Installation Of Handrails And Steps

SWMS number:
SMS-06-SW-0987

SWMS Name:
Installation Of Handrails And Steps

SWMS Team: Civil Construction Review Team

Custodian (Position):
Services Manager Civil

Assumptions:
Site specific risks are addressed and assessed in pre- work briefing

Approver (Position):
Civil Electrical Works Manager Infrastructure Renewals

Content reviewed by Technical expert (SME) and RailCorp safety professional
(position including Div/Group)
Services Manager Civil and Safety facilitator, Safety Support Services Division

Plant/Equipment/Tools:
- Scaffolding, Attached Climbing System
- Elevated Work Platform
- Electrical Tools/Equipment, Hand Tools, Generator
- Chemical Anchors, Fasteners
- Refuse Bags
- Fire Extinguishers, Water cart
- Welding Equipment – Arc or Oxy/Acetylene

Records/Reporting:
- Worksite Protection Plan
- Pre-work Brief
- Site Specific Management Plan
- Scaffolding Certification if over 4M high, Testing records of Attachment Systems
- Daily Plant Checklist
- Electrical Tool Test Tags
- Hot Work Permit (During Total Fire Ban)
- Fire Brigade

Permits/licences required:
- Hot Work Permit
- Scaffolding Certificate
- Elevated Work Platform Certificate

Applicable Standards, Codes of Practice and guidance:
- OH&S Act 2000
- OH&S Regulation 2001
- Rail Safety Regulation 2003
- RailCorp Network Rules & Procedures
- RailCorp Safety Management System.
- MSDS for all chemicals and hazardous Substances used on site
- Working near Overhead Power Lines
- AS/NZS 1891.4 – 2000 “Industrial fall arrest systems and devices – Selection, use and maintenance”
- AS/NZS 1576: 1009 Scaffolding – General Requirements
- National Code of Practice for Manual Handling [NOHSC:2005]
- AS 1674.1 – Safety in welding processes
- AS 4839 portable oxy-fuel gas systems

Inspection requirements
Nil

Service schedule:
Nil

Training/Qualification required:
- Construction Industry Induction
- RISI (Rail Industry Safety Induction)

And as specified below.
- Welder / Cutter

PPE required:
- Safety Boots
- High Visibility Vests
- Hardhats
- Protective Clothing
- Safety Glasses

And as specified below.
- Type 2 Respirator , Dust Masks
- Welding Spats, Goggles
- Fall Arrest Devices
- Gloves
- During all Site Works a FIRST AIDER MUST be Present

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1	Mark Out Position Of Handrails Or Ladder	Manual Handling Injuries	B-	Correct Manual Handling Techniques. Use Gloves If Required	C+	Team Leader Work Group Leader All Staff	Manual Handling Guide SMS-06-GD-0001 SSMP, Pre Work Briefing SMS-06-FM-0163
		Fall From Height	B+	Use Scaffolding To As1576 Or Work From An Approved Attached Climbing System Or Elevated Work Platform If It Is Possible To Fall 2m Or More	C+	Team Leader Work Group Leader All Staff	Working At Heights SMS-06-GD-0240 Elev. Work Platform's SMS-06-SW-0310
2	Drilling And Cutting	Fire From Sparks	B+	Evacuation Plan, Water Cart	C-	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163
		Electric Shock	B+	All electrical equipment to be tagged /tested, earth leakage units to be used with all tools. Equipment to be fitted with effective safe guards *SWI training *. Correct use of PPE	C-	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Electrical Equipment SMS-06-GD-0268
		Flying Objects	B-	Implement Exclusion Zone Wear Eye Protection and Hearing protection	C-	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE SMS-06-GD-0323
		Inhaling Dust / Noise	B-	Implement Exclusion Zones. Wear type 2 Respirators.	D	Team Leader Work Group Leader All Staff	SSMP , Pre Work Briefing SMS-06-FM-0163 Hazardous Substances SMS-06-GD-0199
		Fall From Height	B+	Use Scaffolding To As1576 Or Work From An Approved Attached Climbing System Or Elevated Work Platform If It Is Possible To Fall 2m Or More	C+	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Working At Heights SMS-06-GD-0240 Elev. Work Platform's SMS-06-SW-0310
3	Install Chemical Anchors	Skin Irritation	C-	Read MSDS. Use Recommended PPE. Place Any Contaminated Waste In Suitable Refuse Bags. Follow Safely Instructions On MSDS If Chemical Contacts Skin.	D	Team Leader Work Group Leader All Staff	MSDS, Hazardous Substances SMS-06-GD-0199

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4	Fix Handrail Or Ladder In Position	Manual Handling Injuries	B-	Correct manual handling procedures. “back-safe” training. Plant to move heavy and/or bulky items. As per Risk assessment.	C+	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Manual Handling Guide SMS-06-GD-0001
		Fall From Height	B+	Use Scaffolding To As1576 Or Work From An Approved Attached Climbing System Or Elevated Work Platform If It Is Possible To Fall 2m Or More	C+	Team Leader Work Group Leader All Staff Workcover Ticketed Scaffolder Or Operator Sms-11-Gd-0243	SSMP, Pre Work Briefing SMS-06-FM-0163 Working At Heights SMS-06-GD-0240 Elev. Work Platform's SMS-06-SW-0310
WARNING		*The Following Precautions Are To Be Undertaken For When Using Hot Works As In Activity 5 During Total Fire Bans:* • An Hot Works Permit Must Be Issued Before Work Tasks Are To Be Performed • The Welder Or Other Person In Control Of The Worksite Must Take Reasonable Care To Inspect The Workplace To Identify Potential Fire Hazards • All Fire Hazards Are To Be Removed Prior To Commencing Welding Tasks • Fire Fighting Equipment Must Be On Hand At The Worksite E.G. Watercart, Knapsacks, Fire Extinguishers • (Hot Works In Progress) Warning Signs Are To Be Placed At Appropriate Locations Hot Work Sms-06-Pr-0329					
5	Weld Handrails To Post Or Ladders To Mounts	Fire From Welding Equipment	B+	Hot Work Permit If Required. Watercart, Or Fire Extinguishers On Site Wet Down Work Area	C-	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Hot Work SMS-06-PR-0329
		Burns From Cutting Equipment And Hot Work	C+	Implement Exclusion Zone Wear Gloves Long Sleeve Shirts, Long Pants , Spats, Goggles Or Face Shield As Appropriate	D	Team Leader Work Group Leader All Staff Ticketed Cutter/ Welder	SSMP, Pre Work Briefing SMS-06-FM-0163 MSDS PPE SMS-06-GD-0323

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NOTE: Each work group or team member must sign off on the SWMS to acknowledge they have been briefed about or instructed in the SWMS

Team member name (Please print)	Team Member signature	Instructor/ Briefer name	Date	Team member name (Please print)	Team Member signature	Instructor/ Briefer name	Date

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RailCorp Level 2 Risk Matrix - Regional & Local (Workplace)

		Likelihood/Frequency						
		Event Frequency	Less than once every 1000 years	Once every 100 to 1,000 years	Once every 10 to 100 years	Once every 1 to 10 years	More than once per year up to and including 10 times per year	More than 10 times per year
		Historical (Likelihood)	Unheard of in the rail industry	Has occurred once or twice in the rail industry	Has occurred many times in the rail industry, but not in NSW	Has occurred once or twice in NSW	Has occurred frequently in NSW	Has occurred frequently at specific locations
		Workplace Predictive (Likelihood)	Not expected to occur	May occur only in exceptional circumstances	Could occur at some time but not likely	You would expect it to occur at least once in the next 10 years performing similar activities	You would expect it to occur at least once this year performing similar activities	You would expect it to occur at least once this month performing similar activities
			F1	F2	F3	F4	F5	F6
Consequence			Incredible	Improbable	Remote	Occasional	Probable	Frequent
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	A
2-10 Fatalities	C5	Catastrophic	C+	B-	B+	A	A	A
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	A
1 Major Injury	C3	Major	D	C-	C+	B-	B+	A
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-	B+
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-

Extreme
High
Medium
Low

Definition for Use - Regional & Local level (Workplace)

Used for workplace hazards and safety risks that do not consider the whole of the network. Indicatively this matrix is appropriate for use where the hazards under consideration are up to 10% of the total network exposure. This includes regional and local workplace risk assessments.

As an example, the Level 2 scale would be used when examining the risk of slips, trips and falls on specific RailCorp platforms within a region or at a particular station, or the risk of fire within a depot.

There are 3 options for descriptors which can be used to determine the frequency category. One set of descriptors is provided for frequency, one for historical likelihood, and one for predictive liklihood in the workplace. Choose the most appropriate.

To score the risk, follow the steps:

1. Identify the magnitude of the credible consequence if the risk were to occur. If applicable, risks should be considered in terms of the safety (this matrix), commercial and environmental impact (using other matricies).

2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)

3. Score the risk using the combination of likelihood and consequence ranking.

Note: Where there are a range of credible consequences which may lead to a different level or risks and/or where the controls may be different. It may be useful to score the risk more than once.