TOWN OF HARDWICK, VERMONT PUBLIC WORKS DEPARTMENT SAFETY GUIDELINES

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II. GENERAL AND LABORER SAFETY RULES

Keep alert at all times, and THINK!

- 1. Safety is everyone's business. Report unsafe conditions immediately.
- 2. Familiarize yourself with work procedure and safe practices to be followed.
- 3. Practical jokes and horseplay have no place on the job. Any employee participating in such activities shall be subject to disciplinary action.
- 4. Drinking of alcoholic beverages on the job or during working hours is prohibited. Any employee reporting to work who has been drinking alcohol or consuming alcohol during working hours shall be subject to disciplinary action.
- 5. Work should be at a steady consistent pace. Haste can cause accidents.
- 6. Wear hard hats and steel toes as required.
- 7. Wear eye protection where necessary.
- 8. Jewelry such as rings, identification bracelets, etc., will be removed when work involves climbing, material handling or operating mechanical equipment. The only exception may be wedding bands.
- 9. Protective equipment and/or clothing will be worn as required by rules specified in this safety plan. Personnel failing to make use of available protective equipment will be subject to disciplinary action.
- 10. All hazardous areas and/or equipment will be clearly marked with appropriate signs or tags.
- 11. All hazard warning signs and tags will be obeyed.
- 12. Only personnel properly authorized and trained will operate Town equipment.
- 13. Jumping from an elevation such as a table or platform will be avoided.
- 14. Climbing on or off a moving vehicle will be prohibited.
- 15. All tools and equipment should be inspected prior to use. Defective items should be reported to supervisors and potential users.

16. All machinery and equipment will have appropriate safety guards installed in accordance with

manufacturer's recommendations, and will not be removed except for service.

- 17. Stay clear of overhead loads. Never work under a suspended load.
- 18. Most hazardous situations and conditions can be eliminated with proper advance planning and use of common sense.
- 19. Report all injuries and obtain First Aid immediately.
- 20. All first aid and fire equipment shall be maintained and accessible for emergency use.
- 21. All employees should familiarize themselves with the material safety data sheets located in the garage break room.
- 22. HANDLING MATERIALS:

Remove exposed nails from all lumber before handling.

Pile material in a pyramid form on firm, level ground.

When cutting wire or metal straps, stand clear and warn others nearby.

Keep aisle to exits and fire equipment clear.

23. Concrete or cement produce painful burns. Use protective creams and wash exposed skin

often. Wear rubber boots when necessary.

- 24. Never ride on moving equipment unless you can ride on a seat.
- 25. Use heavy gloves when handling rough materials.
- 26. Use rubber gloves when handling corrosives, liquid chemicals, and situations as warranted.
- 27. Wear shirts at all times to prevent abrasions, cuts, and burns.
- 28. Always push hand-wheeled equipment.
- 29. Remove all fire hazards and properly ventilate work area before welding.
- 30. If compressed air is used for cleaning, wear safety goggles. Anytime high pressure air is used for cleaning, wear safety goggles. Anytime high pressure air is used, be sure air hose connections are wired or chained together.
- 31. Before entering any manhole, use a gas detection meter to determine if air in manhole is safe for entry.

III. PERSONAL SAFETY RULES

<u>A. HARD HATS:</u> Reduce the chance of injury from falling objects, and also protect your head from bumping on things. The hard hat is the only accepted head covering on construction jobs as accepted by safety people, insurance companies, labor departments, and building trades unions.

As it absorbs the shock of a falling object, it also protects the neck and back from injury.

Hard hats are required to be worn whenever and whereever an individual is exposed to a falling or flying object.

VOSHA 1910.135 Occupational Head Protection

Helmuts for the protection of heads of occupational workers from impact and penetration of falling and flying objects and from limited electric shock and burn shall meet the requirements and specifications established in A.N.S. Safety Requirements for Industrial Head Protection, Z89.1-1969.

<u>B. SAFETY SHOES:</u> Steel-toed boots will be worn at all times while at work to protect the individual's feet. Laces will be cut off or tucked in if they are too long.

VOSHA 1910.136 Occupational Foot Protection

Safety-toe footwear for employees shall meet the requirements and specifications in American National Standard for Men's Safety-toe Footwear, Z41.1-1967.

<u>C. EYE PROTECTION:</u> No employee will perform any work requiring the use of safety goggles or other face protection unless he is using such protective devices. Anyone in a workplace where others are performing work requiring the use of such protective devices will also use the same or immediately leave the area.

VOSHA 1910.133 Eye and Face Protection

(A) <u>General</u>. (1) Protective eye and face equipment shall be required where there is a reasonable probability of injury that can be prevented by such equipment. In such cases, employers shall make conveniently available a type of protector suitable for the work to be performed, and the employees shall use such protectors. No unprotected person shall knowingly be subjected to a hazardous environmental condition. Suitable eye protectors shall be provided where machines or operations present the hazard of flying objects, glare, liquids, injurious radiation, or a combination of these hazards (VOSHA 2,3,4,5,6 Additional VOSHA standards available).

The four basic types of hazards requiring eye protection are:

- 1. Unidentified flying objects.
- 2. Particles from chipping, grinding, sawing, brushing, hammering, or using power tools.
- 3. Invisible hazardous light (welding light rays and lazer beams).
- 4. Liquids.

The following are general recommendations for eye hazards:

GENERAL CATEGORIES OF WORK: PROTECTION REQUIRED:

Chipping, hammering, drilling, grind chiseling, etc.	ling, Safety spectacles or goggles
BATTERY SERVICE	Chemical goggles
CARPENTRY	Safety spectacles
CHEMICAL HANDLING	Chemical Goggles
METAL WORK	Safety spectacles or Chemical goggles
PAINTING	Safety spectacles or Chemical goggles
WELDING	Welding helmet or welding goggles

THE LIFE OR EYES THEY SAVE, MIGHT BE YOURS!

<u>D. HEARING PROTECTION:</u> Hearing protection will be used when the noise level where you are working exceeds that minimum level required by law.

VOSHA 1926.101 Hearing Protection (VOSHA Safety and Health Standards for Construction, Oct. 1982, p. 18.0)

- (a) Whenever it is not feasible to reduce the noise levels or duration of exposures to those specified in the following table, ear protective devices shall be provided and used.
- (b) Ear protective devices inserted in the ear shall be fitted or determined individually by competent persons.
- (c) Plain cotton is not an acceptable protective device.

In general, hearing protection should be worn when it is necessary to raise your voice to speak to someone less that two feet away. Hearing protection cuts down on distracting noise, making it easier to hear speech and warning signals. Protective hearing devices can stop further damage to hearing even after years without protection.

Hearing protection will be in the form of Ear Plugs or Ear Muffs.

HOURS PER DAY	dBA	
8	90	
6	92	From: VOSHA Safety and Health
4	95	Standards for construction, Oct. 1982
3	97	
2	100	
11/2	102	
1	105	
1/2	110	
-1/4	115	

<u>E. LIFTING AND CARRYING:</u> Improper lifting may cause injuries that can take months or even years to heal. Lifting injuries account for nearly one-quarter of all occupational injuries.

Proper lifting techniques:

- Crouch down with the load between your legs. Get a good grip on the object. As your rise, left with your legs keeping your back straight and the load close to your body. If you have to place the load to one side or the other move your feet, don't twist. To lower the load, reverse procedure. Don't lift more than you can handle, alone.
- 2. Do warm up, stretching exercises before lifting work.
- 3. Clear the pathway of tripping hazards, and rock the load to estimate its weight.
- 4. For bulky loads, get a dolly or helper.
- 5. Don't lift badly damaged containers.
- 6. Always ask for assistance in handling heavy or bulky loads!
- 7. Get a firm grip on the load.
- 8. Position your feet and use your leg muscles. Bend your knees, not your back.
- 9. Carry the load close to your body. Keep the weight centered.
- 10. Move as smoothly as possible, keep fingers away from pinch and shear points, and keep a clear view over the load.
- 11. Use extra caution when walking over ice and snow.
- 12. Set loads down next to your body, near the edge of a shelf or truck, then slide the load back.
- 13. Don't drop loads from high places. Use a lowering device.
- 14. Team lift pipes and use shoulder pads..

<u>F. SAFETY BELTS:</u> Whenever an employee is working at elevated heights not protected by hand rails or nets he will use a safety belt. The belt will be secured to a structural member of the building or to a line independent of the rigging.

The lanyard, which fastens you and the belt to the anchor, should be $\frac{1}{2}$ " nylon rope with a 5,400 lb. breaking strength. The line should be secured so as not to allow a drop of more than 6 feet.

A safety belt and lifeline will also be used anytime a man descends into a manhole. The lifeline will be belayed by a safety man at the top of the hole who will monitor entry at all times.

<u>G. ATTITUDES</u>: A safe employee is one with a positive safety attitude. Safe attitudes can be formulated by complying with all safety rules and practices, always wearing required personal protective equipment, and accepting your own safety responsibility.

The easy way to do things right is to make them habits. Every time an act is repeated the habit is strengthened. Don't make any exceptions. Steady unbroken safety rules with constant compliance firmly fixes them as habits. A good habit should be a safe habit.

IV. WORKPLACE MAINTENANCE AND SAFETY

<u>A. SLIPS AND FALLS:</u> The term Workplace Environment Maintenance Systems would best define the subject of housekeeping. Bear in mind a clean workplace reduces the chance of slips and falls, fire and chemical accidents, and also contributes to improved productivity. Psychologists say that an orderly environment significantly improves worker morale.

- 1. Keep work area clean.
- 2. Keep access ways free of debris.
- 3. Return tools and excess material to their proper storage place.
- 4. Minimize the use of extension cords or other loose wires.
- 5. Mark obstructions such as low overhead or short step with highly visible warning signs.
- 6. Put small hand tools in their proper place.
- 7. Clean up spills promptly but do not use highly volatile solvents.
- 8. Stack materials properly and safely.
- 9. Don't allow materials to protrude past shelf bin edges.
- 10. Use pallets to even the stacks when stacking uneven material.
- 11. Build a pyramid when stacking pipe Block the first layer.
- 12. Use defined areas for scrap storage.
- 13. Don't leave tools, materials, empty boxes and cartons or any other objects lying around.
- 14. Under no circumstances, should anything be left on stairs or steps.
- 15. All uncovered floors or decks must have protected openings (i.e., grease pit).
- 16. Remove obstacles from pathway, DON'T STEP OVER THEM!
- 17. Mark pit edge with tape or paint to prevent falls or bumps.
- 18. Use the right ladder for its intended use.
- 19. Never use a metal ladder around electrical hazards.
- 20. Always climb up or down a ladder facing it. Keep both hand free for holding the rails.

<u>B. FIRE:</u> Proper housekeeping is vital in lessening the chance for fire. Fires may erupt as long as one half hour after working. Storage of combustibles and winter heating are leading causes of winter fires.

- 1. Know where fire extinguishers are, what their limitations are, and how to use them.
- 2. Report a fire immediately, no matter how small.
- 3. Protect LIFE first.
- 4. Attack a fire only if you can do so without endangering yourself, and only after someone has reported it.
- 5. Never smoke around volatile gases.
- 6. Never hang clothes or rags near operating machinery lines, heat vents, or ventilation ducts.

<u>C. GASOLINE:</u> Gasoline doesn't burn, gas vapors burn. Gasoline vapors develop through evaporation, at temperatures as low as -45. Gas vapors are heavier than air and collect at the lowest point of an area. A simple spark is all that's needed to ignite gas vapors. Gas can irritate the skin and cause infection.

- 1. Gas will be stored in U.L. listed safety cans.
- 2. Gas cans will be kept full to prevent vaporizing.

- 3. Transferring gas will only be done in areas free of open flame and with adequate ventilation.
- 4. Any spills will be cleaned up immediately.
- 5. Change clothes immediately that are splashed with gas.

<u>D. VEHICLE MAINTENANCE</u>: To prevent avoidable equipment and property damage and personal injuries or death due to defective vehicle equipment, the supervisor must be sure there is communication and cooperation between employees and maintenance personnel.

- 1. Before taking any vehicle out of the yard:
 - a. Check main controlling functions steering, brakes;
 - b. Check safety equipment weekly lights, flashers, alarms, fire extinguishers, mirrors, exhaust systems, etc.
 - c. Repair and clean equipment only when it is NOT running.
- 2. Provide adequate ventilation for harmful vapors or fumes.

V. ON THE JOB SAFETY

The following are guidelines and brief descriptions for activities encountered on the job. While not every job the public works employee will encounter is mentioned, the basic rules still apply.

<u>A. STREET AND HIGHWAY MAINTENANCE:</u> This variety of jobs may range from sealing a crack in the roadway to catch basin repair, to blacktopping.

1. GENERAL:

- a. Make adjustments in driving techniques to accommodate the changing handling characteristics of machines that may increase or decrease in load weight.
- b. Use ear protection in noisy work environments as required, or where many pieces of equipment are running.
- c. Wear the proper type of air mask or respirator in dusty environments.
- d. If chemicals are spilled on work clothes, don't permit them to be laundered with home laundry.

2. PAVING:

- a. Wear the proper clothing when paving.
- b. Make only deliberate moves to avoid spillage.
- c. Douse skin splashed with hot asphalt with cold water, but do not remove the asphalt from the skin. Cover the burn.
- d. Do not eat in an area where asphalt fumes are present, lest the fine airborne solids contaminate the food.

3. PAINTING:

- a. Always use a properly designed respirator to avoid breathing the paint and its solvents.
- b. Remember that many paint pigments and solvents are classified as hazardous materials. READ THE LABEL! Avoid contact with the material.
- c. Keep out of the direct spray area when spraying. Do not blow paint dust off from clothing or skin surfaces.

B. PNEUMATIC TOOLS:

- 1. The wearing of hearing protection, eye protection, and foot protection when using an air tool is mandatory.
- 2. Air hammer operators should have frequent breaks to avoid the cumulative effects of vibrations and noise.
- 3. Wet drilling and chipping is encouraged over dry drilling in order to reduce the amount of flying debris and dust.
- 4. Do not allow the heads of cutting tools to mushroom. Heads must be ground to their original shape before using.
- 5. Warm the cutting tool before use in cold weather to prevent stalling during use.
- 6. Check bolts and check bushings for tightness before using.
- 7. Vent air tank before disconnecting hoses.
- 8. Don't blow dust off clothing with compressed air.

- 9. Safety clips and retainers shall be installed and maintained at air hose couplings.
- 10. Hoses shall not be laid anywhere they may create a tripping hazard.

<u>C. TRAFFIC SITUATIONS</u>: Traffic accidents are the largest single cause of injuries to public works employees. This is in part due to incomplete or nonexistent traffic protections at the worksite.

- 1. Work should be performed so as to minimize the fewest number of traffic lanes as possible. Wearing devices like arrows and signs must be utilized.
- 2. Avoid scheduling work on roadways during rush hours.
- 3. Moving maintenance vehicles will use flashing yellow lights, flags, and warning signs.
- 4. Damaged, defaced, or muddy signs should be cleaned, repaired, or replaced.
- 5. Temporary barricades will not be weighted down. Barricades will be marked with Reflectorized orange and white stripes.
- 6. Cones should be used near moving traffic. They will be used with other warning devices like signs.
- 7. Flashing lights will be used for night warning signals.
- 8. Early warning signs are needed in congested areas or where traffic is likely to be backed up.
- 9. Wear hard hats, vest, and bright clothing for visibility.
- 10. Temporary traffic lanes will be at least 10' wide, and at least 5' from open excavation whenever possible.
- 11. Sidewalks should be kept clear or alternate routes allotted for pedestrians.
- 12. A flag person will be used where conditions are constantly changing and traffic instructions must change to.
- 13. Advance warning signs must alert drivers to a flag person.
- 14. A flag person must be visible if he is to be utilized.
- 15. A flag person must be properly dressed, including a hard hat, safety boots, and wearing a fluorescent vest.
- 16. Only designated flag people should be directing traffic.
- 17. Flag people will always face traffic. Never turn your back to traffic.
- 18. Flag people will be firm but courteous to the public at all times.
- D. SPOTTERS: A spotter will be used for safe backing on a job site.
- 1. The spotter will watch for himself, others, and make sure the vehicle doesn't damage property.
- 2. Only one spotter at a time will direct a driver.
- 3. Spotters should stand to the rear but well to the drivers side of the vehicle so he can be seen and also watch behind the vehicle.
- 4. Designated spotters will wear a fluorescent vest.
- 5. If the driver can't see the spotter clearly, the operator is responsible for stopping and alerting him to that fact.
- 6. Hand signals must be agreed upon before operations begin.

<u>E. TRENCHING</u>: A trench is a special kind of excavation and is defined as an excavation whose width is less than 15' and whose dept is greater than its width.

- 1. To avoid cave-in, the top of the trench can be cut back on the soils angle of repose. The angle of repose is the angle at which the soil will be stable and will not slough when subjected to vibration. When it is not possible to lay back a trench, the use of trench shoring to protect the sides of a trench will be used.
- 2. Keep all tools, material, and spoil at least 2' from trench edge.
- 3. Do not drive equipment up to trench edge.
- 4. Inspect the trench after backfill for signs of settlement after a rain or first thing in the morning.
- 5. Do not jump across a trench.
- 6. Locate emergency exits in the trench no more than 25' apart. Ramps, or ladders extending 3' above the ground and tied securely are sufficient.
- 7. Use care when working adjacent to sidewalks, buildings, and utility poles.
- 8. Install shoring from top down. Remove shoring from bottom up. This reduces the chance of ditch collapse.
- 9. Install jacks or braces perpendicular to trench sides.
- 10. Backfill the trench immediately after the shoring is removed.
- 11. Use lifelines in excavations over 15' deep due to the danger of asphyxiants or poisonous gases collecting in the trench bottom.

BE ATTENTIVE TO YOUR SURROUNDINGS! DON'T DIG YOUR OWN GRAVE!

<u>F. HAND AND HAND POWER TOOLS</u>: Misuse or poor condition of tools can result in injury or spoiled work.

Tips for using tools safely:

- 1. Pull a wrench, don't push.
- 2. Use the full handle on a hammer.
- 3. Always cut away from yourself.
- 4. Don't use a file without a handle.
- 5. Wear eye protection if there is a chance of chips of flying particles.
- 6. Use the prescribed tool to do the right job.
- 7. Don't use a chisel or a screwdriver as a pry bar.
- 8. Use caution when carrying hand tools.
- 9. Hand tools will be kept in good repair. Defected tools will be removed from service immediately.
- 10. Throwing tools from one location to another, from one person to another, or dropping them to lower levels, shall not be permitted.
- 11. Periodic inspections will be made to assure safe operating condition and proper maintenance of power tools.
- 12. Electric power tools will have their plug, cord, on-off switch, and housing inspected before use. If there is any damage to the above, the tool will be tagged for repairs. Be sure the

tool and work area are clean and dry.

- 13. Ground all electrical tools unless double insulated.
- 14. In wet locations WEAR RUBBER BOOTS and gloves or stand on a good insulating pad.
- 15. Keep work area free of clutter that can cause trips and falls.
- 16. Keep guards in place, and in working order.
- 17. Always be alert to potential hazards in the work area.
- 18. Avoid accidental start-up. Don't carry plugged in tool with finger on switch.
- 19. Make sure saw blades, drill bits, etc., are sharp, clean, and regularly maintained.
- 20. Do not force a tool. Don't over speed engine. Operate it at slowest speed needed for effective operation.
- 21. Never leave tool running unattended.
- 22. Never adjust, change blades, bits or cutters with tool on.
- 23. Shut off power and disconnect plug before making adjustments.
- 24. Don't surprise or touch anyone operating power tool.
- 25. Secure the work item. Use both hands to operate the tool.
- 26. Tools not in use should be put away properly in racks or suitable tool boxes.

<u>G. SAFETY GUIDELINES FOR SMALL EQUIPMENT:</u> Sidewalk sweeper, Tamper, Post Hole Auger, Chainsaw, Pipesaw, Mower, String Trimmer.

- 1. GENERAL:
 - a. Read owner's manual before using any piece of equipment.
 - b. Fuel equipment with engine off. Wipe up any spillage. Refill after every use.
 - c. Keep tools clean, sharp, and in good repair.

2. SIDEWALK SWEEPER:

- a. Do not force machine. Allow machine to travel at its own speed.
- b. Do not insert hands into any part of the sweeper while operating.

3. TAMPER/COMPACTOR:

- a.. Ask for assistance before lifting.
- b. Wear hearing protection if in use for long periods of time.

4. POST HOLE AUGER:

- a. Locate all underground utilities before drilling.
- b. Keep general work area clear of people and debris.
- c. Keep a good foothold and firm grip on machine.
- d. Keep feed pressure to a minimum.
- e. Remove from hole vertically with throttle off.
- 5. STRING TRIMMER:
 - a. Caution on starting keep cutting end away from ground and body.
- 6. PIPESAW:
 - a. Use proper blade for each item to be cut.
 - b. Mark pipes prior to cutting. Clear area around pipe before cutting.

c. Adjust blade shield properly before cutting to prevent flying particles.

7. MOWER:

- a. Remove all debris from lawn before mowing.
- b. Always disconnect the spark plug during repair.
- c. Always stand with feet solidly anchored when starting the mower.
- d. Never place hands or feet under mower or near the discharge chute while the mower is running.
- e. Do not tilt the mower to extreme angles while the engine is running. Cut grass on hills sideways, not up and down. (On hills, stay <u>uphill</u> of the mower.)
- f. Do not fill gas tank while engine is running. Wipe up any spillage immediately.
- g. Avoid discharge from mower toward any person.
- h. Do not start mower in high, uncut grass.
- 8. CHAINSAW:
 - a. All chainsaws will be kept in good repair and used only for the purpose designated.
 - b. Chainsaws will not be in unventilated areas.
 - c. The blade will be checked regularly as will the chain.
 - d. Green and wet materials should be cut slowly and not jammed or crowded into the work.
 - e. The material to be cut should be checked for nails, hard knots, etc.
 - f. Eye, hearing, hard hat, and glove protection will be worn during operation of the chainsaw.
 - g. Keep a clear work area.
 - h. Do not overextend while using the chainsaw. Keep the saw in close proximity to the body.

9. TREE FELLING:

- a. Watch for power lines.
- b. Watch for pedestrians in the area.
- c. Use flag men to direct traffic through a work area near the road.
- d. Do not attempt to move a fallen wire.
- e. Do not use metal or painted ladders.
- f. Use nonconductive handles on pole saws.

SAFETY GUIDELINES FOR SMALL EQUIPMENT

	HARD HAT	TEC-	PRO- TEC-	GLOVES	BREATH- ING PRO- TEC- TION CI	CAU- TION ON DIS- HARGE	CLEAR WORK AREA
SWEEPER		Х	X		Х	Х	
TAMPER			X	X			
AUGER		X	X	Х		X	Х
STRING TRIMMER		X	X	X		X	X
PIPESAW	X	X	X	X	Х	X	X
MOWER			Х			X	X
CHAINSAW	X	X	X	X		X	X

<u>H. HANDLING GAS CYLINDERS:</u> Gas cylinders have been known to blast through brick walls and be found 1/4 mile away. Common sense and good judgement will keep cylinder accidents down.

- 1. Check the protective cover. Never use the cover to lift the tank.
- 2. Be sure the valve is closed when moving the tank or when work is finished.
- 3. Never move cylinders when regulators are attached unless the cylinders are secured to a cylinder dolly. Cylinders will not be transported over-the-road with regulators attached.
- 4. Rolling cylinders should be done by slightly tilting them and rolling them on their bottom edge.
- 5. Never use choker slings or magnets to hoist cylinders.
- 6. If cylinders are close to welding or cutting operations, place a fire resistant shield between the cylinders and these operations.
- 7. Standing cylinders should be chained or tied to a secure anchor.
- 8. Take the same precautions with empty tanks as with full ones.
- 9. Cylinders must be transported only in an upright position and must be firmly secured.

VI. MISCELLANEOUS

This public works department will perform periodic compound and site inspections. These inspections may or may not be announced, and are designed to increase safety awareness within the department.

This set of guidelines will be reviewed and updated bi-annually or as needed.

Violating these safety guidelines may be dealt with by reprimands, suspensions or ultimately, discharge.