

Mecklenburg County Council COPE & Climbing Indoor Wall Rappel (MSR) SOP

Overview

This document sets the standards for rigging and facilitating the rappel station at the Mecklenburg Scout Reservation indoor climbing wall. This document is in addition to the Releasable Rappel SOP that governs all rappelling activities in the MCC COPE & Climbing program.

Note that although the BSA *Guide to Safe Scouting* does not prohibit Webelos from the indoor wall rappel element it is not recommended. The general intent of this element is to have a method to complete Climbing merit badge when weather prevents access to the tower.



Equipment

The following lists the equipment needed to rig the tethers and rappel as detailed below in this document.

- MSR
 - 1 bucket
 - 1 Lobster claws including aluminum triple action carabiner for instructor attachment
 - 1 short rope tether
 - 1 Petzl Vulcan tri-action carabiner
 - 1 tri-action steel carabiner
 - 3 steel screw gate locking carabiners
 - 1 rescue 8 (belay friction device)
 - 1 ATC-XP (belay friction device)
 - 1 static rope; minimum 20m (for rappel)
 - 1 low stretch static rope; minimum 19m (for rappel belay)
 - 1 low stretch static rope; minimum 19m (for ladder belay)
 - 2 captive eye carabiners
 - 2 pairs of rappel gloves
 - 1 Mammut SMART 2.0 with paired aluminum screw gate carabiner
 - 1 rope ground anchor
 - 1 steel screw gate locking carabiner
 - Slingshot Belay (in addition to the items listed above)
 - 1 Fixed Wheel SRD with paired steel screw gate carabiner (note that this is not the usual “trapezoid” SRD)
 - 1 Mammut SMART 2.0 with paired aluminum screw gate carabiner
 - 1 rope ground anchor
 - 1 steel screw gate locking carabiner

Indoor Wall Rappel Facility Inspection

Special attention should be taken when performing the daily inspection of the indoor wall to also inspect the underside of the rappel platform for wasp nests. The back side of the indoor wall can be accessed via the door next to the trading post window. While there is a light in this area, it is recommended to use a flashlight to visually check the underside of the rappel platform.

While inspecting the element, also pay attention to the metal straps that have been used to secure the ladder to the wall and the accessory cord loop that is at the top of the ladder.

Belay for Ladder

To access the top of the indoor wall, the instructor and participants must be “on-belay” while climbing the ladder.

Untie the paracord from the ladder and rig a low stretch static rope to be used as the belay rope through the pre-rigged SRD attached to the anchor above the ladder. This is the same process used to rig a climb when paracord has been pre-threaded. Refer to the Indoor Wall Climbing SOP for step-by-step instructions on performing this action.

The 4th (left-most) ground anchor should be used for this belay.

The instructor or participant will remain “on-belay” until they have been transitioned to another life-safety system at the top of the indoor wall. Any of the three wire rope loops around the steel roof beams may be used as a life-safety connection.

Gear and Equipment Access

Gear and equipment for the rappel element should be placed in a bucket. The bucket of gear and equipment can now be hauled to the top of the indoor wall using the belay line. Repeat this action for the rescue bag.

Place the rescue bag and bucket should be placed in the back corner of the rappel platform.



Safety Tethers

The first items to be rigged must be the safety tethers at the top of the indoor wall. Safety first. Rig the tethers to keep the instructor(s) safe while completing the rest of the rigging for the releasable rappel.

Instructor Tether

At the rappel station, the instructor must be on lobster claws. The lobster claws should be attached to the wire rope loop at the rear of the rappel station furthest away from the edge of the platform. The instructor lobster claw connection should be the top-most connection on the wire rope loop above the wire rope clip spacer that has been attached to the loop. The gates on the snap hooks should be opposite and opposed to each other when on the same wire rope loop. While rigging and setting up, the instructor may connect to any of the three life-safety wire rope loops. The instructor should take care to adjust the length of the lobster claw arms to limit any potential fall.

Participant Tethers

For the participant tether we use a custom tied rope tether with a steel dual action snap hook and triple action carabiner.

The participant tether should be clipped to the steel wire rope loop at the back of the rappel station platform above the wire rope clip spacer.

When not in use the tether can be left hanging. It is recommended that the aluminum carabiner of the tether not be clipped back to the wire rope loop.

Rigging the Element

Releasable Rappel

The releasable rappel should be rigged in the same manner as any rappel in the MCC COPE & Climbing program. The rappel should be attached to the life-safety wire rope loop at the back wall of the rappel station. The carabiners for the rappel should be connected below the wire rope clip spacer.

Using the mid-point of the ropes that are intended for the tower will result in too much rope on the ground. Adjust the amount of rope on the ground before tying off the releasable rappel. There should only be 2-3 feet of rope on the ground. Place a stopper knot on both ends of the rappel rope. The rappel line should be gathered up and thrown over the side of the wall. The release line should be neatly hand coiled using a small butterfly coil and placed on the platform below the wire rope loop so it will not get in the way or become a tripping hazard.



Rappel Belay

The rappel will be belayed in similar methods as rappels on the tower.

Top Rope Belay (top managed)

To rig the top rope belay you should use one of the ropes designated for this purpose. Since the indoor wall is shorter than the tower, we will not utilize the teeter-totter configuration here. A tri-action captive eye carabiner should be tied to one end of the belay line using a figure 8 on a bite. The top rope belay will be set up using a Munter hitch on a steel carabiner hanging on the wire rope loop above the edge of the rappel station.

The Munter hitch allows instructors of varying heights and belay styles to hold the brake strand comfortably. Taller instructors may need to kneel on the rappel platform due to the limited height of the roof. The brake strand of the Munter hitch can be held at any height and still provide plenty of braking strength for any size rappeller.

The remainder of the rope should be flaked or stacked neatly off to the side.

The Petzl Rescucender should be attached to the brake side of the belay rope. This is the end that was just placed to the side. Ensure that the Rescucender is oriented properly. There is an Up arrow on the device. This arrow should point up toward the Munter hitch and the steel wire rope loop. When in use the screw gate carabiner will be attached to the instructor's belay loop. When not in use the screw gate carabiner can be attached to the captive eye carabiner on the top rope belay.

It is often convenient to leave the rappel device, carabiner, and rappel gloves clipped to the captive eye carabiner.



Top Rope Belay (bottom managed)

Attach the triangular shaped bolted wheel SRD to the steel wire rope loop using the paired steel screw gate locking carabiner. Rotate the carabiner so that it is in the “screw down” orientation.

Thread a low-stretch static rope through the SRD. A tri-action captive eye carabiner should be tied to participant side of the belay line. The participant side of the belay line is the side that exits the SRD closest to the rappel station. The belay side of the line exits the SRD away from the rappel station toward the ground anchors. Lower the belay side of the rope to the ground.

Connect a Mammut SMART 2.0 belay device to the belay line and connect it to the pre-rigged ground anchor. The second from the right ground anchor is recommended to be used for the rappel belay.

Do not use the belay line above the ladder to belay a rappeler. If the rappeler were to fall, it would result in a pendulum swing that could impact with the wall or ladder.



Fireman's belay

The rappel line is used to belay the participant. This is an acceptable method for a single line rappel; however, an independent top rope belay is recommended.

Facilitating the Rappel

While the basics of facilitating the rappel are no different than any other rappel, there are a few items worth noting.

Instructor Safety & CHECK

When the instructor first ascends to the rappel platform he should immediately clip in to one of the 3 wire rope life-safety loops. He should then perform a CHECK of the rigging before any participant is allowed to climb the ladder to gain access to the rappel platform.

The instructor will likely be positioned on the far side of the rappel station farthest away from the ladder. This position will allow the most room for the participant to climb the ladder and gain access to the platform.



This picture shows the complete rappel rigging with participant tether and instructor lobster claws attached to the back wire rope life-safety loop.

The participant tether's connection is resting on the wire rope clip spacer allowing easy access to the carabiners used to connect the rappel to the anchor.

The instructor's lobster claws should be placed above the participant tether connection to allow easy access should the instructor need to transition themselves to another anchor.

Participant Safety

CHECK will be performed on participants before ascending the ladder and going “on belay”. The participant will go through the appropriate belay commands before leaving the ground. An instructor will be positioned on top of the indoor wall at the rappel station before a participant is permitted to ascend the ladder.

Once the participant accesses the top of the indoor wall, they should be connected to an appropriate tether. There should be no untethered participants on the top platform of the indoor wall at any time.

The participant tether should only be connected to the back wire rope loop and only be long enough for the participant to approach the edge of the platform.

When the participant is transitioned to a tether, the belay line above the ladder should remain at the top so that it can be easily accessed. For example, if the participant decides that they do not wish to rappel. The participant would need to go back “on-belay” before disconnecting from the tether and descending from the platform.



On Belay

When connecting the belay line to the participant, take special care to ensure that the belay line to the participant will not be crossed or twisted. This is especially important when a top-managed belay is being utilized. From the instructor's perspective, the participant's belay line will be under the brake side of the belay line. When the participant backs closer to the edge and is rappelling, the belay line will go straight down from the Munter hitch on the anchor above the rappel.

Make sure that all rappelling belay commands are followed with the belayer and belay team before the participant is removed from the tether. If using a fireman's belay, a second trained instructor should be present at the bottom to supervise the bottom belay.

Rappelling

There is limited head room at the top of the indoor wall, so participants and instructors may have to crouch slightly; especially as the participant begins to rappel. The participant needs to keep his legs straight and his feet on the edge of the platform. Instruct him to lean back, butt first like he is going to sit down. The direction of the rappel is intended to be straight out from the wall over the point of the climbing wall feature. The rappel transitions into a "free" rappel as the rappel gets lower on the wall.

Watch the participant all the way down. Sometimes they freeze, panic or encounter other difficulties. You must watch the entire process until the participant is safely on the ground.

Rappel devices, gloves, and any other hardware will need to be hauled back to the top of the indoor wall after each rappeler. Rappelling gear could also be handed to the participant and clipped to a gear loop before they ascend the ladder.

De-Rigging the Rappel Station

The instructor should de-rig the rappel element and rappel belay, placing gear and equipment in the bucket as it is de-rigged. Ropes may be dropped to the ground after all hardware has been removed. Lower the bucket and rescue bag to the ground using the belay line above the ladder.

Once everything has been lowered to the ground, the instructor should go “on-belay” and either climb down the ladder or be lowered to the ground.

Replace the paracord on the pre-rigged SRD above the ladder. Be careful to maintain control of the paracord so it is not pulled through the SRD. Once the paracord has been replaced, tie it to one of the rungs of the ladder to keep it out of the way.



Rethreading the Paracord

If the paracord needs to be re-threaded, use the following procedure to regain access to the rappel platform to rethread it.

The ladder should not be climbed with lobster claws alone while not connected to an independent top-rope belay system.

Rig a belay line through the anchor for the climbing route below the rappel platform.

Disconnect the zorber from the cable grab (ascender) in the closet and connect it to the belay line for the climb below the rappel platform. Connect the other end of the zorber to the instructor's belay loop. Since the instructor will be climbing above their anchor during this process, the zorber is required.



Climb the ladder while “on-belay” with this line. Take a set of lobster claws up the ladder, already clipped to your belay loop.

As you approach the height of the climbing anchor, use the lobster claws and wrap one of the legs around the side of the ladder passing over a rung of the ladder, clipping the lobster claw back on itself. Climb up one or two more rungs, then repeat the process with the other leg of the lobster claw. Remove the lower leg of the lobster claws, climb up another rung or two, and wrap the leg of the lobster claw around the ladder and over the next rung. Repeat these steps to gain access the rappel platform. The belayer will need to give slack as the instructor climbs the ladder.



Move one of the lobster claw legs to the steel life-safety wire rope loop above the ladder. Manually re-thread the paracord through the SRD ensuring that the paracord follows the rope path and is under the rollers on both sides.

Using the lobster claws, down-climb the ladder in the same fashion as it was climbed by wrapping the lobster claw arm around the side of the ladder and over a rung until you are below the anchor of the belay line, have the belayer take any slack in the belay line. At this time, you can either down climb the ladder while the belayer pays out rope or be lowered to the ground by the belayer. If you choose to lower, down climb the ladder to transfer your weight to the belay line, then slowly release yourself from the ladder. There will be a small pendulum swing when you release from the ladder.