



CAL MARITIME

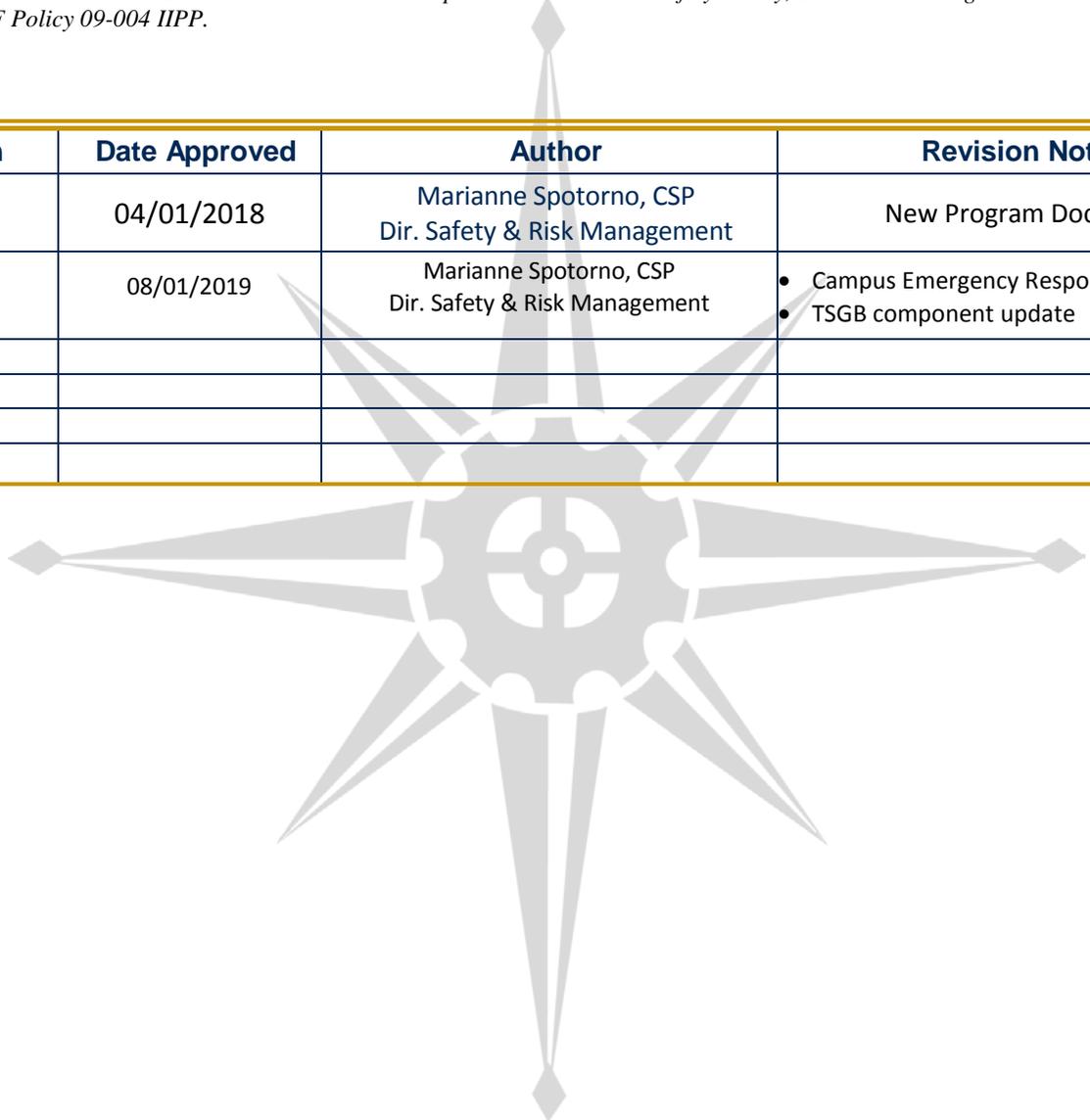


Fall Protection & Prevention Safety Program

INJURY ILLNESS PREVENTION PROGRAM

*This sheet should be completed each time the **Fall Protection & Prevention Safety Program** is reviewed and/or modified. The Director of Safety and Risk Management is responsible for the review and update this document annually or more frequently as determined or needed per CSU Chancellor's Executive Order 1039 Occupational Health and Safety Policy, 1069 Risk Management as well as Cal Maritime A&F Policy 09-004 IIPP.*

Version	Date Approved	Author	Revision Notes:
1.0	04/01/2018	Marianne Spotorno, CSP Dir. Safety & Risk Management	New Program Document
2.0	08/01/2019	Marianne Spotorno, CSP Dir. Safety & Risk Management	<ul style="list-style-type: none"> • Campus Emergency Response update. • TSGB component update



											
Risk Management	Transportation	Personal Protective Equipment	Hazardous Materials Management	Ergonomics	Material Handling	Safe Work Practices/Accident Prevention	Working at Heights/Elevated Work	Emergency Response	Controlling Hazardous Energy	Marine/Water Safety	Continuous Improvement / Change Management

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Table of Contents

1.0 Purpose & Scope	4
1.1 Regulatory Standards Reference	4
1.2 CSU-System & Cal Maritime Specific Reference	4
1.3 Other Resources	1
2.0 Administrative Duties & Responsibilities	1
2.1 Employees (Including Student workers).....	1
2.2 Department of Safety and Risk Management (SRM)	2
2.3 Deans, Directors, Department or Operating Unit Management.....	2
2.4 Supervisors and Principal Investigators.....	2
2.5 Academic Programming Faculty and Advisors	3
2.6 Students- Cadets	3
2.7 Fall Protection Users	3
3.0 Process Management	4
3.1 Hazard Identification, Risk Assessment & Control (HIRAC)	4
3.1.1 Integrated Safety Management (ISM)	4
3.1.2 Hazard Identification, Risk Assessment & Determining Control Table (HIRAC).....	4
3.1.3 Application of Hierarchy of Controls.....	4
3.1.4 Job Hazards Analysis (JHA).....	5
3.1.4.1 JHA Requirements.....	5
3.2 Hazard Assessment	6
3.3 General Requirements	8
3.3.1 Regulatory Overview.....	8
3.3.1.1 Owner Department Requirements	8
3.3.1.2 Fall Protection Program Coordinator.....	8
3.3.1.3 FPE Users.....	8
3.4 Fall Protection Equipment User’s Safe-Work Rules	9
3.5 FPE Maintenance and Care	9
3.6 Fall Protection – When working from ladders.	9
3.7 Types of Fall Protection Equipment (FPE)	10
3.7.1 Fall Arrest System	11
3.7.2 Positioning System.....	11
3.7.3 Restraint System	11
3.7.4 Suspension System	12

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

3.7.5 Retrieval System	12
3.8 Selection of FPE	13
3.8.1 FPE Types and Selection for Use	13
3.9 Fall Protection Rescue Plan	18
4.0 Training Requirements	19
5.0 Document Control & Recordkeeping	20
Appendix A: Definitions	21
Appendix B: Job Hazard Analysis Template- Sample	24
Appendix C: Inspecting of Fall Protection Equipment	26
Appendix D: Inspecting of Equipment	28
Appendix E: Equipment Inventory	35
Appendix F: Rescue Plan	36
Appendix G: Donning Full Body Harness	37
Appendix H: Emergency Response	38
Appendix I: Accident Incident Management	39
Appendix J: Training Log	40

1.0 Purpose & Scope

The purpose of the Injury Illness Prevention Program (IIPP) is to outline Cal Maritime’s environmental health and safety requirements, expectations, and responsibilities in order to achieve effective campus safety performance through Integrated Safety Management (ISM). The **Fall Protection & Prevention Safety Program** is a subject specific component that supports the overall University IIPP. This Program applies to any activities being conducted in elevated locations by University personnel where fall hazards that require wearing of FPE for protection are part of research/work activities. This includes contract employees and graduate students performing research related activities in field stations and remote research facilities

Falls present significant workplace hazards. The Federal Bureau of Labor Statistics states that in 2009, 608 people died from falls. That’s 14% of the total workplace fatalities in the USA that year! In California, of the 54 falls that occurred that year, 41 could have been avoided by proper use of fall protection equipment (FPE). The use of fall protection equipment (FPE) poses physical and physiological hazards that could result in permanent injury or death to the wearer when used incorrectly or without adequate preparation for rescue after a fall. The Cal Maritime developed this program to describe all aspects of secondary FPE use, inspection, personnel accountability for the condition and use of the equipment, safe work practices, training requirements, and record keeping.

There are two types of FPE, primary and secondary. Primary FPE refers to stationary objects that act as engineering controls for the prevention of falls. This includes guardrails, floors, ramps, platforms, and lifts or scaffolding. Secondary FPE refers to devices attached to structures whose sole use is for fall protection anchorages, and any devices used for fall protection that a user attaches to them (lanyards harnesses, elbow straps, etc.). This program primarily applies to secondary fall protection equipment worn by the FPE user and attached to structural anchor points.

This Manual applies to all Cal Maritime operations, maintenance and construction activities under the supervision of Cal Maritime personnel. For activities associated with the Training Ship Golden Bear (TSGB) refer to the Vessel Operating Manual (VOM) and/or Shoreside Administrative Manual (SAM). The TSGB is a subject specific component that supports the overall University IIPP.

1.1 Regulatory Standards Reference

Cal Maritime and its subcontractors shall comply with the following requirements. In case of conflict or overlap of the below references, the most stringent provision shall apply.

- Occupational Safety and Health Act (OSHA), 1904, 1910, 1915, 1917, 1918, 1926
- California Code of Regulations (CCR), Title 8, GISO, CSO, ESO
- §1620. Design and Construction of Railings.
- §1621. Railings and Toe-boards.
- §1660. Suspended Scaffolds for Loads of 425 Pounds or Less.
- §1662. Boatswains' Chairs.
- §1663. Float Scaffolds.
- §1664. Needle-Beam Scaffold.
- §1669. General Requirements for Fall Protection Use.
- §1670. Personal Fall Arrest Systems, Personal Fall Restraint Systems and Positioning Devices.
- Fed/OSHA Fall Protection Regulations
- http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_i_d=10756
- §1671. Safety Nets.
- §1671.1. Fall Protection Plan.
- §1671.2. Controlled Access Zones and Safety Monitoring Systems.
- §1704. Pneumatically Driven Nailers and Staplers.
- §1710. Erection of Structures.
- §1712. Reinforcing Steel and Other Similar Projections.
- §1716. Bolting, Riveting, Fitting-Up and Plumbing.
- §1730. Roof Hazards.

1.2 CSU-System & Cal Maritime Specific Reference

For additional information on Cal Maritime environmental health and safety policies, refer to:

- CSU Executive Order 1039, 1056, 1069
- Cal Maritime Policy AF 09-003, AF 09-004

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

1.3 Other Resources

- UC Berkeley Fall Protection Safety Program
- Guardian Fall Protection- <https://www.guardianfall.com/>
- MSA Fall Protection- <http://us.msasafety.com/Fall-Protection-Equipment/Full-Body-Harnesses/c/10101>

2.0 Administrative Duties & Responsibilities

It is the policy of the Cal Maritime to maintain a safe and healthy work environment for each employee (including student and contract employees), and to comply with all applicable occupational health and safety regulations. This Injury and Illness Prevention Program (IIPP) is intended to establish a framework for identifying and correcting workplace hazards within the department, while addressing legal requirements for a formal, written IIPP.

To assist Cal Maritime in providing a safe, compliant, environmentally sound, and more sustainable operation, each department or operational unit is expected to review, understand, and follow the guidance provided in the Injury Illness Prevention Program components and the and the function of the integrated campus safety management system (ICSMS) as related to operations under their control.

In a proactive behavior based environmental health and safety model that entire campus community participation reflects a process that embraces the ability to;

- Eliminate adverse conditions which may result in injury or illness,
- Recommend the establishment of programs to raise safety consciousness in the community, and
- Achieve and maintain a beneficial relationship through continuing communication on issues relating to environmental health and occupational safety.

2.1 Employees (Including Student workers)

It is the responsibility of all faculty and staff to proactively participate and subsequently comply with all applicable health and safety regulations, Cal Maritime policies, and established safe work practices. This includes, but is not limited to:

- Observing health and safety-related signs, posters, warning signals and directions.
- Learning about the potential hazards of assigned tasks and work areas.
- Taking part in appropriate health and safety training.
- Following all safe operating procedures and precautions.
- Participating in workplace safety inspections
- Using proper personal protective equipment.
- Inform coworkers and supervisors of defective equipment and other workplace hazards without fear of reprisal.
- Reviewing the building emergency plan and assembly area.
- Reporting unsafe conditions immediately to a supervisor, and stopping work if an imminent hazard is presented.

2.2 Department of Safety and Risk Management (SRM)

The Director of Safety and Risk Management (SRM), as delegated by the University President, is responsible for the implementation and administrative management for Cal Maritime’s Injury Illness Prevention Program (IIPP) that meets the requirements of California Code of Regulations (CCR), Title 8, section 3203) as well as other applicable California and Federal Occupational Safety and Health (Cal-OSHA) requirements.

Further responsibilities are outlined below:

- Provide advice and guidance to all university personnel concerning IIPP compliance requirements;
- Provide centralized monitoring of campus activities related to implementation of campus IIPP;
- Ensure scheduled periodic safety inspections are performed in compliance with regulatory requirements and assist management staff in identifying unsafe or unhealthful conditions;
- Ensure safety and health training programs comply with regulatory requirements and university policy;
- Oversee the maintenance of safety and health records consistent with the requirements of this document and regulatory mandates;
- Ensure program audits, both scheduled and as required by a process, equipment or personnel change, or by a safety program mandate, are performed;
- Interpret existing or pending safety and health legislation and recommend appropriate compliance strategies to university personnel;
- Maintain centralized environmental and employee monitoring records, allowing employee access as directed by law.
- Conduct at least an annual review of this document and make the current revision available on the SRM web site.

2.3 Deans, Directors, Department or Operating Unit Management

Campus Department or Operating Unit Head leadership have an integral campus role and shall have a thorough understanding of Injury Illness Prevention Program components and the function of the integrated campus safety management system (ICSMS) as related to operations under their control.

- The Department Head has primary authority and responsibility to ensure the health and safety of the department's faculty, staff and students through the implementation of the Injury Illness Prevention Program components. This is accomplished by communicating the Cal Maritime’s campus emphasis on health and safety, analyzing work procedures for hazard identification and correction, ensuring regular workplace inspections, providing health and safety training, and encouraging prompt employee reporting of health and safety concerns without fear of reprisal.
- Specific areas include employee and student (both student employees and students in academic programs) education and training, identification and correction of unsafe conditions, and record keeping. It is recognized that a substantial amount of responsibility falls at this level.
- Colleges and Departments are encouraged to designate an individual as the College or department safety coordinator, to assist with specific operational environmental health and safety process management components.

2.4 Supervisors and Principal Investigators

Supervisors play a key role in the implementation of the Cal Maritime’s Injury Illness Prevention Program components. Supervisors may be Management, Senior Research Associates, Department Chairs, Principal Investigators, or others who oversee a project and/or staff. They are responsible for but not limited to:

- Communicating to their staff and students about Cal Maritime campus's emphasis on health and safety.
- Ensuring periodic, documented inspection of workspaces under their authority.
- Promptly correcting identified hazards.
- Modeling and enforcing safe and healthful work practices.
- Providing appropriate safety training and personal protective equipment.
- Implementing measures to eliminate or control workplace hazards.
- Stopping any employee’s work that poses an imminent hazard to either the employee or any other individual.
- Encouraging employees to report health and safety issues without fear of reprisal.

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

2.5 Academic Programming Faculty and Advisors

It is the responsibility of Faculty, Academic Programming Advisors other Cal Maritime related activities and student clubs to:

- Develop procedures to ensure effective compliance and support of the Injury and Illness Prevention Program components as it relates to operations under their control. Specific areas of responsibility include student education and training, identification and correction of unsafe conditions, and incident reporting.
- Develop and maintain written classroom, laboratory, and activity procedures which conform to regulatory, campus and departmental guidelines.
- Instruct students in the recognition, avoidance, and response to unsafe conditions, including hazards associated with non-routine tasks and emergency operations
- Permit only those persons qualified by education and training to operate potentially hazardous equipment or use hazardous materials, unless under close supervision.
- Supervise students in the performance of activities.

2.6 Students- Cadets

Students are expected to always adhere to safety practices presented by faculty, technical staff, student assistants, graduate assistants or other authorized individuals. They must also report potentially hazardous conditions that become known to them. These reports should be made to their supervisors, faculty advisers, Department of Safety and Risk Management, or other responsible parties.

2.7 Fall Protection Users

- Is trained on and applies “Safe-Work Rules” for users as outlined in this program.
- Always selects and uses a hand and power tools in a safe manner.
- Visual inspect prior to use.
- Alerts Owner Department Management when hand and/or power tools need repair/replacement.
- Assesses work to determine if fall protection should be worn and seeks alternative access methods instead of hand and/or power tools if need be.
- Proactively use Stop Work Authority when they feel there is an unsafe condition present by means of communicating with Department Management and SRM to work collaboratively to resolve and improve identified or perceived condition.

3.0 Process Management

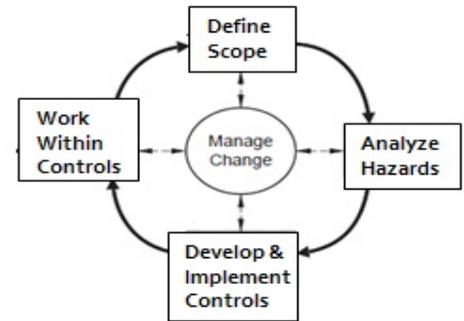
3.1 Hazard Identification, Risk Assessment & Control (HIRAC)

3.1.1 Integrated Safety Management (ISM)

Cal Maritime is committed to having all campus-related work performed safely and in a manner that strives for the highest degree of protection for the Campus Community. To achieve these goals, Cal Maritime implements, the principles of safety through an Integrated Campus Safety Management System (ICSMS).

Simply put, ICSMS applies a plan-do-check-act approach to campus safety management. Five core activities represent the plan-do-check-act approach, and comprise the underlying process for any construction work activity. The five core activities are:

- 1) Define the Scope of Work
- 2) Analyze the Hazards
- 3) Develop and Implement Hazard Controls
- 4) Perform Work Within Controls
- 5) Provide Feedback and Manage Change



The identification and analysis of workplace hazards is part of the pre-work planning process. The goal of this core activity is to ensure that the hazards associated with construction work activities are clearly understood and appropriately managed. All new campus work activities, changes to existing work or introduction of new equipment or processes (which introduce new hazards or increase the hazard level) need to be reviewed to analyze hazards, identify safety standards/requirements, and establish appropriate controls. Safety conditions and requirements need to be formally established and in place before construction work is initiated.

The campus Job Hazards Analysis (JHA) process is the principle method for achieving this.

3.1.2 Hazard Identification, Risk Assessment & Determining Control Table (HIRAC)

The SRM Hazard Identification, Risk Assessment and Determining Control Table (HIRAC) process is used to identify, assess and risk-rank Cal Maritime campus-related activities in order to ensure that Cal Maritime Campus Safety programs, activities and work controls are appropriately addressing construction risks. The initial HIRAC assessment and risk-ranking of campus-related activities was conducted during the third quarter, AY 2016-2017. The HIRAC assessment will be reviewed annually, when new campus-related activities are introduced that create or modify assessed risks, and when worksite observations or accident/incident experience identify previously unrecognized or incorrectly categorized risks.

3.1.3 Application of Hierarchy of Controls

In developing hazard controls and preparing the Job Hazard Analysis submittal, the campus shall select means and methods to mitigate worker exposure to workplace hazards using the Hierarchy of Controls as specified in the American National Standards Institute (ANSI) Z10-2005 Occupational Health and Safety Management Systems.

The campus shall make a good faith effort to analyze each hazard and identify the appropriate control(s) using the following hierarchy:

- Elimination or substitution of the hazards where feasible and appropriate;
- Use of engineering controls where feasible and appropriate;
- Application of work practices and administrative controls that limit worker exposures; and
- Provision and use of personal protective equipment

3.1.4 Job Hazards Analysis (JHA)

For the purposes of this section Job Hazard Analysis (JHA) and Job Safety Analysis (JSA) can be used synonymously. A JHA/JSA can be incorporated into a Pre Task Plan, provided there is a section for employees to review, comment and sign. Core components of the scope of work and relative hazards can be electronically completed ahead of time, provided there is room for current site conditions are able to be readily added as applicable. When the scope or conditions change, the change in work plan should be noted in a different colored pen with employee’s initially that they have been briefed on the change. The Department of Safety and Risk Management will work with individual Departments to develop a master Campus JHA library.

- Each employee scheduled to work in the activities identified below shall receive safety training in those activities prior to working on them.
- Subcontractors shall submit a Job Hazards Analysis (JHA) for those construction activities meeting the requirements for performing JHA (see below). The JHA shall be reviewed and authorized to proceed by the Cal Maritime Department of Safety and Risk Management before work commences.
- Subcontractor shall be responsible for submitting a JHA and work procedures to Cal Maritime Department of Safety and Risk Management for review a minimum of seven days prior to the start of work for most work activities.

3.1.4.1 JHA Requirements

A JHA shall be written based on the following conditions:

- Jobs with the highest injury or illness rates
- Jobs with the potential to cause severe or disabling injuries or illness, even if there is no history of previous accidents
- Jobs in which one simple human error could lead to a severe accident or injury
- Jobs that are new to your operation or have undergone changes in processes and procedures
- Jobs complex enough to require written instructions.

If not otherwise specified in a particular project specification, the JHA shall be performed in accordance with the OSHA 3071.

JHA processes. In general the JHA will include:

- Description of work phase or activity
- Identification of potential hazards associated with the activity
- Address further hazards revealed by supplemental site information (e.g., site characterization data, as-built drawings) provided by the subcontractors construction manager.
- A list of the Subcontractor’s planned controls to mitigate the identified hazards
- Identification of specialized training required
- Identification of special permits required
- Name of the Subcontractor’s Competent Person(s) responsible for inspecting the activity and ensuring that all proposed safety measures are followed.

3.2 Hazard Assessment

Code requires the load rating must be attached or permanently printed on each piece of equipment and must be readable by the person using the equipment. The user must be able to plan the use of the equipment based on the load capacity. The kind of personal fall arrest system selected should match the particular work situation, and any possible free fall distance should be kept to a minimum. Consideration must be given to the particular work environment, the presence of acids, dirt, moisture, oil, grease, etc., and their effect on the system. Hot or cold environments may also have an adverse effect on the system. Wire rope should not be used where an electrical hazard is anticipated, etc.

Answer these questions whenever you are about to work from an elevated location and may want to use FPE:

	Question	YES	NO	NA
1	Will the work require special PPE (besides fall protection)?			
2	How will I get equipment and tools to the work location?			
3	Do I need to prevent my activities from resulting in hazards to those below by following appropriate barricading methods to keep non-essential personnel away?			
4	Can I work from the ground level instead by bringing the work down?			
5	Can I work safely from a ladder instead?			
6	Can I use an aerial (boom) lift or scissors lift instead (and, am I qualified to operate one?)			
7	If not, can we install portable guardrails for the job?			
8	If not, can I use fall restraint?			
9	If not, will I use fall arrest?			
The goal is to find another way to perform the work without the necessity to use FPE and avoid the need of rescue. So, if you've chosen to use FPE, answer the following questions:				
10	Are there any existing approved anchorage points I can use? Where?			
11	Is it labeled as an approved anchorage point or obviously capable of holding 5,000 lbs. or more as determined by a qualified person?			
12	If not, can approved pre-manufactured or engineered anchorages be installed?			
13	Do I have the right equipment (full body harness, minimum length lanyard, shock absorber, connecting hardware, I-beam strap, self-retracting lifeline, etc.)?			
14	What is the clearance or distance I may fall into?			
15	Is there at least 15-18 feet of clear space from anchorage point before the next level down? (Calculate fall distance to include lanyard length, deceleration distance of 3.5 feet, your height, one foot of harness slack, elongation factor, and a safety factor.)			
16	What is between me and the ground or floor below?			
17	What will I hit on the way down?			
18	If would I need to be rescued if I fall and suspended in the harness, has the Fall Protection Rescue Plan Form been completed?			
19	Notes:			

Listed below are different types of fall safety equipment and their recommended usage.

GENERAL HAZARD IDENTIFICATION & CONTROL MEASURES FOR EQUIPMENT USE			
TASK	HAZARD	HAZARD CONTROLS & PROTECTION MEASURES	
OPERATIONS THAT REQUIRE FALL PROTECTION		Harnesses and Belts	<ul style="list-style-type: none"> ⚠ Class 1: Body belts (single or double D-ring) are designed to restrain a person in a hazardous work position and to reduce the possibility of falls. They should not be used when a fall potential exists; positioning only. ⚠ Class 2: Chest harnesses are used when there are only limited fall hazards (no vertical free fall hazard) or for retrieving persons such as removal of persons from a tank or a bin. ⚠ Class 3: Full body harnesses are designed to arrest the most severe free falls ⚠ Class 4: Suspension belts are independent work supports used to suspend a worker, such as boatswain's chairs or raising or lowering harnesses.
		Connectors	<ul style="list-style-type: none"> ⚠ Rope Lanyard: Offers some elastic properties for fall arrest; used for restraint purpose. ⚠ Web Lanyard: Ideal for restraint purposes where fall hazards are less than two feet. ⚠ Cable Positioning: Designed for corrosive or excess heat environments and must be used in conjunction with shock absorbing devices. ⚠ Shock Absorbers: When used, the fall arresting force will be greatly reduced if a fall occurs. ⚠ Rope Grabs: A deceleration device which travels on a lifeline, used to safely ascend or descend ladders or sloped surfaces and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. ⚠ Retractable Lifeline: Gives fall protection and mobility to the user when working at height or in areas where there is a danger of falling.
		Guards	<ul style="list-style-type: none"> ⚠ Safety Nets: Can be used to lessen the fall exposure when working where temporary floors and scaffolds are not used and the fall distance exceeds 25 feet. ⚠ Rail System: When climbing a ladder, rail systems can be used on any fixed ladder as well as curved surfaces as a reliable method of fall prevention.

TRAINING REQUIREMENTS

	DO NOT use this equipment unless an instructor or shop supervisor has instructed you in the safe use and operation and has authorized you to operate this equipment.		
✓ IIPP	✓ Dept. Specific	✓ Operators/Owner's Manual	✓ Other:

PERSONAL PROTECTIVE EQUIPMENT

									
Eye Protection	Foot Protection	Hand Protection	Hearing Protection	Body Protection	Head Protection	Respiratory Protection	Fall Protection	Face Shield	OTHER
When exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation...	When working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, or will protect the affected	When hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns	When exposed to a time weighted average noise level of 85 dBA or higher over an 8 hour work shift.	When exposure to: Intense heat, hot metals, other hot liquids Impacts from materials that can cut, burn Hazardous chemicals Or potentially infectious materials	Where there is a potential for injury to the head from falling objects and/or when there is a risk of impact to head	May be required if removal of contaminants from the air does not fall below permissible exposure level.	When there is a risk of falling from a height greater than 4ft GSO 6ft CSO 6ft MSO When working in confined space	Face shield can be used over the glasses if there is a presence of a lot of flying debris.	

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

3.3 General Requirements

3.3.1 Regulatory Overview

Employers must set up the work place to prevent employees from falling off of overhead platforms, elevated work stations or into holes in the floor and walls. Fed/OSHA requires that fall protection be provided at elevations of **four feet in general industry workplaces, five feet in shipyards, six feet in the construction industry and eight feet in longshoring operations.** In addition, OSHA requires that fall protection be provided when working over dangerous equipment and machinery, regardless of the fall distance. Cal/OSHA requirements depends on the activities for example 7.5-feet in construction

Please Note: As a means of best management practice, Cal Maritime will be adopting the Fed/OSHA construction standard of **six feet** for all land-base/shore-side operations.

OSHA defines fall protection as “any equipment, device, or system that prevents a worker from falling from an elevation or mitigates the effect of such a fall.” Under the final rule, employers may choose from the following fall protection options:

- Guardrail
- Safety net system
- Personal fall arrest system
- Positioning system
- Travel restraint system
- Ladder

Proper training, maintenance and inspection of all components of FPE are crucial in creating a safe work environment. The following procedures outline activities to be followed when implementing this program.

3.3.1.1 Owner Department Requirements

The Department owning FPE designates the “**Fall Protection Program Coordinator(s)**” responsible for the following actions:

- Ensures that FPE purchased and used in the department are code-compliant and appropriate for the needed safe-work tasks.
- Consults with the SRM Fall Protection Program Manager as needed to assess proper FPE use and procurement specifications.
- Coordinates with SRM to provide documented fall protection safety training, or provides FPE training themselves (by JSA or other presentation), to all department personnel who use FPE. Periodically audits departmental compliance with the Fall Protection Program.
- Only allows persons who have successfully completed documented Fall Protection training to use FPE and conduct work requiring use of FPE.
- Informs SRM when new equipment is purchased so it can be added to the SRM FPE inventory.
- Ensures that all FPE owned by the department has documented FPE inspections completed by SRM every 6-months.
- At least annually reminds the FPE users of their requirements under this program.

3.3.1.2 Fall Protection Program Coordinator

The Owner Department’s Fall Protection Program Administrator is trained on their roles and responsibilities in the management of the Fall Protection Program as it applies to their department, and maintenance requirements and the semi-annual equipment inspections outlined in this program.

3.3.1.3 FPE Users

Are trained as part of their work activities once on the contents of this program and the general safe-work procedures it contains. In addition, site-specific or task-specific safe-work orientation as well as tail-gates trainings may be needed in the use of FPE for unusual operations. Annual review of the general requirements and safe-work rules of this program is recommended for tailgate meetings or periodically scheduled safety meetings.

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink “controlled copy” stamp.

3.4 Fall Protection Equipment User's Safe-Work Rules

FPE is selected so that it fits comfortably, can be adjusted so that it is comfortable and has the attachment points appropriate for its use (positioning, fall arrest, etc.).

Prior to use each FPE device is inspected for the following:

- Operation of snap-hooks or any other means of attachment
- Condition of webbing, straps and buckles
- Operation of brakes and ratchets in self-retracting lanyards and winches
- Damaged, defective, or in any way questionable FPE is removed from use and Owner Department management is notified of the problem.
- The work area is prepared and cleared of unnecessary obstructions.
- Cordon off the area below to alert people passing below of potentially falling items.
- Clear or shield obstacles that could affect the safe use of the FPE. This includes obstacles at a landing point if using a controlled decent device or sharp/abrasive surfaces that could impact a lanyard.
- Lanyards are never clipped together.
- If using FPE while working off a ladder, the Ladder Safety Program is referred to for the safe use of the ladder and fall protection on ladders.
- When working aloft, tools and supplies are secured with tool lanyards so they cannot fall.
- FPE is not used for any operation that it was not designed for.

3.5 FPE Maintenance and Care

FPE is not stored in the sunlight or in another source of ultraviolet light. Ultraviolet light degrades the condition of synthetic webbing. Store FPE in a dry clean place not subject to dust or weather. Hanging on storage hooks is a good idea for webbing devices.

- FPE is not stored with weight over folded webbing. The webbing can be creased and therefore be damaged.
- FPE is not exposed to any solvents that could breakdown webbing. This includes products containing acetone, MEK, lacquer thinner or other similar solvents.
- FPE is not subjected to hot surfaces or welding splatter. Any burn marks on or stiffening of webbing due to heat will make the device unusable.
- Always keep FPE ready for use by following the safe-cleaning and storage procedure

3.6 Fall Protection – When working from ladders.

The Ladder Safety Program outlines information on the use of fall protection when working from a ladder including very specific activities that must be followed to work without fall protection.

Safe-Work Rules for Use of a Ladder:

1. Select a ladder that is the proper length and duty rating for the intended work.
2. The leaning-ladder must extend at least 36" above the edge of a roof/mezzanine when properly installed. A step ladder must be tall enough so that you don't have to stand on the top or the top two rungs of the ladder to access your work.
3. Do not use electrically conductive (e.g. aluminum) ladders for electrical work or near live electrical parts.
4. Inspect the ladder for broken or defective parts prior to each use.
5. Remove damaged or defective ladders from use and notify department management of the problem ladder.
6. Do not place ladders where they can be accidentally struck or displaced.
7. If the ladder is used in an area where anyone could walk under it, the area must be cordoned off with a visual barrier such as yellow caution tape to alert pedestrians to the hazard of something falling from the ladder.
8. Ladders must not be placed in passageways, doorways, driveways, or any location where they may be displaced by activities conducted on any other work, unless protected by barricades or guards.

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

9. Tie, block, or otherwise secure portable ladders while in use.
10. Do not splice ladders together.
11. Face the ladder while ascending and descending.
12. Do not stand on the top two rungs of a single ladder, extension ladder or the top cap and top step of a step ladder.
13. Do not stand on the top three rungs of ladders unless there are members of an adjacent structure that provide a firm handhold, or the ladder user is protected by a personal fall protection system (e.g., positioning device or fall restraint system) tied off to a CalOSHA certified fall protection anchor.
14. If working outside of the ladder's footprint, or when standing on the upper-most parts of the ladder as noted above, use an appropriate fall protection system as described in the Cal Maritime Fall Protection Program.
15. Do not place planks on the top cap or any other part of a ladder.
16. Do not use the X-bracing or other structures on the rear section of a stepladder for climbing unless the ladder is designed to be climbed from both sides. (See Extension Trestle Ladders and similar.)
17. Make sure that the stepladder is properly set up and that the spreader is locked in place before use.
18. Do not use the stepladder as a lean-to ladder.
19. Always use a tool belt and other 'hands-free' carrying devices when ascending and descending a ladder.
20. When working aloft secure tools and supplies so they cannot fall from the ladder

Refer to Ladder Safety Program for more in depth details

3.7 Types of Fall Protection Equipment (FPE)

A Personal Fall Protection System is comprised of three (3) key components:

- Anchorage connector
- Body wear
- Connecting device to join them

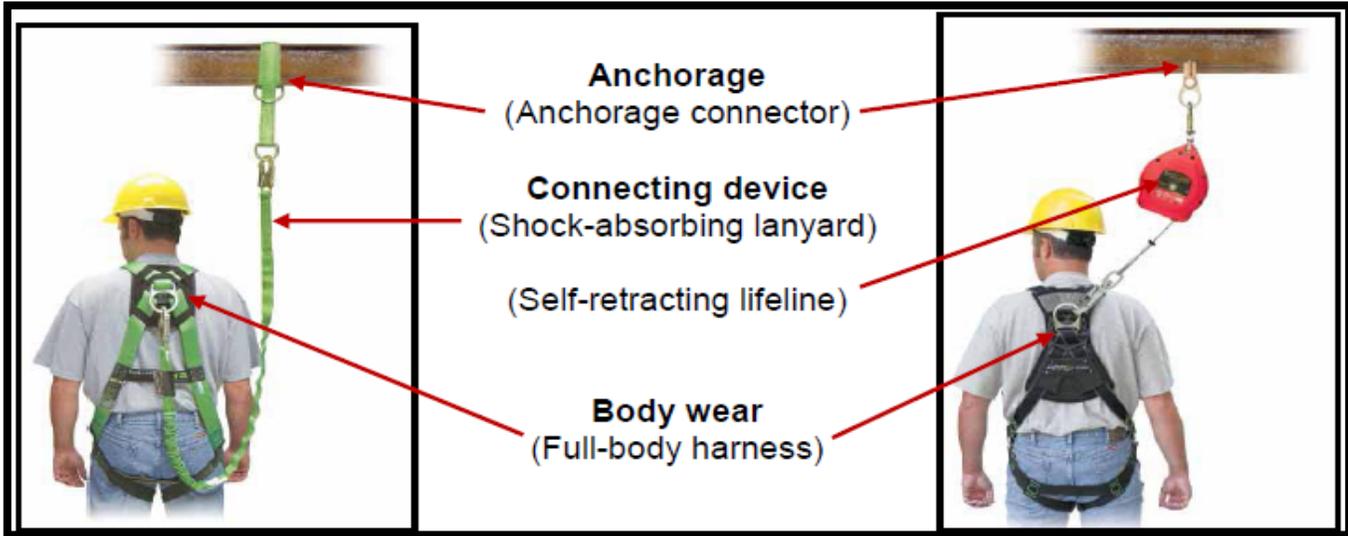
FPE is selected and used to meet the design requirements for the following five categories of Fall Protection Systems:

1. Arrest System
2. Positioning System
3. Restraint System
4. Suspension System
5. Retrieval System

3.7.1 Fall Arrest System

A personal Fall Arrest System is used to slow and stop a person during a fall from an elevated location. As a general rule, it is recommended that a Fall Arrest System be used at working heights of four (4) feet or more; however, regulatory agencies vary the height-use requirements based on tasks or industries. Contact SRM to assure compliance with codes prior to procuring and using Fall Arrest Equipment.

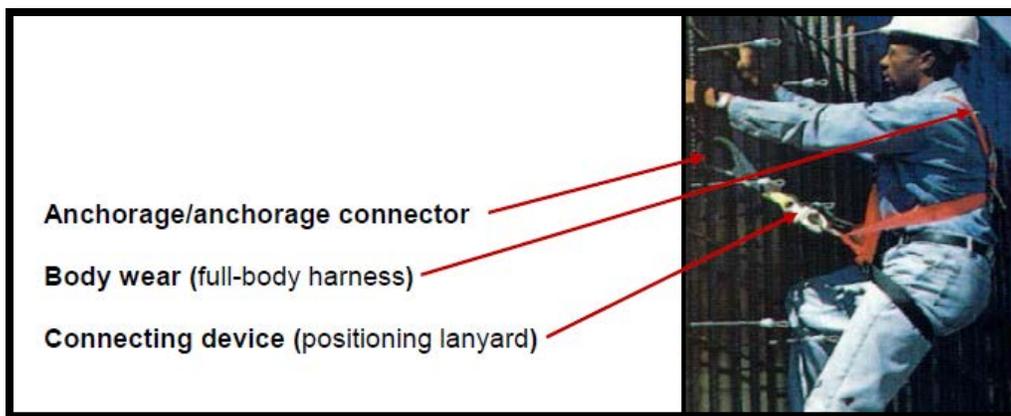
The Fall Arrest System consists of:



3.7.2 Positioning System

A positioning system is used to hold a worker in place while allowing a hands-free work environment at elevated heights. The positioning systems are not designed for fall arrest and, therefore, a back-up fall arrest system must be used.

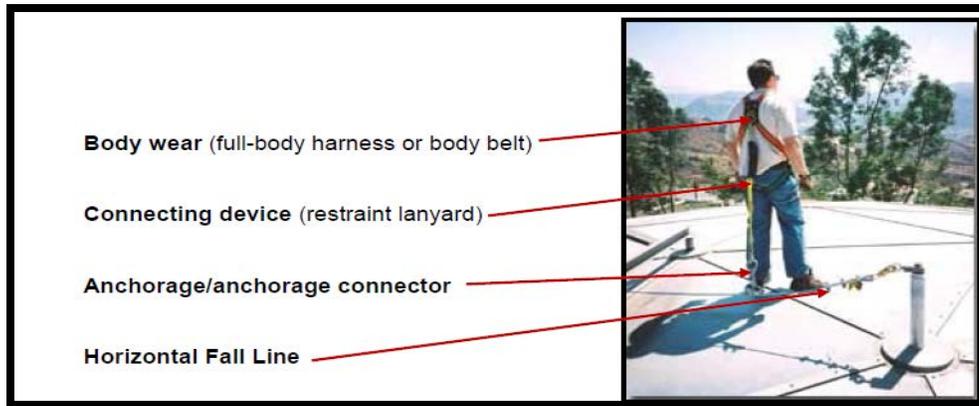
A typical positioning system consists of:



3.7.3 Restraint System

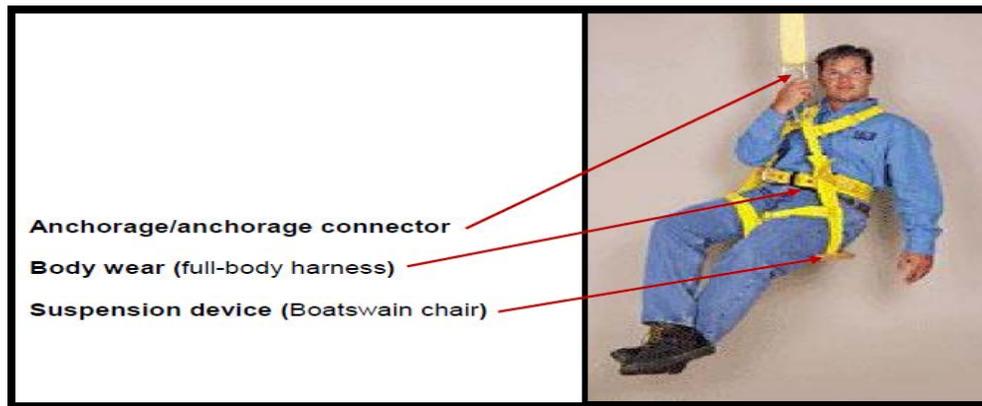
A restraint system is used to restrict the worker’s movement to prevent reaching a location where a fall hazard exists. The restraint systems are not designed for fall arrest and, therefore, a back-up fall arrest system must be used.

A typical restraint system consists of:



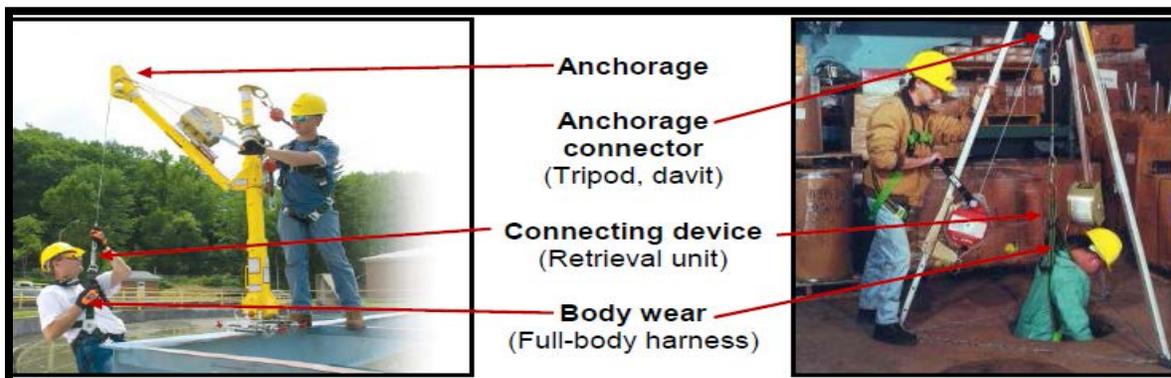
3.7.4 Suspension System

Suspension systems are used widely in the window washing and painting industries and are designed to lower and support a worker while allowing a hands-free work environment. The positioning and suspension systems are not designed for fall arrest and, therefore, a back-up fall arrest system must be used. A typical suspension system includes:



3.7.5 Retrieval System

The retrieval system is primarily used in confined space applications where workers must enter tanks, manholes, etc., and may require retrieval from above should an emergency occur. Retrieval Systems may also be used in rescue after a fall has occurred and the victim is hanging by the Fall Arrest System in suspension. A retrieval system typically consists of:



3.8 Selection of FPE

FPE is designed and constructed according to the American National Standards Institute (ANSI) standards to safely hold greater than twice the expected load in positioning systems and a specific amount of weight in fall arrest systems in the event of a fall. The design-load capacity includes a person's fully clothed weight plus the weight of any tools and materials that are carried that could be part of the load on the FPE during a fall.

3.8.1 FPE Types and Selection for Use

Harnesses	
<p>Vest Harness</p> <ul style="list-style-type: none">  A harness is built into the vest to create a no-tangle body wear system.  The leg straps of the Vest Harness zip into the back of the harness for easy storage when not in use.  Used the same as any other fall protection harness, but offers pockets and can be visibility vests for use on construction sites. 	
<p>Retrieval harness</p> <ul style="list-style-type: none">  This harness has spring loaded "stand-up" dorsal retrieval D-rings for quick rescue in the event of a fall or retraction (retrieval) from a confined space  Can be used as a fall arrest harness in man-holes and other confined spaces. 	
<p>Welding Harness</p> <ul style="list-style-type: none">  Edge Flame Resistant Harness is designed with welding applications in mind and features a replaceable outer shell to prolong the life of the harness by shielding the webbing from high intensity ultraviolet light, slag, and sparks produced by welding.  Used as a fall protection harness on steel structures such as bridges where the person wearing the harness is welding. 	
<p>Tower Harness</p> <ul style="list-style-type: none">  Tower Harness for climbing, work positioning, and suspension has an extra comfortable saddle and a body belt for positioning.  Typically used on broadcast towers and theater/concert production in instances where lifelines and positioning/restraint systems are used. 	
<p>Body Belt</p> <ul style="list-style-type: none">  Body belts can only be used for fall restraint or positioning systems, not for fall arrest.  Body belts (single or double D-ring) are designed to restrain a person in a hazardous work location and to reduce their inadvertent access to a fall hazard. 	
<p>Lineman Harness</p> <ul style="list-style-type: none">  The extra wide cradle seat adds comfort to the lineman harness and includes four attached side positioning D-rings and a permanently attached tool belt.  These are mostly used for work from poles or in trees. 	
<p>Jacket Harness</p> <ul style="list-style-type: none">  The outer shell of this harness's jacket is designed to protect the person wearing it from wind and rain, and the accessory flaps prevent rain from getting inside their jacket.  These are similar to a vest harness as they are used the same as any other fall protection harness, but offers pockets and can be in orange visibility coloration for use on construction sites. 	

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

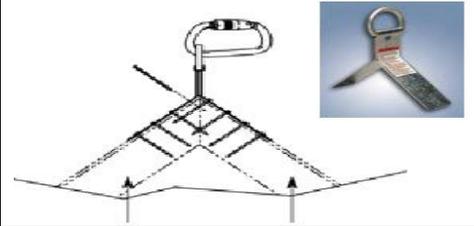
Connectors	
<p>Fall limiter</p> <ul style="list-style-type: none">  A short version of a self-retracting lanyard. The one shown here is attached to an elbow strap around the beam.  These are used in lieu of shock absorbing lanyards.  They are designed to lock quicker (within two inches) than self-retracting lanyard 	
<p>Rope Grab Lanyard</p> <ul style="list-style-type: none">  A deceleration device which travels on a lifeline used to safely ascend or descend ladders or sloped surfaces and automatically, by friction, engage the lifeline and lock so as to arrest the fall of an employee.  These are used for fixed ladders. 	
<p>Cab Mount Lanyard</p> <ul style="list-style-type: none">  Designed to secure an operator into a cab of a forklift as shown in the picture.  It is a version of a fall-limiter. They are designed to lock quicker (within two inches) than self-retracting lanyards 	
<p>Self-Retracting Lanyard</p> <ul style="list-style-type: none">  A Retractable Lifeline System that gives fall protection and mobility to the user when working at height or in areas where there is a danger of falling. 	
<p>Positioning Lanyard</p> <ul style="list-style-type: none">  These clip to both sides of waist D rings so the center clip can attach to ladder rungs or rebar. A person can be positioned so they can work with both hands free while secured to a vertical surface.  These are used for tying rebar or working off towers and allow hands free work. 	
<p>Double legged Shock Absorbing Lanyard</p> <ul style="list-style-type: none">  Are attached to a dorsal D ring and used to alternate attachment when necessary.  Most often used for horizontal lifelines and having to detach from one line to reach around something like a vertical beam to attach to another line. 	
<p>Stop Fall</p> <ul style="list-style-type: none">  A lanyard that cinches a pole while attached to the belt rings of a climbing belt or harness.  A positioning system lanyard used for "hitchhiking" trees and poles 	
<p>Vertical Lifeline</p> <ul style="list-style-type: none">  These attach to an anchor point on a roof, a beam, or something similar. A rope grab and/or a descender operates on the rope.  These are used as lifelines for temporary means of access such as suspended scaffolding and extension ladders. 	
<p>Shock Absorbing lanyard</p> <ul style="list-style-type: none">  This type of connector, or alternatives such as fall limiters or self-retracting lanyards, is required for all fall arrest systems. The shock absorber is sewn layers of fabric in the black part of this lanyard. The snaphook at the opposite end is engineered to attach to webbing or anchor points. 	
<p>Self-Locking Carabineers</p> <ul style="list-style-type: none">  This is a prime connecting device and may be used to connect harnesses to lanyards, lanyards to anchors or decent devices. 	

Rescue Devices	
<p>Handled Ascender Designed for ascending or descending along a rope or lifeline and, occasionally, for hauling (progress capture).</p>	
<p>ASAP Mobile fall arrest device for rope used as a lifeline. Stops a fall, a slide or uncontrolled descent. It locks even if the device is grabbed during a fall. Works on vertical or angled rope. Moves up and down along the rope without manual intervention. Easy to install and remove at any point on the rope. Can be used with an energy absorbing lanyard.</p>	
<p>Self-braking Descender Self-braking Descender (Petzl I'D) with anti-panic function for working on fixed ropes. Designed for work on a rope, the gate on the swinging side plate helps prevent dropping the device. Multi-functional handle allows the user to: Unblock the rope and control the descent with the hand on the braking side of the rope Move more easily on horizontal or low-angle terrain thanks to the button on the handle Position themselves while on the rope</p>	
<p>Self-Rescue Device This attaches to a harness and provides a means of self-rescue controlled descent as well as a means of rescue if the person using it is unconscious. This may be used in any situation where a harness is used in addition to the harness itself.</p>	
<p>Self-Rescue Emergency Controlled Decent Device Designed for smooth, automatic vertical and angular controlled descent from overhead cranes, towers, aerial lifts, oil derricks, platforms or other elevated work areas. This is specialized equipment for emergency use only.</p>	

Anchors

Temporary Roof Anchor

Attached to the crest of a roof by nails or screws and provides an anchor point while working on a roof.



Reusable Temporary Roof Anchor, Steep Pitched Roof



Permanent Roof Crest Double D



Tie-Back, or Elbow Strap Lanyards

These are designed to serve as an anchorage connector and wrap around beams or pipe that can support the 5,000 or 3,000 pound load depending on the fall protection system being used.



Permanent Anchorage Connectors

There are many designs for retrofit D rings. These two are designed to be secured through a hole in a steel structural member.



Fixed Beam, adjustable Anchors

These are attached to I beams and are load rated to 5,000 lbs. so they can be used in a fall arrest system



Snap-hook for choking

This shows a type of snap-hook that is flattened on one end to be used for choking webbing lanyards



Accessories and Their Uses

Relief Step Strap

The strap is a webbing loop that unfurls from the harness and provides a means for the person suspended after a fall to reduce/avoid suspension trauma.



Tool Lanyards

Used to prevent tools from falling and possibly injuring others below.



Fall Protection Systems

Fixed Ladder Climbing System

When climbing a ladder, rail systems can be used on any fixed ladder as well as curved surfaces as a reliable method of fall prevention.



Horizontal Lifeline System

Temporary or permanent. A horizontal rope mounted to anchor points and allows movement all along its line while attached to the line.



Continuous Pass-Through for Horizontal Lifelines

This allows movement along a horizontal lifeline without detaching or using a double legged lanyard to alternate attachments.



Temporary Horizontal Lifeline

A horizontal rope mounted to anchor points and allows movement all along its line while attached to the line. It's also known as a Catenary lifeline



Trolley

Attachment point for a horizontal lifeline that allows continuous attachment.



Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

3.9 Fall Protection Rescue Plan

A rescue plan must be developed whenever fall arrest systems are in use and when personnel may not be able to self-rescue should a fall occur. Rescue plans are required because if a person has fallen and is suspended in a harness for a relatively short period of time, even two to ten minutes, the result could be suspension trauma. Suspension trauma can result in loss of consciousness and potential death; therefore, a rescue plan and its implementation are required by code whenever someone using FPE may not be able to rescue themselves after a fall.

What is the emergency contact information of professional rescue services available, such as the local Fire Department, and what are the instructions for summoning immediate assistance?

A rescue plan must be written) and include the following:

- A second person (attendant) must accompany the person using the FPE and be in direct communication with that person.
- The attendant must have been trained in the recognition of the pre-fainting symptoms (pre-syncope).
- The attendant must have immediate access to paramedic emergency services.
- The attendant must have some means of immediate rescue assuming the person who has fallen is not able to assist in the rescue.

4.0 Training Requirements

Effective dissemination of safety information lies at the very heart of a successful Injury and Illness Prevention Program. It is essential to provide training for employees concerning general safe work practices as well as specific instruction with respect to hazards unique to each employee’s job assignment.

Training content is determined by the Department of Safety and Risk Management, as well as Department Management which is based upon observed hazards, type of equipment, Department need, and work requirements.

- Providing training from within the department as a part of academic programming, or
- Training provided by CSU-System, or
- Training provided by Cal Maritime SRM, or
- A training provider outside the University.

Note: All outside trainer vendors are to be reviewed and content approved by SRM. The Department of Safety and Risk Management, in conjunction with various departments have developed training programs designed to meet general safe work practice requirements. These programs are elements of larger programs which service broad campus needs.

Employees expected to utilize fall protection equipment as part of their job duties must be adequately trained prior to using such tools or equipment.

- Employees should be trained in the following areas:
 - Be able to recognize hazards associated with different types of tools and equipment; and the safety precautions necessary for use.
 - The PPE required to be worn during the use of tools.
 - The proper use of equipment
 - Be able to recognize defects in tools, which may render them out of service.
 - When applicable, provide access to the manufacturer specifications and manual’s for specific equipment to be used.
 - Department-developed standard operating procedures (SOPs) outlining specific safety precautions for certain tools or activities.

Retraining may be necessary to maintain employee knowledge of working with tools or if a near-miss or injury has occurred.

Training is to be documented and kept in a readily accessible location by the Department designee for access reference as needed by Department Management, Department of Safety & Risk Management, or regulatory agency (e.g. CalOSHA). Submit the completed training roster of attendees to the Department of Safety & Risk Management.

Program Administrators are trained on their roles and responsibilities in the management/maintenance of the requirements and inspections outlined in this program.

Refer to Cal/OSHA Safety & Health Training and Instruction Requirements as outlined in Appendix C of the Injury Illness Prevention Program.

5.0 Document Control & Recordkeeping

Essential records, including those legally required for Workers' Compensation, insurance audits and government inspections will be maintained for as long as required. Individual Departments and/or Colleges will also keep records of steps taken to establish and maintain the Injury and Illness Prevention Program.

They must include:

- Records of scheduled and periodic inspections to identify unsafe conditions and work practices. The documentation includes the name of the person(s) conducting the inspection, the unsafe conditions and work practices identified, and the corrective action(s) taken. These records will be maintained for at least three years.
- Documentation of health and safety training for each employee. Specifically, employee name or other identifier, training dates, type(s) of training and the name of the training provider will be included. Records will be retained for at least three years. Standard forms for maintaining this information can be obtained from the Department of Safety and Risk Management.

Training records will be kept in each department and copies will be forwarded to the Department of Safety and Risk Management.

Departments must maintain the following records as part of the hand and portable power tool safety program.

- Employee training records
- Specialized SOPs
- Manufacturer specifications/manuals
- Maintenance/service records

Record	Timeframe/Frequency	Location of Record	Retention Period*
Fall Protection & Prevention-General	Initial, Annual Refresher for affected employees.	Document on Employee's Safety Training Checklist	3-Years
Fall Protection & Prevention-General	Post incident and/or process management change for affected employees.	Document on Employee's Safety Training Checklist	3-Years
Fall Protection Safety Training-Equipment Specific	Initial, Annual Refresher for affected employees.	Document on Employee's Safety Training Checklist	3-Years
Fall Protection Safety Training-Equipment Specific	Post incident and/or process management change for affected employees.	Document on Employee's Safety Training Checklist	3-Years

*Refer to the Injury Illness Prevention Program Document Retention Table and/or California State University Systemwide for more information.

Appendix A: Definitions

General Definitions

ANSI:	American National Standards Institute
Authorized person:	Means a person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the jobsite.
Competent person:	<p>A competent person is a person who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees.</p> <p>The competent person has the authority to impose prompt corrective measures to eliminate these hazards.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> • Excavation - Inspectors 1541 • Fall Protection Plan implementers & supervisors 1671.1 • Lift Slab Construction 1522.1
Confined Space:	Is a space that (1) is large enough and so configured that an employee can enter bodily, (2) has limited or restricted means for entry or exit (e.g., tanks, vessels, vaults, shafts, pits), and (3) is not designed for continuous occupancy.
Construction Manager:	Is the Cal Maritime employee responsible for the supervision and field management of day-to-day needs of a construction project. It may be a project superintendent, a craft supervisor, or a lead person.
Construction work:	For purposes of this section, "Construction work" means work for construction, alteration, and/or repair, including painting and decorating. Construction: is any combination of engineering, procurement, erection, installation, assembly, demolition, or fabrication used to create a new facility, or to alter, add to, rehabilitate, dismantle, or remove an existing facility. It also includes the alteration and repair (including dredging, excavating, and painting) of buildings, structures, or other real property, as well as any construction and excavation activities conducted as part of environmental remediation efforts.
Controlled Access Zone (CAZ)	Means an area in which certain work (e.g., overhand bricklaying) may take place without the use of guardrail systems, personal fall arrest systems, or safety net systems and access to the zone is controlled
Imminent Danger:	Is any condition or practice that could reasonably be expected to cause death or serious physical harm (permanent or prolonged impairment of the body or temporary disablement requiring hospitalization) to employees or the public unless immediate actions are taken.
Project Manager:	Is the Cal Maritime employee representative with overall responsibility for a project. This person ensures subcontractor compliance with subcontract documents, including performance, schedule, budget, and safety.
Shall:	Means mandatory
Should:	Means recommended
Subcontractor:	Is a firm that has sole contractual responsibility for execution of the construction work related to a project, and for compliance with all safety, health, and environmental codes, standards, and regulations.
Qualified Person:	<p>A qualified person is a person designated by the employer; and by reason of training, experience, or instruction has demonstrated the ability to perform safely all assigned duties; &, when required is properly licensed in accordance with federal, state, or local laws and regulations.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> • Mobile Crane & Tower Crane Operators 5006.1(a) • Scaffold Erection & Dismantling Supervisors 1637(k)(1) • Demolition 1736 • Personal Fall Arrest System supervisors 1670(b)

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Definitions (cont.)

Fall Protection & Prevention Definitions-

Approved	Tested and approved by a Nationally Recognized Testing Laboratory (NRTL) such as Underwriters Laboratory (UL) or Gravitac.
Anchorage	A secure point of attachment for lifelines, lanyards or deceleration devices. May also be a “Bearer Bracket” or a “Roofing Bracket”.
Bearer Bracket	A bracket used in slope roof construction, having provisions for fastening it over the roof-ridge and being secured to some suitable object; also known as “Roofing Bracket”.
Body Belt	A simple or compound strap with means for securing it about the waist and for securing a lanyard to it. The use of a body belt for fall restraint/prevention is allowed, but it cannot be used for fall arrest.
Body Harness	Straps which may be secured about a person’s torso and buttocks in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.
Buckle	Any device for holding the body belt or body harness closed around the employee’s body.
Catenary Line	See “Lifeline”.
Carabineer	See “Snaphook”.
Free-Fall	The act of falling before a personal fall arrest system begins to apply force to arrest the fall.
Free-Fall Distance	The vertical displacement of the fall arrest attachment point on the employee’s body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.
Guardrail	A barrier consisting of a top rail and a midrail secured to uprights and erected along the exposed sides and ends of platforms.
Handrail	A rail used to provide employees with a handhold for support.
Hole	Any area in a floor or platform that is open to an area below but is smaller in size than an “opening” as defined by the Cal/OSHA Fall Protection codes.
Lanyard	A flexible line to secure a wearer of a safety belt or harness to a drop line, lifeline, or fixed anchorage.
Leading Edge	The edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an “unprotected side and edge” during periods when it is not actively and continuously under construction.
Lifeline	Usually a horizontal steel-wire rope (i.e. Catenary line) located between two fixed anchorages and suspended above the work surface, to which the lanyard is secured either by tying off or by means of a suitable sliding connection. A lifeline may be vertical when used with a rope-grab attached by lanyard to a body harness.
Linemen’s Body Belt	A leather or web (cotton or nylon) belt designed specifically for employees working on poles. It consists of a waist belt, generally cushioned, with a front buckle, two D rings for attaching safety straps and a multiple-looped strap for holding, rings, snaphooks, holsters and other tool holding devices.
Lower Levels	Those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.
Midrail	A rail approximately midway between the top rail and platform that is secured to the uprights erected along the exposed sides and ends of platforms.
Opening	An open area in any floor or platform 12 inches or more in the least horizontal dimension. It includes: stairway floor openings, ladder-way floor openings, hatchways and chute floor openings.
Personal Fall Arrest System	A system used to slow and stop a person during a fall from elevated location. It consists of an anchorage, connectors, a body harness, and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. The use of a body belt for fall arrest is prohibited by law.

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink “controlled copy” stamp.

Personal Fall Restraint System	A system used to prevent an employee from access to a leading edge or other fall- hazard location. It consists of anchorages, connectors, body belt/harness. It may include, lanyards, lifelines, and rope grabs designed for that purpose.
Personal Fall Protection System	A generic term for any designed fall protection system that might include fall arrest systems, positioning device systems, fall restraint systems, safety nets, guardrails, etc.
Personal Protective Equipment (PPE)	As this term applies to Fall Protection Equipment, it defines the safeguarding obtained by use of fall protection safety devices worn by a person and that safeguards them from a fall hazard, and is of such design, strength, and quality as to eliminate, preclude, or mitigate the hazard.
Positioning Device System	A body belt or body harness system rigged to allow an employee to be supported on an elevated surface, such as a wall, and work with both hands free while leaning.
Qualified Person, Attendant or Operator	A person designated by the Owner Department who, by reason of training, experience or instruction, has demonstrated the ability to safely perform all assigned duties and, when required, is properly licensed in accordance with federal, state, or local laws and regulations.
Railing	(See "Guardrail")
Ramp	A surfaced sloping passageway connecting two different levels.
Roofing Bracket	(See "Bearer Bracket").
Rope	Refers to steel-wire rope unless otherwise specified.
Rope Grab	A deceleration device which travels on a vertical lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.
Safety Belt or Harness	A device specifically for the purpose of securing, suspending, or retrieving a worker in or from a hazardous work area.
Safety Factor	Ratio of the ultimate breaking strength of a structural member, piece of material or equipment to the actual working stress or safe load when in use.
Safety Line	A vertical line most often of polypropylene or other woven synthetic material provided to protect a person from falls caused by failure of suspended scaffolds, working platforms, or loss of balance, and that extend to within four feet of ground or other stable rescue surface.
Self-Retracting Lifeline/Lanyard	A deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal movement by the user/wearer, and which, after onset of a fall, automatically locks the drum and arrests the fall.
Safety Strap	A web strap designed specifically for use in conjunction with a lineman's belt as an aid in climbing poles and to secure the employee to the pole in a manner that permits hands-free work using both hands.
Snaphook	A connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object; also known as a "Carabineer".
Unprotected Sides and Edges	Any side or edge (except at entrances to points of access) of a walking/working surface (e.g., floor, roof, ramp, or runway) where there is no wall or standard guardrail provided.
Wall opening	A gap or void 30 inches or more high and 18 inches or more wide, in a wall or partition, through which employees can fall to a lower level.

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Appendix B: Job Hazard Analysis Template- Sample

SAFETY GUIDELINES

IMAGE	SCOPE OF WORK/EQUIPMENT USE	DEPARTMENT:			
		HAZARD POTENTIAL EVALUATION			
		<input type="checkbox"/> Struck By <input type="checkbox"/> Struck Against <input type="checkbox"/> Slip/Trip/Fall <input type="checkbox"/> Caught In/Between <input type="checkbox"/> Material Handling <input type="checkbox"/> Equipment Operating	<input type="checkbox"/> Weather Conditions <input type="checkbox"/> Hazardous Substance <input type="checkbox"/> Electrical Hazards <input type="checkbox"/> Obstruction		
		SRM-HIRAC	1	2	3
			4		

TRAINING REQUIREMENTS

	DO NOT use this equipment unless an instructor or shop supervisor has instructed you in the safe use and operation and has authorized you to operate this equipment.	
<input type="checkbox"/> IIPP	<input type="checkbox"/> Dept. Specific	<input type="checkbox"/> Operators/Owner's Manual
<input type="checkbox"/> Other:		

PERSONAL PROTECTIVE EQUIPMENT

									
Eye Protection	Foot Protection	Hand Protection	Hearing Protection	Body Protection	Head Protection	Respiratory Protection	Fall Protection	Face Shield	OTHER
When exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation...	When working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, or will protect the affected	When hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns	When exposed to a time weighted average noise level of 85 dBA or higher over an 8 hour work shift.	When exposure to: Intense heat, hot metals, other hot liquids Impacts from materials that can cut, burn Hazardous chemicals Or potentially infectious materials	Where there is a potential for injury to the head from falling objects and/or when there is a risk of impact to head	May be required if removal of contaminants from the air does not fall below permissible exposure level.	When there is a risk of falling from a height greater than 4ft GSO 6ft CSO 6ft MSO When working in confined space	Face shield can be used over the glasses if there is a presence of a lot of flying debris.	

KEY HAZARD SUMMARY

HAZARD CONTROLS & PROTECTION MEASURES

IF CONDITIONS CHANGE: STOP WORK IMMEDIATELY-REVIEW WITH SUPERVISOR-DOCUMENT HAZARD-REVIEW WITH SRM

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

SAFE OPERATING PROCEDURES				
STEPS/TASKS		HAZARD POTENTIAL		HAZARD CONTROLS & PROTECTION MEASURES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
NOTES				
IF CONDITIONS CHANGE: STOP WORK IMMEDIATELY-REVIEW WITH SUPERVISOR-DOCUMENT HAZARD-REVIEW WITH SRM				
EMERGENCY RESPONSE			EVACUATION ASSEMBLY POINT	
1	First Aid Kit			
2	AED			
3	Emergency phone	Campus Police- 707-654-1111 or 911		
REMINDER: IMMEDIATELY REPORT ALL INCIDENTS, REGARDLESS OF SEVERITY, TO YOUR SUPERVISOR AND THE DEPARTMENT OF SAFETY & RISK MANAGEMENT.				
HOUSEKEEPING & SECURITY		SHOP SUPERVISOR MUST BE PRESENT WHEN SHOP IS OCCUPIED		
1	Is the work area/site Clean?	Ensure work area is clean daily and that any hazardous materials are properly disposed of daily		
2	Is the work area/site Secure?	Ensure lights are turned off and building is locked upon exiting work for the day.		
3				

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Appendix C: Inspecting of Fall Protection Equipment

Inspection of Fall Protection Guide

Body wear and connecting devices must have an undocumented inspection before each use by the FPE user, and a documented inspection semi-annually by a certified inspector. Both inspections follow the same inspection protocol as outlined below.

Harness (and Body Belt) Inspection		Hardware –	
<p>Webbing – Grasp the webbing with your hands 6 inches (152 mm) to 8 inches (203 mm) apart. Bend the webbing in an inverted “U” as shown. The surface tension resulting makes damaged fibers or cuts easier to detect. Follow this procedure the entire length of the webbing, inspecting both sides of each strap. Look for frayed edges, broken fibers, pulled stitches, cuts, burns and chemical damage.</p> 		<p>Snaps – Inspect closely for hook and eye distortions, cracks, corrosion, or pitted surfaces. The keeper (latch) should seat into the nose without binding and should not be distorted or obstructed. The keeper spring should exert sufficient force to firmly close the keeper. Keeper locks must prevent the keeper from opening when the keeper closes.</p> 	
<p>D-Rings/Back Pads – Check D-rings for distortion, cracks, breaks, and rough or sharp edges. The D-ring should pivot freely. D-ring back pads should also be inspected for damage.</p> 		<p>Thimbles – The thimble must be firmly seated in the eye of the splice, and the splice should have no loose or cut strands. The edges of the thimble must be free of sharp edges, distortion, or cracks.</p> 	
<p>Attachment of Buckles – Inspect for any unusual wear, frayed or cut fibers, or broken stitching of the buckle or D-ring attachments.</p> 		<p>Wire Rope Lanyard – While rotating the wire rope lanyard, watch for cuts, frayed areas, or unusual wearing patterns on the wire. Broken strands will separate from the body of the lanyard.</p> 	
<p>Tongue/Grommets – The tongue receives heavy wear from repeated buckling and unbuckling. Inspect for loose, distorted or broken grommets. Webbing should not have additional punched holes.</p> 		<p>Web Lanyard – While bending webbing over a pipe or mandrel, observe each side of the webbed lanyard. This will reveal any cuts or breaks. Swelling, discoloration, cracks and charring are obvious signs of chemical or heat damage. Observe closely for any breaks in stitching.</p> 	
<p>Tongue Buckles – Buckle tongues should be free of distortion in shape and motion. They should overlap the buckle frame and move freely back and forth in their socket. Roller should turn freely on frame. Check for distortion or sharp edges.</p> 		<p>Rope Lanyard – Rotate the rope lanyard while inspecting from end-to-end for any fuzzy, worn, broken or cut fibers. Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout, following a short break-in period.</p> 	
<p>Friction and Mating Buckles – Inspect the buckle for distortion. The outer bars and center bars must be straight. Pay special attention to corners and attachment points at the center bar.</p>		<p>Shock Absorber Pack – The outer portion of the pack should be examined for burn holes and tears. Stitching on areas where the pack is sewn to D-rings, belts or lanyards should be examined for loose strands, rips and deterioration.</p> 	
<p>Quick-Connect Buckles – Inspect the buckle for distortion. The outer bars and center bars must be straight. Make sure dual-tab release mechanism is free of debris and engages properly.</p> 		<p>Shock-Absorbing Lanyard – Shock-absorbing lanyards should be examined as a web lanyard (described in Item 3 above); however, also look for the warning flag or signs of deployment. If the flag has been activated, remove this shock-absorbing lanyard from service.</p> 	

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink “controlled copy” stamp.

Self-Retracting Lifeline Inspection		Cleaning Fall Protection	
<p>Check Housing – Before every use, inspect the unit’s housing for loose fasteners and bent, cracked, distorted, worn, malfunctioning or damaged parts</p>		<p>Basic care of all safety equipment will prolong the durable life of the unit and will contribute toward the performance of its vital safety function. Proper storage and maintenance after use are as important as cleansing the equipment of dirt, corrosives or contaminants.</p>	
<p>Lifeline – Test the lifeline retraction and tension by pulling out several feet of the lifeline and allow it to retract back into the unit. Always maintain a light tension on the lifeline as it retracts. The lifeline should pull out freely and retract all the way back into the unit. Do not use the unit if the lifeline does not retract. The lifeline must be checked regularly for signs of damage. Inspect for cuts, burns, corrosion, kinks, frays or worn areas. Inspect any sewing (web lifelines) for loose, broken or damaged stitching.</p>		<p>Storage areas should be clean, dry and free of exposure to dust, fumes or corrosive elements.</p> <p>Nylon or Polyester – Remove all surface dirt with a sponge dampened in plain water. Squeeze the sponge dry. Dip the sponge in a mild solution of water and commercial soap or detergent. Work up a thick lather with a vigorous back and forth motion; then wipe with a clean cloth. Hang freely to dry, but away from excessive heat and direct prolonged sunlight.</p>	
<p>Braking Mechanism The braking mechanism must be tested by grasping the lifeline above the impact indicator and applying a sharp steady pull downward which will engage the brakes. There should be no slippage of the lifeline while the brakes are engaged; once tension is released, the brakes will disengage and the unit will return to the retractable mode. Do not use the unit if the brakes do not engage.</p>		<p>Equipment Housings – Periodically clean the unit using a damp cloth and mild detergent; towel dry.</p> <p>Drying – Equipment should dry thoroughly without close exposure to heat, steam or long periods of sunlight.</p>	

Fillable Inspection forms are available for download from the SRM webpage

INSPECTION FORM:

HARNESSES

Harness Part #:

Serial #:

Date of First Use:

Date of Manufacture:

Department:

Name of Inspector:

Signature:

Date of Inspection:

Harness Configuration:
 CHEST STRAP: PT TB OC
 LEG STRAPS: PT TB OC
 WAIST BELT: YES NO

CONNECTION LEGEND: PT: PASS-THROUGH, TB: TONGUE BUCKLE, OC: QUICK-CONNECT

As a Competent Person, you must always inspect equipment before use and formally document all of your equipment at least twice a year according to industry safety standards, such as ANSI A10.32-2012 4.2.8.3, which states, "All fall protection shall be inspected at least every six months by a competent person."

LABELS & MARKINGS	PASS	FAIL	NOTE
Label (Intact & Legible)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate ANSI/OSHA/CSA Markings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspections are Current / Up-to-Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date of First Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Impact Indicator (Signs of Deployment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HARDWARE (BUCKLES & D-RINGS)	PASS	FAIL	NOTE
Shoulder Adjustment Buckles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leg & Waist Buckles / Other Hardware	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D-Rings (Dorsal, Side, Shoulder, or Sternal)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion / Pitting / Nicks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WEBBING	PASS	FAIL	NOTE
Shoulder / Chest / Leg / Back Straps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cuts / Burns / Holes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paint Contamination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Excessive Wear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heat / UV Damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STITCHING	PASS	FAIL	NOTE
Shoulder / Chest / Leg / Back Straps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



NOTES

Retain Original at Department Level & Submit Copy to Risk Management
 This best management form is adapted from Guardian Fall Protection and is to be used for any manufacturers models



Fillable Inspection forms are available for download from the SRM webpage

CAL MARITIME
INSPECTION FORM:

LANYARD

Lanyard Part #:

Serial #:

Date of First Use:

Date of Manufacture:

Lanyard Configuration:

SINGLE LEG LANYARD

DOUBLE LEG LANYARD

INTERNAL SHOCK ABSORBER

EXTERNAL SHOCK ABSORBER

CABLE WEB

Department:

Name of Inspector:

Signature:

Date of Inspection:

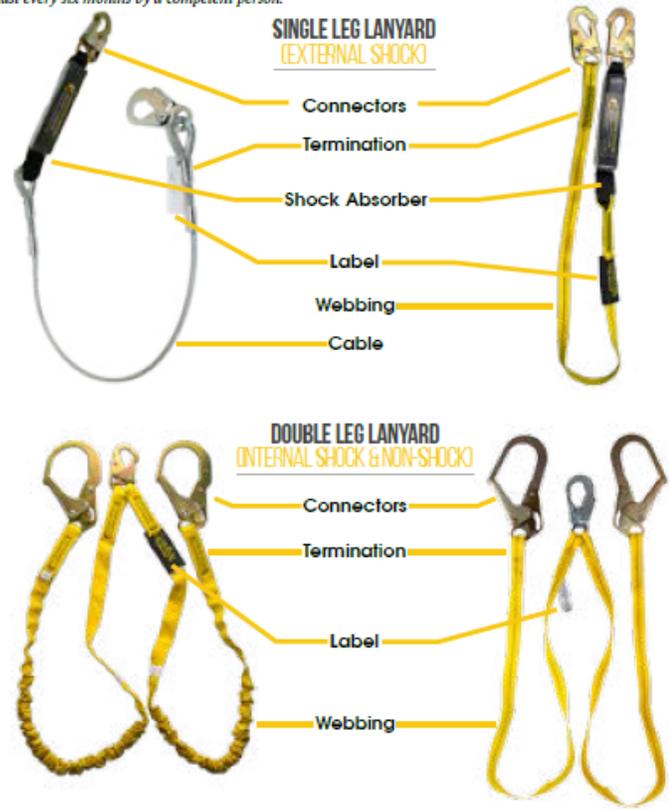
As a Competent Person, you must always inspect equipment before use and formally document all of your equipment at least twice a year according to industry safety standards, such as ANSI A10.32-2012 4.2.8.3, which states, "All fall protection shall be inspected at least every six months by a competent person."

LABELS & MARKINGS		PASS	FAIL	NOTE
Label (Intact & Legible)				
Appropriate ANSI/OSHA/CSA Markings				
Inspections are Current / Up-to-Date				
Date of First Use				

CONNECTORS		PASS	FAIL	NOTE
Connector (Self-Closing & Locking)				
Hook Gate / Rivets				
Corrosion				
Pitting / Nicks				

MATERIAL (WEB OR CABLE)		PASS	FAIL	NOTE
Broken / Missing / Loose Stitching				
Termination (Stitch, Splice, or Swage)				
Webbing Length				
Cuts / Burns / Holes				
Paint Damage				
Cable Separating / Bird-Caging				

SHOCK PACK (IF PRESENT)		PASS	FAIL	NOTE
Cover / Shrink Tube (Don't Cut or Remove)				
Damage / Fraying / Broken Stitching				
Impact Indicator (Signs of Deployment)				



NOTES

Retain Original at Department Level & Submit Copy to Risk Management

This best management form is adapted from Guardian Fall Protection and is to be used for any manufacturers models



Fillable Inspection forms are available for download from the SRM webpage



INSPECTION FORM: SELF-RETRACTING LIFELINE

SRL Part #:

Serial #:

Date of First Use:

Date of Manufacture:

Lifeline Material:

Web:

Cable: STAINLESS
 GALVANIZED

Length:

Department:

Name of Inspector:

Signature:

Date of Inspection:

As a Competent Person, you must always inspect equipment before use and formally document all of your equipment at least twice a year according to industry safety standards, such as ANSI A10.32-2012 4.2.8.3, which states, "All fall protection shall be inspected at least every six months by a competent person."

LABELS & MARKINGS	PASS	FAIL	NOTE
Label (Intact & Legible)			
Appropriate ANSI/OSHA/CSA Markings			
Inspections are Current / Up-to-Date			
Date of First Use			

SHOCK PACK (IF PRESENT)	PASS	FAIL	NOTE
Cover / Shrink Tube (Don't Cut or Remove)			
Damage / Fraying / Broken Stitching			
Impact Indicator (Signs of Deployment)			

HOUSING	PASS	FAIL	NOTE
Attachment Point			
Nuts / Bolts / Rivets / Screws			
Evidence of Damage (Dents/Cracks/Rust)			

LIFELINE (WEB OR CABLE)	PASS	FAIL	NOTE
Termination (Stitch, Splice, or Swage)			
Cuts / Fraying / Broken Stitching			
Excessive Wear			
Cable Separating / Bird-Caging			
Entire Length Retracts Smoothly			
Test Braking / Locking Function			

CONNECTORS	PASS	FAIL	NOTE
Connector (Self-Closing & Locking)			
Impact Indicator			
Hook Body / Rivets			
Corrosion			
Pitting / Nicks			



NOTES

Retain Original at Department Level & Submit Copy to Risk Management

This best management form is adapted from Guardian Fall Protection and is to be used for any manufacturers models







Fillable Inspection forms are available for download from the SRM webpage



INSPECTION FORM: ANCHORAGE CONNECTOR

Anchor Part #:

Serial #:

Date of First Use:

Date of Manufacture:

Anchor Material: GALVANIZED STEEL ZINC-PLATED STEEL
 STAINLESS STEEL ALUMINUM
 WEB
 OTHER:

Department:

Name of Inspector:

Signature:

Date of Inspection:

As a Competent Person, you must always inspect equipment before use and formally document all of your equipment at least twice a year according to industry safety standards, such as ANSI A10.32-2012 4.2.8.3, which states, "All fall protection shall be inspected at least every six months by a competent person."

LABELS & MARKINGS

	PASS	FAIL	NOTE
Label (Intact & Legible)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate ANSI/OSHA/CSA Markings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspections are Current / Up-to-Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date of First Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

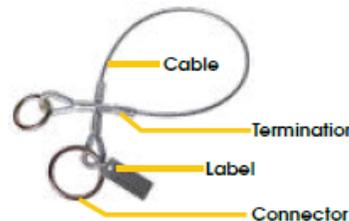
HARDWARE (IF APPLICABLE)

	PASS	FAIL	NOTE
Signs of Deformity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D-Ring / Connection Points	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hook Gate / Rivets (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion / Pitting / Nicks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ANCHORAGE CONNECTOR

	PASS	FAIL	NOTE
Termination (Stitch, Splice, or Swage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deterioration / Corrosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cuts / Burns / Holes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Integrity of Welds / Rivets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paint Contamination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stitching / Wire Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heat Corrosion / UV Damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Separation / Bird-Caging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

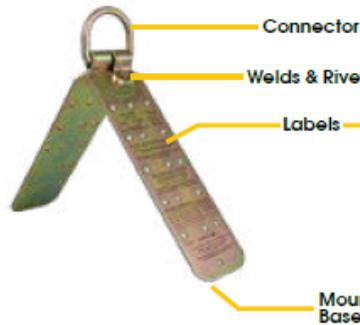
CABLE SLING ANCHOR



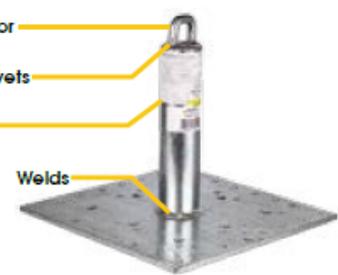
CROSS ARM STRAP



TEMPER ANCHOR



CB-12 ANCHOR



NOTES

Retain Original at Department Level & Submit Copy to Risk Management
 This best management form is adapted from Guardian Fall Protection and is to be used for any manufacturers models



Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Fillable Inspection forms are available for download from the SRM webpage



INSPECTION FORM:

HORIZONTAL LIFELINE

Lifeline Part #:

Serial #:

Date of First Use:

Date of Manufacture:

Lifeline Materials:

- POLYESTER LIFELINE
- KERNMANTLE LIFELINE
- CABLE LIFELINE
- LENGTH:
- DIAMETER:

Department:

Name of Inspector:

Signature:

Date of Inspection:

As a Competent Person, you must always inspect equipment before use and formally document all of your equipment at least twice a year according to industry safety standards, such as ANSI A10.32-2012 4.2.8.3, which states, "All fall protection shall be inspected at least every six months by a competent person."

LABELS & MARKINGS

	PASS	FAIL	NOTE
Label (Intact & Legible)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate ANSI/OSHA/CSA Markings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspections are Current / Up-to-Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date of First Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

HARDWARE

	PASS	FAIL	NOTE
Connector (Self-Closing & Locking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hook Gate / Tensloner / Rivets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pitting / Nicks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MATERIAL (ROPE OR CABLE)

	PASS	FAIL	NOTE
Broken / Missing / Loose Stitching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Termination (Stitch, Splice, or Swage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Excessive Wear (Fraying or Broken Strands)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cuts / Burns / Holes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kinks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Separation / Bird-Caging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SHOCK PACK (IF PRESENT)

	PASS	FAIL	NOTE
Cover / Shrink Tube (Don't Cut or Remove)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Damage / Fraying / Broken Stitching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Impact Indicator (Signs of Deployment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTES

HORIZONTAL LIFELINE KIT
(KERNMANTLE ROPE, CARABINERS, ROPE TENSIONER, & O-RINGS)



CABLE HORIZONTAL LIFELINE SYSTEM
(CABLE, WEB TENSIONER, IMPACT ATTENUATOR, & O-RINGS)



Retain Original at Department Level & Submit Copy to Risk Management

This best management form is adapted from Guardian Fall Protection and is to be used for any manufacturers models



Fillable Inspection forms are available for download from the SRM webpage

INSPECTION FORM:

VERTICAL LIFELINE

Lifeline Part #: <input type="text"/>	Lifeline Materials:	Department: <input type="text"/>
Serial #: <input type="text"/>	CABLE <input type="checkbox"/>	Name of Inspector: <input type="text"/>
Date of First Use: <input type="text"/>	BLUE POLY STEEL ROPE <input type="checkbox"/>	Signature: <input type="text"/>
Date of Manufacture: <input type="text"/>	WHITE POLYDAC ROPE <input type="checkbox"/>	Date of Inspection: <input type="text"/>
	KERIMANTLE ROPE <input type="checkbox"/>	
	LENGTH <input type="text"/>	
	DIAMETER <input type="text"/>	

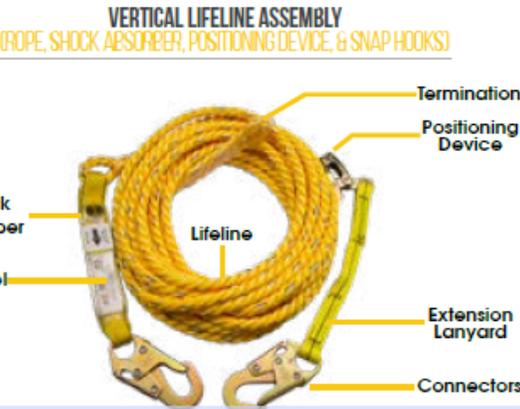
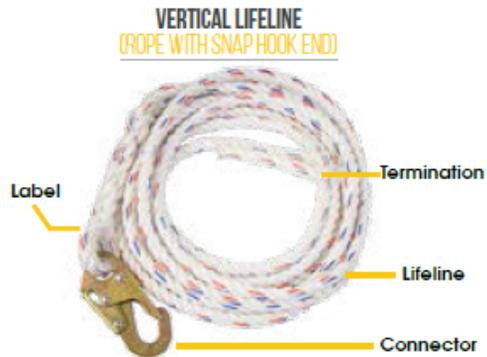
As a Competent Person, you must always inspect equipment before use and formally document all of your equipment at least twice a year according to industry safety standards, such as ANSI A10.32-2012 4.2.8.3, which states, "All fall protection shall be inspected at least every six months by a competent person."

LABELS & MARKINGS	PASS	FAIL	NOTE
Label (Intact & Legible)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate ANSI/OSHA/CSA Markings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspections are Current / Up-to-Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date of First Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

HARDWARE	PASS	FAIL	NOTE
Connector (Self-Closing & Locking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hook Gate / Rivets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pitting / Nicks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MATERIAL (ROPE OR CABLE)	PASS	FAIL	NOTE
Broken / Missing / Loose Stitching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Termination (Stitch, Splice, or Swage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Excessive Wear (Fraying or Broken Strands)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cuts / Burns / Holes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kinks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Separation / Bird-Caging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SHOCK PACK (IF PRESENT)	PASS	FAIL	NOTE
Cover / Shrink Tube (Don't Cut or Remove)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Damage / Fraying / Broken Stitching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Impact Indicator (Signs of Deployment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



NOTES

Retain Original at Department Level & Submit Copy to Risk Management
 This best management form is adapted from Guardian Fall Protection and is to be used for any manufacturers models



Appendix E: Equipment Inventory

Equipment Inventory

Department Instructions: An initial inventory of Equipment owned/operated by each department must be conducted to identify all equipment impacted by this program. This must be done by physical inspection. At Cal Maritime this survey may be conducted by a responsible person in a department, the department’s Designated Safety Coordinator (DSC) or their designee and documented on this form. Update this inventory list as equipment is purchased or retired from service, and at least annually

#	Type	Make/Model	Manufacture Date	Serial Number	Location
EX.	Full Body Harness	Miller Air Core	2017		Facilities Shop
1					
2					
3					
4					
5					
6					
7					
8					
9					
7					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Retain Original at Department Level & Submit Copy to Risk Management

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Appendix F: Rescue Plan

SAMPLE

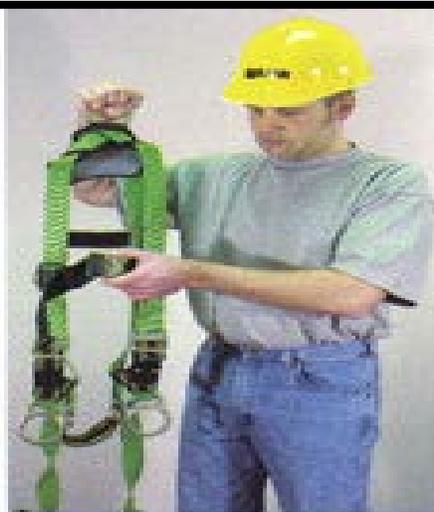
Worker using FPE and may fall:	
Attendant	
Date:	
Building/Location:	
Is rescue equipment immediately available for this location? E.g. Ladders, aerial devices, elevating work platforms, tripods, additional harnesses, controlled descent devices, winches, pulleys, etc.)	
List Rescue Equipment Available:	
Who to contact for equipment use?	
Their phone number:	
What obstructions are in the way reaching the suspended worker?	
How will rescue be assured within 15 minutes of the occurrence of a fall to minimize the risk of further injury or death due to suspension trauma?	
Who to Call:	
Their Phone Number:	
How will the safety of the rescuers be assured as well as that of the suspended worker?	
What communication systems will be used between the suspended worker and rescue team?	
Other Information	

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Appendix G: Donning Full Body Harness



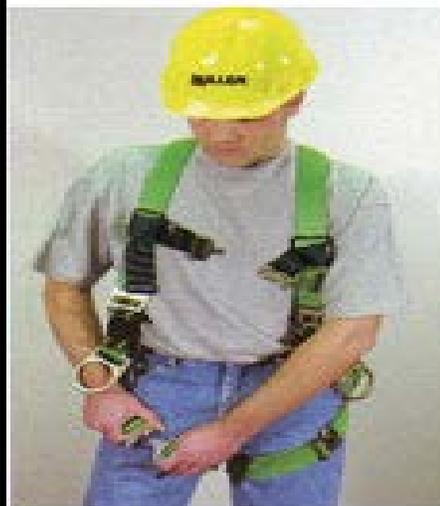
Step 1
Hold harness by back D-ring. Shake harness to allow straps to fall in place.



Step 2
If chest, leg and/or waist straps are buckled, release straps and unbuckle at this time.



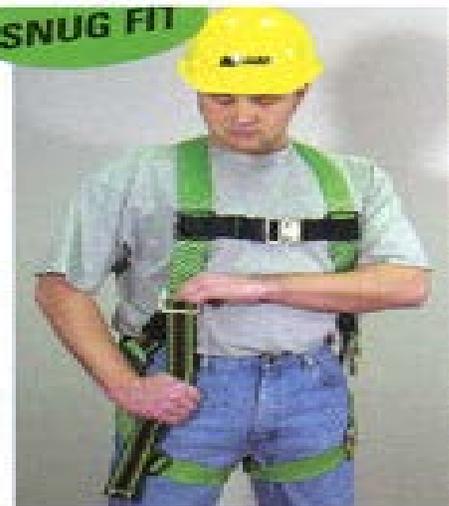
Step 3
Slip straps over shoulders so D-ring is located in middle of back between shoulder blades.



Step 4
Pull leg straps between legs and connect to opposite end. Repeat with second leg strap. If belted harness, connect waist strap after leg straps.



Step 5
Connect chest strap and position in midchest area. Tighten to keep shoulder straps taut.



Step 6
After all straps have been buckled, tighten all buckles so that harness fits snug but allows full range of movement. Pass excess strap through loop keepers.

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Appendix H: Emergency Response

To download and/or print poster refer to SRM website: [Campus Emergency Poster](#) , [Campus Emergency Response Guide](#)



CAL MARITIME



911

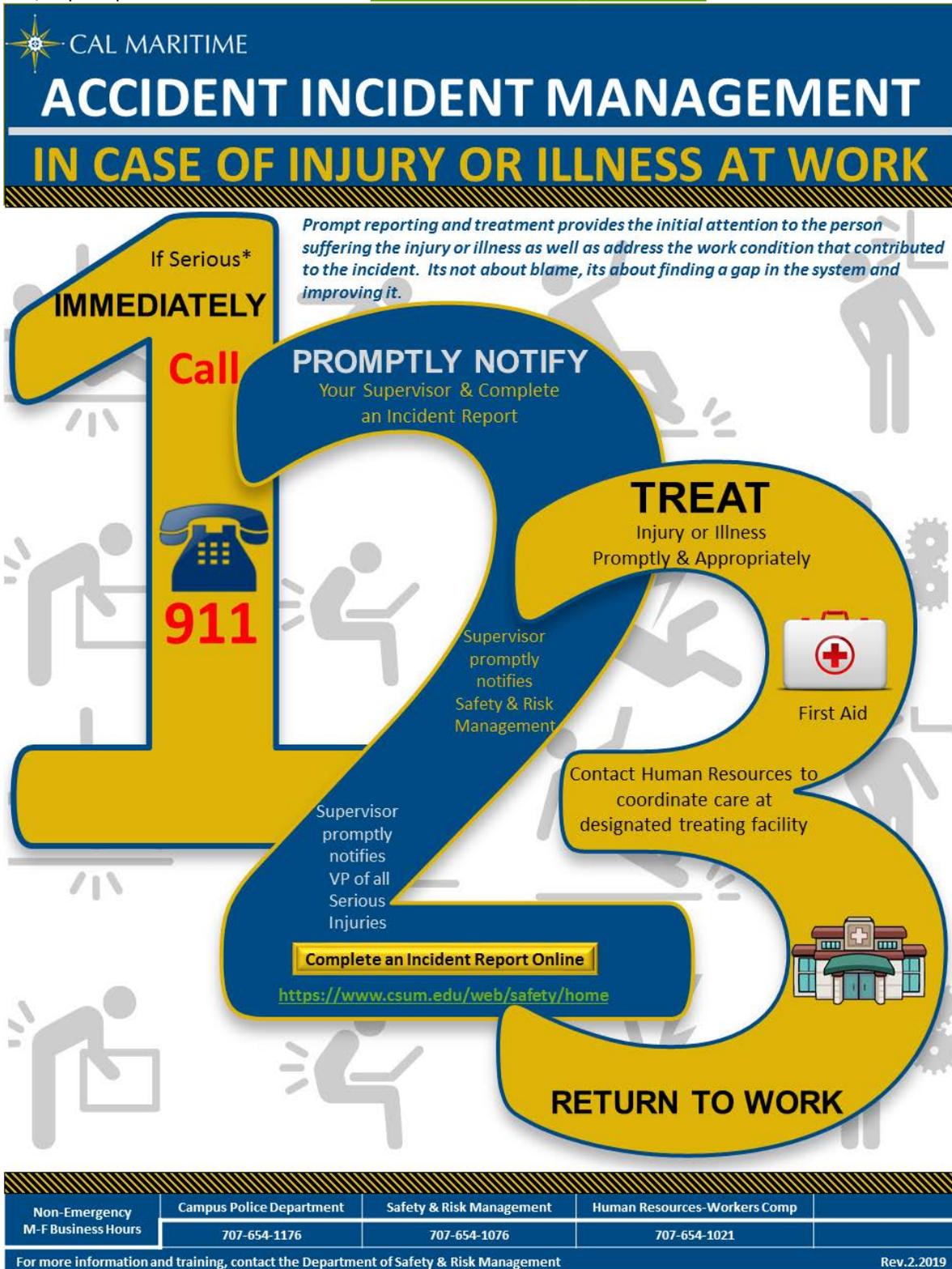
EMERGENCY PROCEDURES

Evacuation	Fire	Hazardous Spill	Medical	
 <ul style="list-style-type: none"> Do not use elevators, use nearest stairs and exit. Follow directions given by the building monitors or Campus Officials Go to designated evacuation point and do not return to building until instructed to do so. Assist persons with mobility needs. 	 <ul style="list-style-type: none"> Evacuate the building and notify occupants as you leave. Do not return until authorized by emergency personnel Do not use elevators Fire Extinguisher Instructions if trained: <ul style="list-style-type: none"> • P- Pull pin • A- Aim at the base of fire • S-Squeeze handle • S-Sweep from side to side 	 <ul style="list-style-type: none"> For spills not involving immediate danger, that are confined; contain and notify the Department of Safety & Risk Management (SRM) at 707-654-1076. For uncontained spill, contact Cal Maritime Police Department & SRM If immediate hazard or emergency exists, dial 911. Move away or evacuate the area. 	 <ul style="list-style-type: none"> For all medical emergencies dial 911 Be ready to describe natures and severity of the medical emergency. Provide the Campus location. Keep the victim calm and comfortable. Provide basic first aid/CPR/AED if trained. Report all work related injuries immediately to: Department of Safety & Risk Management and to Human Resources 	
Earthquake	Bomb Threat	Shelter in Place	Active Shooter	
 <ul style="list-style-type: none"> Drop, Cover, Hold under a table or desk or against an interior wall until the shaking has stopped. After shaking has stopped check yourself and others for injuries. Evacuate the building. Move towards the safest location away from building, tree's, power lines. Follow the instruction of the building monitors or Campus officials and be prepared for aftershocks 	 <ul style="list-style-type: none"> Report all threatening calls to Cal Maritime Police Department Ask Caller: When the bomb is going to explode. Where the bomb is located? What does the bomb look like? Why did you place the bomb? If suspicious object is found: Do not handle and dial 911 immediately 	 <ul style="list-style-type: none"> Stay in building; close and lock doors and windows. Move away from windows Do not use elevators Remain in shelter area until emergency personnel announce that it is safe 	 <ul style="list-style-type: none"> RUN: leave your belongings behind. If there is an escape path attempt to evacuate. Help others if possible HIDE: If you cannot get out safely. Hide. Lock or barricade doors. Silence your cell phone and stay quiet. FIGHT: as a last resort, and if you life is in danger, you may attempt to incapacitate the shooter. Work in unison with others. 	
Non-Emergency M-F Business Hours	Campus Police Department 707-654-1176	Safety & Risk Management 707-654-1076	Facilities & Maintenance 707-654-1120	Human Resources 707-654-1139
For more information and training, contact the Cal Maritime Police Department or the Department of Safety & Risk Management				Rev.2019

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Appendix I: Accident Incident Management

To download and/or print poster refer to SRM website: [Accident Incident Management Poster](#)



CAL MARITIME

ACCIDENT INCIDENT MANAGEMENT

IN CASE OF INJURY OR ILLNESS AT WORK

Prompt reporting and treatment provides the initial attention to the person suffering the injury or illness as well as address the work condition that contributed to the incident. Its not about blame, its about finding a gap in the system and improving it.

1 If Serious*
IMMEDIATELY
Call

911

2 **PROMPTLY NOTIFY**
Your Supervisor & Complete an Incident Report

Supervisor promptly notifies Safety & Risk Management

Supervisor promptly notifies VP of all Serious Injuries

3 **TREAT**
Injury or Illness Promptly & Appropriately


First Aid

Contact Human Resources to coordinate care at designated treating facility



4 **RETURN TO WORK**

Complete an Incident Report Online
<https://www.csum.edu/web/safety/home>

Non-Emergency M-F Business Hours	Campus Police Department 707-654-1176	Safety & Risk Management 707-654-1076	Human Resources-Workers Comp 707-654-1021
-------------------------------------	--	--	--

For more information and training, contact the Department of Safety & Risk Management Rev.2.2019

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Appendix J: Training Log


TRAINING SIGN IN SHEET

Subject		Date	
Instructor Name			
Department			
Course Level	<input type="checkbox"/> Awareness	<input type="checkbox"/> Competent Person	<input type="checkbox"/> Certified Person <input type="checkbox"/> Other
Frequency	<input type="checkbox"/> Initial	<input type="checkbox"/> Annual-Refresher	<input type="checkbox"/> Process Change <input type="checkbox"/> Post Incident

The attendees listed have satisfactorily participated and been tested per Regulation/University training requirements.

	PRINT NAME	STATUS (Staff, Faculty, Student)	SIGNATURE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Retain Original at Department Level & Submit Copy to Risk Management

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.

Electronically Controlled. Latest revision is in the Document Management System. A printed copy is uncontrolled and may be outdated unless it bears a red ink "controlled copy" stamp.