent training that can be verified by documentary evidence, shall be available at the work site to render first-aid. Further, a minimum ratio of one such qualified person to 50 employees shall be maintained throughout the course of the construction. A suitable emblem shall be affixed to the qualified person's hard hat, or other suitable means of identification shall be used.
- 2) First-aid supplies, approved by a physician licensed to practice in the State of Florida, shall be accessible for immediate use. One 16-unit first-aid kit (or equivalent) shall be provided for each 50 persons or fraction thereof.
- 3) First-aid kit (s) shall be provided in a weatherproof container with individual sealed packages for each type item. The kits shall be checked by the Contractor before being sent out on each job and at least weekly on each job to ensure that the expended items are replaced.
- 4) A telephone shall be made available at the site before construction begins. Telephone numbers and locations of emergency facilities including emergency hospitals, physicians, ambulance service, police and fire department, as well as the complete street address of the work site, shall be posted in conspicuous locations at the work site, and at all telephone locations. The communication system for contacting necessary ambulance service or other emergency response personnel shall be operable at all times personnel are on the work site.
- 5) The location and number of approved stretchers provided for each contract shall be submitted to MDC for approval immediately after work commences on site. They will be maintained, properly protected and easily accessible at all times.
- 6) The Contractors, his supervisors and foreman, shall assure that any of his employees who suffers a job-related injury shall receive first aid and medical attention consistent with and as required by law.
- 7) The Contractor's first aid facility shall maintain a daily log of all injuries, both first aid and doctor cases. The log shall contain information to reflect the date, name of employee, employer, craft, supervisor, type of injury, how accident happened, time, disposition of patient and name of attendant.
- 8) The Contractor shall ensure that all OSHA and State of Florida record-keeping and reporting requirements are met.

E. DRINKING WATER

- 1) An adequate supply of potable water shall be provided in all places of employment.
- 2) Portable water containers shall be capable of being tightly closed and be equipped with a tap.
- 3) A common drinking cup is prohibited. Disposable cups shall be furnished.
- 4) Unused disposable cups shall be kept in a sanitary container, and a receptacle shall be provided for used cups.
- 5) All containers utilized for potable water shall be labeled as "Potable/Drinking Water Only".

F. PERSONAL PROTECTIVE AND LIFE SAVING EQUIPMENT

1) **GENERAL**

- a) The Contractor is responsible for requiring and enforcing the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions.
- b) The Contractors is to comply with all OSHA regulations (29CFR1926 Subpart E) regarding personal protection devices and life saving equipment.
- c) All persons on the Work Site shall utilize the proper foot protection which meets ANSI 241 (toe), 241.2 (metatarsal) and 241.4 (electrical) standards.
- d) All persons on the Work Site shall utilize hand and body protection which meets ANSI/ISEA 105 and ASTM F23 standards.

2) **HEAD PROTECTION**

- a) All persons on the Work Site shall be protected by NON-METALLIC protective helmets, which meet ANSI 289.2 standards. Helmets for the protection of employees against impact and penetration of falling and flying objects shall meet the specifications contained in ANSI 289.1 Safety Requirements for Industrial Head Protection. Bump caps are not acceptable.
- b) All Work Sites shall have posted approved signs alerting all persons that hard hats are required on the site. The use of hard hats at the Work Site will be strictly enforced.

3) **RESPIRATORY PROTECTION**

- a) Whenever feasible administrative and/or engineering controls fail or are inadequate to prevent harmful exposures to employees; the Contractor shall provide and require the use of appropriate respiratory protective devices in accordance with OSHA, 29 CFR 1910.134.
- b) Respiratory protective devices must be approved by the U.S. Bureau of Mines or acceptable to the U.S. Department of Labor for the specific contaminant to which the employee is exposed.
- c) Employers must have a written respiratory protection program as defined in 29 CFR 1910.134.
- d) Employees required to use respiratory protective equipment must be trained in the use and limitations of such equipment, fit tested annually and medically approved to wear respiratory protection as required by 29 CFR 1910.134.
- e) Respiratory protective equipment shall be inspected regularly and maintained in good condition. Defective or worn parts shall be replaced.

4) **HEARING PROTECTION**

- a) Feasible engineering or administrative controls shall be utilized to protect employees against sound levels in excess of those shown in the table below.
- b) When engineering or administrative controls fail to reduce sound levels within the limits of the Table below, protective hearing devices in accordance with OSHA (29CFR1926.101) shall be provided and used.
- c) Exposure to impulsive or impact noise should not exceed 140-db peak sound pressure level.
- d) In all cases, where the sound levels exceed the values shown in the Table below, a continuing, effective hearing conservation program shall be administered.
- e) PERMISSIBLE NOISE EXPOSURE TABLE (Source: OSHA, 29CFR1926.52)

<u>Duration per day, hours</u>	<u>Sound level dBA slow response</u>
8	90
6	92
4	95
3	97
2	100
1 -1/2	102

Duration <u>per day</u> , hours	Sound level dBA slow <u>response</u>
1	105
1 / 2	110
1 / 4 or less	115

- f) Plain cotton is not an acceptable protective device. Hearing protection shall be used only when it meets OSHA requirements and is suitable to correct the exposure.

1. EYE AND FACE PROTECTION

- a) Eye and face protection shall be provided and worn when machines or operations present potential eye or face injury.
- b) Eye and face protective equipment shall meet the requirements of ANSI Z87.1 - 2003, "Occupational and Educational Eye and Face Protection".
- c) Employees involved in welding operations shall be furnished with a welding helmet with minimum grade 10 shade filter lens for shielded arc welding or cutting. Welding goggles with a minimum grade 4 shade filter lens may be worn only for oxyacetylene gas welding or burning.
- d) Employees exposed to laser beams must be furnished suitable laser safety goggles. which will protect for the specific wavelength of the laser and be of optical density (0.0) adequate for the energy involved.

2. SAFETY NETS

- a) Safety nets shall be provided when workplace are over roads, guideways, or more than 25 feet above other surfaces where the use of ladders, scaffold catch platforms, temporary floors, safety lines, or safety belts is impractical. Safety net systems shall conform to OSHA 29 CFR 1926 502.
- b) Where nets are required, operations shall not be undertaken until the net is in place and has been tested & inspected by the Resident Engineer.

3. SAFETY BELTS, LIFELINES AND OTHER PERSONAL FALL ARREST SYSTEMS

- a) Approved personal fall arrest systems (in accordance with OSHA; 29 CFR 1926.104 and 29 CFR 1926.502) shall be worn by those employees whose

work exposes them to falling from the perimeter of a structure or through shaftways and openings. Protection must also be provided for employees who are exposed to the hazard of falling into/onto dangerous equipment,

- b) Employers must provide a training program for employees who might be exposed to fall hazards. The training shall include how to recognize such hazards and how the employees can minimize their exposure to such hazards. The training shall, at a minimum, comply with 29 CFR 1926.503. Re-training or refresher training must also be provided when necessary. Records of such training must be available for inspection by DTPW.

4. WORKING OVER OR NEAR WATER

- a) Employees shall be provided with a U.S Coast Guard approved life jacket or buoyant work vest.
- b) Prior to and after each use, the buoyant work vest or life jacket shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used and be removed from the job site.
- c) Ring buoys with at least 90 feet of line shall be provided and available for emergency rescue operations. Distance between ring buoys shall not exceed 200 feet.
- d) At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.

G. SIGNS, SIGNALS, BARRICADES AND TRAFFIC CONTROL

- 1) All traffic signs or devices used for protection of construction workmen or the public shall conform to the State of Florida Department of Transportation's "Roadway and Traffic Design Standards" and applicable permit(s) conditions. All work areas on or around highways, roads and streets shall follow approved maintenance of traffic plans.
- 2) Barricades, cones and/or similar protective devices shall be used whenever men or equipment are exposed to traffic or similar hazards.
- 3) When traffic lanes are closed due to work activity, advance warning signals and high level warning devices shall be used as described in the State of Florida Department of Transportation's "Roadway and Traffic Design Standards" and applicable permit(s) conditions. All work areas on or around highways, roads and streets shall follow approved maintenance of traffic plans.

- 4) Flagmen and signalmen will be properly trained, certified, wear high-visibility clothing (as required by FDOT FTDS600) and use appropriate procedures following the current FDOT manual. Where flaggers are used, a flagger symbol or legend sign must also be used.
- 5) All employees within 15 feet of the edge of the travelway and/or where employees are exposed to roadway traffic shall be required to wear a high visibility vest vest/garment, per FDOT manual.
- 6) Whenever and wherever possible and necessary, line voltage (12 volt) protected lights shall be used to mark fences and barricades and other such encroachments onto public streets or sidewalks. Warning lights shall be in accordance with FDOT RTDS 600.
- 7) Where covered sidewalks are required they shall be provided with permanent lights to provide sufficient illumination for safe use by the public day or night. All bulbs shall be cage-protected.
- 8) Public walkways shall be kept clean and free of hazards at all times. When an existing pedestrian way or bicycle way is located within a traffic control work zone, accommodations must be maintained and include provisions for the disabled. Only approved temporary traffic control devices may be used to delineate a temporary traffic control zone for pedestrian and bicycle ways. Advanced notification of sidewalk closures and detours shall be provided by appropriate signs.
- 9) Where the Contractor is required to provide public walkway, they shall have abrasive, non-slip surface.
- 10) Where access to bus stop is disturbed or obstructed by the Contractors operations, safe access will be maintained or the bus stop relocated as directed by the Engineer. Coordination for maintaining or relocating bus stops with the appropriate agencies is the sole responsibility of the Contractors.
- 11) When steel plates or similar covers are used on public ways to cover excavations they shall be substantially secured to prevent movement imposed by traffic. Covers shall have non-slip surface, conforming to OSHA Specifications.
- 12) When such covers are located where there is pedestrian exposure, they shall be tapered at all sides with cut-back cold mix or similar material to eliminate tripping hazards. Covers shall have non-slip surface.
- 13) Free access shall be maintained to every fire extinguisher, fire hydrant, fire alarm box, fire escape and standpipe connection, street and traffic light control box. When required, hydrants shall be extended by suitable tube or piping to an

accessible point as approved by the Engineer. No obstructions shall be allowed at any time within 15 feet of a fire hydrant. Where materials are placed in the vicinity of a fire hydrant or a fire alarm box or fire extinguisher, and to such a height as to prevent the same from being readily seen, the position of such hydrant or fire alarm box or fire extinguisher shall be indicated by suitable signals, both day and night.

- 14) The Contractor shall erect and maintain fences and barricades to enclose the Contractor's work area, and provide watchmen where required to prevent unauthorized access.
- 15) No work shall be allowed above or below an active traffic lane. Contractor shall establish a work zone including appropriate lane closures following FDOT RTDS 600 series.

H. MATERIAL HANDLING- (STORAGE, USE AND DISPOSAL)

- 1) All materials stored in tiers shall be secured to prevent sliding, falling or collapse.
- 2) Reinforcing steel shall not be used as a lifting ("Pick") point on any load nor as a guy line anchor.
- 3) Hooks, except special sliding choker hooks shall be securely moused when in use, or shall be provided with a functioning safety latch.
- 4) Scrap material of any kind, type or nature shall be placed daily into appropriate containers specifically supplied for this purpose. Containers shall be removed from the Work Site when full.
- 5) Loose material on open decks or other exposed locations shall be removed or secured at the end of each day to eliminate dislodgment by wind or other causes.
- 6) Compatibility of stored materials and storage methods will comply with all applicable OSHA, Fire Department and environmental agency standards.
- 7) Employees required to handle, use or dispose of hazardous materials shall be instructed regarding the safe handling, proper procedures, potential hazards, personal hygiene, and personal protective equipment required.
- 8) Disposal of materials shall be in accordance with all applicable Federal, State and Local regulations. All applicable recordkeeping and reporting requirements will be met by the Contractors.

I. **TOOLS - HAND AND POWER**

1) General

- a) Keep the work area clear of clutter
- b) Keep the work area well lighted
- c) Maintain and keep tools sharpened, oiled and stored in a safe place
- d) Supervisors instruct employees on using equipment and safe work practices before using equipment
- e) Inspect tools, cords and accessories prior to use
- f) Repair or replace problem equipment immediately
- g) Use 3-prong electrical plugs, double insulated tools and safety switches
- h) Machine guards must be in place and not removed
- i) Do not wear loose clothing or jewelry when operating equipment
- j) Install and repair equipment only if you are qualified to do so
- k) Use the right tool for the job (i.e. do not use a pipe wrench as a hammer)
- l) Carry a sharp tool pointed downward or place it in a tool belt/box
- m) Protect sharp blades with a shield/sheath
- n) Store tools in draws or chests with cutting edge down
- o) Proper personal protective equipment shall be worn
- p) All power hand tools shall be equipped with a "dead man" control where the power is shut down when the operator releases the tool
- q) Never leave a running tool unattended
- r) Tools of a non-sparking material and/or intrinsically safe tools must be used if fire or explosion hazards exist
- s) All fuel operated tools shall be sloped and allowed to cool prior to being refueled, serviced, or maintained and proper ventilating used when used in enclosed spaces
- t) Power grinding machines shall have proper grounding. Work rests must be kept at a distance not to exceed 1/8" from the wheel surface
- u) Avoid repetitive motion, hold tools in a neutral position

2) "Lock on" buttons on all hand held power drills are prohibited.

3) Powder Actuated Tools

- a) High velocity tools are prohibited. Only low velocity piston drive tools are permitted.
- b) Only employees who have been trained in the operation of the particular tool in use shall be allowed to operate a power actuated tool. ANSI STANDARD A10.3-1970.
- c) Firing of the tools shall be dependent upon at least two separate and distinct operations of the operator, with the final firing movement being separate from the operation of bringing the tool into firing position. The tool shall be so

designed so as not to be operable other than when being held against a work surface with a force of at least five pounds greater than the total tool weight. Caution must be exercised to ascertain that the proper color coded charge, for the materials involved, is utilized.

- d) In case of misfire, the operator shall hold the tool in the operating position for at least 30 seconds. He shall then try to operate the tool a second time. He shall wait again 30 seconds, holding the tool in the operating position. Then he shall proceed to remove the explosive load in strict accordance with the manufacturer's instructions. Misfired cartridges shall be placed carefully in a metal container filled with water and returned to the supervisor for disposal.
- 4) Grinding wheels shall not be operated at speeds in excess of the manufacturer's RPM rating as labeled on the wheel.
 - 5) Face and eye protection or safety goggles shall be worn by all employees using grinding wheels, jackhammering, slag chipping, powder actuated tools or similar operations.
 - 6) Radial Saws
 - a) The upper hood shall completely enclose the upper portion of the blade down to a point that will include the end of the saw arbor. The slides of the lower exposed portion of the blade shall be guarded to the full diameter of the blade by a device that will automatically adjust itself to the thickness of the stock.
 - b) Radial saw for ripping shall be provided with non-kickback finger or dogs approved by the manufacturer.
 - c) The saw and table shall be designed to prevent the blade from traveling beyond front of table.
 - d) Installation shall be in such a manner so that the front end of the unit be slightly higher than the rear, so as to cause the cutting head to return gently to the starting position when released by the operator.
 - 7) Table saws shall be equipped with a functioning hood, guard, anti-kickback device and splitter.
 - 8) Only power saws specifically designed by the manufacturer for cutting concrete block, or similar materials, shall be used for this purpose.
 - 9) Cutting shall be done with water spray and the operator shall wear a face shield.

- 10) All hose couplings or any pneumatic or hydraulic equipment or tools shall be equipped with appropriate safety clips or retainers and shall be properly installed and maintained.
- 11) All appropriate machine and tool guarding devices shall be provided, shall be operational, and shall be use when the equipment is in operation.

J. WELDING AND CUTTING

- 1) Contractors shall instruct employees in the safe and proper use of cutting and welding equipment prior to using that equipment.
- 2) Oxygen and fuel gas pressure regulators, including their related gauges, shall be in proper working order while in use. Each regulator shall be provided with an anti-flashback device for protection against excessive oxygen back pressure in the fuel gas supply.
- 3) A minimum of one 10-pound all-purpose (ABC) dry chemical fire extinguisher shall be kept within 10 feet of any cutting or welding operation. The extinguisher shall be kept in a conspicuous place, free of any obstructions.
- 4) Proper personal protective equipment shall be worn while welding and cutting.
- 5) Welding screens shall be used in areas where prefabrication work is to be performed.
- 6) Oxygen and fuel gas regulators and hoses shall be maintained and in proper working order while in use.
- 7) All oxygen cylinders and fittings shall be kept free of grease and oil.
- 8) Do not weld without the approved goggles, hood and jacket/apron.
- 9) Always use approved gloves when welding.
- 10) Do not weld or burn in an area where fellow employees are working, without protective barriers, non-combustible flameproof screens/shields (blankets, covers, curtains etc.).
- 11) Do not weld where flammable or combustible material, such as waste, rags, paper, etc. can be ignited by the sparks or molten metal.
- 12) Do not weld in any location where open flame is not permitted.
- 13) Do not weld on a wooden bench or other structure that can burn.

- 14) Do not use leaky regulators, hose or other defective gas welding tools.
- 15) Do not use leaky gas cylinders.
- 16) Do not operate gas welding or cutting torches at pressure in excess of prescribed maximum.
- 17) Do not change or adjust pressure on regulators with torch valve closed.
- 18) Do not leave valves of gas cylinders open when not in use.
- 19) Do not leave valve key on gas cylinders when not in use.
- 20) Always remove all scale, rust, grease, protective surface coatings, oil and other foreign matter from metals before welding.
- 21) Always keep welding bench clear of dirt.
- 22) Always locate electric welding machine where it is protected from dirt, dust and harmful fumes.
- 23) Always see that the material being electrically welded is well grounded, and the ground connection from machine is tight.
- 24) Avoid fires on personal clothing from sparks or hot metal.
- 25) Always use protective clothing (welders legging, aprons, sleeves, jacket, etc.) when welding or burning.
- 26) Oxygen must not be used near flammable or combustible materials, such as grease, oil, etc., or any substance likely to cause fire.
- 27) Do not weld or cut in confined spaces without adequate ventilation.
- 28) Protect welding hose from being burned, trampled on or run over. Do not leave hose where it may be tripped over.
- 29) Valves on acetylene and oxygen tanks must be tightly closed when work is completed.
- 30) Carrying a lighted torch while climbing is forbidden.
- 31) Put rod stubs in a container. Stubs thrown on the floor become a slipping hazard.
- 32) Do not direct the flow of oxygen, from the torch, at clothing to remove dust, etc. This is a fire hazard.

- 33) Always have good ventilation when welding and gas cutting.
- 34) In the open air, when welding, cutting or heating metals having toxic substance(s), such as zinc, lead, cadmium, or chromebearing metals, approved respirator shall be used
- 35) When required have a certified fireguard while burning or welding. Fireguard must have a functional fire extinguisher present.
- 36) Use caution when removing eye protection. Hot slag may pop during cooling.
- 37) Remove manifold and replace protective caps on cylinders before storing welding unit (overnight, etc.).
- 38) Manifold hoses must be equipped with flash arrestors.

K. COMPRESSED GAS CYLINDERS

- 1) Valve protection caps shall be in place when compressed gas cylinders are transported, moved, or stored.
- 2) Cylinder valves shall be closed when work is finished and when cylinders are empty or are moved.
- 3) Compressed gas cylinders shall be secured in an upright position at all times, except when cylinders are actually being hoisted or carried.
- 4) Cylinders shall be kept at a safe distance or shielded from welding or cutting operations. Cylinders shall not be placed where they can contact an electrical circuit.
- 5) You are forbidden to lift or transport gas cylinders with hoisting equipment. · Rough handling of loaded or empty gas cylinders is dangerous. Install protective caps onto cylinders before moving same. Transport cylinders on handcarts equipped with chains and secure the cylinder during movement. Do not accept cylinders, which do not have a protective cap.
- 6) Grease or oil on acetylene cylinders or oxygen cylinders is forbidden. It is extremely dangerous.
- 7) Avoid freezing acetylene cylinders.
- 8) Always remove leaky gas cylinders to open air, place them clear of flammable material or anything that might ignite them.

- 9) Always secure cylinders in an upright position. When a cylinder is empty, it must be marked "empty" and stored separately from full cylinders.
- 10) Protect cylinders from excessive heat. Do not store near steam pipes, furnaces, etc.
- 11) Oxygen cylinders should not be stored with acetylene or other highly combustible materials, including welding units. A minimum of 20 feet must be maintained from combustible and flammable gases.
- 12) All cylinders must be transported and stored with the protective cap securely in place. Never store cylinders with regulators/manifolds attached.
- 13) All cylinders must be clearly labeled as to content.

L. ELECTRICAL

- 1) Extension cords and temporary lighting electrical cords shall conform to the current edition of the National Electrical Code table 400.11. "Hard Usage" or "Extra Hard Usage", and shall be protected against all types of abrasion and damage.
- 2) All male plugs and female receptacle connections shall have cords physically interlocked to prevent accidental or unintentional separation and provide complete and positive continuity and grounding.
- 3) All power cords connected to panels of breaker boxes shall be connected using plugs. No direct wiring is permitted.
- 4) Temporary (extension) cords used to supply tools shall be limited to a maximum length of 200 feet, except that additional length may be used if supplemental positive equipment grounding is maintained within 200 feet of the tool or power use.
- 5) All portable power generators shall be grounded.
- 6) Ground-Fault Circuit Protection:
 - a) Ground-Fault Circuit interrupters will be installed on all 120 volts, single-phase, 15 and 20 ampere receptacles, on the Work Site.
 - b) An assured equipment grounding conductor program may be substituted for ground-fault circuit protectors, only after the following has been provided.

- c) Submit a written program, developed by a licensed electrician, including specific procedures adopted by the Contractor to the Engineer and MDC Risk Management.

- 7) All Work Site conditions will comply with requirements in OSHA 1926 Subpart K.

- 8) Before starting work on electrical equipment and lines, inspections and tests must be made to determine if they are alive or dead.

- 9) Use only tools or devices provided and see that they are in good condition.

- 10) Never touch two parts at different potentials or a single exposed live part at a dangerous potential to ground unless employee is insulated from other conducting surfaces, including ground.

- 11) Standing with hands behind back, with back toward generator or switchboard, is prohibited.

- 12) Employees working near live equipment and lines must protect themselves from tripping, slipping or falling, or from touching equipment or lines with body, tools or material.

- 13) Work on or about electrical circuit, apparatus or equipment only if qualified and with a thorough knowledge of its operating voltage and service, and then only when authorized by the immediate supervisor.

- 14) Do not use appliance, device, tool, flashlight, material or equipment that is not designed and approved for the maintenance and operation of the circuit on which it is to be used.

- 15) Insulation, weather proofing or covering on electrical wire, apparatus or equipment must not be depended upon for protection against shock.

- 16) Do not use bolt, rivet, cotter key or other object as a jumper in place of fuse.

- 17) Do not place clothing, lunch, tools, clothes hanger, or other unauthorized items in or about the power or control cabinet, switch box, battery box or on top of electrical apparatus.

- 18) Place "DO NOT OPERATE" warning tag on switch, set to de-energize line, apparatus or equipment. "Lock Out" procedures are preferred where feasible. At all times, when working on equipment that has the potential to cause harm or create a hazard, "Lockout/Tagout projection Televisions" procedure shall be followed. Lockout/Tagout procedure requires each employee to place a lock (if possible) or a safety tag on the energy source of any equipment that has the

potential to cause harm if the equipment is activated while it is being worked on. Refer to OSHA Standard 1910.147, "Control of Hazardous Energy".

- 19) Consider every circuit to be alive.
- 20) Use extreme care when using "snakes" in preparation of installing wire or cable. The coiled "snake" may fly loose and strike a person or electrified equipment.
- 21) Do not allow wet clothing, raincoats, etc., to come in contact with electrified equipment.
- 22) Do not lubricate electrical apparatus with power on.
- 23) Do not use water to put out electrical fires.
- 24) Do not change any wire or connections with power on.
- 25) Do not shift brushes in electrical motors with power on.
- 26) Do not leave the secondary of a current transformer open-circuited, or open up the secondary with power on.
- 27) Never wear ring(s) or jewelry on fingers on person when working near or handling electrical equipment.
- 28) Inspect all temporary cords and plug equipment for damage prior to use. Cords with damaged insulation, covers, plugs or missing grounding pins are not to be used.
- 29) Do not pass temporary cords through door openings or other areas where they are likely to be cut.
- 30) When temporary cords are used, care must be taken to ensure a trip hazard is not created.
- 31) Portable extension lights shall be visually inspected by employees using them. Lamp guards must be in place on all extension lamps.
- 32) Electrical plugs of portable extension cords, or cords attached to any electrical apparatus, shall be disconnected by grasping the plug and not by pulling the cord.

LADDERS AND SCAFFOLDS

- 1) Ladders:
 - a) The use of ladders with broken or missing rungs or steps, broken or split side rails, or with other faulty or defective construction is prohibited. When ladders with such defects are discovered, they shall immediately be withdrawn from service.
 - b) Portable ladders shall be placed on a substantial base at a 4-1 pitch, have cleat access at top and bottom, extend a minimum of 36 inches above the landing, and be secured against movement while in use.
 - c) Portable metal ladders shall not be used for electrical work or where they may contact electrical conductors.
 - d) Job-made ladders shall be constructed for this intended use. Cleats shall be inset into side rails $\frac{1}{2}$ inch, or filler blocks used. Cleats shall be uniformly spaced, 12 inches, top-to-top.
 - e) Wooden ladders must not be painted. Split or rotted conditions would not be easily seen and constitute a hazard.
 - f) The foot of a ladder shall be placed $\frac{1}{4}$ of its length away from vertical plane of its support and must be secured to prevent all possibility of slipping.
 - g) Before climbing ladders, see that your shoes are free and clean of slippery substances. Watch out for broken rungs.
 - h) Face the ladder while climbing either up or down.
 - i) Never place a ladder in front of an unlocked door.
 - j) Employees must not reach out from a ladder more than an arm's length.
 - k) Ladders must be inspected by employees using them daily. Defective ladders are to be marked and kept separate from serviceable equipment and must be repaired before using.
 - l) Do not "walk" a ladder while on it.
 - m) Do not jump from or slide down any portion of any kind of ladder.

- n) When getting off a ladder, make certain of secure footing and avoid stepping on loose stones, debris or into a depression before releasing handhold on the ladder.
 - o) A stepladder must be fully opened and spread properly before being used. Never stand on the top step of a stepladder.
 - p) When carrying tools or other objects up a ladder presents a hazard, they should be raised with a rope and bucket.
 - q) Two or more persons should raise, extend, shorten or move extension ladders. Never use the top section of an extension ladder as a single ladder, since it has no safety feet.
 - r) Always rope off the area directly beneath ladders.
 - s) Never leave extended ladders unattended. Remove ladders when there is a temporary stoppage of work.
- 2) Scaffolds:
- a) Platforms shall be tightly planked for the FULL width of the scaffold except for any necessary entrance opening. Platforms shall be secured in place, with proper guardrail and toe boards.
 - b) Workmen shall not be allowed to climb or stand in cross bracing, or scaffold bucks.
 - c) Adjustment screws on scaffold legs shall not be extended beyond the manufacturer's recommendations, or two-thirds of the threaded length, whichever is shorter.
 - d) Casters shall be properly designed for strength and dimensions to support four times the maximum intended load. All casters shall be provided with a positive locking device to hold the scaffold in position. Casters shall be provided with a positive means of attachment to the scaffold legs.
 - e) Scaffold support bearing shall not be comprised of concrete block or similar materials and footed securely on a solid, stable base.
 - f) Materials shall not be stored on scaffolds in excess of the supplies needed for the immediate operation.
 - g) The edges of scaffolds shall be protected with railings and toe boards.

- h) When using rollers for moveable scaffolds, lock or secure wheels.
- i) Do not use bent or twisted members on scaffolds.
- k) Always remove a scaffold as soon as there is no more need for it. A scaffold is a constant hazard.
- l) Always rope off the area directly beneath scaffolds.
- m) Use extreme caution and use approved fall protection equipment on elevated surfaces lacking side rail and/or approved guard.

FLOORS, WALL, OPENINGS AND STAIRWAYS

- 1) One-half inch mild plow steel cables or equivalent, or ¼ inch alloy steel chains may be used on bridge or guideway decks, open floor edges, and similar applications, in lieu of standard wooden top midrails. Such cables or chains shall be firmly anchored and kept taut. All connections or cables shall be looped and clamped. Standard toeboards shall be used in such instances.
- 2) Floor openings shall be guarded by a standard railing and toeboards or cover. In general, the railing shall be provided on all exposed sides, except at entrances to stairways. Temporary floor openings shall have standard railings.
- 3) Every open-sided floor or platform, six feet or more above adjacent floor or ground level, shall be guarded by a standard railing, or the equivalent, on all open sides except where there is entrance to a ramp, stairway, or fixed ladder.
- 4) Runways four feet or higher shall have standard railings on all open sides except runways more than 18 inches wide used exclusively for special purposes may have the railing on one side omitted where operating conditions necessitate.

RAILING

- 1) A standard railing shall consist of top rail, intermediate rail and posts, and have a vertical height of approximately 42 inches from upper surface of top rail to the floor, platform, etc.
- 2) The top rail of a railing shall be smooth-surfaced, with a strength to withstand at least 200 pounds. The intermediate rail shall be approximately halfway between the top rail and floor.

- 3) A stair railing shall be of construction similar to a standard railing, but the vertical height shall be not more than 34 inches nor less than 30 inches from upper surface of top rail of tread, in line with face of riser at forward edge of tread.
- 4) A standard toeboard shall be at least four inches in height, and may be of any substantial material either solid or open, with openings not to exceed one inch in greatest dimension.

CRANES, DERRICKS, HOISTS, ELEVATORS, PILE DRIVERS, & CONVEYORS

- 1) Prior to commencement of any work using any hoisting equipment on the Work Site, the Contractor will provide the Engineer with a valid certification of compliance for shore-based, or water borne equipment meeting all the provisions of OSHA 29CFR 1919.
- 2) Record Keeping Requirements:
 - a) Supervision of all testing, examinations, inspections, heat treatments and record keeping procedures shall be carried out by such persons as are so designated in OSHA 29CFR 1919.
 - b) Certificates issued by an accredited person (agency) shall be signed and all register entries made only by persons authorized by such accredited person (agency).
 - c) Certification shall not be issued until all conditions cited for correction on the semi-annual certification report form have been corrected in a manner satisfactory to the certifying agency.
 - d) In the event deficiencies remain uncorrected, no certification shall be issued.
 - e) An accredited person (agency) shall maintain records of all work performed including reports of work or tests performed by others (nondestructive testing, heat treating, etc.), in relation to each certification. Such records shall be available for examination upon request by MDC Risk Management, the Engineer or their authorized representatives.
 - f) A copy of each certificate relating to semi-annual examination and/or unit proof load test shall be available with each crane or derrick.
- 3) A checklist will be prepared and submitted to the Engineer by the Contractor for any lift where the load exceeds 80% of the load chart capacity for the crane or derrick, or, where the lift involves the use of two or more cranes. (See Appendix C).

- a) No lifts meeting the above criteria will be made without prior submission of a Critical Lift Checklist.
 - b) Where erection drawings are prepared for submittal to the Engineer, Appendix C, will not be required if all the information contained therein is shown on the drawing submitted.
 - c) Prior to making the lift, the conditions shown on the drawing submitted will be verified by the Contractor's representative at the Work site. Any deviations from the erection drawing submitted will be reviewed and verified as safe by the Contractor's representative.
- 4) Operation of boom equipment, or other equipment such as forklifts, backhoes, and the handling of any load in the proximity of electrical transmission lines is forbidden within a minimum of 10 feet. Further, if such equipment is positioned so that it is possible by rotation or any other movement, whether anticipated or not, to possibly contact high voltage, de-energizing of the lines, restraints, "hold-backs", or other positive physical means will be required. (Note: "High Voltage" is defined as voltage in excess of 400 volts).
 - 5) All cranes shall be equipped with spirit level, or equivalent, to indicate the level of the crane fore and aft, and across the width. As nearly as possible, the crane shall be operated in level position.
 - 6) After normal working hours and during other extended periods of non-usage, crane booms shall be lowered to a horizontal position to minimize the chance of movement due to wind. If this cannot be accomplished, load lines shall be securely fastened to a substantial anchoring point.
 - 7) Except for floor-controlled overhead track cranes, a bell or other effective audible warning signal shall be provided for each crane equipped with power traveling mechanism, which shall be automatically engage and immediately audible when the crane begins to travel.
 - 8) All pinch points drive mechanisms, and other hazardous moving parts shall be effectively guarded. (See Appendix C for suggested checklist).
 - 9) Conveyor Systems
 - a) Conveyor systems shall be equipped with an automatic audible warning signal sounded immediately **BEFORE** starting up the conveyor.
 - b) Whenever a conveyor is equipped with a catwalk, a safety cable shall be installed on the conveyor to stop it instantly in an emergency, so as it cannot be started until the actuating switch has been reset to the "On" position. The

cable shall not be less than 12 inches nor more than 18 inches above the conveyor belt and shall extend the entire length of the conveyor.

- 10) Catwalks shall be kept clean and free of tripping hazards.
- 11) Any anticipated use of helicopters for lifting operations shall require advance notice and approval by the Engineer and MDC Risk Management.
- 12) No person will be allowed to ride on a suspended load or hook for any reason.
- 13) **No** person shall be allowed to stand or pass under the elevated portion of any equipment whether loaded or empty.
- 14) Pile driving loftsmen shall use safety belts when working at elevations outside loft platforms. When the leads are to be rotated or moved, the loftsmen shall descent from the leads.
- 15) Exhaust pipes, steam lines, and other hot surfaces, located where employees could contact them, shall be effectively guarded or insulated.
- 16) Do not operate cranes or hoisting machines unless qualified to do so.
- 17) Do not stand under load being moved by crane.
- 18) Always test crane brakes and limit switches before operating on your tour of duty.
- 19) Always be sure that path of crane travel is clear of people or alerted by signal alarm in advance of moving load and while crane is in motion.
- 20) Always be sure that hooks, chains or cables are secure and properly placed before raising load.
- 21) Always be sure that loose parts are removed from load before raising it.
- 22) Only the operator is permitted to be in the operators cab while crane is in operation, except when authorized maintenance is being performed or a new operator is being trained.
- 23) Hoisting hooks, chains or cables are to be visually inspected daily for flaws, cracks, etc., by employees using them and defects reported to their immediate supervisor. A monthly inspection with a certification record which includes the inspection date and signature of individual inspector must also be done.
- 24) Do not lift load with twists or kinks in the chain, rope or sling.

- 25) Operators of cranes that are moving loads in close proximity of exposed current carrying devices, are required to maintain a safe operating distance at least 10 feet from such devices to avoid contact with hoisting cables, blocks, hooks, etc.
- 26) Know the load rating of equipment when starting to raise an unusual or heavier than normal load (Load should not exceed limits of crane). Test brakes when load is a few inches from floor or ground.
- 27) When hoisting unusual material or machinery, attach a chain or cable well above the center of gravity to prevent the load from tilting or falling over when lift is made
- 28) When hoisting long shaped objects, a red tag line or other method of control is required to prevent load from turning end on end.
- 29) No employee shall ride or hang onto tongs, slings, hooks or load of hoisting equipment.
- 30) Before removing sling or chain from load, observe arrangement of load to be sure it has settled securely.
- 31) Keep from positioning yourself between the load being handled and a fixed object, (wall, stanchion or car) to avoid being pinned.
- 32) Leaving any hoisting equipment with a suspended load unattended, is forbidden.
- 33) Before hoisting a load, one (1) person must be designated to give signals, and all persons involved in the hoisting operation shall be notified who has been designated.
- 34) Before pulling a hoisting rope, wire, cable, chain or other such tackle, secure a firm footing, assume a braced position, and move clear in the event of adverse action.
- 35) Use both hands, when climbing into or leaving the crane cab. Lift tools and materials to the cab with a hand line.
- 36) If repairs to crane cause it to be laid up for a long period of time, lock the main switch in the open position to prevent use.
- 37) Make sure the controllers are in the "Off" position before opening or closing the main switch.
- 38) If power should go off, move the controllers to the "Off" position at once. Wait until power is restored before operating controllers again.

- 39) Never depend upon a limit switch to stop hoisting motor. Use your controls. Do not attempt to use two controls at the same time when approaching limits.
- 40) Whenever leaving the crane, place all controllers in the "Off" position, open the main switch and set the brakes.
- 41) When hoist operator's view is obstructed in the direction of movement, assign an employee to precede the hoist and warn others of its approach.
- 42) Do not shorten, repair or splice hoisting chain with wire, nails, bolts or other objects.
- 43) Use standard hoisting hand signals.
- 44) Do not make side pulls with a hoist, which will misalign the rope. It may cause the load to swing sideways or damage the rope itself.
- 45) Do not operate crane (move load) while the load is being raised or lowered.
- 46) Approved fire extinguishers are required in overhead cabs.
- 47) Any construction activity, including crane movement, occurring within 30' of the drip line of a Metromover or Metrorail guideway will also be subject to compliance with Department of Transportation and Public Works Adjacent Construction Manual requirements and OSS approval.

Q. WIRE ROPES, CHAINS, AND ROPES

- 1) Wire ropes, chains, ropes, and other rigging equipment shall be inspected prior to use and as necessary to assure their safety. Defective gear shall be tagged and removed from service.
- 2) Job or shop hooks and links, or makeshift fasteners, formed from bolts, rods, etc., or other such attachments, shall not be used.
- 5) The proper type of chain is to be used for the particular application (overhead lifting, transport, cargo securement, etc)
- 6) Any attachment, such as hooks or links, are to have a rated "working load limit" at least equal to the chain/rope with which it is used.
- 3) When U-bolts are use for eye splices, the U-bolt shall be applied so that the "U" section is in contact with the dead end of the rope.

- 4) When U-bolt wire rope clips are used to form eyes, the following table shall be used to determine the number and spacing of clips.

NUMBER AND SPACING OF U-BOLT WIRE ROPE CLIPS

Improved plow steel, rope diameter inches	<u>Number of clips</u>		Minimum Spacing (inches)
	Drop forged	Other material	
1/2.....	3	4	3
5/8	3	4	3-3/4
3/4.....	4	5	4-1/2
7/8.....	4	5	5-1/4
1.....	5	6	6
1-1/8.....	6	6	6-3/4
1-1/4.....	6	7	7-1/2
1-3/8.....	7	7	8-1/4
1-1/2.....	7	8	9

- 7) Slings are to be tagged for simple inclusion of sling type, working load limit, reach, serial number, chain size and grade.
- 8) State and federal regulations regarding size and number of chain systems required for securing loads on trucks are to be adhered to.

R. MOTOR VEHICLES AND MECHANIZED EQUIPMENT

- 1) All equipment that is left unattended adjacent to a roadway in normal use shall have appropriate lighted barricades placed around the location of the equipment
- 2) Loaders, backhoes, bulldozer and other similar equipment shall have their blades or buckets fully lowered and engines shut-off when left unattended.
- 3) All vehicles and equipment shall be checked at the beginning of each shift to ensure that the equipment is in proper operating condition and that accessories that affect safe operations are free from defects.
- 4) Heavy equipment, machinery, or parts thereof, shall be blocked to prevent falling or shifting before employees are permitted to work under or between them.
- 5) All equipment and vehicles with cabs shall have safety glass or equivalent windshields that are free of cracks and defects. Broken or cracked glass shall be replaced.

- 6) No person shall be allowed to ride in or on any equipment or vehicle except in seats, which are provided by the manufacturer.
- 7) Only trained, qualified and/or licensed persons are to operate equipment/vehicles.
- 8) All vehicles are required to have visual and audio back-up alarms.

S. EXCAVATION, TRENCHING AND SHORING

- 1) The Contractor shall call the Engineer who will call the Underground Utilities Notification Center at 1-800-432-4770 prior to any excavation regarding utilities. All initial excavation, which is done to expose all subsurface utilities, shall be done by hand to prevent damage. When exposed, they shall be protected at all times by suitable bridging, boxing, hangers or other supports during the prosecution of the work.
 - a) To provide access in emergencies, and for routine inspections of valves on water, gas or other mains, and to electrical power, communications, signal alarm and other service boxes, junction boxes and manhole that are decked over; trap door of a suitable size with suitable identifying steel plates securely attached thereto, shall be provided at all times in the decking.
 - b) The Contractors shall have a copy of the water main and gas drawings, clearly marked, to show the valves that control flow in the area and at the construction site. At least two valves in all directions outside the net lines shall be shown. The Contractor's superintendent shall mark and keep clear the location of valves for ready identification, should trouble develop.
- 2) Walkways shall be kept clean and free of all hazards at all times.
- 3) Internal combustion engines used in confined areas, such as in excavations or utility vaults where natural ventilation is limited, shall have exhaust fumes dispelled with forced ventilation or equivalent means.
- 4) All excavations and similar work areas where an exposure to the public or work personnel exists shall be promptly and completely fenced or barricaded, as shown in the Contact Drawings, except in those areas temporarily required to be open for the conduct of the work, then these openings shall be guarded to prevent access.
- 5) Adjustment screws on cross braces or trench jacks shall not be extended beyond the manufacturer's recommendations or 2/3 of the threaded length, whichever is more restrictive.

- 6) No one shall be permitted to climb or work from cross bracing.
- 7) Supervision - Excavation work shall at all times be under the immediate supervision of someone with authority to modify the shoring system or work methods, as necessary, to provide greater safety. He shall frequently examine the material under excavation and improve the shoring or methods beyond the minimum requirements, as necessary, to insure protection of workmen from moving material.
- 8) Removal of Shoring - No part of the shoring system of any excavation shall be removed until proper steps have been taken to avoid hazard to workmen from moving material. If a newly installed masonry or concrete wall is to be depended upon for this protection, it must have attained adequate strength to sustain resulting pressures.
- 9) Access and Egress - Convenient and safe means shall be provided for workmen to enter and leave the excavated area. This shall consist of a standard stairway, ladder, or ramp securely fastened in place at suitably guarded or protected locations where men are working and shall not require movement farther than 25 feet to reach such egress.
- 10) Blasting will not be permitted on the Work Site without prior approval of the Engineer and MDC Risk Management.
- 11) If any excavation (s) are required or requested to be left open by a utility company (s), municipality (s), or governmental agency, the excavations (s) will remain the sole responsibility of the Contractor for proper barricading and protection.

T. LASERS

- 1) Only qualified and trained employees shall be assigned to install, adjust, and operate laser equipment.
- 2) Employees shall wear proper eye protection where there is potential exposure to laser light greater than 0.005 watts (5 milliwatts).
- 3) Beams shutters or caps shall be utilized, or the laser turned off, when laser transmission is not actually required. When the laser is left unattended for a substantial period of time, such as during lunch hour, over-night, or at change of shifts, the laser shall be turned off and shall be secured in a manner, which will preclude indiscriminate or unauthorized activation.
- 4) Employees shall not be exposed to light intensities above: direct staring - 1 microwatt per square centimeter; incidental observing - 1 milliwatt per square

centimeter: diffused reflected light - 21/2 watts per square centimeter.
Employees shall not be exposed to microwave power densities in excess of 10 milliwatts per square centimeter.

- 5) The Engineer shall be notified of the location, time and qualifications of person or persons operating the laser.

U. ROLLOVER PROTECTIVE STRUCTURES, OVERHEAD PROTECTION AND REVERSE WARNING ALARMS

- 1) On **ALL** rubber-tired or crawler scrapers, bulldozers, front-end loaders, backhoes, motor graders, industrial tractors and forklift trucks, Rollover Protective Structures (ROPS) and Falling Object Protective Structures (FOPS) are required. (Note: See OSHA for structural performance standards).
- 2) On equipment where ROPS are required (above), seat belts shall be installed and worn by operators.
- 3) In lieu of a signalman, all bi-directional earthmoving, haulage or compacting equipment, and all trucks with a body capacity of 1-1/2 yards or more used to haul dirt, rock, concrete or other material shall be equipped with an automatically operated reverse signal alarm (such as buzzer, horn or bell) which is audible from a distance of 100 feet from the rear of the vehicle in operation. It shall be the duty of the contractor to inform his suppliers of these requirements.

V. CONCRETE

- 1) All equipment and materials used in concrete construction and masonry work shall meet the applicable requirements for design, construction, inspection, testing, maintenance and operations as provided in OSHA.
- 2) Employees working more than six feet above adjacent working surfaces, placing and tying reinforcing steels in walls, piers, columns, etc., shall be provided with a personal fall arrest system (29CFR 1926.502), or equivalent device.
- 3) Employees shall not be permitted to work above vertically protruding reinforcing steel unless it has been protected to eliminate the hazard of implement.
- 4) Guying - Reinforcing steel for walls, piers, column and similar vertical structures shall be guyed and supported to prevent collapse.
- 5) Wire mesh rolls - Wire mesh rolls shall be secured at each end to prevent dangerous recoiling action.

- 6) Pumpcrete systems - Pumpcrete or similar systems using discharge pipes shall be provided with pipe supports designed for 100 percent overload. Compressed air hose in such systems shall be provided with positive fail-safe joint connectors to prevent separation of sections when pressurized. Safety chains shall be provided on all line two inches in diameter or larger.
- 7) Concrete buckets equipped with hydraulic or pneumatically operated gates shall have positive safety latches or similar safety devices installed to prevent aggregate and loose material from accumulating on the top and sides of the bucket.
- 8) Riding of concrete buckets for any purpose shall be prohibited, and vibrator crews shall be kept out from under concrete buckets suspended from cranes or cableways.
- 9) When discharging on a slope, the wheels of ready-mix trucks shall be locked and the brakes set to prevent movement. The use of chocks is also required.
- 10) Nozzlemen applying a cement, sand, and water mixture through a pneumatic hose shall be required to wear protective head and face equipment.
- 11) When temporary storage of reinforcing rods, materials, or equipment on top of formwork becomes necessary, these areas shall be strengthened to meet the intended loads.
- 12) The sills for shoring shall be sound, rigid, and capable of carrying the maximum intended load.
- 13) All shoring equipment shall be inspected prior to erection to determine that it is as specified in the shoring layout. Any equipment found to be damaged should not be used for shoring.
- 14) Erected shoring equipment shall be inspected immediately prior to, during, and immediately after the placement of concrete. Any shoring equipment that is found to be damaged or weakened shall be immediately reinforced or reshored.
- 15) Reshoring shall be provided when necessary to safety support slabs and beams after stripping or where such members are subjected to superimposed loads due to construction work done.
- 16) Metal tubular frames used for shoring shall not be loaded beyond the safe working load recommended by the manufacturer.
- 17) All locking devices on frames and braces shall be in good working order; coupling pins shall align the frame or panel legs; pivoted cross braces shall have

their center pivot in place; and all components shall be in a condition similar to that of original manufacture.

- 18) When checking the erected shoring frames with the shoring layout, the spacing between towers and cross brace spacing shall not exceed that shown on the layout, and all locking devices shall be in the closed position.
- 19) Devices for attaching the external lateral stability bracing shall be securely fastened to the legs of the shoring frames.
- 20) Formwork and shoring shall be designed, erected, supported, braced, and maintained so that it will safely support all vertical and lateral loads that may be imposed upon it during placement of concrete.
- 21) Working drawing showing the jack layout, formwork, shoring, working decks, and scaffolding, shall be available at the Work Site for review by the Engineer.
- 22) Stripped forms and shoring shall be removed and stockpiled promptly after stripping. In all areas which persons are required to work or pass, protruding nails, wire ties, and other form accessories not necessary to subsequent work shall be pulled, cut, or other means taken to eliminate the hazard.
- 23) Imposition of any construction loads on the partially completed structure shall not be permitted unless such loading has been considered in the design and approved by the Engineer.
- 24) Jacks and vertical supports shall be positioned in such a manner that the vertical loads are distributed equally and do not exceed the capacity of the jacks.
- 25) When checking the erected shoring towers with the shoring layout, the spacing between posts shall not exceed that shown on the layout, and all interlocking of tubular members and tightness of couples shall be checked.
- 26) All baseplates, shore heads, extension devices, or adjustment screws shall be in firm contact with the footing sill and the form material and shall be snug against the posts.
- 27) For stability, single post shores shall be horizontally braced in both the longitudinal and transverse directions, and diagonal bracing shall also be installed. Such bracing shall be installed as the shores are being erected.
- 28) All baseplates or shore heads of single post shores shall be in firm contact with the footing sill and the form materials.
- 29) Whenever single post shores are used in more than one tier, the layout shall be approved by the Engineer.

- 30) When formwork is at an angle, or sloping, or when the surface shored is sloping, the shoring shall be designed for such loading.
- 31) Adjustment of single post shores to raise formwork shall not be made after concrete is in place.
- 32) Fabricated single post shores shall not be used if heavily rusted, bent, dented, rewelded, or having broken weldments or other defects.
- 33) Timber shall not be used if it is split, cut, has sections removed, is rotted, or is otherwise structurally damaged.
- 34) Nails used to secure bracing or adjustable timber single post shores shall be driven home and the point of the nail bent over if possible. Double head nails will be permitted.

W. DEMOLITION

- 1) All sidewalks and walkways open to the public shall have abrasive non-skid surface and shall be kept clean and free of tripping hazards at all times.
- 2) "NO PARKING" zones with appropriate signs and barricades shall be displayed adjacent to buildings being demolished.
- 3) Water or other means of dust control shall be used where dust presents a health or environmental hazard, property damage potential, or nuisance.
- 4) See this Manual's section for Rollover and Falling Object Protection Structures, which also applies to demolition equipment.
- 5) Provide adequate protection to prevent damage to pipes, conduits, wires, cables, or structures above or below ground, which are not designated for removal.
- 6) Overhead protection shall be erected over sidewalks and shall extend at least ten feet beyond the building lines along direction of the sidewalks. Overhead planking shall be a minimum of three-inch full dimension lumber placed on adequately designed, metal or timber frames.
- 7) Substantial catch platforms shall be erected around all sides of the building prior to any demolition. Design must be approved by the Engineer.
- 8) Solid barriers of $\frac{3}{4}$ inch exterior fire rated B/D Plywood at least eight feet high shall be erected around the structure at ground or sidewalk level to protect the public. The barriers shall be framed with, at a minimum, 2"x3" fire rated studs 16" on center.

- 9) Full time flagman shall be provided to assist truck egress and ingress.
- 10) All mechanical, electrical, air conditioning, ducting, skylights, windows, and any other equipment, material or objects on roofs or walls of adjoining or adjacent structures to buildings under demolition shall be adequately protected from falling material and activity of wrecking crews and equipment.
- 11) No mechanical equipment (i.e. headache ball, impact equipment other than hand held) shall be used within six feet of any adjoining structure.
- 12) Employees engage in the demolition or removal of any pipes, structures or machinery covered or insulated with asbestos shall conform with all federal, state and local codes, rules, regulations and requirements including but not limited to:
 - a) 29CFR 1926.1101
 - b) 40CFR 61, Subpart M
 - c) Florida Statute 469.001-469.099
 - d) Miami-Dade Environmental Resources Management
- 13) Employees engage in the demolition, removal or disturbance of any listed hazardous substance shall conform with all applicable federal, state and local codes, rules, regulations and requirements.

X. ADVERSE WEATHER CONDITIONS

- 1) Disassemble all scaffolds, loose formwork, radio antennas and secure properly.
- 2) All items that cannot be secured shall be stored inside secured storage areas or buildings.
- 3) All crane booms shall be lowered to ground level and secured to prevent movement.
- 4) All office trailers shall be tied down in compliance with MDC Tie Down Ordinance No. 77-1 upon original installation. All tie down straps, ground anchors, piers, etc., shall be checked for condition and operation.
- 5) All exposed glass on the Work Site shall be protected by a solid, rigid covering.
- 6) All free standing walls shall be shored from both sides.

- 7) Before employees are dismissed from the Work Site, the Contractors shall make a thorough inspection to verify all necessary precautions have been taken, and report to the engineer for any further instructions.
- 8) All precautions for construction sites during hurricane conditions, as required by the Florida Building Codes (Appendix D) shall be met.
- 9) All contractors shall develop a project specific hurricane plan. This plan will include a detailed description of all hurricane preparation activities for each DTPW phase of hurricane readiness including:
 - a) Phase A - Pre-Season Preparedness
 - b) Phase B - Hurricane Advisory (48 hours prior to landfall)
 - c) Phase C - Hurricane Watch (24-48 hours prior to landfall)
 - d) Phase D - Hurricane Warning (24 hours prior to landfall)
 - e) Phase E - Landfall
 - f) Phase F - Recovery/Post Hurricane
- 10) Progression through the DTPW phases of hurricane readiness will be declared by the DTPW Hurricane Disaster Preparedness Coordinator (Coordinator). The Coordinator may accelerate preparedness levels based on prevailing conditions and expectations. The time of day the storm is expected to arrive, along with the Miami-Dade Emergency Operations Center levels of activation, are some of the factors that are considered. The DTPW readiness phase will be communicated through the Resident Engineer or other DTPW contract representative.

Y. HOUSEKEEPING

- 1) All refuse piles shall be removed from the Work Site immediately.
- 2) Stored and stacked materials shall be kept orderly, properly stacked, choked, and secured.
- 3) Any protruding nails, etc., shall be bent, removed or clinched immediately.
- 4) Oil, grease, and water spills shall be cleaned up immediately.
- 5) Loose materials, tools, or equipment shall be kept off stairs, out of walkways, ramps, platforms at all times when not in use.

- 6) Depressions and pot-holes in vehicle or walkway surfaces on the Work Site shall be properly filled and graded immediately.
- 7) Walkways, vehicle travel ways, ramps, railings, and stairways, shall be kept free from debris, properly installed and maintained.
- 8) Smoking or the use of open flames within 25 feet of flammable storage areas or fueling areas shall not be permitted.
- 9) Flammable storage areas shall be properly posted "**NO SMOKING**", provided with adequate fire extinguishers and free of combustible materials.
- 10) All sanitary facilities used on the Work Site shall be maintained on a daily basis.
- 11) All structures shall have a minimum of a 5-foot perimeter clearance that is to be free from any combustible debris or materials.

Z. HAZARDOUS SUBSTANCES

- 1) The Contractor shall develop, implement and maintain a written Hazard Communication/Right-to-Know Program and comply with all applicable requirements of OSHA Hazard Communication Standard 29CFR1910.1200.
- 2) The Contractor shall ensure that each container of hazardous substances in the workplace is labeled, tagged, or marked with the following information:
 - a) identify of the hazardous substance (s) contained therein
 - b) appropriate hazard warnings
- 3) The Contractor's written hazard communication program shall describe how the criteria for labeling; Material Safety Data Sheets (MSDS); employee information and training will be met and also include:
 - a) A list of the hazardous chemicals known to be present and their locations at the Work Site.
 - b) The methods the employer will use to inform employees of the hazards of non-routine tasks & the hazards associated with hazardous substances contained in unlabeled pipes in their work areas.
- 4) The Contractor shall maintain copies of the required Safety Data Sheet (SDS) for each hazardous substance in the workplace, and shall ensure that they are readily accessible during each work shift to employees. (The Contractor may obtain the SDS for a product by requesting it from the product's manufacturer, distributor, or importer.

- 5) Where employees must travel between workplaces during a workshift, i.e., their work is carried out at more than one geographical location, the SDS may be kept at a central location at the primary workplace facility. In this situation, the employer shall ensure that employees can immediately obtain the required information in an emergency.
- 6) SDS shall also be made readily available to fire & emergency response personnel, the Engineer and MDC Rick Management.
- 7) Contractors shall provide their employees with the following:
 - a) Information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
 - b) Any operations in there work area where hazardous chemicals are present.
 - c) The location and availability of the written hazard communication program, including the required list (s) of hazardous chemicals and material safety data sheets.
 - d) Information as to the employees' rights under the Florida Right-to-Know Law:
 1. The right to know of the listed toxic substances present in the workplace.
 2. The right to obtain a copy of the Safety Data Sheet for each listed toxic substance present.
 3. The right to refuse to work, under specified circumstances, with a listed substance, if not provided a copy of the Safety Data Sheet for that substance within 5 of the requesting employee's working days after submitting a written request to the employee's employer.
 4. The right to instruction, within 30 days of employment, and at least annually thereafter, on the adverse health effects of each listed toxic substance with which they work in the workplace, how to use each substance safety, and what to do in case of any emergency.
 5. The right to obtain further information on the properties and hazards of listed toxic substances from the Toxic Substance Information Center (1-800-367-4378).
 6. The right to protection against discharge, discipline, or discrimination for having exercised any of these rights.
- 8) The Contractor shall post the State of Florida Right-to-Know Poster at the Work Site. The poster and information/assistance in complying with the Right-to-Know Law is available from the Toxic Substance Information Center (1-800-367-4378). As soon as any environmental item is discovered, the Contractor shall immediately inform the Resident Engineer and the DTPW Senior Professional Engineer (Environmental).

APPENDICES

Appendix A - State of Florida, First Report of Injury or Illness; Supervisor's Report;
OSHA 300 & 300A

Appendix B - Tool Box Safety Meeting Document, Suggested Format

Appendix C - Safety Inspection Checklist For Crane Inspection & Critical Lifts

Appendix D - Special Hurricane Precautions

Appendix E - OSHA General Industry and Construction Standards Requiring a
Competent Person

APPENDIX A

INSTRUCTION - FIRST REPORT OF INJURY OR ILLNESS LES FORM DWC - 1

EMPLOYER -You are required by law to report all industrial accidents to the Division of Workers' Compensation within seven days of your first knowledge of the accident. A civil penalty of up to \$500 is provided for failure. Fully complete this form, using the employee's description of the accident, signs it, have the employees sign it and mail the original to the Division. Copies marked for the employee and your carrier (insurance company) must be sent to them.

If, for any reason, the employee cannot or will not sign the notice, **do not delay your report.**

EMPLOYEE -You are required by law to report your accident to the Worker's Compensation Division. Enter your description of the accident on this form, have your employer complete the form, then both of you should sign. If your employer refuses to sign or complete the report you should complete it. Send the original to the division, a copy to your employer.

For assistance, or for answers to questions on Workers' Compensation, call the toll free number shown on the form.

DISTRIBUTION: Part 1 - Division Copy
 Part 2 - Carrier Copy
 Part 3 - Employer Copy
 Part 4 - Employer Copy

APPENDIX A

FIRST REPORT OF INJURY OR ILLNESS

**FLORIDA DEPARTMENT OF FINANCIAL SERVICES
DIVISION OF WORKERS' COMPENSATION**

For assistance call 1-800-342-1741
or contact your local EAO Office
Report all deaths within 24 hours 1-800-219-8953 or (850) 922-8953

RECEIVED BY CLAIMS-HANDLING ENTITY	SENT TO DIVISION DATE	DIVISION RECEIVED DATE

PLEASE PRINT OR TYPE

EMPLOYEE INFORMATION

NAME (First, Middle, Last)	Social Security Number	Date of Accident (Month-Day-Year)	Time of Accident <input type="checkbox"/> AM <input type="checkbox"/> PM
HOME ADDRESS Street/Apt #: City: State: Zip:	EMPLOYEE'S DESCRIPTION OF ACCIDENT (Include Cause of Injury)		
TELEPHONE Area Code Number ()			
OCCUPATION	INJURY/ILLNESS THAT OCCURRED	PART OF BODY AFFECTED	
DATE OF BIRTH / / SEX <input type="checkbox"/> M <input type="checkbox"/> F			

EMPLOYER INFORMATION

COMPANY NAME: D. B. A: Street: City: State: Zip:	FEDERAL I.D. NUMBER (FEIN)	DATE FIRST REPORTED (Month/Day/Year)
TELEPHONE Area Code Number ()	NATURE OF BUSINESS	POLICY/MEMBER NUMBER
EMPLOYER'S LOCATION ADDRESS (If different) Street: City: State: Zip: LOCATION # (If applicable)	DATE EMPLOYED ____/____/____	PAID FOR DATE OF INJURY <input type="checkbox"/> YES <input type="checkbox"/> NO
PLACE OF ACCIDENT (Street, City, State, Zip) Street: City: State: Zip: COUNTY OF ACCIDENT	LAST DATE EMPLOYEE WORKED ____/____/____	WILL YOU CONTINUE TO PAY WAGES INSTEAD OF WORKERS' COMP? <input type="checkbox"/> YES
	RETURNED TO WORK <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE DATE ____/____/____	LAST DAY WAGES WILL BE PAID INSTEAD OF WORKERS' COMP ____/____/____
	DATE OF DEATH (If applicable) ____/____/____	RATE OF PAY <input type="checkbox"/> HR <input type="checkbox"/> WK \$ PER <input type="checkbox"/> DAY <input type="checkbox"/> MO
	AGREE WITH DESCRIPTION OF ACCIDENT? <input type="checkbox"/> YES <input type="checkbox"/> NO	Number of hours per day _____ Number of hours per week _____ Number of days per week _____
Any person who, knowingly and with intent to injure, defraud, or deceive any employer or employee, insurance company, or self-insured program, files a statement of claim containing any false or misleading information commits insurance fraud, punishable as provided in s. 817.234. Section 440.105(7), F.S. I have reviewed, understand and acknowledge the above statement. _____ EMPLOYEE SIGNATURE (If available to sign) _____ DATE _____ _____ EMPLOYER SIGNATURE _____ DATE _____	NAME, ADDRESS AND TELEPHONE OF PHYSICIAN OR HOSPITAL AUTHORIZED BY EMPLOYER <input type="checkbox"/> YES <input type="checkbox"/> NO	

CLAIMS-HANDLING ENTITY INFORMATION

1(a) Denied Case - DWC-12, Notice of Denial Attached 2. Medical Only which became Lost Time Case (Complete all required information in #3)

1(b) Indemnity Only Denied Case - DWC-12, Notice of Denial Attached Employee's 8TH Day of Disability ____/____/____
Entity's Knowledge of 8TH Day of Disability ____/____/____

3. Lost Time Case - 1st day of disability ____/____/____ Full Salary in lieu of comp? YES Full Salary End Date ____/____/____
Date First Payment Mailed ____/____/____ AWW ____ Comp Rate ____

T.T. T.T. - 80% T.P. I.B. P.T. DEATH SETTLEMENT ONLY

Penalty Amount Paid in 1st Payment \$ ____ Interest Amount Paid in 1st Payment \$ ____

REMARKS:			INSURER NAME FL DFS, DIV OF RISK MANAGEMENT
			CLAIMS-HANDLING ENTITY NAME, ADDRESS & TELEPHONE STATE OF FLORIDA DEPT OF FINANCIAL SERVICES, DIV. OF RISK MANAGEMENT PO BOX 8020 TALLAHASSEE FL 32314-8020 (850) 413-3123
INSURER CODE #	EMPLOYEE'S CLASS CODE	EMPLOYER'S NAICS CODE	
SERVICE CO/TPA CODE #	CLAIMS-HANDLING ENTITY FILE #		

APPENDIX B

APPENDIX C

APPENDIX C: SAFETY INSPECTION CHECKLIST
 Page 1 of 3

TITLE: JOB SITE ERECTION - Crane Inspection

AREA INSPECTED: _____

INSPECTED BY: _____ DATE: _____

INSPECTOR SIGNATURE: _____

PCI SAFETY MANUAL REFERENCE SECTIONS: _____

* Check items to be inspected in your area - disregard others not applicable

*	OK	ITEM INSPECTED	NOT OK	COMMENTS
		The Crane Crew: Is the operator and crew properly trained and medically fit to perform their job?		
		Operating is a full time job - does the operator pay strict attention to his duties?		
		Do crane personnel wear hard hats when away from the crane?		
		Is the operator aware of the regulations involving working close to high voltage lines and electrical equipment?		
		High Voltage, even from a distance source, can be induced in metal parts of the crane. Is the operator aware of these situations?		
		Does the operator know the weight of each piece before he picks it?		
		Does the crane crew know the manufacturer's proper recommendations for making short moves on the job site?		
		Does the crew get help when lifting heavy items?		
		Does the crew periodically check for level?		
		Do they check outriggers for stability?		
		Do they check the boom angel indicator and other electronic load equipment for accuracy?		
		Does the operator allow anyone to ride the load or the hooks?		
		The Ground Crew (hooking up product) Does the ground crew have, maintain and use proper safety equipment?		
		Are they familiar with the product erection sequence?		

APPENDIX C: SAFETY INSPECTION CHECKLIST

Page 2 of 3

TITLE: JOB SITE ERECTION - Crane Inspection (continued)

AREA INSPECTED: _____

INSPECTED BY: _____ **DATE:** _____

INSPECTOR SIGNATURE: _____

PCI SAFETY MANUAL REFERENCE SECTIONS: _____

- **Check items to be inspected in your area - disregard others not applicable**

*	OK	ITEM INSPECTED	NOT OK	COMMENTS
		(Continue) Are they familiar with the crane signals and general operation of the crane?		
		Do they know how to properly hook pieces and provide aerial stability?		
		Do they know how to properly use tag lines?		
		Are tag lines in good condition, strong enough?		
		Long Enough?		
		Two-way communication between the operator and erection foreman are becoming more common to provide safety on the job. Does the crew know how to operator and maintain the system? Are spare parts available for quick repair?		
		Is the crane swing radius roped off to prohibit the crane (during swing) from causing damage or hurting someone? Is entire swing checked? Including counterweights?		
		The Machine: Is the crane operated within all capacities?		
		Is the machine inspected daily?		
		Are the required crane inspections recorded?		
		Are all controls properly identified?		
		Are warning devices operative?		
		Is an operator's manual available to the crew for easy reference?		
		Are load charts, operating signals and other important information posted and/or readily available?		

APPENDIX C: SAFETY INSPECTION CHECKLIST
Page 3 of 3

TITLE: JOB SITE ERECTION - Crane Inspection (continued)

AREA INSPECTED: _____

INSPECTED BY: _____ **DATE:** _____

INSPECTOR SIGNATURE: _____

PCI SAFETY MANUAL REFERENCE SECTIONS: _____

- **Check items to be inspected in your area - disregard others not applicable**

*	OK	ITEM INSPECTED	NOT OK.	COMMENTS
		(continued)		
		Are brakes within operating limits?		
		Are clutch and brakes surfaces dry?		
		Are all protective panels and guards in place?		
		Are electrical systems in good condition?		
		Are all of the sheaves properly aligned so as to reduce rope wear during work?		
		Is cable in good condition?		
		Are hooks in good condition?		
		Have hooks been inspected by magnetic particle inspection?		
		Are there safety latches on hooks?		
		Are fuel tanks in good condition and without leaks?		
		Are fire extinguishers available and routinely inspected?		
		<u>Slings</u>		
		Are slings in good conditions? Is safety factor of 5 maintained?		
		Are slings stored properly?		
		Are sling inspection reports maintained?		
		Are "U" bolt wire rope clips correctly Placed?		
		Are all other lifting devices in good condition?		

CHECK LIST FOR CRITICAL LIFTS

NOTE: THIS FORM IS TO BE COMPLETED WHEN THE LOAD EXCEEDS 80% OF THE LOAD CHART FOR THE CRANE OR DERRICK OR WHERE THE PICK INVOLVES THE USE OF TWO OR MORE CRANES.

DATE: _____

(1) SUPERVISOR RESPONSIBLE FOR LIFT: _____

(2) DESCRIPTION OF ITEM TO BE LIFTED AND ESTIMATED WEIGHT:

(3) EQUIPMENT AND LIFT RELATIONSHIP:

(A) OPERATING RADIUS..... _____

(B) BOOM LENGTH..... _____

(C) ALLOWABLE LOAD (FROM LOAD CHART)..... _____

(D) RATIO OF LIFT TO ALLOWABLE LOAD..... _____

(E) CLEARANCE TO SURROUNDING FACILITIES..... _____

(F) SLING ANGLE..... _____

(4) CONDITION OF HOISTING EQUIPMENT AND RIGGING:

(A) HAS ALL EQUIPMENT BEEN REINSPECTED FOR THIS LIFT? YES NO

(5) STABILITY OF GROUND AREA:

(A) CHECK SOIL BEARING ALLOWABLE LOAD (COMMENTS):

(B) WILL MATS BE NEEDED? YES NO

CHECK LIST FOR CRITICAL LIFTS (cont.)

(B) ANY UNDERGROUND INSTALLATIONS NEEDING SPECIAL ATTENTION?
 YES NO

(C) WILL IT BE NECESSARY FOR THE CRANE TO WALK WITH THE LOAD?
 YES NO

IF THE ANSWER IS "YES", ANSWER QUESTIONS E, F, & G.

(E) IS AREA SURFACE LEVEL AND STABLE WHERE THE CRANE WILL BE WALKING
 YES NO

(F) HAVE FACILITIES BEEN PROVIDED TO KEEP THE LOAD RADIUS FROM CHANGING?
 YES NO

(G) HAVE ALL OVERHEAD FACILITIES BEEN CHECKED FOR CLEARANCE IN THE AREA WHERE THE CRANE WILL BE MOVING?

(6) DOES THE OPERATOR HAVE THE NECESSARY EXPERIENCE ON THE CRANE AND ON THIS TYPE OF LIFT?
 YES NO

(7) IF LIFT INVOLVES USE OF TWO CRANES ANSWER THE FOLLOWING:

A) HAVE OPERATORS WORKED TOGETHER BEFORE? YES NO

B) WHO WILL COORDINATE INSTRUCTIONS TO OPERATORS? _____

BY: _____
CONTRACTOR'S SUPERINTENDENT

APPENDIX D

APPENDIX D

SPECIAL HURRICANE PRECAUTIONS

During such periods of time as are designated by the United States Weather Bureau as being a hurricane warning or alert, all construction materials or equipment shall be secured against displacement by wind forces; provided that where a full complement of personnel is employed or otherwise in attendance, or engaged for such protection purposes, normal construction procedures or uses of materials or equipment may continue allowing such reasonable time as may be necessary to secure such materials or equipment before winds of hurricane force are anticipated. Construction materials and equipment shall be secured by guying and shoring, by tying down loose materials equipment and construction sheds.

APPENDIX E

APPENDIX E

OSHA General Industry and Construction Standards Requiring a Competent Person

The following OSHA standards require a competent person to perform specific functions under the standard. Standards are arranged numerically within the categories of General Industry and Construction. This list of standards requiring a competent person is to be used as a reference tool and does not supercede OSHA requirements.

General Industry (1910)

- 1910.66, Powered platforms for building maintenance.
- 1910.66 App C, Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms, Personal Fall Arrest System (Section I - Mandatory; Sections II and III - Non-Mandatory).
- 1910.109, Explosives and blasting agents.
- 1910.139, Respiratory protection for **M**. tuberculosis.
- 1910.183, Helicopters.
- 1910.184, Slings.
- 1910.268, Telecommunications.

Construction (1926)

- 1926.20, General safety and health provisions.
- 1926.53, Ionizing radiation.
- **1926.62, Lead.**
- 1926.101, Hearing Protection.
- 1926.251, Rigging equipment for material handling.
- 1926.354, Welding, cutting, and heating in way of preservative coatings.
- 1926.404, Wiring design and protection.
- 1926.451, Scaffolds.
- 1926.454, Scaffolds, Training requirements.
- 1926.500, Fall Protections, Scope, application, and definitions applicable to this subpart.
- 1926.502, Fall protection systems criteria and practices.
- 1926 Subpart M App C, Personal Fall Arrest Systems - Non-Mandatory Guidelines for Complying with 1926.502(d).
- 1926 Subpart M App E, Sample Fall Protection Plan - Non-Mandatory Guidelines for Complying with 1926.502(k).
- 1926.503, Fall Protection, Training Requirements.
- 1926.550, Cranes and derricks.
- 1926.552, Material hoists, personnel hoists, and elevators.
- 1926 Subpart P App A, Excavations, Soil Classification.
- 1926 Subpart P App B, Excavations, Sloping and Benching.
- 1926.651, Specific Excavation Requirements.
- 1926.652, Excavations, Requirements for protective systems.
-

- 1926.705, Concrete and Masonry Construction, Requirements for lift-slab operations.
- 1926.752, Steel Erection, Bolting, riveting, fitting-up, and plumbing-up .
- 1926.800, Underground Construction .
- 1926.803, Underground Construction, Caissons, Cofferdams, and Compressed Air, Compressed air.
- 1926.850, Demolition, Preparatory operations.
- 1926.859, Mechanical demolition.
- 1926.900, Blasting and the Use of Explosives.
- 1926.1053, Ladders.
- 1926.1060, Stairways and Ladders, Training requirements.
- 1926.1101, Asbestos.
- 1926.1101 App F, Work practices and engineering controls for Class I Asbestos Operations - non-mandatory.
- 1926.1127, Cadmium.

2025_Construction_Safety_Manual Rev 7-Final

Final Audit Report

2025-02-27

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