



Bridge Access and Rescue Course

This course is intended to provide information and practical skills for the student to competently and safely maneuver around various bridge structures for the purpose of inspection and additionally be confident to perform a co-worker rescue.

Course objectives:

Upon completion of this course, students should be able to satisfactorily understand and/or perform the following:

1. General understanding of basic concepts of bridge access
2. General understanding of overall site safety
3. General understanding of the approach to bridge access
4. General understanding basic fall protection concepts
5. General understanding of equipment selection, care, use, inspection and maintenance
6. Basic rope access maneuvers
7. Utilizing ropes to access bridge truss members
8. Utilizing climbing techniques
9. System rigging
10. Co-worker rescue pre-plans and techniques

Course overview:

1. General understanding of basic concepts of bridge access

- Hazards of various types of bridges
- Methods to overcome hazards and why they are utilized
- Advantages of climbing systems
- Engineered systems (i.e. horizontal lifelines, vertical lifelines)
- Equipment management while climbing

2. General understanding of overall site safety

- Traffic hazards
- Pre-planning
- Job Safety Analysis (JSA)
- Fall protection
- FRA requirements, work parameters
- Weather and environmental hazards
- Utilities
- Personal protective equipment (PPE)
- Personal well being
- Equipment retention
- Communication (radios, cell phones, voice, signals, etc.)

3. General understanding of the approach to bridge access

- Two points of contact concept
- Fall factor
- Choice of climbing method
- Need and feasibility of climbing

4. General understanding of equipment selection, care, use, inspection and maintenance

- Equipment use, inspection and replacement
- Rope use, protection, inspection and replacement



5. Basic rope access maneuvers

- Ascending, descending, changeover direction of travel and rope to rope transfer

6. Utilizing ropes to access bridge truss members

- Utilizing fall protection lanyards to access various bridge components
- Utilizing adjustable lanyards to access various bridge components

7. Utilizing climbing techniques

- Fixed rope systems
- Lead climbing
- Belaying

8. System rigging

- Anchor selection, application and evaluation
- Anchoring techniques
- Knots, bends, hitches

9. Co-worker rescue pre-plans and techniques

- Partner rescue
- Team rescue
- Raising and lowering