* **VR Wire Down Storyboard**

**Learning Objectives-**

FSRs and MTs will be required to assess field conditions by:

1. Identifying the different utilities at various locations on Edison structures (i.e. phone, cable TV, etc.)

2. Identifying the various types of Edison construction and recognizing the difference between high and low-voltage lines, cables, and devices

**Storyboard**

FSRs and/or MTs responsibilities/steps: for 911 wire down calls (handled by troubleman), respond within 1 hour. If no troubleman, MFO is sent to keep the scene safe.

1. Make contact with emergency personnel at the location

2. Assess the situation for the proper Edison response

3. Barricade the restricted area with barrier tape and road cones

4. Contact the CCO Dispatch and report the status of the scene. If needed, request a Trouble-man or Damage Assessment for further assessment

**Note**: Though obvious line repairs may be required, MFO Field Work Force is not authorized to request a line crew to the location

5. Make customer contact or leave the door hanger. If Edison is not involved, advise the customer to contact the appropriate utility

6. Standby until qualified crew arrives on the scene

Required Equipment:

• Safety Vest

• Barrier Tape

• Cones

• Emergency Vehicle Light

• Radio

• Doorhangers

**2. Where are mistakes happening in the field? In what situations? Not following process? Environment?** Misidentification of the condition (telecom wire vs. service wire). Is a service wire- secondary? Distribution or transmission line? Broken service drop, verify if the problem is being caused by customer’s equipment.. Not being prepared for being onsite for long periods. Have necessary PPE in the vehicle. Have backup flashlight! Bring food.Stay on site until cleared. Doc says to go to another call, you have to remain.

There should be a single point of contact each storm, but usually, there are multiple- sups, MFO dispatch, DOC dispatch, Troubleman. Don’t give in to the pressure- know/follow the procedures. You call your sup, have sup track down where wrong info is coming from.

**3. What do students need most practice with? All the steps above? Or certain ones?**

**1. Storm situation (high winds, heavy rain)- no light calls. Unknown condition. Customer calls/ROC sees outage, have to assess once arrive. Tree down on wire, drop,**

**2. Vehicle traffic**

**3. Residence- arrive at neighborhood, all out.**

**4. Public interaction, controlling public challenges**

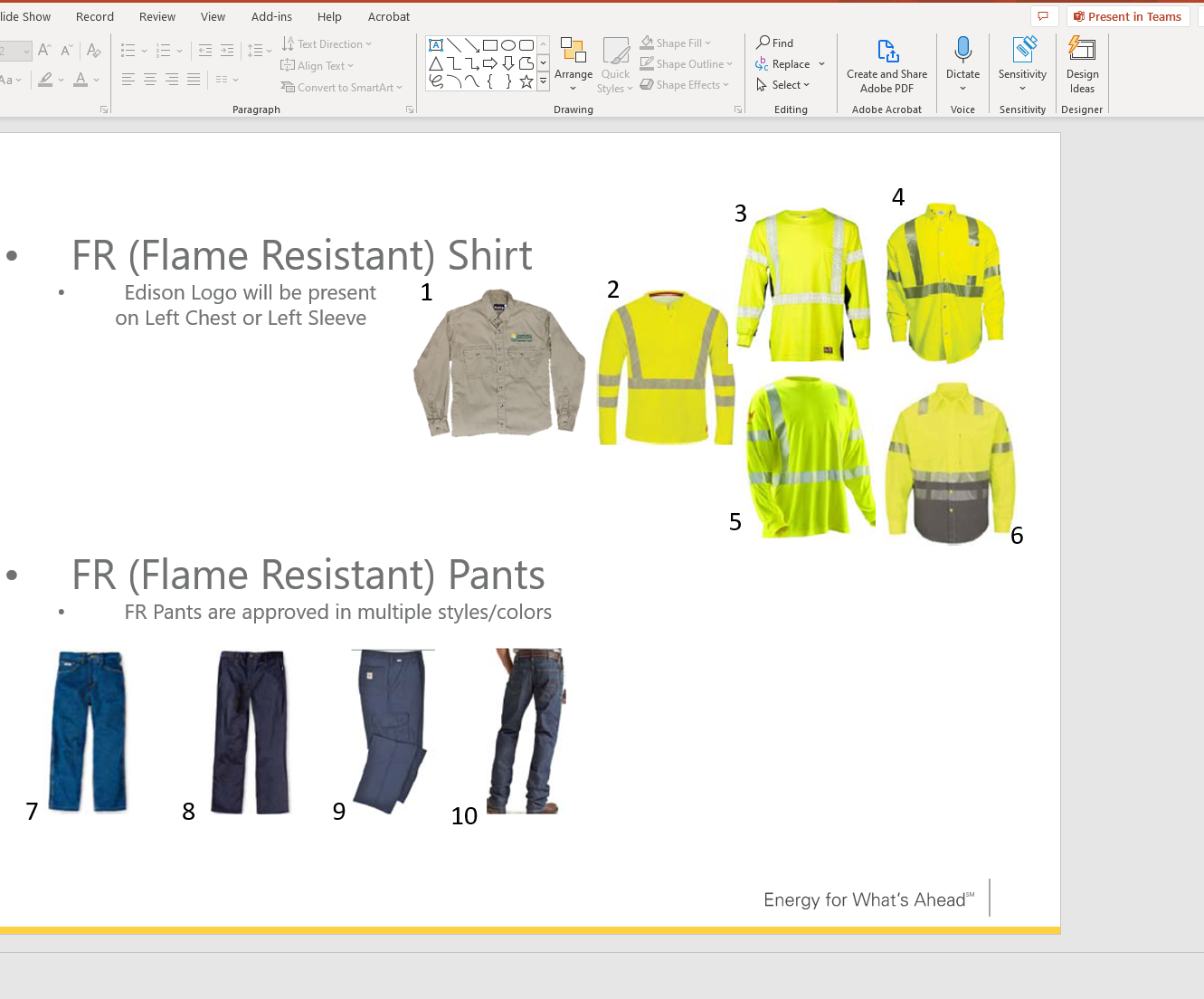
**Scenario 1- Single residential part light, clear daytime weather conditions. (heat storm)**

**Service drop wires came loose at weatherhead**

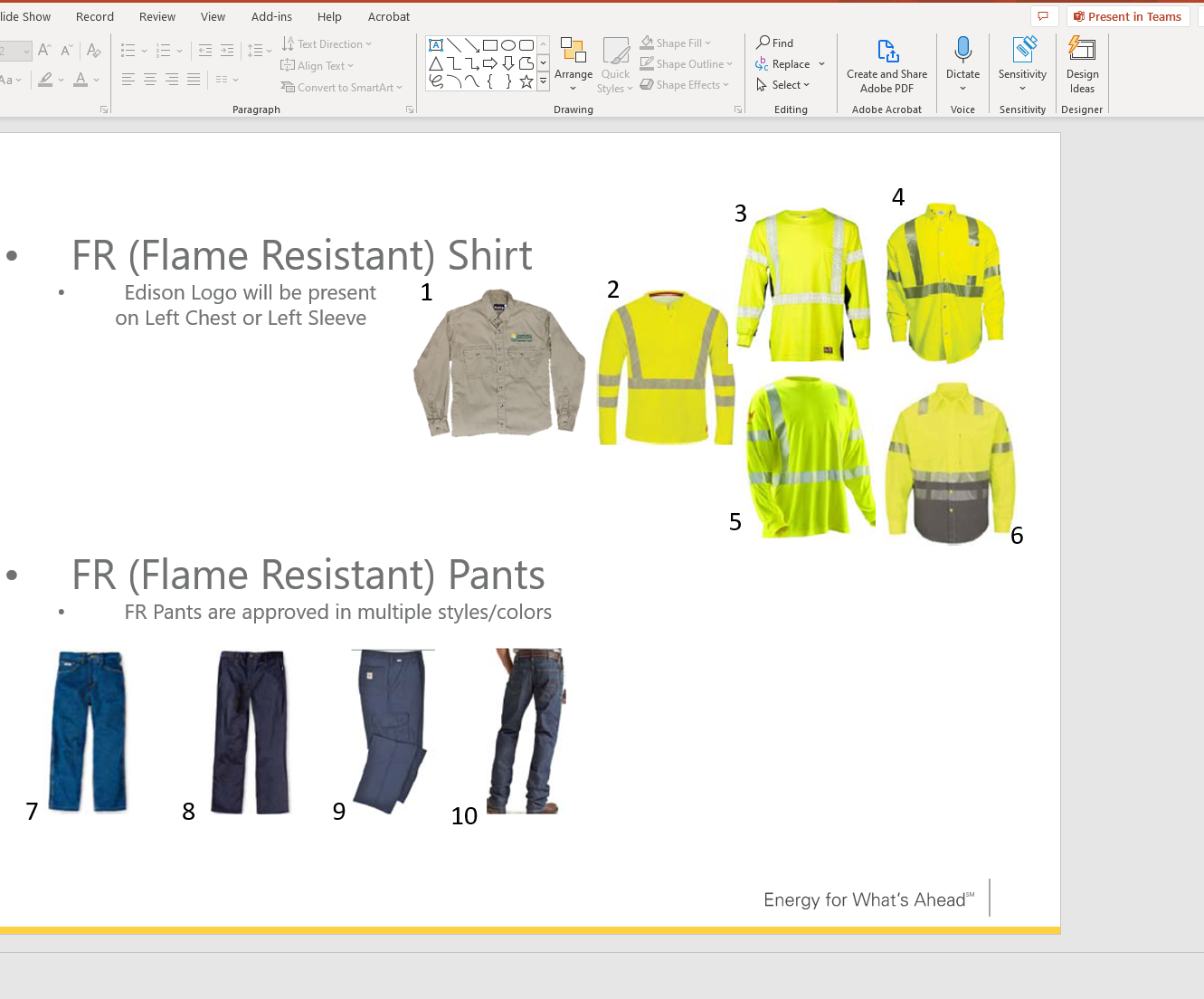
**Make customer contact, go back, visibly see wire not connected, not posing immediate hazard, refer back to DOC for TM to correct**

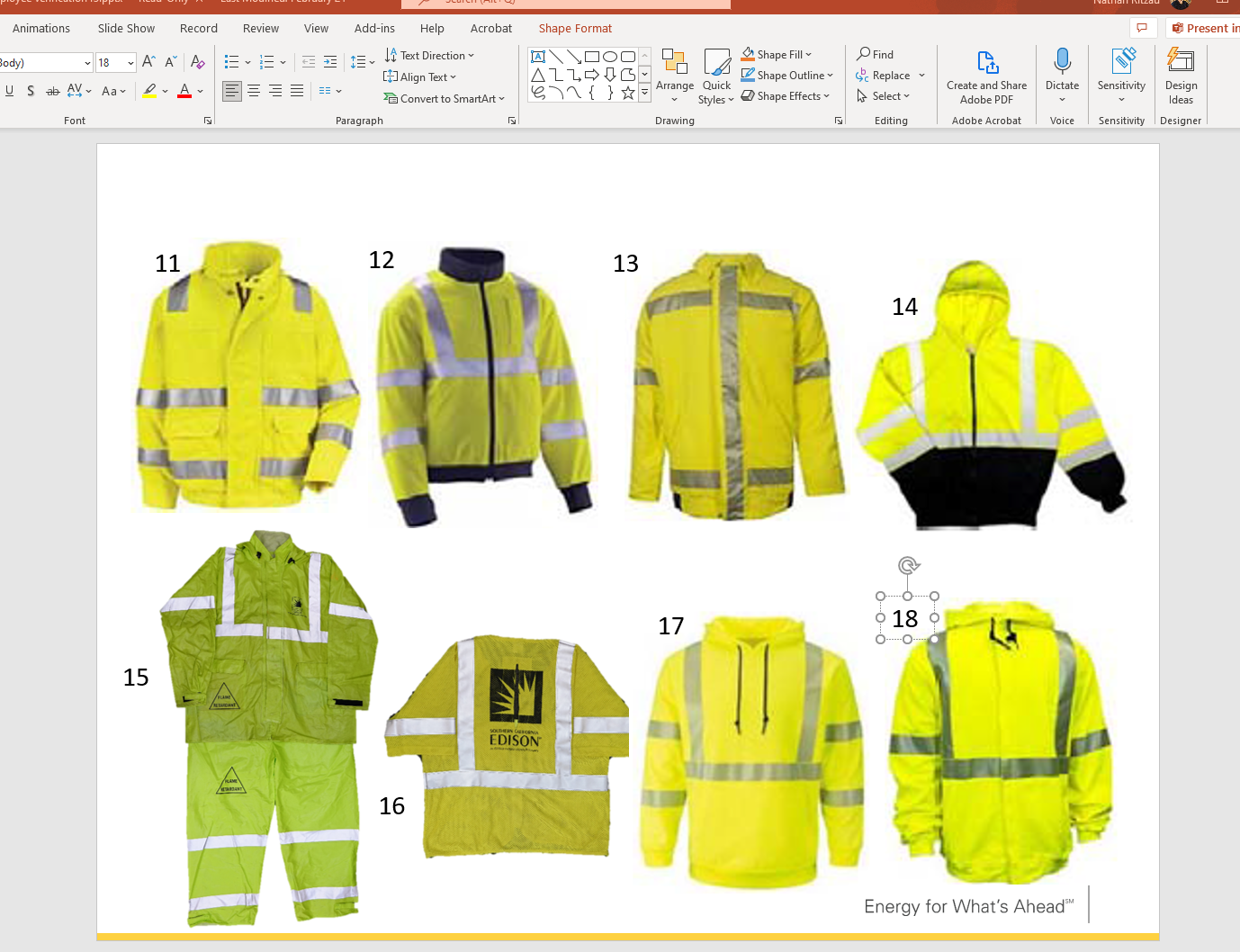
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | General | Learner Actions/Interactions | On-screen action | Images |
| 1 | Arrive at scene. Inside truck | Click Question icon.  Must select correct choice before getting out of the truck.  Learner needs to know address, reported condition, meter #/partial (last 4 digits)  Special instruction or Safety Notes associated with location. | Narration: You’ve arrived onsite and safely parked. Review your order, and click continue when ready.  On screen text popup-  984 Maple Avenue, Irvine  Part light condition  Meter # 005632  Continue button. When clicked, question popup-  What do you do next?  1- Get out of the truck  2- Make sure you have your PPE  3- **Notify DOC/Dispatch to let them know you’re arrived.**  Feedback for incorrect answers 1, 2- That’s not the best next step. Try again.  Feedback for correct answer 3- Great job. You informed DOC/Dispatch you arrived at 984 Maple Avenue in Irvine to respond to the part light callout.  Click continue button. | Standard residential neighborhood. Addresses on curb and on house.  Can be similar to VR Meter Spotting neighborhood.  **For photos of truck interior, see folder- Wire Down CalloutàTruck Interior.** |
| 2 | Ensure no visible hazards present before exiting vehicle | Question icon.  Must select correct choice before exiting truck. | Once continue button clicked- Question popup.  Now what should you do?  1- **Look for any visible hazards.**  2- Get out of the truck.  3- Make sure you have your PPE.  Feedback for incorrect answers 2,3- That’s not the best next step. Try again.  Feedback for correct answer 1- Nice work. Always scan your surroundings for safety hazards before exiting the vehicle.  Continue button.  TCS: Is it possible to require the learner to look out the passenger, front, and driver side window before the next question pops up? If they don’t look long enough (1 second for each), scene can’t proceed. If they need a hint, they talk to themselves and say- I need to look out all the windows before I continue. |  |
| 3 | Ensure PPE | High vis vest/shirt, dogstick/protection, “talk to himself, I need my V watch/hard hat”. | Once they complete the window “test”, question popup.  Select the PPE you need for the job by clicking on it.  Grid of options. V Watch, Hard hat. High visibility shirt. High visibility jacket. FR pants. Flashlight. Screwdriver.  Only options NOT needing to be selected are flashlight and screwdriver.  When hardhat is selected, popup saying- Even though a hard hat is not required, it’s still best practice to wear.  After all correct options are selected, button call “Exit Truck” comes up.  When Exit Truck button clicked, learner is outside car. Talks to themselves- “Just to be safe, I put out my cone behind the truck. I’m going to continue the job now.”  Cone is already behind truck aligned with rear wheel closer to street (not curb). | See image of #6 shirt, #10 pants, #11 jacket ) optional) below |
| 4 | Attempt customer contact | Going to door, ring doorbell, doesn’t work. Knock… | Learner must proceed to front door. Can either ring the doorbell (which doesn’t work because no power), or knock on door.  Customer (Avatar) opens door. “Thanks for coming. We lost power. You can go on through that right gate.”  If learner tries to open gate without making customer contact, text prompt says: Hold on. You need to attempt to make customer contact before entering their property.” Place invisible boundary to NOT allow them through gate until they have customer interaction. |  |
| 5 | Walk through gate, see service drop and panel | Question icon.  Must select correct choice before continuing. | Once user looks at weatherhead, Question popup:  Identify the wire type:  1. distribution  **2. service drop**  3. transmission.  4. communications  Feedback for incorrect answers 1, 3, 4- That’s not correct. Please try again.  Feedback for correct answer 2- You got it.  What should you do next? | TCS: you can see the conductor detached. |
| 6 | Advise customer to stay in house and inform them of condition and someone will be out as soon as possible. | Question icon.  Must select correct choice before continuing. | Question popup-  1. Go to truck, get ladder, and fix the issue.  2. Go to truck and contact DOC/Dispatch.  3. **Advise customer to stay in house.**  Feedback for incorrect answers 1, 2- That’s not correct. Please try again.  Feedback for correct answer 3- Great job. Always inform the customer with any information to keep them safe.  **Continue button.** |  |
| 7 | Contact Dispatch or DOC. |  | Question popup-  What is the next best step?  **1. Contact Dispatch or DOC.**  2. Return to your truck and leave.  3. Contact a Troubleman to come fix the issue.  4. Get your ladder and equipment and fix the line yourself.  Feedback for incorrect answers 2,3,4- That’s not correct. Please try again.  Feedback for correct answer 1- Excellent. You informed DOC/Dispatch that the wire is secure, not low enough to touch, and does not pose a hazard at this time. You recommend referring this one so you can move to your next job. |  |
| 8 | Scenario end |  | Text popup- Ready for another scenario? Click Try another scenario button, or click Restart current scenario to try again. |  |

**Choose PPE options:**

**Shirt/vest #6 :**

**Pant #10 :**





**Scenario 2- daytime wind storm conditions/911 wiredown – vehicle/pedestrian traffic**

**No power in area**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | General | Learner Actions/Interactions | On-screen action | Images |
| 1 | Arrive at scene. Inside truck | Click Question icon.  Must select correct choice before getting out of the truck.  Learner needs to know intersection address, reported condition,  911 wire down, expecting emergency personnel on site. | Narration: You’ve stopped just short of the intersection of State and Main. This is a 911 wire down call and you are expecting emergency personnel on site.  What do you do next? Question popup-  1- **Notify DOC/Dispatch to let them know you’re arrived.**  2- Get out of the truck  3- Make sure you have your PPE  Feedback for incorrect answers 2, 3- That’s not the best next step. Try again.  Feedback for correct answer 1- Great job. You informed DOC/Dispatch you arrived at State Street and Main Avenue to respond to the 911 wire down call.  Continue button. When clicked, question popup- | Busy intersection w/ car and pedestrian traffic.  Windy conditions.  Make sure street signs say State Street. Main Avenue.  The viewpoint of the truck needs to be far enough away, but close enough for them to see something is wrong- a line is on the ground in the parkway.  Wire down touching the ground, jumping, sparking.    This is the burn marks a wire down makes on sidewalk |
| 2 | Ensure no visible hazards present before exiting | 12kV line in residential area. Pole in parkway. Line hanging on comm line.  Wire down on ground over crosswalk in middle of street. Line hopping/Sparks flying out/little puffs of smoke. | What do you do next?  1- **Look for any visible hazards.**  2- Get out of the truck to go help.  3- Make contact with first responders.  Feedback for incorrect answers 2,3- That’s not the best next step. Try again.  Feedback for correct answer 1- Nice work. Always scan your surroundings for safety hazards before exiting the vehicle. Click the best area to park your truck.  TCS: Is it possible to create three invisible parking zones that when the controller is aimed there is lights up? Maybe in three different colors? Blue, green, yellow.  The green area will be on left, yellow area in middle, blue area on right. Correct area is middle yellow area, in the middle of the intersection so truck can block/direct traffic.  When correct answer selected, text popup reads- That’s a great spot so you can safely direct traffic. You turn on your beacon light and safely park your truck. |  |
| 3 | Ensure PPE | High vis vest/shirt, | Text popup- Now let’s grab our PPE. Select the PPE you need for the job by clicking on it.  Grid of options. V Watch, Hard hat. High visibility shirt. High visibility jacket. FR pants. Flashlight. Screwdriver.  Only options NOT needing to be selected are flashlight and screwdriver.  After all correct options are selected, button called “Exit Truck” comes up. |  |
| 4 | Make contact with public safety officer. Security guard Uniform.  Tape off intersection with public safety guy, set out cones. | N bound lane  E bound lane  4 way stop | Learner sees a woman in uniform (like a security guard outfit) keeping people away from downed line.  Cars are honking to keep moving. People gathering to take pictures of the downed line.  Learner needs to interact with public safety officer. When they approach, the woman waves at you and woman says: “About time you got here! This is madness! Help me direct traffic from over there.” (She points across intersection.)  Text popup- How do you respond?  1. I’m on it! Heading there now!  **2. We should secure the area first. I have cones and tape.**  3. Let me grab my gloves and try to move this line first.  Feedback for incorrect answers 1, 3- Not quite. Try again.  Feedback for correct choice 2-  Excellent, the best choice is to secure the area.  Continue button.  Learner talks to themselves- “I can tell it’s a distribution line and I need to secure the area with cones and tape. How far away do I need to put the cones again?”  1. 15 feet (about a car length)  **2. 30 feet (about a bus length)**  3.100 feet (about 3 bus lengths)  Cones need to be set 30 ft away from downed line.  Feedback for incorrect answers 1,3- That’s incorrect. Try again.  Feedback for correct answer 2- Exactly. You place the cones and tape 30 feet away from the downed line.  Continue button.  Tape/cones appear when Continue is clicked. | Model that type of cone for all of them. |
| 5 | Establish traffic lanes. | Traffic control | Text pop up- The public safety officer needed to leave, so you are now alone. Your job is to maintain the safety of the public until help arrives.  Bikers get close to wire.  Woman walking stroller not paying attention goes under tape barrier.  Joggers running by. Cars moving slowly towards you. You have to direct them appropriately. | If you don’t wave or get close to woman walking stroller, popup comes up saying there was a safety incident involving a woman and her baby. She disregarded the barrier and got too close to the wire down.  After roughly 2 minutes of managing vehicle and pedestrian traffic, the sparking wire is deenergized, stops sparking and just lays there. |
| 6 | Advance 3 hours. 3pm – 6pm. | On the hour, every hour, calling sup saying no assistance. No ETA, no availability on assistance.  Thinking to himself- exhausted | Question popup-  You feel yourself becoming very tired. What should you do?  **1. Continue calling your supervisor to give updates that there is no assistance. Ask if/when assistance is arriving.**  2. Take a quick nap in the truck to refresh yourself.  3. Leave for the night. Things have calmed down enough.  Feedback for incorrect answers 2,3- That’s incorrect. Try again.  Feedback for correct answer 1- You got it. Keep calling your supervisor every hour to provide updates and to request assistance.  Continue button. | Skybox turns to dusk/twilight. |
| 7 | Assistance arrived after dark (8pm).  Directing traffic in dark.  8pm | Contact made with person arriving, what to expect, once arrived tailboarded, ETA, hazards, status of streets | Assistance arrives. Learner sees Edison truck park and avatar get out and come towards him.  Question popup-  You see your assistance has finally arrived. You do a tailboard, provide a status update, and answer their questions. What do you do next?  1. Pack up your gear and go home for the night.  **2. Stay and help until a TM arrives.**  Feedback for incorrect answer 1- That’s incorrect. Try again.  Feedback for correct answer 2- Good job. Even though you are exhausted, you know the situation is still too hazardous for one person to handle. You call your supervisor to let them know you were staying until the job was done.  Continue button. | Lightbox turns to night. (8pm)  Truck same model as above. |
| 8 | End scenario  11pm |  | Text popup-  After another 3 hours, the TM arrived on site and you were able to go home. You did great work keeping the public safe during this long and challenging day.  Ready for another scenario? Click Try another scenario button, or click Restart current scenario to try again. |  |

**Scenario 3- residential, raining, windy, dark, over time winds knocked wire down on grass, dog is electrocuted.**

**No power**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | General | Learner Actions/Interactions | On-screen action | Images |
| 1 | Arrive at scene. Inside truck | Click Question icon.  Must select correct choice before getting out of the truck.  Learner needs to know address, reported condition, meter #/partial (last 4 digits)  Part light condition.  008475  Special Instructions: Bad dog chained in back. | Narration: You’ve arrived onsite and safely parked. Review your order, and click continue when ready.  On screen text popup-  11921 Lemon Ave, Pasadena  Part light condition  Meter # 008475  Special Instructions: Bad dog chained in back.  Continue button. When clicked, question popup-  What do you do next? Question popup-  1- **Notify DOC/Dispatch to let them know you’re arrived.**  2- Get out of the truck  3- Make sure you have your PPE  Feedback for incorrect answers 2, 3- That’s not the best next step. Try again.  Feedback for correct answer 1- Great job. You informed DOC/Dispatch you arrived at 11921 Lemon Avenue in Pasadena to respond to the part light call.  Continue button. When clicked, question popup- | 11921 Lemon Avenue correct address.  Neighbor house addresses are 11911 and 11927.  Make 11921 address difficult to read. |
| 2 | Ensure no visible hazards present before exiting | Vehicle has spotlight | What is the next best step?  1- Exit the truck.  2- Grab your PPE  **3- Use your vehicle spotlight to scan for any hazards before exiting the vehicle.**  Feedback for incorrect answers 1, 2- That’s not the best next step. Try again.  Feedback for correct answer 3-You got it. Before exiting the truck, use your spotlight to scan for any hazardous conditions. Control the spotlight using your controller’s thumbstick. Locate any potential hazards.  Continue button-  Learner will use thumbstick to move the spotlight. They will be inside truck and be viewing a light. In distance behind the house, small flashing lights appear periodically. The spotlight needs to focus on those lights in order to continue.  Text popup comes once completed. |  |
| 3 | Ensure PPE |  | You spotted a potential safety risk behind the house. Choose the PPE you should use and proceed.  Grid of options. V Watch, Hard hat. High visibility shirt. High visibility jacket. FR pants. Flashlight. Headlamp for hard hat. Screwdriver.  Only option NOT needing to be selected and screwdriver.  After all correct options are selected, button call “Exit Truck” comes up. | See more images for headlamp for hard hat |
| 4 | Attempt customer contact | Going to door, ring doorbell, doesn’t work. Knock… | Male Customer (Avatar) opens door. Distressed. “We kept hearing crackling sounds and saw flashing bright lights. Our dog is chained up in the back, so you can go on through that gate.”  Text popup-  You advise the customer to stay inside the house before making your way to the backyard.  Continue button |  |
| 5 | Walking back to yard | Hearing dog barking, getting louder as get closer. Debris on ground, tree branches. Hear arcing getting louder, crackling buzz. Line falls on lawn, no more dog noise. Transformer fuse blows. Still on cement.  Dog on lawn, you’re on cement. | Learner needs to use flashlight as it’s dark out. | Backyard has a cement patio, and a lawn. On lawn is a doghouse, with dog chained up to it. Dog is outside doghouse barking.  As learner is walking to backyard they hear dog barking louder. Tree branches on the ground. You hear arcing/crackling buzzing sounds. Line falls on lawn, no more dog noise. Dog is electrocuted. Transformer fuse blows. Learner stays on cement. Learner does NOT need to see line fall, just see that is has fallen. Line is dangling and touching the grass lawn.  Learner needs to stay on cement, not touch the grass.  Good video of rainy/windy conditions and transformer blowing up: <https://youtu.be/bXmX6OuWeDA>  Good video of sound of arcing: <https://youtu.be/_Rl_2OJUGMU> |
| 7 | Kid/dad want to help dog. |  | Learner is looking at dog and around scene. After about 5 seconds, learner notices kid/dad looking through patio window. Learner hears loud knocking on the window. Dad opens back door.  Text Choices pop up. Question- You see the customer trying to get your attention. What do you tell them?  1. Come closer. I can’t hear you.  2. Yes, of course! It’s safe to go care for your dog.  3. **Get back in your house immediately! It’s not safe out here!**  Feedback on incorrect answers 1, 2- That is a very unsafe choice. Try again.  Feedback on correct answer 3- Great job. That is the safest choice.  Continue button. Once clicked- dad moves back inside and shuts door. |  |
| 8 | Contact Dispatch or DOC | Call dispatch, wire down, need assistance. | Question popup- Now what is your best next step?  1. Go help the dog.  **2. Call DOC/Dispatch.**  3. Use a hot stick to safely move the line away from the dog.  Feedback on incorrect answers 1, 3- That’s not the best choice. Try again.  Once #2 selected:  From Dispatch- Thanks for checking in. We will send a TM over right away. This storm is crazy and we just got another call. You ready for the address?  Choices:  1. Sure am. Send the address over.  2. I need to stay here until help arrives. I’ll be in my truck out of the rain.  3**. I am going to wait out here to make sure the customer stays safe.**  Feedback on incorrect answers 1, 2- That’s incorrect. Try again.  Feedback on correct answer 3- That’s the best choice. A TM arrives 1 hour later. You conduct a tailboard and provide updates. Great work! You handled that call well.  End scenario. |  |

**Scenario 4- What can go wrong, does. Flashlight doesn’t work. Debris have to maneuver.**

**Pitch black, extreme rain, then stops. Residential neighborhood.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | General | Learner Actions/Interactions | On-screen action | Images |
| 1 | Arrive at scene. Inside truck | Click Question icon.  Must select correct choice before getting out of the truck.  Learner needs to know address, reported condition, meter #/partial (last 4 digits)  Area no lights. | Narration: You’ve arrived onsite and safely parked. Review your order and click continue when ready.  On screen text popup-  6359 Palm Way, Yucca Valley  Area no lights condition  Meter # 004923  Note: Owner has left property and given SCE permission to enter yard through gate.  Continue button. When clicked, question popup-  What do you do next? Question popup-  1- **Notify DOC/Dispatch to let them know you’re arrived.**  2- Get out of the truck  3- Make sure you have your PPE  Feedback for incorrect answers 2, 3- That’s not the best next step. Try again.  Feedback for correct answer 1- Great job. You informed DOC/Dispatch you arrived at 6359 Palm Way in Yucca Valley to respond to an area no light call.  Continue button. When clicked, question popup- | Pitch black, eerie silence. Desert suburb environment, one-story stucco houses, palm trees.  South Florida single family house in sunny day. Typical Southwest Florida  concrete block and stucco home  No legible address for 6359, across street is 6360 on house. |
| 2 | Ensure no visible hazards present before exiting |  | What is the next best step?  1- Exit the truck.  **2- Use your vehicle spotlight to scan for any hazards before exiting the vehicle.**  3- Grab your PPE  Feedback for incorrect answers 1, 3- That’s not the best next step. Try again.  Feedback for correct answer 2- You got it. Before exiting the truck, use your spotlight to scan for any hazardous conditions. Control the spotlight using your controller’s thumbstick. Locate any potential hazards.  Continue button-  Learner will use thumbstick to move the spotlight. They will be inside truck and be viewing a light. There are no obvious safety hazards visible, so after 5 seconds a text popup appears. |  |
| 3 | Ensure PPE |  | You couldn’t see any hazards so you decide to choose your PPE before exiting the vehicle.  Grid of options. V Watch, Hard hat. High visibility shirt. High visibility jacket. FR pants. Flashlight. Headlamp for hard hat. Screwdriver.  Only option NOT needing to be selected and screwdriver.  After all correct options are selected, button call “Exit Truck” comes up. |  |
| 4 | Make customer contact |  | Learner has to use flashlight because it is so dark outside.  Learner needs to determine this is correct address. They can go across street to see house numbers 6356 and 6360 on houses/mailboxes. They can look on top of overturned garbage bin that has numbers 6359 on it.  Learner can knock on door. There will be no response. Learner can also proceed directly to gate since in the notes it said the owner had left the property. | No stars, no moon, cloudy. No sound. |
| 5 | Can’t get through due to debris in way |  | Learner tries to open gate and it only opens a little bit. There is too much patio furniture/umbrella, palm branches up against fence due to strong winds earlier in the day.  Quiz- What’s next best step?  1. Keep pushing the gate top open it.  2. Climb over gate to access the back yard.  3**. Attempt access from next door**  Feedback for incorrect answers 1, 2- That’s not the best choice. Try again.  Feedback for choice 3- Great! That’s the best choice. |  |
| 6 | Walk to neighbor house. |  | Learner goes to front door of neighbor house. Knocks on door. They open door and point to their right gate. | When looking at houses from street, neighbor house is to the left of 6359.  Neighbor gate is to the left of front door when looking from street. |
| 7 | Discover line on wrought iron fence | DO NOT touch fence!  Keep safe distance | Learner walks through gate, and flashlight flickers, then turns off completely. Screen goes totally dark for a few seconds. Another light comes on, from their headlamp.  Text popup- Good thing you brought your headlamp. You never know when your flashlight may fail.  Once learner reaches wrought iron fence separating houses, they identify a line is down on top of it. Headlamp light must focus on the line for popup question to appear.  Text popup Question… What do you do next?  1. Move the line. You have gloves on and you can coil it up because it is a secondary wire.  2. Contact DOC/Dispatch.  **3. Notify the customer.**  Feedback for incorrect choices 1, 2- That’s not the best choice here. Try again.  Feedback for correct choice 3- Great job. The customer is the safety priority in this situation. You need to inform them first of the danger outside. Then you can contact Doc/Dispatch to provide an update.  Continue button  Text- Excellent work! You wait on the scene until a Troubleman arrives to ensure the safety of the customer. Ready for another scenario? Click Try another scenario button, or click Restart current scenario to try again. | Service drop to house A is down. Line on House A/B. Gain access to pole from House B. |