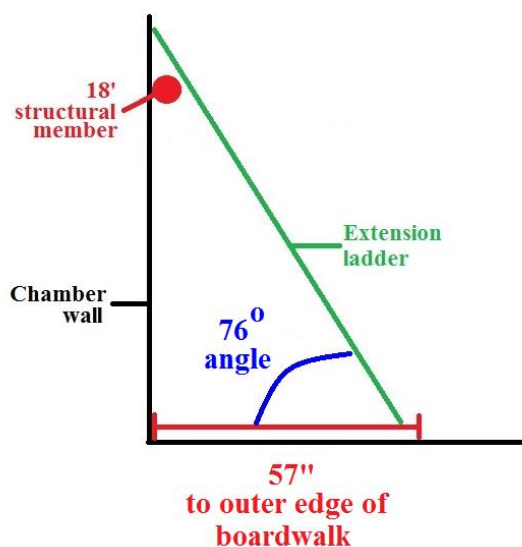


ORNL Employee & Collaborator Extension Ladder Use within the SPRUCE Enclosures:

Extension ladders will be used to access research equipment installed within the SPRUCE enclosures, mounted to the 18 foot structural member. This work-aid shall address the initial hardware installation and subsequent uses for routine maintenance of the research equipment and hardware, following installation.

As seen within Figure 1 the interior angle of the ladder when positioned just above the 18 foot working height (situated at ~19 feet or 228 inches) and secured to the outer edge of the boardwalk (at 57 inches) is ~76 degrees. The proposed use and positioning of the ladder have been reviewed and approved by ORNL Fall Protection subject matter expert (SME) Andrew Bush. On June 9, 2015 (via email) SME Bush also informed us that fall protection devices are not required when climbing or working on this type of portable ladder.

Figure 1



In accordance with this work-aid ORNL employees and collaborators utilizing these ladders shall comply with the following requirements:

ORNL employees:

- Shall be an active participant on the authorized version of the SPRUCE RSS 7728;
- Will have completed the ORNL LRN ladder training module;
- Must use and operate ladders in accordance with the controls specified within Question 13.7 of the aforementioned RSS and the accompanying SBMS subject area.
- Secure the bottom and top of the ladder. Cinch straps will be used to secure the bottom portion of the ladder to the enclosure wall, and the top of the ladder to the structural steel girder.

Collaborators:

- Will follow requirements as stated within the “Collaborations” tab of the ORNL SPRUCE project website (<http://mnspruce.ornl.gov/content/collaborations>) particularly that “all collaborators must agree to and abide by the SPRUCE data policy, experimental protocols, and the safety rules established by ORNL and the USDA Forest Service.” This includes the requirement to read a hardcopy of the current/authorized version of the ORNL Research Safety Summary (RSS) and sign the appropriate acknowledgement form which will be maintained as an official SPRUCE record.
- Coordinate tasks with the ORNL point of contact for the SPRUCE site (Robert Nettles or his delegate). He is available to assist with securing the ladders (described previously), and other tasks as requested.
- Prior to using these ladders the ORNL point of contact shall ensure that collaborators using the ladders are comfortable with the setup and may ask questions pertaining to their ability to perform the task.
 - Collaborators will be reminded of stop work authority which can be called by **ANYONE** at the site (ORNL and non-ORNL personnel alike).
 - Collaborators will be reminded to be aware of their own personal limitations and to be mindful if those limitations have changed on any given day (i.e. if they feel ill, dizzy, etc.).