

Performing Arts Safety Primer

Working at Heights



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Note: The material in this publication is intended as educational information only. This publication does not replace the Occupational Health and Safety Regulation administered by WorkSafeBC. Employers and workers should always refer to the Regulation for specific requirements that apply to their activities.

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Introduction

This primer is for employers, performers, and technicians in British Columbia's live performance industry. It describes health and safety requirements and safe work practices for working at heights.

You may find the information in this primer useful if you are involved with:

- An established performing arts organization, such as a dance or theatre company
- An organization that produces concerts, cooperative shows, or corporate or special events (including festivals)
- A volunteer or educational organization

Aim of this primer

- Help employers comply with their legal responsibility to take every reasonable precaution to protect workers from falls
- Provide information about fall protection issues so cast and crew members can work safely

This primer does not replace the Occupational Health and Safety Regulation or the *Workers Compensation Act*. It explains many of the health and safety requirements that apply to live performance in B.C., but employers and workers should always refer to the Regulation for specific requirements that apply to their production activities.

Quick-start questions

Answer each of the following three questions to help determine what you need to do for fall protection on your production.

1. Will technicians or performers be working near unguarded edges at heights of 3 m (10 ft.) or more, other than on a temporary ladder, or in a bucket or scissor lift?

Yes. Your production needs fall protection. Complete a risk assessment and follow safe work procedures.

Complete a written fall protection plan if technicians or performers will be working at heights of 7.5 m (25 ft.) or more without permanent guardrails, or if the fall protection system will consist of work procedures (for example, a control zone and safety monitor).

No. Move to question 2.

Think about:

- Working on ladders, scaffolds, work platforms, balconies, catwalks, scenery, lifts, flying rigs, high steel, or near pits and traps
- Build, set-up, hang, touch-ups, tech, run, and strike

2. Will technicians or performers be working at heights less than 3 m (10 ft.), but where a fall could involve unusual risk of injury?

Yes. Your production needs fall protection. Complete a risk assessment and follow safe work procedures.

Complete a written fall protection plan if technicians or performers will be working at heights of 7.5 m (25 ft.) or more without permanent guardrails, or if the fall protection system will consist of work procedures (for example, a control zone and safety monitor).

No. Move to question 3.

Think about:

- Working above an audience, an orchestra pit, or on platforms or risers above scenery
- Build, set-up, hang, touch-ups, tech, run, and strike

Actsafes resources

Visit www.actsafe.ca for health and safety resources, including the following:

- *Risk Assessment Checklist*
- *Fall Protection Plan*

Other resources are described on page 48.

3. Will there be any other hazards while technicians or performers are working at height?

Yes. Complete a risk assessment and follow safe work procedures.

Depending on the hazard, you may need to complete a written fall protection plan.

No. You're done.

Think about:

- Working alone, with moving or falling objects, on slippery or unstable surfaces, in adverse weather conditions, near power sources, or with new crew
- Build, set-up, hang, touch-ups, tech, run, and strike

Types of fall protection

Types of fall protection include:

- Fall restraint (guardrails, safety belts, or full body harnesses)
- Fall arrest (full body harnesses)
- Work procedures (control zones and safety monitors)
- Other work procedures acceptable to WorkSafeBC

In the Regulation

See Part 11: Fall Protection.

Fall protection hierarchy

1. Use fall restraint before fall arrest.
2. Use fall arrest before work procedures.
3. Use work procedures only if you cannot use restraint or arrest methods.

Fall restraint systems

Whenever possible, use a fall restraint system to avoid getting into a situation in which you can fall. Guardrails are preferred.

If guardrails are not practicable, use a safety belt or full body harness attached to a securely anchored lanyard or lifeline. Adjust the lanyard or lifeline to limit your ability to travel and keep you away from the unguarded edge.

Fall arrest systems

If a fall restraint system is not practicable, use a fall arrest system. A fall arrest system will not prevent a fall from occurring, but it will stop the fall after a short distance.

A fall arrest system consists of a full body harness attached to a securely anchored lanyard that will limit the fall to a safe distance. Full body harnesses are specially designed to help protect against internal injuries. Don't use safety belts in fall arrest systems.

A fall protection plan is required for work at heights of 7.5 m (25 ft.) or more in locations that don't have permanent guardrails. (See "Fall protection plans," pages 10–13.)

Work procedures

If fall restraint and fall arrest systems are not practicable, use a work procedure, such as a control zone and safety monitoring system.

A control zone is an off-limits area between an unguarded edge and a safe zone where workers can move about. If you need to enter the control zone, a safety monitor keeps an eye on you.

Work procedures can also include other procedures acceptable to WorkSafeBC.

Exceptions for live performance

Live performance presents unique difficulties when it comes to working at heights.

Guardrails are often not practicable on scenic units that will be visible to an audience. Full body harnesses and safety lines on performers are often not practical during performance.

In the Regulation

See sections 4.56, 4.59, 4.60, and 8.22.

WorkSafeBC recognizes this and allows some exceptions to the use of standard protective

equipment and clothing in performance situations “provided that effective measures are taken to protect performers and other workers from injury.”

Effective measures may include procedures described in “Rehearsal” (see pages 21–24) and “Developing Production Components” (see pages 25–28).

Fall protection equipment

Employers are responsible for providing workers with any necessary fall protection equipment. However, if employers and workers both agree, workers may use their own equipment as long as it meets WorkSafeBC requirements and is appropriate for the specific task.

If you are inexperienced or unsure of what fall protection to use, consult the specialist on your production who is most qualified for the intended task.

What does *qualified* mean?

In the Regulation, *qualified* means “being knowledgeable of the work, the hazards involved and the means to control the hazards, by reason of education, training, experience or a combination thereof.”

Fall protection plans

When are fall protection plans required?

Employers must ensure that decisions are documented in a written fall protection plan in any of the following cases:

- When technicians or performers will be working at heights of 7.5 m (25 ft.) or more without permanent guardrails
- When a fall from a lower height could involve unusual risk of injury
- When the fall protection system will consist of work procedures, such as control zones or nets

Even if you are not required to complete a plan, briefly documenting your decisions can be useful for future reference and can establish due diligence.

What should the fall protection plan include?

Include detailed rehearsal and performance plans. All fall protection plans must specify:

- Fall hazards expected during each production phase
- Methods to prevent or mitigate the hazards
- Procedures to assemble, maintain, inspect, use, and disassemble fall protection systems
- A rescue plan for aiding workers who fall and are left suspended at height

Rescue plans

The rescue plan should answer these questions:

- If workers at risk fell, what would likely happen?
- Would self-rescue be possible?
- If not, could rescuers get to the workers?
- What equipment and techniques (including qualified experts) would you need, and how will you provide them?

Safety measures for customized equipment

If a performer will be using customized equipment—including harnesses and fly hardware (rated equipment made into a customized system)—describe safety measures the production will take.

Examples of safety measures

- Write a detailed rehearsal and choreography plan.
- Use equipment designed for the forces that will be exerted on it.
- Appoint a qualified person to inspect the equipment before each use.

Review and update the fall protection plan

- Review the fall protection plan before implementing it.
- Review the fall protection plan regularly as the production develops and conditions change.

- Make and document any necessary additions or changes.
- If you change things on the fly, make sure there is enough time to reassess risks and to test and rehearse the system. Note changes on the risk assessment checklist and fall protection plan.

Make changes as required by the venue

If you did not see the venue before completing the risk assessment checklist and fall protection plan, you may need to review and update them. This applies particularly to touring shows or new locations, where you need to reassess hazards for the new venue or worksite. Even if you have been there before, reassess the venue or location when you arrive.

Formalize continual risk assessment

The risk assessment should be on the agenda at production meetings. Briefly document each reassessment (for example, add to the risk assessment checklist and fall protection plan).

Worker instruction and training

Employers must provide workers with information, instruction, training, and supervision so they can carry out their work safely.

- When hiring, specify the requirements of the job if it will involve working at heights.
- Inform workers of relevant hazards.
- Post your risk assessment checklist and fall protection plan, and any subsequent amendments.
- Instruct and train workers in rescue procedures, fall protection methods, and equipment use.
- Document crew talks, training programs, and rehearsals, including attendance.

Crew meetings

Supervisors or crew chiefs must discuss fall protection at the first crew meeting.

- Inform workers where the risk assessment (and fall protection plan, if there is one) is posted before working at heights begins.
- Address the safety aspects of the work and the technical requirements, particularly

when the task involves unusual or unwieldy equipment.

With new crew, discuss fall protection and other health and safety issues in an orientation *before* they begin work. Introduce them to their worker health and safety representative.

Young and new workers

Employers must ensure that young and new workers are given health and safety orientation and training specific to their workplace before beginning work.

In the Regulation

See sections 3.22–3.25.

Definitions

Young worker—“Any worker who is under 25 years of age.”

New worker—“Any worker who is new to the workplace, returning to a workplace where the hazards in that workplace have changed during the worker’s absence, affected by a change in the hazards of a workplace, or relocated to a new workplace if the hazards in that workplace are different from the hazards in the worker’s previous workplace.”

Employers must document orientation and training of new and young workers. Actsafe has a sample form available in the publication *Orientation for Young and New Workers*.

Tips for effective orientation and training

- Set the tone by providing a clean, safe work environment.
- Stress safety over productivity. Productivity will come as new employees learn.
- Encourage questions.
- Don't assume anything is common sense.
- Evaluate and assess the safety of equipment that young or new workers might be required to operate.
- Ensure that young and new workers are appropriately supervised.
- Involve supervisors and experienced workers in orientation and training.

Actsafes resources

- *New and Young Worker Orientation* infosheet
- *New and Young Worker Orientation* series (three videos)

General safety

Falling objects

Wear a hard hat if there is a risk of head injury from falling or thrown objects (for example, flown scenery, lighting equipment, tools, or tail ends of cable). Although some companies provide hard hats, workers are responsible for providing their own approved hard hat, if necessary.

Hard hat requirements

- Keep your hard hat clean. Don't use solvents to clean it; they weaken the plastic.
- Don't drill holes in your hard hat.
- Don't paint it or apply stickers to it.
- Inspect it regularly. If it is cracked or damaged, replace it.
- Warn anyone not wearing a hard hat in an area where hard hats are required to keep clear of that area.

Working at heights

- Empty your pockets.
- Strap loose tools to your body.
- If you are using a hard hat, fasten the chin strap.

- If you need to work with loose tools, materials, or equipment (for example, when loading a counterweight arbor), make sure the area below is cleared of people and marked as a danger zone.
- Position objects as securely as possible so nothing gets accidentally knocked overboard.
- Avoid working alone at heights.

In the Regulation

See sections
4.21–4.23.

Low light levels

- Install running lights backstage.
- Mark unguarded edges, if possible, with conspicuous warning markers such as white tape, glow tape, LED lights, or laser markers. Don't rely entirely on electrical illumination in case of a power failure.
- Make portable lights (such as trouble lights, forehead flashlights, and mag lights) easily available to technicians working near unguarded edges.
- Include the running crew and technicians in technical rehearsals so they can orient themselves to the conditions.

Slippery or unstable surfaces

Performers and technicians must wear footwear that protects against existing hazards. If it is not practicable

for a performer to wear

standard safety footwear, the employer must take other measures to protect them from injury—for example, fit costume shoes with non-slip soles, change the floor surface, or remove the hazard.

In the Regulation

See sections
8.22–8.23.

High voltage

Don't violate the limits of approach when working near energized high-voltage electrical equipment. In the Regulation, high voltage

“means a potential difference (voltage) of more than 750 volts between conductors or between a conductor and ground.”

In the Regulation

See sections
19.24–19.29.

Strike

When assessing risks, include the work that will be done at heights when striking. Circumstances can be more hazardous during strike: there is

often a sense of urgency, crew sizes may have changed, all departments may be working at the same time, and fatigue is often a factor.

If the install required special equipment, make sure you have it for the strike. Ensure that stairways and other access methods are left intact until workers do not need access to the areas they serve.

Rehearsal

Rehearsal is a fundamental safe work practice for live performance. If a falling hazard cannot be eliminated during the design and construction phases of production, use rehearsal to introduce workers to the hazard and train them to deal with it. Proceed gradually from no risk to performance-level risk. Complicated sequences and hazardous parts of the action may require far more rehearsal time.

Pre-rehearsal planning

- Consider fall protection and general safety when discussing how the artistic concept will be staged. Include fall protection strategies in the budget.
- Assess risks, and eliminate or control hazards and unsafe work practices. Reassess risks as the production develops and conditions change.
- Complete a fall protection plan that includes information on hazards, prevention methods, safe work procedures, and rescue plans. (See “Fall Protection Plans,” pages 10–13.)

- Make fall protection a part of all pre-production planning and communication. Allow enough lead time for adjustments to be made for each venue.
- Hire performers and technicians who are sufficiently trained, experienced, and comfortable performing the tasks required.
- Schedule enough rehearsal time to deal with hazards. Allow time for additional rehearsals throughout the run, if necessary.
- Make sure understudies and replacements have enough rehearsal time to perform safely.

Orientation

- Orient performers and technicians at the beginning of production or when arriving at a new venue.
- Point out hazards such as traps and other unguarded edges.

Actsafes resources

- *New and Young Worker Orientation* infosheet
- *New and Young Worker Orientation* series (three videos)

- Discuss the risk assessment and fall protection plan. Focus on risks and how to mitigate them. Give workers an opportunity for feedback.
- Update workers about changing set conditions—for example, draw attention to an open orchestra pit or a new floor opening.

Rehearsal guidelines

- Develop blocking or choreography that eliminates or mitigates risks; or alter the technical parameters of the hazardous sequence.
- Ask the stage manager to document fall protection issues and solutions in the daily production notes.
- Ensure that production notes are on the agenda and discussed at weekly production meetings, and with appropriate technicians and performers.
- Inspect fall protection equipment before and after each use.

Actsafes resource

- *Stunt Harness Inspection video*

- Make sure that technicians checking a performer's safety arrangements are protected from injury while doing so.
- Upon arriving at the venue, conduct a spacing or orientation rehearsal.
- Dry-run sequences that involve special effects, pyrotechnics, stage machinery, or other technical hazards.
- Do a full run-through of any sequence believed to be hazardous.

Developing production components

The safe development process is a part of production design that can be initiated at any time. Use this process to identify and resolve health and safety issues for potentially hazardous production components, such as scenery used to fly performers or a costume with stilts. Document the process in your fall protection plan to establish due diligence.

The safe development process consists of three steps: development, testing, and rehearsal.

Note: Before developing production components, make sure the production and creative teams complete a risk assessment.

Development

Use research and design to resolve health and safety concerns. Consult with performers, production team members, and the health and safety representative, if there is one.

Actsafes resource

- *Sample Safe Development Process*

Testing

Test production components that interact or might interact with performers or technicians.

In the Regulation

See Guideline 11.2-6, Fall Protection During Stunt Work.

- For initial tests, use non-live loads such as sand bags.
- For secondary tests, use controlled live loads with appropriate safety measures such as fall arrest harnesses to simulate and exaggerate performer movement and interactions.
- Carry out final tests with all other production components that could affect the component under development (for example, adjacent performer or scenery movements, lighting conditions, or sound levels).

Rehearsal

Provide all performers working on or with potentially hazardous components with enough orientation and rehearsals to eliminate or mitigate the risks. (See “Rehearsal,” pages 21–24.)

Components visible to the audience

Generally, structures and components must meet the standards described in the Regulation. However, WorkSafeBC allows exceptions for props, scenic units, and effects components that will be visible to the audience, *as long as effective measures are taken to ensure that workers are protected from injury.*

This means that in situations where WorkSafeBC requirements are not practicable, you can use the safe development process (in conjunction with the rehearsal process) to identify and resolve health and safety issues. You must still use professional engineering when necessary.

Entering new territory

When trying something for the first time, ask a trusted and respected colleague who has done something similar how to approach the component design, or consider hiring a specialist or engineer.

Consult or hire an engineer to help develop production components when:

- The development process does not adequately address the engineering principles involved
- You want to ensure that you are providing a safe work environment and doing your due diligence

Refusing unsafe work

At any point, anyone involved can and must speak up if he or she feels the process is inadequate and the

resulting production component will not mitigate the hazard. If there is a concern, work toward a solution that satisfies everyone involved. For example:

In the Regulation

See sections 3.12–3.13.

- Provide additional rehearsal time for the performer to increase their comfort level.
- Change the sequence.
- Cut the sequence from the production.

Unguarded edges

You are working at height if you are working near a vertical drop that is:

- 3 m (10 ft.) or higher
- Less than 3 m (10 ft.) but where a fall could cause unusual injury

In the Regulation

See sections 4.54–4.63.

Note: Section 4.55 of the Regulation mentions a requirement for guardrails at heights of 122 cm (4 ft.) or more. This requirement is only intended for structures such as loading docks and **does not** apply to performance stages and scenic units visible to audiences.

When working near edges such as stages, balconies, catwalks, and traps, look out for others—especially if you are a director blocking performers or a stage performer working above pit musicians.

Actsafes resource

- *Health and Safety Overview of Orchestra Pits* (Performing Arts Safety Bulletin #11)

Notify all workers of changes to their work environment. For example, tell them if the pit is open and the drop has significantly increased, or if unguarded edges are hidden by drapery.

Technical setting vs. rehearsal or performance setting

- Establish when work zones will change between the technical setting and the rehearsal or performance setting so protective measures can be implemented.

Example: When shifting from a focus call to a technical rehearsal, technicians may need to replace guardrails with alternative fall protection intended for rehearsal and performance.

- If practicable, leave standard fall protection measures used to protect technicians during work calls in place to protect performers (for example, during technical rehearsals).
- If reassembling protective devices is impractical between shows or during maintenance, protect workers by using the systems in place for performers, but only if these measures are safe given the risk

involved and you reorient the technicians to the altered risk.

- If the running crew will be working near edges during the performance (for example, follow-spot operators), provide them with fall protection and include them in rehearsals.

Traps

- When not in use, cover traps or surround them with guardrails.
- If practicable, mark trap perimeters with glow tape, LED lights, white tape, or laser markers.
- Don't rely exclusively on electrically powered systems, in case of a power failure.

In the Regulation

See section 4.59.

Ladders

Two types of ladders are used in live performance:

- Portable ladders (straight ladders, extension ladders, A-frame ladders, and stepladders)
- Permanent ladders (access ladders and escape ladders)

In the Regulation

See sections 13.2–13.6.

Note: The use of wheeled A-frame ladders is not recommended.

Use ladders that meet CSA or ANSI standards. You can work without fall protection for short, light-duty tasks only. If the job will take longer, use another method such as a lift.

Raising and lowering items

Don't climb ladders while carrying heavy or bulky objects. Either position yourself securely on the ladder and rope the item up or down, or attach a pulley block to a rated overhead grid or rigging point, and have ground crew raise or lower the object.

If you are roping the item by hand, make sure the ladder is secure (for example, tie off the ladder at the top and secure it at the bottom or have ladder assistants foot the ladder).

Ladder assistants

When necessary, use ladder assistants to:

- Foot the ladder
- Keep people out of the area
- Hook up and raise or lower equipment or materials on a rope

Note: The use of ladder assistants is not considered fall protection.

Portable ladders as scenic units or props

A portable ladder constructed at the job site must meet WorkSafeBC requirements unless it will be used as a scenic unit or prop that will be visible to the audience. If a ladder is designed and constructed for use as a visible scenic unit or prop:

- Inform all technicians that the ladder is for performance only
- Mark the ladder “for performance only” when it is not being used in performance or rehearsal

Scaffolds

In the Regulation, scaffold “means any temporary work platform and its supporting structure used for supporting workers, or materials, or both.”

In the Regulation

See sections
13.13–13.19.

Scaffolds must meet the safety standards in section 13.17. The only exceptions are scenic units or props that will be visible to the audience.

Erecting scaffolds

- A qualified worker must supervise scaffold erection and dismantling.
- Follow the manufacturer’s and supplier’s instructions, and meet WorkSafeBC requirements.
- Erect scaffolds on solid footings. If necessary, use screw jacks to level scaffolds.
- Secure and rigidly brace the uprights to prevent swaying and movement.
- If a scaffold is higher than three times its minimum base dimension, secure the

scaffold to the adjacent structure or use guylines and outriggers.

- Don't erect scaffolds near power lines or other energized high-voltage electrical conductors. If necessary, contact the local power company.
- Install required guardrails and toeboards on platforms that are 3 m (10 ft.) or higher.
- Don't mix and match components.
- Keep erection drawings on site.
- Use fall protection when erecting or dismantling scaffolds that are 3 m (10 ft.) or higher.

Inspecting scaffolds

Inspect scaffolds daily before use and after any modification. Follow the manufacturer's and supplier's instructions, and replace any damaged components.

Using scaffolds

- If guardrails are not practicable, use personal fall protection.
- Use a ladder, stairway, or other safe means to access scaffold landings. Don't climb the outside of scaffold frames between landings.

- Don't use ladders or makeshift devices on top of scaffolds to increase the height.
- Don't overload scaffolds with materials or people. Stay within the manufacturer's and supplier's load specifications.
- Secure and belay equipment when hoisting it. When lifting materials more than three frames high from the ground, use a well wheel and davit. Secure equipment on top to the main framework.
- Don't remain on a rolling scaffold while others are moving it if the scaffold is higher than twice its minimum base dimension.
- Don't remain on a rolling scaffold if you are moving it and the platform is higher than one and a half times the scaffold's minimum base dimension.
- Don't work on a draped scaffold in outdoor conditions unless a professional engineer has determined that it is safe to do so in those conditions at that particular venue.
- Objects mounted on scaffolds can make it unstable. Use counterweights or bracing if necessary.

Scaffolds as scenic units or props

A scaffold must meet all WorkSafeBC requirements unless it will be used as a scenic unit that will be visible to the audience. If a scaffold is designed and constructed for use as a visible scenic unit and it does not meet WorkSafeBC requirements, you must include it in your fall protection plan.

- Inform all technicians that the scaffold is for performance only.
- Mark the scaffold “for performance only” when it is not being used in rehearsal or performance.
- Provide an effective means of fall protection for workers (see “Rehearsal,” pages 21–24).

Lifts

Lifts (usually bucket or scissor lifts) are ideal for live production because they:

In the Regulation

See sections
13.20–13.33.

- Have built-in guardrails
- Usually do not require full body harnesses (except for boom lifts)
- Are easy to move around for minor adjustments
- Leave both hands free for work

Types of lifts

Bucket lifts are single-person telescopic vertical lifts. Some bucket lifts are self-propelled.

Scissor lifts are vertical lifts that are scissored rather than telescopic. They can hold more than one person.

Boom lifts are mounted on an arm that can be articulated (above) or telescopic.

In the Regulation:

- *Boom-supported elevating work platforms* include boom lifts.

- *Elevating work platforms* include bucket lifts and scissor lifts.
- *Self-propelled* “means the capability of an elevating work platform to be power propelled with the primary controls on the work platform.”

Lift requirements

Personnel lifts must meet CSA or ANSI standards and WorkSafeBC requirements.

Basic requirements for personnel lifts

Type of lift	Annual lift certification required?	Harness required?	Suitable for sloping ground?
Bucket lift	No	No, if operating on a firm, substantially even surface with all guardrails and chains in place	No
Scissor lift	Yes	No, if operating on a firm, substantially even surface with all guardrails and chains in place	No
Boom lift	Yes	Yes	Yes, if used according to manufacturer's instructions

Inspecting lifts

- Inspect lifts before each use.
- If you find any defects, repair the lift immediately or tag it and remove it from service.
- Keep inspection and maintenance records.
- Check the equipment decal to ensure the certification has not expired.

Operating lifts

In the Regulation

See sections
19.24–19.29.

- Lifts must be operated by trained, qualified crew members.
- Follow the manufacturer's instructions and WorkSafeBC requirements. Keep the operating manual on site.
- Before operating the lift, check for potential hazards, including traffic, power sources, floor openings, and slopes.
- Level and plumb the lift base and supporting ground. Use wheel chocks and blocking on inclines.
- Look out for overhead power lines and high-voltage devices. When working near power lines, stay outside the limits of approach.

- Don't exceed the manufacturer's specified load limit.
- Don't try to increase lift height by placing ladders, planks, or other objects on top of the platform.
- Set the braking system before elevating crew members.
- Don't sit or climb on the railings.
- Lock out unattended personnel lifts.
- Establish clear communication protocols between workers on the platform and those on the ground.
- Don't use lifts in extreme weather conditions such as thunderstorms, heavy rain, or high winds, unless safety measures are in place.
- In electrical storms, workers must get off the lift.

Moving workers on lifts

- Most lifts, with the exception of scissor lifts, must be lowered before they are moved with workers on them.
- Follow the manufacturer's or supplier's specifications.

- Ensure that all guardrails and chains are in place.
- Watch the rate of travel and communicate with the worker on the platform according to pre-set protocols.

Communication protocols

Generally, workers at height should dictate any movement of themselves or the equipment in their immediate area. Workers below should never make such moves unless asked to by the person at height.

If you need to move a counterweight or other fly pipe that is near a worker on a ladder or lift, or the worker is on the grid or loading gallery, ask the worker before moving the item.

If you drop an object from a height, immediately yell “Heads!” If you hear someone yell “Heads!” duck and cover; don’t look up.

Moving workers on scaffolds or bucket lifts

1. Worker at height: Make sure your head is clear of the grid and the space is clear of cables. Initiate the move by saying “Ready to move” and indicating the location or direction (for example, “Stage left, one foot”).

2. Assistant below: Before moving the ladder or lift, make sure the path is clear, then say “Moving.”
3. Worker at height: When you reach the new location, say “Stop.”

Assistants should pay close attention to the worker above. Designate one assistant as the operator. The operator should:

- Communicate with the worker above
- Make sure the path is clear
- Make sure others know there is someone working overhead

WorkSafeBC requirements

Fall protection requirements appear throughout the Regulation. These are the most relevant sections from the Regulation and its associated guidelines that apply to working at heights in live performance.

Topic	Location in Regulation
Work Area Guards and Handrails	Sections 4.54–4.63
Personal Protective Clothing and Equipment	Sections 8.2–8.3, 8.7–8.9
Safety Headgear	Section 8.11
Footwear	Sections 8.22–8.23
Fall Protection	Part 11
Ladders	Sections 13.2–13.6
Scaffolds	Sections 13.13–13.19
Movable Work Platforms	Sections 13.20–13.33
Safe Work Areas and Safe Access	Sections 20.4–20.14.3
Roof Work	Sections 20.73–20.77
Demolition	Sections 20.111–20.121
Evacuation and Rescue	Part 32
Fall Protection During Stunt Work	Guideline G11.2-6

Organizations

Actsafe

Tel: 604 733-4682 in the Lower Mainland
1 888 229-1455, toll-free in B.C.

Fax: 604 733-4692

Web: www.actsafe.ca

Collaborating with B.C.'s motion picture and performing arts industries to provide innovative, accessible health and safety training and resources.

WorkSafeBC

Tel: 604 276-3100 in the Lower Mainland
1 888 621-SAFE (621-7233),
toll-free in B.C.

Email: workpub@worksafebc.com

The Occupational Health and Safety Regulation and many other publications are available at WorkSafeBC.com.

Canadian Institute for Theatre Technology

Tel: 1 888 271-3383

Fax: 613 482-1212

Email: info@citt.org

Web: www.citt.org

Entertainment Technician Certification Program

Tel: 212 244-1505

Fax: 212 244-1502

Email: etcp@plasa.org

Web: <http://etcp.plasa.org>

North American Association of Flying Effects Directors (NAAFED)

Tel: 1 888 359-4255, ext. 103

Email: louh@flyingfx.com

Web: www.naafed.com

United States Institute for Theatre Technology (USITT)

Tel: 1 800 938-7488

Fax: 1 866 398-7488

Email: info@office.usitt.org

Web: www.usitt.org

Resources

Actsafe

Visit www.actsafe.ca for health and safety resources, including the following:

- *Risk Assessment Checklist*
- *Fall Protection Plan*
- *Sample Safe Development Process*
- *New and Young Worker Orientation* infosheet
- *New and Young Worker Orientation* series (three videos)
- *Stunt Harness Inspection* video
- *Health and Safety Overview of Orchestra Pits* (Performing Arts Safety Bulletin #11)
- *Play it Safe* online manual

Other

WorkSafeBC Ladder Safety web page:
www2.worksafebc.com/Topics/EquipmentSafety/LadderSafety.asp

What is Actsafe?

Actsafes partners with B.C.'s entertainment industries to keep workers safe. Actsafes is where people in the industry connect with others who share their safety concerns, and set the stage to work safely.

Mission

Collaborating with B.C.'s motion picture and performing arts industries to provide innovative, accessible health and safety training and resources.

Values

Accessibility, Collaboration, Innovation.

Structure

Actsafes is governed by the industries it represents. We operate through two standing committees that represent the motion picture and performing arts communities. Membership on these committees includes both employer and worker representatives.

Office hours: 9:00 am–5:00 pm, Monday to Friday.

Contact us:

Suite 215 – 750 Hamilton Street
Vancouver, B.C. V6B 2R5

Tel: 604.733.4682

Fax: 604.733.4692

Toll-free: 888.229.1455

Email: info@actsafe.ca

www.actsafe.ca

Performing Arts Safety Primer

Working at Heights



This primer is for employers, performers, and technicians in British Columbia's live performance industry. It describes health and safety requirements and safe work practices for working at heights.

This primer is intended as a tool to help cast and crew members work safely. It will also help employers comply with their legal responsibility to take every reasonable precaution to protect workers from falls.