

Road Map Item #: 5.7

Product Name: **PROJECT CONSTRUCTION SAFETY AND SECURITY
PLAN**

PMP Appendix: APPENDIX P

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ABSTRACT: This deliverable provides a general overview and guidance for construction safety and security and assists in the management of the risks associated with construction throughout all phases of the CRC Program. The content of the Project Construction Safety and Security Plan is applicable to all CRC Program staff, and all other agency employees who may be involved with, or visit the CRC Program. This product is distinct from the SSMP (Appendix G to the PMP), which focuses on system safety and security activities for the LRT aspects only of the CRC Program.

PROJECT CONSTRUCTION SAFETY AND SECURITY PLAN

Draft Report



May 2013

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TABLE OF CONTENTS

1. PURPOSE AND OBJECTIVES	1-1
1.1 Purpose.....	1-1
1.2 Policy.....	1-2
1.3 Implementation.....	1-2
2. SAFETY RESPONSIBILITIES.....	2-1
2.1 WSDOT.....	2-1
2.2 ODOT.....	2-3
2.3 TriMet.....	2-4
2.3.1 TriMet Project Staff.....	2-4
2.3.2 Project Director/Construction Manager	2-4
2.3.3 TriMet's System Safety Department.....	2-4
2.3.4 Project Manager/Resident Engineer.....	2-5
2.3.5 Insurance Carriers' Safety Management Consultants	2-6
2.4 Contractor	2-6
3. OFFICE SAFETY.....	3-1
3.1 Slips, Trips, and Falls	3-1
3.2 Lifting/Moving Heavy Items	3-2
3.3 Ergonomics	3-2
3.4 Safe Egress from Office Buildings.....	3-3
3.5 Fire Safety.....	3-3
3.6 Hazard Communication/Right to Know.....	3-4
3.7 First Aid/CPR/AED	3-4
3.8 Special Hazards	3-5
3.9 Emergency Procedures.....	3-5
4. CONSTRUCTION SAFETY	4-1
4.1 Public Convenience and Safety	4-1
4.2 Safety Meetings and Safety Planning.....	4-1
4.2.1 Safety Meetings.....	4-1
4.2.2 Safety Planning	4-1
4.3 Personal Protective Equipment	4-2
4.4 Highway Operational Safety	4-3
4.5 Enforcement of Safety and Health Requirements	4-3
4.6 Work Zone Traffic Control	4-3
4.6.1 WSP and OSP Assistance	4-4
4.6.2 Traffic Control Management.....	4-4
4.7 Incident Response.....	4-4

APPENDICES

Appendix A: CRC Building Evacuation Plan

Appendix B: Field Work Incident Notification Protocol

Appendix C: CRC Pre-Activity Safety Plan

ACRONYMS

ADA	American Disability Act
CFR	Code of Federal Regulations
CRC	Columbia River Crossing
C-TRAN	Clark County Public Transportation Benefit Area Authority
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
LRT	Light Rail Transit
MSDS	Material Safety Data Sheets
MSHA	Mine Safety and Health Administration
MUTCD	Manual on Uniform Traffic Control Devices
ODOT	Oregon Department of Transportation
ORS	Oregon Revised Statutes
OSEA	Oregon Safe Employment Act
OSHA	Occupational Safety and Health Administration
OSP	Oregon State Patrol
PASP	Pre-Activity Safety Plan
PE	Project Engineer
PM	Project Manager
PMP	Project Management Plan
PPE	Personal Protective Equipment
RE	Resident Engineer
SOP	Standard Operating Procedure
SSMP	Safety & Security Management Plan
TCP	Traffic Control Plan
TriMet	Tri-County Metropolitan Transportation District of Oregon
UBC	Uniform Building Code

WAC	Washington Administrative Code
WISHA	Washington Industrial Safety and Health Act
WSDOT	Washington State Department of Transportation
WSP	Washington State Patrol

1. Purpose and Objectives

1.1 Purpose

The purpose of the Project Construction Safety and Security Plan is to provide general overview and guidance for safety and assist in the management of the risks associated with construction throughout all phases of the CRC Program. The content of the Safety and Security Plan is applicable to all CRC Program staff, and all other agency employees who may be involved with, or visit the CRC Program.

The programs, policies and procedures outlined in the Project Construction Safety and Security Plan do not supersede, replace or remove the Federal, State, or other regulatory agency policies and procedures.

The Project Construction Safety and Security Plan serves as a guide for implementing the safety and security requirements of the CRC Program. The CRC Program's approach will follow established best practices and all applicable Federal, State, and Local requirements including current versions of:

WSDOT

- WSDOT Construction Manual M41-01.14, January 2013
<http://www.wsdot.wa.gov/Publications/Manuals/M41-01.htm>
- WSDOT Safety Procedures and Guidelines Manual, M 75-01.24, March 2013
<http://www.wsdot.wa.gov/Publications/Manuals/M75-01.htm>
- WSDOT Work Zone Traffic Control Guidelines, M 54-44.04, February 2012
<http://www.wsdot.wa.gov/Publications/Manuals/M54-44.htm>

ODOT

- ODOT Construction Manual, June 2012
<http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/Pages/CM.aspx>
- ODOT Safety and Health Manual
<http://www.oregon.gov/ODOT/HWY/OOM/mm/1mm6.pdf>
- ODOT Employee Safety Manual
- ODOT Office Safety Standard

TriMet

- TriMet Capital Projects, Construction Safety Program, June 2010

FHWA

- Manual on Uniform Traffic Control Devices, January 2009

<http://www.wsdot.wa.gov/Publications/Manuals/MUTCD.htm>

1.2 Policy

Providing a safe environment in which to work is WSDOT, ODOT, and the CRC Program's top priority regardless of cost, complexity or time. The CRC Program is committed to safety. To ensure this commitment is met, training and guidance is provided about working in a safe and safety conscious manner. It is the responsibility of every employee to provide for workplace safety.

Safety is an integral part of the Program. CRC demands full participation, cooperation and support by all project contractors, subcontractors and their personnel. The requirements and minimum standards set forth in this program are applicable to all CRC employees, consultants, contractors, subcontractors, suppliers, and visitors, guests, or invitees on any contract work site.

CRC's goal is injury-free construction. Together, the CRC Program and the project contractors shall take every precaution to prevent incidents, protect property from damage, protect the public from injury, and maintain safe rail, pedestrian and vehicular traffic.

1.3 Implementation

All CRC Program staff, and all other agency employees who may be involved with, or visit the CRC Program will receive employee orientation and training to meet safety objectives. Other agency team members (TriMet, C-TRAN, City of Portland, and City of Vancouver) should have their safety training conducted through their designated representative prior to being assigned to the CRC Program.

CRC Program staff that may be exposed to certain types of hazards, i.e.; confined spaces, fall hazards, etc. will receive additional extensive training related to the hazards and the requirements to minimize or eliminate such hazards prior to performing tasks. CRC Program staff assigned to the light rail transit (LRT) portion of the CRC Program shall become familiar with the training requirements outlined in Appendix G to the Project Management Plan (PMP), the CRC Safety & Security Management Plan (SSMP).

2. Safety Responsibilities

2.1 WSDOT

Safety is not optional in WSDOT. No employee will be permitted to disregard applicable safety and health standards of the State Department of Labor and Industries or other regulatory agencies.

The Secretary of Transportation's Executive Order E 1033 provides direction to all WSDOT employees to adhere to the following basic safety provisions in every work activity:

- Participate in your work group safety plan (or Safety Management System for WSDOT Ferries Division employees).
- Look for ways to prevent accidents.
- Immediately identify hazards and safety concerns.
- Always use personal protective equipment.
- Promptly report all injuries.

All WSDOT employees are covered and continue to be covered by the policies and procedures in the WSDOT Safety Procedures and Guidelines Manual M 75-01, and other related policy documents. Therefore, a pre-activity safety plan is the preferred method for conducting a hazard assessment prior to performing any new field work. Office staff will conduct a hazard assessment and mitigation plan for all office environments.

Since WSDOT employees on transportation construction projects are routinely exposed to a variety of hazards, they must take adequate safety precautions at all times. The following items represent common activities that workers or work crews may encounter, and should be addressed in pre-activity safety plans as needed.

- The employee shall ensure that an area is safe before entering it for the purpose of inspection. For example, a trench greater than or equal to 4 feet deep must be adequately shored or meet the open pit requirements before entering it.
- Aggregate production and material processing plants should be safe from hazards. Corrective measures should be called to the attention of the Contractor or producer. Corrections must be completed before WSDOT personnel will be permitted to proceed with entry or work upon the premises.
- The employee must, at all times, watch for backing trucks and not depend upon hearing alone for warning. The noise of plants and other equipment often make it impossible to hear trucks approaching and the truck driver's vision area is restricted when backing a truck.

- Parking WSDOT vehicles too close to the path of construction equipment, behind standing equipment, or in other hazardous locations is not permitted.
- Where traffic is maintained in work zones, care must be taken to avoid approaching traffic when it is necessary for inspectors and others to step onto or cross the traveled portion of the roadway. Whenever possible, work activities, ingress and egress, should be conducted within the relative safety of the work zone.
- WSDOT employees working on foot in the highway right of way and other areas exposed to vehicular traffic must comply with the high visibility clothing requirements of the WSDOT Safety Procedures and Guidelines Manual M 75-01, Section 4.2, Chapter 3.
- Where the engineering crew is working adjacent to traffic, without positive barriers, the work area should be marked with proper signs and traffic control devices as shown on the appropriate Traffic Control Plan (TCP). The crew may be protected by a certified flagger or spotter as needed.
- When the engineering crew is working under the protection of the Contractor's flaggers and signs, other signs may not be needed, but a "STOP"/"SLOW" paddle should be available for use in special situations. Good communication with the Contractor and Flagger is needed to ensure that they are aware of crew activities within the work zone.
- A survey crew is typically exposed to traffic hazards and should conduct survey work under approved TCPs from the Work Zone Traffic Control Guidelines M 54-44. The Region Traffic Office will assist survey crews with TCPs for situations not covered in this publication.
- During blasting operations, employees are instructed to seek cover at least 500 ft from the location of the blasting.

In addition to the above requirements for workers and work crews, supervisors also have the following responsibilities:

- Each supervisory employee is charged with the responsibility of providing safety
- Leadership at all times and safety enforcement when necessary.
- Supervisors shall give thorough instructions to employees under their jurisdiction on the safe use of tools, materials, and equipment and the safe prosecution of work on construction projects.
- The Division of Occupational Safety and Health requires that every foreman, supervisor, or other person in charge of a crew have a valid first aid card.
- When employees are injured on the job to the extent that the services of a doctor are required, the Regional Safety Officer shall be notified immediately.
- When traffic control measures are necessary, approved Traffic Control Plans (TCPs) should be used in conformance with the Manual on Uniform Traffic Control Devices

(MUTCD), as adopted by WSDOT. Supervisors should ensure that the appropriate TCP is used and that the necessary signs, devices and equipment are available.

For more information see the WSDOT Safety Procedures and Guidelines Manual (M75-01), WSDOT Construction Manual (M41-01), and Standard Specifications for Road, Bridge, and Municipal Construction (M41-10).

2.2 ODOT

Safety is a basic business value of ODOT. Each supervisor must ensure that:

- Each employee is properly trained in, and uses safe work practices for, each task they perform.
- Proper safety equipment and apparel are available and are used, including required Personal Protective Equipment (PPE) and work in confined spaces or trenches, etc.
- Traffic control methods and devices for work zones or crash or incident response are proper and appropriate for the situation.

The Project Manager (PM) oversees Contractor compliance with the Contract requirements, such as Temporary Traffic Control. The PM will require the Contractor to complete the ODOT Safety Questionnaire for Contracted Construction Projects and submit to the PM prior to the Pre-Construction Conference.

If the PM notes a safety violation, it should be brought to the attention of the Contractor's Superintendent. If the violation is corrected, this event should be noted in the Project diary or on the General Daily Progress Report, and no further action is required.

If the PM detects or is aware of a safety violation that presents an imminent danger, and the Contractor fails to take immediate corrective action, the PM should order that work be suspended until the hazard is eliminated. Contact the ODOT Region Safety Manager for advice and guidance. This event should also be noted in the Project Manager's Diary or on the General Daily Progress Report.

All employees should be alert for potential danger at all times. Plan ahead so that you do not place yourself in dangerous situations. Look out for your safety, as well as that of other workers and that of the public. Everyone at the Project site must comply with the safety requirements of the Contractor, including requirements for hard hats, safety glasses, etc.

Monitor traffic control, devices, and movement of traffic frequently to detect unsafe conditions or situations. Assure that the Contractor is properly maintaining traffic control and devices. If a deficiency is noted, bring it to the immediate attention of the Contractor. The PM should suspend the Contractor's operations if the Contractor does not correct unsafe conditions in a timely and proper manner.

The PM must address the issue of safety when completing the Prime Contractor Performance Evaluation.

For more information see the ODOT Safety and Health Manual, ODOT Construction Manual, and Oregon Standard Specifications for Construction.

2.3 TriMet

2.3.1 TriMet Project Staff

For each construction project, the TriMet project manager is responsible for establishing specific roles and responsibilities during construction. The project manager may delegate this responsibility to a resident engineer.

All members of the construction team are responsible for familiarizing themselves with the requirements of TriMet's Capital Projects Construction Safety Program. All TriMet construction team members shall encourage and support the contractor's efforts to develop an effective safety program and to establish a safety culture on the project that involves all workers. Within assigned roles, each member of the team is responsible for assuring contractor compliance with TriMet's safety program.

It is particularly important that notice of and information related to serious incidents and emergencies be promptly communicated from the construction site to TriMet officials. Lines of communication as outlined in this Program should be followed. All on-site TriMet representatives shall cooperate and assist as appropriate in the timely notification of agency officials.

All TriMet employees are responsible to follow any and all site safety rules developed by the contractor and subcontractor.

Capital Projects and all contractors and subcontractors will comply with TriMet Operation SOP's and directives.

2.3.2 Project Director/Construction Manager

The Project Director or assigned TriMet Resident Engineer (RE) has overall responsibility for monitoring implementation of and compliance with TriMet's safety program during construction. The Construction Manager shall monitor contractor performance through TriMet Safety representatives and the assigned resident engineer and staff.

2.3.3 TriMet's System Safety Department

The TriMet Systems Safety department is responsible for ensuring that TriMet's Construction Safety Program is consistent with the agency's overall policies and needs. Safety representatives coordinate activities as required with the TriMet construction team through the Project Director or assigned RE.

On certain large projects, TriMet may employ additional safety representatives or form a construction safety team to assist in the implementation of TriMet's Capital Projects Construction Safety Program during construction. These persons supplement the efforts of the construction team and also communicate with all parties involved in TriMet's safety and loss control efforts.

A representative of TriMet's safety department may direct the Resident Engineer to issue stop work orders to any contractor or subcontractor who fails or refuses to take prompt, corrective action when given notice of noncompliance with any of the applicable safety requirements. In cases of imminent danger, the Safety Department representatives have the authority to direct the contractor to immediately suspend work until the imminent danger is removed.

If stop work orders are given to the contractor or sub contractor, a documented safety inspection performed by the TriMet Safety representative shall be forwarded to the Resident Engineer, no later than 24 hours from the time of inspection, which includes violations and deficiencies which led to the stoppage of work.

Systems Safety employees will conduct periodic audits of the general contractor and subcontractor safety documentation, which may include weekly supervisor safety meetings, monthly safety committee meetings, safety trainings, site safety inspections, and any other documents or procedures pertaining to safety on the project.

2.3.4 Project Manager/Resident Engineer

On many projects, the project manager is the RE during construction. The RE is TriMet's "eyes and ears" on the construction site and is responsible for the overall administration of the construction contract. This responsibility applies to safety management as well.

The RE is assigned to monitor the contractor's performance under the terms of the contract and take all reasonable measures to ensure compliance with it. The RE should assist as necessary to facilitate the contractor's understanding of TriMet's safety plan.

The RE leads the TriMet construction team and is expected to develop an effective relationship with the contractor so that TriMet's Construction Safety Program is implemented. The RE has the authority to 1) stop work when imminent danger exists, and 2) remove from the worksite any person or contractor who continually or deliberately violates TriMet's or the contractor's safety program requirements. The RE shall delegate authority to staff so that TriMet's Construction Safety Program is effectively administered.

In the event of an incident, the RE shall ensure that an investigation is promptly completed. In general, the RE should receive reports from the prime contractor of incidents within 24 hours. During construction, the RE is responsible for properly documenting performance under the contract. On major projects, weekly progress meetings are required.

In order to keep agency management informed, the RE must include the following information as part of the weekly minutes:

- a. Most recent data on recordable incident rate, and lost time accident rate
- b. Recap of incidents for the past week, with action taken
- c. Recap job hazard analyses of upcoming activities
- d. Safety notices of non-compliant activities issued/closed out

Other significant safety issues

2.3.5 Insurance Carriers' Safety Management Consultants

The Safety Management Consultants or their representatives will provide the following full-time, on-site services:

- a. Perform regular on-site safety surveys and prepare evaluation reports.
- b. Analyze loss trends; prepare safety and loss control reports, including an analysis of accident frequency, severity, and causes. Provide recommendations to increase the effectiveness of the TriMet Construction Safety Program.
- c. Attend and participate in safety meetings.
- d. Develop safety-training materials and assist with the preparation and delivery of the training courses for Contractor supervisory personnel.
- e. Bring any problem relating to safety that cannot be resolved at the contract level to the attention of TriMet's OCIP Administrator and TriMet's Safety Specialist assigned to the project and provide technical assistance related to the resolution of safety issues.
- f. Provide technical support including industrial hygiene consulting as needed.

For more information see TriMet Capital Projects Construction Safety Program.

2.4 Contractor

The Contractor is required to perform all necessary work, and to take precautions to maintain the health and safety of all workers and the public, who may be in the work area and for the avoidance of interruptions in the performance of the work under the contract.

The Contractor is required to have an accident prevention program. The accident prevention program of the Contractor should include the organization, staff, names of responsible individuals, meetings, training, reports, etc. It should explain the Contractor plans for meeting specific safety requirements and for eliminating potentially critical hazards on the project for all Contractor employees, Contracting Agency employees, and the public.

The Contractor is responsible for seeing that subcontractors comply with all safety regulations.

It is the contractual obligation of the Contractor for complying with all Federal, State, and local safety laws, regulations, and industry standards including, but not limited:

- WAC 296-800 (Safety and Health Core Rules) along with respective Washington Occupational Safety and Health Codes
- ORS 654 (Occupational Safety and Health) along with respective Oregon Occupational Safety and Health Codes
- 29CFR Part 1926 - Safety and Health Regulations for Construction
- 29CFR Part 1910 - Occupational Safety and Health Standards

For more information regarding the Contractor's role in safety in Washington, see the WSDOT Construction Manual (M41-01.14) or the Standard Specifications for Road, Bridge, and Municipal Construction (M41-10). In Oregon, see the ODOT Construction Manual or the Oregon Standard Specifications for Construction. For TriMet, see Capital Project Construction Safety Program.

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3. Office Safety

3.1 Slips, Trips, and Falls

- Keep floor areas clean and dry. If you see water or other liquid on the floor, clean it up and place a caution-wet floor sign out if available and needed to avoid a slip by you or by someone else. If you are unable to determine the nature of the liquid, supervisor, or janitorial crew for assistance. Absorbent walk off mats may be used near entrances where water could be carried in on shoes.
- Keep office equipment cords bundled together to avoid trip hazards with plastic ties or other restrains. Long phone cords in conference rooms should be coiled and stored to prevent trip hazards when not in use.
- Watch for and correct when possible potential tripping hazards when doing quarterly building inspections.
- Discard un-needed items to avoid clutter and trip hazards.
- Do not store unwanted boxes and furniture in hallways, unless there is a scheduled pickup time from surplus or janitorial services.
- Keep break rooms and common areas free of clutter and personal items.
- Keep cubicles clean – regularly remove empty pop cans and other unneeded items.
- Cabinet drawers left open can be a tripping hazard. File cabinet drawers should be opened one at a time and closed when not in use.
- Do not over reach or over extend. Always use a ladder to reach high places; never rely on office chairs or furniture to substitute for a ladder.
- Use handrails when ascending and descending stairs.
- Wear appropriate shoes. In inclement weather, avoid wearing high heels or slick soled shoes. Use snow/ice traction devices, i.e. Ice Trekkers, or shoe/boot chains.
- Watch where you are going. Be aware of uneven pavement and sidewalks. These should be corrected when identified if possible or reported to facilities, safety committee member, or your supervisor.
- Keep your arms free of bags and clutter when walking. If need be, make two or three trips.

3.2 Lifting/Moving Heavy Items

- Stretching and warming up muscles before lifting or moving heavy items may be beneficial.
- When lifting heavy items, keep them close to your body. Use the muscles in your legs and test the weight of the load before lifting.
- Plan your lift – where do you intend to place it? Is your pathway clear?
- Use a lifting device, such as a hand truck or rolling cart/table when the load is too large or too heavy for one person.
- Get assistance from a co-worker or supervisor whenever possible.
- Never lift and twist in the same movement. Lift the item to a comfortable level then turn the whole body before walking.
- Avoid moving heavy furniture. If the need arises, contact facilities for assistance.

3.3 Ergonomics

- All employees should have a current ergo assessment by their agencies ergonomic team member.
- Employees are encouraged to make minor adjustments to furniture and equipment in order to fit task.
- Employees will notify their supervisor of changes in their physical needs and environment and should be addressed by the agencies Human Resource or Safety Office as soon as possible.
- Consult with your supervisor when medical issues or other ergonomic factors affect employees' ability to perform their tasks. The supervisor will notify the agencies Human Resource or Safety Office of issue.
- Review ergonomic-related educational materials provided by safety and wellness committees and the programs agencies Office of Employee Safety.
- Take micro-breaks (1-2 minutes) every hour to stretch, warm up muscles, and refocus eyes.
- For more information on this topic: Ergonomic Awareness Training
- Contact the Office of Employee Safety

3.4 Safe Egress from Office Buildings

- All exits must be marked. Where an exit is not clearly visible, an exit sign shall direct occupants to the nearest exit.
- All emergency exits must be identified by lighted exit signs. Illuminated signs should be checked during quarterly building inspections verifying that all bulbs in the sign are functioning. (See Emergency Preparedness standard).
- Do not stack material, boxes, or paper in the exit path or in locations where they could impede access to emergency exits.
- Never lock required exits with a dead bolt, operating the door handle in a single motion must unlock the door. Only the front door may be locked and shall be labeled “Door to remain unlocked during business hours”.
- Any door that may be confused with an exit shall be labeled as “NOT AN EXIT.”
- All exterior exits will meet Uniform Building Codes (UBC) and American Disabilities Act (ADA) requirements. See Facilities or Safety Manager for more information and assistance.
- All furniture (file cabinets, partitions, bookcases, etc.) over six feet high, or furniture that is top heavy, must be secured to prevent it from tipping over and blocking exits or pathways in case of earthquake. Partitions cannot exceed 84” high.
- Corridors, aisles, and pathways used by the public must be a minimum of 36” (inches) wide. In special circumstances, such as interior non-public access aisles, a minimum aisle clearance of 22” may be allowed with prior approval from Facilities or a Safety Manager.
- Evacuation practice drills should be conducted at least annually.
- All employees must be trained and aware of the recommended evacuation routes and safe gathering points outside the facility.

3.5 Fire Safety

- Fire extinguishers must be located throughout the building and visibly marked.
- All employees must be told where extinguishers are located in the building and what the expectation is for their use.
- Discharged extinguishers must be promptly serviced and re-charged by the contract vendor.
- All fire extinguishers must be visually inspected monthly and the back of the service tag on each extinguisher marked with the date and initials of the CRC Program employee doing the visual inspection. A visual inspection includes: extinguisher is on hook or in

cabinet where belongs; pressure gauge is in the green zone; seal on the discharge lever pin is intact; and access to the extinguisher is good.

- Avoid accumulating and storing combustible materials, such as recycled paper and cardboard, paper forms, and aerosol cans. Make a note of flammable or combustible materials during quarterly building safety inspections.
- There must be 24” ceiling clearance on top shelves and cabinets in non-sprinkled buildings. In buildings with fire sprinkler systems, there must be 18” clearance.
- Smoking is not allowed in offices or within 25 feet of a building. Designated areas outside of buildings have been set aside for employees who smoke.
- For a list of approved electrical appliances, see APPLIANCES section.
- There shall be a 3-foot clearance (width and depth) in front of electrical panels.

3.6 Hazard Communication/Right to Know

- Employees must be trained in the hazards associated with chemical materials used on the job.
- Chemicals in the office environments must be stored according to the manufactures instructions, MSDS, or fire code. Consult with your safety manager if there are questions...
- All bottles and containers must be labeled.
- Material Safety Data Sheets (MSDS) will be available (for non-consumer products) where chemical handling or exposure exists.
- If you have questions about chemicals used in the workplace, contact your Safety Manager.
- Conduct a written annual inventory to verify that all chemicals needing MSDS’s have one.

3.7 First Aid/CPR/AED

- A First Aid kit that meets the needs of the hazards in the workplace shall be available to all employees.
- Employees need to be aware of location of first aid kits.
- First Aid/CPR/AED training is not required for most office employees when fire department or emergency medical services are with five-minute response time.

- Employees who have knowledge of First Aid/CPR/AED or hold current certifications are permitted to respond to emergencies and will be protected under the “good Samaritans,” law. Employees are not required as part of their job duties to serve as first responders.

3.8 Special Hazards

- Paper cutters must have guards.
- Guillotine paper cutters should be closed with locking mechanism in place when not in use.
- Shredders that auto-start when material is inserted in the slot can trap and shred loose clothing, neckties, hair, etc. Use extreme caution around powered equipment in any environment.
- File cabinets with multiple drawers that can be opened at the same time should be secured.

3.9 Emergency Procedures

The CRC program has developed a CRC Building Evacuation Plan to provide the evacuation procedure in case of an emergency. The CRC Building Evacuation Plan is reviewed with all CRC personnel and guests. The CRC Building Evacuation Plan will be updated throughout the duration of the CRC. A copy of the CRC Building Evacuation Plan as of April 2013 can be found in Appendix A to this document.

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4. Construction Safety

4.1 Public Convenience and Safety

Under the many special conditions encountered where traffic must be moved through or around construction operations, serious problems of traffic control can occur. Most conditions are temporary and are, therefore, dangerous and difficult to deal with because they are unexpected and not in accordance with the normal pattern of highway traffic. The Contractor is required to conduct all operations with the least possible obstruction and inconvenience to the public and to provide adequate safeguards, safety devices, protective equipment, and any other needed actions to protect the life, health, safety, and property of the public. The responsibility to comply with these requirements is the Contractor's. It is the Project Engineer's responsibility to ensure that the Contractor complies.

4.2 Safety Meetings and Safety Planning

4.2.1 Safety Meetings

Safety meetings shall be tailored for the specifics of the work area or work activity. Regardless of the working environment or the work tasks and equipment used, at a minimum, the following items should be accomplished during the scheduled safety meetings:

- Review accident/incident reports for injuries occurring within the work group and use these reports to assist in the correction of identified unsafe conditions or practices.
- Receive and consider accident prevention and loss control suggestions and improvement ideas from supervisors, employees, and employee organizations and recommend appropriate actions for injury prevention.
- Solicit employee input regarding safety concerns and issues.
- Discuss recommendations for improvement.
- Discuss and implement controls to minimize or eliminate injuries/accidents.
- Demonstrate agency concern for reducing injury and property damage accidents.

At a minimum, safety meetings will be conducted quarterly, however monthly safety meetings are encouraged. Documented meeting attendance and topics is encouraged.

4.2.2 Safety Planning

Safety awareness, risk assessment, and planning needs to be both proactive and ongoing in the dynamic work environment and changing conditions often encountered by WSDOT employees. As such, it is expected that Work Activity Safety Planning will be conducted before work begins, during the actual work as conditions change, shifting to other work, and when emergent work is

encountered. The key elements of this planning effort need to include awareness, risk assessment, and communication.

Given that WSDOT will be utilizing a proactive and ongoing planning effort in regard to Work Activity Safety Planning, different tools will be utilized that best fit the work activities and situations encountered.

A field work incident notification protocol will be developed for construction of the CRC Program to describe how information gets to the CRC project office and is distributed to appropriate staff and external groups in the event of the field work incident. Each field crew has a plan that includes safety and notification information related to situations which could emerge during their work. See Appendix B to this document for an example field work notification protocol document.

PASPs are the preferred method for planned work activities as a group or as an individual documentation is required. The CRC PASP can be found under Appendix C to this document.

4.2.2.1 Unscheduled Work Activities

When unscheduled work activities occur, conduct a safety briefing to address awareness, risk assessment, and communication before transitioning to the new activity. If practical, this briefing can include an in-person conversation, phone call, or radio call with co-worker and/or supervisor to discuss the change in work activities. Formal documentation may not be practical.

To this end, Work Activity Safety Plans may include, but not be limited to the following tools:

- Safety Stand Down
- Safety Meetings
- Pre-Activity Safety Plan
- Tailgate Meeting Checklist
- Safety Briefing

4.3 Personal Protective Equipment

The use of personal protective equipment (PPE) to reduce injuries is an important component of CRC safety program. PPE includes all clothing and accessories designed to create a barrier against workplace hazards. PPE should be considered a means of minimizing the hazards after engineering controls, administrative controls, and safe work practices have been implemented.

It is the responsibility of each Agency manager, supervisor, and employee to ensure implementation of the CRC Program's policy on PPE. It is the responsibility of each Agency to provide and maintain equipment that is adequate and is safe in design and construction.

PPE includes but is not limited:

- Head Protection
- Eye and Face Protection

- Ear Protection
- Hand and Arm Protection
- Foot Protection
- Body Protection
- Respiratory Protection
- Fall Protection

All PPE must be kept clean and in reliable condition. Maintenance and cleaning of PPE shall be in accordance with PPE manufacturer's recommendations. PPE that is damaged or deemed to be unsafe must be replaced.

4.4 Highway Operational Safety

The CRC project encompasses the states of Washington and Oregon and is subject to applicable DOT's safety requirements, federal, state and local regulations dependent on the work zone location. CRC project team members (agency, construction and consultant staff) in the field will be routinely exposed to a variety of hazards and must take adequate safety precautions at all times. Safety precautions include, but not limited to: High visibility apparel meeting FHWA standards, appropriate head and foot gear, etc. Traffic Control Plans utilized during the CRC project shall be reviewed and accepted during the bidding process and evaluated per contract specifications during the CRC project. All Traffic Control Plans must be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

4.5 Enforcement of Safety and Health Requirements

The Contractor is obligated by law to comply with both State and Federal safety regulations. Washington State regulations are administered by the Washington State Department of Labor and Industries under the Washington Industrial Safety and Health Act (WISHA). Oregon State regulations are administered by the Oregon Occupational Safety and Health Administration under the Oregon Safe Employment Act (OSEA). Federal regulations are administered by the Occupational Safety and Health Administration (OSHA) and the Mine Safety and Health Administration (MSHA) of the U.S. Department of Labor, which has jurisdiction over Federal safety requirements for pit and quarry operations up to the point where materials leave the quarry area or go into a batch plant.

4.6 Work Zone Traffic Control

The primary function of work zone traffic control is to move vehicles and pedestrians safely through or around work zones while protecting on-site workers and accommodating the contractor's construction operations. All work is to be performed by the contractor under the contractor's control and supervision. All resources are to be provided by the contractor unless the Special Provisions of the contract specifically states that the Contracting Agency will provide some resource(s), what those resources will be and how they are to be utilized. Such provided

resources will be placed in the contractor's control to be used in the contractor's operation. Any additional resources provided to the contractor during the project should be accompanied by a change order to the contract and, where appropriate, a price reduction. The requirements for traffic control will follow the standards of the Contracting Agency

It is important for the Project Engineer to ensure that the Contractor has an approved traffic control plan in place and implemented providing all necessary signs and other traffic control devices so that the traveling public is aware of all deviations from the normal traffic conditions and is furnished adequate direction and guidance to permit safe travel through the construction area.

4.6.1 WSP and OSP Assistance

Washington State Patrol (WSP) and Oregon State Patrol (OSP) troopers may fulfill two roles on a construction project. In the first case, troopers may be dispatched to participate in the Contractor's traffic control activity, perhaps as Flaggers or Spotters, or to perform rolling slowdowns. The WSP and/or OSP role will be defined in the contract provisions.

The second case of WSP or OSP involvement is in the area of enforcement. In this case, the troopers are not considered to be a State-provided resource and do not participate in the Contractor's traffic control work. When this situation occurs, WSP or OSP is present (at the Contracting Agency's expense) to provide enhanced, increased and visible enforcement of all traffic regulations, including those installed by the Contractor in the course of the work.

4.6.2 Traffic Control Management

The Contractor has the responsibility for managing traffic control and providing safe traffic control measures that are appropriate for the type of work and consistent with the requirements of the contract plans and specifications. The Contractor's traffic control work is a contract activity. Just like other contract activities, it is associated with pay items. The activity must be inspected for adequacy and conformance with the contract. Once it is performed and inspected, associated contract items must be measured and paid. Traffic management actions affect not only the Contractor's work operations, but also those of subcontractors. The process for coordinating and approving those actions must be well defined and consistent with the contract requirements.

4.7 Incident Response

In the event of an incident or accident during office or field work, the CRC project team will follow the process detailed in the CRC Procedures Manual describing how information gets to the appropriate CRC managers. Each CRC field crew has a plan that includes safety and notification information related to situations which could emerge during their field work. CRC field crews are responsible for notifying any necessary permitting, regulatory, or other responsible agency as dictated in their scope of work.

For incidents involving the LRT portion of the CRC project, CRC project team members will follow the process detailed in the CRC SSMP.

Appendix A
CRC Building Evacuation Plan

CRC Building Evacuation Plan

1. All CRC staff and visitors must evacuate the building immediately when a fire alarm is activated, using the North and South stairwells. Do not use the elevators. (See Figure 2.2 and Figure 2.3 below for a diagram of the evacuation plan.)

1.1. The egress map in the elevator lobby shows the direction to the two stairwells from the lobby.

- Stairwell #6 is the North stairwell, just north of the bathrooms.
- Stairwell #7 is the South stairwell, just south of the lunchroom.

1.2. The two doors to the elevator lobby will automatically be unlocked in case of emergency.

1.3. For those with a disability, please wait at the landing area of the two stairwells for assistance descending the stairs.

1.4. The designated sweepers will walk around the office to ensure that all CRC staff has evacuated the office. The Front Desk staff shall take the visitors log, a copy of the staff roster, and CRC emergency contact list with them to the designated meeting area (see #3 below).

1.5. All visitors must sign in and sign out on the visitors' log at the front desk. CRC staff shall be responsible for escorting their visitors out of the building in the case of an emergency.

2. Proceed to the first floor (street level) and exit the building.

3. All CRC staff and visitors are to meet at the designated meeting area, which is ***the vacant lot one block north of the Vancouvercenter building, across 8th Street***. The Key Contacts and/or designated sweepers will meet with all evacuees and conduct a head count in this waiting area. Do not leave this waiting area until you have been authorized to do so by the designated Key Contacts.

3.1. The Key Contacts are as follows:

- WSDOT – Michael Williams (alternate is Keith Daly)
- ODOT – Aaron Myton (alternate is Marilyn Webb)
- Consultants – Dann Horowitz (alternate is Lyn Wylder)
- TriMet – Marc Guichard
- C-Tran – Audri Bomar

3.2. The designated 3rd floor sweepers, Keith Daly and Devin Reck, will meet with Key Contacts of WSDOT and ODOT to conduct head counts.

3.3. The designated 2nd floor sweepers, Lynn Rust and Frank Green, will meet with Key Contacts of WSDOT and ODOT to conduct head counts.

3.4. The Key Contacts will call/contact the Washington and Oregon Project Directors and General Engineering Consultant Lead (GEC Lead).

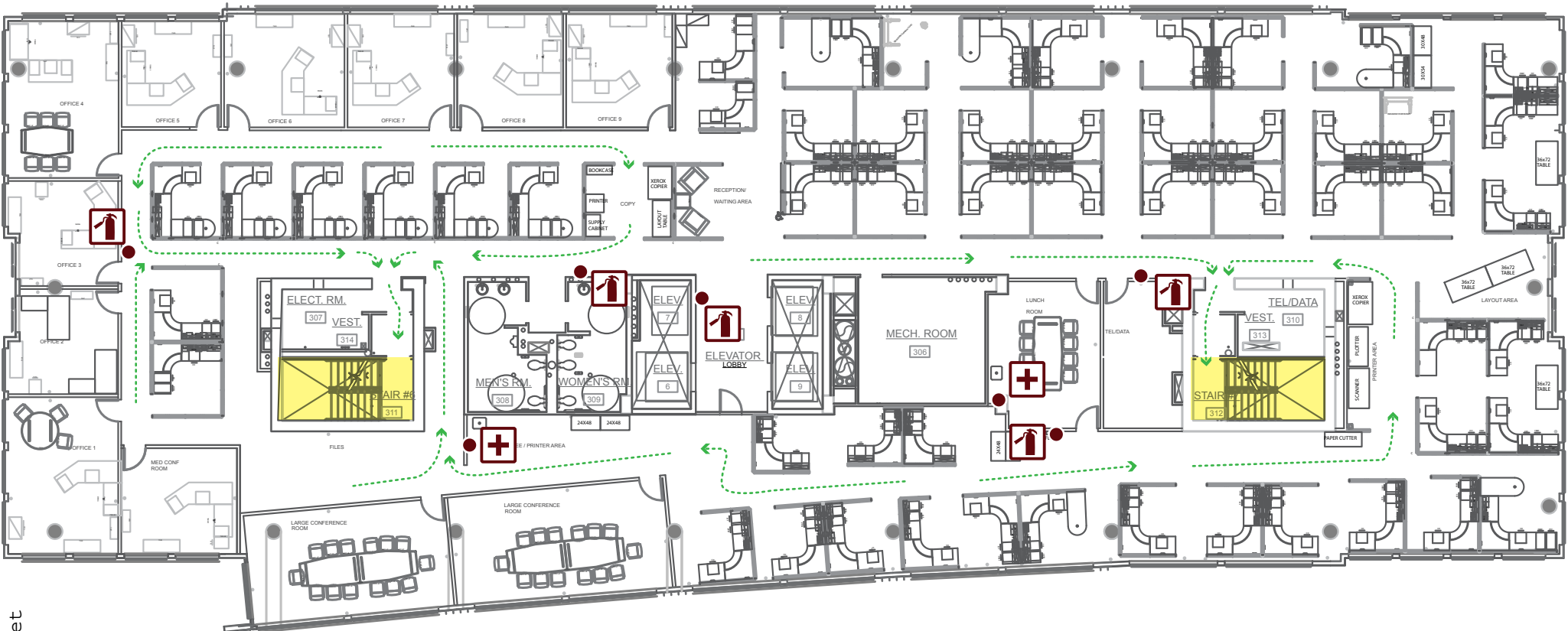
4. The Key Contacts will give authorization to return to the building.

North
←

Washington Street

8th street

8th Street



Fire Extinguisher



First Aid Kit

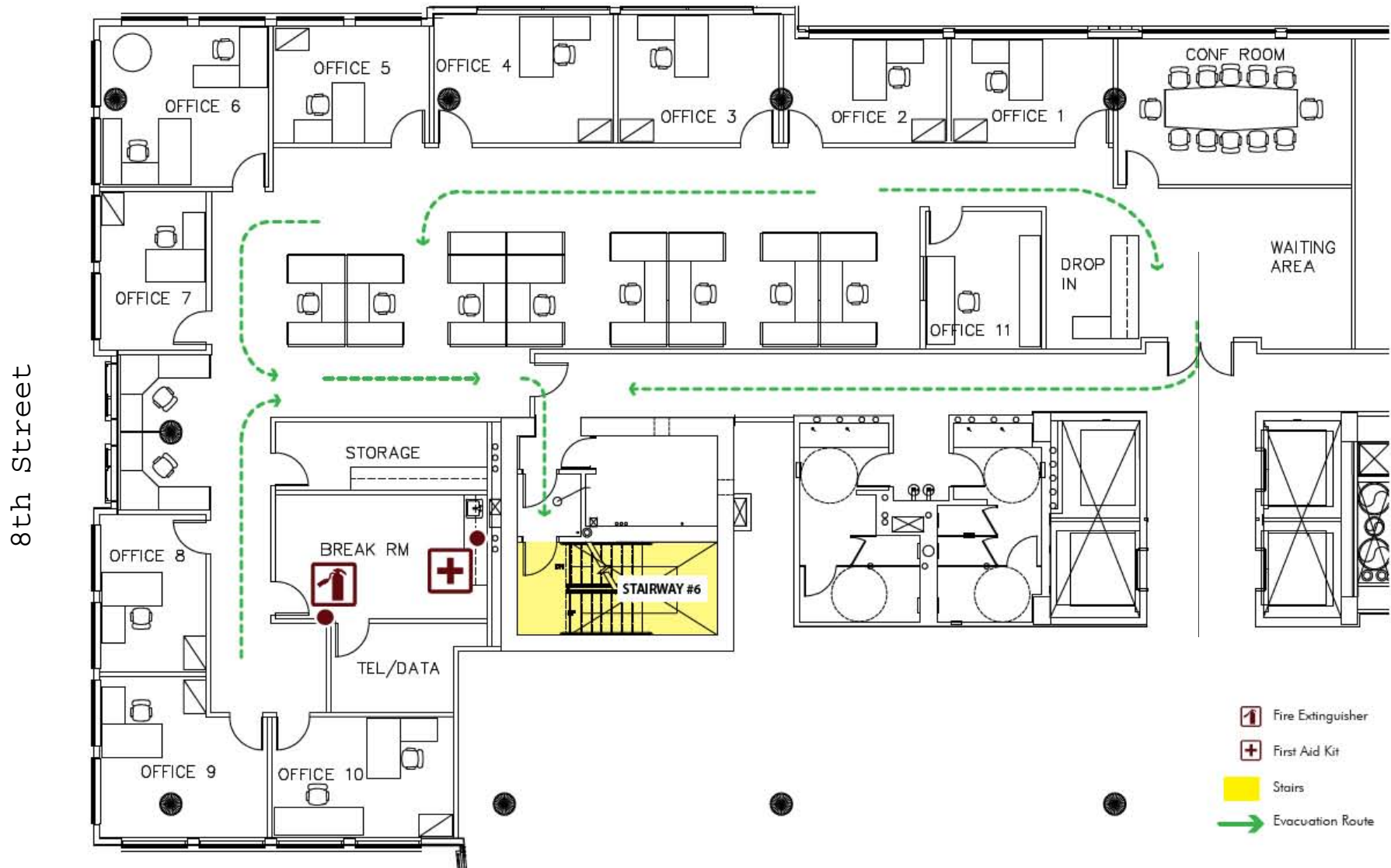


Stairs



Evacuation Route

Figure 2-3. Second Floor Evacuation Plan



CRC emergency evacuation route and meeting place



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Appendix B
Field Work Incident Notification Protocol

In the event of a utility incident during field work, the following protocol describes how information gets to the CRC project office and is distributed to appropriate staff and external groups. Each field crew has a plan that includes safety and notification information related to situations which could emerge during their work. Field crews are responsible for notifying any necessary permitting, regulatory or other responsible agency as dictated in their scope of work, contract and/or project bid documents. Field crews are also responsible for notifying in-office field staff as described herein.

After an incident with a utility occurs:

1. **Field crew** takes necessary action related to their work plan and the situation at hand.
2. **Field crew** personally, not by voice mail, notifies one in-office **field staff** on the following list:
 - CRC Design Engineer: Daniel Teran (desk 360-816-2205; cell 360-690-5664)
 - Field Operations Manager: Mark Degenhart (desk 360-816-8876; cell 360-601-8913)
 - Assist. Hwy Engineering Manager: Devin Reck (desk 360-816-8879; cell 360-601-0457)
 - If none are available:
 - i. During business hours, contact the Front desk (360-737-2726 or 503-256-2726 or Toll-Free 866-396-2726)
 - ii. Outside of business hours, leave a message on the Field Operations Manager's cell phone and continue calling field staff hourly until one person to person notification has been achieved
3. **Field staff** notifies other office staff including **discipline specialists, leadership and communications**. Notification should be made to a person(s) in each applicable category. **Field staff** and **discipline specialists** determine any external notifications necessary (i.e. traffic management centers, regulatory agencies and/or affected jurisdictions) and coordinate with **leadership**.

Discipline specialists: Task Lead and Expert

- *Archaeology:* Tom Becker, Archeologist/Cultural Resource Manager (desk 360-816-8862)
- *Environmental (permit violation, hazardous material, erosion control, spills, etc):* Steve Morrow, Environmental Permitting Specialist (desk 360-816-8892; cell 360-624-5378)
- *Media (in the event of media on-site without advance notice):* Karyn Criswell, Communications Public Outreach (desk 360-816-2170; cell 360-921-0066)

Leadership:

- Mike Niemi (desk 360-816-8884)
- Lynn Rust (desk 360-816-2177)

Communications:

- Karyn Criswell (desk 360-816-2170; cell 360-921-0066)
- Dee Hidalgo (desk 360-816-2168; cell 480-225-5712)

4. **Field staff, leadership or communications** to notify State or City officials of incident with utility within their right-of-way. **Field staff** and **discipline specialists** determine any external notifications necessary (i.e. traffic management centers, regulatory agencies and/or affected jurisdictions).

- WSDOT: (Dave Bellinger desk 360-905-2190)
- ODOT: Kermit Meling (desk 971-673-6225; cell 503-621-4704)
- City of Vancouver: Matt Ransom (desk 360-487-7707; cell 360-487-8625)
- City of Portland: Dan Layden (desk 503-823-2804; PBOT Office 503-823-6868)

EXAMPLE

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Appendix C
CRC Pre-Activity Safety Plan



Pre-Activity Safety Plan

Field Exploration

This plan attempts to identify as many hazards as possible for various activities associated with the WSDOT Columbia River Crossing’s field exploration projects. Remediation/precautionary measures are listed below for each identified hazard. The list is not all-encompassing as new scenarios are ongoing.

Description of specific work activity (if needed): _____

Hazard	Remediation
Traffic	<ul style="list-style-type: none"> • Be aware of traffic. Do not enter roadway. Do not crouch or sit on side of road. Do not sit on traffic barrier. Keep your distance from the barrier. • Drive defensively • If you are going to be on the roadway, a traffic plan will be required, as well as another Pre-Activity Safety Plan. • Wear required PPE when on the roadway.
People in R/W	<ul style="list-style-type: none"> • Use caution in R/W of people in the R/W. When at all possible, travel with another person.
Needles, Hazardous materials	<ul style="list-style-type: none"> • Be aware of and stay away from needles and other materials in the right of way. Do not pick things up.
Slip, Trip, and Fall Hazards	<ul style="list-style-type: none"> • Be aware of terrain and weather conditions. Wear appropriate footwear. Open trenches.
Flying objects	<ul style="list-style-type: none"> • Be aware of flying objects from traffic. Keep your distance when possible. Wear safety glasses.

General Equipment Required

- First Aid Kit
- Flares/Triangles
- Emergency Contact Phone List
- _____
- _____

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