Summary of Significant Changes

Chapter 1: Introduction

a. Updated fall mishap statistics.
b. Modified the Scope Section to mirror the organization of the chapters and the table of contents.
c. Deleted the verbiage “there is no safe distance from unprotected side or edge”. This interpretation applies to the construction industry only. Also deleted the interpretation “there is no minimum time duration that allows exclusion of FP requirements”. The final rule 29 CFR 1910 (2016) changes are in conflict with these requirements.
d. Updated the information regarding DoD Instruction 6055.1 published on 11/14/2014.

Chapter 2: Definitions

a. Modified 16 definitions reflecting the changes from various ANSI Z359 standards.
b. Add 41 new definitions from the 29 CFR 1910 Final Rule and the Z359 new or updated Standards.

Chapter 3: Fall Protection Program

a. Improved/updated the verbiage throughout the chapter.
b. Updated FP Program Compliance and Audit Checklist reflecting the latest changes made to the updated chapter 13, the new changes/updates from this guide and updates of ANSI Z359 FP Code/Standards.
c. Included a new paragraph for Audits and Evaluation.

Chapter 4: duties and Responsibilities

a. The changes are only limited to verbiage improvement.

Chapter 5: Workplace Surveys and Assessment of Fall Hazards

a. Minimal verbiage improvement.

Chapter 6: Training

a. Included a paragraph that the end user shall not deviate from the FP procedures set forth by the CP without consulting with the CP.
b. Added a paragraph for training other personnel, not listed in OPNAVINST 5100.23 chapter 13 who are involved in the FP program must be determined by
the FP Program Manager. Similar verbiage is already included in the latest update of .23, Chapter 13.

(c) Added verbiage that all FP and rescue training in Appendix 13-A of OPNAVINST 5100.23 shall be developed and delivered according to Needs Assessment.

d. Training Matrix:
   1. Improved and updated the verbiage throughout the appendix.
   2. Included applicable and available ESAMS and NAVSAFENVTRACEN courses including duration of the required training.
   3. Included requirements and available training for Aviation FP Program Manager ESAM course #4463 and another training course # for Aviation Competent Person.
   4. Afloat Competent Person/Program Managers Training was added to the training matrix.
   5. Modified the verbiage for ESAMS Course # 3639 to cover the final rule requirements for 28 CFR 1910 (11/2016) to include inspection and investigation of workplace conditions (General Industry Work).
   6. Included training requirements for other personnel involved in the FP program not listed in OPNAVINST 5100.23 Series (whether exposed or not exposed to fall hazards) as determined by the FP program manager.

Chapter 7: Fall Hazard Prevention and Controls

(a) Added verbiage regarding the preparation of FP and prevention plan to include the final rule requirements for frequent and lengthy tasks and also for infrequent and temporary tasks.

(b) Other minor verbiage improvements were included in chapter 7.

Chapter 8: Fall Protection Systems, Criteria and Design Requirements

(a) Re-organized the fall protection systems into Passive, active and other Fall Protection Systems and including Prohibited Systems.

(b) Guardrail System:
   1. Modified the distance between the supporting posts of the guardrail system from 8 feet apart to “whatever distance is necessary to meet the strength requirement of 200 lbs. without failure”.
   2. Included a note regarding counterbalanced guardrails or movable weighted-base railing (temporary non-penetrating guardrails), how to make them permanent.
   3. Modified the stair rails and handrail requirements to meet the final rule changes.
   4. Per the final Rule, changed the previous requirement (exiting parapet wall height of minimum 30 inches and the width of 18 inches equal to 48
inches) to 42 inches high. Also provided solutions to using additional railing to make parapet walls comply with OSHA 42 inches height requirements.

5. Included the final rule requirement regarding hatch openings by providing 42 inches high grab bars to facilitate access from/thru fixed ladders. Also included additional requirements to protect the entrance to the hole with guardrails. Per the final rule, a swinging gate or offset to prevent employee from falling into the hole was added.

6. Moved work stands/stationary work platform to chapter 9.

c. Fall Arrest system:
1. General: Modified the verbiage for anchorage connectors, connecting means and body support equipment to match the updated .23, chapter 13 and ANSI Z359 standards.
2. Deleted the note “ANSI Z359 permits the use of sternal D ring for limited fall arrest when the free fall distance is less than 2 ft”. This requirement is included in the new verbiage as part of the harness section.
3. Clarified the 5,000 lbs. anchorage requirement which means the required anchorage for active fall protection system (not the structure).
4. Referenced the anchorage connectors as being the terminus component for active fall protection systems.
5. Included other examples of anchorage connectors with photos.
6. Added new information regarding wire rope anchors.
7. Since the fall arrest components/equipment do have their own appropriate ANSI Z359 standards, a statement was included for each product that the requirements prescribed in ANSI Z359.1 (2007) were superseded by other standards.
8. When purchasing new harnesses, it shall be equipped with at least one Lanyard Parking Element and at least one deployment indicator. Also included other accessories that are available for purchase as part of the harness.
9. Included new verbiage regarding the differences between repairable and non-repairable SRDs.
10. Included considerations for full body harness selection.
11. Since the positioning system is not considered active FP system, moved the verbiage to a new section titled other FP systems.

d. Climbing Ladder Fall Arrest System
1. Modified the requirements for climbing ladder fall arrest system taken from ANSI Z359.16 standard.
Chapter 9: Fall Protection Guidelines for Specific Work Applications

a. Included new final rule changes regarding roof work requirements and deleted the old requirements.
b. Included new fall protection requirements from the final rule regarding inspection, investigation and assessment work on roofs. Also, included sketches to explain these new requirements.
c. Added additional requirements for excavated trenches or holes deeper than 6 ft. taken from EM 385-1-1, Section 25.
d. Included new final rule requirements for ladders (fixed and portable) and stairways. Deleted the old information.
e. Included methods of inspecting and testing wood poles.

Chapter 10: Guidance for Fall Rescue Procedures.

a. Minimum verbiage improvement.

Chapter 11: Inspection, Storage, Maintenance and Care Procedures for Personal Fall Protection Equipment

a. Anchorage system: Improved inspection requirements for anchorage connectors.

Chapter 12: Tie-Off Considerations and Selection of Safe Anchorages

a. Included minimum verbiage improvement.

Chapter 13: Responsibility for Design, Inspection, Certification, and Recertification of Anchorages and Recertification of Active Fall Protection Systems

a. Included few clarifications and verbiage improvements.

Chapter 14: Fall Prevention Considerations during Planning and Design Phase

a. Added a new section titled Applicability of Unified Facilities Guide Specifications to Fall Protection.
b. Included few clarifications and verbiage improvements.
Chapter 15: Guidance–Fall Protection for Aircraft Maintenance and Inspection Work

a. The update included verbiage modification and improvement. Also verbiage was moved around to make the chapter flow better.

b. Added verbiage regarding CNAF message 201800ZMAR14 to further clarify CNAF message of 2010 for developing FP program. Also, both CNAF messages were included in the chapter.

c. Duties and Responsibilities:
   1. Added a note that the Aviation Competent person responsibilities should be assigned to an E-6 or above, and preferably a quality assurance representative.
   2. Included a note that Wings/Squadrons do not need a qualified person on staff as practical matter. The qualified person from NAVFAC personnel can fulfill this role as required.

d. Workplace Surveys and Assessment of Fall Hazards: Added a note that for a sample fall hazard survey report, see appendix I.

e. Training: In addition to the program manager and end users, expanded the training to include all aviation personnel involved in the fall protection program. Also included all applicable ESAMS fall protection training courses.

f. FP Systems and Equipment used for Aircraft Maintenance and Inspection Work: Included and expanded the verbiage of all systems used for aircraft maintenance and also included new systems used with new photos. The chapter also included warnings on the proper use of various systems (i.e. Vacuum anchors, etc.). Added a warning that cranial is not a fall protection method.

g. The MH-60 Fall Hazard Survey Report was removed and replaced with a comprehensive Survey and Assessment Report Template included in Appendix I

Chapter 16: FP Requirements for Architects/Engineers and Other Inspectors Conducting Inspection, Investigation and Assessment Work of Roofs, General Industry Workplace Conditions or conducting Fall Hazard Surveys

a. Incorporated the 29 CFR 1910 (2016) final rule changes for inspection and investigation Work for general industry work throughout the chapter and the checklist.

Chapter 17: Other Fall Protection Control Measures.

a. No Changes

Chapter 18: ANSI Z359 Fall Protection Code/Standards.
a. Improved and updated the verbiage of the new or modified standards such as Z359.0, .1, .2, .3, .16 and ANSI 459.1 standards.

Chapter 19: References:


APPENDICES

APPENDIX A:

a. Incorporated the new changes from the final rule, 29 CFR 1910 (2016) throughout the appendix.

APPENDIX B: Calculating Total Fall Distance and Clearance.

a. Updated the calculation for the required clearance based on the changes from ANSI Z359 standards.
b. Improved the sketch for calculating the required clearance reflecting the latest ANSI Z359 changes such as harness stretch and safety margin.

APPENDIX C: Discussion, Examples/Problems and Solutions to Fall Hazards

a. Improved verbiage and incorporated the final rule requirements when accessing and performing work on roofs:
b. Included requirements regarding permitting a contractor to use Government Owned personal fall protection equipment.

APPENDIX D: Man Over board Plan

a. No Change

APPENDIX E: Guidance Document- Design Considerations for Management of Fall Hazards.

a. Minimum verbiage improvement.

APPENDIX F: Fall Protection Training Course Syllabus for Competent Person

a. Minimum Verbiage improvement.

APPENDIX G: Human System Integration with Personal Fall Arrest System (Medical Aspects)
a. Very Minimal verbiage improvement.

**APPENDIX H: Fixed Metal Ladder Inspection Checklist**

a. Incorporated new requirements for Fixed Metal Ladders from the final Rule, 29 CFR 1910 (2016); also included inspection of fixed ladders, ladders with cages and ladder safety system.

**APPENDIX I: Fall Hazard Survey Report Template for Squadron (New)**

a. The purpose of the survey was to identify fall hazards associated with Navy personnel from Squadron HSM 40 performing maintenance duties on MH-60 (SEAHAWK) aircraft in and around Hangar 1552 at the Naval Base Mayport, in Mayport, Florida. The report includes the following:
   1. Hazard Identification and Evaluation Methodology including fall hazard validation, risk analysis, relative risk ranking and mitigation strategies;
   2. Program Evaluation including flowdown requirements, and HSM-40 programmatic observations;
   3. Hazards and Recommendation Discussion including hazard description, hazard analysis, mitigation strategies and cost/benefit trade analysis;
   4. Conclusions including recommended mitigation strategies, cost summary of final recommendation, potential cost savings and performance requirements.