

Job Hazard Analysis

Title of Job/Operation: All Field Personnel /Field Activities

Task(s)— All Field Personnel /Field Activities		
Activity	Significant Hazards	Procedures & Controls
Pre-Work Site Meeting/ pre-shift safety huddle	ALL	<p>Conduct a planning & site safety meeting with all Team members including client representative (escort) and sub-consultant prior to the start of the day's field activities. The site job planning and safety meeting should include but should not be limited to, the following:</p> <ul style="list-style-type: none"> Emergency procedures including evacuation routes, muster points and attendance taking Task Specific hazards & controls Review of the JHA & Safe Work procedures HASP Section 12.0 General Safety Rules And Requirements
Use of Standard PPE	ALL	<p>Standard PPE shall include the following unless otherwise specified within a given Activity:</p> <ul style="list-style-type: none"> Safety-toe Footwear (Work Shoes) Hard hats Reflective Traffic safety vest Eye protection (safety glasses with side shields) Wear USCG approved personal floatation devices (PFDs) when working on or near water. Hearing protection (ear plugs) with a minimum NRR of 31 when working in high noise areas exceeding 85 dbA for exposure duration of 15 minutes or greater. Use the following "rule of thumb" to determine a "high noise area". If you have difficulty hearing or understanding a "normal" tone of voice at a distance of about three feet. HASP Section 17.0 Personal Protective Equipment Program
Occupational Noise		<ul style="list-style-type: none"> Feasible administrative and engineering controls and shall be utilized to keep sound levels from exceeding those listed in Table D-2 of the regulation (1926.52(b)). Controls shall include the following: <p><u>Distance</u></p> <ul style="list-style-type: none"> When not required to be in an area that exceeds 85dbA employees shall distance themselves from the area. The distance from the area shall be considered sufficient when one has no difficulty hearing or understanding a "normal" tone of voice at a distance of two to three feet. To help in determine a proper distance, employees equipped with smart phones will have Sound Level meter applications available to them. <p><u>Time</u></p> <ul style="list-style-type: none"> As practically possible, employees will limit the time they are in high noise areas and shall not exceed exposure times as given in Table D-2 of the regulation (1926.52(b)). <p><u>Personnel Protective Equipment</u></p> <ul style="list-style-type: none"> When required to be in an area of "High Noise", hearing protection (ear plugs and/or muffs) with a minimum NRR of 31 are required to be worn. A "high noise area" shall be defined as an area where the noise level exceeds 85 dbA. Employees will use the following "rule of thumb" to determine a "high noise area". If you have difficulty hearing or understanding a "normal" tone of voice at a distance of about two feet. To help in determine an approximate noise level, employees equipped with smart phones will have Sound Level meter applications available to them.

Table D-2 -29 CFR 1926.52 -

Duration per day (hrs.)	Sound Level dBA
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

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Slab on grade rebar inspections		<ul style="list-style-type: none"> Inspector shall not walk on steel reinforcement for slabs unless stable surface is in place. Contractor to provide stable surface in the form of plywood sheets in order to properly & safely inspect rebar installation Plywood sheets shall be moved as required, in order to provide safe access to areas requiring observation
Working next to, behind and in front of equipment		<ul style="list-style-type: none"> Stay alert! Pay attention to back up signals Stay Alert and pay attention to spotter/flagman. Discuss the areas of operation with the foreman Discuss know operator "blind spots" for the given equipment. Visibility –make eye contact with the operator. Remember if you cannot see him, he cannot see you.
Working Around Excavations	Caught-in excavation collapse Atmospheric Hazards Water Accumulation Limited Egress Hazardous	<ul style="list-style-type: none"> Do not work in excavations 5' or greater in depth unless they are either properly: "sloped", "benched" or "shored" according to OSHA requirements and under the direction of a Qualified Person Do not work in excavation 4' or greater in depth without proper egress (i.e., ladder) Do not work in an excavation 4' or greater that may contain a hazardous atmosphere unless the atmosphere has been tested and determined to be safe for entry. Do not work in excavations with water accumulation. If water is or has accumulated do not enter the excavation unless the integrity of the excavation has been determined to be safe by a Qualified Person. Areas surrounding the excavation/test-pit shall be evaluated by a Qualified Person to determine acceptable loading of employees, equipment, spoils, etc. Areas that are not capable of supporting potential loadings shall be clearly identified and appropriately demarcated to prevent unsafe loading. Precautions shall be taken to prevent surface water from entering an excavation and to provide good drainage of the areas adjacent to an excavation. Fall protection shall be provided around test-pit/excavations greater than 6 feet in depth to protect employees from falling into the excavation. Protection shall be provided to prevent employees, vehicles, and equipment from falling into excavations. When vehicles or mobile equipment are used near or allowed adjacent to an excavation/test-pit, substantial stop logs or barricades shall be installed. Non-operating personnel shall stand clear from vehicles and equipment to avoid being struck by spillage or falling materials. Determine anticipated soil type and procure resources accordingly (i.e., shoring, trench box, etc.) Excavations shall be protected from cave-ins by a protective system unless the excavation is less than 5 feet in depth and a Competent Person determine there is no potential for cave-in, or the excavation is made entirely in stable rock. Determine anticipated soil type and procure resources accordingly (i.e., shoring, trench box, etc.) Employees shall be protected from potential falling objects (e.g., loose rock, soil). Excavated material shall be placed at least 2 feet from the edge of an excavation, or shall be retained by protective systems designed to support the weight of the excavated material and prevent the materials from falling into the excavation. Atmospheric monitoring shall be performed in excavations greater than 4 feet in depth where there is potential for an oxygen deficiency or hazardous atmosphere. This includes where fossil fuel-powered equipment is utilized within or near an excavation.
Working with Nuclear Density Gauges	Physical Exposures	<ul style="list-style-type: none"> Training & Required Certifications Control Exposure via Distance , Time & Shielding techniques

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	Ionizing Radiation Lifting > 50 pounds Stains & Body Injury Hand Tools cuts, sprains, lacerations	<ul style="list-style-type: none"> Use proper lifting and handling techniques. Follow manufactures operations & safety procedures when handling the instrument Visibly check equipment prior to use including but not limited to the shutter operations. Adhere to all Tectonic Safety and Emergency procedures as given and approved as part of the NYS Radioactive Material lic. Radiation monitoring badges are required to be worn by all personnel that use the nuclear density gauges. Radiation badge monitoring is performed in accordance with NRC and as required by New York State DOL Part 38. Follow all DOT requirements when transporting the instrument <p><u>Manual Lifting</u></p> <ul style="list-style-type: none"> Follow procedures for safe lifting practices Plan your lift and your route “Size Up” the load. Weight, package size, handles, etc. should be considered. Consider mechanical methods first- Use a hand truck or other mechanical means. Know your own personal limitations (don’t try to lift “too much”) Use a balanced stance Get a secure grip. Use both hands whenever possible. Avoid jerking by using smooth, even motions. Alternate heavy lifting or forceful exertion tasks with less physically demanding tasks. Take rest breaks. When carrying a load, keep the load close to the center of your body to take full advantage of the mechanical leverage of your body Avoid twisting at the waist Bend with your knees Lift with your legs, keep your back straight Avoid lifting above shoulder height Don’t rush, make sure that you can clearly see your path Turn /pivot with your feet ; don’t twist your back Wear gloves and/or sleeves as necessary when handling sharp or rough edges Squat lifting should be done for a majority of all lifts Team lifts should be used when objects are too heavy, too large or too awkward for one person to lift. <p><u>Hand Tools</u></p> <ul style="list-style-type: none"> Use the proper tool for the job Proper guarding Grounding/GFCI Inspect equipment, power/extension cords Be aware of hazards and your hand positioning relative to hazards Minimize repetitive motion by switching tasks and using properly designed tools Use work gloves as necessary to prevent and cuts, etc.
Working around Heavy Machinery/Equipment Drill Rigs, Excavators, etc.	Struck by Caught –In Noise	<ul style="list-style-type: none"> Only trained individuals shall operate heavy machinery and/or equipment Stay alert! Pay attention to back up signals Know the areas of operation All personnel shall wear proper PPE hard hat, safety glasses, hearing, protection and safety shoes Obey all signage.

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		<ul style="list-style-type: none"> All non-essential personnel shall remain out of the "No Access Zone" during operations. Do not work within "No Access Zone" without authorization and training. Essential personnel in Work Zone shall remain a safe distance past the radius of any boom/ bucket, etc. Be alert and pay attention to potential flying fragments/particles, etc. and when practical possible stay out of their reach. Do not stand directly under loads Do not wear loose fit clothing or jewelry around rotating or moving parts. Do not approach and unprotected (not guarded) piece of machinery Hearing protection (ear plugs) with a minimum NRR of 31 when working in high noise areas exceeding 85 dbA for exposure duration of 15 minutes or greater. Use the following "rule of thumb" to determine a "high noise area". If you have difficulty hearing or understanding a "normal" tone of voice at a distance of about three feet. HASP Section 16.0 Construction Safety Program HASP Section 22.0 Hearing Conservation Program
Working around Vehicular Traffic	Struck by Caught -In Noise	<ul style="list-style-type: none"> Training Visibility –wear reflective traffic vest and other standard PPE. Pay attention and observe the Maintenance & Protection of Traffic (MPT) plan and/or Temporary Traffic Control Plan. (TTCP). Note and follow the direction of flagmen & signage. Take note of cone and other temporary barriers. Pay attention and listen for back up signals. When possible make visual observations from locations outside of the shoulder 15 feet or more from the edge of the traveled way. Use Vehicle Warning Lights Vehicles parked on the shoulder of a road should be pulled off as far as possible and hazard lights and flashing warning light will remain on. Exit the vehicle from the passenger side if there is less than 8' from the traveled way. Do not attempt to cross any roadways that are not designed for pedestrian crossing. When crossing a roadway use designated crosswalks and obeys all traffic signs and signals. Hearing protection (ear plugs) with a minimum NRR of 31 when working in high noise areas exceeding 85 dbA for exposure duration of 15 minutes or greater. Use the following "rule of thumb" to determine a "high noise area". If you have difficulty hearing or understanding a "normal" tone of voice at a distance of about three feet. HASP Section 16.0 Construction Safety Program HASP Section 22.0 Hearing Conservation Program
Working At Heights – Using Scaffolds, &Aerial Lift Devices	Falls	<ul style="list-style-type: none"> Training & Required Certification Fall protection is required when working at a height of 6' or more All walking and working surfaces $\geq 6'$ require that a Fall Protection Program/Plan be in place. At a minimum plans should consider the following: <ul style="list-style-type: none"> ✓ Guardrails in place and approved by Qualified Person. DO NOT climb and/or lean on guardrails, handrails, mid-rails, etc. ✓ Properly wear Personal fall arrest equipment PFA equipment if it is to be used. Know the fall distance to be sure equipment is suitable for the plan. ✓ Tie off point identified by a qualified person

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		<ul style="list-style-type: none"> ✓ Life Lines approved by Qualified Person ✓ Netting in Place if applicable ✓ Floor Holes & Openings Protected ✓ Wall Openings and edges protected ✓ Rescue Plan in place • Personal fall arrest equipment (PFA) is required for work on all lifts & Aerial Lift Devices. • Fall protection must be in place prior to the use of all scaffolds. • In NYC the use of scaffolds requires, at a minimum, the 4hr DOB Scaffold Training course. • HASP Section 19.0 Fall Protection Program • HASP Section 20.0 Scaffolding Safety Program • HASP Section 33.0 Aerial Lifts And Scissor Lift Safety
Use of Ladders		<ul style="list-style-type: none"> • Ladders must be Secured • For extension ladders - maintain a 4:1 for every 4' in height the bottom of the ladder should be 1' away from the structure. (proper angle) • Ladder Extends 3' above surface (extension ladders) • Proper size and type • Level footing • Properly use ladders for its intended use. • Be sure the ladder has been inspected and in good condition. • Non-slip bases • Face the ladder when ascending or descending. • Maintain three points of contact at all times on extension & straight & Fixed ladders. • Keep your body centered on the ladder. • Never let your belt buckle pass either side rail. • Ladders must be kept free of oil, grease, and other slipping hazards. • Consider using a rope to raise/lower materials instead of carrying items while climbing a ladder. • Do NOT use metal or aluminum ladders near exposed energized electrical equipment. • Select a ladder with the proper duty rating for your weight and the materials you are handling. • Ladders shall not be loaded beyond the maximum intended load for which they were built nor beyond their manufacturer's rated capacity. • Do not use a stepladder that is folded or in a leaning position • Ladders should be inspected before each use. • Broken or weak ladders or ladders that are not stable must be marked or tagged as defective and taken out of service. • The top or top step of a stepladder shall not be used as a step. Cross-bracing on the rear section of stepladders shall not be used for climbing unless the ladders are designed for and provided with steps for climbing on both front and rear sections. • Ladders shall not be climbed by more than one person at a time, unless designed by the manufacturer for such use.
Scaffold Use		<ul style="list-style-type: none"> • Training-

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Scaffold Use		<ul style="list-style-type: none"> For projects located within NYC, individuals using scaffolding shall have this training specifically documented by possession of the appropriate current NYC DOB scaffold user card. 4 hr User or 16 hr suspended All Scaffold must be constructed by and approved by a Qualified Individual. Do not use unless a Qualified Individual has “tagged” and/or has indicated the scaffold is ready for use. <p><u>Fall Protection Requirements</u></p> <ul style="list-style-type: none"> Fall protection includes guardrail systems and personal fall arrest systems. When working from an aerial lift, attach the fall arrest system to the boom or basket. Crossbracing is acceptable in place of a midrail when the crossing point of two braces is between 20 inches (0.5 m) and 30 inches (0.8 m) above the work platform or as a toprail when the crossing point of two braces is between 38 inches (0.97 m) and 48 inches (1.3 m) above the work platform. The end points at each upright shall be no more than 48 inches (1.3 m) apart. <p><u>Collapse</u></p> <ul style="list-style-type: none"> Footings—Support scaffold footings shall be level and capable of supporting the loaded scaffold. The legs, poles, frames, and uprights shall bear on base plates and mud sills. Platforms—Supported scaffold platforms shall be fully planked or decked. Guying ties, and braces—Supported scaffolds with a height-to-base of more than 4:1 shall be restrained from tipping by guying, tying, bracing, or the equivalent. Capacity—Scaffolds and scaffold components must support at least 4 times the maximum intended load. Suspension scaffold rigging must at least 6 times the intended load. <p><u>Struck by --Falling Object Protection</u></p> <ul style="list-style-type: none"> <u>Barricades</u>—The area below the scaffold to which objects can fall shall be barricaded, and employees shall not be permitted to enter the hazard a To protect employees from falling hand tools, debris, and other small objects, install toeboards, screens, guardrail systems, debris nets, catch platforms, canopy structures Wear Your Hardhats! Don't work underneath! <p><u>Electrocution</u></p> <p>Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines.</p> <p><u>General</u></p> <ul style="list-style-type: none"> Scaffolds shall be erected, moved, dismantled, or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling or alteration. Such activities shall be performed only by experienced and trained employees selected for such work by the competent person. Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence which could affect a scaffold's structural integrity. Shore and lean-to scaffolds are strictly prohibited. Scaffolds and scaffold components shall not be loaded in excess of their maximum intended loads or rated capacities, whichever is less. Any part of a scaffold damaged or weakened such that its strength is less than that required by paragraph (a) of this section shall be immediately repaired or replaced, braced to meet those provisions, or removed from service until repaired. Scaffolds shall not be moved horizontally while employees are on them, unless they have been designed by a registered professional engineer

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Scaffold Use		<p>specifically for such movement or, for mobile scaffolds, where the provisions of 1926.452 (w) are followed.</p> <ul style="list-style-type: none"> Scaffolds shall be erected, moved, dismantled, or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling or alteration. Employees shall be prohibited from working on scaffolds covered with snow, ice, or other slippery material. Work on or from scaffolds is prohibited during storms or high winds. Do not access platforms if excess debris has been allowed to accumulate on platforms. Makeshift devices, such as but not limited to boxes and barrels, shall not be used on top of scaffold platforms to increase the working level height of employees. Ladders shall not be used on scaffolds to increase the working level height of employees except on large area scaffolds where employers have satisfied the following criteria: <ul style="list-style-type: none"> When the ladder is placed against a structure which is not a part of the scaffold, the scaffold shall be secured against the sideways thrust exerted by the ladder The platform units shall be secured to the scaffold to prevent their movement; The ladder legs shall be on the same platform or other means shall be provided to stabilize the ladder against unequal platform deflection, and The ladder legs shall be secured to prevent them from slipping or being pushed off the platform. Platforms shall not deflect more than 1/60 of the span when loaded. <p><u>Scaffold Access</u></p> <ul style="list-style-type: none"> Proper access must be provided when the scaffold platforms are more than 2 feet (0.6 meters) above or below a point of access. Crossbraces as a means of access is prohibited.
Working with and around Portland Cement/ Concrete Concrete Coring Handheld and stand-mounted drills •	Chemical Exposures- Silica Dust Skin Burns & Rash Strains	<ul style="list-style-type: none"> Control exposures by using dust control procedures including but not limited to wet methods and dust collection methods (i.e., local HEPA exhaust) Use proper PPE and avoid skin contact Use Work Gloves/Hand Protection Use tool equipped with integrated water delivery system that supplies water to cutting surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. Use a HEPA-filtered vacuum when cleaning holes Must wear PPE properly including gloves and safety glasses when handling wet concrete. When moving cylinders of performing heavy lifting, refer to section below. HASP Section 8.0 Respiratory Protection HASP Section 5.0 Medical Monitoring And Recordkeeping Program HASP Section 12.0 General Safety Rules And Requirements
Intrusive Soil Activities/Soil Boring	Dust Stuck by	<ul style="list-style-type: none"> Intrusive activities All work will be performed in accordance with recognized procedures using appropriate engineering and administrative dust controls including but not limited to the following. Dust Control: Soil Test Boring Operations

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		<ul style="list-style-type: none"> • Drilling will be performed using wet methods to ensure spoils are kept “wet” to minimize dust emissions. • Spoils shall remain “wet” until drummed or placed back in to the boring hole. • If visible dust emissions occur, all work will stop and adjustments made to limit any visible emission. • Tectonic site personnel shall be trained and capable of identifying existing and foreseeable respirable crystalline silica hazards. Tectonic site personnel shall be authorized to take prompt corrective measures to eliminate or minimize any hazards. • Site personnel shall wear appropriate PPE including face shield or safety glasses with side shields, long sleeves and pants • When practically possible Tectonic site personnel shall stay “up wind” and shall use a flag or similar device to determine wind direction. • When handling soil, personnel shall use disposable gloves and shall wash their hands before eating or drinking. • Tectonic personnel shall not remain in the active “intrusion” zone if visible emissions are observed. • Tectonic personnel shall wash their hands before eating or drinking.
Concrete Inspection & Testing Use of Wheelbarrows	Strains Burns	<ul style="list-style-type: none"> • Must wear PPE properly including gloves and safety glasses when handling wet concrete. • When moving cylinders of performing heavy lifting, refer to section below. • Inspect the wheelbarrow before use. • Make sure that the wheelbarrow has the proper capacity rating for the material being hauled. Do not over-load the wheelbarrow. • Clear all debris away from the area where the wheelbarrow will be loaded. • Inspect the path where the wheelbarrow will be moved to ensure that the surface is free of pot-holes, or grading problems. • Always place the load well forward, balanced and confined in size for safety. • When picking up a wheelbarrow, spare your back by giving your legs their fair share of the lifting. Bend the legs for lifting instead of bending the back. Spare your back and the wheelbarrow by never overloading. • Always push a loaded wheelbarrow forward. This is the way to avoid being run over. Warn others to get out of the way. A walking pace is safer than running. • Cross over obstacles at the right angle, especially over rails or planks which may divert the wheel causing the load to spill or fall. • The wheelbarrow wheel or wheels should be inspected and maintained regularly. Maintain proper lubrication according to directions. Inspect tires for damage. Keep tires inflated according to directions. Keep all bolts and fittings tight and secure. • Do not overfill wheelbarrows. Minimum sample needed is 1 cubic foot, if wheelbarrow is to heavy discard portion of sample until wheelbarrow can be moved safely. • Must wear PPE properly including gloves and safety glasses when handling wet concrete. • When moving cylinders or performing heavy lifting, refer to Heavy lifting section in this JHA.
Working on Wet and Uneven Surfaces	Slip/Trip/Fall	<ul style="list-style-type: none"> • Face the direction you are moving & look ahead. • Establish and utilize a pathway, which is most free of slip and trip hazards.

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Snow & Ice Covers surfaces		<ul style="list-style-type: none"> • Carry only loads that you can see over and around • Wear proper work shoes • Use Yak Trak as required • Where possible, avoid working in wet or slippery (oily) areas • Where work in these areas cannot be avoided: <ul style="list-style-type: none"> ◦ Adjust your stride to a pace that is suitable for the walking surface and the tasks at hand ◦ Walk with the feet pointed slightly outward • Make wide turns at corners • DO NOT approach unprotected edges, cliffs, bluffs etc. • DO NOT take risks by walking in unsafe areas. • HASP Section 12.0 General Safety Rules And Requirements
Environmental Sampling	Biological & Chemical Exposures Lead Asbestos VOC SVOC Metals PCB's	<ul style="list-style-type: none"> • Proper training and Certification • Additional PPE as required <ul style="list-style-type: none"> • Gloves (i.e., Nitrile and/or Neoprene) • Coveralls (Tyvek) • Goggles (if splashing may occur) • Respirator (if PEL may be exceeded) • Participate in the Medical Monitoring Program as required • Use the right tool for the job. Properly use hand tools & instruments. Follow manufactures instruction for proper handling and use of filed instrumentation. • For now and/or potential contaminants have the SDS sheets available. • Follow recognized sampling protocol (s) • Practice Good Hygiene. Wash hands after sampling prior to eating or drinking • Notify Project Manager if contamination is identified by smell, visually or with direct read instrument. • Hazardous Waste Site –Follow Site Specific Health & Safety Plan-- HASP • Training & Certification. Do not sample asbestos or lead based coating without training and required certification. • Do not enter a regulated work area without training and certification.
Working "alone" or in Remote Locations Isolated at a distant work site, in a remote part of a building		<ul style="list-style-type: none"> • You may not work alone when working in confined spaces and when working in areas with no mobile phone coverage . • Determine if there is cell phone service in the area • Be sure mobile phone is charged & have charger available (i.e., car charger) • If feasible utilize 2-way radios where feasible to increase overall communication capabilities. • When working in remote locations the best approach and 1st consideration should be to use a buddy system. If there is no phone service or radio contact available, we must use a buddy system. That is either another Tectonic employee or an owner /property escort. Lone working is forbidden with no mobile phone or radio coverage. • If there is cell phone service in the area and the buddy systems is not practical, use a "Call in- check in" procedure. Establish a reasonable time interval for the employee to "check-in" via phone, text, email etc. (e.g., upon arrival, every 2 hours, upon departure) <p>When working alone & remotely we should:</p> <ul style="list-style-type: none"> • Notify local police and/or emergency services • Be able to identify where you will be parking and entering the trail • Identify make & model of vehicle so emergency response knows exactly where you entered.

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		<u>Other Considerations</u> <ul style="list-style-type: none"> Working in a hot & Cold environment Temperature Stress Working on Wet and Uneven Surfaces Work conducted in vegetated areas Snow & Ice Covers surfaces Working around Wildlife Working in inclement weather
Work conducted in vegetated areas	Insects and Ticks- Poisonous Plants Snakes and Small Animals Rodents	<ul style="list-style-type: none"> Wear long sleeve shirt and pants Use insect repellant with DEET Complete tick inspection after leaving vegetated area Keep out of vegetated areas, when possible. Proceed cautiously when moving branches if passing through vegetation is necessary. Do not place your hands under bundle, logs, etc. Do not kick or displace bundles, logs etc. Stay on the cleared (beaten) pathways, access roads etc where visibility is better, as much as possible. Use spray repellents Carry bear pepper spray as required. If bitten, seek medical attention promptly. Use barrier cream if poisonous plants are identified. Use a poisonous plant cleaner such after direct contact with poison ivy, oak, or sumac Wash hands and face upon leaving vegetated work area
Working around Wildlife	Attack -Bites	<ul style="list-style-type: none"> The site visit should not disturb or harm wildlife or wildlife habitat. Personnel will stay away from any wild or domestic animal and report immediately to their supervisor if an animal is acting strangely or appears rabid. Holes, nests, or anything else on the property that resembles an animal dwelling should be avoided. Employees will use caution if residential pets are seen near or on a site Carry first aid and snake bite kits as required <u>Snakes</u> <ul style="list-style-type: none"> Watch where you place your hands and feet when removing debris. If possible, don't place your fingers under debris you are moving. Wear heavy gloves. If you see a snake, step back and allow it to proceed. Wear sturdy leather work boots at least 10 inches high. In heavily infested areas wear snake chaps Watch for snakes sunning on fallen trees, limbs or other debris. A snake's striking distance is about 1/2 the total length of the snake. If bitten, note the color and shape of the snake's head to help with treatment. Stay still & calm and lay down. Call 911 & notify local police and/or emergency services. Seek medical attention as soon as possible. Apply first aid per instruction in the snake bite kit:
Working around Blood borne pathogens:	Cuts & Body fluids	<ul style="list-style-type: none"> Use Universal Precautions. Avoid all contact with blood or other bodily fluids (i.e., vomit, saliva). Warn employees in surrounding area of potential hazard Report all BBP exposure incidents to your supervisor. 7.0 Bloodborne Pathogens Policy

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Working in inclement weather	Slips, Trips and Falls Visibility	<ul style="list-style-type: none"> Do not work in inclement weather or during heavy fog conditions and/or when visibility is low. Do not work when severe weather is predicted. Check forecasts prior to scheduling the site visit.
Working Above or Near Water Bathymetric Surveys	Falls & Drowning Hypothermia	<ul style="list-style-type: none"> Wear USCG approved personal floatation devices (PFDs) when working on or near water. Fall protection and use PFP as required Have 90' Ring Buoys available Water rescue plan/Man Overboard Change of clothing Freezing Water Rescue Program If practically possible, perform bathymetric surveys during warmer weather. Avoid performing in the winter, early spring or late fall to help prevent possible hypothermia. Check the weather beforehand Don't overload the boat with people or equipment Remain seated while boat is moving Do not extend body over the side/side rail Do not jump from vessel to vessel or from boat to dock/dock to boat but step deliberately. Use three-point contact rule for entering/exiting using gangway. Ensure vessel is tied or secured before exiting & boarding. Keep hands, fingers, and feet away from vessel/dock boundary and inside the boat.
Manual /Heavy lifting	Back Strains Bodily Injury	<ul style="list-style-type: none"> Follow procedures for safe lifting practices Plan your lift and your route "Size Up" the load. Weight, package size, handles, etc. should be considered. Consider mechanical methods first- Use a hand truck or other mechanical means. Know your own personal limitations (don't try to lift "too much") Break load into parts Use a balanced stance Get a secure grip. Use both hands whenever possible. When practically possible, attach handles or holders to loads. Avoid jerking by using smooth, even motions. Alternate heavy lifting or forceful exertion tasks with less physically demanding tasks. Take rest breaks. When carrying a load, keep the load close to the center of your body to take full advantage of the mechanical leverage of your body Avoid twisting at the waist Bend with your knees Lift with your legs, keep your back straight Avoid lifting above shoulder height Don't rush, make sure that you can clearly see your path Turn /pivot with your feet ; don't twist your back Wear gloves and/or sleeves as necessary when handling sharp or rough edges Squat lifting should be done for a majority of all lifts Team lifts should be used when objects are too heavy, too large or too awkward for one person to lift. HASP Section 21.0 Manual Material Handling Program
Working in High Noise Areas		<ul style="list-style-type: none"> Hearing protection (ear plugs) with a minimum NRR of 31 when working in high noise areas exceeding 85 dbA for exposure duration of 15 minutes or

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		<p>greater. Use the following "rule of to determine a "high noise area". If you have difficulty hearing or understanding a "normal" tone of voice at a distance of about three feet.</p> <ul style="list-style-type: none"> Control Exposure via Distance & Time of exposure.
Electrical Safety	Electrocution	<ul style="list-style-type: none"> Training & Certifications Only Electrically Qualified Person shall work on or near energized electrical system Lock-out/ Tag-out as required. Testing for de-energization of identified equipment/machinery after lockout Proper removal of locks Grounding/GFCI Routinely test GFCI Inspect equipment and power cords/extension cords Use according to manufacturer's instructions Training in proper tool use Inspect tools before use Proper guarding No conductive clothing or jewelry HASP Section 16.0 Construction Safety Program HASP Section 30.0 Assured Equipment Grounding Conductor Program (Aegcp) HASP Section 31.0 Lockout/Tag Out
Working Near (Energized) Power Lines	Electrocution	<ul style="list-style-type: none"> Training Shut-Down Utilities if possible Do not work within 15' of an energized line Notification to affected employee HASP Section 16.0 Construction Safety Program HASP Section 30.0 Assured Equipment Grounding Conductor Program (Aegcp) HASP Section 31.0 Lockout/Tag Out
Asphalt/Asphalt Fumes	Fumes Burns	<ul style="list-style-type: none"> Training Stay up wind of paving activities Use proper PPE HASP 12.0 General Safety Rules and Requirements HASP Section 16.0 Construction Safety Program
Handling glues & epoxies Smoke Testing	Chemical Exposure	<ul style="list-style-type: none"> Follow manufactures instruction for handling & safety for tool use Secure & review SDS Review and follow work practice procedures and controls outlined in applicable Safety Data Sheets (SDS) Affected Project personnel should receive Orientation, HASP and Haz Com training Consider the following: <ul style="list-style-type: none"> ✓ First Aid requirements ✓ Eye Contact ✓ Ingestion ✓ Inhalation ✓ Skin Contact-Required Additional PPE, Gloves, Overalls, etc.
Confined Space Entry Culvert/Subsurface Structure Entry Pits, Vaults, Tanks, etc.	Atmosphere Caught in	<p>Confined space means a space that:</p> <ol style="list-style-type: none"> Is large enough and so configured that an employee can bodily enter it; Has limited or restricted means for entry and exit; and Is not designed for continuous employee occupancy. <ul style="list-style-type: none"> Do not enter a confined space without training and certification. Do not enter a confined space without verifying that Acceptable entry conditions exists. Acceptable entry conditions means the conditions that

Task (s)— All Field Personnel /Field Activities		
Activity	Significant Hazards	Procedures & Controls
		<p>must exist in a space, before an employee may enter that space, to ensure that employees can safely enter into, and safely work within, the space.</p> <ul style="list-style-type: none"> Review entry procedures before entering the space. The procedures, at a minimum, should consider the following: <ul style="list-style-type: none"> ✓ Atmospheric Monitoring & Atmospheric Controls ✓ Control of Energy Sources /Lockout/ tag-out ✓ Egress ✓ Recognized & Potential Hazards (e.g., Engulfment, Physical Hazards, Entrapment) ✓ Job Functions ✓ Rescue Plan ✓ Communication HASP Section 24.0 & Appendix P -Confined Space Entry Program
Hand Tools Use of Hand & Power Tools	cuts, sprains, lacerations Electrocution Hand, Wrist and Finger Safety	<ul style="list-style-type: none"> Use the proper tool for the job Proper guarding Grounding/GFCI Inspect equipment, power/extension cords Be aware of hazards and your hand positioning relative to hazards Minimize repetitive motion by switching tasks and using properly designed tools Use work gloves as necessary to prevent and cuts, etc. HASP Section 16.0 Construction Safety Program HASP Section 30.0 Assured Equipment Grounding Conductor
Roof Top Safety	Non Ionizing Radiation Slip Trip Falls Caught IN Stuck by	<ul style="list-style-type: none"> DO NOT perform work on a pitch roof without PFA equipment. A Qualified Person must prepare fall protection plan. Always remain a minimum of 15' away from unprotected edges, holes or openings. <p><u>Considerations:</u></p> <ul style="list-style-type: none"> RF Safety-See RF Safety <ul style="list-style-type: none"> ➤ Distance & Time Noise <ul style="list-style-type: none"> ➤ Mechanical Equipment (MER) ➤ Fans, Blowers, Cooling Towers etc. ➤ Elevator Machine Rooms ➤ Distance & Time Falls From Heights--- <ul style="list-style-type: none"> ➤ Parapets in place 39" ➤ Permanent Rails or other ➤ Unprotect Edges- ➤ Ladders ➤ Fall Protection Plan Slips Trips Falls—Struck -by <ul style="list-style-type: none"> ➤ Housekeeping ➤ Conduit ➤ Pavers ➤ Etc. Caught-In— <ul style="list-style-type: none"> ➤ MER's, Machine Rooms, Machinery, Rotating Parts,, etc.
RF Safety	Non Ionizing Radiation	<ul style="list-style-type: none"> Prepare by getting as much site details as practically possible about the types of transmitters on towers including power levels, frequencies, and types of antenna prior to the site visit. Determine where potential hazards exist. Identify RF EMF sources in the immediate vicinity of the work location and access routes, and identify signage & Compliance Boundaries Assume all antennas are active. Practice Distance & Time.

Task (s)— All Field Personnel /Field Activities		
Activity	Significant Hazards	Procedures & Controls
		<ul style="list-style-type: none"> Obey all boundary signage (stay outside the recognized boundary). Never stand or work directly in front of antennas. If signage is not present and/or a boundary has not been established or is unknown, distance yourself as far as practically possible from the source and manage your time. Do not linger, take applicable measurements and move on. No work shall be carried out within the Compliance Boundary of a live antenna transmitting at full or unknown power levels. When work has to be performed in this zone, e.g. directly in front of a directional antenna, Contact your Project Manager (PM) to determine what actions will need to be taken. PM together with the client/supplier will coordinate access. If access is necessary, the power shall be reduced or relevant transmitter(s) shall be switched off as per local network operator's outage procedure. PM shall determine additional safety requirements such as Lock/out Tag Out.
Using Survey Instrumentation	Non Ionizing Radiation Low level Class 1 lasers	<ul style="list-style-type: none"> Training –Do not use the instrument without operational training from a qualified person. Standard SOP-Follow Manufacturer's instruction on the proper use of the instrumentation including all prescribed safety procedures. Stop using the instrument and notify the Project Manager of any instrument malfunction.
Underground Construction	Hazardous Atmospheres Fire & Explosion Caught in Struck by	<ul style="list-style-type: none"> At all times there must be safe means of access and egress to all work stations. Prior to permanent environmental controls being effective, all employees shall maintain a check-in/check-out procedure that will ensure that above-ground personnel. Determine the mode of communication and maintain communications at all times. At all times wear your standard Personal Protective Equipment: <p><u>Air monitoring & Hazardous & Explosive Atmospheres:</u></p> <ul style="list-style-type: none"> Prior to Entry a competent person must perform air sampling at a minimum to determine the following: <ul style="list-style-type: none"> ✓ Oxygen Levels -19.5 percent oxygen and no more than 22 percent oxygen. ✓ <10 % of the Lower Explosion Limit (LEL) ✓ Known or suspected Gases, vapors, fumes, dusts, and mists are within permissible exposure limits <p><u>Ventilation:</u></p> <ul style="list-style-type: none"> Do not enter unless a competent person has determined that Fresh air shall be supplied to all underground work areas in sufficient quantities to prevent dangerous or harmful accumulation of dusts, fumes, mists, vapors or gases. Mechanical ventilation shall be in place except when it can be demonstrated that natural ventilation provides the necessary air quality through sufficient air volume and air flow. A minimum of 200 cubic feet (5.7 m³) of fresh air per minute shall be supplied for each employee underground. The linear velocity of air flow in the tunnel bore, in shafts, and in all other underground work areas shall be at least 30 feet (9.15 m) per minute where blasting or rock drilling is conducted, or where other conditions likely to produce dust, fumes, mists, vapors, or gases in harmful or explosive quantities are present. <p><u>Illumination:</u></p> <ul style="list-style-type: none"> Minimum illumination intensities of 5 foot candles in foot-candles <p><u>Mechanical equipment:</u></p> <ul style="list-style-type: none"> Stay alert know and understand working around Heavy Machinery/Equipment including but not limited to the use of or any hoists and/or haulage equipment. <p>Fire prevention and protection and Emergency Procedures:</p>

Task (s)— All Field Personnel /Field Activities		
Activity	Significant Hazards	Procedures & Controls
		<ul style="list-style-type: none"> • Prior to entering, know and understand the fire prevention and emergency procedures including but not limited to evacuation plans, check- in/check-out systems and muster points. • No smoking • Use in intrinsically safe equipment as required
Driving to and From a Job Site		<ul style="list-style-type: none"> • Drivers of vehicles should maintain a valid driver's license. • Drivers should drive defensively, keep both hands on the wheel, avoid distracted driving, and adhere to site traffic requirements. • Drivers of vehicles should not drive when tired. • Suspend travel during conditions that impact controlled operation of the vehicle. • Never use hand held mobile phones while driving • Do not exceed the speed limits • Do not under any circumstances, operate a Corporation vehicle, or a personal vehicle for Corporation business, when any physical or mental impairment causes you to be unable to drive safely. This prohibition includes, but is not limited to, circumstances in which the employee is temporarily unable to operate a vehicle safely or legally because of illness, medication, or intoxication. • Adhere to all policies and procedures as given in the Company's Employee Handbook section 205.10 Automobile Use
Non Routine Tasks	All Identified Hazards	<ul style="list-style-type: none"> • BE ALERT and be aware of your surroundings at all times. DO NOT remain in any environment that you believe may be unsafe. Immediately notify your site contact/site supervisor and/or the project's site safety representative and your Project Manager of any workplace area you believe to be unsafe. • If there are non-routine task associated with a given site, then field personnel must contact their PM and/or Safety Officer to discuss any additional measures that must be taken.