



20/20 Plumbing & Heating, Inc.

**CONSTRUCTION
CODE OF
SAFE PRACTICES**

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CODE OF SAFE PRACTICES

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CODE OF SAFE PRACTICES

1.00 General

- 1) All persons shall follow these safe practice rules, render every possible aid to safe operations, and report all unsafe conditions or practices to the supervisor or superintendent.
- 2) Supervisors shall ensure employees are observing and obeying every applicable Local, State or Federal regulation and order as is necessary to the safe conduct of the work, and shall take such action as is necessary to obtain compliance.
- 3) All employees shall be given frequent accident prevention instructions. Instructions shall be given at least every 10 working days.
- 4) Anyone known to be under the influence of drugs or intoxicating substance which impair the employee's ability to safely perform the assigned duties shall not be allowed on the job while in that condition.
- 5) Horseplay, scuffling, and other acts which tend to have an adverse influence on the safety or well-being of the employees shall be prohibited.
- 6) Work shall be well planned and supervised to prevent injuries in the handling of materials and in working with equipment.
- 7) No one shall knowingly be permitted or required to work while the employee's ability or alertness is so impaired by fatigue, illness, or other causes that they might unnecessarily expose the employee or others to injury.
- 8) Employees shall not enter confined spaces unless it has been determined that it is safe to enter. An entry permit shall be completed before entry into permit-required spaces.
- 9) Employees shall be instructed to ensure that all guards and other protective devices are in proper places and adjusted, and shall report deficiencies promptly to the supervisor or superintendent.
- 10) Crowding or pushing when boarding or leaving any vehicle or other conveyance is prohibited.
- 11) Workers shall not handle or tamper with any electrical equipment, machinery, or air or water lines in a manner not within the scope of their duties, unless they have received instructions from their superintendent.
- 12) All injuries shall be reported promptly to the supervisor or superintendent so that arrangements can be made for medical or first aid treatment. All accidents shall be investigated, and the findings documented. Corrective measures to prevent future accidents shall be implemented.

- 13) When lifting heavy objects, the large muscles of the leg instead of the smaller muscles of the back shall be used.
- 14) Employees are limited to a maximum of 75 pounds when lifting. Heavier and voluminous objects require a team lift.
- 15) Inappropriate footwear or shoes with thin or badly worn soles must not be worn.
- 16) Materials, tools, or other objects shall not be thrown from buildings or structures until proper precautions are taken to protect others from the falling objects.
- 17) Employees shall cleanse themselves thoroughly after handling hazardous substances and follow special instructions from authorized sources.
- 18) Any damage to scaffolds, falsework, or other supporting structures shall be immediately reported to the supervisor and repaired before use.
- 19) Work shall be so arranged that employees are able to face a ladder and use both hands while climbing and descending.
- 20) Gasoline shall not be used for cleaning purposes.
- 21) No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel, even if there are openings, until it has first been determined that no possibility of explosion exists and authority for the work is obtained from the supervisor or superintendent.

2.00 GENERAL WORK ENVIRONMENT

- 1) All places of employment shall be kept clean to the extent that the nature of the work allows. Passageways and work areas shall be kept free from unnecessary material such as debris and protruding nails.
- 2) All spilled materials or liquids shall be cleaned up immediately.
- 3) All combustible scrap, debris and waste shall be stored safely and removed from the worksite promptly.
- 4) Covered metal waste cans shall be used for oily and paint-soaked waste.
- 5) The minimum number of toilets and washing facilities provided at one toilet to every twenty people.
- 6) All toilets and washing facilities shall be clean and sanitary.
- 7) All work areas shall be adequately illuminated.
- 8) Every floor and roof opening shall be guarded by a cover, a guardrail, or equivalent

on all open sides

3.00 PERSONAL PROTECTIVE EQUIPMENT & CLOTHING

- 1) Protective goggles or face shields provided shall be worn where there is any danger of flying particles or corrosive materials.
- 2) Eye protection (safety glasses/goggles) shall be worn at all times in warehouses, fabrication areas, construction sites, during service calls, and on finished projects. Eye protection will also be worn when operating power tools, machinery, and heavy equipment.
- 3) Employees who wear prescription lenses and work in areas where safety glasses are required, shall wear eye protection that incorporates the prescription in its design, or wears eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses
- 4) The type of glove used will depend on the tasks being performed and the potential hazards; at minimum, cut level 2 gloves shall be worn at all times, unless rotating equipment/tools are being used (lathe, drill press, drill etc) and/or when tools are being utilized and the manufacturer recommends gloves not be used.
- 5) Hard hats shall be worn at all times when on a construction job site regardless of phase (e.g. grounds, finish, rough), unless ALL the following conditions are met:
 - An employee is doing interior work on a unit in the “finish” phase
 - There are no interior hazards that could cause a struck by hazard
 - A hard hat would impede the completion of a task

Hard hat must be accessible within close proximity to don once task is complete

- 6) Hard hats shall be inspected periodically for damage to the shell and suspension system.
- 7) Appropriate foot protection shall be worn where there is the risk of foot injuries from hot, corrosive, poisonous substances, falling objects, crushing or penetrating actions.
- 8) At minimum, 6 inch boots with leather uppers, rigid soles, and laces are required at all times in warehouses, fabrication areas, construction sites, during service calls, and on finished projects.
- 9) Approved respiratory protection shall be worn accordingly for the exposure at hand and for regular or emergency use where needed.
- 10) All protective equipment shall be maintained in a sanitary condition and ready for use.
- 11) In areas where lunches are eaten on the premises, the areas shall be free of

exposure to toxic materials or other health hazards.

- 12) Hearing protection shall be provided against the effects of occupational noise exposure when sound levels exceed those of the DOSH noise standard.
- 13) Retro-Reflective vests/shirts are considered part of the 20/20 Plumbing and Heating, Inc. uniform. All employees that are in the warehouses, fabrication areas, construction sites, during service calls, on finished projects, and on job walks must wear a level two retro-reflective vest/shirt..

4.00 **WALKWAYS**

- 1) Aisles and passageways shall be kept clear.
- 2) Holes in floors, sidewalk or other walking surface shall be guarded.
- 3) Spilled materials shall be cleaned up immediately.
- 4) Materials or equipment shall be stored in such a way that it will not interfere with the walkway.
- 5) Aisles or walkways that pass near moving or operating machinery, welding operations or similar operations shall be arranged so employees will not be subjected to potential hazards.
- 6) Standard guardrails shall be provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground.
- 7) Bridges with guardrails shall be provided over trenches or areas where potential fall hazards exist.

5.00 **FLOOR & WALL OPENINGS**

- 1) All floor openings shall be guarded by a cover, guardrail, or equivalent on all sides (except at entrance to stairways or ladders).
- 2) Toe boards shall be installed around the edges of a permanent floor opening (where persons may pass below the opening).
- 3) Every floor and roof opening shall be guarded by a cover, a guardrail, or equivalent on all open sides.
- 4) Manhole covers, trench covers and similar covers, plus their supports, shall be designed to carry a truck rear axle load of at least 20,000 pounds when located in roadways and subject to vehicle traffic.

6.00 **STAIRS & STAIRWAYS**

- 1) Standard stair rails and/or handrails shall be on all stairways having four or more risers.
- 2) All stairways must have a minimum width of 22 inches.
- 3) All stairs of hollow-pan type treads and landings shall be filled to the top edge of the pan with solid material such as cement or wood planked.
- 4) Step riser greater than 18" shall have at least one additional step with no riser spacing greater than 7-1/2 inches.
- 5) All steps on stairs and stairways shall be designed or provided with a surface that renders them slip resistant.
- 6) All stairway handrails shall be capable of withstanding a load of 200 pounds, applied in any direction.

7.00 ELEVATED SURFACES

- 1) All elevated surfaces (beneath which people or machinery could be exposed to falling objects) shall be provided with standard 4-inch toe boards.
- 2) A means of access and egress shall be provided to elevated storage and work surfaces.
- 3) All material on elevated surfaces shall be stacked or racked in a manner to prevent it from tipping, falling, collapsing, rolling or spreading.

8.00 EXITING OR EGRESS

- 1) All exits shall be marked with an exit sign or otherwise identified.
- 2) Directions to exits signs shall be apparent and visibly marked or reviewed with employees.
- 3) Doors, passageways or stairways, that neither exits nor provide access to exits and which could be mistaken for exits, shall be appropriately marked "NOT AN EXIT", "TO BASEMENT", "STOREROOM", and the like.
- 4) Exit signs provided with the word "EXIT" in lettering shall be at least 5 inches high and the stroke of the lettering at least 1/2 inch wide.
- 5) All exits shall be kept free of obstructions.
- 6) At least two means of egress shall be provided from elevated platforms, pits or rooms where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable, or explosive substances.

9.00 PORTABLE LADDERS

- 1) All ladders shall be maintained in good condition, joints between steps and side rails tight, all hardware and fittings securely attached, and moveable parts operating freely without binding or undue play.
- 2) Non-slip safety feet shall be provided on each ladder.
- 3) All ladder rungs and steps shall be free of grease and oil.
- 4) It is prohibited to place a ladder in front of doors opening toward the ladder except when the door is blocked open, locked or guarded.
- 5) It is prohibited to place ladders on boxes, barrels, or other unstable bases to obtain additional height.
- 6) All employees are instructed to face the ladder when ascending or descending and maintain three points of contact at all times.
- 7) All employees are prohibited from using ladders that are broken, missing steps, rungs, or cleats, broken side rails or other faulty equipment.
- 8) All employees are instructed not to use the top 2 steps of ordinary stepladders as a step or seat.
- 9) An extension or straight ladder used to access an elevated surface must extend at least 3 feet above the point of support. Slip-resistant feet shall not be used as a substitute for care in placing, lashing, or holding a ladder that is used upon slippery surfaces.
- 10) Ladders shall not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental displacement.
- 11) All manufacture markings and labels on portable ladders shall be visibly readable, intact, and clear from paint or company markings.
- 12) All employees are prohibited from using ladders as guys, braces, skids, gin poles, or for other than their intended purposes.
- 13) All employees are instructed to only adjust ladders while standing at the base and while not on the ladder. (not while standing on the ladder or from a position above the ladder).
- 14) All metal ladders shall be inspected for damage. Metal ladders shall not be used where it can come in contact with live electrical wiring.
- 15) All ladders rungs shall be uniformly spaced at 12 inches, center to center.

10.00 HAND TOOLS & EQUIPMENT

- 1) All tools and equipment (both, company and employee-owned) used by employees at their workplace shall be in good condition.
- 2) All hand tools such as chisels, punches, which develop mushroomed heads during use shall be reconditioned or replaced as necessary.
- 3) All broken or fractured handles on hammers, axes and similar equipment shall be replaced promptly.
- 4) All worn or bent wrenches shall be replaced regularly.
- 5) All employees shall be aware of the hazards caused by faulty or improperly used hand tools.
- 6) Tools must be equipped with auxiliary, or secondary, handles when design allows.
- 7) Appropriate safety glasses, face shields, and similar equipment shall be used while using hand tools or equipment that might produce flying materials or be subject to breakage.
- 8) All hand tool handles shall be wedged tightly in the head of all tools.
- 9) All tool cutting edges shall be kept sharp so the tool will move smoothly without binding or skipping.
- 10) All company tools shall be stored in dry, secure locations where they won't be tampered with.
- 11) Eye and face protection shall be used when driving or hammering hardened or tempered studs or nails.

11.00 PORTABLE (POWER OPERATED) TOOLS & EQUIPMENT

- 1) All grinders, saws, and similar equipment shall be provided with appropriate safety guards and not removed.
- 2) All power tools shall be used with the correct shield, guard and/or attachment recommended by the manufacturer.
- 3) All portable circular saws shall be equipped with guards above and below the base plate.
- 4) All circular saw guards shall be checked to assure they are not wedged up, thus leaving the lower portion of the blade unguarded.
- 5) Tools must be equipped with auxiliary, or secondary, handles when design allows.

- 6) Rotating or moving parts of equipment shall be guarded to prevent physical contact.
- 7) All cord-connected, electrically operated tools and equipment shall be effectively grounded or of the approved double insulated type.
- 8) Effective guards shall be in place over belts, pulleys, chains, and sprockets, on equipment such as sewer snakes, air compressors, and the like.
- 9) Portable fans shall be provided with full guards or screens having openings 1/2 inch or less.
- 10) All hoisting equipment used for lifting heavy objects shall be ratings for the appropriate task.
- 11) All ground-fault circuit interrupters shall be provided on all temporary electrical 15 and 20 ampere circuits, used during periods of construction.
- 12) All pneumatic and hydraulic hoses on power-operated shall be tools checked regularly for deterioration or damage.
- 13) No loose-fitting clothing, no neckties, no jewelry, no dangling objects of any kind and no gloves when using power tools with rotating parts (drill press, drill, etc.), unless recommended by the manufacturer.

12.00 ABRASIVE WHEEL EQUIPMENT GRINDERS

- 1) The work platform shall be kept adjusted to within 1/8 inch of the wheel.
- 2) The adjustable tongue on the top side of the grinder shall be kept adjusted to within 1/4 inch of the wheel.
- 3) Side guards shall cover the spindle, nut, and flange and 75 percent of the wheel's diameter.
- 4) All bench and pedestal grinders shall be permanently mounted.
- 5) Goggles and/or face shields shall always be worn when grinding cutting.
- 6) The maximum RPM rating of each abrasive wheel shall be compatible with the RPM rating of the grinder motor.
- 7) All fixed or permanently mounted grinders shall be connected to their electrical supply system with metallic conduit or other permanent wiring method.
- 8) Each grinder shall have an individual on and off control switch.
- 9) Each electrically operated grinder shall be effectively grounded.

- 10) Before new abrasive wheels are mounted, are they shall be visually inspected and ring tested.
- 11) Dust collectors and powered exhausts shall be provided on grinders used in operations that produce large amounts of dust.
- 12) Splashguards shall be mounted on grinders that use coolant, to prevent the coolant from reaching employees.

13.00 POWDER ACTUATED TOOLS

- 1) All employees who operate powder-actuated tools shall be trained in their use and carry a valid operator's card.
- 2) Powder-actuated tools being used shall only be used as intended and approved.
- 3) Each powder-actuated tool shall be stored in its own locked container when not being used.
- 4) A sign at least 7" by 10" with bold type reading "POWDER-ACTUATED TOOL IN USE" shall be conspicuously posted when the tool is being used.
- 5) All powder-actuated tools shall be left unloaded until they are actually ready to be used.
- 6) All powder-actuated tools shall be inspected for obstructions or defects each day before use.
- 7) Powder-actuated tools operators shall have and use appropriate personal protective equipment such as hard hats, safety goggles, safety shoes and hearing protection.

14.00 MACHINE GUARDING

- 1) All employees shall be instructed on safe methods of machine operation as per the manufacturer's operator's manual.
- 2) Adequate supervision is required to ensure that employees are following safe machine operating procedures.
- 3) All machinery and equipment shall be kept clean and properly maintained.
- 4) Sufficient clearance shall be provided around and between machines to allow for safe operations, set up and servicing, material handling and waste removal.
- 5) Equipment and machinery shall be securely placed and anchored, when necessary to prevent tipping or other movement that could result in personal injury.

- 6) Power controls and operating controls should be located within reach of the operator while he is at his regular work location.
- 7) Electrical power to each machine shall be locked out for maintenance, repair, or security.
- 8) All the noncurrent-carrying metal parts of electrically operated machines shall be properly bonded and grounded.
- 9) Foot-operated switches shall be guarded or arranged to prevent accidental actuation by personnel or falling objects.
- 10) Power switches shall not be rigged to remain in the on position.
- 11) All manually operated valves and switches controlling the operation of equipment and machines shall be clearly identified and readily accessible.
- 12) All emergency stop buttons shall be colored red.
- 13) All pulleys and belts that are within 7 feet of the floor or working level shall be properly guarded.
- 14) All moving chains and gears shall be properly guarded.
- 15) Methods shall be provided to protect the operator and other employees in the machine or tool area from hazards created at the point of operation such as exposed cutting blades, drill bits, ingoing nip points, rotating parts, flying chips, and sparks.
- 16) All machinery guards shall be secure and so arranged that they do not offer a hazard in their use.
- 17) Provisions shall be made to prevent machines from automatically starting when power is restored after a power failure or shutdown.
- 18) When machinery is cleaned with compressed air, the air pressure shall be controlled and personal protective equipment or other safeguards shall be used to protect the operator and other workers from eye and body injury.

15.00 LOCK/OUT - TAG/OUT PROCEDURES

- 1) All machinery or equipment capable of movement, required to be de-energized or disengaged shall be locked/out and tagged/out during cleaning, servicing, adjusting or setting up operations, whenever required.
- 2) The locking-out of control circuits in lieu of locking-out main power disconnects is prohibited.
- 3) Stored energy (i.e. mechanical, hydraulic, air,) shall be released before equipment is locked/out and tagged/out for repairs.

- 4) Employees are required to keep personal control of their key(s) while they have safety locks in use.
- 5) It is required that employees check the safety of the lockout-tag/out procedure by attempting a start up after making sure no one is exposed.
- 6) It is required to assure the control circuit can also be disconnected and locked/out tag/out applied.

16.00 WELDING, CUTTING & BRAZING

- 1) Only authorized and trained personnel are permitted to use welding, cutting or brazing equipment.
- 2) All operators shall be provided with a copy of the appropriate operating instructions and are directed to follow them.
- 3) Compressed gas cylinders shall be regularly examined for obvious signs of defects, deep rusting, or leakage.
- 4) Care shall be used in handling and storage of cylinders, safety valves, relief valves, and the like, to prevent damage and injury.
- 5) Precautions shall be taken at all times to prevent the mixture of air or oxygen with flammable gases, except at a burner or in a standard torch setup.
- 6) Only manufacturer approved apparatus (torches, regulators, pressure-reducing valves, acetylene generators, manifolds) shall be used.
- 7) Cylinders shall be kept away from sources of heat.
- 8) It is prohibited to use cylinders as rollers or supports.
- 9) Empty cylinders shall be appropriately marked - the valves closed and the valve-protection caps on.
- 10) Signs reading: DANGER NO-SMOKING, MATCHES, OR OPEN FLAMES, or the equivalent shall be posted.
- 11) All cylinders, cylinder valves, couplings, regulators, hoses, and apparatus shall be keep free of oily or greasy substances.
- 12) Care shall be taken not to drop or strike cylinders.
- 13) Unless secured on special trucks, regulators shall be removed and valve-protection caps put in place before moving cylinders.
- 14) Cylinders without fixed hand wheels shall have keys, handles, or non-adjustable

wrenches on stem valves when in service.

- 15) All liquefied gases shall be stored and shipped valve-end up with valve covers in place.
- 16) Employees shall be instructed to never crack a fuel-gas cylinder valve near sources of ignition.
- 17) Before a regulator is removed, the valve shall be closed and gas released from the regulator.
- 18) Red hoses shall be used to identify the acetylene (and other fuel-gas), green for oxygen hose, and black for inert gas and air hose.
- 19) Pressure-reducing regulators shall be used only for the gas and pressures for which they are intended.
- 20) Open circuit (No Load) voltage of arc welding and cutting machines shall be as low as possible and not in excess of the recommended limits.
- 21) Grounding of the machine frame and safety ground connections of portable machines shall be checked periodically.
- 22) Electrodes shall be removed from the holders when not in use.
- 23) Electric power to the welder shall be shut off when no one is in attendance.
- 24) Suitable fire extinguishing equipment shall be available for immediate use.
- 25) The welder is forbidden to coil or loop welding electrode cable around his body.
- 26) Wet machines shall be thoroughly dried and tested before being used.
- 27) Electrode lead cables shall be frequently inspected for wear and damage, and replaced when needed.
- 28) When the object to be welded cannot be moved and fire hazards cannot be removed, shields shall be used to confine heat, sparks, and slag.
- 29) A firewatcher shall be assigned when welding or cutting is performed, in locations where a serious fire might develop.
- 30) Are combustible floors shall be kept wet, covered by damp sand, or protected by fire-resistant shields.
- 31) When floors are wet down, personnel shall be protected from possible electrical shock.
- 32) When welding is done on metal walls, precautions shall be taken to protect combustibles on the other side.

- 33) Before hot work is begun, used drums, barrels, tanks, and other containers shall be so thoroughly cleaned that no substances remain that could explode, ignite, or produce toxic vapors.
- 34) It is required that eye protection helmets, hand shields and goggles meet appropriate safety standards.
- 35) Employees exposed to the hazards created by welding, cutting, or bracing operations shall be protected with personal protective equipment and clothing.
- 36) Welding or cutting shall only be performed in areas with adequate ventilation.
- 37) When working in confined spaces, environmental monitoring tests shall be taken and means provided for quick removal of welders in case of an emergency.

17.00 COMPRESSORS & COMPRESSED AIR

- 1) Compressors must be equipped with pressure relief valves, and pressure gauges.
- 2) Compressor air intakes shall be installed and equipped to ensure that only clean uncontaminated air enters the compressor.
- 3) Compressors shall be operated and lubricated in accordance with the manufacturer's recommendations.
- 4) Safety devices on compressed air systems shall be checked frequently.
- 5) Before any repair work is done on the pressure system of a compressor, the pressure shall be bled off and the system locked/out and tagged/out.
- 6) Signs shall be posted to warn of the automatic starting feature of compressors.
- 7) The belt drive system shall be totally enclosed to provide protection for the front, back, top, and sides.
- 8) It is strictly prohibited to direct compressed air towards a person.
- 9) Employees prohibited from using highly compressed air for cleaning purposes.
- 10) If compressed air is used for cleaning off clothing, the pressure shall be reduced to less than 10 psi.
- 11) When using compressed air for cleaning, employees shall use personal protective equipment.
- 12) Safety chains or other suitable locking devices shall be used at couplings of high

pressure hose lines where a connection failure would create a hazard.

- 13) When compressed air is used to inflate auto tires, an inline pressure gauge shall be preset.
- 14) It is prohibited to use compressed air to clean up or move combustible dust if such action could cause the dust to be suspended in the air and cause a fire or explosion hazard.

18.00 COMPRESSED GAS & CYLINDERS

- 1) Cylinders shall be legibly marked to clearly identify the gas contained.
- 2) Compressed gas cylinders stored shall be in areas which are protected from external heat sources such as flame impingement, intense radiant heat, electric arcs, or high temperature lines.
- 3) Cylinders shall be located or stored in areas where they will not be damaged by passing or falling objects or subject to tampering by unauthorized persons.
- 4) Cylinders shall be stored or transported in a manner to prevent them from creating a hazard by tipping, falling or rolling.
- 5) Cylinders containing liquefied fuel gas shall be stored or transported in a position so that the safety relief device is always in direct contact with the vapor space in the cylinder.
- 6) Valve protectors shall always be placed on cylinders when the cylinders are not in use or connected for use.
- 7) All valves shall be closed off before a cylinder is moved, when the cylinder is empty, and at the completion of each job.
- 8) Low pressure fuel-gas cylinders shall be checked periodically for corrosion, general distortion, cracks, or any other defect that might indicate a weakness or render it unfit for service.
- 9) The periodic check of low pressure fuel-gas cylinders shall include a close inspection of the cylinders' bottom.

19.00 INDUSTRIAL TRUCKS - FORKLIFTS

- 1) Only trained personnel shall be allowed to operate industrial trucks.
- 2) Industrial truck and forklift operating rules shall be posted and enforced.
- 3) Directional lighting shall be provided on each industrial truck that operates in an area with less than 2 foot candles per square foot of general lighting.

- 4) Each industrial truck shall have a warning horn, whistle, gong or other device which can be clearly heard above the normal noise in the areas where operated.
- 5) Each industrial truck shall have a rotating light which can be clearly seen by hearing impaired employees in the areas where operated.
- 6) Brakes on each industrial truck shall be capable of bringing the vehicle to a complete and safe stop when fully loaded.
- 7) The industrial truck's parking brake shall effectively prevent the vehicle from moving when unattended.
- 8) Industrial trucks operating in areas where flammable gases or vapors, or combustible dust or ignitable fibers may be present in the atmosphere, shall be approved for such locations.
- 9) Industrial trucks with internal combustion engine operated in buildings or enclosed areas shall be carefully checked to ensure such operations do not cause harmful concentration of dangerous gases or fumes.

20.00 ENTERING CONFINED SPACES

- 1) Confined spaces shall be thoroughly emptied of any toxic atmospheres before entry.
- 2) Before entry, all lines to a confined space, containing inert, toxic, flammable, or corrosive materials shall be “valve off and blanked” or disconnected and separated.
- 3) Either natural or mechanical ventilation shall be provided prior to confined space entry.
- 4) Before entry, atmospheric tests shall be performed to check for oxygen deficiency, toxic substance and explosive concentrations in the confined space before entry.
- 5) Adequate illumination shall be provided for the work to be performed in the confined space.
- 6) The atmosphere inside the confined space shall be frequently tested or continuously monitor during conduct of work.
- 7) An assigned trained safety standby employee shall be outside of the confined space, whose sole responsibility is to watch the work in progress, sound an alarm if necessary, and render assistance.
- 8) The trained standby employee or other employee are prohibited from entering the confined space without lifelines and respiratory equipment if there is any

questions as to the cause of an emergency.

- 9) In addition to the trained standby employee, another trained supervisor/rescuer should be in the vicinity.
- 10) All rescuers shall be appropriately trained and using approved, recently inspected equipment.
- 11) All rescue equipment shall allow for lifting employees vertically from a top opening.
- 12) Trained personnel in First Aid and CPR immediately shall be available.
- 13) An effective communication system shall be in place whenever respiratory equipment is used and the employee in the confined space is out of sight of the standby person.
- 14) Approved respiratory equipment shall be required if the atmosphere inside the confined space cannot be made acceptable.
- 15) All portable electrical equipment used inside confined spaces shall be either grounded and insulated, or equipped with ground fault protection.
- 16) Before gas welding or burning is started in a confined space, hoses shall be checked for leaks, compressed gas bottles forbidden inside of the confined space, torches lighted only outside of the confined area and the confined area tested for an explosive atmosphere each time before a lighted torch is to be taken into the confined space.
- 17) If employees will be using oxygen-consuming equipment such as salamanders, torches, furnaces, in a confined space, sufficient air shall be provided to assure combustion without reducing the oxygen concentration of the atmosphere below 19.5 percent by volume.
- 18) Whenever combustion-type equipment is used in confined space, provisions shall be made to ensure the exhaust gases are vented outside of the enclosure.
- 19) Each confined space shall be checked for decaying vegetation or animal matter, which may produce methane.
- 20) The confined space shall be checked for possible industrial waste, which could contain toxic properties.
- 21) When the confined space is below the ground and near areas where motor vehicles will be operating, confirm that vehicle exhaust or carbon monoxide is not entering the space.

21.00 ENVIRONMENTAL CONTROLS

- 1) All work areas shall be properly illuminated.
- 2) Employees shall be instructed in proper first aid and other emergency procedures.
- 3) Hazardous substances shall be identified to the employee which may cause harm by inhalation, ingestion, skin absorption or contact.
- 4) Employees shall be made aware of the hazards involved with the various chemicals they may be exposed to in their work environment, such as ammonia, chlorine, epoxies, and caustics.
- 5) Employee exposure to chemicals in the workplace shall be kept within acceptable levels.
- 6) The work area's ventilation system shall be appropriate for the work being performed.
- 7) Employee exposure to welding fumes shall be controlled by ventilation, use of respirators, exposure time, or other means.
- 8) Noise levels in facilities where employees are working shall be determined for the use of hearing protection.
- 9) Steps shall be taken to use engineering controls to reduce excessive noise levels.
- 10) No employee shall handle asbestos or asbestos containing material
- 11) Wet methods shall be used, when applicable, to prevent the emission of airborne hazardous materials.
- 12) Vacuuming or wet sweeping with appropriate equipment shall be used whenever possible rather than blowing or sweeping dust.
- 13) Grinders, saws, and other machines that produce respirable crystalline silica or dust shall be vented to minimize the accumulation of dust, or used in conjunction with a dust collecting system, or the task shall be performed using the wet method.
- 14) Restrooms and washrooms shall be kept clean and sanitary.
- 15) Potable water shall be made available for drinking at all times.
- 16) Employees shall be instructed in the proper manner of lifting heavy objects.
- 17) Accessibility to shade will be provided to all employees working in environments at or above 80 degrees.
- 18) Employees working on jobsites and roadways where they are exposed to the hazards or traffic, shall be required to wear bright colored class II safety vest.
- 19) Equipment producing ultra-violet radiation shall be properly shielded.

22.00 FLAMMABLE & COMBUSTIBLE MATERIALS

- 1) All natural gas pipe lines shall be evacuated of natural gas by means of compressed air and vented away from the building where work is to be conducted.
- 2) Whenever natural gas is detected, the employee shall not use or activate any matches, lighters, torches or electrical devices which can produce a spark such as wall switches and power tools.
- 3) During extended exposure to natural gas, employees may become desensitized to the odorant in the natural gas. In this case the employee shall open any windows or doors leading **to the outside of the building**. The employee shall leave the area and refresh his/her sense of smell to help determine its concentration and safe work environment upon return.
- 4) Employees shall be made aware that new piping can absorb the odorant from the natural causing a potentially dangerous explosion hazard. Gas pipes shall always be purged with compressed air away from the building before servicing pipe lines or appliances. (FAU's, water heater or countertop stoves)
- 5) All combustible scrap, debris and waste materials (i.e. oily rags) shall be stored in covered metal receptacles and removed from the worksite promptly.
- 6) Proper storage shall be practiced to minimize the risk of fire including spontaneous combustion.
- 7) Approved containers and tanks shall be used for the storage and handling of flammable and combustible liquids.
- 8) All flammable liquids shall be kept in closed containers when not in use (e.g. parts cleaning tanks, pans, glues).
- 9) All flammable liquids shall be kept in fire-resistant covered containers until they are removed from the worksite.
- 10) Fuel gas cylinders and oxygen cylinders shall be separated by distance, fire resistant barriers or other means while in storage.
- 11) ABC Fire extinguishers shall be provided based on the classes of anticipated workplace fires.
- 12) Appropriate fire extinguishers shall be mounted within 75 feet of outside areas containing flammable liquids, and within 10 feet of any inside storage area for such materials.
- 13) The transfer/withdrawal of flammable or combustible liquids shall be performed by trained personnel.

- 14) Fire extinguishers shall be mounted so that employees do not have to travel more than 75 feet for a class "A" fire or 50 feet for a class "B" fire.
- 15) Employees shall be trained in the use of fire extinguishers.
- 16) Fire extinguishers shall be free from obstructions or blockage.
- 17) Fire extinguishers shall be serviced, maintained and tagged at intervals not to exceed one year.
- 18) Fire extinguishers shall be fully charged and in their designated places.
- 19) Fire extinguishers shall be present during any type of hot work.
- 20) A record shall be maintained of required monthly checks of fire extinguishers.
- 21) Where sprinkler systems are permanently installed, nozzle heads shall be directed or arranged so that water will not be sprayed into operating electrical switchboards and equipment.
- 22) "NO SMOKING" signs shall be posted in areas where flammable or combustible materials are used or stored.
- 23) "NO SMOKING" rules shall be enforced in areas of storage and use of flammable materials.
- 24) Safety cans shall be used for dispensing flammable or combustible liquids at a point of use.
- 25) All spills of flammable or combustible liquids shall be cleaned up promptly.
- 26) All fuel storage tanks shall be adequately vented to prevent the development of excessive vacuum or pressure as a result of filling, emptying, or atmosphere temperature changes.
- 27) Storage tanks shall be equipped with emergency venting that will relieve excessive internal pressure caused by fire exposure.
- 28) Spare portable propane tanks used by industrial trucks shall be stored in accordance with safety regulations.

23.00 FIRE PROTECTION

- 1) All employees shall be made aware of the fire prevention plan.
- 2) The fire prevention plan shall describe the type of fire protection equipment and/or systems.
- 3) Practices and procedures shall be established to control potential fire hazards and

ignition sources.

- 4) Employees shall be made aware of the fire hazards of the material and processes to which they are exposed.
- 5) Fire alarm system, shall be tested at least annually.
- 6) Fire alarm system, shall be certified as required.
- 7) Interior standpipes and valves, shall be they inspected regularly.
- 8) Outside private fire hydrants, shall be flushed at least once a year and on a routine preventive maintenance schedule.
- 9) Fire doors and shutters shall be in good operating condition.
- 10) Fire doors and shutters shall be unobstructed and protected against obstructions, including their counterweights.
- 11) Sprinkler heads shall be protected by metal guards, when exposed to physical damage.
- 12) Proper clearance shall be maintained below sprinkler heads.
- 13) Fire extinguishers shall be mounted in readily accessible locations.
- 14) Fire extinguishers shall be recharged regularly and noted on the inspection tag.
- 15) Employees shall be periodically instructed in the use of extinguishers and fire protection procedures.

24.00 HAZARDOUS CHEMICAL EXPOSURES

- 1) All employees shall be trained in the safe handling practices of hazardous chemicals such as acids, caustics, and the like.
- 2) All employees shall be aware of the potential hazards involving various chemicals stored or used in the workplace--such as acids, bases, caustics, epoxies, and phenols.
- 3) Eye wash fountains and safety showers shall be provided in areas wherecorrosive chemicals are handled.
- 4) All employees shall be required to use personal protective clothing and equipment when handling chemicals (i.e. gloves, eye protection, and respirators).
- 5) All flammable or toxic chemicals shall be kept in closed containers when not in use.

- 6) Standard operating procedures must be followed when cleaning up chemical spills.
- 7) All employees are prohibited from eating in areas where hazardous chemicals are present.
- 8) Personal protective equipment shall be provided, used and maintained whenever necessary.

25.00 HAZARDOUS SUBSTANCES COMMUNICATION

- 1) A list of hazardous substances shall be maintained in the workplace.
- 2) A written hazard communication program dealing with Safety Data Sheets (SDS) labeling, shall be available to all employees.
- 3) The safety director/coordinator shall be responsible for maintaining the SDSs and employee training.
- 4) Each container for a hazardous substance (i.e. vats, bottles, storage tanks,) shall be labeled with product identity and a hazard warning (communication of the specific health hazards and physical hazards).
- 5) The Safety Data Sheet shall be readily available for each hazardous substance used.
- 6) Employee training shall be conducted by the safety director/coordinator at the time of employment and followed-up annually or as needed or when new products are used or when exposure or contamination has occurred.
- 7) The Hazard Communication Program shall include:
 - 8) An explanation of what an SDS is and how to use and obtain one.
 - 9) SDS contents for each hazardous substance or class of substances.
 - 10) Explanation of "Right to Know".
 - 11) Identification of where employees can see the employer's written hazard communication program and where hazardous substances are present in their work area.
 - 12) The physical and health hazards of substances in the work area, how to detect their presence, and specific protective measures to be used.
 - 13) Details of the hazard communication program, including how to use the labeling system and SDSs.

26.00 ELECTRICAL

- 1) All employees are required to report, as soon as practicable, any obvious hazard to life or property observed in connection with electrical equipment or lines.
- 2) All portable electrical tools and equipment shall be grounded or of the double insulated type.
- 3) All electrical appliances such as vacuum cleaners, polishers, vending machines grounded, microwave ovens shall be grounded.
- 4) All extension cords being used shall have a grounding conductor.
- 5) Only approved multi-plug pigtail grounded adapters shall be used.
- 6) Multi-plug power strips are prohibited on construction sites.
- 7) Ground-fault circuit interrupters shall be installed on each temporary 15 or 20 ampere, 120 volt AC circuit at locations where construction, demolition, modifications, alterations or excavations are being performed.
- 8) Exposed wiring and cords with frayed or deteriorated insulation shall be repaired or replaced promptly.
- 9) Flexible extension cords and cables shall be free of splices or taps.
- 10) All cord, cable and raceway connections shall be intact and secure.
- 11) All location of electrical power lines and cables (overhead, underground, under-floor, other side of walls) shall be determined before digging, drilling or similar work is begun.
- 12) The use of metal ladders are prohibited in area where the ladder or the person using the ladder could come in contact with energized parts of equipment, fixtures or circuit conductors.
- 13) All DC power tools shall disabled by removing the battery power source before changing blades or bits to prevent the probably of injury from inadvertent starting.
- 14) All AC power tools shall disabled by removing the battery power source before changing blades or bits to prevent the probably of injury from inadvertent starting.
- 15) Employees are prohibited from working on energized lines or equipment.

27.00 NOISE

- 1) When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels, the employer shall obtain measurements for employees who may be exposed at or above that level.
- 2) Engineering controls shall be used to reduce excessive noise levels (i.e. isolating the employee from prolonged noise exposure such as damping walls, closing doors and windows)
- 3) Where engineering controls are determined not feasible, administrative controls (i.e. worker rotation) shall be used to minimize individual employee exposure to noise.
- 4) A preventive health program in the recognition of safe noise levels and exposure, shall be in used to educate employees on personal hearing protection use.
- 5) This training shall be repeated annually for employees exposed to continuous noise above 85 DBA.
- 6) Work areas where noise levels make voice communication between employees difficult been shall be identified and posted.
- 7) Approved hearing protective equipment (noise attenuating devices) shall be available to every employee exposed to an 8-hour time-weighted average of 85 decibels or greater.

28.00 FUELING

- 1) It is prohibited to fuel an internal combustion engine with a flammable liquid while the engine is running.
- 2) Portable containers shall be metal, have tight closures with screw or spring covers and shall be equipped with spouts or other means to allow pouring without spilling.
- 3) When spillage occurs during fueling operations, the spilled fuel shall be cleaned up completely, evaporated, or other measures taken to control vapors before restarting the engine.
- 4) Fuel tank caps shall be replaced and secured before starting the engine.
- 5) In fueling operations contact between the metal container and the fuel tank is always required. Fueling hoses shall be of a type designed to handle the specific type of fuel.
- 6) It is prohibited to handle or transfer gasoline in open containers. (buckets)

- 7) Open lights, open flames, or sparking or arcing equipment are prohibited near fueling or transfer of fuel operations.
- 8) Smoking is prohibited in the vicinity of fueling operations.
- 9) Fueling operations are prohibited in buildings or other enclosed areas that are not specifically ventilated for this purpose.
- 10) Where fueling or transfer of fuel is done through a gravity flow system, the nozzles shall be of the self-closing type.

29.00 MATERIAL HANDLING

- 1) Safe clearance for equipment shall be accessible through aisles and doorways.
- 2) Designated aisle ways shall be permanently marked, and kept clear to allow unhindered passage.
- 3) Motorized vehicles and mechanized equipment shall be inspected daily or prior to use.
- 4) Vehicles shut offs and breaks shall be set prior to loading or unloading.
- 5) Containers or combustibles or flammables, when stacked while being moved, shall always be separated by “type” sufficient to provide stability.
- 6) All trucks and trailers shall be chocked and secured from movement during loading and unloading operations.
- 7) All pallets shall be inspected before being loaded or moved.
- 8) All chains, ropes, chokers or slings shall be adequate for the job to being performed.
- 9) When hoisting material or equipment, no employee must be directly under the load.
- 10) Safety Data Sheets shall be available to employees handling hazardous substances.

30.00 TRANSPORTING EMPLOYEES & MATERIALS

- 1) Employees who operate vehicles on public thoroughfares shall have valid operator's licenses.
- 2) When seven or more employees are regularly transported in a van, bus or truck, the operator's license shall be appropriate for the class of vehicle being driven.

- 3) Each van, bus or truck used regularly to transport employees, shall be equipped with an adequate number of seats.
- 4) A full charged fire extinguisher, in good condition, of an ABC rating shall be maintained in each employee assigned company vehicle.
- 5) Cutting tools with sharp edges carried in passenger compartments of vehicles shall be placed in securely closed containers.
- 6) Employees are prohibited from riding on top of any load

31.00 SANITIZING EQUIPMENT & CLOTHING

- 1) Personal protective clothing and equipment shall be kept clean and maintained.
- 2) Employees are prohibited from interchanging personal protective equipment, PPE is for personal use only.
- 3) Employees are prohibited from smoking or eating in any area where contaminants are present that could be injurious if ingested.

32.00 INFECTION CONTROL

- 1) Employees potentially exposed to infectious agents in body fluids shall wear personal protective equipment at all times and properly cleaned after the exposure.
- 2) Any potential for occupational exposure shall be identified and documented.
- 3) During the First Aid training program, information shall be provided to the employee to help identify potentially exposure to blood and/or body fluids.
- 4) Personal Protective Equipment shall be provided to employees appropriate to their work duties.
- 5) Medical surveillance including evaluation, antibody testing, and/or vaccination shall be made available to potentially exposed employees.
- 6) Universal precautions shall be used when the potential exposure to bodily fluids exist.
- 7) During First Aid/CPR training employees shall be trained in the use of personal protective equipment.

33.00 ERGONOMICS

- 1) Work shall be done using the larger muscles of the body.

- 2) Work shall be done without twisting or overly bending the lower back.

34.00 FALL PROTECTION

- 1) Fall protection is required any time an employee is working in an unprotected area at or above six (6) feet or other sloped surfaces steeper than 40 degrees not otherwise adequately protected (e.g., no guardrails, etc.). Full body harnesses will be worn, and workers will be tied off above the ground floor where a standard guardrail system or other suitable means of protection cannot be used for fall protection.
- 2) All fall protection equipment must be inspected daily and not used if found defective.
- 3) Fall protection must be attached to adequate anchorage points that can hold the designated weight capacity for the fall protection method used (fall arrest, fall restraint, & positioning).
- 4) Training must be given to all potentially exposed employees in the use of fall protection devices, such as harnesses, shock absorbing lanyards, static lines, vertical lifelines, and horizontal lifelines etc.
- 5) Employees must be familiar with the application and design criteria of fall protection systems in the work site so that they can visually identify potential fall hazards in the work area. All subcontractors and their employees must be able to verify that the fall protection system installed in the work area provide adequate protection under OSHA's standards (fall distance, swing radius, etc.).

35.00 SUBCONTRACTORS

- 1) Division Management is responsible for ensuring that any trades that we subcontract work to provide a copy of their IIPP and other applicable health and safety programs to us prior to beginning work at any of our jobsites prior to the beginning of work.
- 2) All subcontractors are required to, regardless of size, comply with all our Safety practices, policies, or procedures unless written permission is granted by the Safety and Health Department. Contractors will comply with all applicable local, state, and federal health and safety laws and regulations while performing work for, and while present on our property and at customer work locations.
- 3) Contractors will provide us with a detailed incident report in the event of personal injury/illness, exposure, vehicle incident, or property damage. Our supervisors and management may participate in investigations of contractor incidents, to document the facts.

36.00 EXCAVATION

- 1) All employees involved in excavation activities shall be trained in excavation hazards, methods to prevent them and the applicable regulations. Competent

- persons shall receive specific training.
- 2) A competent person shall inspect the excavation and protective systems daily before the start of work and throughout the day as conditions change. The competent person shall have the authority to implement corrective action as necessary.
 - 3) The excavation operation shall be pre-planned to identify safe work practices, hazard recognition procedures, and soil determination/analysis tasks.
 - 4) Prior to beginning excavation work underground utilities shall be located and identified. Adjacent structures shall be stabilized.
 - 5) Protective systems shall be in place to protect employees from cave-ins 5ft. or greater and when the competent person determines there is a need for protective systems less than 5 ft.
 - 6) The area adjacent to the excavation shall be evaluated for previously backfilled excavations or the potential for vibration and possibly additional shoring or bracing may need to be provided.
 - 7) Excavation sites shall be tested for oxygen deficiency or the presence of other hazardous atmosphere prior to entry as applicable if hazardous atmospheres are expected. Employees shall not enter or work in excavations with a hazardous atmosphere. Water accumulation shall be prevented whenever possible and adequate precautions shall be implemented to protect employees as applicable.
 - 8) Spoils and other materials shall be kept 2 or more feet away from the edge of the excavation so they do not fall into the excavation.
 - 9) Employees shall stay away from equipment loading or unloading material. Employees shall be protected from loads or objects falling from lifting or excavating equipment.
 - 10) Employees shall wear all required personal protective equipment as appropriate.
 - 11) Appropriate barricades, signs, and other protective devices shall be in place to protect the public and for remote/hard to see excavations.
 - 12) All equipment and materials shall be in good working condition.
 - 13) A safe means of access and egress shall be located in excavations that are 4 feet or greater in depth that requires no more than 25 feet of lateral travel.

ACKNOWLEDGEMENT OF RECEIPT AND REVIEW OF THE CODE OF SAFE PRACTICES

TO ALL EMPLOYEES:

ATTACHED IS A COPY OF THE CODE OF SAFE PRACTICES. THESE GUIDELINES ARE PROVIDED FOR YOUR SAFETY.

IT IS THE RESPONSIBILITY OF THE SAFETY DIRECTOR AND HUMAN RESOURCES TO PROVIDE AND REVIEW THIS PROGRAM WITH EACH EMPLOYEE.

IT IS THE EMPLOYEE'S RESPONSIBILITY TO READ AND COMPLY WITH THIS PROGRAM.

THE ATTACHED COPY OF THE CODE OF SAFE PRACTICES IS YOURS TO KEEP.

PLEASE SIGN AND DATE BELOW AND RETURN **ONLY THIS PAGE** TO THE SAFETY DIRECTOR OR HUMAN RESOURCES.

I HAVE READ AND UNDERSTAND THE CODE OF SAFE PRACTICES

DATE & EMPLOYEE SIGNATURE

PRINT NAME _____

DATE

EMPLOYEE SIGNATURE