Loveland Fire Rescue Authority
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SPECIAL OPERATIONS: ROPE RESCUE BASIC HAUL SYSTEMS (1.1)

This heading includes information about the following:

Developed by Matt DeDecker
October 2015

TASK SKILL DESCRIPTION AND DETAIL

This heading includes information about the following:

- This guide is intended to create consistency for building basic haul systems.
- The tasks role would be rescue.
- How to do the task:

Step 1: Determine what mechanical advantage you will need to haul the load. 3:1 or 5:1 mechanical advantage.
Step2: Choose appropriate anchor point/points for the load (see anchor point training manual page.)

Step 3: Determine the direction of travel and area necessary to minimize multiple resets for the haul team. Moving Downhill aids in the mechanical advantage but is not always the best direction.
Step 4: Assemble the haul system.

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3:1 Mechanical Advantage

- Attach the MPD to the anchor point, and load the device. After loading the MPD, sharply pull the rope on the load side of the device. If the rope does not free pull through the device then it is loaded correctly.

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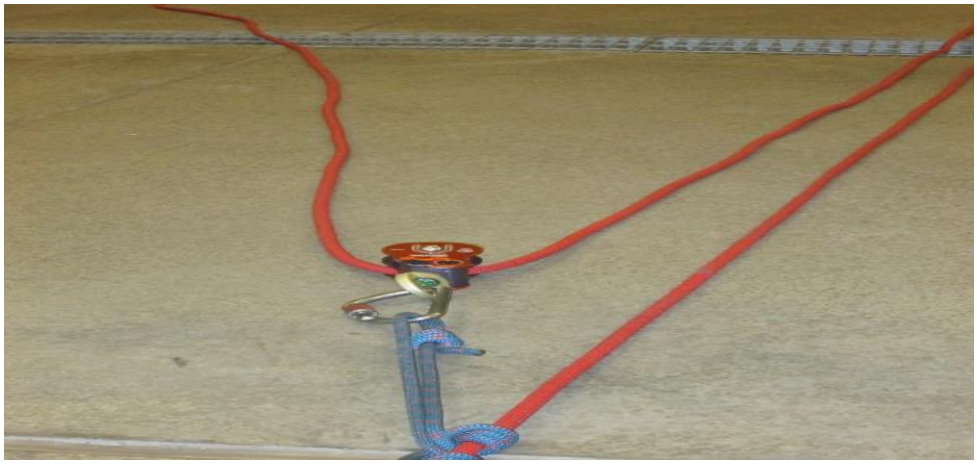
- Attach a 7mm prussic cord to the main line as close to the load as possible, using the three wrap method. Placing the prussic here allows for the maximum travel before a reset is needed. Place a steel carabiner and double pulley on this prussic.

- Load the running end of the rope into one side of the double pulley and take it back to the anchor.



Step 5: Safety check the system.

- Insure anchor points are secure
- Carabiners are loaded correctly

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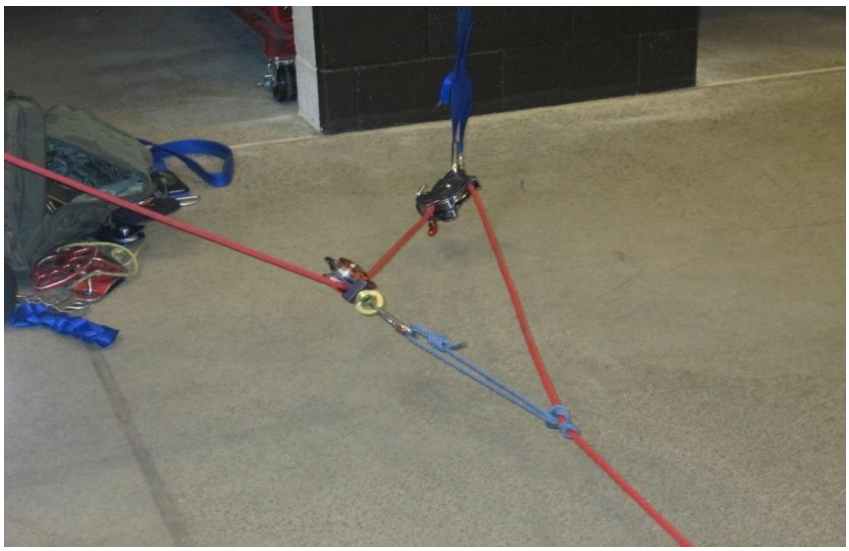
- Knots are all tied correctly
- No one in the fall line of loose rock/debris
- All key positions know their roles and responsibilities and everyone operating is aware of the plane.

Step 6: Haul on the system. When the traveling pulley is almost to the MPD call a "STOP" and a system reset.



Step 7: Resting the haul system. Make sure that progress capture has grabbed the load. After progress capture is confirmed move the traveling pulley back to its beginning location by minding the prussic and walking back to the starting location.

Communications associated with the task:

"Haul"-Haul team pulls on the running end of the rope in a smooth controlled manner.
"Stop"-All movement in the system stops immediately do not let go of the rope.
"Reset"-Confirm progress capture. Move the traveling pulley back towards the load for the next haul.

5:1 Mechanical Advantage

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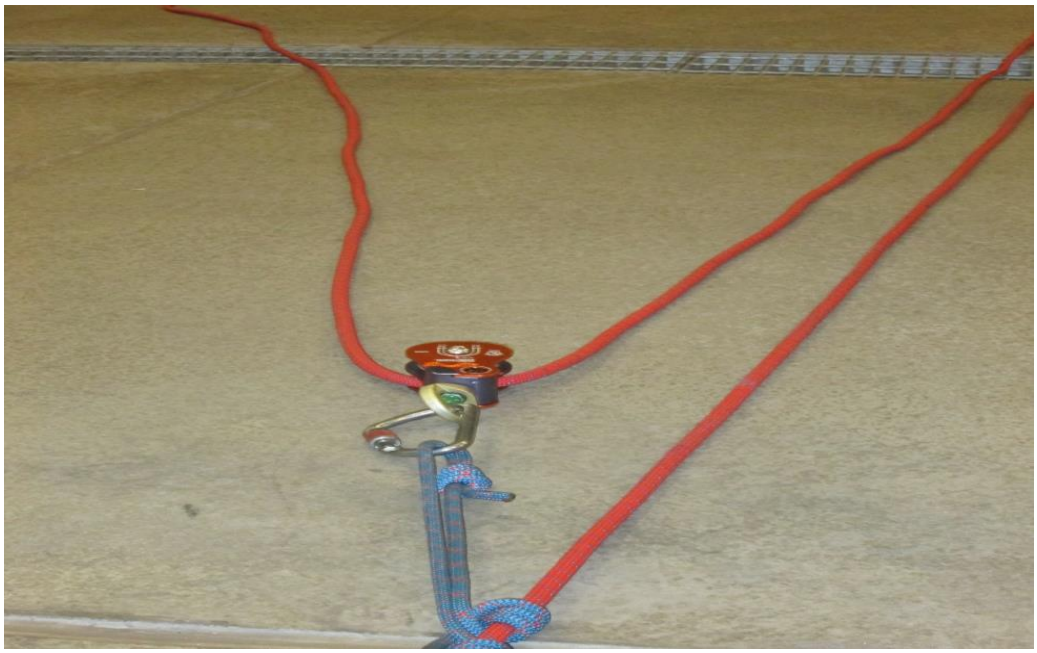
- Load the running end of the rope into one side of the double pulley and take it back to the anchor.



- Attach a steel carabiner and single pulley to the bottom becket of the MPD. Load the running end of the rope into the single pulley and pull the rope back to the double pulley.

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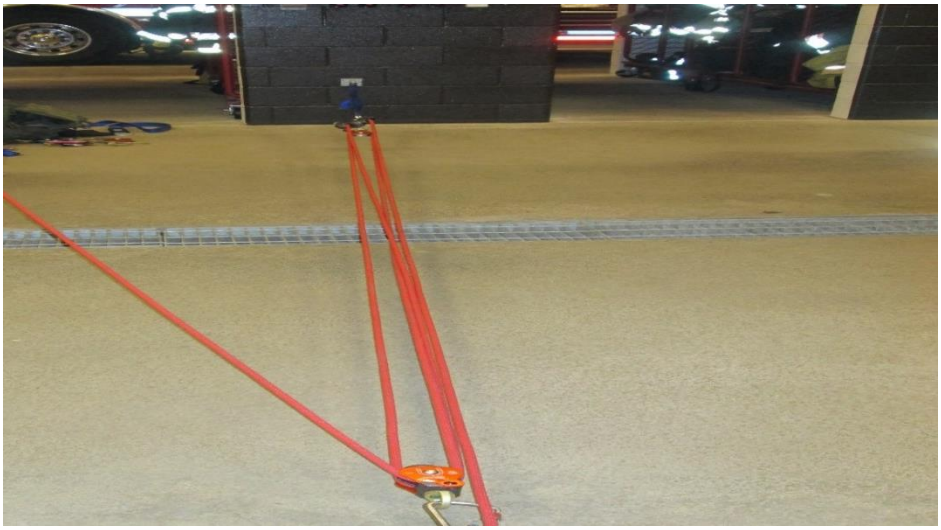
- Load the running end of the rope into the free side of the double pulley and pull it back to the anchor.



Step 5: Safety check the system.

- Insure anchor points are secure
- Carabiners are loaded correctly
- Knots are all tied correctly
- No one in the fall line of loose rock/debris
- All key positions know their roles and responsibilities and everyone operating is aware of the plane.

Step 6: Haul on the system. When the traveling pulley is almost to the MPD call a "STOP" and a system reset.

Step 7: Resting the haul system. Make sure that progress capture has grabbed the load. After progress capture is confirmed move the traveling pulley back to its beginning location by minding the prussic and walking back to the starting location.

Communications associated with the task:

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- **"Haul"**- Haul team pulls on the running end of the rope in a smooth controlled manner.
- **"Stop"**-All movement in the system stops immediately do not let go of the rope.
- **"Reset"**-Confirm progress capture. Move the traveling pulley back towards the load for the next haul.

Task Skill Instructional Requirements and Implementation

Associated PPE required for instructing the task:

- Tech Gen, SOT Uniform, or Wild Land PPE, leather work gloves and helmet. If the incident is on or near a road way a reflective vest is needed.

Primary progression steps for the development of the task:

- Basic knots and anchor systems are a fundamental base for building a basic haul system.

Evaluation criteria for observing knowledge, skills and abilities:

- The basic haul system should be set up in a timely manner with no errors in the system.

Safety criteria when instructing on this task:

- The entire system needs to be inspected for the fallowing prior to loading the system.
  - Knots – All knots shall be dressed and easy to identify.
  - Carabineers – All carabiners in the system shall be locked and appropriately used.
  - MPD – MPD shall be inspected to make sure it is loaded correctly and the parking brake is set.
  - Edge protection – Edge protection is in place where there is potential for rope abrasion to occur.
  - Rope – Rope is in good condition, and the rope is the appropriate size for the equipment being used (11 mm.)

Reference Information

This heading includes information about the following:

- NFPA chapter and section reference to this task and professional standards:
  - NFPA 1670
- Instructional materials reference and location for LFR:
  - S.O.T. training manual pages for rope rescue.