



STANDARD OPERATING PROCEDURE FALL PROTECTION RESTRAINT LINES & FIXED RESTRAINTS

Kiewit Bridge and Marine		
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Revision Summary Change		
Rev	Revision Date	Change Description
A	6-Jun-2024	Issued for Review
B	26-Jul-2024	Issued for Final KBM DSM Review
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NOTE: Revision history will be an alpha revision Rev. A, B, etc., until “Issued for Use”. At that point it will be issued with a two-digit numeric revision Rev. 01, 02, etc.



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1.0 PURPOSE

This document identifies important aspects to include while planning and executing a fall protection permit to utilize a fall restraint system. This SOP contains valuable information to help steer operations away from defaulting to fall arrest and encourage the use of fall restraint.

2.0 WORK SCOPE

Employees that utilize an engineered system that will limit the ability to reach the leading edge of a fall hazard that is over 6' above the ground (or 4' for Washington state).

3.0 DEFINITIONS / ACRONYMS

These are common terms that are used in fall protection planning and shall be understood when filling out a restraint fall protection permit.

Definitions		
Corporate Standard Definitions	Glossary	



4.0 ROLES AND RESPONSIBILITIES

POSITION	ROLE AND RESPONSIBILITY
DESIGNATED SIGNER	<ul style="list-style-type: none">• Must review and approve <u>every</u> fall protection permit on their project.• Designated by district leadership and assigned on the TSCD matrix.
DESIGNATED INSPECTOR	<ul style="list-style-type: none">• Responsible for initial inspection of fall protection systems to ensure correct installation.
PROJECT MANAGER	<ul style="list-style-type: none">• Oversee implementation of fall protection program.• Ensure employees are trained and understand the fall protection requirements.
GENERAL SUPERINTENDENT	<ul style="list-style-type: none">• Review, approve fall protection permits.• Ensure the fall protection hierarchy of controls is followed.• Ensure the fall protection permit is complete with all supporting documents attached.
SUPERINTENDENT	<ul style="list-style-type: none">• Develop the fall protection permit with the goal of eliminating fall risk by following the hierarchy of controls (eliminate, prevent, restrain, arrest, administrative).• Verify the craft have appropriate training, understand the plan/permit.• Verify the permit is being adhered to in the field.• Ensure all approvals are obtained.• Ensure the team is trained on the inspection process and it is being tracked.• Confirm rescue equipment is available.
FIELD ENGINEER	<ul style="list-style-type: none">• Participate in development of the fall protection permit.• Confirm fall distance vs fall clearance required.• Verify that the crew has the correct fall protection equipment.• Track and document all fall protection equipment and device inspections.• Verify the permit is being adhered to in the field.• Confirm rescue equipment is available.
FOREMAN	<ul style="list-style-type: none">• Participate in the development of the fall protection permit.• Verify the permit is being adhered to in the field.• Ensure all craft employees working on the permit are properly trained to utilize their fall protection equipment and devices.• Review fall protection permit with crew prior to task and confirm signed off.• Confirm rescue equipment is available.
CRAFT	<ul style="list-style-type: none">• Follow the fall protection permit being utilized in the field.• Only use fall protection equipment you have been trained to use.• Inspect all fall protection equipment and devices prior to every use.



5.0 PROCEDURE

- 5.1 Following the hierarchy of controls, verify that work cannot be built from the ground or behind handrail.
- 5.2 Identify the type of restraint system to match the conditions.
 - 5.2.1 For larger, linear work zones – consider developing an effective restraint line system.
 - 5.2.2 For smaller, more confined work zones – consider developing a fixed-point restraint system.
- 5.3 Identify Anchorage
 - 5.3.1 Improvised Anchor Point – see SOP [HERE](#).

System Application	Certified Anchorage	Non-Certified Anchorage	Defined by
Restraint	2 times foreseeable force	1,000 lbf (4.4 kN)	ANSI Z359
		5,000 lbf (22.2 kN)	OSHA 29 CFR 1910.140, 1926.502

- 5.3.2 Engineered Anchor Point.
- 5.3.3 Horizontal Restraint Line.
- 5.3.4 Manufactured Anchor Point.
- 5.4 Identify Anchorage Connector
 - 5.4.1 The SRL shall be anchored farther from the edge than the overall SRL length.
 - 5.4.2 Fixed length rope, lanyard, cable, etc.
 - 5.4.3 Adjustable length rope, lanyard, cable, etc.
 - 5.4.4 Other means clearly described.
- 5.5 Be thorough in the permit’s description of setting up, inspecting, and utilizing the equipment.
 - 5.5.1 Take measurements and label the graphics neatly.
 - 5.5.2 Provide all applicable manufactured information to support system capabilities.
 - 5.5.3 Provide all applicable engineering.

6.0 REFERENCES

Here are some examples of fall restraint systems and a sample permit used on F200 project:

- Figure A – Fall Restraint Graphic (Fixed Anchor Points)
- Figure B – Fall Restraint Graphic (Horizontal Restraint Lines)
- Fall Protection Permit: Top of Wall Restraint Line

[LSA Guidelines](#)



RESTRAINT LINES & FIXED RESTRAINTS

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[LSA Toolkits](#)

[Glossary](#)