CONSTRUCTION LEADERS

LETTER OF TRANSMITTAL			
DATE:	**March 17, 2015**	PCL JOB NO:	**5515002**
ATTN:	**Chris Barker**	TRANSMITTAL NO:	**040**

To: **State of Vermont Agency of Transportation**
One National Life Drive

(802) 828-0053

Re: Hartford Lateral Slide
Project No.: IM 091-2(79)
Contract ID.: 12A132 County: Windsor PCL FILE NO: 5515002-26

WE ARE SENDING **X** Attached ____ Under separate cover via **Email & SP** the following:

____ Shop drawings ____ Prints **X** Plans ____ Samples **X** Specifications

____ Copy of Letter ____ Change Order ____ Other

COPIES	SPEC.	REVISION	DESCRIPTION
1	**900.645**		**Public Protection Plan**

TRANSMITTED for as checked below:

X For approval ____ Approved as submitted ____ Resubmit **1** Copies for approval

____ For your use ____ Approved as noted ____ Submit ____ Copies for distribution

____ As requested ____ Returned for corrections ____ Return ____ Corrected prints

____ For review and comment

Remarks:

Please return an email of this approved submittal to Erich Heymann (ewheymann@pcl.com) and Jeremy Mackling (jmackling@pcl.com).

We request the review and return of this submittal within 7 days. Please advise if this request cannot be met so we can plan accordingly.

By: **Erich Heymann,** Project Engineer

COPY TO: Project Files

CONSTRUCTION LEADERS

SUBMITTAL NO. : 26
Public Protection Plan

Item No.	Specification	Description
1	900.645	Public Protection Plan

PROJECT:
HARTFORD LATERAL SLIDE
PROJECT NO.: IM 091-2(79)
CONTRACT ID.: 12A132

OWNER:
STATE OF VERMONT AGENCY OF TRANSPORTATION

ENGINEER OF RECORD:
STATE OF VERMONT AGENCY OF TRANSPORTATION

CONTRACTOR:
PCL CIVIL CONSTRUCTORS, INC.

MARCH 17, 2015

3810 Northdale Blvd., Suite 200; Tampa, FL • (813) 264-9500 • (813) 264-6689 (fax)

PUBLIC PROTECTION PLAN – HARTORD LATERAL SLIDE

Special Provision 77.

As per plan, there will be a designated walk way on the south-side of the eastbound traffic lane of US-5. The walk way will proceed under the existing bridges, 43S and 43N, and the new construction zones. It will be protected by Jersey Shaped barrier wall on each side. A drawing of the barrier wall has been added to this document as Appendix 1. The south-side of the designated walkway will be protected by an eight foot tall chain link fence, complimented with wind-screen. This will help prevent any loose debris from harming pedestrians and motorist alike. It will also provide a line of sight barrier, reducing traffic delays and distractions from the motorized public. A drawing of the fence is provided in Appendix 2 and the wind-screen specifications are listed in Appendix 3. LED strand lighting will be strung along the top length of the fencing, providing illumination for pedestrians.

Materials to be used (some measurements are approximated):

- 80 – 8’ x 12’ Chain Link Fencing
- 10 – 6’ x 100’ Windscreen
- 95 – 3’ x 10’ Jersey Shape Barrier Wall
- 10 – 100’ LED Strand Lighting

Special Provision 78. (a)

No means of enclosures are anticipated to be used during any operation.

Special Provision 78. (b)

No means of diversions are anticipated to be used during any operation. However, there is an outline contingency diversion for US-5 highlighted in the Transportation Management Plan Appendix B-5. It has been added to this document as Appendix 4.

Special Provision 78. (c)

During operations, PCL has elected to use interruptions as a means of public protection. Interruptions will be, as highlighted in the Special Provisions page 30 Public Protection for Bridge Projects Item 78 (c), up to (but not exceeding) ten minutes during the daytime, or up to (but not exceeding) twenty minutes during the nighttime. Flaggers will be used during interruptions to direct vehicular and pedestrian traffic. Examples are listed:

Flaggers will be used during girder erection to allow pedestrians and vehicles through the work zone between interruptions in operations. These operations will be taking place at night, therefore it is anticipated that there will be little or no foot traffic during the operations.

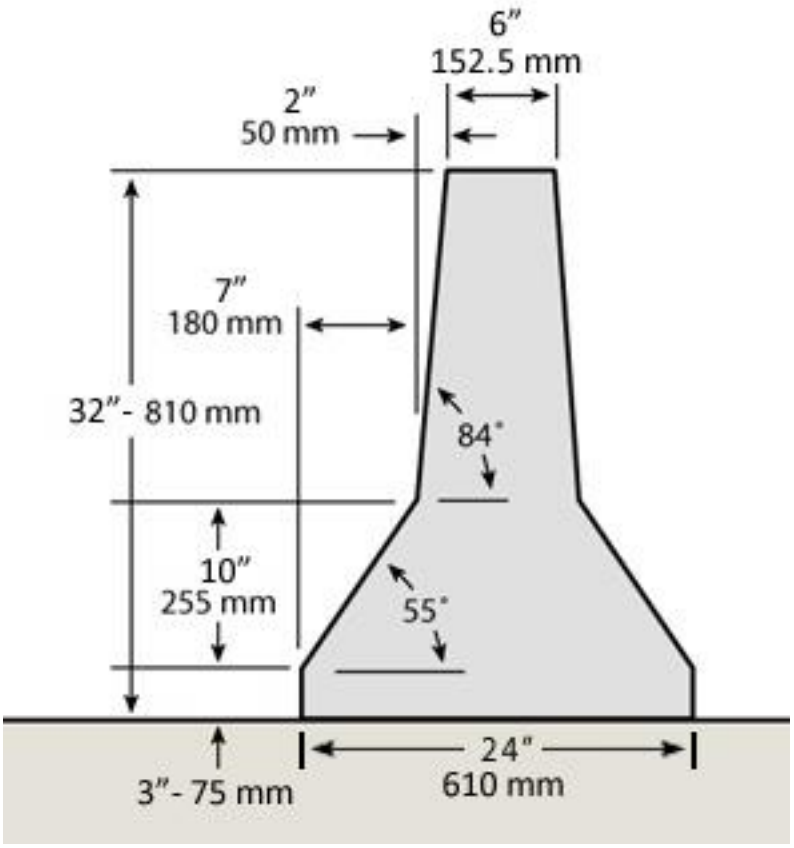
Flaggers will be used during the placement of the deck panels and deck overhangs to allow pedestrians and vehicles through the work zone between interruptions in operations. After the handrails are installed on the overhang, a five foot wide strip of burlap will be attached. The burlap will run from the top of the handrail to the toe board for the entire width of decking, including the pedestrian walkway. This protection method will stay in place during the deck pours as well as the construction and placement of the barrier wall.

Further Explanations

In addition to the aforementioned protections, a project *Stop the Drop Plan* has been formed and has been added to this document as Appendix 5.

PCL CIVIL CONSTRUCTORS INC.
Transportation Infrastructure Group
3810 Northdale Blvd. Suite 200 Tampa, Florida 33624
Telephone: 813-264-9500 ♦ Fax: 813-264-6689 ♦ www.pcl.com

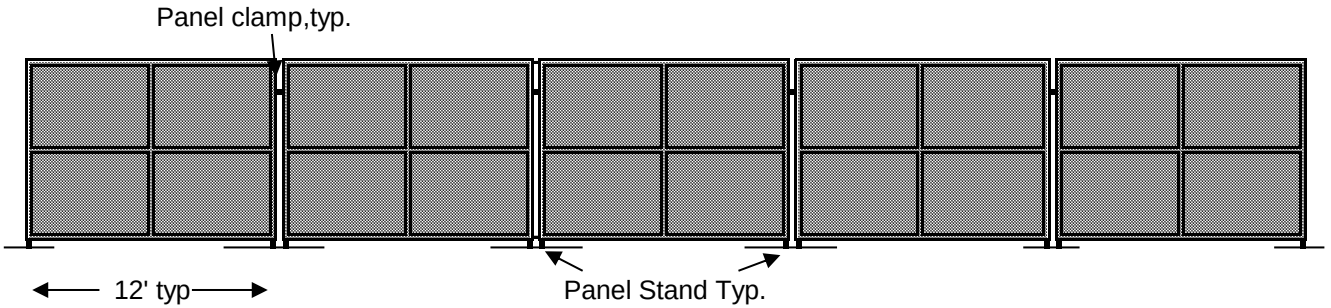
Appendix 1



Jersey Shaped Barrier Profile Dimensions

Appendix 2

Typical "Panel Fence" (6' or 8' high)



Chain link:	11 1/2 ga., 2 3/8" Diamond, Galvanized
Frame:	1 3/8" diameter .065"wall galvanized tube
Panel stand:	1 3/8" diameter .065"wall galvanized tube

Appendix 3

WINDSCREEN SPECIFICATIONS

Composition: Polyethylene

Construction: Raschel Knit

Weight: 130 g/m2 – 3.8 oz/yd2

Burst Strength: 170 psi

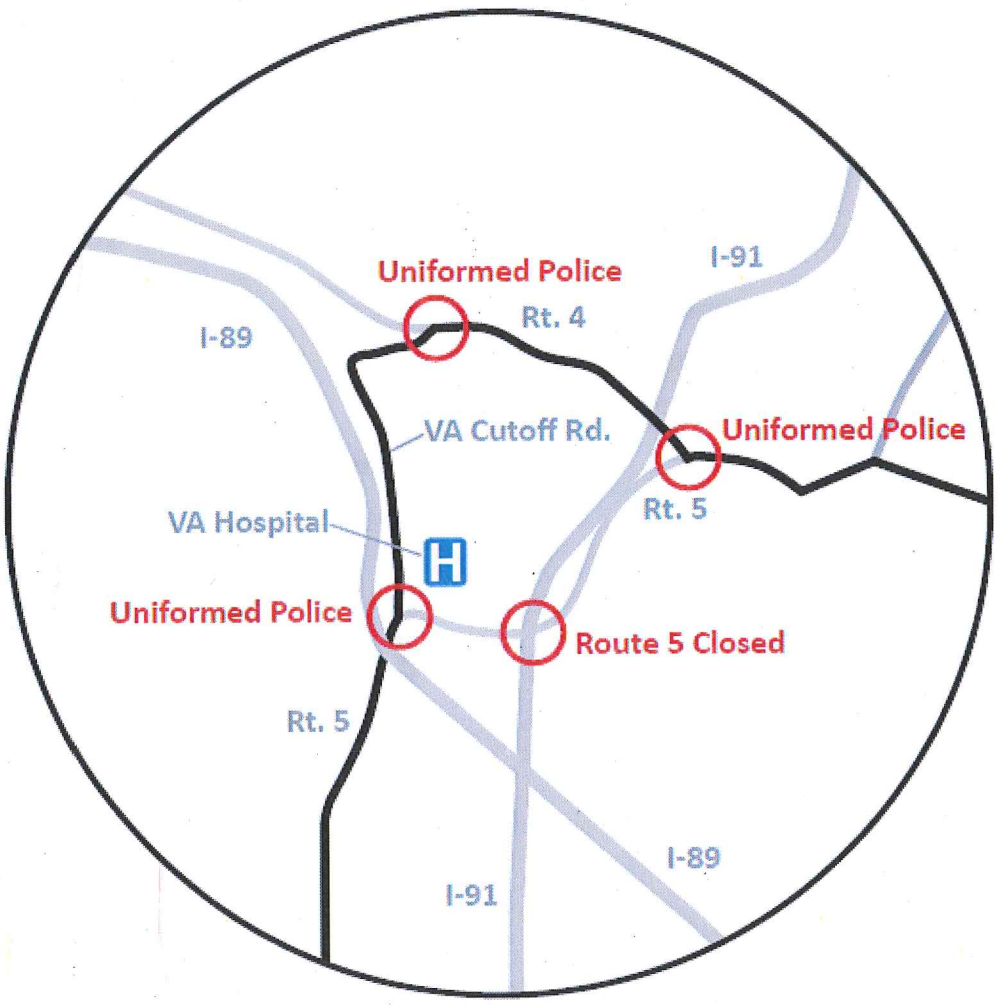
Tensile Strength (Warp): 140 lbs

Tensile Strength (Fill): 115 lbs

Color: Green

- **4 ply, UV resistant tape edge, with brass grommets installed around perimeter** – gives the fabric a clean and professional look, while preventing "ripping" and/or "tearing away" from fence when properly installed
- **(4) Vertical mid-rows with grommets** – provides added reinforcement to fence, versatility when cutting off damaged portions, and/or the ability to reduce panel size(s) in the field (ie: 10', 20', 30', etc)
- **Knitted fabric construction** – knitted material does not ravel if cut, torn, poked, etc. Desirable when cutting flaps, cut-outs, or custom height / length requirements need to be achieved
- **50' panel length** – manageable size panels for installation, also reduces replacement cost(s); if a section is damaged – only 50' needs to be replaced

Appendix 4
US-5 Contingency Detour



Appendix 5

STOP THE DROP

Hartford Lateral Slide
Hartford, VT.

1.0 PURPOSE

To establish minimum requirements and guidelines to provide maximum prevention/protection against dropped objects from elevations and a minimum standard of communication necessary to verify worker's understanding and compliance with the plan. The goal is to achieve 100% prevention of dropped objects and awareness for all workers who have the potential to be exposed to dropped objects.

2.0 ROLES/RESPONSIBLITIES

2.1 Supervisor

Initiate and enforce the Plan and any required communication in the field.

2.2 Workers

Be familiar with and execute 100% compliance with requirements outlined in the Plan.

2.3 HSE Manager

Support the Plan and assist with any required communication related to the Plan to ensure workers have sufficient understanding of the Plan.

3.0 PROCEDURE

3.1 The following procedures outline requirements that are imperative to the prevention of dropped objects on our worksite. This procedure applies to all workers, short duration workers, and visitors who access or conduct work on a PCL worksite.

3.2 PSI shall be discussed and documented with/by each person assigned to work in elevated areas that present any possibility of dropped objects. Supervisors will analyze all tasks for the potential of dropped objects and then make certain that adequate tool retention, material containment and hoisting methods are utilized. Supervisors should actively question their worker's knowledge of the tool retention, containment or hoisting devices being utilized, and the proper methods of use. Supervisors will review the PSI to verify that all applicable hazards and controls have been identified and then sign off on the PSI. Work at elevations should not commence until controls are put in place to eliminate the possibility of objects falling to lower levels.

3.3 Hoisting, Lowering and Carrying Tools, Equipment, and Materials to and from Elevations

3.3.1 By Hand

- Prior to manually hoisting tools, equipment or materials to elevations, communicate with workers or crews who maybe working below (lower elevated decks or ground level).
- Do not manually lift/hoist loads that are unmanageable or weigh 50 lbs plus. Divide the material into manageable loads under 50 lbs.
- A suitable and approved containment device (e.g., tool bag), should always be used when hoisting or lowering tools and small materials to elevations (refer to Attachment 1 to view examples of acceptable and unacceptable containment devices for hoisting tools and equipment).
- Containment devices should not be overfilled in a manner that creates the potential for tools or small materials to fall from the device to lower levels.
- Always remove snow and ice from material/equipment prior to hoisting to elevations.
- The load should be adequately balanced and secured before raising or lowering.
- Pulleys, rigging and ropes should always be inspected for damage or wear prior to use and weight capacities should not be exceeded.
- When hoisting with rope, a suitable knot should be used to secure the containment device (e.g., tool bag to the rope). The knot should also be tied properly (if required refer to the knot diagram in Attachment 2 to verify correct methods for tying knots).
- Additional caution is required when hoisting a containment device over the top rail of a platform (e.g., scaffold, permanent or mobile elevated work platform), for fear of tipping contents out.
- Working or walking underneath hoisted loads is prohibited.
- When ascending or descending ladders do not carry loose tools, tool bags or materials in your hands or have tools or materials in your pockets. A tool belt or suitable and approved tool lanyards that are secured to an appropriate anchor point should be used.
- When ascending or descending stairs, refrain from carrying loose tools or materials in your hands or have tools or materials in your pockets – A tool belt or suitable and approved tool lanyards secured to an appropriate anchor point should be used. A tool bag may be carried by hand when ascending or descending stairs, provided the tools or material are properly contained and the worker is still able to hold the hand rail.

- For circumstances where it is not possible to secure all material (e.g., during scaffold erection and dismantle), red flagging should be in place to secure the area.
- Check load after lifting 1' off the ground for any defects.
- Use of taglines is required to guide and maintain control of hoisted materials or objects.
- Loads are not to be left unattended or unsecured.

3.3.2 By Means of Mechanical Lifting Device

- Prior to hoisting tools, equipment or materials to elevations with the use of a mechanical lifting device, communicate with workers or crews who maybe working below (lower elevated decks or ground level).
- Loads that are unmanageable or weigh 50 lbs or more should be lifted or hoisted with a suitable mechanical lifting device.
- Lifting devices/equipment (e.g., zoom booms, cranes, rigging equipment etc.), used to hoist/lower tools/equipment to and from elevations, should be approved and suitable for the material being hoisted or lowered.
- Competent personnel should confirm that all lifting devices/equipment are in good condition and used according to manufacturer's specifications. Any defective lifting devices or equipment should be immediately taken and tagged out of service.
- Material baskets or other containment devices suspended from a crane or hoist may be used to transport equipment or materials. It should be approved, inspected and appropriate for the material being hoisted or lowered. The material basket or other containment device should properly surround the load being hoisted.
- Always remove snow and ice from material/equipment prior to hoisting to elevations.
- The load should be adequately secured and balanced before raising or lowering.
- When required, tag lines should be used to control the load.
- Loads are not to be left unattended or unsecured.
- A designated ground person should be present and clear of the lift area until the material/equipment has been completely lowered or hoisted and secured.

- The designated ground person should verify that the area is clear of personnel prior to hoisting/lowering material/equipment and if required, the lift area should be secured with proper flagging.

- Working or walking underneath hoisted loads is prohibited.

- Prior to repositioning vessels or module frames from horizontal to vertical position, a thorough inspection should be conducted. Check for loose braces, steel, and stored objects that may fall when the orientation is changed to vertical.

- Check load after lifting 1' off the ground for any defects.

- Check wind prior to lifting operations.

3.4 Using Tools and Materials at Elevations

3.4.1 Working from Permanent, Temporary, and Mobile Elevated Work Platforms

- Prior to starting work at elevations, communicate with workers or crews who maybe working below (lower elevated decks or ground level).

- Inspect the work area for housekeeping issues. Where possible remove all unnecessary material that could potentially fall through grating or be inadvertently kicked or swept over the edge of the elevated work platform. Also verify that all toe boards are in place on decks prior to starting work.

- Never exceed the maximum weight capacity of a mobile elevated work platform and never hoist unsecured over hanging materials, when there is potential for inadvertent dislodgement from the basket.

- Materials and tools should not be carried or hung on guardrails of mobile elevated work platforms. In addition mobile elevated work platforms should not be used for hoisting and lifting materials, unless it is engineered and approved for such use.

- All tools should be secured with a suitable and approved tool lanyard and attached to an appropriate anchor point in a suitable location at all times, when there is potential to drop a tool to lower levels. Do not grasp tools by their cords or hoses as this may cause damage (refer to Attachment 3 to verify approved tool lanyards).

- When using a tool lanyard on a sleever bar, spud wrench, drift pins, etc., the lanyard should be properly fastened to the tool end to prevent it from sliding off.

- Never insert objects inside scaffold tubes or pipe as they may become

dislodged as scaffolds are dismantled or due to vibration from various work activities.

- Never place unsecured tools or materials on or near edges (e.g., rails, I-beams, piping, cable tray, instruments, vessel skirts, saddles, scaffold tubes or other surfaces), where there is potential for them to fall to lower levels.

- Tools or materials should never be placed up against or on top of hoarding or tarp material when at elevations.

- Where required, protection (e.g., scaffold boards, safety netting, fire blanket, plywood or other covering) should be put in place to protect personnel below. Protection may be placed underneath pipe-racks, and stairwells; on or underneath grating, as well as around railing (including lower sections to mid rails of mobile elevated work platforms).

- Nuts, bolts and other small materials should be contained in a suitable pail or tool bag and protective material should be placed underneath pails, and tool bags to prevent their contents from falling through grating, in the event they are inadvertently knocked over.

- When cutting objects or materials at heights, ensure both pieces are tied off and secure. Do not attempt to hold the item as it may become too heavy, hot, or twist free of your grip.

- Do not throw objects down from heights or up to workers at heights and do not attempt to catch falling objects.

- Hazards associated with working in windy weather conditions should be considered and safeguards should be put in place to prevent tools, materials or equipment from falling to lower levels (e.g., objects such as plywood or sheeting).

- Use fire blanket or hoardings to contain sparks and slag when grinding or welding, to protect personnel working below or in close proximity.

- When cleaning elevated decks after the task is complete or at the end of the shift, be careful not to sweep or kick tools or materials over the edge of the platform. When sorting or removing small tools or materials from the area, use a containment device (e.g., tool bag) and/or protection (e.g., fire blanket or plywood) to ensure they do not fall through grating.

- If continuing the task the next shift and the decision is to temporarily store tools/material or equipment in an elevated work area, they should be placed and/or secured where they cannot be dislodged (e.g., use steel wire to secure materials to railing to prevent them from shifting and potentially falling to lower levels).

- If all possible safeguards have been put in place, and the risk of dropped objects cannot be eliminated, supervision should communicate with crews working below to determine priority work sequence. Work should not commence until all inherent risk associated with potential dropped objects has been eliminated.

- Cover tools and materials prior to snow fall.

3.5 General Safety

3.5.1 Working at Ground Level

- Be aware of overhead work zones.

- Use of barricade tape is recommended for ground personnel protection. Red (danger) for never walk through. Yellow (caution) for proceed with caution through area.

- Never walk under a crane boom.

- When ice and snow are, be aware of your footing and snow plows pushing heavy loads of rock, snow, and ice.

3.5.2 Drop Protection Systems

- Handrail systems will be constructed, consisting of a top rail, mid-rail, and toe board. The toe board shall be flush and tight against the walkway surface.

- Use of snow fence or netting/burlap on handrails to help with falling objects is required.

- Never hang item, tools, or materials over the handrail system.

3.5.3 Materials and Item Hauling

- Never over load trucks, trailers, or equipment. Check with manufacturer recommendations.

- Hauling of material should be done by securing the material with straps to ensure it is secure. If a material can easily be blown out, ensure it is properly secured and weighed down.

4.0 COMMUNICATION

4.1 Project supervisors should communicate requirements outlined in the Plan to all workers and continuously raise awareness of hazards associated with dropped objects.

4.1.1 The Plan will be made available to all jobsite personnel, so they may fully read and understand the plan.

4.1.2 Parts of the Plan should be reviewed during tailgate talks and PSI meetings.

4.2 Communication of requirements outlines in the Plan shall be documented.

4.2.1 Near misses will be complied at the end of this plan and should be reviewed during tailgate meetings.

4.3 Competent workers should be encouraged to communicate with each other regarding the Plan and correct each other.

4.4 Include the Plan in work plans and JHA's

4.5 Any ideas that will help further develop this plan are to be reported to your supervisor who then will report to either Ron G. or Dillon C.

5.0 INCIDENT INVESTIGATIONS

5.1 All incidents relative to the Plan should be investigated and documented.

5.2 Workers found in non-compliance with the requirements outlined in the Plan may be subject to the PCL's Alcohol and Drug Policy and/or PCL's Progressive Discipline Process.

6.0 ATTACHMENTS

Attachment 1 - Examples of Acceptable and Unacceptable Containment Devices for Hoisting Tools and Equipment

Attachment 2 - PCL Knot Diagram

Attachment 3 - Approved Tool Lanyards

ATTACHMENT 1

Examples of Acceptable Containment Devices for Hoisting Tools and Equipment

Certified Lifting Gas Bottle Trolley

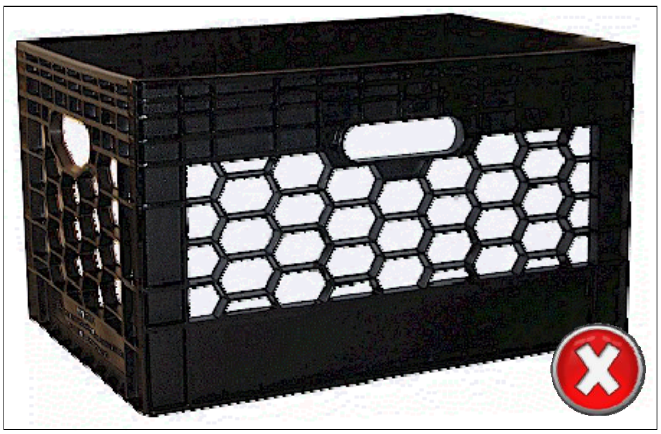
Canvas Tool Bag with Closure

Propane Cylinder Cradle

Fire Extinguisher Cradle

Approved Material Basket

Examples of Unacceptable Containment Devices for Hoisting Tools and Equipment



Milk Crates

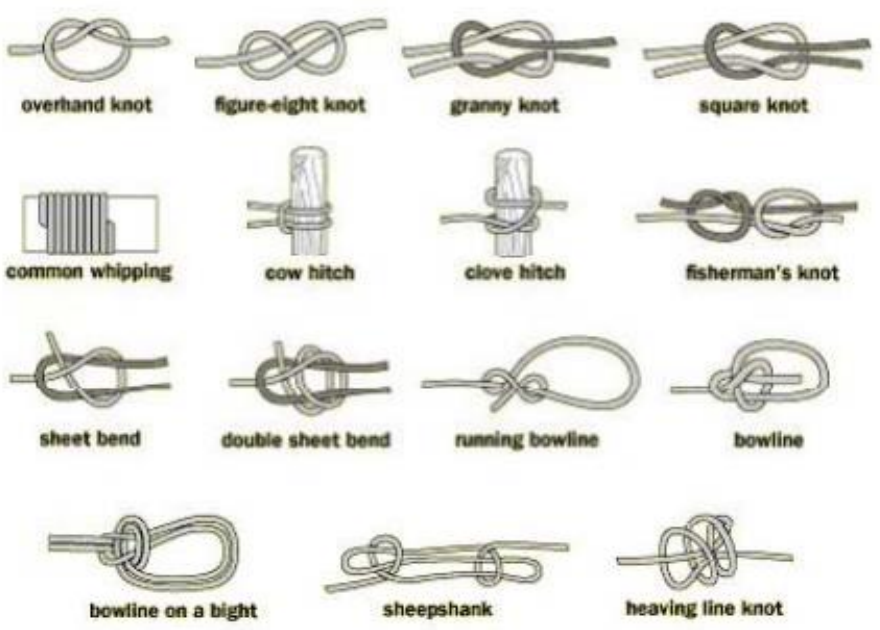
Card Board Boxes

Plastic or Metal Pails

ATTACHMENT 2

PCL Knot Diagram

CHOOSE THE RIGHT KNOT FOR THE JOB



POOR CHOICES CAUSE INJURY AND DAMAGE

ATTACHMENT 3

Approved Tool Lanyards

Fixed

Retractable MK

Retractable Ty-Flot

Carabineer Loop

Heat Shrink/Attachment

Heat Shrink

Quick Rings

Quick Spins

Hard Hat Retention