



ARC DESIGN SOLUTIONS

ARC Design Solutions Safety and Health Management for Bridge & Culvert Inspection



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1. Introduction

ARC Design Solutions is a premier engineering firm servicing Victoria and New South Wales, specializing in four critical sectors. Here's an expanded overview of our capabilities and commitments:

- **Bridge Services and Asset Management:** We excel in bridge engineering, offering extensive services such as Level 1 and 2 and detailed bridge inspections, load ratings in accordance with AS5100 standards, and thorough infrastructure assessments. Our goal is to ensure the safety and functionality of bridge structures, facilitating long-term asset management and maintenance strategies to extend the life and performance of infrastructure assets.
- **Buildings Sector:** Our comprehensive offerings in the building sector encompass a wide range of services, from structural inspections to complete certifications, renovations, and defect rectification for residential, commercial, and industrial buildings. We focus on delivering high-quality, safe, and sustainable solutions that meet the evolving needs of our clients, ensuring that every structure stands solid and compliant with all regulations.
- **Civil Services:** Our expertise in civil engineering includes the design and implementation of foundational structures such as retaining walls, foundations, piling, and soil retention systems. We provide innovative, efficient, and compliant solutions that underpin various infrastructures' structural integrity and longevity, ensuring they withstand environmental and operational demands.

At ARC Design Solutions, safety and quality form the bedrock of our operations. From the start of a project, we implement stringent risk assessment methodologies and adhere to Safety in Design (DWMS) protocols, ensuring personnel and public safety are prioritised.

Our thorough pre-start procedures and detailed documentation uphold transparency and accountability throughout the entire project lifecycle. Furthermore, we maintain rigorous compliance with industry standards, continuously updating our licenses and certifications to meet and exceed client expectations and regulatory requirements. By fostering a culture of safety and precision, ARC Design Solutions remains at the forefront of the engineering industry, consistently delivering reliable and innovative solutions.

2. Safety Management System

ARC Design Solutions upholds a robust Safety Management System (SMS) across all operations, ensuring the safety of employees, clients, and the public.

Our SMS encompasses:

- **Overview of Our Safety Management System (SMS):** Structured to proactively identify, assess, and mitigate risks associated with engineering services, particularly during bridge inspections and structural assessments.

- **Alignment with Local Regulations and Industry Standards:** Strict adherence to local regulations like the Work Health and Safety Act and AS/NZS 4801 ensures our safety protocols surpass industry benchmarks.

Key Components of Our SMS:

- **Risk Assessment and Mitigation:** Thorough assessments and controls mitigate hazards effectively, with ongoing updates for continuous improvement.
- **Safety Training and Competency:** Rigorous training ensures staff competency in safe practices, supported by ongoing development to incorporate emerging safety technologies.
- **Safety in Design (DWMS):** Integrating safety measures from project inception minimise hazards throughout project execution.
- **Emergency Preparedness and Response:** Tailored emergency plans undergo regular testing to maintain readiness and effectiveness.
- **By integrating regulatory compliance with industry best practices, ARC Design Solutions demonstrates an unwavering commitment to safety excellence.**

3. Risk Management

Our approach to bridge and culvert inspections aligns with VicRoads guidelines for Level 1 and 2 assessments, focusing on meticulous risk identification and assessment to safeguard personnel and inspection integrity.

- **Risk Identification:** Detailed assessments include site-specific risks such as access challenges, slip hazards, heights, and environmental factors like water bodies.
- **Risk Assessment:** Each identified risk undergoes systematic evaluation, informing tailored control measures for effective mitigation.
- **Controlling and Mitigating Risks During Inspection Activities:** For Level 1 and 2 bridge inspections, stringent procedures ensure safety standards and operational efficiency:
- **Access Equipment and Safety Measures:** Certified equipment like harnesses and scaffolding complies with occupational health and safety regulations.
- **Slip, Trip, and Fall Prevention:** Non-slip surfaces and barriers minimize hazards, supported by clear signage and designated walkways.
- **Water and Environmental Hazards:** Safety flotation devices near water bodies ensure compliance and mitigate drowning risks.
- **Emergency Response Preparedness:** Comprehensive plans include immediate response protocols, site-specific SWIMS integration, and environmental contingency measures.
- **Compliance with VicRoads standards ensures alignment with regulatory requirements and best practices.**

4. Health and Safety Policies for Bridge Inspection Projects

Our policies prioritise safety while maintaining operational efficiency and regulatory compliance:

- Personal Protective Equipment (PPE): Mandatory for all personnel, tailored PPE addresses inspection-specific risks.
- Site Access Control: Strict protocols limit site access to authorised personnel, ensuring adherence to safety guidelines.
- Emergency Procedures: Comprehensive plans cover medical emergencies, fires, structural failures, and environmental hazards, with clear evacuation routes and contact information.
- Workplace Health and Safety Training: Regular training includes hazard identification, safe practices, and PPE use, validated through competency assessments.
- Environmental Management: Environmental practices minimise operational impact, ensuring regulation compliance.
- Continuous improvement through audits and feedback enhances safety measures and regulatory adherence.

5. Training and Competency

ARC Design Solutions invests in ongoing training to uphold safety standards:

- Initial Training and Induction: Comprehensive programs cover safety policies and site-specific hazards.
- Specialised Training Programs: EWPs, bridge inspection licenses, and road work safety ensure competence in operational environments.
- Competency Assessments: Regular evaluations validate skill application and maintain performance standards.
- Continuous professional development keeps staff updated with industry advancements, reinforcing safety practices.

6. Incident and Emergency Management

Reporting and Investigating Incidents: Proactive procedures manage health, safety, and environmental incidents:

Immediate Reporting: Incidents trigger swift responses and investigations, which are documented for corrective action.

Investigation Process: Root cause analysis informs preventive measures, enhancing safety protocols.

Emergency Response Plan for Bridge Inspection Sites: Tailored plans include emergency contacts, SWIMS integration, and environmental contingencies, which are tested for readiness and efficacy.

7. Compliance

Health and Safety Regulations Compliance: ARC Design Solutions prioritises compliance with health and safety regulations:

Adherence to Local Regulations: Rigorous adherence to legislative requirements ensures operational integrity.

Industry Standards: AS/NZS 4801 compliance underscores safety management system effectiveness.

Certifications and Accreditations: EWP and bridge inspection licenses validate competence, supported by road works safety certification.

Continuous monitoring and improvement ensure regulatory alignment and operational excellence.

8. Conclusion

In conclusion, ARC Design Solutions' safety and health management document underscores our commitment to excellence in bridge inspection projects:

Comprehensive Safety Management System: SMS integration ensures proactive risk management and regulatory compliance.

Risk Identification and Mitigation: Rigorous assessment and control measures minimise personnel safety and inspection integrity hazards.

Health and Safety Policies: Clear policies and training programs uphold safety standards and operational efficiency.

Training and Competency: Ongoing development ensures staff readiness and compliance with industry requirements.

Incident and Emergency Management: Proactive reporting and response protocols mitigate risks, ensuring swift and effective resolutions.

Continuous Compliance and Improvement: Audits and reviews drive ongoing enhancement of safety protocols and regulatory adherence.

Our dedication to safety excellence ensures the well-being of our team, clients, and communities, reinforcing ARC Design Solutions as a leader in engineering services.

9. Appendices

9.1 Prestart Job form for bridge inspection

9.2 Risk Assessment form for general use