Caltrain RWP
Training
2016
Today’s Objectives

• Provide training necessary for RWP Qualification and abbreviated training on Exhibit F of the MOW OTS.
• Determine what is expected from individual roadway workers
• Definitions
Today’s Objectives Cont.

• What is “FOUL”
• What is an Employee In Charge or (EIC)
• Job Briefings
• Explain different types of track
• What to do when trains are passing
• How to stop a train in an emergency
• Working Next to an Adjacent Live Controlled Track.

• Explain different types of protection and when needed-
  • Train Approach Warning (watchman)
  • Inaccessible Track
  • Track and Time
  • Form B
• Pass exam with a 90%
Abbreviations

OTS - On Track Safety “Protection”
MOW - Maintenance of Way
TASI - TransitAmerica Services Inc.
FRA - Federal Railroad Administration
CPUC - California Public Utilities Commission
JPB - Joint Powers Board
MP - Mile Post
MT - Main Track
CP - Control Point
TAW - Train Approach Warning
EIC - Employee in Charge
EXAM FAQ’s

Can notes be used during the test?
• Notes can be utilized during the test

Is this an individual or group test?
• The person next to you can not be used for help on your test
• Cheating will result in removal from class
Federal Law
214.303 Railroad On-Track Safety Programs (Generally)

(a) Each railroad shall adopt and implement a program to provide protection to roadway workers

(b) Each railroad’s program shall include monitoring procedures
Federal Law
214.309 On-Track Safety Program
Documents

(a) Rules and procedures shall be maintained together in one manual and be readily available to all roadway workers

(b) Each roadway worker in charge and lone worker shall be provided and maintain a copy of the program
On-Track Safety Program
Documents

JPB Contractors should be issued a copy as part of their bid process with the JPB. TASI contractors will be issued one as needed, however the EIC will always have a paper copy that can be referred to while on duty.
Federal Law
214.313 Responsibility of Individual Roadway Workers

(a) Each roadway worker is responsible for following the on-track safety rules of the railroad upon which the roadway worker is located.

(b) A roadway worker shall not foul a track except when necessary for the performance of duty.

(c) Each roadway worker is responsible to ascertain that on-track safety is being provided before fouling a track.

(d) Each roadway worker may refuse any directive to violate an on-track safety rule (good faith challenge).
Good Faith Challenge

• EIC must understand that any worker may file a right to challenge “in good faith” without retaliation or retribution from their employer or Caltrain

Right-To-Challenges

1. On-track safety- To be used when you believe the On-Track Protection provided is insufficient
2. On-Track Equipment does not comply with FRA regulations or has a condition that inhibits its safe operation.
Good Faith Challenge

An individual that files a Good Faith Challenge must not be forced to do the task until the issue is resolved. However the individual may continue to work on tasks not related to the challenge.

• The EIC must have 3 paper, physical, copies of the Right To Challenge form in his/her rule book. A copy must be made available to those who request it.
CALTRAIN ON-TRACK PROTECTION / RMM SAFETY GOOD FAITH CHALLENGE FORM

<table>
<thead>
<tr>
<th>Employee Name:</th>
<th>Position:</th>
<th>Date:</th>
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<tbody>
<tr>
<td>Employer:</td>
<td>Position:</td>
<td>Date:</td>
</tr>
<tr>
<td>Work Location:</td>
<td>Track #:</td>
<td>Mile Post:</td>
</tr>
<tr>
<td>OTS procedure applied or lacking at work locations / RMM Equipment Safety Issue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caltrain’s Safety/GCOR not being complied with, give Rule # if known:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reason for Challenge:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee’s Signature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determination by EIC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EIC Signature</td>
<td></td>
<td></td>
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<tr>
<td>Determination by Employee’s Supervisor</td>
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<td></td>
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<tr>
<td>Employee’s Supervisor’s Signature</td>
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</tbody>
</table>

INSTRUCTIONS: READ the Caltrain ROADWAY WORKER PROTECTION GOOD FAITH CHALLENGE AND DISPUTE RESOLUTION PROCEDURE IN THE OTS MANUAL!
The employee making challenge shall complete this form, sign and date it, and give it to the EIC who shall document his/her determination, sign and date it, and give it to the employee’s supervisor who shall document his/her determination, sign and date it, and forward it to the Caltrain Safety Officer or his/her designee. If immediate resolution cannot be reached, the EIC must contact the San Jose Control Center who will contact the Caltrain Safety Officer or his/her designee.
Where should we start?
With YOU!!!
Because you are a Roadway Worker!!!!

ROADWAY WORKER – any employee of a railroad, or of a contractor to a railroad, whose duties include inspection, construction, maintenance or repair of railroad track, bridges, roadway, signal and communications systems, electric traction systems, roadway facilities or roadway maintenance machinery on or near track or with the potential of fouling a track, and flagman and watchmen/lookouts as defined in this section.
What if I am working with a group?

**ROADWAY WORK GROUP** - Two or more Roadway Workers organized to work together on a common task.

You are still a Roadway Worker, however now part of a group!!!
How am I protected from being hit by a train?

TASI Employees will provide you On-Track Safety!

On-Track Safety - A state of FREEDOM from the danger of being struck by a moving train or other railroad equipment, provided by operating and safety rules that govern track occupancy by personnel, trains and on-track equipment.
What is an EIC?

**Employee In Charge (EIC)** - A qualified employee who is assigned the duty of being responsible for the protection and direction of his/her self and/or co-workers in any engineering work activity.

**TASI EICs** – Any full rules qualified employee who will be providing On-Track Safety to a work group. Any of the following could be an EIC for you or your group.

- Flagman
- Foreman
- Signal Maintainer/Inspector/Technician
- Watchman
- Manager
- Track Inspector
Employee In Charge

Employee in Charge, “The EIC” MUST:

1. Make sure a full job briefing takes place.
2. Ensure everyone in the work group is wearing **Safety Glasses, Hard Hat, Work Boots** and **Safety Vest**.
3. Ensure everyone possesses an **ID Card**.
4. Make sure everyone in the work group fully understands the On-track Safety being provided.
5. Must carry **Right to Challenge** forms.
6. Must assess roadway workers for fitness for duty.
Employee In Charge
(EIC)
There Can Only Be One!
When do I need On-Track Safety?

**FOULING A TRACK** - The placement of an individual or an item of equipment in such proximity to a track that the individual or equipment could be struck by a moving train or on-track equipment, or in any case is within **15 FT** of the field side of the nearest running rail.

*If you are within FIFTEEN FEET of a track you are in the “foul” or “fouling”.

*15FT is a Caltrain requirement over and above the FRA minimum safety standard*
Roadway Workers Must Have A TASI EIC present If Work Is Done Inside The 15 Ft. Zone

Outside of 15 Ft., Protection for work will be designated by appropriate Site Specific Work Plan (SSWP).
If your work group is here
This would be the nearest running rail
If your work group is here
This would be the nearest running rail
Fouling a Track

- The 15 foot foul zone applies to **ALL** tracks
- This training does not authorize you to be within the 15 foot foul zone without a TASI EIC present.
Exception

Passenger Station Platforms

DO NOT CROSS YELLOW LINE!
Exception

Passenger Station Platforms

Employees can work on passenger station platforms within the 15 ft. foul zone without protection if:

1. There is no potential to cross the yellow line toward the tracks under any circumstances
2. No heavy machinery or equipment is being used

Situations 1 and 2 above would require a TASI EIC be present if they existed.
Exception

Passenger Station Platforms

OK To Work on station side of Yellow Line Here

CANNOT WORK ON TRACK SIDE OF YELLOW LINE
Why do I need to worry about any of this???

Federal and State Law Compliance

Your job site could be visited by a number of government agencies.

- Federal Railroad Administration (FRA)
- California Public Utilities Commission (CPUC)

These violations can be issued directly to the person, as well as the employer, agency, etc. They are $$$ violations!
Compliance with the MOW On-Track Safety Rules

- TASI safety assessment teams, safety and rules personnel, project representatives WILL conduct unannounced and unscheduled assessments.
- On-site contractor and JPB Project Managers will be notified of assessment findings.
Compliance with the MOW On-Track Safety Rules

- TASI safety, management, project representatives are authorized to stop contractor operations where there is imminent jeopardy to the safety/health of personnel, or where damage to equipment, property, customers or the environment seems highly probable.

On-Time Performance, Project Timelines and Budget Constraints will not be a factor in ensuring safety on this property.
Compliance with the MOW On-Track Safety Rules

• Contractors must comply with applicable FRA and OSHA regulations, EPA or equivalent state environmental regulations, and local fire and building codes and rules within this document.

• It is not the intent of this program to teach FRA or OSHA rules, nor is it the intent of TASI EICs to ensure the contractor understands what applies.

• It is your company’s responsibility to make sure that YOU are in compliance with these rules.

• The training provided here is to make contractors aware of the OTS requirements as well as Exhibit F.

• For further details, refer to Exhibit F of the MOW-On-Track Safety Rules.
Audits: JPB, TASI, CPUC & FRA

Two types of audits:

EIC Audit:

• On-Track Safety Manual: At location & current?
• Job Briefing performed properly?
• Properly establishing on-track safety?
Audits: JPB, TASI, CPUC & FRA

Work Group Audit:

- Everyone has on proper required PPE for task performed?
- Everyone on job site has proper job briefing information. The contractor will need to complete the job briefing forms during the job briefing.
- Everyone in the work group has their RWP ID Card and it is valid?
- Does the work group have their SSWP?
- Has the work group completed their daily safety meeting?
What types of track are there out here?

– Main Track
  • “Controlled”

– Other Than Main Track
  • “Non-controlled”
What types of track are there out here?

– Adjacent Tracks
  • Two or more tracks within 25 feet of each other

– Adjacent Controlled Tracks
  • A controlled track whose track center is spaced 19 feet or less from the track center of the occupied track.
Main Track

- Track that requires authorization to occupy
- Dispatcher gives permission/CONTROLS
- Caltrain station track
- Signalized territory
Other than main tracks

- Trains and equipment can move without permission from the dispatcher/ NON-CONTROLLED
- Required protection - make track inaccessible
- Non-Signalized

Example Locations on Caltrain
- San Francisco (yard)
- South San Francisco
- Redwood Junction
- Dumbarton
- CEMOF
Other than main tracks
Adjacent Tracks

Tracks are next to each other
Adjacent Tracks

A TASI EIC Must Be Present If Work Is Done Inside The 15 Ft. Zone
Adjacent Controlled Track

When working on a track adjacent to a controlled live track, the EIC will establish on-track safety as necessary to protect against trains passing on the adjacent controlled live track.
Remember...
Any Time
On Any Track
In Any Direction
Is Train Time

STAY ALERT!
What type of On-Track Safety will TASI EICs provide?

Train Approach Warning (TAW)
- Watchman

Positive Protection
- Track and Time (T&T)
- Track Bulletin Form B (Form B)
- Track Bulletin Form C
  - (Form C Tracks Out Of Service)
Train Approach Warning
TAW
Train Approach Warning (TAW)

Train Approach Warning will be provided by a Watchman who will be an employee of TASI!!

**Watchman**- Warns workers of approaching trains.

- The watchman must give enough advance warning for you to be in the clear at least 15 seconds prior to the arrival of the train.
- When using a watchman within 15’ of the nearest rail, only **MINOR TASKS** may be performed:
  - Measuring
  - Marking
  - Counting
  - Inspecting
Train Approach Warning (TAW)

• Every worker who depends on a Train Approach Warning (TAW) for warning shall maintain a position that will enable them to receive the warning.

• Watchmen shall communicate that a train is approaching by a means that does not require workers to be looking in a particular direction and can be detected regardless of noise or distraction of work.
What is TAW?

Watchman/TAW

• Utilized inside and outside the 15 foot safety envelope (Minor Work)
• NOT for machinery / equipment that could enter the 15ft. Foul zone
• Watchman must not do ANYTHING ELSE!
What does a Watchman Wear?
How is Train Approach Warning (TAW) Applied?

*Sight Distances vs. Reaction & Advance*

**Reaction times**

- “You must be in the place of safety a minimum of 15 seconds prior to the arrival of a train”
- To arrive at the 15 seconds you must consider the following:
How is the sight distance determined? It is based on the distance traveled at a certain speed!

<table>
<thead>
<tr>
<th>Maximum Authorized Speed in MPH</th>
<th>Minimum Separation Upon Reaching Place of Safety</th>
<th>Maximum Authorized Speed in MPH</th>
<th>Minimum Separation Upon Reaching Place of Safety</th>
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<td>45</td>
<td>990</td>
<td>90</td>
<td>1,870</td>
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</table>

Expected sight distance at 75 MPH: 1,650 feet.
How is Advanced Watchman Used with Train Approach Warning?

Advance Watchman-

• Extends “view” of watchman with the gang.
• Can use as many as necessary to obtain adequate sight distance provided that all are properly qualified and equipped to act as a watchman. Contractors are not permitted to act as Advanced Watchman.
How is Advanced Watchman Used with Train Approach Warning?

• Equipment includes watchman equipment plus two (2) red fusees (flares) and a red flag.
• If next watchman does not acknowledge signal, then red flag must be waved to have train perform an emergency stop.
What if I have hearing loss or hearing problems?

• Be mindful of surrounding noises that could impair your hearing such as a plane taking off or a compressor running near by.

• If you get involved in what you are doing, and do not acknowledge the warning from the watchman, the train whistle could be the LAST sound you ever hear.
Train Approach Warning Review

- NO EQUIPMENT!!!
- MUST KNOW WARNING SIGNAL
- MUST KNOW WHERE TO CLEAR
What Can Happen!
Positive Protection

Track and Time

Form B and Form C
What is Positive Protection?

Positive Protection - A method of establishing working limits to prevent trains or on-track equipment from entering a track segment—“Exclusive Track Occupancy”

- Must have this type of protection to work within 15’ of the nearest rail WITH EQUIPMENT that has the potential to foul. On Track or Off Track makes no difference.
Types Of Positive Protection

**Track & Time (T&T)** – Working limits between control points given by the dispatcher.

**Form B** – Paperwork given to train crews and track employees before start of shift notifying them that a Flagman is positioned to control all movements through an area.

**Form C** – Paperwork given to train crews and track employees before start of shift notifying them that the track is out of service.

If there is a problem trains stop “Positive Protection”
Positive Protection - Track and Time

- **Track & Time (T&T)** - Is a form of protection in which the dispatcher gives an EIC/Flagman a certain “amount” of time to work between two *Control Points or Working Limits.*

- Trains cannot enter the work zone during this time
- Used mainly for short durations
- Large sections of track
- Can use machinery or equipment
What is a Control Point?

**Control Point** - The location on the track with a signal that is controlled by the dispatcher

- Called “CP” for short

Your (T&T) limits will be between 2 control points

Example: CP Geneva to CP Brisbane
A train cannot pass the signals until the work group has cleared the track.
Positive Protection- FORM B

• This is On-Track Protection upon which trains, on-track equipment and personnel must be authorized into a Work Zone by a **Flagman**.

• All trains must stop at the limits until given permission from the Flagman to enter the area.

• This is in writing and given to train crews, dispatchers, and MOW (Track/Signal Employees) at the start of their shift in the form of a bulletin.

• Used most frequently for major projects with work on or near the tracks.

• Can use equipment within Form B limits.
• A train cannot pass the red flags without permission from the EIC/Flagman.
Form C, a.k.a “Track Out of Service” – Track is removed from service. Done in writing and identified by times and by control points- i.e. 8am-12am between CP Scott and CP Sierra

Trains **cannot** use out of service tracks without talking to the EIC (Track might be removed)

Primarily used for major track work during 55 hour work windows Friday night to Monday morning. I.E. Replacing road crossing, track panel install, etc..

Can use equipment with Form C
A train cannot enter the track out of service area without permission from the EIC/Flagman.
Review Positive Protection

Track and Time
Form B
Form C

Can Use Equipment With All!
The track we will be working on is Non-Controlled Track. How does TASI provide protection on these tracks?

Non-Controlled Does Not Mean, Non-dangerous!
Non-Controlled/Other than main tracks
1. Flagman with instructions and capability to hold all trains and equipment clear of the working limits;

2. A switch or derail lined to prevent access to the working limits, tagged, spiked, and secured with an effective locking device.

3. A discontinuity in the rail (remove or cut rail)

4. A remotely controlled switch that’s blocked by dispatcher
So, what about the track next to us? Is there any protection?
Protection on Adjacent Track

To determine if authority or protection is required on adjacent tracks, the EIC must consider factors such as the following:

1. Right-of-way conditions involved in reaching the identified place of safety
2. Curvature of the track
3. Sight distance
4. Speed of passing trains
5. Spacing of workers and equipment in the work group
Protection on Adjacent Track

6. Background noise

7. Will on-track equipment be used next to an adjacent live track?

8. Will workers be on the ground working near the on-track equipment while trains are passing on the adjacent track?

9. What speed will trains be permitted to pass the work site at?

10. Will the work take place between two adjacent controlled live tracks?
Protection on Adjacent Track

Operators of on-track equipment working adjacent to a controlled live track will place a standard sign reading “Danger – Live Track” across the entrance/exit on the live track side of their machines if so equipped.
FRA Part 214.336

Effective date of July 1, 2014
What rule is changing?

FRA rule 214.335 (c) states “Roadway work groups engaged in large-scale maintenance or construction shall be provided with train approach warning in accordance with 214.327 for movements on adjacent tracks that are not included within working limits. Part 214.336 replaced this rule in its entirety on July 1, 2014.
Why the change?

New rule specifies more comprehensive on-track safety procedures that must be adopted and followed to protect roadway workers working with on-track equipment from the movement of trains or other on-track equipment on an “adjacent controlled track”.

Caltrain
Who does this apply to?

Roadway workers **who are working with on-track equipment** on an occupied track with at least 1 of the roadway workers on the ground.

If you are **working with on-track equipment** and next to an adjacent live track that is within 19’, working limits will need to be established by the EIC on the adjacent track.
Now that I know about protection, and job responsibilities, how do I know what my protection is?
TASI Job Briefing:

Federal Requirements Which Can Be Audited By- JPB, TASI, CPUC & FRA

• Who is the EIC
• Your working limits or location
• The type of protection, time limits, what track if multiple, track speed, place of safety, method of warning, etc.
TASI Job Briefing Cont.

Other things to include-

- What to do in an emergency - who is first-aid/CPR qualified, 911?
- Nearest hospital
- If known in advance that conditions are likely to change
Job Briefings Cont.

Changing Conditions-

- Anytime conditions change all workers on site must be notified via a new job briefing.
- Recommended to be out of “foul” zone or on-track safety envelope during re-briefing.

Examples of changes:
Changes in personnel
Changes in weather conditions
Assignment changes; and
Changes of equipment
Changes in PROTECTION
It is not TASI’s responsibility to audit the quality of your work. However, it is their responsibility to ensure compliance with the safety rules and SPTMC. If they notice something not in order, their instructions are to stop the work and call a Supervisor.
Pocket Job Briefing forms are used to document the briefing given by the EIC.

TASI does not provide the books to contractors, however sheets are available for copying.
TASI employees use a job briefing sheet which helps the Employee remember and document all that needs to be covered.
Contractors need to do their own briefings as well!!!!

Contractors are required to give job safety briefings on a daily basis and document those briefings. TASI will give a briefing which includes the type of On-Track protection in effect.
Contractors Job briefings

- Contractor briefings should include the following, but not be limited to:
  - Tasks to be accomplished;
  - Break each task into step by step procedures;
  - Discuss potential hazards;
  - Determine tool, equipment, material needs and applicable safety rules and procedures;
  - Establish the 15’ Circle of Safety around mobile construction equipment and tool operations.
Contractor Job Safety Briefings Cont.

**Explain job tasks to workers:**

- What is to be done;
- Why it is to be done;
- Where it is to be done;
- How it is to be done;
- Who is to do what tasks/ portions of tasks; and
- What safety precautions are necessary

For further information on job briefings, please reference Exhibit F.
Emergencies

• The violent movement of arms will be taken as an indication by train Engineers to stop. Refrain from using this gesture unless you are in fact trying to stop a train and do not remember the approved signal which will be covered later.
• The violent movement of arms can be used to stop work equipment if discussed in the briefing and only if it will not be mistakenly interpreted by the train Engineer as a stop signal.

The correct hand Signal to stop a train!
Emergencies

If an emergency arises, your TASI representative will make the necessary calls. In the event they are unavailable, and your assessment indicates a need to stop the movement of trains and other on-track equipment the number to call is:

**TO STOP TRAINS IN EMERGENCY: 1-800-872-4660**

- If you have a need to stop a train, you can accomplish this by swinging your hard hat in a circle motion while standing away from the tracks or waving your arms violently in the event you do not remember the approved signal.

**FOR POLICE, FIRE, MEDICAL EMERGENCY: 1-877-723-7245**

- **REMEMBER** – It may take a train up to 1 mile to stop. There are risks to passengers, crew members, and damage to the train so please ensure if you make a decision to stop a train, you have a true emergency.

### Approximate Stopping Distance

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<th>Time (sec)</th>
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<tbody>
<tr>
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<tr>
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<tr>
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<tr>
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<td>6-12</td>
</tr>
<tr>
<td>&gt;5280</td>
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</tbody>
</table>

At 55 MPH
Electronic Device (FRA)

Electronic device – Anything other than a stand alone timepiece (watch), railroad supplied radio or other Railroad Authorized Device (MOW-OTS 2.21)
NO PERSONAL CELL PHONES ARE PERMITTED ON THE CALTRAIN ROW AT ANY TIME

- Company Issued Cell Phones can not be used within 15ft. of the tracks unless being used to communicate to the dispatcher, or in two way mode with another employee involved in the same task.
- Personal cell phones that are paid for by your company are still considered PERSONAL cell phones
Why are the Cell Phone Rules So Strict?
2008 Chatsworth Train Collision

• Metrolink commuter train collided head-on with a Union Pacific Freight train.

• 25 deaths
  • Metrolink train ran through a red signal before entering a section of single track where the opposing freight train had been given the right of way by the train dispatcher.

• Train ENGINEER was distracted by text messages he was sending while on duty.
Bottom Line!!!

Zero Tolerance
Do not use a personal cell phone or a company provided cell phone for personal business while on the Caltrain Right of Way.

IT WILL NOT BE TOLERATED
Useful Information
When Trains are Passing

• Stop all work
• Make note of the locomotive number and train number
“Roll by” - Face train when it passes

- Watch for any flying debris or dragging materials
- Watch underside of train as it passes for anything lodged under the train
- Look for glowing metal as an indicator of excessive heat, wheel journals, brakes, etc.
“Hot Rail” = Train is Coming

• **Hot Rail** is a universal term on railroads nationwide to tell co-workers that a train is approaching.

• The sign is to tap the top of your hardhat with your palm in an up and down motion
Exhibit F
Injury Reporting/Illnesses/Property and Equipment Damage

• Promptly advise TASI representative of work related injuries/illnesses. TASI will report these to the CCF MTO (Central Control Facility; Manager, train operations) immediately. Each contractor is responsible for meeting OSHA and FRA reporting and recordkeeping requirements.

• All cases of damage to the railroad or railroad property needs to be promptly reported to a TASI representative.

• TASI vehicles or equipment are not to be used by third party contractors. TASI employees are not to use third party contractor vehicles or equipment.
General Requirements Cont.

- Maintain a 15’ clearance from the nearest running rail of any track unless your work requires you to enter this area and you have specific instructions from the responsible TASI project representative.

- Maintain a 25’ clearance from switches. Never operate switches unless authorized or directed by a TASI representative.
What type of Personal Protective Equipment (PPE) am I required to wear?

- Hard Hats
- Safety Shoes (Boots- Steel toe or composite)
- Eye Protection
- Safety Vest (Reflective Orange)
- Hearing and Respiratory Protection
- Appropriate Wet Weather Gear
- Appropriate Hand Protection

The following slides outline in detail the specific requirements with respect to PPE.
Safety Shoes (Boots)

301.7.1: Defined Heel

All employees, except office workers are required to wear footwear with a defined heel. A “defined heel” means that the back of the heel is at an approximate right angle from the sole of the shoe and from the ground when standing. The front of the heel must not be at an angle of less than 45 degrees from the sole of the shoe to the ground. Footwear with heels commonly called “riding heels” are not appropriate footwear and do not satisfy this requirement.
Safety Shoes (Boots)

Safety shoes need to be above-the-ankle, lace-up boots with a well-defined heel, and safety toe. The safety toe may be steel or composite material.

This is everyone in this room. YOU ARE REQUIRED TO COMPLY
Hard Hat

- **Hard Hat** – Worn at all times, except when in office areas, or performing office related activities, in highway vehicles, or in enclosed cabs with doors and windows closed. All hard hats will have ANSI Z89.1 on the inside. “Cowboy hat” type hardhats are not to be used on-site.

- Every hard hat conforming to the requirements of ANSI Z89.1-1997 must be appropriately marked to verify its compliance. The following information must be marked inside the hard hat:
  - The manufacturer's name or identifying mark
  - Date of Manufacture
  - The legend, "ANSI Z89.1"
  - The Type and Class Designation
  - The approximate head size range
Eye Protection

Eye protection needs to be worn at all times except when in office areas performing office tasks or when in highway vehicles on paved roads or with windows up. The marking ANSI Z87+ appears on one of the temple bars of items of approved safety eyewear.

Safety glasses are to have permanently affixed side shields

Reflective/mirrored lenses are not to be worn when on-site.

Contractors need to have guidelines in place as to what tasks/conditions require the upgrading of eye protection from safety glasses to goggles or, in more severe eye hazard situations, to goggles under a face shield.
Safety Vest

• ANSI level II or III orange, retro-reflective work wear needs to be worn by engineering contractor personnel or employees working on the right of way at all times. Only TASI EICs are permitted to wear florescent green vests.
Rain Gear, Gloves, and Jewelry

- Appropriate wet weather gear should be provided and worn when needed.
- Appropriate hand protection is *required* to be worn when actively engaged in work activities.
- No jewelry will be worn that could pose a risk to the employee and present a hazard around machinery or electrical lines and equipment.
Hearing and Respiratory Protection

OSHA’s Respiratory Protection Standard
29 CFR 1910.134
Hearing and Respiratory Protection

- Hearing and respiratory protection needs to be worn in accordance with OSHA requirements for work being performed.
Housekeeping

Good housekeeping is critical to the prevention of many slip, trip and fall, and struck-on injuries. Contractors need to maintain clean work areas. Proposed storage locations need to be approved by the TASI project representative.
Vehicles and Jobsite Access

- Do not leave unattended equipment within 15 feet of the nearest running rail of a live track, unless obtaining prior approval from the responsible TASI project representative.
- Under no circumstances is equipment to be left where it is within 8' 6" of track centerline, or otherwise could be struck by a train, or on-track equipment.
Hazard Communications

- Copies of SDS need to be maintained with your work groups.
- In addition to maintaining SDS on-site, contractors need to verify that all chemical containers are labeled with the chemical name and appropriate hazard warning.
Environmental Issues

Below are some actions that can be taken to protect the environment:

a. Conduct a daily clean-up of the work area;
b. Provide for the proper handling of hazardous wastes;
c. Do not dump, bury or burn waste material on Caltrain property;
d. Label all containers as to content and hazards;
e. Provide a means to capture fluids leaking from parked equipment; establish adequate dust control;
Environmental Issues

Contractor will have a spill response plan and kit on site.
Fall Protection

Where fall arrest equipment is in use on railroad bridges, or during any other activities requiring fall protection, plans need to be developed for prompt rescue.

Contractors are to ensure that their personnel receive fall protection training that is appropriate to the tasks that they will be performing and the equipment they will be using. Completion of fall protection training is to be documented on the contractor’s TASI Engineering Safety Action Plan.
Excavation Work

Excavation work is one of the more hazardous construction activities.

A competent person must be present at excavation sites. The competent person is also responsible for conducting inspections at the beginning of the shift and as needed during the course of the work shift.

Contractors must comply with the SPTMC standards for Excavations. Contractors should also refer to the PCJPB’s Operating System Interface, which is available from the PCJPB Engineering Department.
SSWP Process

A detailed Site Specific work plan needs to be prepared for every construction task. The SSWP MUST include:

Detailed work description
Location
Duration
Track Impact
Anticipated impacts to Operations
Construction Method
Hazard and risk description

Accident delay prevention methods – including contingency plans for returning track to service in the event key elements or equipment of the plan fail.
SSWP Process

The detailed work description would include:

• Step by step breakdown of all work activities
• List of all assumptions and tasks, availability of materials, equipment and labor
• Identify critical milestones which must be achieved prior to continuing with next step
• Staffing requirements for all disciplines and shifts within the work window, including subcontracts and owner furnished labor
• Identify contractors responsible person(s) in charge for the overall operations and individual tasks including name, role, responsibility, contact info, competent persons
• List of materials and equipment required for each work task.
Review/Exam