



Service Provider Manual

Everett Site
September 2018

Emergency Numbers

Prior to the start of work, please become familiar with the emergency numbers listed below.

1. Dial an emergency number:

From the Everett Main Campus
 Call 2-2222 from a Boeing desk phone, or
 206-655-2222 from an outside phone or cell phone

From off site or leased property
 Dial 8-911 from a Boeing desk phone, or
 911 from an outside phone or cell phone

AFTER calling 911, if you are able, call Boeing Dispatch at
 206-655-2222

| Building Number | Address |
|---|--|
| 7-15 Future of Flight Tour Center | 8415 Paine Field Blvd, Mukilteo, WA 98275 |
| 7-20 Harbour Pointe Tech Center Building | 6500 Harbour Heights Parkway, Mukilteo, WA 98275 |
| 7-36 ESRC (Electrical Systems Responsibility Center) | 6001 36th Ave. W, Everett WA 98203 |
| 7-76 ERC (Employee Resource Center) | 9901 24th Pl W, Everett, WA 98204 |
| 7-335 thru 7-339 Dreamlifter Operations Center | 8605 Dreamlifter Drive, Mukilteo, WA 98275 |
| 7-830 Bothell Monte Villa Building (Marina) | 3830 Monte Villa Parkway, Bothell WA 98021 |
| 40-201 Boeing Fitness Center | 6400 36th Ave W, Everett, WA 98203 |
| 40-202 Bright Horizons Family Center | 3003 W Casino Rd Everett, WA 98204 |
| 41-02 Harbour Pointe Warehouse | 12401 Harbour Reach Drive, Mukilteo, WA 98275 |
| 45-333 thru 45-335 Everett Modification Center (EMC) | 3100 112th Street SW, Everett, WA 98203 |
| 45-371 thru 45-374 Everett Modification Center (EMC) | 3100 112th Street SW, Everett, WA 98203 |
| 45-70 BOMARC (Parts Control/XPO Logistics) | 2600 94th St SW, Everett, WA 98204 |
| 45-80 BOMARC (Dreamliner Product Development) | 9801 27th Ave W, Everett, WA 98208 |
| 45-801 BOMARC (Mech Hydraulics) | 9701 24th Pl W, Everett, WA 98204 |
| 45-802 BOMARC | 9902 24 th Pl W, Everett, WA 98204 |
| 47-90 Dreamliner Gallery | 6200 23rd Pl W, Everett, WA 98203 |
| 47-147 (200) Design Build Ctr/Concept Ctr | 6600 Merrill Creek Pkwy, Everett WA 98203 |
| 47-173 (100) Design Build Ctr/Concept Ctr | 6600 Merrill Creek Pkwy, Everett WA 98203 |

2. Provide the following information:

Your name and your employer's name.

Phone number from which you are calling.

Nature of emergency.

Location of the incident

Building number and floor level

City, street address (see below address table)

Column number (if known)

Nearest door number (if known)

Don't hang up until told to do so! You are a vital link in the emergency and must relay changes in the state of the emergency.

Boeing Onsite Activity Representative: _____

Other Important Contact Numbers:

Everett Site EHS (Environment, Health and Safety): **425- 717-6422**

Environmental Affairs: **425-342-0871**

Fire and Security Dispatch Office: **206-655-8800**

Overhead Crane Dispatch:

747/767 Program areas: **425-342-0284**

777 and 787 Programs areas: **425-342-0273**

Northwest Regulated Materials Management: **425-931-6807**

Badge Office: **425-266-1470**

Radiation Health Protection: **206-544-0335**

Hazardous Waste Disposal: **425-342-4705**

Equipment Services Dispatch: **425-342- 2944**

Transportation (Forklift) Dispatch: **425-342- 4008**

Definitions

Boeing Onsite Activity Representative (Boeing OAR)

The Boeing employee who has been designated to oversee and monitor Service Provider activities for the Using Organization. The term OAR is not a job description – it is a functional title only. The following personnel often serve as Boeing OAR for Service Provider activities: Project Engineer, Project Administrator, Construction Administrator, Contract Administrator, Maintenance Analyst, Commodities Engineer, Project Manager, Project Administrator, Equipment/Tooling Engineer, and Supplier Quality Representative.

Emergent Work

Emergent work is characterized by short notice for the needed work to be performed and limited project duration. This type of work can create unplanned or uncommunicated safety considerations that the Service Provider must be aware of.

Portable Electronic Devices

Include, but not limited to: cell phones, smart phones, iPods, MP3 players, gaming devices, video, helmet cams, pagers, radio players, two-way radios, etc.

Planned Work

Planned work is characterized by long notice, longer project durations, larger scope, multiple Boeing OARs, and possibly sub-contractors of a Boeing Service Provider, where safety consideration have been planned and communicated in advance or work commencement.

Project Specific Environmental Health and Safety Plan

Written plan developed by the Service Provider that identifies project specific environmental, health and safety hazards, and the processes, procedures and safeguards used to control these hazards. Plans may cover a single job or a group of similar or related jobs.

See APPENDIX A. PROJECT SPECIFIC EHS PLAN for template

Service Provider (SP)

The independent supplier/contractor performing work for the Boeing Using Organization on property owned, operated, leased, occupied, or controlled by The Boeing Company.

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INTRODUCTION

Boeing is committed to high standards for safety, health, fire prevention, security, and the environment. As a Service Provider to Boeing, you are expected to maintain the same high standards.

You will be interfacing with Boeing operations and working closely with personnel from various Boeing organizations and related Service Providers. Therefore, it is important that you, your employees, and your subcontractors are familiar with Boeing safety, health, fire prevention, security, and environmental requirements.

As a Service Provider, you are responsible for ensuring that your employees and all your sub-contractors follow safe work practices and comply with all federal, state, local, and Boeing contract requirements. This booklet is intended to help you comply with Boeing safety, health, fire, security, and environmental requirements. Nothing herein shall relieve you of your responsibility to comply with federal, state, and local laws, codes, rules, regulations, and Boeing-contract requirements.

Your Boeing Onsite Activity Representative is your primary point of contact. Some work activities you are involved in may require additional coordination with Boeing Environment, Health and Safety (EHS), Fire, Security, and other entities as appropriate. The Boeing Onsite Activity Representative will facilitate this coordination.

Throughout this manual, activities requiring additional coordination are identified with the statement "Additional coordination is required."

Please read this booklet, and if you do not fully understand the information provided in all sections or if there are site-specific issues, discuss your questions with your supervisor or your Boeing Onsite Activity Representative.

Ensure that each of your personnel and subcontractors that will be performing work for Boeing are aware of the requirements of this manual.

Requirements of some locations or activities may differ from those in this manual. Consult with your Boeing Onsite Activity Representative for questions and additional requirements that may apply to your contract. Service Provider employees violating Boeing requirements are subject to removal from the site.

Your cooperation is expected and appreciated.

1.0 GENERAL INFORMATION

1.1 General Rules

- a. All Service Providers are to stay within assigned work areas. Wandering in non-assigned work areas is strictly prohibited.
- b. Service Providers shall comply with all posted safety requirements, including but not limited to rules concerning: hearing protection, eye protection, confined space entry, access barriers, parking and driving requirements.
- c. Use of offensive language and display of offensive materials is not permitted.
- d. Horseplay, theft, fighting, harassment, gambling, and possession or use of alcohol or controlled substances is strictly prohibited.
- e. Firearms or other weapons, and ammunition are strictly prohibited. Other weapons include any instrument or device declared to be a prohibited weapon by Boeing Security & Fire Protection, such as knives (blade over 3 inches), swords, bows, arrows and similar objects. Mock or non-functional weapons are also strictly prohibited. Contact your Boeing Onsite Activity Representative if there is a business reason for blades over 3 inches in length. Additional coordination is required.
- f. Use of Boeing assets such as equipment, machinery, tools, phones, utilities, etc., is prohibited without prior permission from the Boeing Onsite Activity Representative. Additional coordination is required. The use of Boeing assets by Service Providers is generally forbidden unless there is a specific business need such as unique tooling required for a project or additional risk incurred in operating portable equipment such as cranes.
- g. Use of a photographic or camera-enabled device must be properly authorized using a Camera Permit. Additional coordination is required.
- h. Radio frequency devices, such as portable radios, are controlled on Boeing property and must be pre-approved before use. Additional coordination is required.
- i. Tobacco use of any kind is prohibited on Boeing property, including Boeing-controlled, owned or leased grounds, parking lots, private vehicles and buildings, in Boeing-controlled, owned or leased vehicles, or in pre-delivered products. This prohibition

includes the use of any product that gives the appearance of using tobacco (examples: e-cigarettes, herbal chew).

- j. Animals are not to be brought onto Boeing property. Contact your Boeing Onsite Activity Representative regarding the use of guide dogs or other human service animals.
Additional coordination is required.
- k. Phone or electronic device use is not permitted while walking or operating vehicles or equipment, unless hands-free. Personal phone or electronic device use is permitted in designated safety zones only.
- l. Reflective Apparel meeting ANSI/ISEA Class II is required on flight line/ramp areas.

1.2 Badge Identification

- a. You must obtain an identification badge and visibly display and wear the badge while on Boeing property.
- b. Lending or borrowing identification badges is strictly prohibited.

1.3 Vehicles and Mobile Equipment

- a. Personal and Service Provider vehicles and industrial mobile equipment used inside secured Boeing property are allowed with special permission only and may require a Boeing-issued parking pass.
- b. Service Provider vehicles, personal vehicles, and industrial mobile equipment and accessories shall be maintained in a safe operating condition.
- c. Service Provider vehicles, equipment, or supplies shall not block entrance ramps, truck doors, plant access aisles, emergency routes (including lanes or zones), or parking specified for Boeing equipment, facilities, or plant personnel without prior approval from the Boeing Onsite Activity Representative. Additional coordination is required.
- d. Posted speed limit and traffic signs shall be followed at all times while on Boeing property.
- e. Vehicles must yield right-of-way to:
 - Pedestrians
 - Moving aircraft
 - Emergency vehicles

- f. Service Provider vehicles are not permitted on flight line ramps without prior approval. Additional coordination is required.
- g. Seat belts, when available, shall be worn at all times.
- h. Personnel shall not be transported in the beds of trucks.
- i. Do not idle vehicles unnecessarily.
- j. Do not idle vehicles near building air intakes or building entrances.
- k. Operation of diesel, and gasoline-powered equipment is restricted in Boeing buildings. This restriction does not apply to transient vehicles or short-term loading and unloading inside occupied buildings. If diesel or gasoline powered equipment is to remain running inside a Boeing building, then the equipment exhaust shall be piped or vented to the outside of the building or use a Boeing-approved filtering system. Additional coordination is required.

1.4 Required Postings

The Service Provider is responsible for ensuring that all federal, state, and local agency permits and posters are placed at the entrance to the job site, or at a location as directed by the Boeing Onsite Activity Representative. Additional coordination is required.

2.0 EMERGENCY PROCEDURES

1.1 Evacuations

- a. All Service Providers shall participate in scheduled evacuation exercises or drills.
- b. In the event of a building or site evacuation, immediately evacuate through the nearest safe exit and report to your designated assembly point. If you do not know your assembly point, check with your immediate supervisor or Boeing Onsite Activity Representative. In all cases, instruction and directions given by your supervisor, security, or other emergency response personnel shall be followed.
- c. In the event of a building or site incident in which you are asked to "shelter in place," follow the posted directions, or direction from the designated emergency response personnel, to the closest designated "shelter in place" location.
- d. Do not leave the assembly point or shelter in place location until authorized to do so by Boeing Security & Fire Protection or local emergency response agencies.
- e. Ensure there is an effective means of communication with all of your employees and subcontractors working at the site.

1.2 Emergency Notification

Immediately report all emergency and significant incident situations to the Boeing emergency number listed on page i of this booklet and your Boeing Onsite Activity Representative.

You must know the building number, grid/column line number, floor level, and door number.

Remember: do not hang up until the dispatcher tells you to do so. You are a vital link in the emergency response and must relay changes in the state of the emergency.

Emergency and significant incident are defined as follows.

- a. Emergency: Any event requiring emergency personnel and equipment, including but not limited to:
 - Visible flame, smoke, noxious odors or noise that may attract the attention of the surrounding community or that results in the evacuation of personnel.
 - An event that places human life, the environment, or property at risk.

- Environmental spills or releases.
- b. Significant Incident: Any event involving one or more of the following.
- Death, serious injury, or exposure of an individual to hazardous substances that requires attention beyond first aid, hospitalization, or results in permanent impairment.
 - Property damage to Boeing or Boeing customer assets.
 - Damage or the potential for damage to a Boeing product or related production component or part.

3.0 FIRE PREVENTION

3.1 Fire Extinguishers

- a. As required and approved by the Boeing Fire Department or a Boeing Security and Fire representative, all Service Providers shall provide their own Factory Mutual (FM) Approved or Underwriters Laboratory (UL) Listed portable fire extinguishers in good working order. Fire extinguishers approved by the Boeing Fire Department or a Security and Fire representative for the specific hazards of the location must be readily accessible in the immediate area.
- b. All fire extinguisher activations must be reported immediately and treated as an emergency.

3.2 General Housekeeping

- a. Boeing trash receptacles shall not be used for construction debris.
- b. All construction trash and debris receptacles shall be located away from any Boeing building or structure. If construction chutes are required, the location and design of the chute shall be approved by the Boeing Fire Department or a Boeing Security and Fire representative. Coordinate with the Boeing Onsite Activity Representative. Additional coordination is required.
- c. All work areas shall be maintained in a clean state. Clean up and remove trash, scrap, excess materials, and other debris. This shall be done at least daily and whenever the accumulation constitutes a fire hazard.
- d. Burning of trash is prohibited.
- e. Wood, sawdust, or shavings shall not be used as absorbents for spilled flammable or combustible liquids or petroleum lubricants.

3.3 Equipment Requirements

- a. All equipment must be operated in accordance with the manufacturer's instruction manual.
- b. All powered equipment shall be refueled outdoors, away from storm drains and clear of structures, with engines shut off. Spill containment must be provided for equipment fueling. Spill clean up kits must be available at refueling locations.
- c. Gasoline, liquid propane gas, or propane-powered equipment shall be allowed on building roofs only with prior written approval.

Coordinate with the Boeing Onsite Activity Representative.
Additional coordination is required.

- d. Electrical equipment used in areas where flammable atmospheres (vapors, dusts, or mists) may exist shall have appropriate National Fire Protection Association (NFPA) class and division ratings for explosion proofing.
- e. Air monitoring shall be conducted, as necessary, to check for hazardous emissions from powered equipment operating within buildings, excavations, or enclosed structures. Monitoring results shall be available for review if requested by Boeing.

3.4 Flammable Liquids

- a. The Service Provider shall comply with all safety regulations and codes pertaining to labeling, handling, and storage of flammable and combustible products.
- b. Flammable liquids shall not be used or stored inside Boeing buildings unless contained in an FM Approved, UL Listed or Boeing-approved container and only in quantities needed to accomplish the immediate tasks.
- c. Effective methods of spill retention, containment, and cleanup of materials are required.
- d. Containers and dispensing apparatus shall be electrically bonded and grounded when dispensing or transferring flammable liquids, except for portable containers less than five gallons in capacity.
- e. Portable flammable liquid containers five gallons or greater in size must be of metal construction.
- f. Service Provider flammable liquid storage locations must be approved through the Boeing Onsite Activity Representative.
Additional coordination is required.

3.5 Spray Painting, Flammable Resins, Chemicals

- a. Inspection and written approval are required before painting, including spray painting or cleaning with flammable materials.
Additional coordination is required.
- b. All electrical equipment shall be rated for Class I, Division 1 locations where flammable or combustible liquids are sprayed. Spray operations shall be conducted in well ventilated, unoccupied areas. Additional coordination is required.

- c. Only explosion-rated or intrinsically safe electrical equipment, including forklift trucks that are, for example, EE or EX rated, shall be used in hazardous locations, such as flight hangars, paint booths, and tank lines. Additional coordination is required.
- d. A minimum distance of 20 feet from ignition sources is required.

3.6 Storage of Combustible Materials

Contact the Onsite Activity Representative to obtain approval for the storage of combustible materials. Additional coordination is required.

3.7 Welding/Cutting Activities

- a. A Boeing hot-work permit is required before performing all open-flame, welding, or spark-producing work.
- b. Coordinate with the Boeing Onsite Activity Representative regarding hot work permit requirements at your location.
- c. Fire-retardant protective materials (such as fire blankets) shall be used to contain sparks and prevent them from falling against walls, on wooden floors, through flooring, on combustibles or valuable materials and equipment, or into hidden spaces.
- d. Flash shields, fire-resistive curtains, or other suitable shields shall be placed around the hot work area to protect any adjacent personnel from sparks and arc flash.
- e. All flammable materials shall be a minimum of 35 feet away from hot work areas.
- f. Arc welding machines with the potential to interfere with implanted medical devices shall be posted with an appropriate hazard warning.
- g. Local ventilation is required for welding operations that will generate welding fumes inside the building. Coordinate with Boeing Onsite Activities Representative. Additional coordination is required.
- h. Service Providers shall provide their own FM Approved or UL Listed portable fire extinguishers. Fire extinguishers approved for the specific hazards of the location must be readily accessible and fully charged.

- i. The Service Provider shall assign a fire watch for any open flame or spark producing work. The fire watch shall be trained in the use of portable fire-fighting equipment. The fire watch shall be solely dedicated to the assigned activity and remain on standby a minimum of 30 minutes following the end of any and all open-flame activities.
- j. The assigned fire watch shall notify the Boeing Fire Department, or other agency that issued the hot work permit, upon completion of work. Coordinate with the Boeing Onsite Activity Representative. Additional coordination is required.
- k. Hot-work permits shall be removed and destroyed upon completion of work or when they expire.

3.8 Fire Protection Systems

- a. Notify the Boeing Onsite Activity Representative 24 hours in advance of all proposed requests for fire protection system closure or impairments. Additional coordination is required.
- b. Boeing requests a 14 day notice for any non-emergency fire system impairment event, but realizes situations may arise where this is not always possible. However, under no circumstance shall the notice for non-emergency fire system impairment shut off events be less than 7 days. Coordinate with the Boeing Onsite Activity Representative. Additional coordination is required.
- c. Before using any fire hydrant or building standpipe system as a water supply, the Service Provider must obtain approval through the Boeing Onsite Activity Representative. Additional coordination is required.
- d. The Service Provider shall verify with the Boeing Onsite Activity Representative that all fire-extinguishing protection systems (sprinklers) are operational in an area of welding and open-flame cutting. Additional coordination is required.

3.9 Temporary Structures and Enclosures

- a. A separation of 25 feet shall be maintained between temporary buildings and storage areas and other buildings or areas. All temporary installations must have prior approval by the Boeing Onsite Activity Representative. Temporary walls or partitions shall be noncombustible. Additional coordination is required.

- b. Plastic or Visqueen film shall be fire resistive, UL Listed or FM Approved, and meet the requirements of NFPA #701, "Standard Methods of Fire Tests for Flame Propagation of Textiles and Films."

3.10 Roofing

The Boeing Onsite Activity Representative shall be notified in advance of all roof work involving: welding; open flame equipment; spark-producing or hot work, or use of a heat gun, coatings, solvents or chemicals, before start of the work. Additional coordination is required.

3.11 Emergency Egress

Service Providers shall not block or obstruct emergency exits or other means of egress at any time.

4.0 SAFETY REQUIREMENTS

4.1 Occupational Health and Safety Advisory Management Series (OHSAS)

The following is the Boeing Safety and Health Policy. Boeing and its employees are committed to:

- a. Conduct operations in compliance with applicable laws, regulations and Boeing policies and procedures.
- b. Continually reduce occupational injuries/illnesses by assessing, evaluating, communicating, and controlling or eliminating occupational health and safety risks.
- c. Continually improve our occupational health and safety management system.
- d. Work together with our stakeholders on activities that promote occupational health and safety.

4.2 Service Provider personnel must have knowledge of how their actions may impact worker safety and health and the consequences of not following proper procedures and requirements.

4.3 Service Providers at Boeing facilities must ensure that their employees are made aware of the Boeing Safety and Health Policy. For more information on the Boeing OHSAS program contact your Boeing Onsite Activity Representative.

4.4 Project-Specific Safety Plans

- a. The Service Provider shall prepare a written, project- specific safety plan with the details in the plan applicable for work being performed, and submit the plan to the Boeing Onsite Activity Representative, upon request, for Boeing review. Project-specific safety plans shall be available and communicated at the location where the work is being performed.
- b. The Service Provider shall submit to Boeing, on request, a copy of its company safety program.
- c. The Service Provider shall provide written notification to the Boeing Onsite Activity Representative of the name and title of the Service Provider's on-site safety representative for the project.
- d. Contact your Boeing Onsite Activity Representative for additional assistance. Additional coordination is required.

4.5 Personal Protective Equipment

- a. The Service Provider shall provide their employees all required personal protective equipment (PPE) and ensure that it is used.

Boeing does not provide PPE to Service Provider personnel.

- b. All PPE must conform to applicable regulatory requirements and appropriate industry standards.
- c. Examples of PPE are
 - Industrial safety glasses with side shields
 - Face protection
 - Body protection
 - Ear plugs and muffs
 - Hard hats
 - Gloves and hand protection
 - Full-body safety harness and lanyards

4.6 Hazard Communication/Safety Data Sheets

- a. Boeing shall provide, on request, the safety data sheet (SDS) for any hazardous material under Boeing control within the assigned work area.
- b. Before any hazardous material arrives on site, the Service Provider shall furnish to the Boeing Onsite Activity Representative the following information on each hazardous material to be used:
 - 1. The identity of each hazardous material;
 - 2. An SDS for each hazardous material; and
 - 3. The quantity of each hazardous material to be used and/or stored on site.
- c. All hazardous material containers shall be properly identified and labeled as to their contents. Hazardous material container labels must include:
 - 1. The identity of the hazardous material;
 - 2. The manufacturer of the hazardous material; and
 - 3. Appropriate hazard warnings
- d. The Service Provider shall bring to the job site only the amount of hazardous materials necessary for the project.

4.7 Electrical Safety

- a. All electrical incidents and near misses shall be reported immediately to the Boeing Onsite Activity Representative.
- b. Equipment used by Service Providers must be approved by a nationally recognized testing laboratory.
- c. The Service Provider shall supply ground fault circuit interrupters for all temporary electrical wiring cords and portable equipment and tools.

- d. The Service Provider must comply with current OSHA and NFPA 70E standards for safe work on or near energized electrical systems. Work on or near energized exposed movable conductors (e.g., power lines) or energized equipment with exposed conductors operating at 50 volts or greater, shall only be done when approved in writing by the Boeing Onsite Activity Representative. Additional coordination is required.
- e. Portable electrical equipment (e.g., extension cords, drills, etc.) shall be maintained in a safe working condition.
- f. Equipment, carts or other items shall not be stored in front of electrical panels or substations
- g. Combustible materials shall not be stored in any substation or electrical room.
- h. After completion of work, substations and electrical rooms shall be secured to prevent unauthorized access
- i. Do not daisy chain extension cords. Extension cords must be plugged directly into an approved receptacle.
- j. Temporary power cords must be protected from damage.

4.8 Control of Hazardous Energy

- a. Prior to shutdown of any Boeing equipment, building system, or utility, the Service Provider shall notify the Boeing Onsite Activity Representative. Additional coordination is required.
- b. All equipment that could present a hazard from inadvertent activation or release of energy during maintenance or servicing shall have the energy supply locked out and tagged except where the energy supply is needed for testing, troubleshooting, inspecting, or servicing equipment.
- c. Before working on any energized system, the Service Provider shall take the following steps in accordance with the Service Provider's company procedures:
 - 1. Refer to machine-specific instructions on controlling Multiple Energy Sources.
 - 2. Isolate the energy sources and release all energy or potential energy (e.g., electrical [stored], gravity, kinetic, pressure, thermal, pneumatic, and hydraulic).
 - 3. Install your company physical lockout device and lockout tag for each affected employee. The tag must include:

- i. Employee name, company name, date, and phone number (or pager number).
 - ii. Off-shift contact and phone number (requires someone to be available 24 hours per day).
 - iii. Boeing Onsite Activity Representative (add to blank space, if no specific field).
4. Before proceeding with work, test or try out the system to ensure zero energy state.
- d. For joint occupancy jobs that require lock out/tag out, the Service Provider shall coordinate its hazardous energy plan with the Boeing Onsite Activity Representative. Additional coordination is required.

4.9 Trenching and Excavations

- a. Notify and obtain approval from the Boeing Onsite Activity Representative before excavating or opening any trench. Additional coordination is required.
- b. Before starting work, for both indoor and outdoor excavations, a qualified service shall be used to locate the approximate location of subsurface installations such as sewer, telephone, fuel, electric, water lines, or any subsurface installations that may be encountered during excavation work. While the excavation is open, subsurface installations shall be protected, supported, or removed as necessary to safeguard personnel.
- c. Hand-digging shall be required where there is any risk of contacting underground utilities or structures.
- d. The Service Provider shall physically barricade all excavations, trenches, and operating excavation equipment.
- e. Daily inspections of excavations, adjacent areas, and protective systems shall be made by a competent person for evidence of hazardous conditions. Inspections shall also be made after every rain storm or other hazard-increasing occurrence. If a hazardous condition is observed, personnel shall be removed from the hazard area until the hazardous condition is corrected.
- f. The Service Provider's competent person shall assess the soil condition to determine the method of shoring or sloping required for excavation.

- g. All excavations and trenches 5 feet or more in depth shall be benched, shored, sloped, or otherwise protected to ensure that collapse does not occur.
- h. Excavated soils must be placed not less than two feet away from the excavation.
- i. Place excavated soils on the up-slope side of the trench whenever possible to capture sediment runoff in the event of rain.

4.10 Warning Signs and Barricades

- a. The Service Provider shall supply appropriate signs, barricades, flashing light barricades, ground attendants, and flagging, as required, to keep unauthorized personnel out of potentially hazardous work areas. Additional coordination is required.
- b. Highly visible physical barriers such as warning tape shall be used by Service Providers to identify their work area and to prevent Boeing personnel and others not directly involved with the project from entering.
- c. Substantial barricades, such as chain link fencing, standard guardrails, etc., are required around excavations, holes, or openings in floors, roof areas, edges of roofs, and elevated platforms. In addition, barricades are required around overhead work and wherever necessary to warn or protect all personnel.

4.11 Confined Space Entry

- a. All confined-space incidents or near misses shall be reported immediately to the Boeing Onsite Activity Representative.
- b. Service Providers shall request from the Boeing Onsite Activity Representative information on confined space hazards identified and precautions/procedures (if any) that Boeing has implemented for protection of Boeing employees working in or near existing confined space locations.
- c. The Service Provider shall have and follow its own written confined space entry program, including an entry permit system, monitoring equipment, ventilation, retrieval system, and observation personnel, except as provided for in Section 4.11.d.

- d. For jointly occupied confined spaces, the Service Provider shall coordinate its confined-space entry plan with the Boeing Onsite Activity Representative. Additional coordination is required.
- e. Service Providers must independently evaluate hazards presented by work in or near Permit Required Confined Spaces (PRCSs) and implement precautions and hazard controls necessary for safe entry and work in PRCSs. Prior to entry, Service Provider must contact the identified rescue service provider and ensure its availability.
- f. Rescue service contact information must be readily available to PRCS personnel. Additional coordination is required.
- g. The Service Provider shall have its written confined space entry program available at the work site and post the confined-space entry permit at the point of entry.
- h. Upon completion of PRCS entry operations, provide a copy of the closed permit(s) to the Boeing Onsite Activity Representative.
- i. The Service Provider will debrief the Boeing Onsite Activity Representative after the conclusion of PRCS entry operations. This debrief shall include
 - 1. information regarding the confined space program followed and
 - 2. any hazards confronted or created in confined spaces during entry operations.

4.12 Fall-Protection Program

- a. A fall protection work plan is required when fall protection systems including, but not limited to, anchorage points, static lines, lanyards, and full body harnesses must be utilized because fall hazards cannot be eliminated through the use of passive systems such as guardrails.

- b. All fall-protection equipment and devices shall meet American National Standards Institute (ANSI) Z359 standards.
- c. The Service Provider shall provide all necessary fall protection equipment to its employees.
- d. The Service Provider shall inspect and maintain its fall protection equipment and shall promptly remove from the worksite any fall protection equipment found to be defective.
- e. Before considering the use of material handling equipment to lift personnel, the Service Provider shall consult with the Boeing Onsite Activity Representative. Additional coordination is required.
- f. Service Providers must have measures in place to protect personnel in the area of elevated work from hazards resulting from dropped tools, work materials, etc. This may include the use of barricades, spotters, and nets. The inclusion of tool and parts control / inventory provisions in the project specific safety plan may be required. Contact the Boeing Onsite Activity Representative for more information. Additional coordination is required.
- g. When Service Provider personnel utilize personal fall protection equipment, the Service Provider must have a documented fall protection rescue plan. Service provider fall protection rescue plans must be available for Boeing review upon request.
- h. Prior to accessing roof tops the Service Provider shall coordinate access with the Boeing Onsite Activity Representative. Authorized Service Provider personnel may only enter approved areas of roof tops necessary to perform the Service Provider's scope of work. Additional coordination is required.
- i. Before accessing a roof, the Service Provider must have a fall protection work plan identifying the area of the roof where work will be occurring and describing the required safeguards for employees. The Service Provider will make the plan available to Boeing for review upon request.

4.13 Ladders and Scaffolding

- a. Ladders shall be in good condition and used as intended (e.g., do not use portable A-frame step ladders as straight ladders).
- b. Portable metal ladders shall not be used for electrical work. The use of metal ladders is completely prohibited at some Boeing sites. Contact the Boeing Onsite Activity Representative prior to use.
- c. Ladders shall not be used in front of doorways without posting or otherwise protecting the area.
- d. Scaffolds will have an inspection/certification tag affixed to scaffold prior to use.
- e. Scaffolding systems shall be erected and regularly inspected by a competent person. All scaffolding shall have work platforms fully planked; all braces, access ladders, proper guardrails, and toe boards must be installed. Where items may fall onto personnel working or passing below, safety netting shall be provided.
- f. During scaffolding erection, dismantling, and use, all employees shall be fully protected from fall hazards.

4.14 Work Permits

There may be additional site-specific permit and licensing requirements other than those specified in this document. Check with the Boeing Onsite Activity Representative for further clarification. Additional coordination is required.

4.15 Foreign Object Debris / Foreign Object Damage

- a. Foreign Object Debris (FOD) is any substance, debris or article that could find its way into a product system (e.g., aircraft, radar system, satellite, launch system, etc.) and cause damage. Service Providers shall take the following steps to prevent Foreign Object Damage.
 1. Prior to performing work within a FOD area, Service Providers must coordinate activities with the Boeing Onsite Activity Representative. Additional coordination is required.

2. Follow any posted FOD requirements when working in a FOD Critical, FOD Control, or FOD Awareness area.
3. Maintain accountability for all tools, construction materials, hardware, and personal items brought into work areas.
4. Properly contain and secure tools, construction materials, hardware and personal items to prevent them from falling off carts, being moved by weather events, or otherwise migrating into product systems.
5. Pick up any dropped tools, debris or other objects promptly.
6. Clean up and remove trash, scrap, excess materials, and other debris at least daily.
7. Immediately report missing / lost tools and other items to the Boeing Onsite Activity Representative.
8. When work involves loose material (i.e., concrete, asphalt, gravel, dirt, etc.) that can migrate onto product system traveled surfaces or factories where product systems are manufactured, construct FOD barriers as necessary to surround the work area, contain all debris, and sweep up the area of any loose debris daily.

4.16 Crane Operations

a. General

1. Service Providers must coordinate all crane operations with the Boeing Onsite Activity Representative, including material deliveries and hoisting operations. Additional coordination is required.
2. The Service Provider shall provide and use cranes and rigging that have been proof loaded and have required certifications available at the job site.
3. Service Providers must provide, upon request, evidence of crane safety training for the specific equipment to be utilized in accordance with Section 4.19.
4. All crane operations must conform to American Society of Mechanical Engineers (ASME) P30 Standard and American National Standard Institute (ANSI) B30 Standard

b. Overhead Cranes

1. Service Providers shall obtain approval from the Boeing Onsite Activity Representative and schedule any work requiring access to and use of Boeing overhead cranes and crane space, work adjacent to Boeing overhead cranes, or work around Boeing overhead cranes. These activities may require the installation of bridge-crane rail stops, or inactivation of bridge cranes to preclude collision with Service Provider equipment. Hazardous energy control requirements are found in Section 4.8, Control of Hazardous Energy. Additional coordination is required.
2. Mechanical, electronic or other approved crane stop systems shall be installed in front and behind personnel while they are working in an elevated position, or while they are making a lift of materials through the crane travel zone, to protect them from the crane they may be working on and from any other crane entering from another area or adjacent bay.

c. Mobile Cranes

1. Service Providers shall obtain written approval from the Boeing Onsite Activity Representative prior to use of a mobile crane greater than 200 feet in height and whenever the crane would be used within 20,000 feet of an airport or flight line. Additional coordination is required.
2. Service Providers shall provide and use cranes and rigging that have been proof loaded and Service Providers shall have all required certifications available at the job site.
3. Lift plans are to be provided to Boeing upon request.

4.17 Utility Shutdowns

Service Providers shall minimize service interruption during unavoidable utility shutdowns. Service Providers shall submit utility shut down requests to the Boeing Onsite Activity Representative a minimum of two weeks before the requested date of the utility shutdown or as soon as it is known to be required. Additional coordination is required.

4.18 Joint Occupancy Issues (Occupied Work Areas)

- a. The Service Provider shall cooperate and coordinate work with Boeing and other Boeing Service Providers so all work may be promptly and properly performed without undue interference or delay. The Service Provider shall afford Boeing and other Boeing Service Providers reasonable opportunity for the execution of their work. Contact your Boeing Onsite Activity Representative for additional assistance. Additional coordination is required.
- b. For work in close proximity to Boeing personnel, Boeing products, or other non-Boeing persons, a joint project specific safety plan may be required. Contact your Boeing Onsite Activity Representative for more information. Additional coordination is required.

4.19 Training

- a. The Service Provider shall ensure that all of its employees are properly trained and hold regulatory-required certifications for all jobs and tasks that require specific training and/or competency to meet all applicable federal, state, and local regulations prior to conducting work for Boeing.
- b. All Service Provider employees shall be trained in, and be knowledgeable of, the Service Providers' Project Specific Environmental, Health and Safety Plan.
- c. The Service Provider shall submit to Boeing, on request, validation of the training received by Service Provider employees.
- d. Service provider employees must receive information / orientation as necessary to comply with site-specific requirements.

4.20 Radiation Safety

- a. Written approval must be obtained through the Boeing Onsite Activity Representative before any of the following activities occur. Additional coordination is required.
 - 1. Licensed radioactive material (e.g., gamma radiography equipment, moisture density gauges, etc.) is brought onsite.
 - 2. Class 3b or 4 lasers (as indicated by the label on the equipment) are brought onsite.
 - 3. Radio frequency sources capable of exposing personnel above OSHA limits are brought onsite.
 - 4. Machines that produce x-rays (x-ray machines, XRF units, etc.) are brought onsite.
 - 5. Service Providers work in any area restricted for purposes of radiation protection.
 - 6. Service Providers work with any radioactive material possessed under a Boeing license.

4.21 Traffic Control

- a. When delivering and receiving material, Service Providers shall ensure that traffic controls are in place, including flaggers, truck waiting areas, staging areas, and appropriate traffic guidance signs.

If at any time a road or other traffic hazard (e.g., obstructions, poor lighting, etc.) exists that impacts drivers, pedestrians, or material handling activities, Service Provider must place obvious warning devices in order to alert affected people/vehicles approaching the hazard. These warning devices shall remain in place until the hazard is mitigated. For all traffic control issues, coordinate with your Boeing Onsite Activity Representative. Additional coordination is required.

4.22 Explosives Safety(Class 1 and Explosive Containing Devices [ECDs])

Note: This does not apply to ammunition or powder actuated tools.

- a. ECDs are devices, regardless of hazard class, that contain an explosive such as fire extinguishers (halon bottles), or other articles during their installation or removal.
- b. Before bringing an explosive or ECD onto Boeing property, Service Providers must prepare an explosives safety plan and work instructions for use of the explosive and/or ECD, and provide the plan and instructions to Boeing upon request.
- c. Prior to the commencement of explosives work, coordinate with the Boeing Onsite Activity Representative. Additional coordination is required.

5.0 Environmental

5.1 ISO 14001 Environmental Management System (EMS)

- a. Service Providers at Boeing facilities that are ISO 14001 certified must ensure that their employees are made aware of the Boeing Environmental Policy and written procedures established for activities, products, and services necessary to protect the environment.
- b. The following is the Boeing Environmental Policy.
Boeing is committed to:
 1. Conduct operations in compliance with applicable environmental laws, regulations, and Boeing policies and procedures.
 2. Prevent pollution by conserving energy and resources, recycling, reducing waste and pursuing other source reduction strategies.
 3. Continually improve our environmental management system.
 4. Work together with our stakeholders on activities that promote environmental protection and stewardship.
- c. Service Providers must be familiar with and comply with the Boeing Environmental Policy and have knowledge of how their actions may impact the environment, and the consequences of not following proper procedures. For more information on the ISO 14001 program contact your Boeing Onsite Activity Representative.

5.2 Hazardous Materials

- a. Hazardous materials stored on Boeing sites shall be labeled, stored under cover, in containment, and be segregated with regard to material compatibility. Storage areas must be approved by the Boeing Onsite Activity Representative. Additional coordination is required.
- b. Secondary containment must be provided for operations involving the transfer (e.g., pouring, pumping, or dispensing) of hazardous materials.
- c. A utilization report may be required at some locations for hazardous materials that are brought on site. Verify requirements with the Boeing Onsite Activity Representative. Additional coordination is required.

- d. Keep containers closed when not in use.
- e. No lead or asbestos containing materials are permitted to be brought on site, without prior approval by the Boeing Onsite Activity Representative. Additional coordination is required.
Powder Actuated Tools - Only lead-free cartridges may be used.
- f. When bringing hazardous materials onto a Boeing site, notify the Boeing Onsite Activity Representative. Additional coordination is required.

5.3 Waste Handling and Disposal

- a. If Service Provider activities generate hazardous or solid waste, coordinate with the Boeing Onsite Activity Representative. Service Provider must develop a written plan for managing waste to the Boeing Onsite Activity Representative upon request. Additional coordination is required.
- b. Hazardous Waste:
 - 1. Boeing disposes of all hazardous waste, including universal waste, used oils, etc. that is generated on its property, regardless of the party that generates the waste. Service Providers shall not take hazardous waste off site. If the Service Provider needs assistance with hazardous waste management, establishing a waste accumulation point or complying with hazardous waste regulations, contact the Boeing Onsite Activity Representative.
 - 2. All hazardous waste generated by the Service Provider shall be properly segregated, containerized, and labeled by the Service Provider, as directed by the Boeing Onsite Activity Representative. Additional coordination is required.
 - 3. Keep all waste containers closed between waste additions to containers.
 - 4. Monitor your waste stations on a daily basis. Inspect the stations for leaks and full containers of waste. Report any issues such as spills, bulging containers, etc. to the Boeing Onsite Activity Representative.
 - 5. When a waste drum becomes full, it must be immediately removed from the work site as directed by the Boeing Onsite Activity Representative. Additional coordination is required.

6. If managing hazardous waste in an “accumulation area”, a container must not accumulate waste for more than 60 days after the date shown on the hazardous waste label affixed to the container.
 7. Never dump or discharge hazardous waste into storm drains, building sanitary sewer drains, rest rooms or solid-waste containers.
- c. Non hazardous waste as defined by federal or state regulation. Follow non-hazardous waste disposal policies as communicated by the Boeing Onsite Activity Representative. These policies cover construction debris, waste minimization and recycling. Additional coordination is required.

5.4 Suspect Materials

a. Asbestos Awareness

1. Notify the Boeing Onsite Activity Representative prior to conducting activities that may disturb asbestos. Additional coordination is required.
2. Boeing project locations may contain asbestos-containing materials. Prior to the start of work, obtain a written asbestos determination/survey from the Boeing Onsite Activity Representative regarding the presence or absence of asbestos-containing materials (ACM) associated with the work.
3. Abatement of all ACM affected by the project shall be coordinated by the Boeing Onsite Activity Representative. Additional coordination is required.
4. If, after the project commences, the Service Provider discovers a possible asbestos disturbance, new suspect materials, or there is a change in the scope of work or affected area of work, stop work immediately and notify the Boeing Onsite Activity Representative. Work shall remain stopped until a resolution can be coordinated by the Boeing Onsite Activity Representative. Additional coordination is required.

b. Lead Awareness

1. Notify the Boeing Onsite Activity Representative prior to conducting activities that may disturb lead. Additional coordination is required.

2. All painted surfaces are presumed to contain lead unless determined otherwise.
 3. Lead can be found in a variety of different products, such as greases, solders, sealants, paints, coatings, lead shielding in walls and around tables, lead pipes, ceramic tile glaze, and counterweights.
 4. Operations or processes that may cause lead exposure include but are not limited to:
 - i. Spray painting with paints containing lead
 - ii. Grinding, sanding, or welding on lead-based paints.
 - iii. Soldering activities.
 - iv. Demolition of oxidized lead shielding.
 5. Lead containing paint shall be removed before Service Provider proceeds with any grinding, sanding, or welding activities.
 6. Never use compressed air to remove lead dust.
 7. All lead-abatement activities are coordinated through the Boeing Onsite Activity Representative. The Service Provider shall prepare a written plan for lead abatement activities and provide that plan to Boeing upon request. Additional coordination is required.
 8. If, after the project commences, the Service Provider discovers a possible lead-containing material disturbance or new suspect material, work shall stop immediately until the Boeing Onsite Activity Representative can determine the next course of action.
- c. Soils and Remediation
1. Final disposition of all soil shall be coordinated through the Boeing Onsite Activity Representative. Additional coordination is required.
 2. Immediately contact the Boeing Onsite Activity Representative listed at the front of this document if you notice contaminated soil or water during excavation activities. Watch for fuel and solvent smells, visible oil sheen, and other indications of contamination. Stop work immediately until the Boeing Onsite Activity Representative can determine the next course of action.

5.5 Air Quality

- a. If Service Provider activities may produce emissions of any air pollutant, the Service Provider must develop a written plan for minimizing these emissions and provide this plan to the Boeing Onsite Activity Representative upon request. Additional coordination is required.
- b. The Service Provider shall not emit any air contaminant in sufficient quantities and of such characteristics and duration that is likely to be injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life or property. Contact the Boeing Onsite Activity Representative if you are not sure your activity falls in this category.
- c. Open burning is strictly prohibited.
- d. Minimize idling of equipment whenever possible.
- e. Vehicles and equipment shall not leave the work site coated with dust, dirt, or mud.
- f. Truck loads and roll-off containers with loose materials shall be covered. The Service Provider shall take appropriate measures to prevent drag-out and fugitive emissions.
- g. All Service Providers shall take measures to prevent overspray and airborne emissions from painting and blasting operations from depositing on adjacent buildings and automobiles. Any such deposits must be swept up immediately.
- h. Abrasive blasting and spray-painting operations shall be performed inside a booth designed to capture the blast grit or overspray. Outdoor blasting or painting of structures or items too large to be reasonably handled indoors shall employ control measures, such as curtailment during windy periods, and enclosure of the area being painted or blasted. Contact the Boeing Onsite Activity Representative for specific requirements before starting outdoor blasting or painting activities. Additional coordination is required.
- i. For grade-and-fill operations associated with construction and demolition projects, employ water spray as needed to prevent visible dust emissions. The application of water for dust control that does not infiltrate into the ground must be contained by use of the approved erosion and sediment controls.

- j. Airborne and blowing dust and debris shall be controlled. The Service Provider is responsible to obtain any necessary dust control permits. Contact the Boeing Onsite Activity Representative before the start of any activity that may generate dust.
- k. All material that contains volatile organic compounds (VOC), such as paints, coatings, sealants, or resins that are to be used shall be pre-approved through the Boeing Onsite Activity Representative. Additional coordination is required.
- l. If internal combustion engines or equipment using refrigerants are brought onsite (e.g., emergency generators, temporary boilers, freezers) additional permitting or recordkeeping may be required. Use of this type of equipment shall be pre-approved through the Boeing Onsite Activity Representative. Additional coordination is required.

5.6 Water Quality

- a. If Service Provider activities may produce wastewater, or if the Service Provider may handle hazardous materials in an area that may be exposed to stormwater, the Service Provider must develop a written plan for handling such wastewater or stormwater. This plan must be provided to the Boeing Onsite Activity Representative upon request. Additional coordination is required.
- b. Wastewater, including, but not limited to, concrete slurry, water from dewatering, cooling water and stormwater, shall be handled in accordance with instructions from the Boeing Onsite Activity Representative or the Service Provider's written wastewater plan.
- c. Never pour any liquid into a storm drain. Potable water or fire hydrant water can not be discharged to a storm drain without written permission provided through the Boeing Onsite Activity Representative. Additional coordination is required.
- d. Do not use a hose or pressure washer to clean pavement unless the resulting wastewater can be contained. Alternative methods, such as sweeping, shall be used.
- e. No vehicle, equipment, or building washing is permitted outside without prior approval from the Boeing Onsite Activity Representative. Contact your Boeing Onsite Activity Representative for additional assistance. Additional coordination is required.

- f. Equipment and vehicles shall be maintained in good working order to prevent leakage of fluids (e.g., fuel, hydraulic fluids, and antifreeze). Methods to prevent and contain leaks must be implemented by the Service Provider (e.g., drip pads).
- g. Sanitary sewage and industrial wastewater shall be disposed of in accordance with instructions from the Boeing Onsite Activity Representative. Additional coordination is required.
- h. Store all hazardous materials and hazardous waste (including contaminated demolition debris) in a covered and contained area to prevent possible stormwater or soil contamination. The containment shall be large enough to hold 110% of the volume of the largest container. This applies to materials and waste that are both hazardous and nonhazardous in nature.
- i. Implement the Boeing-approved Best Management Practices (BMPs) as needed, to prevent stormwater contamination, such as, but not limited to, silt fences, tarps for rain covers, and drain covers. Approved BMPs are available from the Boeing Onsite Activity Representative. Additional coordination is required.
- j. When a Stormwater Pollution Prevention Plan (SWPPP) is required:
 - 1. The Service Provider will submit a SWPPP to the Boeing Onsite Activity Representative. Additional coordination is required.
 - 2. A copy of the site Construction General Permit, SWPPP, and National Pollution Discharge Elimination System (NPDES) General Permit must be kept at the construction site at all times during construction and prior to notification from the agency that the NPDES permit has been terminated.
Note: Coordinate with Boeing Onsite Activity Representative to ensure all required permits have been obtained and are posted.
 - 3. The Service Provider shall maintain a site log book that contains a record of the implementation of the SWPPP and other permit requirements including the installation and maintenance of BMPs, site inspections, and stormwater monitoring.

- k. Refueling and mobile equipment repair shall be conducted away from storm drains and waterways. Refueling over unpaved areas must be fitted with temporary containment or spill control. Spill clean-up materials shall be staged on site, in well marked containers, and in sufficient quantity and locations to respond to spills such as hydraulic equipment leaks.
- l. Portable toilets must be secured as necessary to prevent them from being blown or knocked over and must be leak-free, maintained in good working order, and located at least 100 feet from any waterway or storm water conveyance structure. Portable toilets must be serviced by a permitted company and cannot be dumped at the site.

6.0 SITE-SPECIFIC REQUIREMENTS

The following provisions identify additional obligations for Service Providers when performing work at Boeing Everett, WA.

These requirements supplement, but do not replace, other applicable requirements for the Service Provider, including, but not limited to:

- requirements in contracts and agreements between Boeing and the Service Provider;
- requirements contained in Sections 1.0 through 5.0 of the Service Provider Manual;
- provisions of the Service Provider's project-specific EHS plan; and
- applicable laws and regulations

To the extent that a Boeing requirement does not meet the requirement of federal or **Washington State** law, the requirement of federal or **Washington State** law supersedes the Boeing requirement and the Service Provider must comply with the federal or **Washington State** requirements.

Where a Boeing requirement exceeds the governing federal requirement or **Washington State** requirement, the Service Provider must comply with the Boeing requirement.

If the Service Provider is not sure whether a particular requirement applies to the work being performed, or believes that two or more applicable requirements may conflict with each other, the Service Provider must immediately inform the Boeing Supplier Management Representative to resolve any questions about the requirements.

GENERAL INFORMATION

6.1 Everett Specific General Requirements

Site Visitor Guide: The Everett Site Visitors guide shall be used when ensuring Service Provider personnel and subcontractors are aware of the requirements of this manual. This guide is available from the Boeing Onsite Activity Representative and the Everett Badge Office.

6.2 Area Access

Some locations require additional access control for safety or security reasons. Primary controls are training and use of badge cards to identify trained/allowed personnel. Coordinate with the Boeing Onsite Activity Representative.

- All Final Assembly areas:
 - TR006005 Hazardous Energy Awareness Training
- 747 Final Assembly:
 - TR013383 Traveler Orientation
- Flightline:
 - 76900 Safety Awareness (check for any additional training classes)
- Building 40-58, 777 Composite Wing Center:
 - 76900 Safety Awareness
 - 79426 BCA FOD
 - 80126 777X CWC FOD Prevention Introduction
 - 78911 Robotic Automation Safety
 - 80218 Introduction to the Composite Wing Center
- Building 40-27
 - 78911 Robotic Automation Safety
- Buildings 40-32, 40-33, 45-334, 45-80.3, 45-335:
 - ITAR #774881
- Building 40-22, 40-51:
 - ITAR # 80687
 - 79586 – FAUB/MBFB Safety Video
- Building 40-23, 777 Wings Horizontal Build Line:
 - 80575 - Factory Automation Core safety course
 - 78911 - Robotic Automation Safety
 - 80879 - FOD Prevention - Enterprise
 - 78817 - Wireless Devices on Boeing Property
 - TR012562 - Crane Safety
 - In person training, Safety Walk Through

Use the Non-Emergency Boeing Security and Fire Protection contact number at (206) 655-8800 for access to areas that are locked or temporarily closed.

Service Providers must provide unimpeded access to their work areas during business and off-shift hours to agents of the company conducting authorized tasks (i.e. safety investigations, security control, emergency services, maintenance groups, etc.). Methodology of providing access during business and off-shift hours to these groups should be coordinated through the Boeing Onsite Activity Representative. This does not apply to by-standers or general Boeing employees.

6.3 Emergency Shelter-In-Place Locations

Everett “Shelter-in-Place” locations are not generally marked. They are defined as “enclosed areas and, when possible, an above ground floor”.

They DO NOT include the following:

- Elevators
- Tunnels
- High bay manufacturing areas.

Ask your Boeing Onsite Service Representative for the Emergency Plan for the area you are working in, or for more specific information on Shelter-in-Place procedures.

6.4 Badging

All badges for Everett are issued by the Badge Office, located at the 40-402 Building. The Badge Office is open 5:45 am - 3:00 pm, Monday through Friday.

To obtain a badge, work thru Supplier Management or your OAR. The badge recipient must then provide one of the following documents to prove U.S. Person status:

1. Enhanced Driver’s License
2. United States Passport or Passport Card
3. Certificate of U.S. Citizenship (Form N-560 or N-561)
4. Certificate of U.S. Naturalization (Form N-550 or N-570)
5. U.S. Permanent Resident Card (Form I-551)
6. Non-U.S. Passport with unexpired temporary I-551 Stamp
7. Certification of Birth Abroad (Form FS-545)
8. Certification of Report of Birth (Form DS-1350)
9. Consular Report of Birth Abroad (Form FS-240) issued by the U.S. Department of State
10. Original or certified copy of U.S. birth certificate issued by a State, county, municipal authority, or territory of the U.S. bearing an official seal (Puerto Rican birth certificate issued on/after July 1, 2010)

Non-employees may be issued a Secure Badge (e.g., a badge with photo identification) or a temporary construction badge based on the frequency and requirements of their business. For non-employee onsite access greater than 30 days, processing time is a minimum of five (5) business days.

Badges must be returned to the Boeing Onsite Activity Representative or badge office upon termination.

6.5 Vehicles and Mobile Equipment

Due to the large and complex nature of the Everett site, vehicle and pedestrian safety is an important safety focus area.

- Any driver operating a licensed vehicle shall be in possession of a valid driver's license at all times. Necessary training requirements shall be current for the type of vehicle being used.
- All drivers of a vehicle **MUST** yield the right-of-way to pedestrians in marked crosswalks
- Use shuttle stops, vanpool pullouts, and marked parking areas to load/offload passengers.
- Drive only within designated traffic lanes.
- Park only in designated areas. Do **not** park in any Red Square, White Square with text, or numbered stalls. These areas are subject to towing for non-authorized vehicles. Service Providers should coordinate with the Boeing Onsite Activity Representative to identify authorized parking locations and obtain appropriate windshield passes or credentials.
- All drivers of vehicles are responsible for ensuring the vehicle's emissions do not exceed state standards and for ensuring that the vehicle is in safe operating condition prior to driving the vehicle. This includes ensuring that anything towed is also in safe operating condition.
- All drivers of vehicles shall move their vehicles to the right, out of the aisle, diving lanes, roadways, etc., when an emergency vehicle is approaching with emergency lights flashing, sirens sounding. Vehicle drivers must stop their vehicle and remain there until all emergency equipment has cleared the area.
- Passenger shuttles may only be passed when hazard lights are turned off. The only exception is when directed otherwise by Security Operations personnel.

6.5.1 Speed Limits: Vehicles shall not be operated in excess of the following maximum allowable speed limits (weather, lighting and poor driving conditions permitting):

- Inside buildings 5 mph.
- Parking lots 10 mph.
- Roads inside the fence line 15 mph.
- Aircraft ramps 15 miles per hour in non-congested areas.
- Perimeter roads outside the fence line 25 mph unless posted otherwise.

6.5.2 Driving Lanes: Driving lanes are considered a traveled path roadway designated for use by a single line of vehicles, to control and guide drivers and reduce traffic conflicts. The majority of driving lanes at the Everett site are two lanes, one lane for each direction of traffic flow and separated by lane markings.

Use only marked vehicle transportation lanes. Material handling lanes are for the exclusive use of material handling equipment (Forklifts, Large Cargo Loader, Straddle Carrier, etc.). Personal and company vehicles, including service vehicles and electric carts, are NOT authorized to use the material handling lanes.

Vehicle travel inside the Everett factory is limited to reduce congestion and potential pedestrian interaction incidents. Vehicles are to only be operated inside the buildings when performing essential and authorized work functions.

- Parts must travel through established drive lanes and MEO approved routes.
- Parts staging is unauthorized in North/ South Aisles, fire lane aisle intersections, and pedestrian paths.
- Two-lane transportation aisles: one lane will always be left open to allow emergency vehicle flow.
- Vehicles parked in the factory must be parked in a dedicate stall off of the fire lane aisle and must clearly display appropriate vehicle ownership signage.
- Proper infrastructure must be in place to support the vehicle (ex; power hookups, required space, utility clearance)

Bicycle, tricycle, cart, scooter, and forklift use in the factory tunnels are prohibited unless specifically authorized by the Boeing Onsite Activity Representative as essential work.

6.5.3 Fire Lanes: Emergency responders supersede all production support when responding to emergency situations. Clear passage ways are critical to ensure dispatched emergency responders are able to provide timely medical, security, and fire response.

The Everett site considers all lanes inside the factory fire lanes (not general driving lanes).

All other fire lanes are marked by 4" inch red paint striping running parallel to the roadway.

Obstruction of a fire lane is never authorized. Any blockage or nonstandard movement along fire lane transportation aisles must be communicated to Fire & Security and Boeing Onsite Activity Representative. Additional coordination is required.

6.5.4 Vehicle Operation on the Everett Flightline: A Flightline pass is required for access and to drive on the flight line. Service Provider passes do not expire; however, it is the responsibility of the Boeing Onsite Activity Representative to retrieve the Service Provider's flight line pass when it is no longer needed, and return it to the Everett Delivery Center flight line pass focal.

Service Providers must work with Boeing Onsite Activity Representative to receive Flightline Safety Awareness training prior to applying for the pass. Example Flightline specific safety requirements include;

- Leave car unlocked with keys or key fobs on the driver's seat or in the ignition. Set parking brake.
- DO NOT pass in front or behind a taxing airplane until it has passed by more than 2 stall lengths (600 feet) Airplanes always have the right-of- way.
- DO NOT pass a static airplane under tow unless directed to do so by the wing walker.
- DO NOT drive between a moving airplane and any guide vehicle or marshaler.
- DO NOT cut through Flightline stalls.
- Follow posted work restriction when a severe weather beacon is flashing
- DO NOT drive between a moving airplane and any guide vehicle or marshaler.

6.5.5 Traffic Signs and Traffic Control Devices: All traffic signs, lines, signals, and control devices will be obeyed, unless directed otherwise by Security Operations personnel. When traffic signs or control devices are not present, general highway rules apply.

6.5.6 Overhead Doors and Doorways: All drivers of vehicles will come to a complete stop before passing through doorways. Vehicles shall not pass under any overhead door that is in motion.

6.5.7 Proper Protective Equipment: All drivers and passengers onboard **non-enclosed** vehicles (including scooters without doors) are required to wear Safety glasses when inside the factory.

All drivers and passengers onboard **enclosed** vehicles will be required to wear safety glasses when they get outside of the vehicle or when windows are down.

6.5.8 Cell Phones, Listening Devices and other Electronic Devices: All drivers will NOT wear portable headphones, earphones, or other listening devices while operating a vehicle, unless such are required to perform their job.

6.5.9 Passengers: The number of passengers will be limited to the designated/designed seating capacity. Passengers shall sit on a seat that is firmly attached to the vehicle.

All passengers must remain seated and no part of any passenger's body is to protrude outside the perimeter of the vehicle.

6.6 Pedestrian Safety Requirements

Stay within marked pedestrian path, walkways and crosswalks where available. If not marked, pedestrians shall walk to the outside of the aisle.

Allow vehicles to come to a stop before stepping into marked crosswalks.

Do not use roll up doors intended for vehicle use. Exceptions maybe granted for employees acting as spotters for equipment and/or material entering or exiting the buildings. Coordinate with the Boeing Onsite Activity Representative.

Along the south apron of the factory, use the main transportation aisle pedestrian doors because they align with both the interior and exterior pedestrian paths and crosswalks. Avoid high-bay pedestrian doors leading into Local Receiving Areas (LRAs); only LRA employees are authorized within the LRAs.

Look both ways before stepping into a transportation aisle or crosswalk. DO NOT assume the vehicle operator will yield the right-of-way to

pedestrian into marked crosswalks. Yield right-of-way to emergency vehicles and airplanes.

Use of portable electronic devices is prohibited while in motion. Pedestrians are required to stop movement and ensure safe surroundings before use.

6.6.1 Pedestrian Requirements on the Everett Flightline: All personnel must wear “Yellow”: ANSI Class II high visibility apparel when walking or traveling outdoors on the Flightline. Contact the Boeing Onsite Activity representative for current Flightline boundaries.

DO NOT walk behind an airplane running engines. Engine run barriers and Aircraft anti-collision lights are warning indicators to stay clear.

6.7 Personal Protective Equipment (supplement to section 4.5)

All projects with specific PPE requirements must have signage informing personnel of the requirements.

PPE assessments and requirements by task shall be included in the project-specific safety, health and environmental plan.

6.7.1 Protective Eyewear: Protective eyewear is required in all production areas at Everett site.

Tinted, shaded, photo-chromic or mirrored lenses are prohibited for indoor work, except when performing work that may expose employees to harmful levels of ultraviolet, visible, or infrared radiation (welding, working with lasers, etc.).

6.7.2 Protective Footwear: Service Provider shall perform a foot protection assessment to determine if enhanced foot protection is required for specific projects.

At a minimum, foot protection shall be equivalent to the Everett requirements for factory footwear as follows:

- Completely cover your feet (incl. tops, toes, & heels)
- Shoes should cover an area on the top of your foot greater than the widest part of your hand
- Recommended: Slip-resistant soles (e.g. rubber or neoprene).

- Made of sturdy material that resists cuts & punctures.
- Heels <2" high & heel base >1" square.
- Soles at least ¼" thick for protection from sharp objects.

6.7.3 Hearing Protection: If your work includes noise levels that reach or exceed 85 decibels, appropriate signage must be posted.

Follow posted signs for hearing protection requirements.

6.7.4 Head Protection: Certain areas of the Everett site and/or operations have hazards that require the use of head protection PPE (hard hat or bump caps).

All personnel are required to wear a hard hat when performing:

- Crane operations
- While in the crane envelop
- Exposed to overhead hazards
- As required by industry specific code

A Bump cap is required whenever work is performed under a stationary structure with less than 75 inch clearance.

6.8 Injury, Property Damage and Near Miss Reporting (supplement to section 2.2)

The Service Provider must inform the Boeing Onsite Activity Representative of incidents and significant near misses.

The Service Provider must immediately notify the OAR, who has responsibility to notify Everett Site EHS, Boeing Operations, and/or the Boeing Procurement Agent regarding incidents that:

- Require an ambulance, security or fire department response,
- Result in hospitalization of one or more employees
- Lead to amputation or loss of eye
- Involve aircraft or property damage that may have safety or environmental implications.

Following immediate notification, the Service Provider shall provide the following to the Boeing Onsite Activity Representative:

- Written investigation reports for these accidents/incidents within 24 hours of the event.

- Upon request, a monthly summary of injuries and hours worked each month.

At the discretion of Boeing, additional investigation may be conducted for an incident at any of its locations involving a Service Provider.

6.9 General Housekeeping (supplement to section 3.2)

Service Provider shall be responsible for properly organizing all activities on the job site to the extent that good housekeeping shall be practiced at all times. This shall include, but not be limited to:

- As the job progresses, work areas must be kept clean at all times.
- All materials, tools, and equipment must be stored in a stable position to prevent rolling or falling. Materials and supplies shall be kept away from edges of floors, hoist ways, stairways, and floor openings. When exterior walls are being built, materials and supplies shall be kept away from the perimeter of the building.
- A safe access way to all work areas and storage areas must be maintained. All stairways, corridors, ladders, catwalks, ramps, passageways, and work platforms shall be kept clear of loose material and trash.
- Forms and scrap lumber with protruding nails and all other debris shall be cleared from work areas, passageways, stairs, and in and around buildings or other structures.
- Combustible scrap and debris shall be removed at regular intervals. Safe means shall be provided to facilitate such removal.

Always check with the Boeing onsite Activity Representative for unique or more stringent area housekeeping requirements (i.e. a clean room).

6.10 Flammable Liquids (supplement to section 3.4)

All storage areas for flammable or combustible liquids shall be approved by the Everett Boeing Fire Inspector for the Building.

Flammable storage cabinets must be self-closing.

6.11 Spray Painting, Flammable Resins, Chemical (supplement to section 3.5)

Paint crews or their supervisors must post a `Paint Notification Flyer`, which identifies the paint (by SDS#) and informs area personnel.

Boeing Fire Department inspection and approval are required before painting, including spray painting and before cleaning with flammable materials outside of approved areas. Additional coordination is required.

Unless arranged and approved by the Boeing Fire Department, only explosion-rated or intrinsically safe electrical equipment shall be utilized in hazardous areas.

If strong odors or significant air contaminants may be generated as a result of service provider activities, additional coordination with EHS is required, in order to manage the impact on surrounding work areas.

6.12 Welding/Cutting Activities (supplemental to section 3.7)

If painted metal will be cut or welded with heated applications, the Service Provider must remove painted material prior to start of work.

The Service Provider performing hot work in any area shall:

1. In advance of operations, request Boeing Fire to inspect the affected area by calling 206-655-8800.
2. Before proceeding with hot work, ensure that the hot work area has been approved and a Hot Work Permit (F710000051) has been issued by Boeing Fire. The following are safety requirements for obtaining a hot work permit:
 - a. Fire extinguishers approved by Boeing Fire Protection for the specific hazards of the location shall be readily accessible in the immediate area.

Note 1: Permanently installed fire extinguishers located within a building or areas are not intended to meet these requirements.

Note 2: Service Providers shall provide their own fire extinguishers suitable to the associated hazards.
 - b. Permanently installed fire protection systems shall be in working order.
 - c. Detection devices shall be protected from smoke and flame to prevent damage or activation.
3. Display the Hot Work Permit (F710000051) in the immediate hot work area. All items marked and all comments written must be complied with prior to any hot work beginning.
4. If the welder or operator has questions after ensuring compliance with issued permit, they must contact Boeing Fire and have a re-inspection of the job site prior to work beginning.
5. Arrange for the removal or protection of materials, personnel, or equipment as required by Boeing Fire.
6. Ensure that adequate ventilation and personnel protective devices are provided and used.

Note: When necessary, consult with site EHS for requirements.

7. Ensure compliance with the personnel safety requirements and confined space document for that location.

Note: When necessary, consult with site EHS for requirements.

8. Areas requiring hot work operations on a continuous basis, i.e. more than one day, must obtain an Approved Hot Work Area Permit (X36679) issued by the Boeing Fire Department

6.13 Fire Protection Systems (supplemental to section 3.8)

When sprinkler valves need to be closed, the Service Provider must first make contact with the Fire Inspector assigned to the building and coordinated through the Boeing Onsite Activity Representative.

All scheduled sprinkler valve closures must be called-in and scheduled with Fire Inspector, no less than 24 hours prior to the actual closure/shut-down date. This action needs to be coordinated through the Boeing Onsite Activity Representative, and may require a pre-shutdown meeting.

Note: It is the Service Provider's responsibility to research which Sprinkler System needs closed/shut.

For closure/shut-down, a firefighter will unlock the sprinkler valve and place a closure tag along with lock on the sprinkler valve (firefighters will not 'Turn' open or shut valves). This tag has information about the work and the system and shall remain on the sprinkler valve during the closure period.

Once the Service Provider has accomplished their work, and has placed the sprinkler valve back in-service, the Service Provider shall notify the Boeing Fire Department (206-655-8800), to have the sprinkler valve inspected by Boeing Fire personnel, prior to being placed back in service.

Sprinkler valve closure/shut-down longer than eight hours, and any closures/shut-downs involving side-by-side sprinkler valve configurations, within a building or work area needs to be authorized by Boeing Fire Department.

All Sprinkler Valve alterations, reconfiguration, additions and/or reductions, shall be approved by Boeing Fire Protection Engineering, prior to any Sprinkler Valve work.

6.14 Roofing (supplement to section 3.10)

Prior to accessing any roof areas, Service Provider must develop project-specific fall protection work/safety plans and verify they have been reviewed by Boeing EHS

If Service Provider is working on or near roof edge of Building 45-01, the FAA must be notified in as much advanced notice as possible of type of work to be performed on roof and preferred schedule. The FAA will then schedule the equipment out of service and make sure it is properly shut down and locked out. Additional coordination is required.

6.15 Radio Frequency (supplement to section 1.1h)

For land mobile radios, wireless crane controls, and other radio frequency (RF) communications systems coordinate with the Boeing Onsite Activity Representative, who has responsibility to coordinate with the Everett Radio Shop prior to installation or modification.

Before modifying or relocating any existing RF Equipment, consult with the designated Boeing frequency manager to determine if additional action must be taken regarding the status of the RF Equipment or the need to obtain a new station authorization.

All employees who operate or maintain RF Equipment must be qualified and possess a license or permit of the class dictated by applicable rules.

See APPENDIX E Radio Request.

6.16 Project Specific Environmental Health and Safety (EHS) Plans
(supplement to section 4.4)

If the work statement or conditions change, such that different hazards are anticipated, a revised plan must be submitted to the Boeing Onsite Activity Representative, who must ensure that the plan is reviewed by Everett Site EHS and other affected parties.

It is recommended that Service Providers employ or work with a trained health and safety professional to develop their plan. Recommended training for safety supervisors is

- OSHA 30 or equivalent
- First Aid/CPR/AED training

It is further recommended that a full time trained safety supervisor be assigned on site when there are 30 employees (or required by contract) and/or subcontractors working in construction, maintenance, manufacturing or related activities.

6.17 Hazard Communication/Safety Data Sheets (supplement to section 4.6)

Before bringing any hazardous material on site, the Service Provider shall furnish the following information to a Boeing Everett Industrial Hygienist for approval

- Safety Data Sheets
- How it will be used
- Volume and quantities of containers

Boeing Everett Industrial Hygienists must review all Service Provider SDSs for hazardous materials before work begins and will provide a notification of approved hazardous materials in a work area.

Everett Site EHS may prohibit use of a material on site if the proposed use creates a hazard to Boeing personnel or the environment. Review APPENDIX F of this document for prohibited hazardous materials and chemicals.

For aircraft production activities, the Service Provider should use materials, for example coatings and cleaning solvents, already in the Everett site inventory and should obtain the chemicals from point of use stations in factory areas or from the Hazardous Materials Management organization by advance coordination with the Boeing Onsite Activity Representative (who will coordinate with the Hazardous Materials Management organization and Everett Site EHS).

When Service Providers are using materials for aircraft production that are not provided by point of use stations in factory areas or from the Hazardous Materials Management organization, the Service Provider shall notify the Boeing Onsite Activity Representative (who will coordinate with the Hazardous Materials Management Organization and Everett Site EHS). Timely notification is essential to provide the opportunity for coordination of this activity.

6.18 Control of Hazardous Energy (supplement to section 4.8)

Service Provider must provide a written procedure of lockout device, lock, tagging system components, and methods for lockout removal.

When a Service Provider is required to lock out a Boeing system, they shall coordinate with the Boeing Onsite Activity Representative to schedule the outage (SEE APPENDIX D Utilities Shutdown Notice). Additional coordination is required.

6.19 Infrastructure Support Shutdowns

Scheduling for support is to be performed a minimum of 7 days prior to the scheduled outage.

Coordination of support shall be performed on the shift the outage will be performed on.

Scheduling for support (outage must be scheduled for 1hr before start or end of shift)

1st 6:00 am to 2:30 pm

2nd 2:30 pm to 11:00 pm

3rd 11:00 pm to 6:00 am

Boeing Maintenance may perform LOTTO for protection of equipment to support a controlled re-start. All Service Providers must perform their approved LOTTO requirements prior to working on any systems.

6.19.1 Prime Power Utility Shutdown: Prime Power utility shutdown requirements must be followed with any planned work that will directly affect or change the configuration or function of a substation or associated circuit breakers.

The Service Provider must assure that all affected employees are informed of the procedure(s) being used and the hazards that may be encountered if the plan is not followed.

Support from the Everett Prime Power team is required if work will directly impact the operation or function of a substation or associated circuit breakers.

Support of Everett Electrical Engineering and Everett Prime Power team is required if:

- Work will directly affect or change the configuration or function of a substation or associated circuit breakers
- Help is needed to identify and eliminate Infrastructure impacts and safety hazards.

Boeing Maintenance may put lock(s) and/or grounds on for protection of equipment only.

All Service Providers must verify absence of voltage prior to working on systems

6.19.2 Steam/Boiler Shutdowns: Support from Infrastructure Maintenance team is required if work will directly impact the operation or function of a Steam, Condensate or Hydronic loop distribution piping or system.

Support of Mechanical Engineering, Boiler Operator and Maintenance Plumbing is required if:

- Work will directly affect or change the configuration or function of a Steam, Condensate or Hydronic loop System
- Help is needed to identify and eliminate Infrastructure impacts and Safety hazards.

6.19.3 Chilled Water - Chillers Shutdowns: Support from Infrastructure Maintenance team is required if work will directly impact the operation or function of a Chiller, their Controls or the alteration of Chiller water makeup or distribution piping.

Support of Mechanical Engineering, HVAC chiller plant operator and Maintenance Plumbing is required if:

- Work will directly affect or change the configuration or function of the Chilled water makeup or distribution piping system
- Help is needed to identify and eliminate Infrastructure impacts and Safety hazards.

6.19.4 Compressed Air/ Air Compressors Shutdowns: Support from Infrastructure Maintenance team is required if work will directly impact the operation or function of a site air compressor or the controls or alteration of the distribution piping or system.

Support of Mechanical Engineering, Air compressor operator and Maintenance Plumbing is required if:

- Work will directly affect or change the configuration or function of the Compressed Air makeup or distribution piping system.
- Help is needed to identify and eliminate Infrastructure impacts and Safety hazards.

6.19.5 Utility Shutoff Plan: The utility shutoff plan and schedule must be agreed to by the customer and include:

- The reason for the interruption and why it is needed.
- The shutdowns, traffic/parking revisions, and any other activity revisions which may affect operations.
- Alternatives to the interrupted services.
- Process for requesting shutdowns consistent with site requirements.
- Lockout/tag-out/tryout procedures consistent with the applicable Boeing safety document.
- Ample lead time according to contract documents, normally two weeks.
- Beginning and ending dates and times for each interruption.
- List of buildings and areas to be shut down.
- Notification of affected parties once the utilities are available again.

See APPENDIX D. UTILITY SHUTDOWN NOTICE

6.20 Aircraft Lockout, Tag, Tryout

Whenever a Service Provider will be working on or near the aircraft:

Check in and coordinate with the Boeing Group Coordinator (GC) before proceeding with work. The Boeing GC must confirm with the Service Provider that they have all received required LOTO training from their employer.

The Boeing GC will discuss with Service Providers the nature of work and whether that work requires the control of hazardous energy. If the work requires the control of hazardous energy, the Boeing GC will work with the Service Provider employees to compare Hazardous Energy Control Procedures (HECP) and determine whether a Boeing HECP or the Service Providers HECP should be used to protect employees.

The Boeing GC will designate a Boeing Primary Authorized Employee (PAE) to support the Service Provider employees.

- a. If the Service Provider employee will be using a Boeing HECP, the Boeing PAE applies the LOTO and allows the supplier to verify the LOTO.
- b. If the Service Provider employee is using its company HECP, the Service Provider employee will apply the LOTO and allow the Boeing PAE to verify the LOTO.
- c. The Boeing PAE will provide familiarization of the Boeing LOTO process to Service Provider employees and completes the Authorized Employee Training Checklist provided by the GC for Escorted non-factory/field Employees form (Appendix J, RC-025G Section 9.4).
- a. The Boeing PAE insures that LOTO is documented on a Logsheets (form X35861) and that Service Provider employees (Authorized Employees) protected by the LOTO while performing the work also sign in and are instructed to sign out after completing their work. The Logsheets is entered in the LOTO Logbook.

Service Provider employees will follow Boeing requirements for LOTO devices.

6.20.1 Energizing Aircraft Systems: Personnel safety and aircraft quality may be impacted by energizing aircraft systems if the proper conditions are not achieved before applying electrical, pneumatic or hydraulic power.

Only Boeing employees shall energize aircraft systems. Under no circumstances shall the Service Provider energize aircraft systems.

If the Service Provider requires an energized system to perform work, the Service Provider must coordinate the activity with the Boeing GC.

6.21 Trenching and Excavations (supplemental to section 4.9)

Where oxygen deficiency or a hazardous atmosphere exists, or could reasonably be expected to exist, the atmospheres in excavation or trenches greater than 4 feet in depth shall be tested before employee entry. Results of the testing must be documented.

Fall protection must be implemented near a trench or excavation at 4' depths when a fall hazard exists.

There must be documented daily inspections by a competent person in accordance with section 4.9e of this manual.

6.22 Pre-Dig Process

Excavations have the potential to damage underground utilities. At the site, excavations are classified as any type of work that penetrates the ground surface. Utilities may have non-standard installation which requires more than standard industry practices.

Service Providers shall use, at the minimum, Ground Penetrating Radar (GPR) for locating underground utilities. When necessary, other means will be used, in addition to GPR. Coordinate with the Boeing Onsite Activity Representative for direction.

Underground utilities shall be located for the entire run of excavation. Examples of work that qualifies as excavations are saw cutting, core drilling, lagging below grade, and mechanical or hand excavation.

See APPENDIX B. PRE-DIG CHECKLIST

6.23 Confined Space Entry (supplement to section 4.11)

The Service Provider shall develop written confined space entry program and permits in accordance with regulatory requirements. Prior to any Service Provider personnel's entry into a Confined Space, the Service Provider shall submit a written confined space program to the Boeing Onsite Activity Representative for coordination with local area Boeing Operations Management and Everett Site EHS.

The Service Provider shall train its affected personnel subcontractors and supplier in all elements of the program.

Notify Boeing Onsite Activity Representative of intention to enter a Boeing owned confined space.

Boeing EHS will provide a notification of the potential confined space hazards before entry into the confined space.

Before entry into an aircraft confined space is conducted, Form X33634 - Checklist for Non-Boeing Personnel Aircraft Confined Space Entry Training must be completed.

If a non-permit confined space will be reclassified, notify your Boeing Onsite Activity Representative and Everett Site EHS.

Service Provider will debrief with a Boeing Onsite Activity Representative after completion of work in the Boeing owned confined space-

For jointly occupied confined spaces, the Service Provider shall coordinate its confined space entry plan with Everett Site EHS, Boeing Operations Management and the Boeing Onsite Activity Representative. Upon completion of joint confined space entry, the Service Provider shall hold a debriefing with co-entrant's management or Boeing Onsite Activity Representative and submit a copy of the closed permit and debriefing to Everett Site EHS.

The Boeing Fire Department is the designated Confined Space Rescue Team. With prior coordination, they may make emergency rescue service available for confined space emergencies. Additional coordination is required.

Provision of this Confined Space Hazard Form and related documents by Boeing does not relieve Service Provider or its Subcontractor(s), if applicable, of the duty to independently evaluate hazards presented by work in or around the Permit Required Confined Space (PRCS) and to implement the precautions and hazard controls necessary for safe entry into the PRCS. Service Provider and its Subcontractor(s), if applicable, must utilize their own PRCS program and related documents (e.g., PRCS entry permit) when entering the PRCS.

6.24 Fall Protection (supplement to section 4.12)

The Service Provider shall have and follow its own written fall prevention program when working from surfaces, tooling, equipment, and product or building structures at four (4) feet or more above a lower level.

The Service Provider shall train its affected personnel, subcontractors and suppliers in all elements of the program.

The written Fall-Protection Work Plan shall be reviewed by Boeing Everett EHS and include the following minimum elements:

1. Identification of all fall hazards in the work area.
2. Description of the method(s) of fall protection to be provided.
3. Description of correct procedures for assembly, maintenance, inspection, and disassembly of the fall protection system to be used.
4. Description of correct procedures for handling, storage, and securing of tools and materials.
5. Description of method of providing overhead protection for employees who may be in or pass through the area below the work site.
6. Description of rescue plan to include method for prompt, safe removal of injured employees.

Note: The plans must meet the design specifications of the fall protection qualified person when using engineered systems such as horizontal or vertical lifelines, this person must be defined in the Project Specific EHS Plan.

Fall protection work plans must be maintained in the work area or job site, made available to employees, and updated by the Service Provider.

Service Providers shall eliminate/mitigate any fall hazards created by their work that could affect Boeing employees.

Service Provider shall coordinate with the Boeing Onsite Activity Representative prior to performing work involving aircraft fall protection.

Unless prior contractual arrangements are made, the Service Provider shall furnish their personnel with proper fall protection equipment and training in its use.

6.25 Equipment Installation Requirements

Facility changes shall not be made without prior coordination with Site Services, Equipment Engineering, and/or Tool Engineering.

Service Provider supplied equipment shall not be installed and utilities to equipment shall not be installed without prior coordination. Prior to this type of work, the Service Provider shall notify Boeing Onsite Activity Representative (who will coordinate with Facilities & Asset Management and/or Equipment Services). REFERENCE APPENDIX D

Utility connections and disconnections must be coordinate with Facilities & Asset Management. Additional coordination is required.

Attach “Do Not Operate” orange tag [X21723](#) to equipment upon initial equipment arrival at installation site. This can be obtained through the Boeing Onsite Activity Representative.

Install equipment to meet Boeing requirements, original equipment manufacturer (OEM) requirements, code requirements, and approved design.

Facilitate equipment training for using organization operators on the equipment prior to use.

Review equipment installation to ensure all required safeguarding and placarding is in place and the required craft signoff have occurred prior to notifying EHS for final equipment buyoff.

Ensure that equipment to be modified or relocated has been brought up to current applicable code requirements.

6.26 Disturbing Painted Material

Prior to commencing work, Service Provider shall investigate potential for exposure to toxic metals and detail the necessary communication and risk abatement measures related to the proposed work in the project-specific EHS plan.

The Service Provider shall include provisions in the project-specific EHS plan to address potential hazards from toxic metals.

When complying with safety measures related to toxic metals, the Service Provider shall coordinate with the Boeing Onsite Activity Representative and Boeing Northwest Regulated Material Management (Boeing NORMM). The Service Provider shall evaluate (in consultation with Boeing NORMM) whether heavy metal remediation is required.

All grinding, sanding, cutting or welding on surfaces coated with paints containing toxic metals is prohibited.

Operations or processes that may cause toxic metal exposure include: grinding, sanding, soldering or welding on sealants, paints, and other materials containing toxic metals

All paints containing heavy metals shall be removed using techniques that prevent generation of airborne dust before proceeding with any grinding, sanding, cutting or welding activities. Paint removal shall be performed by trained personnel.

All lead or cadmium abatement activities shall be coordinated through Boeing Onsite Activity Representative. Additional coordination is required.

If the Service Provider discovers a possible lead or cadmium containing materials disturbance or new suspect material during the project, work shall stop immediately until Boeing determines the next course of action.

- Controls need to be in place to prevent the exposure of heavy metal dust or paint.
- Controls need to be in place to prevent generation of heavy metal dust during the handling of the material.

6.27 Robotic Work

At a minimum, Boeing requires Service Providers to adhere to:

- American National Standard Institute (ANSI) – ANSI/RIA R15.06 – 2012
- International Codes – International Standards ISO 10218-1 and ISO 10218-2
- Occupational Safety Health Administration (OSHA) – There is no OSHA robot standard, however OSHA references ANSI/RIA R15.06 as being the standard applicable to robot systems.
- The supplier must perform a risk assessment and risk reduction analysis in accordance with ANSI/RIA R15.06 methods.

Boeing requires Service Providers to:

- Take and follow all required training for building access.
- Respect all barriers and signage around robot cells
- Do not enter a robot cell unless you are an authorized person with proper training.

6.28 Working around Boeing Automated Guided Vehicles (AGV)

Boeing requires Service Providers to:

- Take and follow all required training for building access.
- Observe all marked areas of AGV operations



AGVs have the right of way. They will be traveling slowly with flashing lights and audible alarms. AGVs will have safety scanners that will stop the AGVs if someone/thing is in their path. These scanners may only be active in the direction of travel.

Stay out of areas where you might be struck by an AGV or its load or pinned between the AGV/load and a fixed object.

6.29 Building, Maintaining, and Servicing Automated Guided Vehicles

Service Providers shall eliminate or control hazards.

- Eliminate the hazard by design.
- Include safety devices such as light curtains, pressure-sensitive mats, two-hand controls, barriers or guards when there is a possibility of flying objects, or other guards and interlocks.
- Include warning devices or alarms

EHS should be contacted to assist in the design and installation of automated, robotic or other NC-controlled equipment, to ensure that the asset and associated processes comply applicable Boeing command media.

6.30 Crane Operations (supplement to section 4.16)

6.30.1 Overhead Crane Operations: Overhead cranes are used throughout the main factory to transport heavy loads.

Move away from the path of overhead crane loads so that they do not pass above you. Stay away from the immediate area around and under the load, the crane, and the lifting tools during the lifting, lowering and moving

Service Provider shall coordinate with the Boeing Onsite Activity Representative to schedule any work requiring:

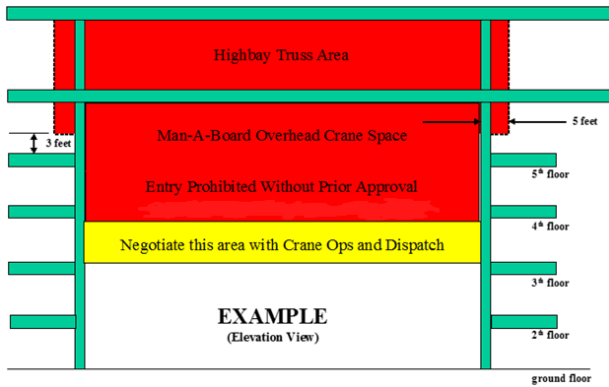
- lifts by Boeing overhead cranes,
- work adjacent to Boeing overhead cranes,
- work around Boeing overhead cranes or
- work in the overhead crane space.

These activities may require the installation of bridge crane rail stops, or inactivation of bridge cranes to preclude collision with Service Provider equipment.

Prior to commencement of work in any Everett overhead crane space, Service Provider will be familiar with the process for Everett Factory Access to Overhead Crane Space. Coordinate with the Boeing Onsite Activity Representative for this information.

At the commencement of the shift of the scheduled work, the Service Provider will not start work until they obtain a Crane Permit from Overhead Crane Operations Dispatch. Overhead Crane Operations Dispatch is not obligated to issue any permits when unscheduled production requirements supersede the Service Provider activity. If such planned Service Provider activity is superseded or delayed for any time period for any reason, the Service Provider is to notify the Boeing Onsite Activity Representative immediately.

Overhead Crane Space is the area in the highbay, above the third floor level, and above the bottom truss cord up to the underside of the roof. See picture below. For access, notify your Boeing Onsite Activity Representative to get authorization from crane operations and crane dispatch.



It is mandatory to coordinate with Crane Operations and Crane Dispatch prior to any activity in this space.

Service Provider shall furnish and use, while working overhead, an effective method to prevent falling objects from endangering or injuring people, equipment, or products below.

6.30.2 Crane Stop Process: Unless prior arrangements have been made with the Boeing Onsite Activity Representative with concurrence from affected stakeholders (local crane support and BU), Service Providers should not install crane stops.

Portable crane rail stops shall be installed front and rear of personnel working in an elevated position, or while they are making a lift of materials through the crane travel zone. The crane rail stops are installed to protect personnel from the crane they may be working on and from any other crane entering from another area or adjacent bay.

6.30.3 Mobile Crane Spaces:

Daily and pre-shift inspections must be performed and documented for all mobile equipment by the operator or other properly trained representative designated by the Service Provider management in accordance with the manufacturer's recommendations. All cranes must have load charts in cabs.

All mobile cranes will have a current Washington State Department of Labor and Industries Mobile Cranes/Derricks Worksheet for Construction Industry.

All mobile cranes operators must be trained and certified through a valid accrediting agency for the specific type of equipment that is being operated.

- When working inside the factory, it is mandatory to coordinate with Crane Operations and Crane Dispatch prior to any activity in the above illustrated Overhead Crane Space
- Cordon off the crane's activity area and ensure no employees will be under a suspended load or inside the angle of a hoist line.
- No employees will stand or work near a cable, chain, or rope under tension unless the nature of the work requires it.
- Underground utilities at the location shall be identified and considered as well as ground compaction.
- A properly trained representative appointed by the Service Provider shall inspect and document all rigging equipment prior to each work shift. Any rigging equipment found to be defective or damaged shall be immediately removed from use and the project site.
- Chain slings shall not be used for lifting operations unless specifically designed for a unique application and approved by a properly trained inspector or rigging specialist.
- Tag lines should be used on all hoisted loads to control the load, unless it is determined that the tag lines would pose a greater risk to the safety of the load.

If a lift is to be performed over an occupied building, a registered structural engineer shall review and certify that the building can withstand the impact of the load being dropped on the building due to a crane or rigging failure. If the structural engineer cannot determine if the building can withstand the impact of a dropped load, or if the structural engineer determines that the building cannot withstand the impact of a

dropped load, either the building areas that would be affected shall be evacuated during the lift, or the lift shall be scheduled when there will be no personnel in those areas of the building. The decision between evacuating the building or scheduling the lift for off-hours will be made by EHS with input from all affected parties.

Outdoor mobile crane use may require notification to the Federal Aviation Administration. Contact your Boeing Onsite Activity Representative prior to mobilizing a crane. Additional coordination is required

Operations should not commence or continue if winds exceed manufacturer's requirements or 20 MPH. If a personnel lift platform is used, this restriction is limited to a maximum of 15 MPH.

6.30.4 Critical Lifts: In addition to regulatory defined critical lifts, Boeing defines a critical lift one that could cause more than \$250,000 in damage.

When a critical lift is conducted a package with the following documentation will be prepared by the Service Provider and submitted to the Boeing Onsite Activity Representative upon request:

- Copy of the Mobiles Cranes/Derricks Worksheet
- Copy of the operator's certification card
- Copy of the riggers certification card
- Copy of the signal person's certification card
- A documented lift plan that states:
 - Names and roles, including lift director
 - A site drawing with radius and distance
 - A copy of the load chart
 - Type of rigging and rigging plan

6.30.5 Aerial Platform Lifts: Daily and pre-shift inspections must be performed and documented for all mobile equipment by the operator or other properly trained representative designated by the Service Provider management in accordance with the manufacturer's recommendations.

6.31 Required Postings (supplement to section 1.4)

The Service Provider will post the following information:

- Required PPE
- Close proximity plans
- Job Safety Analysis (JSA) or Project Specific EHS Plan
- Emergency Evacuation Plan
- Asbestos Determination/Good Faith Inspection (GFI)
- Job-site Contacts (Superintendent, Boeing Onsite Activity Representative, Company Safety Representative)

Where posting is not practical, e.g., activities performed on the airplane these materials need to be on the work site.

6.32 Close Proximity Work Plans

A Close Proximity Work Plan will be completed before any work within fifteen feet or directly above an aircraft and/or major components begins. These plans apply to all operations within a 15' envelope of all surfaces and/or directly above Boeing's airplanes, major airplane components, or high value product (HVPs).

Complete the JSA for working within 15-feet of aircraft or major airplane components that minimizes production disruptions, ensures communication between the affected parties, and effectively isolates the work area from Boeing products.

See APPENDIX C. CLOSE PROXIMITY WORK PLAN

6.33 Low-Powered Visible Lasers (supplement to section 4.20)

Laser classes 3B invisible, 3R invisible and 4 are not allowed on site without prior authorization by the Everett Site Laser Safety Officer.

Laser control measures need to be coordinated with the Everett Site Laser Safety Officer and may include:

- The laser control area shall be posted with the appropriate warning signs.
- The beam shall be controlled; it should not extend across walkways, it should be used above or below eye-level and it shall be terminated at the end of its useful path.

Notify Everett EHS of any intent to buy, build, borrow, loan, trade, sell, scrap or surplus any Boeing owned laser.
Service Provider training shall meet ANSI Z136.1 for Safe Use of Lasers.

6.34 Hazardous Materials (supplement to section 5.2)

If the Service Provider brings hazardous materials on site for use in aircraft production, the Service Provider should coordinate with the Boeing OAR and track hazardous material usage and storage in the Boeing hazardous material electronic tracking system, HazTrax. The HazTrax system satisfies the EHS tracking requirements for the inventory and usage of hazardous materials.

The service provider shall report to Boeing EHS at least monthly:

- a. The product name, manufacturer, Boeing SDS number;
- b. Container size and type (e.g. 12 ounce aerosol can, 1 pint can);
- c. The number of containers stored on site during the period covered by the report;
- d. Storage temperature and pressure of the containers if other than ambient (in most instances storage temperatures and pressures are ambient); and
- e. The number of containers used during the period covered by the report.

Further definitions and explanations are found in PRO- 2610 (Hazardous Materials and Regulated Waste Management). Contact Environmental Affairs for a copy of this procedure.

6.35 Hazardous Waste and Solid Waste Handling and Disposal (supplement to section 5.3)

6.35.1 Written Plan Requirements: If a written plan is required by Section 5.3.a of the Service Provider Manual, the plan shall be submitted by the Service Provider to Environmental Affairs in addition to the Boeing OAR. The plan shall document management of hazardous waste before the start of any work.

6.35.2 Hazardous Waste Training: All Service Provider employees generating and/or managing hazardous wastes must have documented Hazardous Waste Training in compliance with WAC 173-303-330. Annual refresher training must also be documented. Training shall include: how to identify hazardous waste, container management, and emergency procedures in case of spills or other types of releases.

6.35.3 MSDS/SDS Requirements for Waste Analysis: The Service Provider shall identify all possible materials used and MSDSs/SDSs shall be provided to Environmental Affairs for waste analysis. Waste mixtures likely to be generated, with estimated monthly or more frequent volumes, shall be made available to Environmental Affairs to facilitate management and disposal.

It is important that Service Providers ask before taking action on hazardous waste. Incompatible materials, spills, and incorrect containers are issues which have happened. Contact Environmental Affairs with questions.

6.35.4 Hazardous Waste Labels and Container: Service Providers must be aware that containers and labels for hazardous waste are available from the 40-15 building on first shift.

For jobs generating large quantities of hazardous waste, roll-off containers, totes or cubic yard boxes may be ordered by Service Providers. Contact Environmental Affairs for assistance.

Service Providers must transport full drums to the 40-15 building 60 days after they are filled or dated.

Many common wastes that Service Providers generate must be handled properly:

- Take used fluorescent bulbs to the 40-05 building.
- Non-Empty Aerosols are Hazardous Waste when disposed.
- Legally empty containers are not hazardous waste.
- Used batteries cannot go in the trash.
- Battery collection containers are located throughout the site; coordinate with the Boeing OAR.

6.35.5 Solid Waste Management: Small construction projects use many building materials that can be recycled by Service Providers.

The list of acceptable recyclable materials are as follows – wood (non-painted), metal, steel and wire, drywall/sheetrock, cardboard and paper, hard plastics, film plastics, ceiling tiles, windows and framing, carpet and concrete, asphalt, rock, masonry, sand and dirt.

- Separate solid waste from recycled materials.
- Label recycled materials as “CDL”
- Material handling will look for a transportation tag that identifies the material as either solid waste or CDL.

6.36 Suspect Materials (supplement to section 5.4)

6.36.1 Asbestos Awareness: Certain buildings at the Everett facility are known to contain Galbestos, which is an asbestos containing siding. Although not complete, the following is a list of buildings known to contain Galbestos:

40-01, 40-03, 40-11, 40-12, 40-20,40-21,40-22,40-23, 40-24,
40-25, 40-26, 40-30, 40-31, 40-32, 40-33, 40-34, 40-51, 40-53,
40-81, 45-01, 45-02 and 45-03.

This information does not substitute a Good Faith Inspection (GFI).

Where work being performed at the Everett facility includes any action that may disturb building materials, or other suspect asbestos containing materials, the Service Provider must include the following provisions in their project-specific EHS plan.

- Prior to performing any work including emergent work that may disturb building materials, or other suspect asbestos containing materials, the Service Provider shall contact the Boeing OAR for coordination with the Boeing EHS Northwest Regulated Material Management (NORMM).
- The Boeing OAR shall obtain a written asbestos determination from Boeing's EHS Northwest Regulated Materials Management (NORMM) and the determination shall be submitted to the Service Provider.
- The written determination must physically be posted by the Service Provider at the work site.
- The Service Provider and its workers are prohibited from disturbing any building material (e.g., cutting, drilling, and breaking up) without prior authorization and notice from Boeing EHS NORMM that any necessary asbestos abatement has been completed.

The Service Provider shall comply with all federal, state, and local requirements pertaining to asbestos.

All Service Provider personnel who are reasonably expected to perform asbestos disturbing work must have documented asbestos awareness training. All abatement personnel must be certified.

If the Service Provider discovers a possible asbestos disturbance or new suspect material during the project, work shall stop immediately, notify the Boeing Onsite Activity Representative to determine the next course of action.

6.37 Air Quality (supplement to section 5.5)

6.37.1 Written Plan Requirements: If a written plan is required by Section 5.5.a of the Service Provider Manual, the plan shall be submitted to Environmental Affairs in addition to the Boeing OAR.

The plan must ensure compliance with all applicable air quality regulations and any applicable provisions of any air quality orders, permits or approvals issued to Boeing Everett, including but not limited to the Boeing Everett Air Operating Permit (Puget Sound Clean Air Agency AOP No. 13120). The Boeing Everett Air Operating Permit is available at: <https://www.pscleanair.org/DocumentCenter/View/225/Air-Operating-Permit-PDF?bidId>

If Service Provider activities include performing any of the activities described below, the written plan must address the applicable requirements as described below.

Cleaning and Coating of Aerospace Components Cleaning and coating of aerospace components is strictly regulated. These activities may not be performed without prior written approval from Environmental Affairs.

If approval from Environmental Affairs is obtained to perform cleaning and coating of aerospace components, the Service Provider must comply with all applicable air quality requirements related to aerospace cleaning and coating operations, including, but not limited to:

- If the Service Provider plans to bring any products on site that will be used for cleaning or coating of aerospace components, the Service Provider shall first submit a list of all such products, along with their SDSs, to the Boeing OAR and Environmental Affairs for approval. The list shall include the name of the product and a short description of how the product will be used. The Service Provider must also submit a monthly report to the Boeing OAR and Environmental Affairs that summarizes the amount (in gallons) of each product used in the previous month.
- All coatings regulated by the Aerospace National Emission Standards for Hazardous Air Pollutants (40 CFR Part 63

Subpart GG) and Puget Sound Clean Air Agency Regulation II, Section 3.09 must comply with the applicable volatile organic compound (VOC) and organic hazardous air pollutant (organic HAP) content limits as specified in those rules.

- The amount of any solvent added to coatings for thinning purposes must not exceed that allowed by the applicable
- BMS specification or by the instructions on the coating container.
- Cleaning solvents shall comply with the applicable requirements in the Aerospace National Emission Standards for Hazardous Air Pollutants (40 CFR Part 63 Subpart GG)
- Rags contaminated with solvents and coatings shall not be left unattended. All coating and solvent contaminated rags shall be stored and disposed of in closed containers.
- No spray coating, other than spray coating using hand-held, non-refillable aerosol cans, may occur without prior approval from EHS.
- Containers with paints, solvents, and other materials containing volatile organic compounds or organic HAP shall remain closed except when material is being added, mixed, or removed from the container.

Non-Production Spray Coating Operations: The following non-production spray coating operations (i.e. spray coating operations not performed on airplane parts) may be conducted by Service Providers without prior approval from Environmental Affairs:

- Application of architectural or maintenance coatings to stationary structures (e.g. buildings, stationary equipment, paved surfaces).
- Spraying with hand-held aerosol cans with a capacity of 1 quart or less.
- The use of air-brush spray equipment with 0.5 to 2.0 CFM airflow and a maximum cup capacity of 2 fluid ounces.
- No other non-production spray coating may occur without prior written approval from Environmental Affairs.

The above activities do not need to be conducted in an approved spray coating area.

The coating of motor vehicles (e.g. cars, trucks) and mobile equipment (e.g. forklifts, tooling on wheels) by Service Providers may not be performed without prior written approval from Environmental Affairs.

Bondo Application Operations: The use of resins containing styrene on composite airplane parts and/or tooling is strictly regulated. This activity may not be performed without prior written approval from Environmental Affairs.

Common types of resins containing styrene that are used at Boeing are:

- All bondo qualified under BMS 5-136 (e.g. Ad-Tech 15-3, PE-6010, PE-6013)
- White Diamond Body Filler
- Ad-Tech Ultra Filler #14
- APF #4 White Filler

Havamold and Other Styrene-Containing Sheet Molding Compound Operations: The use of “Havamold” and other sheet molding compounds (SMCs) that contain styrene is strictly regulated. This includes SMCs qualified under BMS 8-197 and BMS 8-225. This activity may not be performed without prior written approval from Environmental Affairs.

Use of Portable or Transportable Engines: For purposes of this document, a portable or transportable engine is an internal combustion engine that, by itself or in or on a piece of equipment, is designed to be and capable of being carried or moved from one location to another. Indications of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, or trailer.

Examples of portable or transportable engines include engines used to power:

- Portable generators
- Portable compressors
- Light stands
- Air conditioning carts
- Hydraulic mule carts
- Air start carts
- Refrigerated trailers

Engines that are in or on a piece of equipment that is self-propelled (e.g. motor vehicles, mobile cranes, bulldozers) or is intended to be propelled while performing its function are NOT considered portable or transportable engines.

Service Providers must comply with the following requirements when using portable or transportable engines:

- **Residence time limit:** The engine must not remain at the same location for more than 12 consecutive months (or a shorter period of time for an engine located at a seasonal source), other than at locations used strictly for storage. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced must be included in calculating the consecutive time period.
- **Notification requirement:** Prior to bringing any engine (including rentals) on site with a maximum rated brake horsepower greater than 500 bhp (or a group of engines which will be used together and have a cumulative maximum greater than 500 bhp), the Service Provider must notify the Boeing OAR and obtain approval from Environmental Affairs.
- **Fuel Standards:** All engines must use ultra-low sulfur diesel or ultra-low sulfur biodiesel (i.e. diesel or biodiesel with a sulfur content of 15 ppm or 0.0015% sulfur by weight or less), gasoline, natural gas, propane, liquefied petroleum gas (LPG), hydrogen, ethanol, methanol, or liquefied/compressed natural gas (LNG/CNG).

6.38 Water Quality Written Plan Requirements

If a written plan is required by Section 5.6.a of the Service Provider Manual, the plan shall be submitted to Environmental Affairs in addition to the Boeing OAR.

Sanitary Sewer and Wastewater Discharges:

- If Service Provider activities produce wastewater discharges, the Service Provider must send the following to sanitary sewer – steam condensate, MOP water, cooling tower water, potable water, fire protection system maintenance water, water with any detergent, degreaser or soap, water from draining water heater or chiller tanks, water from disinfecting water lines, and quenching water.
- The Service Provider shall coordinate disposal on the following wastewater discharges with Environmental Affairs – pressure washing and other wash waters, dewatering wastewater, equipment cooling water, building cooling system water containing glycol, concrete related wastewater, slurry materials and waste from shaft drilling, street sweeper wastewater, wheel wash or tire bath wastewater, water contaminated with fuels/oils, solvents, soaps or other pollutants, and any process wastewater as defined by 40 CFR 122.1.

Flightline Concrete Work/PCBs:

No concrete related work shall occur by Service Providers on the Everett Flightline without prior coordination with Environmental Affairs due to PCB contamination of joint sealant and surrounding concrete.

Areas of the Everett Flightline may contain PCBs. Any pressure washing work shall be coordinated with Environmental Affairs.

Oil Containers and Tanks:

The Service Provider shall contact Environmental Affairs for specific tank requirements prior to bringing on-site. Oil containers of 55 gallons or more must be stored in secondary containment regardless of location.

Boeing Everett Site Specific Requirements

- Containers with less than 55 gallons shall have secondary containment in the following locations:
 - All liquid hazardous material and petroleum product outdoor storage areas. Storage areas indoors must be within containment or at least 25 feet from exterior doors.
 - Any areas where stationary mobile-fueled equipment (i.e., generators and light stands) are located within 25 feet of bare soil or storm drain.
- Oil-handling personnel shall be trained in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan per 40 CFR 112. Training must be documented and available upon request.

Cover Trash and Metal Scrap Materials:

- Trash and scrap metal shall be stored in leak-proof containers under cover or with a lid that remains closed unless adding or removing material.
 - Cover piles or containers of exposed soil or fill material.
 - Stockpiles of galvanized materials (e.g., scaffolding, fencing, etc.) shall be covered.

Zinc and Copper:

- Bare galvanized metal or copper shall not be used for materials that convey stormwater, such as roofs, canopies, siding, gutters, downspouts, roof drains, and pipes.
- New chain link fencing, including posts and rails, installed in outdoor areas must be vinyl or powder coated. Exceptions to this shall be approved by Environmental Affairs. Temporary construction fencing can be uncoated, bare galvanized, fencing if vinyl or powder coated fencing is not available.
- Areas with heavy vehicle traffic shall be swept regularly to remove tire wear and brake pad dust.

Scrapping Operations:

- All scrapping operations must occur in a designated scrapping area. Contact Environmental Affairs prior to starting any scrapping operations.

Outdoor Painting:

- Use ground or drop cloths underneath painting, scraping and sandblasting work.
- Clean work area daily to remove paint, dust and other accumulated debris.
- Wipe up spills with rags and other absorbent materials immediately.
- Do not hose down any area to a storm drain or waterway.

Pesticide Use:

- Develop and implement an integrated pest management plan and use pesticides only as a last resort. Carefully apply pesticides/herbicides in accordance with label instructions.

Industrial and Construction Stormwater Permit Coverage

Requirements:

- The Everett Site operates under an Industrial Stormwater General Permit issued by the Washington State Department of Ecology. If the project is greater than 1 acre in size, the Everett Site operates under a Construction Stormwater General Permit issued by the Washington State Department of Ecology.

For general and specific permit information, Service Providers should review the following documents:

<https://ecology.wa.gov/DOE/files/a1/a11b5cb4-491e-4810-ba0f-c79cd9e6f93c.pdf>

<https://fortress.wa.gov/ecy/paris/DownloadDocument.aspx?id=135677>

References

Documents referenced are available from the Boeing Procurement Representative:

- Everett Air Operating Permit (PSCAA AOP No. 13120). The permit is available at:
<https://www.pscleanair.org/DocumentCenter/View/225/Air-Operating-Permit-PDF?bidId>
- [Fall Protection in Washington State](http://wisha-training.lni.wa.gov/training/presentations/CompChartFallProtReqs.pdf)
<http://wisha-training.lni.wa.gov/training/presentations/CompChartFallProtReqs.pdf>
- [D950-11544-1 \("Enterprise Factory Automation Safety Program \(E_FASP\) Manual](#)
- [D6-85752](#) Standard for Access to the Safeguarded and Restricted Space of Industrial Robots
- [RC-025G](#) – Aircraft Hazardous Energy Control Manual
- [RC-032G](#) – Safe Entry of Autoclave
- [D6-83865](#) Everett Traffic Safety and Regulation

APPENDIX B PRE-DIG CHECKLIST



Check Before You Dig Check List

Shared Services Group | Site Services | Operational Excellence

| \$ Level | Utilization |
|------------------|-------------|
| \$30K to \$100K | Required |
| \$100K to \$500K | Required |
| \$500K to MP | Required |
| MP + | Required |

Home

Project name:

Project manager:

Caution: Before digging, please check with your site Environment, Health, and Safety (EHS) representative.

- | | |
|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Existing site utility information reviewed with Site Plan created <input style="width: 100%;" type="text"/> <input type="checkbox"/> Using org and business partner notified of location and schedule <input style="width: 100%;" type="text"/> <input type="checkbox"/> Locations of underground utilities established and marked <input style="width: 100%;" type="text"/> <input type="checkbox"/> Checklist and Site Plan finalized <input style="width: 100%;" type="text"/> <input type="checkbox"/> Onsite review and job walk completed by Boeing rep and contractor <input style="width: 100%;" type="text"/> <input type="checkbox"/> Method(s) used to locate underground utilities entered below <input style="width: 100%;" type="text"/> <input type="checkbox"/> Name and phone number of locator representative entered below <input style="width: 100%;" type="text"/> | <p>All assigned workers have been briefed or instructed on the following</p> <ul style="list-style-type: none"> <input type="checkbox"/> The location of the excavation. <input type="checkbox"/> The type (or types) of the excavation. <input type="checkbox"/> Hand/dig probe (minimum of 24" of utility markings) <input style="width: 100%;" type="text"/> <input type="checkbox"/> Workers know how to contact Emergency Services and Boeing rep <input style="width: 100%;" type="text"/> <input type="checkbox"/> Estimated excavation duration (open to close) noted: <input style="width: 40px;" type="text"/> days <input style="width: 100%;" type="text"/> <input type="checkbox"/> Surface encumbrances (e.g., walkways, tanks, fences) noted below <input style="width: 100%; height: 20px;" type="text"/> <input type="checkbox"/> Walkway required for crossing and/or traffic control <input style="width: 100%;" type="text"/> |
|--|--|

Check all utilities that the excavation will affect

| | |
|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Electric (Red) <input style="width: 100%;" type="text"/> <input type="checkbox"/> Gas (Yellow) <input style="width: 100%;" type="text"/> <input type="checkbox"/> Water (Blue) <input style="width: 100%;" type="text"/> <input type="checkbox"/> Other <input style="width: 100%;" type="text"/> | <ul style="list-style-type: none"> <input type="checkbox"/> Sewers (Green) <input style="width: 100%;" type="text"/> <input type="checkbox"/> Communications (Orange) <input style="width: 100%;" type="text"/> <input type="checkbox"/> Reclaimed Water (Purple) <input style="width: 100%;" type="text"/> |
|---|--|

Pertinent shutoff valves and switches located. *Note: Lockout, Tag, and Try requirements apply if any valve or switch is closed.*

Specific safety plan elements for unique project concerns.

APPENDIX D UTILITIES SHUTDOWN NOTICE

| | | | | |
|-------------------|-----------------|-------------------|------------|------------------|
| ELECTRICAL | PLUMBING | MECHANICAL | GAS | FIRE Main |
| Date: | Job Title: | Job Number: | | |
| Requested By: | Contractor/Grp: | Contact Phone #: | | |
| Technician: | Contractor/Grp: | Contact Phone #: | | |

BOEING PROJECT RESPONSIBILITY:

| | | |
|-------|------------------|------|
| Name: | Contact Phone #: | Org: |
|-------|------------------|------|

SHUTDOWN INFORMATION:

| | | |
|-----------------|-------------|--------------------|
| Start/End Date: | Start Time: | Comp Time: |
| Bldg/Floor: | Column: | Add'l Description: |

| |
|----------------------------|
| <u>Reason and Details:</u> |
|----------------------------|

| |
|----------------|
| <u>Impact:</u> |
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| |
|---------------------|
| Computing Notes: |
|---------------------|

| Maintenance Concurrence: | Signature | Name | Phone Number |
|---|-----------|------|--------------|
| | | | |
| Business Partner Concurrence: (If additional organizations are impacted, please use an additional sheet of paper for signatures) | Signature | Name | Phone Number |
| | | | |
| | | | |

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|---------------------------|
| People to be Cc'd: |
| |
| |

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|---------------------|
| SNAP NUMBER: |
|---------------------|

*Please supply Outage Coordination Electrical Panel Schedules if applicable Responsible Craft (Boeing/Partner): Just before and after the utility shutdown call **877-366-3330 option 21** and give the SNAP number.

Other groups requiring notification before and after the shutdown:
Facilities Dispatch 206-544-6500/ Fire Department
Security Dispatch 206-655-8800

APPENDIX E. RADIO REQUEST

Contractor Communications Request

Frequency Management Services

Purpose

This form must be completed for Boeing Contractors and approved by Boeing Frequency Management Services before transporting and operating radio communication equipment (voice or data) or other radio devices on Boeing property. This includes FCC licensed or unlicensed equipment. Generally, cellular or other mobile telephones are permitted without authorization; however some areas are strictly prohibited. Consult with your appropriate Boeing Point of Contact.

Instructions:

Step 1. Fill out this section.

Contractor Company Name: _____

Contractor Point of Contact Name: _____

Contractor POC Phone: _____

Boeing Point of Contact Name: _____

Boeing POC Phone: _____

Project Name: _____

Boeing Job Site, Building, Facility Name: _____

Date radios will begin operations: _____

Date radios will cease operations: _____

Contractor License|Call Sign(s): _____

Step 2. Attach a copy of your applicable FCC license(s)

Contractor Communications Request
Frequency Management Services

Step 3. Fill out radio equipment information.

Radio Equipment Information

| Frequency | Station Class | Emission | Power (W) | # of Radios | Radio Manufacturer & Model |
|-----------|---------------|----------|-----------|-------------|----------------------------|
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Base Station Location - _____
Area of Operations (KM or Miles Radius) _____

Step 4. Make a copy for your office records. Return this form to your Boeing Point of Contact who will return the form to Boeing Frequency Management Services by email, company mail or FAX.

Address: The Boeing Company
Frequency Management Services M/C 2T-22
Attention: Nate Miller
P.O. Box 3707
Seattle, WA 98124-2207

Phone: 206-544-6045
Fax: 206-662-0701
Email: nathan.a.miller@boeing.com

Step 5. A letter of authorization with operating information and any restrictions will be sent to the Boeing Point of Contact. Contractors should make a copy for office records. Contractors should have a copy of the authorization letter and license at the job site. Any changes subsequent to authorization will require another request.

APPENDIX F RESTRICTED MATERIALS LIST

| | Hazardous Materials List | | Restrictions |
|------------|---|--|---|
| Prohibited | Asbestos | | Prohibited At Everett Site |
| | Polychlorinated biphenyl (PCB) | | |
| | ODS Class 1 and Class 2 substances | | |
| | Silicone | | Prohibited in all airplane production areas |
| Restricted | Beryllium | Methyl Ethyl Ketone (2-butanone) | Use is restricted to those hazardous materials where there is no technically feasible alternative. Boeing IH approval is required to use restricted material. |
| | Cadmium | Methyl Isobutyl Ketone | |
| | Carbon Tetrachloride | Nickel (and compounds)*, ** | |
| | Chloroform | Tetrachloroethylene or Perchloroethylene | |
| | Hexavalent chromium | Toluene (methylbenzene) | |
| | Dichloromethane or Methylene chloride or methylene dichloride | Trichloroethane | |
| | Lead (and compounds) | Trichloroethylene | |
| | Mercury (and compounds) | Xylene (dimethyl benzene) | |
| Tracked | Cerium* | Aluminosilicate refractory ceramic fibers | IH Tracked materials must be reported to Everett EHS |
| | Perchlorate | Anthracene oils, paste and fraction | |
| | Perfluorooctanoic acid PFOA | Diisobutyl phthalate | |
| | Naphthalene | Lead chromate | |
| | Sulfur hexafluoride | Lead chromate molybdate sulphate red | |
| | Polybrominated diphenyl ethers | Lead sulfochromate yellow | |
| | Cobalt and compounds* | Pitch coal tar high temp | |
| | Benzene | Tris (2-chloroethyl) phosphate | |
| | Cyanides | Zirconia aluminosilicate | |
| | Ethylene Glycol | Acrylamide | |
| | Aluminum (Fume or dust)* | PFOS Perfluorooctane sulfonate | |
| | Copper (Fume or Dust)* | Toluene diisocyanate | |
| | Zinc (fume or dust)* | Aluminosilicate refractory ceramic fibers | |
| | Musk xylene | Sodium chromate | |
| | 4,4 diaminodiphenylmethane MDA | Potassium chromate | |
| | Short chain chlorinated paraffins | Ammonium Dichromate | |
| | Hexabromocyclododecane; alpha, beta, gamma | Potassium dichromate | |
| | Bis(2-ethylhexyl) phthalate DEHP | Tetraboron disodium heptaoxide | |
| | Benzylbutylphthalate BBP | Disodium tetraborate, anhydrous | |
| | Dibutylphthalate DBP | Boric acid | |
| | Anthracene | Chromic acid and oligimers of chromic acid | |
| | Diarsenic trioxide | Chromium trioxide | |
| | Diarsenic pentaoxide | 2-Ethoxyethanol | |
| | Sodium dichromate | 2-Methoxyethanol | |
| | Bis(tributyltin) oxide TBTO | Cobalt (II) Diacetate | |
| | Triethyl arsenate | Cobalt (II) carbonate | |
| | Lead hydrogen arsenate | Cobalt (II) dinitrate | |
| | 2, 4 Dinitrotoluene | Cobalt (II) sulphate | |

NOTES:

NOTES:



The Boeing Company
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Chicago, IL 60606-1596
MC 7A-UR

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