

Clark County Building & Fire Prevention

BUILDING ONLY

Application # BD19-30585

Date: 5:10 pm, Mar 02, 2021

Reviewed By: Antonio Garcia



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Campus Wide People Mover Operations Manual

Type of Facility:	Underground Public Transportation System
Name of Facility:	Campus Wide People Mover
Facility Address:	3150 Paradise Rd, Las Vegas, NV 89109
Date of Submittal:	March 1, 2021
Revision Number:	7
Application Number:	BD19-30585
Parcel Numbers:	APN (LVCVA): 162-09-703-023 162-10-401-003, 004, 005, 006 162-15-101-013, 015 162-15-501-030 APN (ROW): 162-09-899-003, 005, 021, 022, 023, 041, 042, 043, 044, 048 162-10-499-002, 003, 004, 008, 009, 010, 013, 015 162-15-199-003, 004, 012, 013, 014, 055, 056, 057
Preparer of the Document:	TBC-The Boring Company d/b/a Vegas Loop

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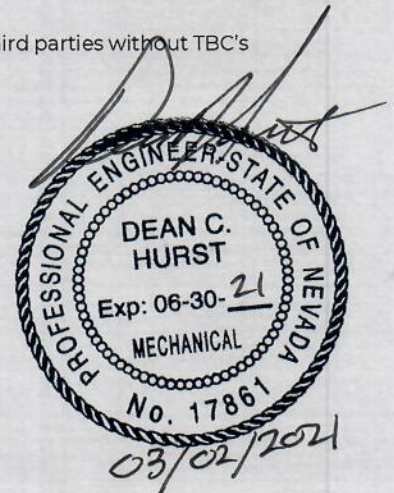


Table of Contents

Revision History.....	3
1.0 Overview	5
1.1 Scope and Purpose.....	5
1.2 CWPM System.....	5
1.3 Definitions.....	15
2.0 Onboarding: Drivers, Operators, and Instructors	17
2.1 Hiring.....	17
2.2 Training.....	19
2.3 Code of Conduct and Key Policies.....	23
3.0 Operating: Drivers	26
3.1 Rules.....	26
3.2 Driver Procedures Manual	28
3.3 Ride Script.....	48
4.0 Operating: Operators.....	53
4.1 Rules and Commands	53
4.2 Operator Procedures Manual	54
5.0 Appendix.....	66

Revision History

Document Revision	Submission Date	Paragraph/Section/Figure	Description of Change
Revision 0	May 27, 2020	All	Initial release of Loop Operations Manual
Revision 1	July 17, 2020	All	Updated to address comments received from the CCDBFP, dated June 25, 2020
Revision 2	August 28, 2020	All	Updated to address comments received from the CCDBFP, dated August 28, 2020 *Note that Revision 1, dated July 17, 2020, was submitted incorrectly with a cover page that stated "Revision 2". The Revision dated August 28, 2020, is the correct Revision 2.
Revision 3	October 7, 2020	Section 3.2.12.3	Included use of directional lighting system
Revision 4	October 23, 2020	Section 3.2.6, Section 3.3	Provided language regarding CWPM Driver instructions to passengers about seatbelt use, per CCDBFP comment dated October 21, 2020
Revision 5	January 2, 2021	All	Updated Driver and Operator procedures
Revision 6	February 16, 2021	All	Updated to address comments received from CCDBFP, dated February 4, 2021. Updated Driver and Operator procedures. Revised training section and provided clarification regarding the use of external contractors as CWPM drivers.
Revision 7	March 1, 2021	Section 1.2; Section 2.2.3 Driver and Operator Training Program Emergency Training Program	Updated to address comments received from CCDBFP, dated March 1, 2021.

1.0 Overview

1.1 Scope and Purpose

This CWPM Operations Manual sets forth TBC-The Boring Company d/b/a Vegas Loop (“TBC” or the “Company”)’s approach for drivers and related personnel operating the Las Vegas Convention Center (“LVCC”) Campus Wide People Mover (CWPM) located at the existing LVCC, connecting the east side of the LVCC South Hall to the LVCC West Hall. This document details TBC’s policies and procedures for hiring and training the necessary personnel, the code of conduct and other policies that such personnel must follow, and the general operations they perform. The training programs are attached as appendices to this document.

1.2 CWPM System

1.2.1 Alignment

The CWPM system is a 0.8-mile, twin tunnel transportation system located at the existing LVCC, connecting the east side of the LVCC South Hall to the LVCC West Hall. The CWPM alignment includes the following three stations:

- Station 1: South Hall Station (Surface; 10 Parking Stalls)
- Station 2: Central Hall Station (Subsurface; 10 Parking Stalls)
- Station 3: West Hall Station (Surface; 9 Parking Stalls)

From Station 1, the CWPM travels northwest beneath Desert Inn Road towards the LVCC Central Hall and Silver Drive to Station 2, then continues west across Paradise Road under Convention Center Drive, terminating at Station 3.

While system operational hours and capacity are not yet finalized, the CWPM system will be operational for all trade show events from 7:00am to 8:00pm. Limited operations will be provided for LVCVA employees on other weekdays that the LVCVA administrative offices are open. The CWPM system will be closed on days when system operations are not required, such as days when the LVCVA administrative offices are closed and/or on holidays.

The following speeds will be adhered to within the CWPM system. The derivation of these speeds is discussed in the CWPM Dynamic Analysis.

- **Maximum Operating Speed – Straightaway:** up to 40 mph
- **Maximum Operating Speed – Turns:** up to 30 mph
- **Maximum Operating Speed – Stations** (includes all areas within the Stations, including the Express Lane): up to 10 mph
- **Maximum Operating Speed – Ramps:** up to 15 mph

Figure 1 – CWPM Alignment and Stations 1, 2, and 3

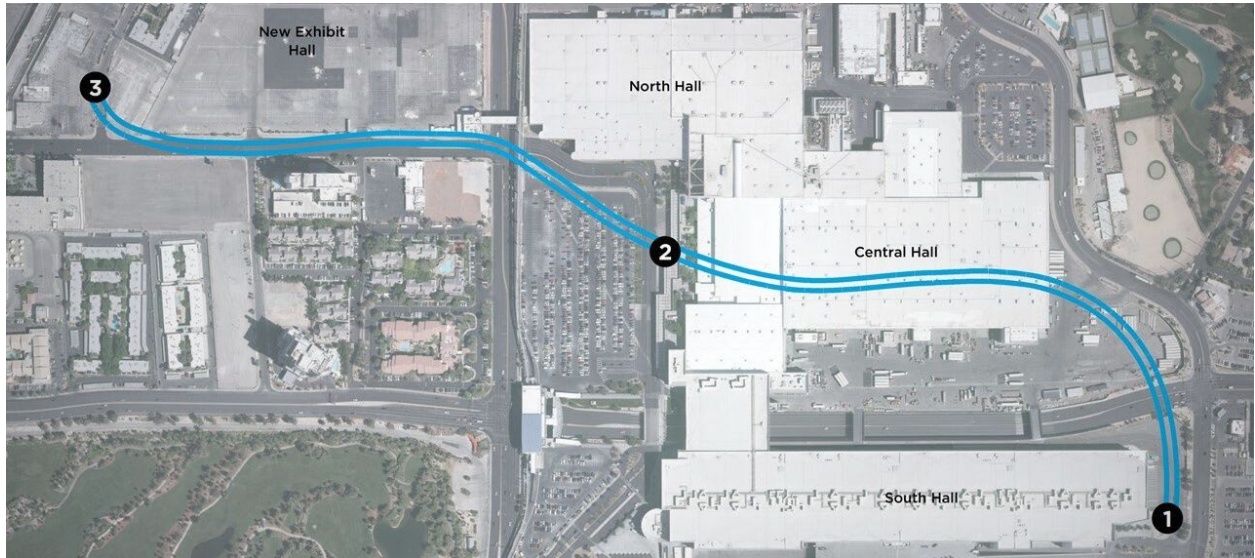


Figure 2 – Station 1 Rendering and Layout

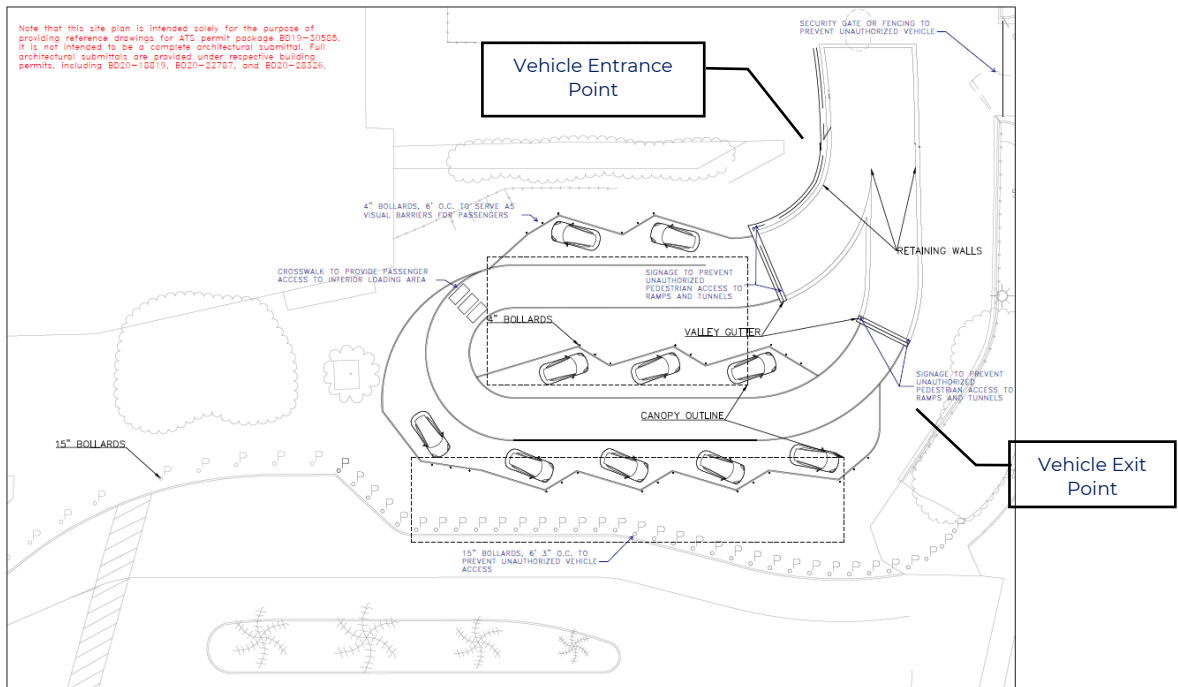


Figure 3 – Station 2 Rendering and Layout

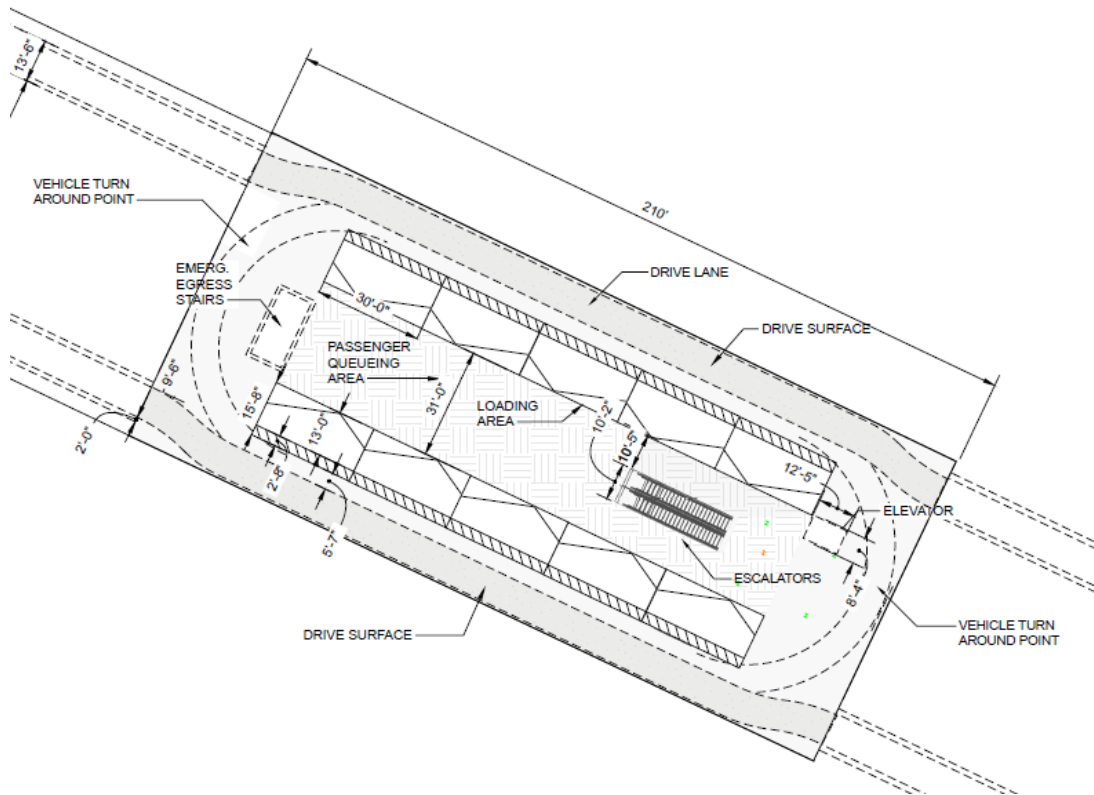
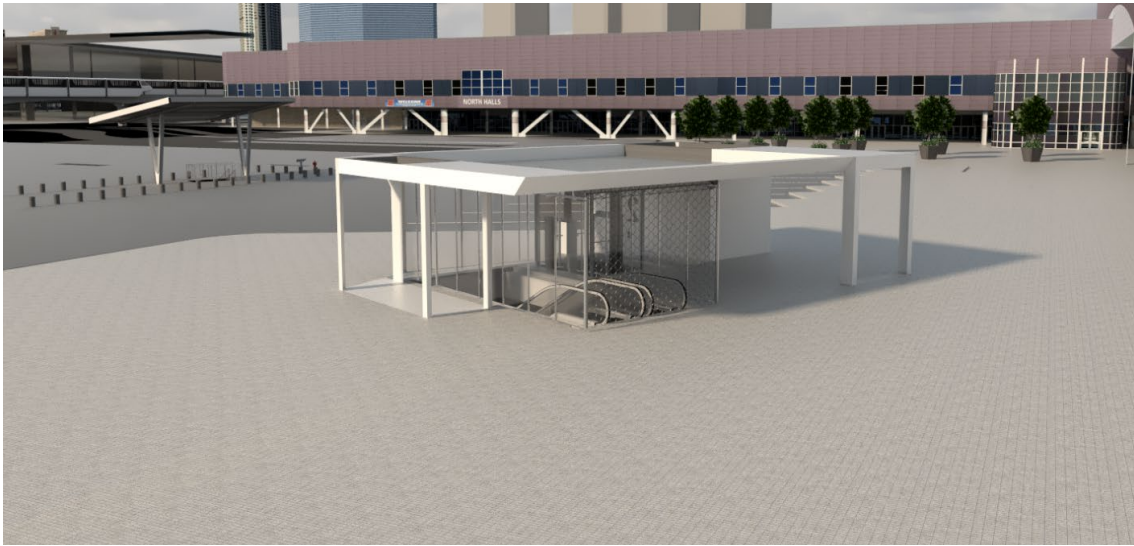
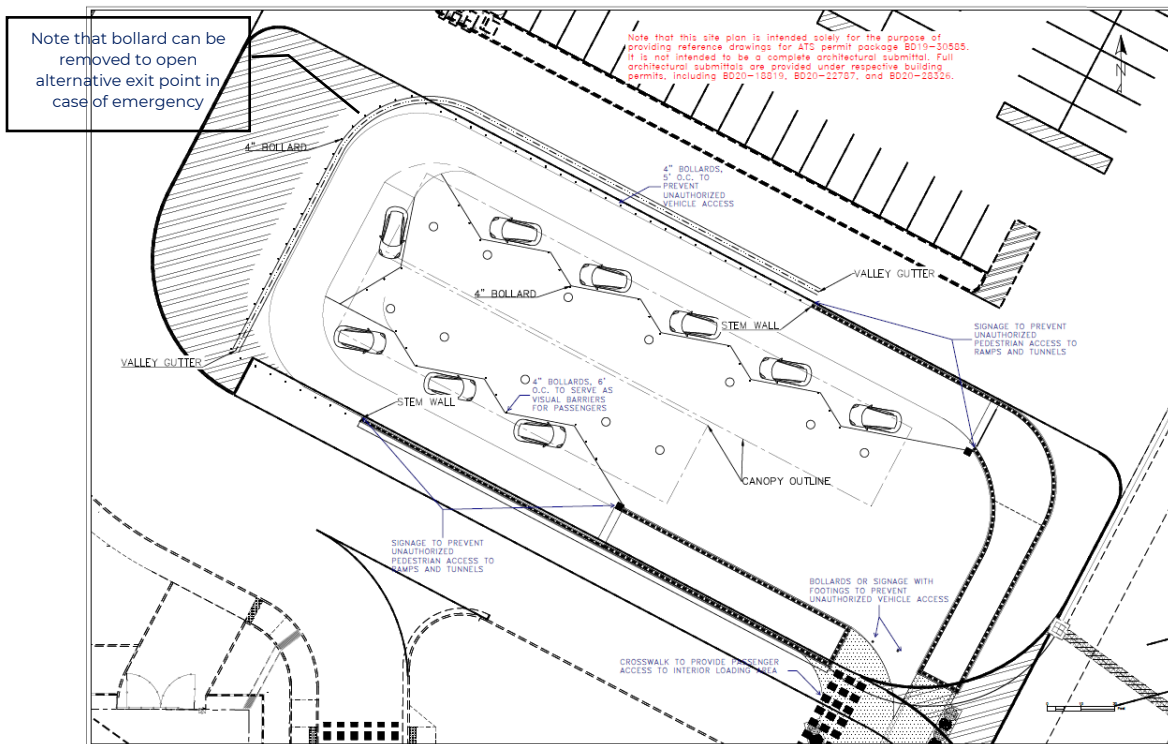


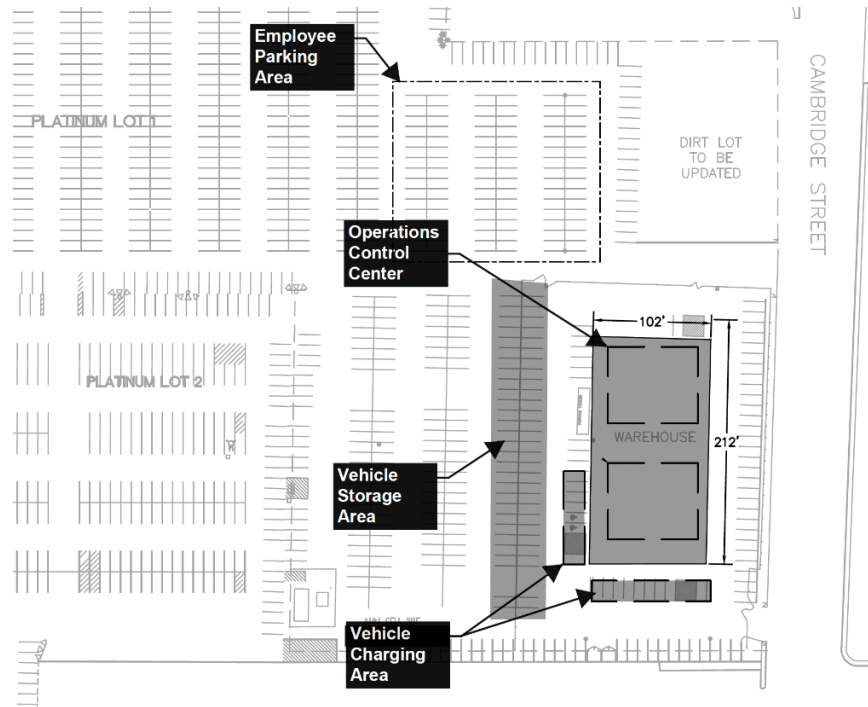
Figure 4 – Station 3 Rendering and Layout



1.2.2 Operations Control Center Facility

The primary location for system management, safety and security monitoring, and emergency identification and notification is the OCC, located adjacent to a Convention Center parking lot at 3395 Cambridge Street. The OCC will be staffed by trained TBC personnel during operating hours, and during off-hours, there will be at least one person stationed in the OCC and alarm status will be sent to a third-party central monitoring station. Communication lines run in both directions, such that the OCC communicates directly with the CWPM vehicles, and the CWPM vehicles can reach the OCC.

Figure 5 – Map of OCC



The OCC is linked to the tunnel network via single mode fiber connections to facilitate communications, management, and monitoring. Additionally, the tunnel network is connected continuously to the OCC via redundant dedicated fiber strands. The data link connecting the tunnel and the OCC is a single mode fiber cable with at least two active paths available at all times.

The OCC contains the following equipment on which Operators will be trained:

- Workstations (for Operators and visiting authorities) for monitoring all tunnel/station cameras, engaging with Danger Management System client, and interacting with traffic control/lights/systems
- Fire / life safety panels
- Wall screens displaying:
 - Tunnel and station camera feeds
 - Danger Management System client
 - System health monitoring screen
- Telephones
 - Handsets to receive calls from Blue Light Stations
 - Headsets to receive/make calls to Drivers
 - Landline phone to make external calls (e.g. to fire department)
- First Aid kit

Figure 6 – OCC Layout Diagram A

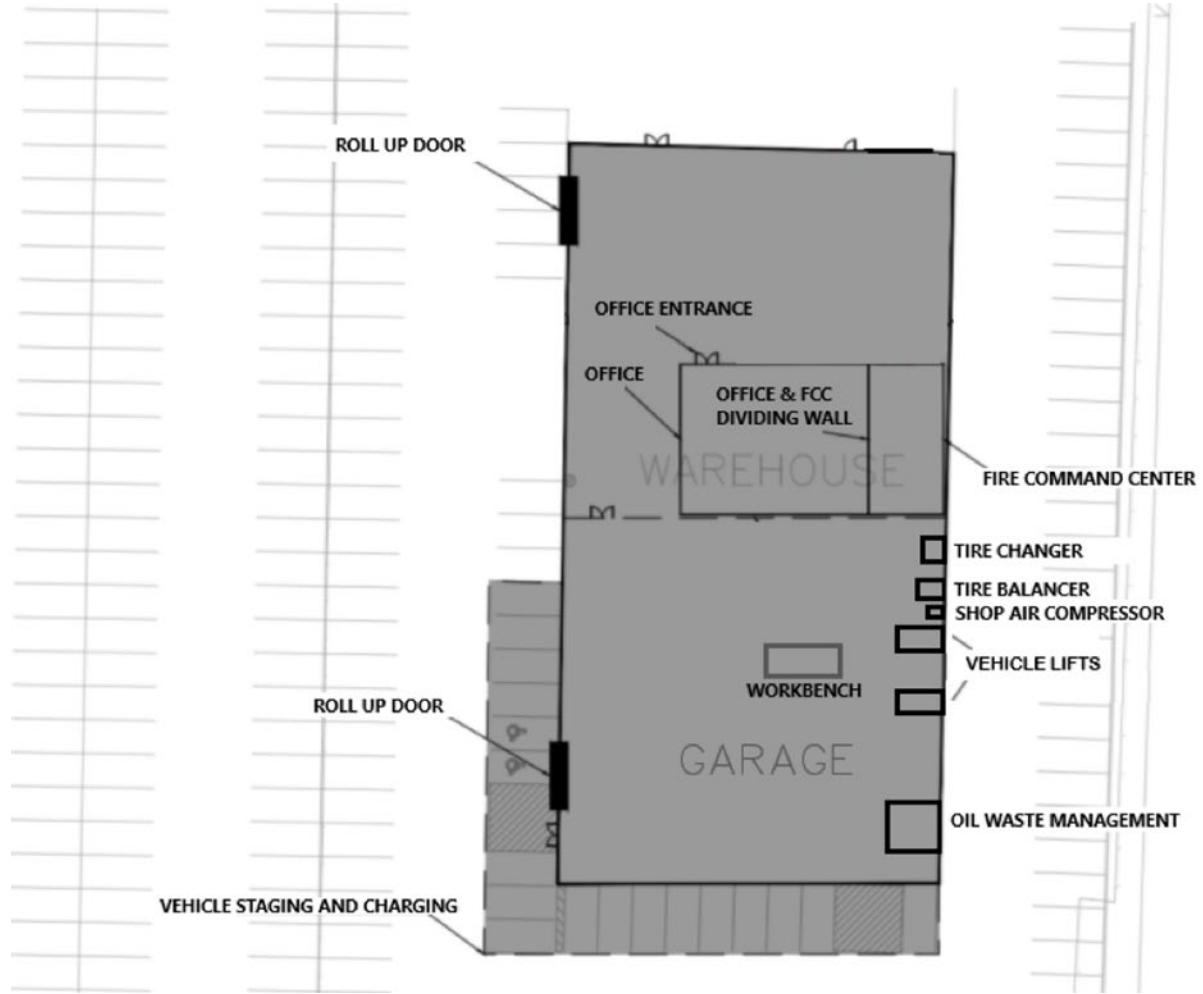
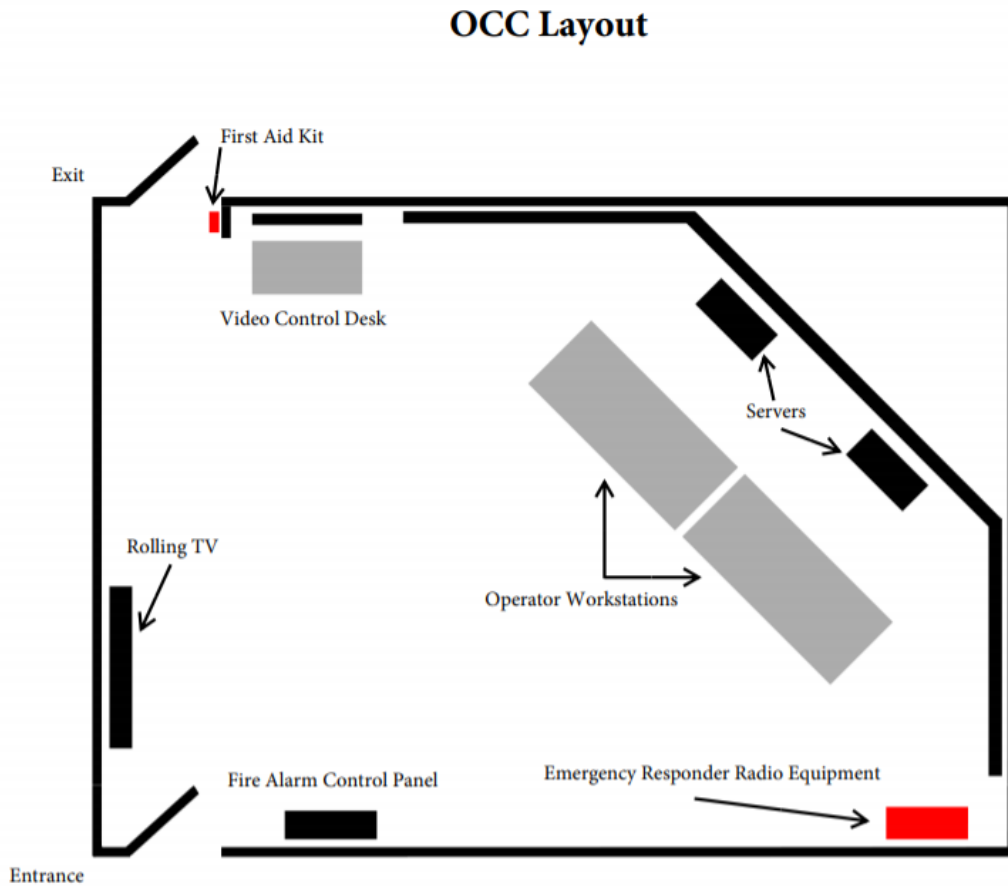


Figure 7 -- OCC Layout Photo



Figure 8 -- OCC Layout Diagram C



1.2.3 Vehicles

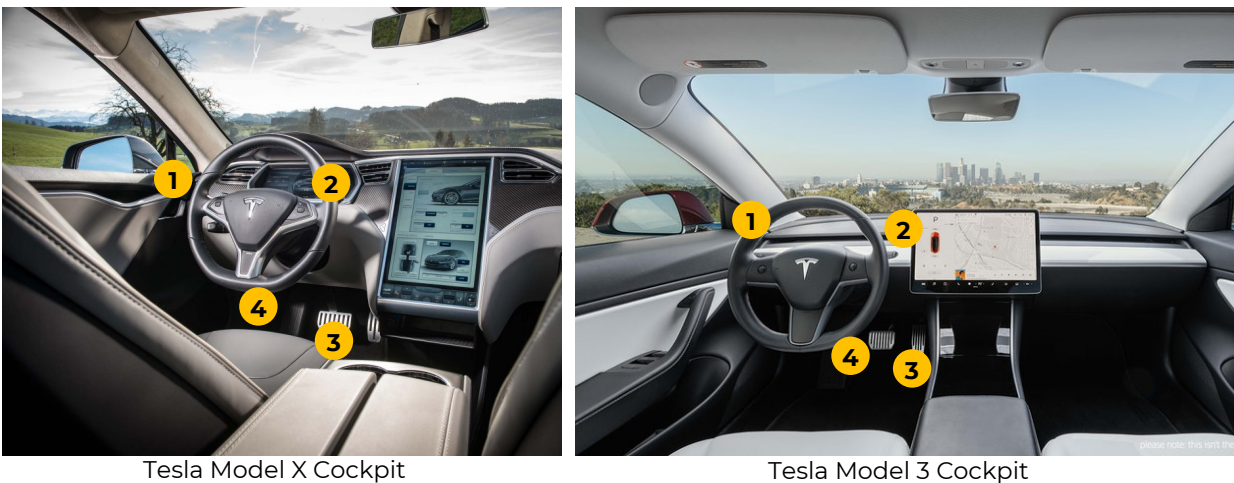
CWPM vehicles carry passengers between stations within the CWPM system. CWPM vehicles are production Tesla Model X and Model 3 vehicles used for CWPM operations. Figure 9 provides representative images of the vehicles that will be used for the CWPM.

Figure 9 – Tesla Model X (top) and Model 3 (bottom)



All CWPM vehicles are operated by a Driver. All CWPM vehicles feature the standard steering wheel, gear stalk, accelerator, and brake pedals found in automobiles. Figure 10 provides representative images of Tesla Model X and Model 3 cockpits showing 1) steering wheel, 2) gear stalk, 3) accelerator, and 4) brake pedals.

Figure 10 – Tesla Model X and Model 3 Cockpits



Tesla Model X Cockpit

Tesla Model 3 Cockpit

Tesla vehicle door systems lock when the vehicle is in motion, and disengage when the vehicle stops and is placed in neutral / park. The door lock actuation systems are electro-mechanical, and in the event of

electrical failure, the Model 3's front doors can be opened from the interior the car, and all doors in the Model X can be opened from the interior via a user accessible mechanical release. In emergency situations, maintenance personnel will be on hand to troubleshoot any issues opening the door from the exterior. To the extent that there are emergency hazards that prevent the opening of the door (blockage by a physical obstruction, e.g., the vehicle crashes into the gate at the entrance to the tunnel, the vehicle's direct communication line to the OCC will enable TBC personnel to quickly arrive at the scene and assist with dislodging the obstruction and deboarding passengers if all vehicle doors are obstructed.

1.3 Definitions

The following terms are used throughout this document:

Check-In Screen: Screen where Driver requests vehicle key card or keyfob.

Danger Management System: Fire / Life Safety computer system for Operator and first responder monitoring and use.

Destination: A specific Station that is the terminus of the Mission.

Employee Parking Area: Area adjacent to OCC where Drivers and Operators park their personal vehicles. See Figure 5.

Express Lane: the area in a station through which vehicles not stopping at that station continue driving.

GUI: In-vehicle Graphical User Interface for Driver interaction with the OCC (screenshots throughout).

Junction Boxes: Enclosures installed in the tunnel for components of power, communications, and lighting systems.

Lockbox: A locker bank of safety boxes, each containing the key cards/keyfobs of all available vehicles.

CWPM Drive: The area of the system where vehicles are driven and pedestrians are prohibited, including tunnels, ramps, and drive surfaces at stations.

Maintenance Team: Personnel responsible for maintenance of vehicles, tunnel, systems, stations, and other CWPM components.

Mission: Journey starting when passengers board the vehicle and ending when all passengers have deboarded vehicle.

Notes Screen: Screen in WGUI for Operator notes input during shift.

OCC: Operations Control Center, the central facility for traffic and systems control.

OCC Charging Station: The vehicle charging area is located at the OCC for mass vehicle charging, and contains a Charging Station with wall chargers for Tesla vehicles.

Parking Stall: Areas in Stations, immediately adjacent to parked vehicles, for passengers to board and deboard vehicles.

SoC: State of charge of the vehicle (expressed as a percentage of battery power remaining).

Stations 1, 2, and 3: Areas for passenger to access (and board/deboard) CWPM.

Turnaround Point: Driving lanes in Station 2 that serve a U-turn function, such that Drivers re-enter the Station 2 boarding areas from the opposite direction rather than proceeding to the next Station. See Figure 3. Note that the Turnaround Point shall be equipped with mirrors to aid Drivers in merging into the Express Lane. There will be mirror located on the passenger-side wall of the Express Lane near each

tunnel portal entering Station 2. Drivers in the Turnaround Point will look at this mirror to see if a vehicle is entering the Express Lane. Drivers shall be trained to properly utilize said mirrors.

Vehicle Entry/Exit Point: Points for vehicle entry and exit to the CWPM system located at Station 1.

Vehicle Number: Unique identification number assigned to each vehicle to aid with identification and tracking of CWPM vehicles during operation and maintenance. Vehicle Number labels will be placed on the front and rear of each vehicle and the key card/keyfob, and will be documented on all records associated with each vehicle.

Vehicle Roster: List of the vehicles in the as-commissioned fleet that serves as an inventory and provides status information about each vehicle, including model, color, and VIN. See the *Vehicle Maintenance Plan*.

Vehicle Storage Area: Area adjacent to OCC where CWPM vehicles are picked up for operation and dropped off for storage and maintenance. See Figure 5.

WGUI: Workstation Graphical User Interface for Driver interaction with the OCC.

Workstation: The computer and phone apparatus set up at each Operator desk.

2.0 Onboarding: Drivers, Operators, and Instructors

This section covers standards for hiring, training, professional conduct, and operations for Drivers, Operators, and Instructors in the CWPM system.

- Drivers are the individuals that operate vehicles that carry passengers from station to station in the CWPM system.
- Operators are individuals based in the Operations Control Center that serve as dispatchers to Drivers, monitor the vehicle, camera, and other system components, and provide the first line of emergency response.
- Instructors are individuals who train Drivers and Operators.

2.1 Hiring

2.1.1 Drivers

TBC seeks candidates who are not only skilled, safe drivers, but also professional and personable, as they will often be passengers' sole human interaction with the Company. The following criteria apply to hiring Drivers:

- Age 21 or older;
- Must submit to TBC background check (more information is available in TBC's Employee Handbook, which will be provided to Drivers) and continuous background checks while employed;
- Must hold valid driver's license (which includes passing a driver's license vision test);
- Must disclose all at-fault accidents;
- Must submit to Motor Vehicle Records Check; and
- Must pass pre-employment drug test.
 - All applicants must be drug-free. Passing a pre-employment drug test is a condition prior to performing work duties. If an applicant refuses to submit to the drug test, or tests positive on the drug test, the applicant will not be offered a position with TBC.

TBC reserves absolute discretion as to all aspects of hiring, including determinations based on the results of background and motor vehicle records checks.

CWPM drivers may be TBC employees and/or external subcontractors; regardless of which type, all drivers undergo identical operational training, including emergency training, and certification processes. Drivers employed by TBC and drivers employed by a third-party contractor will be subject to the same hiring criteria described above. Driver rosters and training documentation for both TBC and subcontracted drivers shall be kept current and up to date and shall be readily made available at the OCC for the County and/or Approved QAA to audit at least twice a year. Whether a driver is employed by TBC or a subcontractor, employment shall be continuous; if a driver's employment ends and then the driver is rehired, recertification shall be required. Additionally, driver training records will be continuously monitored to ensure that drivers have been trained on the current training revision prior to driving in the CWPM. If a driver does not drive in the CWPM for more than one month, he or she will be subject to recertification.

2.1.2 Operators

Operators are subject to the same hiring criteria as Drivers. It is preferred that Operators have at least (2) years of experience in driving (e.g. commercial, livery, trucking), dispatch, or other relevant fields, though it is not a hiring requirement.

2.1.3 Instructors

Instructors are subject to the same hiring criteria as Operators.

2.2 Training

See Appendix for training materials. Documentation and filing of training materials certifications and roster shall be made readily available for review upon request by CCDB&FP-Engineering Division or a CCDB&FP-Engineering Division Approved QAA

2.2.1 Drivers

Drivers undergo rigorous training along two dimensions: driving competence and professional conduct. Before a Driver may begin working in the CWPM system, he or she must complete the following training courses successfully, as evaluated in the sole discretion of CWPM system Instructors, through a written test or practical demonstration as applicable. Upon successful completion of all trainings listed below, Driver receives an electronic certification that is kept on file by TBC.

As described above, CWPM drivers may be TBC employees and/or external subcontractors; regardless of which type, all drivers will undergo identical training as described in the following sections, and this training will be administered by TBC for both types of drivers. Regardless of employer, all CWPM Drivers will also be subject to the codes of conduct and policies described in Section 2.3. Driver rosters and training documentation for both TBC and subcontracted drivers shall be kept current and up to date and shall be readily made available at the OCC for the County and/or Approved QAA to audit at least twice a year. Whether a driver is employed by TBC or a subcontractor, employment shall be continuous; if a driver’s employment ends and then the driver is rehired, recertification shall be required. Additionally, driver training records will be continuously monitored to ensure that drivers have been trained on the current training revision prior to driving in the CWPM. If a driver does not drive in the CWPM for more than one month, he or she will be subject to recertification.

2.2.1.1 Written Test

Drivers must pass a written exam testing their knowledge of all of the subject matter covered in the forthcoming sections (2.2.1.2-.6). The written test will cover the content of the trainings, including the rules of the road tested practically during the in-vehicle training. Classroom training to prepare for the written exam will be approximately 5 hours.

2.2.1.2 In-Vehicle Training

First and foremost, CWPM Drivers will be trained on how to safely operate Tesla CWPM vehicles. The following chart describes the stages of in-vehicle training, comprising 10 hours total, and each stage must be completed successfully, in the sole discretion of the Instructor, before the next stage may be undertaken. Each task will be conducted using a combination of Tesla CWPM vehicle models.

Task	Instructor in vehicle?	Passengers in vehicle?	Number of hours	Notes
Familiarization with Tesla vehicle and stations: <ul style="list-style-type: none"> • Features and controls • Vehicle overhang and spacing • Parking lot maneuvering (cones, etc.) • Practice communications with OCC 	Yes	No	1	N/A
Mock ride* through system	Yes	No	1	N/A
Mock ride through system	No	No	1	Continuous repetition to test endurance / stamina

Task	Instructor in vehicle?	Passengers in vehicle?	Number of hours	Notes
Mock ride through system	Yes	“Passengers” (TBC personnel acting as passengers)	1	“Passengers” will ask many questions and start arguments; this stage tests Drivers’ ability to handle pressure and tense situations
Mock ride through system	No	“Passengers” (TBC personnel acting as passengers)	2	“Passengers” will ask many questions and start arguments; this stage tests Drivers’ ability to handle pressure and tense situations. Drivers will go through a Simulated Evacuation Event and simulated Operational Fault Event.
Ride through system during normal operation	Yes	“Passengers” (TBC personnel acting as passengers)	4	One half shift to test endurance
Total in-vehicle training hours:			10	

*A mock ride through the CWPM system includes not just driving through the tunnels, but also inspecting the vehicle, queuing, maneuvering at the station, boarding passengers (including those who require assistance for mobility or other disability-related reasons), storing passenger personal property such as luggage, and ensuring all safety protocol are followed before, during, and after the ride.

2.2.1.3 Emergency and Security Training

CWPM Drivers will be trained to handle emergency and security situations, consistent with the CWPM emergency response and CWPM security procedures. These trainings will address how to handle situations involving fire, explosives, stalled vehicles, evacuation, encounters with unauthorized personnel or foreign objects, and other scenarios that may arise during normal business operation. CWPM Drivers will also be instructed in how to make decisions about when to remain in a vehicle under duress, when to abandon a vehicle, and how and where to guide passengers in an emergency. The trainings will also cover troubleshooting protocol for communications failures, vehicle part failure, and other scenarios that may occur during a ride. All training includes both theoretical and practical drills and assessments. Refresher training will be provided on an annual basis, or sooner based on real-time developments.

2.2.1.4 Incident Reporting

In the event of an incident or accident, CWPM Drivers must be able to effectively describe the chain of events that led to such incident so that remedial and precautionary measures can be taken to fix problems and prevent repeat occurrences, respectively. Proper incident reporting and recordkeeping is a critical part of protecting CWPM Drivers and passengers, and Drivers will be required to report any incidents candidly and clearly.

2.2.1.5 Passenger Engagement

Because CWPM Drivers will often be the only personal contact passengers have with the CWPM service, CWPM Drivers are representatives of TBC and are expected to observe the highest standards of customer service and professional decorum. CWPM Drivers may not initiate conversation with passengers except

for safety and logistical purposes. Drivers must focus their attention on driving rather than conversing, for the safety of the passengers and the efficient operation of the CWPM system.

Undoubtedly, the novelty of the CWPM system will prompt a variety of questions from passengers. Questions range from “What’s Elon like?” to “How many accidents have there been so far?” The guiding principle for Drivers is to assume everything they say will end up in the news. Accordingly, Drivers should be friendly but brief in their responses to basic questions about the CWPM system, and for any questions outside the scope, casually say that they are just Drivers but that any questions should be directed to communityfeedback@boringcompany.com and that the FAQs on the company website are also helpful.

The Ride Script in Section 3.3 provides common answers and recommended responses.

2.2.1.6 Professional Conduct

Moreover, to ensure that CWPM Drivers conduct themselves in accordance with the professional standards applicable to all TBC employees, they will also be subject to the codes of conduct in the Employee Handbook. Given their direct interface with passengers, they will receive additional training in:

- Sensitivity, to ensure that all passengers are treated equally and without prejudice in regard to their race, religion, age, ethnicity, gender, sexual orientation, and/or other characteristics;
- De-escalation, to teach practical techniques to Drivers on how to diffuse tense situations that may arise among passengers in (small) vehicle cabins; and
- Sexual harassment, to ensure that interactions between Drivers and passengers are appropriate, safe, and comfortable for all involved.

Note that even if a driver is employed by a third-party contractor, he or she will still be subject to TBC codes of conduct and professional standards.

2.2.2 Operators

All Operators will undergo the same training as Drivers, and will also participate in additional training consistent with the following responsibilities:

- Lights and signaling;
- Communications and radio protocol;
- Camera operation and monitoring;
- Fire and life safety procedures;
- Security protocol; and
- Other Operations Control Center standards and procedures, including equipment training.

Operators will be evaluated in the sole discretion of CWPM system Instructors based on a standard rubric for performance. A written test will be evaluated based on pass/fail criteria established by TBC, and the practical demonstration will also be evaluated based on standardized guidelines. Upon successful completion of all trainings, Operator receives an electronic certification, valid for 3 years, that is kept on file by TBC Human Resources. Refresher training will be provided on an annual basis, or sooner based on real-time developments (e.g. technological advancements that necessitate new learning).

2.2.3 Instructors

Instructors must pass not only Drivers and Operators trainings successfully, but they must also:

- Serve as a Driver during normal system operations for 100 hours;
- Serve as an Operator during normal system operations for 100 hours; and
- Pass a written and demonstrative exam administered by an Instructor. Candidate instructors will be observed and tested according to established standard evaluation criteria, and if such criteria

are met, the candidate will become a certified instructor. Prior to commissioning of the CWPM, the Director of Loop Operations, the Operations Manager, the Lead Operations Engineer, and the Lead Maintenance Supervisor shall be the initial Instructors who will certify Drivers and Operators prior to commissioning. These positions are management-level positions on the CWPM Operations Team. Pre-commissioning Instructors will successfully complete Driver and Operator classroom training programs per the CWPM Driver and Operator Training Program.

2.3 Code of Conduct and Key Policies

2.3.1 Safety

Safety of CWPM Drivers, Operators, and passengers is the top priority of TBC. When in doubt, err on the side of caution and safety. For Driver safety infractions, the following system of demerits applies:

Penalty	Infraction
Demerit	Driving for over 5 seconds above 45mph Driving for over 5 seconds above 30mph within turns Driving for over 5 seconds above 15 mph on ramps Driving for over 5 seconds above 10mph within stations Failure to yield to another vehicle with the right-of-way Failure to signal for turns or lane changes Improper lane usage, such as failing to drive within a single lane Failure to fasten seat belt Failure to yield to a pedestrian (assuming no accident or injury) Failure to report a lost object (unintentional) Passenger complaint (case-by-case depending on nature of complaint)
Suspension	Three (3) demerits Driving for over 5 seconds above 50mph Failure to file a report after an accident Failure to report vehicle damage or maintenance issue Driving wrong way in tunnel (assuming no accident or injury) Passenger complaint (case-by-case depending on nature of complaint)
Termination	Two (2) safety-related suspensions Driving for over 5 seconds above 60mph Driving under the influence of alcohol or drugs Reckless driving Intentional vehicular injury / homicide Playing on a phone or texting Failure to stop after an accident Harassing or endangering a passenger Failure to report a lost object (intentional) Failure to notify Human Resources of any traffic violations or if license is suspended Passenger complaint (case-by-case depending on nature of complaint)

Note: Speed and other vehicle telemetry is transmitted to OCC WGUIS automatically. Such data includes vehicle speed, occupancy, door open/close status. The data will be visible on the WGUI screens, and Operators will be required to react to abnormalities by following their training regarding actions and documentation of such actions.

2.3.2 Drug and Alcohol Zero Tolerance Policy

All CWPM Drivers and Operators are prohibited from being under the influence and/or in possession of illegal substances and/or under the influence of alcohol while on duty, or within four (4) hours of reporting for service. Additionally, illegal substance use is prohibited on or off duty, except for over-the-counter substances or substances prescribed or authorized by a medical practitioner under certain conditions. TBC follows the U.S. Department of Transportation’s protocol for drug and alcohol testing. See Exhibit A for the Drug and Alcohol Policy.

2.3.3 Sexual and Other Workplace Harassment

Sexual harassment and harassment based on such factors as race, color, religion, religious creed, national origin, ancestry, sex, gender, pregnancy, perceived pregnancy, age, sexual orientation, gender identity, gender expression, marital or family status, military or veteran status, medical condition, physical or

mental disability, genetic information, or any other protected class under federal or applicable state or local law are not tolerated at TBC.

Harassment includes verbal, physical, and visual conduct that creates an intimidating, offensive, or hostile working environment or that interferes with work performance.

TBC will not tolerate harassment of employees, whether it is carried out by managers, supervisors, or co-workers. In addition, TBC will work to protect employees from harassment by non-employees in the workplace.

Sexual harassment refers to behavior of a sexual nature that is unwelcome and personally offensive to the recipient (regardless of the recipient's gender or sexual orientation). Sexual harassment may (or may not) be motivated by sexual desire. Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitute sexual harassment when any of the following conditions exists:

- Submission to such conduct is made explicitly or implicitly a condition of an individual's employment.
- Submission to or rejection of such conduct is used as a basis for an employment decision affecting the employee.
- The harassment has the purpose or effect of unreasonably interfering with the employee's work performance or of creating an environment that is intimidating, hostile, or offensive to the employee.

Please see the Employee Handbook for the full Harassment policy.

2.3.4 Tardiness/Attendance Policy

All CWPM Drivers and Operators are expected to report to work at least 20 minutes prior to the start of their shift.

2.3.4.1 Tardiness

Tardiness is defined as arriving fewer than 20 minutes prior to shift starting time. The number of times a Driver or Operator is tardy will accumulate over the course of a calendar year:

- The first three tardy reports will result in a warning.
- The fourth tardy report may result in a one (1) day suspension without pay.
- The fifth and sixth tardy reports may result in a two (2) day suspension without pay.
- The seventh tardy report may result in a three (3) day suspension without pay.
- The eighth and ninth tardy reports may result in a five (5) day suspension without pay.
- The tenth (or more) tardy report may result in disciplinary action (up to and including termination).

Note: these suspensions are unrelated to the safety infraction demerit system described in 2.3.1, and do not count in the tally toward termination described therein.

2.3.4.2 Misses

Misses occur when a CWPM Driver or Operator fails to show up for his/her shift completely, and does not arrange for proper coverage. A miss is equivalent to two tardy reports.

2.3.4.3 Mandatory Meetings

Certain meetings during the year will be mandatory for CWPM Drivers and/or Operators. Missing these meetings (or arriving late) may be counted as a tardy report. CWPM Drivers and Operators will be notified prior to the meeting that the meeting is mandatory.

2.3.4.4 Illness

A CWPM Driver or Operator who is sick must notify TBC at least four (4) hours prior to the start of his/her shift. If Driver or Operator fails to do so, TBC, in its discretion, may classify the miss as a tardy report.

Medical and bereavement leave, and paid time off are discussed in the Employee Handbook.

2.3.4.5 Covering

If a Driver or Operator covers a shift for another Driver or Operator, the covering Driver or Operator will have one tardy report removed from his/her record.

2.3.5 Reporting

All CWPM Drivers are required to report all accidents/incidents to their immediate supervisor or dispatcher as appropriate and/or the Manager of Safety and Training immediately. An accident report must be written and filed.

2.3.6 Prohibited Items

CWPM Drivers and Operators are prohibited from possessing any of the following while on duty:

- Alcohol or illegal substances (not allowed on premises at all, see Drug and Alcohol Policy for further detail)
- Cigarettes, including e-cigarettes
- Weapons (not allowed on premises at all)
- Food or beverage (except water is permitted)

3.0 Operating: Drivers

This chapter provides instructions for CWPM Drivers from the minute they arrive at the Las Vegas Convention Center Campus to the end of their shift. Drivers should use this document as a reference for how to perform their responsibilities on the job.

At this point, Drivers will have successfully completed their training and carefully reviewed the Code of Conduct and TBC policies.

3.1 Rules

3.1.1 General Rules and Responsibilities

As representatives of TBC, Drivers must be professional, polite, and friendly at all times. See Section 3.2 for guidance.

- Attire:
 - Drivers must wear company-issued TBC uniforms for the entire duration of their shifts (Uniforms, consisting of a shirt and pants, will be provided on Drivers' first day of work).
 - Drivers must wear all-black sneakers with no markings or logos.
 - Drivers may not wear accessories or jewelry.
 - Drivers must maintain a clean-cut, professional appearance.
- Shifts last up to 8 hours, with breaks and non-paid lunches based on shift duration included, per Nevada statute.
- Shifts will be assigned at least one week in advance.
- Drivers may not eat during their shift except during lunch and rest breaks.
- Drivers must keep CWPM vehicle key card/keyfob on their person (not in the armrest or on the dashboard) at all times, especially when stepping away from the vehicle.
- Drivers may not use their personal cell phones in the vehicles except for emergency communications.
- The following are prohibited in vehicles:
 - Food,
 - Beverages (except water and unopened containers, which are permitted),
 - Smoking (cigarettes, e-cigarettes, marijuana, etc.),
 - Drugs,
 - Weapons, and
 - Animals (except service animals, which are permitted).
- Drivers may not turn on the vehicle radio or play music while on their shift.
- Drivers may not accept tips, gifts, or solicitations from passengers.
- If asked, Drivers may provide their first name only.

3.1.2 Rules of the Road

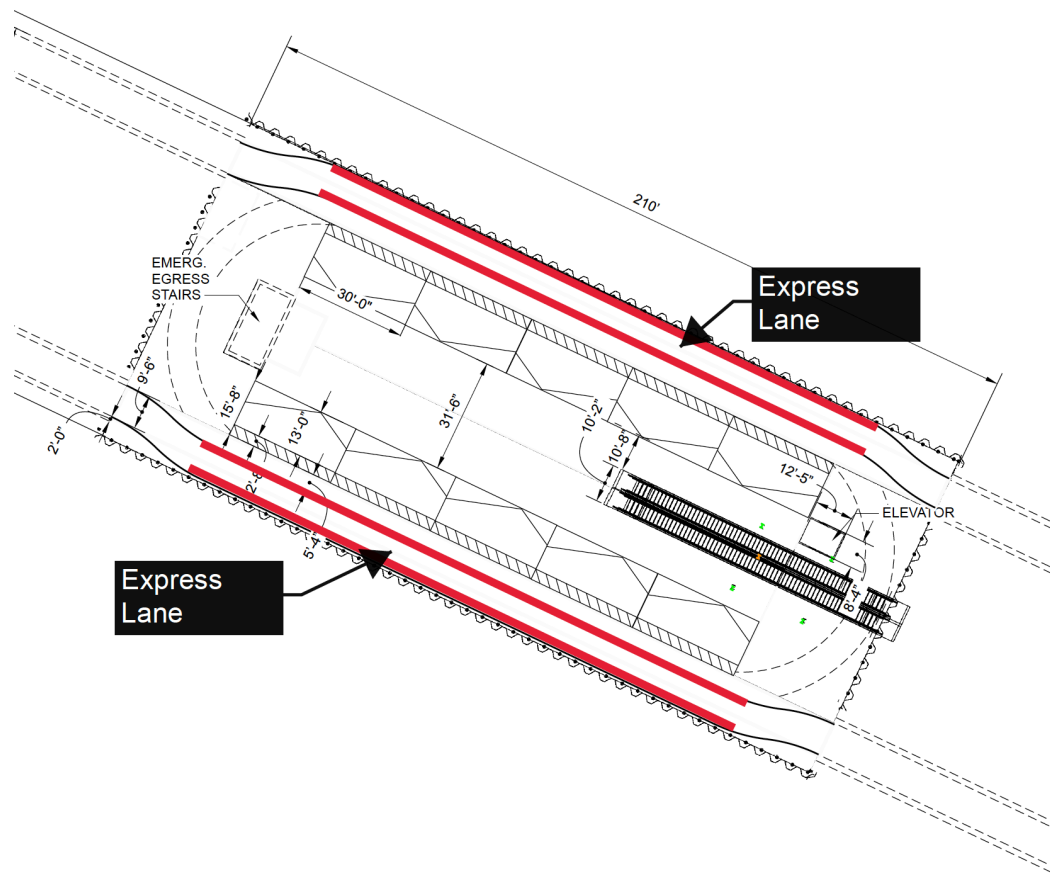
While driving a vehicle in the CWPM system, Drivers must obey the following rules of the road:

- **Speed limit:** Depending on the position of the vehicle and the tunnel section through which it is passing:
 - Maximum of 40 mph on straightaways in the tunnel.
 - Maximum of 30 mph on turns in the tunnel.
 - Maximum of 15 mph on ramps.
 - Maximum of 10 mph while at Stations, including while in the Express Lane in the Station
- **Horn:** Only use vehicle horn when needed to prevent an accident or an injury.
- **No autopilot:** Drivers will not be allowed to activate the Tesla active driving assistance systems (such as Autopilot or Automated Parking). TBC commits to having Autopilot disabled for

operation, and will ensure that each vehicle's active driving systems are inoperable before they are commissioned as part of the fleet. All CWPM vehicles will be operated by a driver. Since all CWPM vehicles are production Tesla vehicles used for CWPM operation, all CWPM vehicles will feature the standard steering wheel, gear stalk, accelerator, and brake pedals found in automobiles. Steering assist, braking/acceleration/deceleration assist systems (both active and passive) are manually disabled and verified to be disabled by CWPM maintenance staff as described in the procedures provided in Appendix 6 of the CWPM Vehicle Maintenance Plan.

- **Right of way:** Vehicles in the Express Lane (see Figure below) have precedence over merging-in vehicles (i.e. merging vehicles must make sure no cars are in the Express Lane before merging). Pedestrians always have precedence over vehicles.

Figure 11 – Express Lane



3.2 Driver Procedures Manual

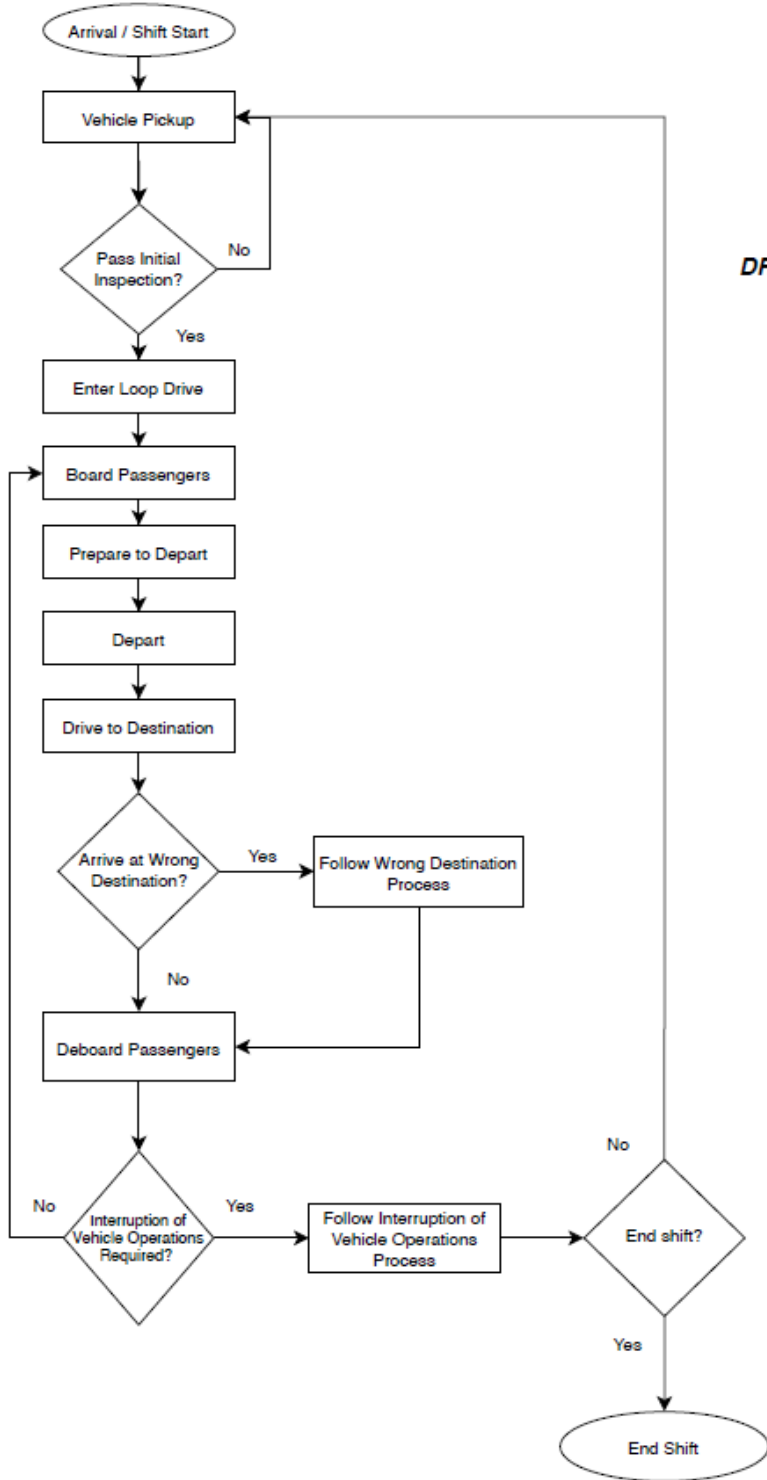
This Procedures Manual section covers:

- Arrival / Shift Start
- Vehicle Pickup
- Initial Inspection
- Entering the CWPM Drive
- Boarding Passengers
- Preparing to Depart on the Mission
- Departing
- Driving to Destination
- Arriving at Destination
- Deboarding Passengers
- Interruption of Vehicle Operations
 - Requesting a Break
 - Ending Shift
 - Early Termination of Shift
 - Exchanging a Vehicle
 - Vehicle Recall
 - Lost Items
- Emergency Events
 - Evacuation Event
 - Accident or Injury Event
 - Stop Event
 - Passenger Misconduct Event
 - Operational Fault Event
- Communicating with the OCC

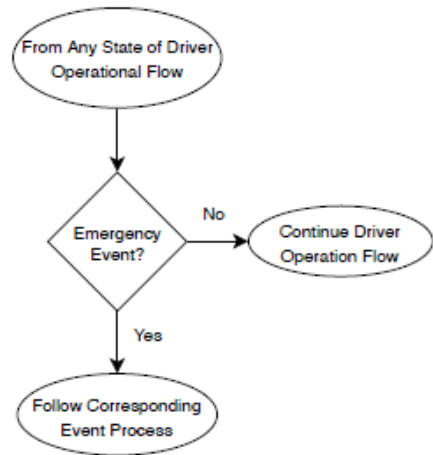
A block diagram of the procedures is provided in Figure 12:

Figure 12 – Driver Procedures Diagram

DRIVER OPERATION FLOW



DRIVER EMERGENCY FLOW



3.2.1 Arrival / Shift Start

- A. Driver, dressed in TBC uniform, arrives at site and parks in Employee Parking Area shown in Figure 5.
- B. Driver walks from Employee Parking Area to the OCC. Driver arrives at OCC at least 20 minutes prior to the start of when the Driver's first Mission is scheduled.
- C. If applicable, Driver places lunch in fridge and small personal belongings in an employee locker. The fridge and employee lockers are located inside the OCC.

Figure 13 – OCC Layout



3.2.2 Vehicle Pickup

- A. Driver approaches vehicle Check-In Screen.
- B. Driver views Check-In Screen to identify vehicles that have an SoC above 50% and are available (such vehicles will appear in green, as these are vehicles that have not had Drivers log in via the GUI as described in Section 3.2.3). Vehicles in red are those either in operation or flagged for maintenance by the Maintenance Team.
 - o If no vehicles appear in green (i.e. with at least 50% SoC are available), Driver waits until a vehicle with such level is available.
 - o If a vehicle appears in green but there is key card/keyfob in the compartment, this means that a Driver has the key card/keyfob but has not yet logged into the GUI).

Figure 14 – Check-In Screen

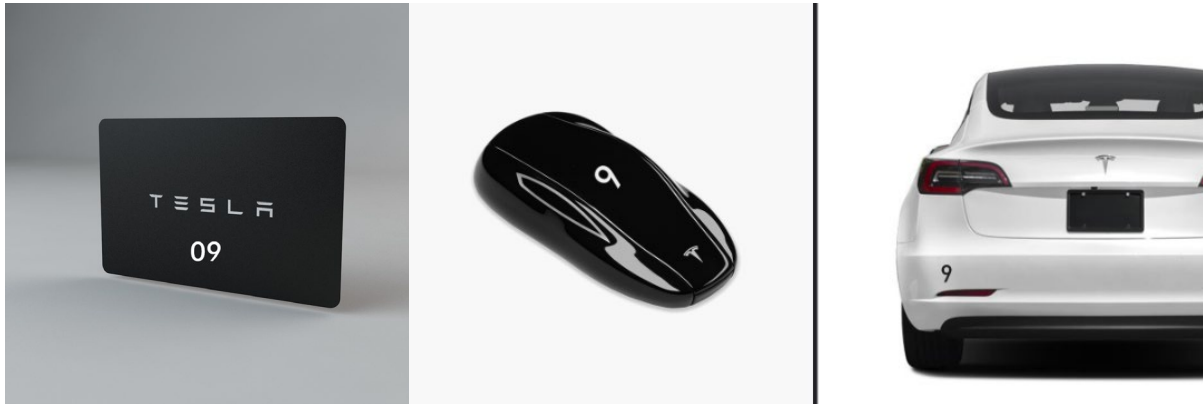
VEHICLE	CHARGE (%)	DRIVER	STATE
0001	74.6		CHECK IN
0002	81.2		CHECK IN
0003	56.7		CHECK IN
0004	62.4		CHECK IN
0005	0.00		LOW CHARGE

- C. Once vehicle is selected on Check-In Screen, Driver obtains key card/keyfob from key provider (i.e. the person managing the Lockbox).
- D. Driver obtains the key card/keyfob labeled with the same number as the vehicle he or she has identified from the Check-In Screen. Each key card/keyfob is labeled with a number that corresponds to the Check-In Screen and the vehicle itself (see Figure 14 and Figure 15).

3.2.3 Initial Inspection

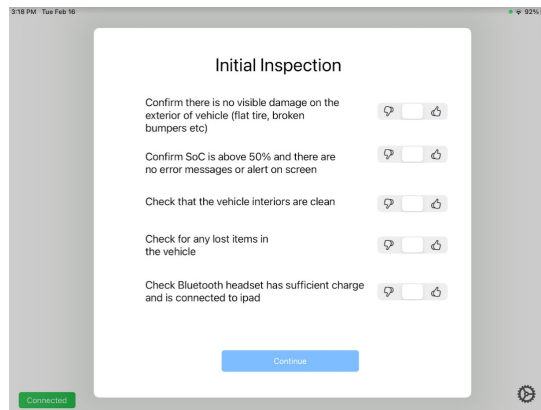
- A. Driver walks from Check-In Screen to OCC Charging Station / Vehicle Storage Area to collect vehicle, as shown in Figure 5.
- B. Driver identifies the vehicle associated with the key card/keyfob received from the Check-In Screen by looking at the Vehicle Number label on the key card/keyfob and matching it to the decal on the front or rear of the vehicle.

Figure 15 – Examples of Key Cards/Keyfob and Vehicle Decal



- C. Driver unplugs the charging cable from above rear Driver’s side tire by pressing the button on the top of the charging cable, removing the handle from the port, and replacing the handle and cable on the wall charger. (The charging port will only open if the key card/keyfob is in close proximity, so as noted in Section 263.1.1, key card/keyfob must be on Driver’s person at all times).
- D. Driver completes the following Initial Inspection checklist on the GUI, which is transmitted to the OCC.

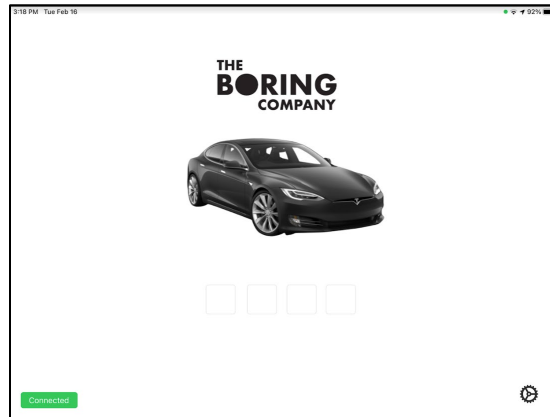
Figure 16 – Initial Inspection Checklist



If any item on checklist cannot be completed successfully, Driver calls the OCC via the GUI and communicates to the Operator the issue he or she has found with the vehicle. If instructed to return the vehicle, Driver returns to the key provider, returns the vehicle’s key card/keyfob, and chooses another vehicle (restart **Vehicle Pickup**). The checklist actions are:

- o Driver walks around vehicle and confirms there is no visible damage on the exterior of the vehicle (e.g. flat tires, broken bumpers, large paint scratches).
- o Driver enters the vehicle and types his/her Personal Identification Code (assigned on first day of work by Human Resources) on the GUI.

Figure 17 – Personal Identification Code Screen



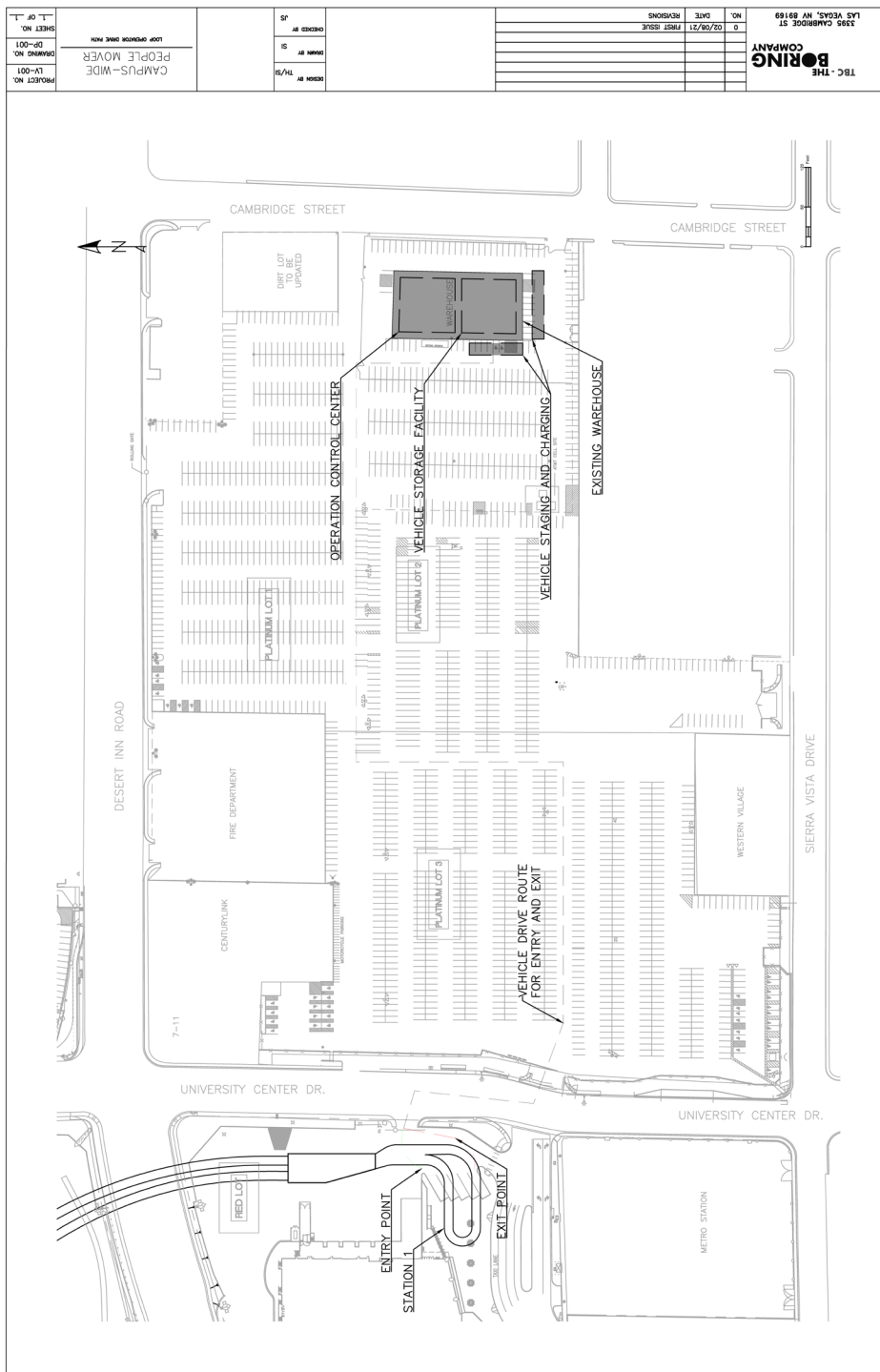
- o Driver checks the GUI to confirm the SoC is above 50% and that there are no error messages or alerts.
 - o Driver checks that the vehicle interiors are clean.
 - o Driver checks for lost items in the vehicle. If objects are found, Driver walks objects back to the OCC and hands them to Security.
 - o Driver verifies that Bluetooth headset has sufficient charge and is connected to iPad, if using.
- E. Drivers will have the option to utilize a Bluetooth headset to facilitate calls to the OCC. Driver will configure headset and confirm it is properly paired to the vehicle if using a headset.

3.2.4 Entering the CWPM Drive

After Driver has completed **Initial Inspection**, Driver proceeds from the OCC Charging Station to the CWPM Drive. To do so:

- A. Driver switches gear to D (drive) or R (reverse) as applicable.
- B. Driver proceeds from OCC Charging Station onto the CWPM Drive and travels to Station 1 via the route shown below. Driver yields right of way to vehicles already in the CWPM Drive.
- C. Driver proceeds to Station 1 to pick up passengers for a Mission (as this is the closest station to the OCC). The OCC may direct Driver to proceed to Station 2 or 3, however Driver will still enter CWPM via Station 1.
- D. Driver merges from CWPM Drive into Station 1 at Vehicle Entry point marked on Figure 19.
- E. If all Parking Stalls are occupied and there are passengers waiting at Station 1, Driver idles in the vehicle until a Parking Stall becomes available. Idling vehicles wait in the CWPM Drive stretching from the OCC to Station 1 until there is space for them at Station 1. If no passengers queues, Driver proceeds to Station 2.

Figure 18 – Route from OCC to Station 1



3.2.5 Boarding Passengers

- A. Driver arrives at Station and parks in a Parking Stall with a passenger queue.
 - o If there are no Parking Stalls with passenger queues, Driver parks in any Parking Stall. Driver waits 1 minute, and if no passengers appear or begin to approach the vehicle for boarding, Driver proceeds to next Station.
- B. Driver allows passengers to open doors and load vehicle.
 - o If passengers require assistance, Driver exits vehicle and assists. This may include assisting passengers using wheelchairs or with other mobility issues, passengers with visual or hearing impairment, and passengers with service animals (which, per 3.1.1, are permitted).
- C. Driver welcomes passengers boarding vehicle (See Ride Script in Section 3.3).
- D. If passengers have luggage, Driver remotely opens rear and front trunks as necessary, and passengers place luggage inside.
- E. Driver may transport between 1 and 4 passengers per Mission, using his or her discretion to determine the number based on seating capacity of the vehicle, queue length, passenger comfort, and size of party.
 - o If a group of passengers is traveling together and does not want to be split up, Driver tells these passengers that they may travel together (up to a group of 4) but must wait for the next vehicle. Driver permits the next passenger in the queue to board the vehicle.
- F. If the number of passengers is 3-4 or no other passengers are in the queue, Driver departs.

3.2.6 Preparing to Depart on the Mission

- A. Driver checks doors (including trunks) are closed.
- B. Driver checks GUI to confirm that there are no vehicle alerts.
- C. Driver reminds passengers of seatbelt use.
- D. Driver announces Destination (e.g. "off to Station 3") to passengers in vehicle.

3.2.7 Departing

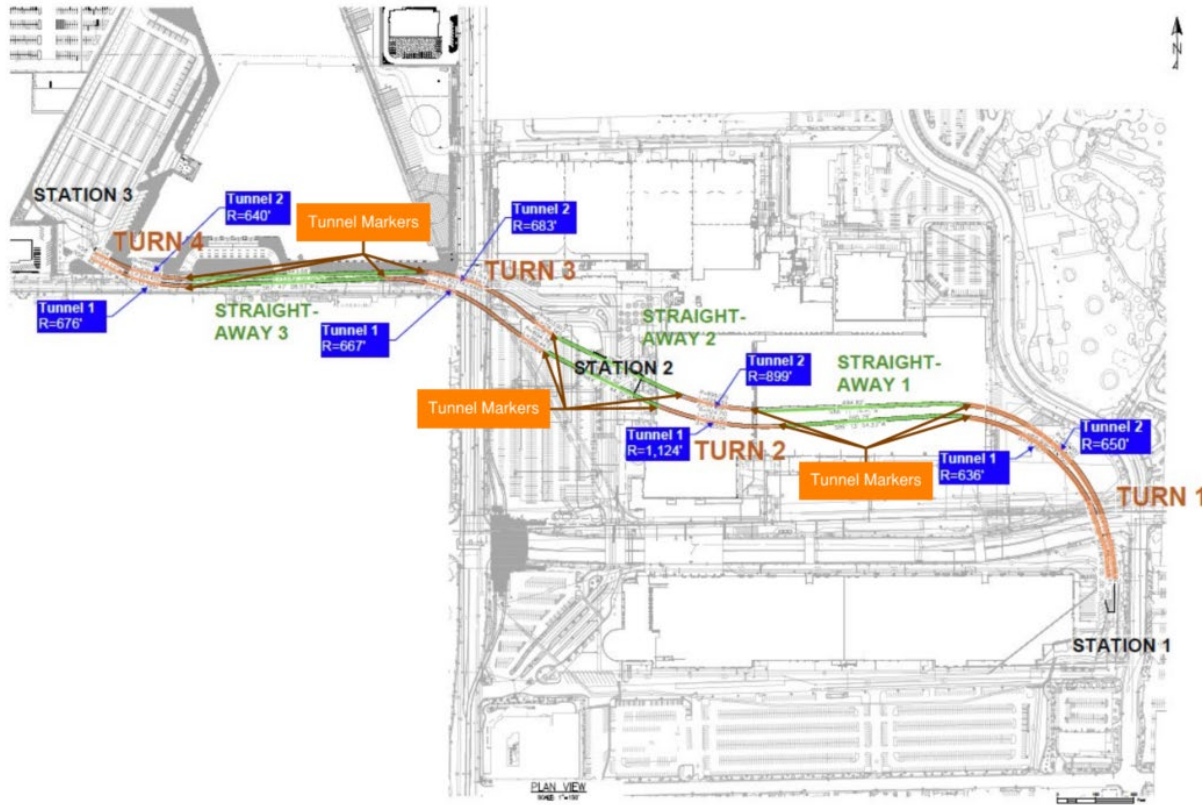
- A. Driver visually verifies that no pedestrians are in the vehicle's path.
- B. Driver turns on the turn signal in the direction of the Express Lane.
- C. Driver leaves the Parking Stall by slowly driving forward, without using the reverse gear.
- D. Driver verifies that the Express Lane is clear of vehicles. If not clear, Driver waits until it is clear.
- E. Driver pulls into the Express Lane and accelerates slowly.

3.2.8 Driving to Destination

Driver safely drives to Destination, observing Rules of the Road (see Section 3.1.2) and exercising sound judgment. Tunnels will have visual markers on the tunnel walls to indicate to Drivers that a turn is approaching or ending. This visual marker will be a reflective marker similar to a reflective traffic marker. Drivers will be trained on where these visual markers are located, and they will be trained to identify markers within the tunnel and begin to decelerate or accelerate as appropriate to the

Maximum Operating Speed around turns at these markers. Figure 20 provides a map with the location of these markers.

Figure 19 – Map of Visual Speed Marker Locations



3.2.9 Arriving at Destination

- A. Driver drives to Destination.
- B. Driver decelerates while approaching the Parking Stalls at Destination.
- C. Driver turns on the turn signal and enters the Parking Stall.
- D. Driver shifts gear to P (park).
- E. Scenarios if Driver arrives at wrong Destination:
 - o Driver travels to the wrong Station.
 - Driver informs passengers of the error, saying: “Apologies, I’ve accidentally stopped at the wrong destination. Please remain in the vehicle and you’ll be at the desired destination within 2 minutes.”
 - Driver continues along the CWPM Drive and proceeds as normal.
 - o Driver mistakenly does not stop at the desired Station.
 - Driver informs passengers by saying “Sorry for the delay. You’ll be at your desired destination within 2 minutes.”

- Driver proceeds to the planned Destination.
- All Parking Stalls are already occupied.
 - Driver informs passengers by saying “Sorry, all the Parking Stalls are occupied. We’ll be parking soon.”
 - If at Stations 1 or 3: Driver waits in the line of vehicles until a Parking Stall is available, and then drives into it.
 - If at Station 2: Driver passes occupied Parking Stalls and proceeds into the Turnaround Point (see Figure 3). Driver waits there until a Parking Stall is available and drives into it.

Note: Driver must NEVER operate the vehicle in reverse in order to reach a missed Destination.

3.2.10 Deboarding Passengers

- A. Driver informs the passengers that they have arrived, and thanks them for riding the CWPM.
- B. Driver kindly instructs passengers to open doors and deboard.
- C. Driver waits for all passengers to exit the vehicles.
- D. Driver exits the vehicle to assist passengers if necessary.
- E. Driver waits for passengers to unload cargo from the rear trunk.
- F. Driver assesses if a vehicle exchange is needed (see **Exchanging a Vehicle**).
- G. Driver boards new passengers (see **Boarding Passengers**).

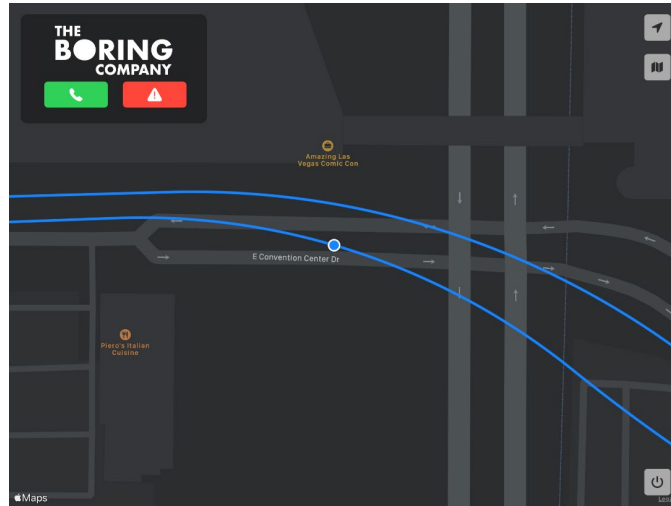
3.2.11 Interruption of Vehicle Operations

To request a break, end a shift, request to terminate the shift early, or other reasons as set forth below, Driver may request an interruption of vehicle operations as follows.

3.2.11.1 Process

- A. Driver calls Operator on the GUI and explains reason for requesting interruption. Driver may call at any time to cancel an interruption request.

Figure 20 – Vehicle GUI (call button indicated in green)



- B. Driver completes the current Mission.
- C. At the end of the Mission, Driver prevents new passengers from entering the vehicle by kindly telling the new passengers to wait for another vehicle.
- D. Driver proceeds to the OCC Charging Station by driving to Station 1 and exiting the station at the Vehicle Exit point, as shown in Figure 19 and following vehicle driver route.
- E. Driver parks the vehicle at an available charger (if no available charger, Driver parks in designated stall).
- F. Driver connects the vehicle to a charging cable.
- G. Driver checks that the vehicle interiors are clean.
- H. Driver checks for lost items in the vehicle. If objects are found, Driver walks objects back to the OCC and hands them to Operator.
- I. Driver conducts walk around inspection to confirm there is no visible damage on the exterior of the vehicle (e.g. flat tires, broken bumpers, large paint scratches).
- J. Driver logs off the vehicle via GUI.
- K. Driver returns the keyfob to the Lockbox.

3.2.11.2 Requesting a Break

Driver may request a break when he or she needs to go to the restroom, or when there is a planned break (every 4 hours of operation Driver shall take a 10-minute break, and an additional 30 minutes for lunch). To request a break:

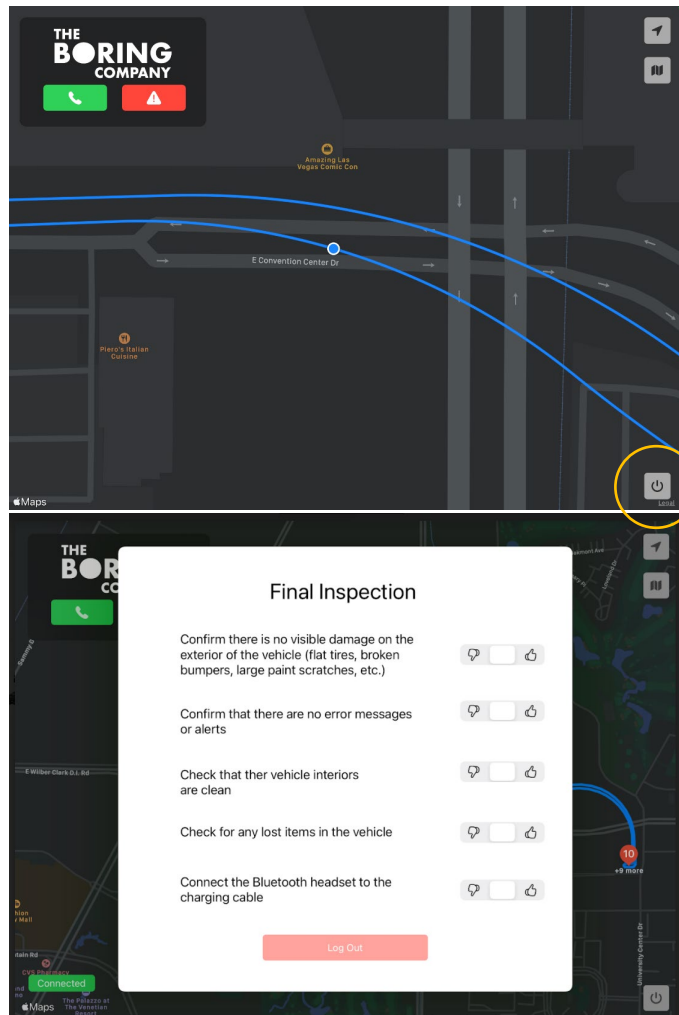
- A. Driver calls the OCC via the GUI to request a break.
- B. If the OCC approves, Driver completes the **Interruption of Vehicle Operations** process set forth in 3.2.11.1.
- C. Driver may begin to operate again by following the **Vehicle Pickup** procedure.

3.2.11.3 Ending Shift

To end a shift:

- A. Driver follows the **Interruption of Vehicle Operations** process set forth in 3.2.11.1.
- B. Before exiting vehicle, Driver logs off via the GUI by pressing Driver Sign Out button:

Figure 21 – Driver Sign Out (circled in yellow) and Final Inspection



- C. Driver checks out at Check-In Screen to end shift and returns key card/keyfob to Lockbox.
- D. Driver collects belongings, leaves OCC, returns to Employee Parking Area, and departs.

3.2.11.4 Early Termination of Shift

Driver may request an early termination of the shift in rare cases where Driver is unable to complete his/her shift (for example, illness).

- A. Driver calls the OCC via the GUI to request an early termination of his or her shift and explains the reason for such request to the OCC.
- B. If the OCC approves of termination, Driver follows the **Interruption of Vehicle Operations** Process set forth in 3.2.11.1.
- C. Driver collects belongings, leaves OCC, returns to Employee Parking Area, and departs.

3.2.11.5 Exchanging a Vehicle

Driver must exchange the vehicle when:

- The vehicle SoC is 10% or lower.
- The interior of the vehicle is not clean.
- There is damage to the vehicle.
- There is another issue that would render the vehicle as having failed an Initial Inspection.
- There is a request to exchange the vehicle on the GUI from the OCC.

To do so:

- A. Driver follows **Interruption of Vehicle Operations** process set forth in 3.2.11.1.
- B. If the vehicle has been exchanged for any reason other than the SoC level, Driver calls the OCC via the GUI and reports the issue.
- C. Driver selects another vehicle (see **Vehicle Pickup**).

3.2.11.6 Vehicle Recall

Driver may receive a command via the GUI that the OCC is recalling the vehicle. In such case, Driver must follow steps B-K of **Interruption of Vehicle Operations** process set forth in 3.2.11.1.

3.2.11.7 Lost Items

- A. If Driver finds valuable items (e.g. laptop, cell phone, wallet, cash, documents, jewelry) in the vehicle, Driver immediately returns the object to Security at the OCC by performing the **Interruption of Vehicle Operations** process set forth in 3.2.11.1.
- B. If Driver finds non-valuable items (e.g. receipts, coins, empty plastic bags, etc.), Driver places them in the storage area under the center armrest and returns them to the OCC at the end of the shift.

Driver shall use his/her own judgment and common sense to determine if an object shall be immediately returned.

Under no circumstances may Driver keep lost items, even if considered non-valuable.

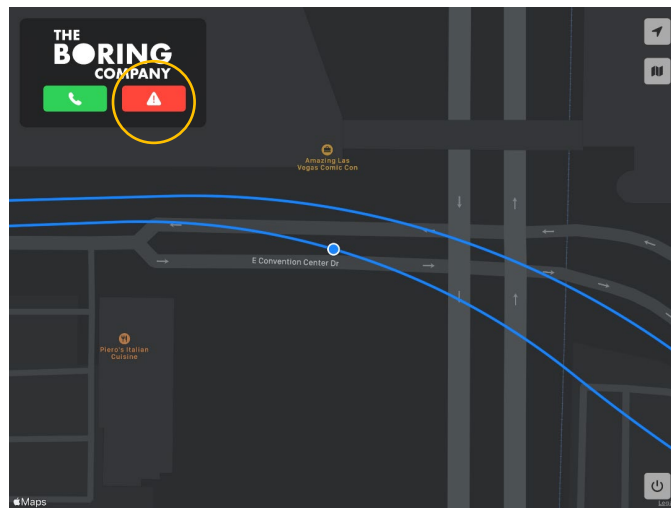
3.2.12 Emergency Events

In addition to the cases that have been already covered above, Driver shall immediately call the OCC via the GUI when any of the events in this section occur.

Driver must immediately report the nature and the location of the event. Whenever possible, a voice call should be used to report emergency situations, allowing for faster responses. However, should Driver be unable to communicate with the OCC via a voice call (e.g., Driver is assisting an injured passenger), an emergency request via the GUI should be undertaken as follows:

- A. Driver presses the button “Report Emergency” on the GUI.
- B. Operators use vehicle telemetry, tunnel cameras, the vehicle interior camera, and environmental sensors to assess the situation and take appropriate actions such as launching an evacuation or dispatching first responders to the vehicle's location.

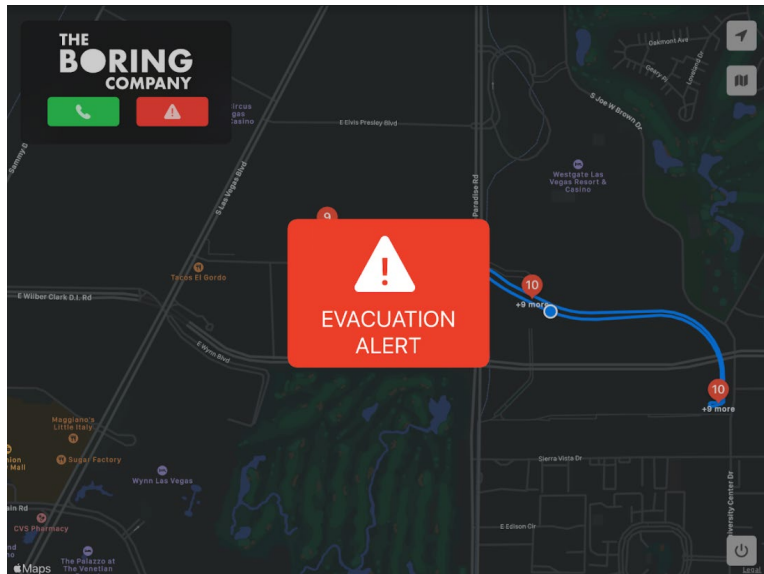
Figure 22 – Call to OCC (emergency call function circled in yellow)



3.2.12.1 Evacuation Event

An Evacuation event is broadcast by the communications system directly to each vehicle, and/or the GUI reports an Evacuation event.

Figure 23 – Evacuate Tunnel Alert



During an Evacuation event:

- A. OCC sends voice alert to all vehicles with information about the emergency, including which tunnel segment is affected and in what direction the evacuation should proceed.
 - o If there is no information provided in the GUI, Driver continues as if the direction of evacuation is ahead of the vehicle, unless or until it becomes clear that the safer direction of evacuation is behind the vehicle.
- B. Flashing red lights will be implemented by the OCC, indicating that vehicles should evacuate. Operators will do this by pressing the “Evacuate” command on the WGUI, which will cause the lights in the system to be flashing red and white.
- C. Driver may not change the direction of evacuation unless the evacuation instructions provided by the OCC would pose a risk of death or injury for Driver or passengers. Driver relies on training to identify and prioritize hazards and risk.
- D. If the direction of evacuation is ahead of the vehicle, Driver continues to the closest Station. Upon arrival at the Station, Driver takes the route learned in Emergency Training (see Appendix) and parks the vehicle in the designated evacuation area.
- E. If the direction of evacuation is behind the vehicle, Driver awaits instruction from OCC.
- F. All evacuations take place in the vehicles rather than on foot unless the vehicle itself is unsafe. If the vehicle itself is on fire, unlocks the vehicle doors, exits the vehicle and assists with debarking passengers, and guides passengers on foot to the closest exit. Driver issues verbal instructions and may physically assist passengers. Driver leads passengers by walking ahead of them, but consistently looks back to ensure every passenger is following closely behind.

- G. If vehicle doors do not open, Driver instructs passengers to use the user accessible mechanical release on the interior of the vehicles (the Model 3's front doors and Model X's all doors). If doors still do not open, Driver calls OCC and waits for assistance to arrive to troubleshoot any issues opening the door from the exterior, which may include the dispatching of fire department personnel to extract passengers.

3.2.12.1.1 Fire Without Evacuation Issued

If Driver sees a fire or smoke ahead of the vehicle and there has not been an Evacuation issued by the OCC, Driver:

- A. Stops the vehicle and turns on hazard lights.
- B. Issues the emergency request via pressing the Report Emergency button on the GUI and follows instructions provided by the OCC.
- C. If no response is received from the OCC immediately or the risk of casualty is imminent, proceeds to closest Station for evacuation of passengers.
- D. If movement is not possible due to blockage, unlocks the vehicle doors, exits the vehicle and assists with deboarding passengers, and guides passengers on foot to the closest exit in the opposite direction of the fire.
- E. Blue Light Stations in the tunnel are accessible to all; if safe, Driver and/or passengers use Blue Light Station to contact OCC during emergencies, unscheduled cessations or other operational needs requiring communication with OCC. Blue Light Stations are used by pressing the call button on the callbox and proceeding to speak to the Operator. See ATS Site Plan for details regarding Blue Light Stations.

3.2.12.1.2 Severe Flood Without Evacuation Issued

If Driver sees severe flooding ahead of the vehicle and there has not been an Evacuation issued by the OCC, and water levels are so high that the vehicle may not pass through (roadway is not visible due to water), Driver:

- A. Stops the vehicle and turns on hazard lights.
- B. Issues the emergency request via pressing the Report Emergency button on the GUI and follows instructions provided by the OCC.
- C. If no response is received from the OCC immediately or the risk of casualty is imminent, proceeds to closest Station for evacuation of passengers.
- D. If movement is not possible due to blockage, unlocks the vehicle doors, exits the vehicle and assists with deboarding passengers, and guides passengers on foot to the closest exit in the opposite direction of the flood.
- E. Blue Light Stations in the tunnel are accessible to all; if safe, Driver and/or passengers use Blue Light Station to contact OCC to provide status update. Blue Light Stations are used by pressing the call button on the callbox and proceeding to speak to the Operator. See ATS Site Plan for details regarding Blue Light Stations. (Note: Operators will prevent other vehicles from entering tunnel per procedures listed in Section 4.1.3).

If flooding is not severe, see **Stop Event**.

3.2.12.2 Accident or Injury Event

If an accident (e.g. a vehicle collision) or an injury to Driver or any of the passengers occurs:

- A. If the vehicle is parked at a Parking Stall:
 - o Driver calls the OCC via the GUI to report the injury, and follows the OCC's instructions.
 - o If necessary, Driver may perform first aid to injured passengers.
- B. In case of injury that does not prevent the completion of a Mission, Driver completes the Mission and undertakes the procedures above once parked at a Parking Stall.
- C. In case of injury to a passenger and/or to Driver where immediate medical help is required and the Mission cannot be completed, Driver turns on hazard lights and brings the vehicle to a stop.
 - o Driver calls the OCC via the GUI to inform the OCC about the injury, and follows instructions.
 - o Driver provides first aid to injured passengers.
- D. When Driver returns to OCC, Driver completes Accident Reporting Form and submits it via e-mail to accidents@boringcompany.com.

3.2.12.3 Stop/Hold Event

A Stop Event occurs when the CWPM vehicle has an issue that prevents Driver from completing a Mission. Examples of Stop Events are:

- Vehicle loses power.
- Vehicle stopped ahead for more than 30 seconds.
- Vehicle does not have enough torque to overcome ramp grade.
- Presence of unauthorized vehicles, foreign objects, or pedestrians in the CWPM Drive.
- Flooded floor with water level below 1.5 feet (water level less than half of wheel size).

When a Stop Event occurs:

If the issue causing the Stop Event is specific to the vehicle:

- A. If the vehicle is parked at a Parking Stall:
 - o If there are passengers in the vehicle, Driver kindly asks the passengers to exit the vehicle and to complete the ride on another vehicle.
 - o When the passengers have deboarded, Driver locks the doors to prevent new passengers from entering the vehicle.
 - o Driver calls the OCC via the GUI, reports the Stop Event, and waits for instructions.
- B. In all other cases:
 - o Driver stops vehicle if still in motion.
 - o Driver turns on the hazard lights.
 - o Driver calls the OCC via the GUI, reports the Stop Event, and waits for instructions.
 - o Driver shall not exit the vehicle or let passengers exit the vehicle. If a passenger deboards the vehicle, Driver shall immediately report this to the OCC via the GUI.
 - o If it is unsafe to remain in the vehicle, Driver additionally notes this to OCC and if instructed, deboards passengers and guides them toward the closest exit.

If the issue causing the Stop Event is general and related to the tunnel or Stations:

- A. If the vehicle is parked at a Parking Stall:
 - o Driver calls the OCC via the GUI, reports the Stop Event, and waits for instructions.

B. In all other cases:

- o Driver stops vehicle if still in motion.
- o Driver turns on the hazard lights.
- o Driver calls the OCC via the GUI, reports the Stop Event, and waits for instructions.
- o Driver shall not exit the vehicle or let passengers exit the vehicle. If a passenger deboards the vehicle, Driver shall immediately report this to the OCC via the GUI.

(Note: Operators will prevent other vehicles from entering tunnel per procedures listed in Section 4.1.3. Operators will also prevent entry to the tunnel by use of directional lighting system; tunnel lighting will implement red lights to indicate potentially hazardous conditions. The determination by Operators of whether vehicles may enter the tunnel is based on Operator training, which covers emergency scenarios. For example, Operators will be trained not to allow vehicles to enter tunnel (by issuing the appropriate command that is communicated to Drivers) if they see smoke in the tunnel).

TBC Maintenance personnel will coordinate with the OCC and evaluate vehicle Stop Events that are the result of a stranded, disabled, or damaged vehicle. The Maintenance Team will coordinate with the OCC to determine where the disabled vehicle is located (i.e. whether the vehicle is in the tunnel, station, or ramp) and which approach direction will be taken. The OCC will redirect traffic accordingly to ensure that the Maintenance Team has a clear path to extract the vehicle from the location in which it was disabled to the Vehicle Exit point at Station 1.

- If the vehicle is fully disabled (defined as complete loss of power and unable to move on its own), the Maintenance Team will use a car carrier dolly system to tow the vehicle out of the system.
- If the vehicle is partially disabled (defined as a vehicle which has power but is not able to drive itself), the Maintenance Team will use a tow strap or push ram connected to the recovery vehicle to extract the vehicle from the system.

3.2.12.4 Passenger Misconduct Event

A Passenger Misconduct event occurs when any of the passengers is:

- Smoking (cigarettes, e-cigarettes, marijuana, etc.).
- Drinking (alcohol, soda, etc.) (all containers must be closed).
- Eating (all containers must be closed).
- Verbally/physically aggressive.
- Physically impeding Driver from safely driving the vehicle.

If a Passenger Misconduct event occurs:

- A. Driver politely tells the passenger to properly behave, for his or her safety and the safety of the other passengers.
- B. If the event continues, and the vehicle is parked at a Parking Stall:
 - o Driver asks the misbehaving passenger to leave the vehicle.
 - o If unsuccessful, Driver alerts the OCC via the GUI and waits for security staff to arrive.
 - o If Driver feels his/her or any of the passenger's safety is at risk, Driver unlocks the vehicle so other passengers may deboard, and leaves the vehicle.
- C. If the event continues, and the vehicle is not parked at a Parking Stall:
 - o Driver tries to conclude the Mission for as long as he/she has full control of the vehicle and his/her actions are not impeded by the Passenger Misconduct.
 - o If Driver is unable to conclude the Mission, Driver alerts the OCC via the GUI and follows instructions.

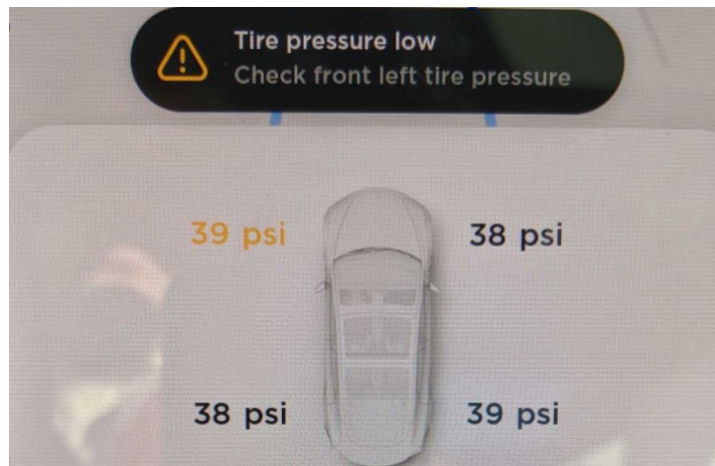
- If Driver feels his/her or any of the passenger's physical safety is at risk, Driver brings vehicle to a stop, unlocks the vehicle so other passengers may disembark, and leaves the vehicle, and, as above, alerts the OCC via the GUI and follows instruction.

3.2.12.5 Operational Fault Event

An Operational Fault event occurs when the vehicle has an issue that requires attention but does not prevent Driver from completing the Mission safely. Examples of Operational Fault events are:

- Flat tire.
- Persistent loss of communication with the OCC.
- GUI screen goes blank and does not recover within 20 seconds.
- Vehicle is in limp mode (reduced power) but can still drive over the ramps.
- GUI indication of an Operational Fault event from the OCC.

Figure 24 – Low Tire Pressure Alert



If an Operational Fault event occurs:

- A. If the vehicle is parked at a Parking Stall:
 - If there are passengers in the vehicle, Driver kindly asks the passengers to exit the vehicle and to complete the ride on another vehicle.
 - When the passengers have disembarked, Driver locks the doors to prevent new passengers from entering the vehicle.
 - Driver calls the OCC via the GUI and reports the Operational Fault. If resolved within 5 minutes, Driver resumes operations; if not resolved within 5 minutes, Driver follows **Interruption of Vehicle Operations** process set forth in 3.2.11.1.
- B. In all other cases:
 - If driving ability is perceivably impacted (e.g. flat tire), Driver turns on the hazard lights.
 - Driver follows **Interruption of Vehicle Operations** process.
 - If the issue is perceivable to the passengers (e.g. flat tire) or the passengers asks questions about the vehicle's misbehaviors (e.g. "why is the screen black?"), Driver shall reassure the passengers that they are safe.
 - Driver proceeds to the Destination.
 - Driver concludes the Mission by following the **Deboarding** procedures.
 - Driver locks the doors to prevent new passengers from entering the vehicle.

- o Driver calls the OCC via the GUI and reports the Operational Fault. If resolved within 5 minutes, Driver resumes operations; if not resolved within 5 minutes, Driver follows **Interruption of Vehicle Operations** process set forth in 3.2.11.1.

3.2.12.6 Priority of Events

When an event occurs, Drivers must prioritize adhering to event-specific procedures rather than general operating procedures.

When multiple events occur simultaneously, Driver must respond to and take action in connection with events in the following order of priority (from highest priority to lowest):

1. Evacuation (3.2.12.1),
2. Fire Without Evacuation Issued (3.2.12.1.1),
3. Severe Flooding Without Evacuation Issued (3.2.12.1.2),
4. Accident or Injury (3.2.12.2),
5. Passenger Misconduct (3.2.12.4),
6. Stop (3.2.12.3), and
7. Operational Fault (3.2.12.5).

This list is not exhaustive and is intended to represent certain categories of events that may take place during a Driver's shift. Drivers must exercise best judgment based on facts on the ground.

3.2.13 Communicating with the OCC

Communications with the OCC should be clear and concise, as follows:

- When a Driver calls the OCC, the OCC will answer: "OCC, Hi [*Driver Name*]". This signals to Driver that the call was placed correctly and that the OCC has identified from which vehicle the call originated.
- Driver should use the headings in this section (i.e. "Stop Event," "Passenger Misconduct") if possible to immediately communicate to the OCC the reason for the call. Otherwise, Driver should calmly and clearly state the nature of the event.
- Driver should provide location information using the format "Headed from [*closest station behind*] to [*closest station ahead*]" and any additional identifying location information such as incremental tunnel markers. For example, if a Driver sees a fire in the tunnel after departing Station 2 and heading to Station 3, Driver would indicate the direction of travel and the marker number. This assists the OCC in identifying not only which tunnel (because the direction of traffic is known), but also to which Station emergency responders should be directed and the approximate marker location of the incident within the tunnel. See Figure and the Appendix.
- The OCC will provide instructions to Driver.

In all cases, Drivers should communicate with the OCC using the GUI call feature. However, in emergency scenarios, Drivers may use their personal cell phones to call the OCC or the Blue Light Stations posted throughout the tunnels. Driver should consult tunnel marker if GUI is not functioning to readily determine his or her location.

Figure 25 – Sample Incremental Tunnel Marker



3.3 Ride Script

During your time as a Driver in the CWPM system, you will encounter a wide variety of people with an even wider variety of questions for you. Remember the following principles:

- **You will likely provide the only interaction passengers have with The Boring Company and the CWPM system. You are both a representative of TBC and an ambassador for the LVCC CWPM, and your conduct will reflect on the entire Company and mission.**
- **Act as though anything you say will end up on the front page of *The New York Times*.**
- **It's perfectly fine to say you don't know the answer to a question you're asked.**
- **Your goal is to provide a safe ride for the passengers, not an entertaining ride. Keep conversation to a minimum so you can focus on the road.**

When the passengers board the vehicle, say:

"Hello, welcome to the Las Vegas Convention Center. A reminder to buckle up! We are off to [Insert Destination Station]."

When the passengers disembark the vehicle, say:

"Thanks for riding!"

What about in between the hellos and goodbyes? First, be prepared for things not to go as planned on occasion. If you've made a mistake (for example, driven to the wrong destination), politely apologize and inform the passengers what will happen (see 3.2). In an emergency situation, such as a fire or a vehicle accident, remain calm and follow the emergency training procedures.

The majority of the time, however, should be smooth driving, and passengers will pepper you with questions. Here are some you may be asked and the recommended responses. Above all, be personable and friendly.

3.3.1 Personal Questions

The key here is to be polite and friendly, but not chatty. You're a representative of TBC, so share as little information about yourself as possible. Do not get into a lengthy conversation. Here are some sample questions and answers:

Q: How long have you been working here?

A: *Long enough to know these tunnels pretty well!*

Passengers will not feel safe if they think you've only been driving for a week (even though that could mean hundreds of rides). Accordingly, do not share how long you've been employed here, but instead, find a way to evade the question or shift the focus.

An exception: if you've been a driver since the opening of the CWPM system, feel free to share that.

Q: How old are you?

A: *Old enough to drive, luckily!*

Q: Where are you from?

A: *[answer where you are from]*

Q: What's your last name? Can we connect on Facebook / Instagram / LinkedIn?
 A: *I'm [say first name], but I can't provide my last name or social media info. Sorry!*

Q: Do you like working here?
 A: *Yup!*

Q: What do you do when you're not doing this?
 A: *[I go hiking / I listen to music / etc.]*

You should invite as little follow-up as possible. Your focus is safety, not making new friends.

3.3.2 Company Questions

Stick to the facts you know. It's okay to direct questions to our website or to our email address, communityfeedback@boringcompany.com.

Q: How many employees does TBC have?
 A: *I'm not sure. You'd have to ask our HR department.*

Q: How many drivers are there?
 A: *I'm not sure. You'd have to ask our HR department.*

Q: How much money do drivers make?
 A: *A driver never tells!*

Q: What's it like working at Tesla?
 A: *Actually, although we use Tesla vehicles, The Boring Company is a totally separate company.*

Q: Do you get a discount on Teslas?
 A: *Nope.*

Q: What was the flamethrower thing about? Was that even legal? Can I buy one?
 A: *We sold "Not-a-flamethrower" devices on our website when our company first started out. And of course, they were definitely legal – they're pretty similar to torches what you can buy at a hardware store (except they're much cooler!) Unfortunately, we only made a limited number of them, and they sold out pretty quickly.*

3.3.3 CWPM system questions

Q: What model number are we in?
 A: *[Model 3 / Model X].*

Q: Does Tesla give you the vehicles for free?
 A: *Nope. Tesla is a separate company, so we buy them.*

Q: What's special about these Teslas?
 A: *They're modified so that they can communicate with our system.*

Q: How fast are we going?
 A: *[Look at speedometer and answer].*

Q: What's the average / maximum speed?
 A: *About 35 mph average and 50 mph maximum.*

Q: Is this vehicle on Autopilot? Is it driving itself? What's to prevent the vehicle from bumping into the walls?

A: The vehicle is currently not self-driving, but we are working on that technology. In the meantime, Teslas are equipped with sensors that alert the driver if the vehicle is in close proximity to other objects.

Q: Are Teslas even safe? I always read about them catching on fire.

A: Actually, Teslas have the highest possible safety rating from NHTSA, 5 stars. And the reason you read about Teslas catching fire is that it's so rare for that to happen that it actually makes the news. Hundreds of non-electric vehicles catch fire every day, but that's so common that it isn't newsworthy.

Q: What happens if there is a fire?

A: Don't worry, we have worked very closely with the fire department and other safety authorities to make sure that we're prepared for any emergency.

Q: How many accidents have there been?

A: It's a very safe system, and I'm not sure. You'd have to reach out to the company.

Q: How much did this tunnel cost to dig?

A: I'm not sure. Feel free to reach out to communityfeedback@boringcompany.com.

Q: How long did it take to dig the tunnel?

A: Digging the tunnels took several months, and then it took a few more to pave the drive surface and install the communications, safety, and other systems.

Q: How deep are we?

A: About 40 feet.

Q: How long is the tunnel?

A: A little under a mile.

Q: Can I work for The Boring Company?

A: We're always looking for talented people! Check out our Jobs page on the company website for more information.

Q: Can my brilliant son / daughter / nephew / niece / grandchild work for The Boring Company?

A: We're always looking for talented people! Check out our Jobs page on the company website for more information.

Q: Can you drop me off somewhere else?

A: Sorry, all destinations are fixed at the existing stations.

3.3.4 Elon Questions

This category of questions is extremely common and extremely sensitive. Public fascination with our founder is inevitable and may dominate the conversation. Be as brief as possible, and do your best to shut down such conversation. If passengers continue to force the topic, politely say, "I'm sorry, but I really can't comment" and change the subject.

Q: What is Elon like?

A: He's awesome! [Inspiring / motivating / etc.].

Q: Have you ever met Elon?

A: I've been too busy driving in the tunnels!

Q: How involved is he?

A: He's the company founder, and has been very involved and supportive.

Q: How often is he around?

A: I'm not sure, I'm busy driving.

Q: What about his tweet [about coronavirus / Tesla share price / Grimes / etc.]?

A: Elon is a public figure. We're just here to provide an awesome transportation experience!

Q: Do you like working for him?

A: Yup, he's a great leader! He motivates us to do great work.

Q: Is it true what I've read about him in the papers that he [is a mean boss / smokes pot / doesn't let employees take vacations / etc.]?

A: I haven't seen that article, but that hasn't been my experience.

4.0 Operating: Operators

Operators in the OCC act as dispatchers for the CWPM system, and serve as the first line of response for emergency situations. This chapter provides instructions for CWPM Operators during their shifts. Operators should use this document as a reference for how to perform their responsibilities on the job.

At this point, Operators will have successfully completed their training and carefully reviewed the Code of Conduct and TBC policies.

4.1 Rules and Commands

4.1.1 General Rules and Responsibilities

- Operators must dress in neat, professional clothing with no markings / logos.
- Operators may not eat during their shift except during lunch and rest breaks.
- Operators may not use their personal cell phones during their shift except for emergency communications.

4.1.2 Operator Shifts

- Operator shifts are subject to change based on CWPM operation schedules, but typically Operator shifts last 8 hours, with lunch and rest breaks included. Shifts last 8 hours, with a 30 minute lunch break and two 10 minute rest breaks included, per Nevada statute. At least one Operator must be logged into and monitoring a Workstation at any one time, so restroom and meal breaks must be coordinated between Operators.
- Shifts will be assigned at least one week in advance.
- One Operator will always be on duty, even when there are no vehicles operating in the tunnels (e.g. night or days when the Convention Center is closed). When vehicles are operating, there will be at least two Operators on duty.
- Sample shift schedule for trade show day (i.e. full capacity operation):

Operator	Shift Start	Shift End
Operator 1	3:00 AM	11:00 AM
Operator 2	7:00 AM	3:00 PM
Operator 3	11:00 AM	7:00 PM
Operator 4	3:00 PM	11:00 PM
Operator 5	7:00 PM	3:00 AM

4.1.3 Operator Commands

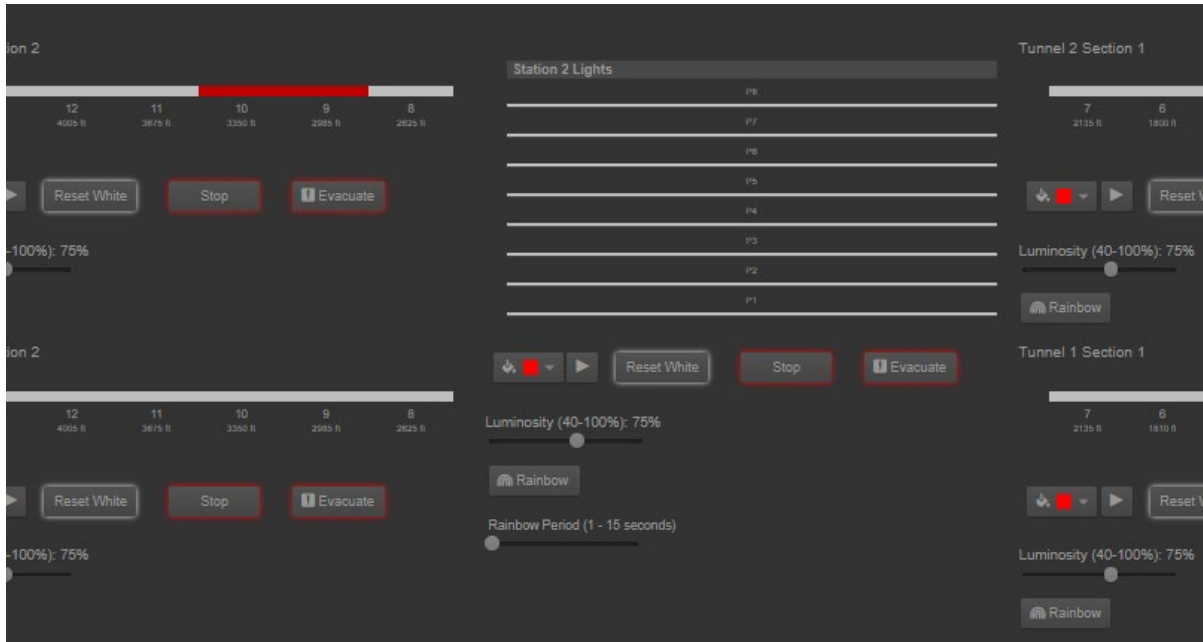
Four commands are available to Operators to drive action in the system. These commands are issued via the WGUI and are transmitted to GUIs. These commands are:

- **EVACUATE: Evacuate tunnel, using emergency protocol.**
- **CLEAR TUNNEL: All vehicles proceed to exit tunnel without moving in reverse. If after 15 minutes, issue is not resolved and vehicles remain in tunnel, Operator instructs Drivers of such vehicles to disembark safely and walk to nearest Station with passengers. Traffic may not resume until Operator issues Resume command.**
- **RESUME: Vehicles may resume transit as normal, provided safe conditions exist for each individual driver, based on their training and experience (see training materials).**

- **MAINTENANCE 20: Drivers reduce speed to 20mph and wait for further instructions from the OCC within the next 20 minutes.**
- **RECALL VEHICLE: Driver must return vehicle to OCC Charging Station.**

To issue a command, the Operator presses the appropriate command button on the WGUI. See a sample Evacuation WGUI sequence below.

Figure 26 – Command Buttons on WGUI



4.2 Operator Procedures Manual

Responsibilities for Operators can be divided into two categories: routine activities, and contingency activities, in which Operators respond to external prompts or events. A challenging aspect of an Operator’s job is the requirement to respond to situations in real-time as they arise. Some such situations are routine, but in other situations, an event will occur that is out of the ordinary, and will require quick, calm, and steadfast action by Operators to ensure the safety of Drivers and their passengers.

This Procedures Manual section covers:

Routine Actions

- Shift Start / Handoff
- Monitoring CWPM Operations
- Vehicle Monitoring
- Driver Safety Monitoring
- Systems Management
- Shift End

Contingency Actions

- Interruption of Vehicle Operations
 - Early Termination of Shift
 - Exchanging a Vehicle
- Emergency Events
 - Evacuation Event
 - Accident or Injury Event
 - Stop Event
 - System Failure Event
 - Operational Fault Event

Communicating With Drivers

Note: For an Operator on duty when vehicles are not operating, actions involving Drivers will be inapplicable. However, the Operator is still responsible for engaging in all of the Routine and Contingency Actions that apply irrespective of whether there are vehicles currently transporting passengers.

4.2.1 Routine Actions

4.2.1.1 Shift Start / Handoff

- A. Operator arrives at site and parks in Employee Parking Area.
- B. Operator walks from Employee Parking Area to the OCC to arrive at least 10 minutes prior to the start of the shift.
- C. If applicable, Operator places lunch in fridge and small personal belongings in employee locker.
- D. If Operator is the starting the first shift of the day, Operator logs into Workstation.

Figure 27 – WGUI Sign In



- E. If the Incoming Operator is not the starting the first shift of the day:
 - Incoming Operator verbally asks on-duty Operator if there are any issues that need to be addressed, both in the immediate and long-term.
 - Incoming Operator waits for on-duty Operator to sign out of Workstation and then signs in within 60 seconds of that sign out. (Note: there will be at least two Operators working at any one time, so sign ins/outs shall not take place simultaneously because shifts are staggered. One Operator must always be signed into the system).
 - Incoming Operator checks Notes Screen from the previous shift to ensure all issues were captured during the verbal handoff
- F. Operators will have the option to utilize a Bluetooth headset to facilitate calls. Operator will configure headset and confirm it is properly paired to the phone if using a headset

4.2.1.2 Monitoring CWPM Operations

Operator shall monitor the Workstation and Wall Screens to ensure that operations are running smoothly and that no Events are occurring. If Events occur, see Section 4.2.2.3 below. This monitoring includes ensuring that Stations are not overcrowded or bottlenecked, and in consultation with Security, that there are no issues with passengers' conduct.

- If a Station is overcrowded or there are issues with passenger conduct, Operator must dispatch additional Security to provide crowd control.

This monitoring also includes ensuring that elevators and escalators are functioning properly in Station 2, and that the Stations are generally in a good state. Operator shall report any issues to the Maintenance Team.

4.2.1.3 Vehicle Monitoring

Operator must continuously check the health and SoC levels of the vehicles in operation by reviewing the data fed to the Workstations. (Operator will also receive alerts from vehicles, covered in further detail as a Reactive activity in Section 4.2.2).

- A. Operator ensures that vehicles are exchanged appropriately (see **Exchanging Vehicle**) as required.
- B. If Operator observes issue with a vehicle that has not triggered an alert or been identified by Driver, Operator issues **Recall Vehicle**.

Figure 28 – Vehicle Roster Screen

Vehicle #	Online	Type	Driver	Speed (mph)	SOC (%)	Last Rfid	
0001	●	Model 3	-	0	76.5	s1.ext.1	Details
0003	●	Model 3	-	0	90.4	w1.1	Details
0004	●	Model 3	-	-	-	w1.1	Details
0006	●	Model 3	-	-	-	s1.ext.1	Details
0008	●	Model 3	-	-	-	s1.ext.1	Details
0009	●	Model 3	-	0	87.5	s1.ext.1	Details
0010	●	Model 3	-	-	-	s1.ext.1	Details
0011	●	Model X	-	0	63.6	s1.ext.1	Details
0012	●	Model 3	-	-	-	s1.ext.1	Details
0013	●	Model 3	-	-	-	s1.ext.1	Details
0014	●	Model X	-	0	68.3	s1.ext.1	Details

- C. If vehicle must be removed from service (or a vehicle must be added as a replacement), Operator, in coordination with maintenance personnel, documents such removals or additions using screens below. (Note: inspection and verification will be undertaken by CCDB&FP or a County-approved ATS QAA).

Figure 29 -- Add / Remove Vehicle

VEHICLE	CHARGE (%)	DRIVER	STATE
0001	87.7		REMOVE SERVICE
0002 - Y	76.3	Not Available - Adrian Castaneda	ADD
0003	77		REMOVE SERVICE
0004	95.9		REMOVE SERVICE
0005 - Y	98.2	Not Available - Seth Hooper	ADD
0006	81.3	Matthew Fendrich	COLLECT RETURNED KEY
0007 - X	98.8	Not Available - Seth Hooper	ADD
0008	78.5	Test Driver	DRIVER CHECKED-IN
0009	77.8	Riccardo Biasini	DRIVER CHECKED-IN
0010	86.6		REMOVE SERVICE
0011 - X	72	Service - Adrian Castaneda	ADD
0012	90		REMOVE SERVICE
0013	83.6		REMOVE SERVICE

Admin Controls

VEHICLE	CHARGE (%)	DRIVER	STATE
0001	87.7	Service - Daniel Frohlich	ADD
0002 - Y	76.3	Not Available - Adrian Castaneda	ADD
0003	77		REMOVE SERVICE
0004	95.9		REMOVE SERVICE
0005 - Y	98.2	Not Available - Seth Hooper	ADD
0006	81.3	Matthew Fendrich	COLLECT RETURNED KEY
0007 - X	98.8	Not Available - Seth Hooper	ADD
0008	78.5	Test Driver	DRIVER CHECKED-IN
0009	77.8	Riccardo Biasini	DRIVER CHECKED-IN
0010	86.6		REMOVE SERVICE
0011 - X	72	Service - Adrian Castaneda	ADD
0012	90		REMOVE SERVICE
0013	83.6		REMOVE SERVICE

Please enter PIN

0000

Admin Controls

VEHICLE	CHARGE (%)	DRIVER	STATE
0001	87.7	Service - Daniel Frohlich	ADD
0002 - Y	76.3	Not Available - Adrian Castaneda	ADD
0003	77		REMOVE SERVICE
0004	95.9		REMOVE SERVICE
0005 - Y	98.2	Not Available - Seth Hooper	ADD
0006	81.3	Matthew Fendrich	COLLECT RETURNED KEY
0007 - X	98.8	Not Available - Seth Hooper	ADD
0008	78.5	Test Driver	DRIVER CHECKED-IN
0009	77.8	Riccardo Biasini	DRIVER CHECKED-IN
0010	86.6		REMOVE SERVICE
0011 - X	72	Service - Adrian Castaneda	ADD
0012	90		REMOVE SERVICE
0013	83.6		REMOVE SERVICE

Success

Servicing 0001

4.2.1.4 Driver Safety Monitoring

To the extent that an Operator observes a safety infraction committed by a Driver (see 2.3.1) (e.g. the Operator sees on camera the Driver using his or her personal cell phone while driving), the Operator must log the infraction details into the Notes Screen in the WGUI. (The appropriate authority will review the infractions and determine the next course of action).

4.2.1.5 Systems Management

4.2.1.5.1 Power

The power to the system will be running 24/7, but Operator must ensure that power levels are at the required levels by checking the data fed to the Workstations. If there is a power failure, Operator reports issue to Maintenance Team via phone.

4.2.1.5.2 Lighting

Operators must review camera feeds and data in their Workstations to ensure that lighting is at full brightness during operation.

- A. If there is a failure that threatens safe operation of tunnel or if the LED goes dark in a continuous section of 330 feet or more of the tunnel, Operator must issue **Maintenance 20** command and report issue to Maintenance Team via phone. (Note: 330 feet is the distance between Junction Boxes).
- B. If the LED lighting goes dark in a section of less than 330 feet of tunnel or if there is a failure that does not interfere with safe operation of tunnel, Operator reports issue to Maintenance Team via phone and follow Maintenance Team's instructions if immediate action is necessary.

4.2.1.5.3 Security

Operators must monitor camera feeds and other indicators to ensure there are no security threats in the system, such as unauthorized persons or vehicles. If an incident threatens the security of people or property, Operator must immediately report the situation to the Director and Deputy Director of Security via phone. Security personnel will issue instructions to Operator.

4.2.1.6 Shift End

To end a shift, the following must be true:

- There is no ongoing Emergency event in progress.
- Operator for following shift (if applicable) assigned to same Workstation is present for handoff procedure.
 - If incoming Operator is not present, Operator contacts that individual and if that fails, contacts Human Resources for further instruction.

If the above conditions are met, Operator ends shift as follows:

- A. If the shift is the final shift of the day, within the last ten minutes of the shift, Operator reviews the Notes Screen in the Workstation before logging out.
- B. If applicable, Operator contacts Maintenance Team regarding the steps necessary to remediate the issues listed in the Notes Screen and to receive a status update on outstanding maintenance issues already reported.
- C. Operator updates Notes Screen as applicable.

- D. Operator updates Driver Safety Infraction Screen as applicable to capture any safety infractions committed by Drivers during the Operator's shift.
- E. Operator reports any issues to the incoming Operator.
- F. Operator signs out of Workstation by closing browser window (note that WGUI auto-logs out anytime the viewer is closed).
- G. Operator collects belongings, leaves OCC, returns to Employee Parking Area, and departs.

4.2.2 Contingency Actions

4.2.2.1 Initial Inspection Failure

- A. Operator calls Maintenance Team if Operator is informed at the start of a Driver's shift that a vehicle has failed the **Initial Inspection**.
- B. Operator follows Maintenance Team instruction about whether vehicle is safe for use and communicates instructions to Driver.

4.2.2.2 Interruption of Vehicle Operations

4.2.2.2.1 Early Termination of Shift

If Driver requests an early termination of shift:

- A. Operator asks for a clearly stated reason for such request.
- B. After Driver responds, Operator asks Driver: "Is it possible to continue your shift safely and at optimal driving performance?"
- C. If the answer is no, Operator sends e-mail via Workstation to Human Resources indicating that Driver has ended shift early.

4.2.2.2.2 Exchanging a Vehicle

In the event that a vehicle's SoC is too low, there is damage to the vehicle, the vehicle is dirty, or other reasons that may or may not cause an alert, a vehicle exchange must take place. In such cases:

- A. If Operator receives call from Driver about a maintenance issue:
 - o Operator calls Maintenance Team to alert them of the issue and logs the issue in the Notes Screen.
 - o Operator follows vehicle on camera and if the vehicle encounters issues along the return journey to the OCC, calls Driver to troubleshoot and guides the vehicle back.
- B. If no alert from is received but Operator observes issue with vehicle, Operator issues **Recall Vehicle**.

4.2.2.3 Emergency Events

In addition to the cases that have been already covered above, Operator will receive calls from Driver when Emergency Events occur (outlined below) or from Blue Light Stations, which are accessible by anyone in the tunnel and provide a direction connection to the OCC.

- A. When Driver uses a voice call to the OCC, Operator asks Driver to state the nature and location of the event.

- B. If Driver is unable to communicate via voice call, Driver will initiate an emergency request via the GUI that is received in the OCC.
 - o Operator attempts to call Driver.
 - o If Driver is unresponsive, Operator may immediately dispatch first responders to emergency, depending on the nature of the event, as set forth below.

When an Emergency Event is reported, Operator uses vehicle telemetry, tunnel cameras, the vehicle interior camera, and environmental sensors to locate and assess the situation and take appropriate actions such as issuing an **Evacuation** command and/or dispatching first responders to the vehicle's location, as set forth below.

4.2.2.3.1 Global Evacuation Event

A Global Evacuation Event is (a / an):

- Fire.
- Intense smoke.
- Violent act that threatens the operation of the system.
- Severe flood, characterized by water levels high enough that the vehicle may not pass through (above 1.5 feet, or half of wheel height)
 - o If flooding is not severe, see **Stop/Hold Event**.
- Other event that threatens the life and/or safety of CWPM passengers is reported by a Driver or is visible on Operator's Workstation.

A Global **Evacuation** command issued by Operator produces the following outputs:

- the public announcement system broadcasts an Evacuation event at Stations,
- the Operator will indicate areas where vehicles and people should not enter by turning lights solid red and indicating the evacuation path with flashing red and white lights.
- the GUI and/or intercom system reports an Evacuation event in the vehicles.

During a Global Evacuation event:

- A. Operator assesses safest path and exit for evacuation.
- B. Operator follows evacuation protocol (notifying first responders (including 911), engaging with the Fire Life Safety system per vendors' procedures (ventilation, HVAC, drainage, elevators, alarms, etc.)), which is part of training. These materials are also available in hard copy at the OCC and electronically on the WGUI.
- C. Operator issues **Evacuation** command.
- D. Operator issues evacuation instructions into microphone of one-way communication system by stating: "Emergency Alert – Evacuate Tunnel Immediately. All Vehicles Evacuate the Loop Immediately. All personnel in Station 2 evacuate immediately using the escalator or stairs." and either:
 - o "Active shooter"
 - o "Fire"
 - o "Violent attack"
 - o "Smoke"
 - o "Flood"
 - o Other short description as applicable.

- E. Operator continues to monitor the system and ensure that all vehicles and personnel are able to evacuate safely. Once first responders, maintenance personnel, and/or security personnel verify that the cause for evacuation has been cleared and the system is safe for operations again, Operator issues “RESUME” call.
- F. Note that during an Evacuation, either manually triggered by the Operator, or automatically triggered by the emergency ventilation system, the display screen in Station 2 will provide a visual message directing passengers to 1) exit the station via escalator or stairs and 2) not enter the tunnels. See Figure below for image of display screen message:

Figure 30 – Station 2 Example Evacuation Screen



4.2.2.3.2 Local Evacuation Event

A Local Evacuation event is when there is a safety or security event affecting a single vehicle and not the entire Loop System. For example if a passenger or driver is injured or sick.

During a Local Evacuation event:

- A. Operator assesses safest path and exit for evacuation.
- B. If necessary, the Operator will clear the path ahead of the vehicle by flashing lights red and white, and communicating with other relevant vehicles as necessary
- C. Operator follows the evacuation protocol (notifying first responders (including 911), engaging with the Fire Life Safety system per vendors’ procedures (ventilation, HVAC, drainage, elevators, alarms, etc.)), which is part of training. These materials are also available in hard copy at the OCC and electronically on the WGUI.
- D. Operator guides the vehicle out to the nearest exit and coordinates the FLS response.

4.2.2.3.3 Accident or Injury Event

If an accident (e.g. a vehicle collision) or an injury to Driver or any of the passengers is reported by a Driver:

- A. Operator requests Driver identify vehicle location and nature of the injury.

- If injury is serious, Operator advises Driver to exit at closest Station.
 - If injury is not serious, Operator advises Driver to exit at intended destination.
 - If Driver cannot exit tunnel because of the nature of the injury, Operator issues **Clear Tunnel** command.
- B. Operator calls 911 and directs 911 to the appropriate Station or tunnel location.
- C. Operator records injury on Notes Screen in Workstation and records accident in the Notes Screen.
- D. When injured person is safely outside the tunnel and no unauthorized vehicles, objects, or persons are in the tunnel, and it appears safe to operate traffic as normal, Operator issues **Resume** command.
- E. Operator completes Accident Reporting Form and submits it via e-mail to accidents@boringcompany.com.

4.2.2.3.4 Stop Event (HOLD 15 Event)

A Stop Event occurs when the vehicle has an issue that prevents Driver from completing a Mission. Examples of Stop Events are:

- Vehicle loses power.
- Vehicle stopped ahead for more than 30 seconds.
- Vehicle does not have enough torque to overcome ramp grade.
- Presence of unauthorized vehicles, foreign objects, or pedestrians in the CWPM Drive.
- Flooded floor with water level below 1.5 feet (water level less than half of wheel size).

When a Stop Event occurs, Driver calls Operator. Operator asks Driver for nature of Stop Event.

- If the vehicle is parked at a Parking Stall, Operator reminds Driver to deboard passengers from vehicle and lock doors to prevent new passengers from boarding.
 - If the vehicle is stopped within the tunnel, Operator issues **Clear Tunnel**.
- B. Operator dispatches Maintenance or Security Team to location of vehicle or event trigger (in tunnel or Station).
- C. Operator issues **Resume** command after vehicle has been towed outside the tunnel (if applicable) and the tunnel is clear of any people or debris, such that it is safe to resume traffic.

4.2.2.3.5 Passenger Misconduct Event

A Passenger Misconduct event occurs when any of the passengers is:

- Smoking (cigarettes, e-cigarettes, marijuana, etc.).
- Drinking (alcohol, soda, etc.) (all containers must be closed).
- Eating (all containers must be closed).
- Verbally/physically aggressive.
- Physically impeding Driver from safely driving the vehicle.

If Operator receives a call from Driver reporting a Passenger Misconduct event that Driver was unable to de-escalate:

- A. If the vehicle is parked at a Parking Stall:

- Operator instructs Driver to hold his or her position.
- Operator dispatches Security go to vehicle location.

B. If the vehicle is not parked at a Parking Stall:

- If Driver is unable to continue driving, Operator issues **Clear Tunnel** command and dispatches Security to vehicle's location.
 - Operator issues **Resume** command when Security determines that it is safe for traffic to resume.
- If Driver can finish Mission, Driver proceeds to destination and Operator dispatches Security to vehicle location.

4.2.2.3.6 System Fault Event

A System Fault Event occurs when a component, piece of equipment, structure, maintenance issue, or other problem with the tunnel, station, or systems could interfere with the operation of the CWPM. Because the nature of each issue will determine the response the Operator should follow instructions from the Maintenance team if the Operator does not know the proper response. There are three types of system faults:

4.2.2.3.6.1 Terminal System Failure (MAINTENANCE 60)

In this scenario there is a time limit for the Operator to resolve the issue. If after 60 minutes the Operator has not successfully resolved the issue, the Operator will issue the Evacuation command. An example of this situation is a power failure – the Loop System has backup power to last 90 minutes. For these 90 minutes there will be no noticeable effect on operations, but the issue has to get resolved within 60 minutes. The steps an Operator will follow will be:

- A. Operator identifies the issue, a 60 minute timer starts, and the Maintenance Team is notified. The Operator workstation computers are equipped with a timer app that can be pulled up on the workstation and visually monitored by the Operator. This timer app provides an alert when the time has lapsed.
- B. If after 60 minutes the issue has not been resolved, the Operator issues **Evacuation** command and follows directions on WGUI.

4.2.2.3.6.2 MAINTENANCE 20

In this scenario there is a 20 minute time limit for the Operator to resolve the issue. For this time period the Drivers will operate at a reduced speed. If after 20 minutes the Operator has not successfully resolved the issue, the Operator will issue the Evacuation command. An example of this situation is a section of tunnel lights losing power, or a localized communications issue. Operator workstation computers are equipped with a timer app that can be pulled up on the workstation and visually monitored by the Operator. This timer app provides an alert when the time has lapsed.

4.2.2.3.6.3 Non-terminal System Failure (MAINTENANCE FYI)

In case of a non-terminal system failure alert on WGUI, Operator contacts the Maintenance Team and enters failure into Notes Screen. In this case there is no effect on routine system operations.

4.2.2.3.7 Operational Fault Event

An Operational Fault event occurs when the vehicle has an issue that requires attention but does not prevent Driver from completing the Mission safely. Examples of Operational Fault events are:

- Flat tire.
- Persistent loss of communication with the OCC.

- GUI screen goes blank and does not recover within 20 seconds.
- Vehicle is in limp mode (reduced power) but can still drive over the ramps.
- GUI indication of an Operational Fault event from the OCC.

If an Operational Fault event occurs, Operator follows **Interruption of Vehicle Operations** process set forth in 3.2.11.1.

4.2.2.3.8 Priority of Events

When an event occurs, Operators must prioritize adhering to event-specific procedures rather than general operating procedures.

When multiple events occur simultaneously, Operators must respond to and take action in connection with events in the following order of priority (from highest priority to lowest):

1. Evacuation (4.2.2.3.1),
2. Accident or Injury (4.2.2.3.2),
3. Passenger Misconduct (4.2.2.3.4),
4. Stop (4.2.2.3.3),
5. System Fault (4.2.2.3.5), and
6. Operational Fault (4.2.2.3.6).

This list is not exhaustive and is intended to represent certain categories of events that may take place during an Operator's shift. Operators must exercise best judgment based on facts on the ground.

4.2.3 Communicating with Drivers

Communications with Drivers should be clear and concise, as follows:

- When a Driver calls the OCC, Operator should consult his or her Workstation to determine the vehicle identity, and answer: "OCC, Hi [*Driver Name*]". This signals to Driver that the call was placed correctly and that the OCC has identified from which vehicle the call originated.
- Driver will state the reason for call and location of issue.
- Operator should provide clear and concise instructions to Driver, and above all, must remain calm in these interactions.

4.2.4 Incident Reporting

Any incidents that cause unscheduled cessation of operations shall be subject to the notification procedures set forth in the Emergency Preparedness Plan, which sets forth the protocol for notification to the County by a Qualified Individual. The Operator notifies the Qualified Individual in the OCC of the unscheduled cessation.

5.0 Appendix

Accident Reporting Form

Tunnel Marker System (Chainage Drawing)

Driver and Operator Training Program

Emergency Training Program

Operations Form 1, Rev 1. 7/13/2020

VEGAS LOOP
Accident Reporting Form

Date: _____ Time: _____

Name: _____

Driver ID#: _____

Driver's License #: _____

Role: Driver or Operator

Vehicle License Plate: _____ Vehicle Model: _____

TBC Vehicle Number _____ VIN: _____

1) Type of accident:

- Between motor vehicles
- Fixed object If yes: What object? _____
- Non-collision
- Pedestrian
- Bicycle
- Issue with passenger boarding or deboarding at station
- Issue within vehicle
- Other

2) Manner of collision:

- Angle
- Rear-end
- Head-on
- Other: _____

3) Location of accident:

- At station
- In tunnel
 - Between Stations 1 and 2, heading toward Station 1
 - Between Stations 1 and 2, heading toward Station 2
 - Between Stations 2 and 3, heading toward Station 2
 - Between Stations 2 and 3, heading toward Station 3
- Other: _____

4) Did the accident result in the following?

- Fatality
- Injury If yes: Serious Moderate Minor Unknown
- No injury
- Unknown

5) Number of injured individuals: _____

6) Did the accident result in property damage?

Yes

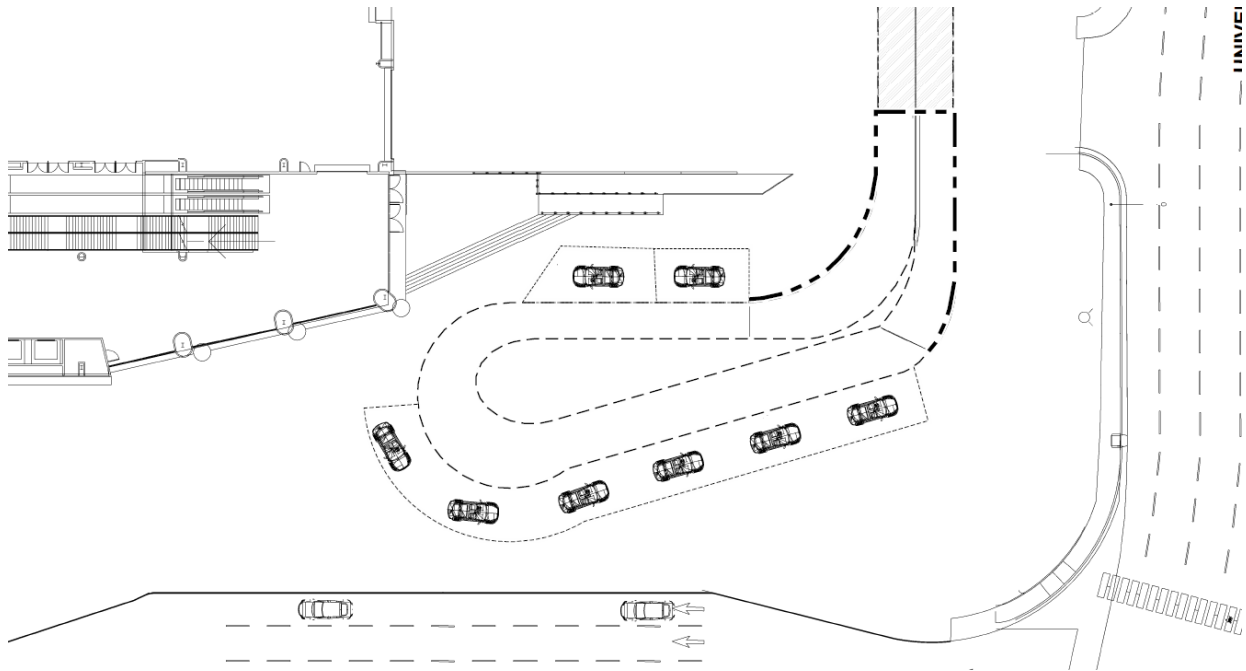
If yes: Above \$500? Yes

No

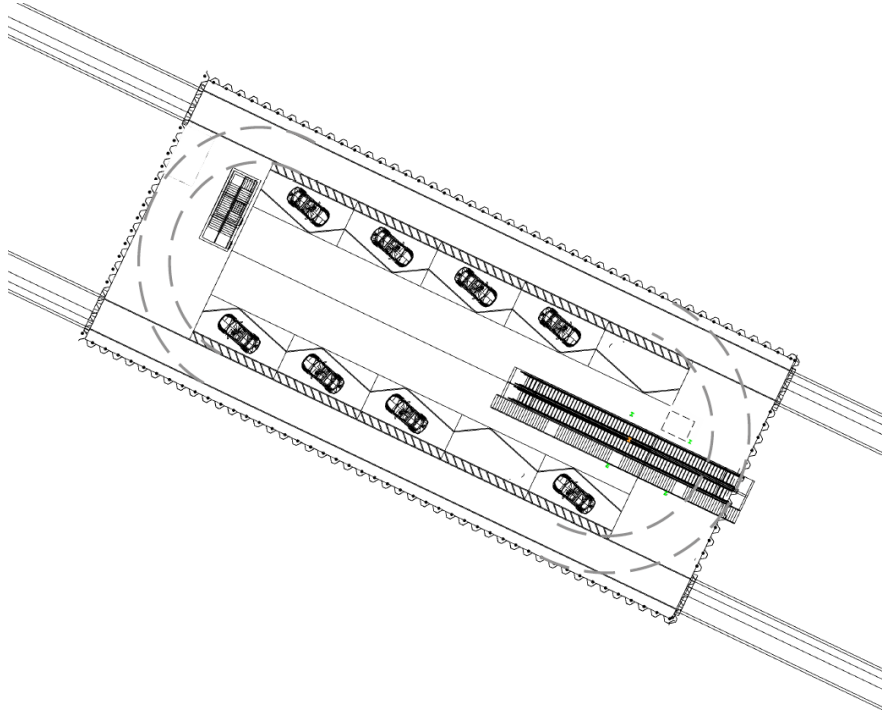
No

Please identify the location of the accident on the corresponding station or tunnel diagrams by marking the location with an "X".

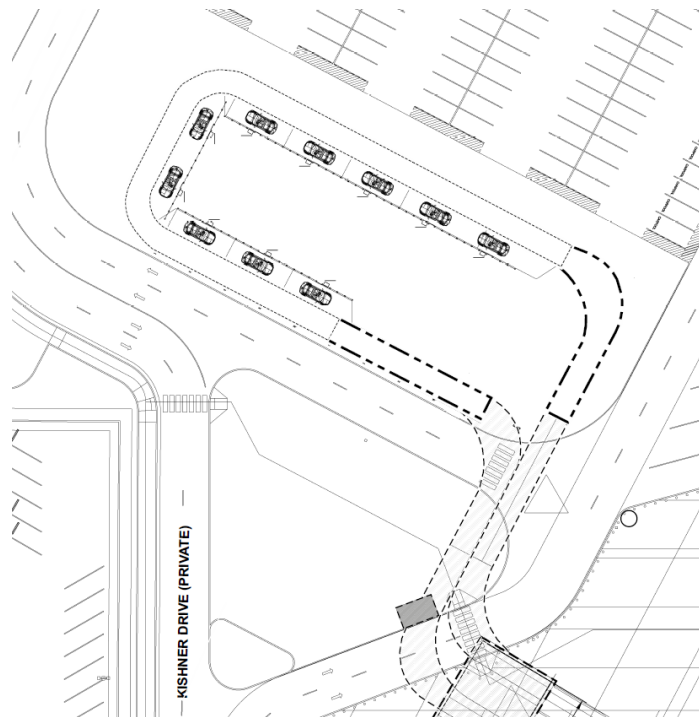
STATION 1



STATION 2



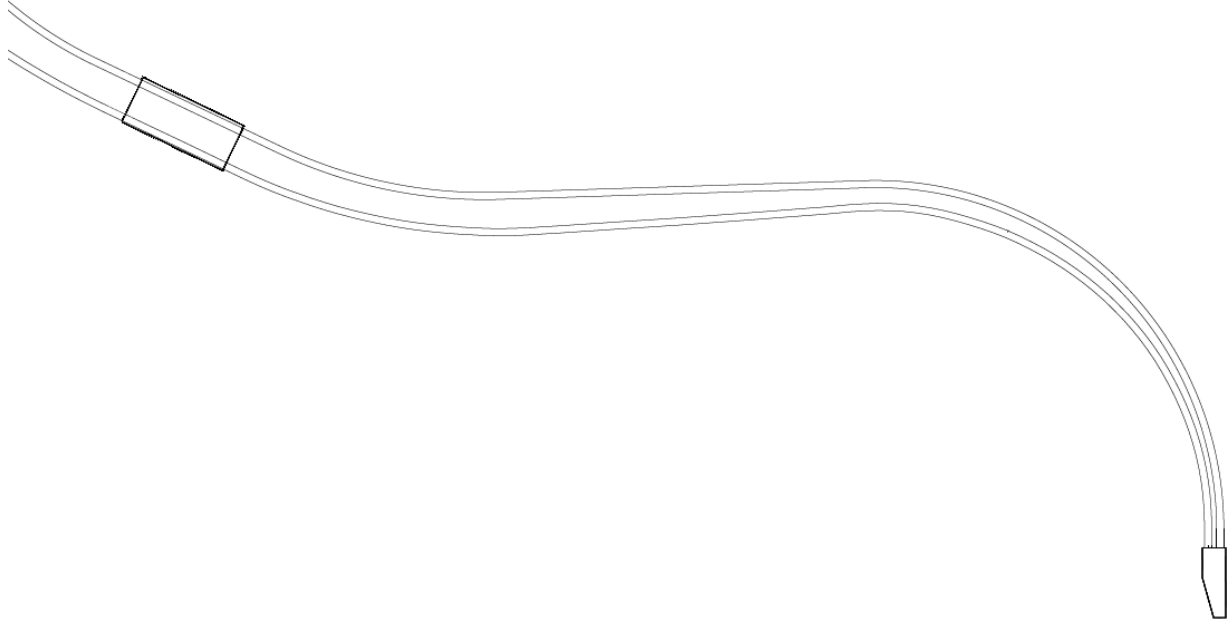
STATION 3



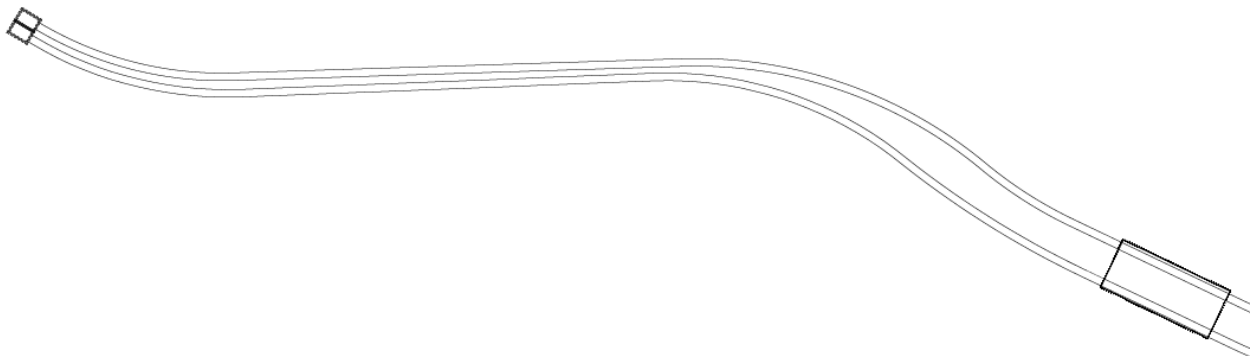
TUNNELS

Tunnel Marker Number: _____

BETWEEN STATIONS 1 AND 2

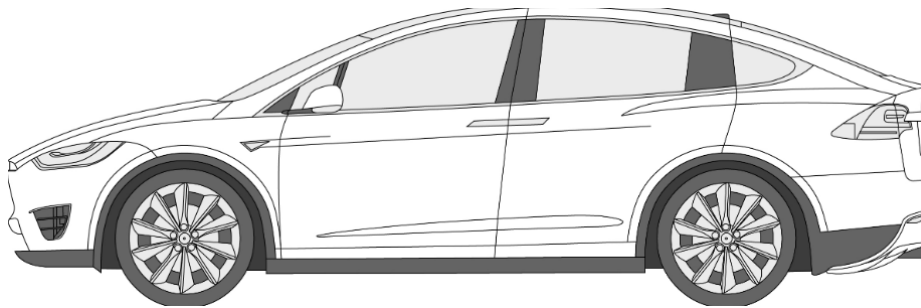
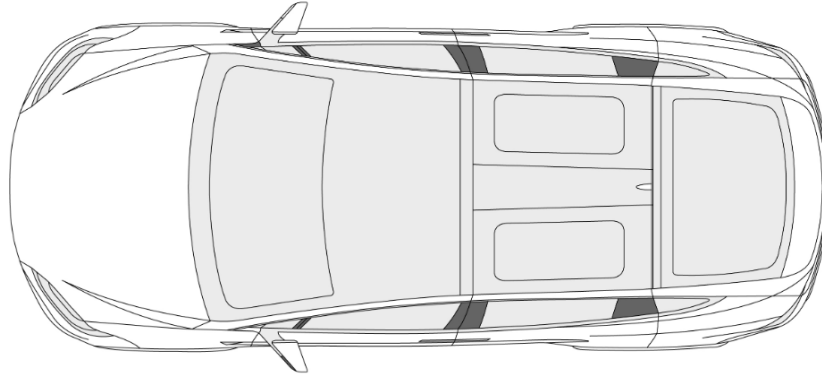
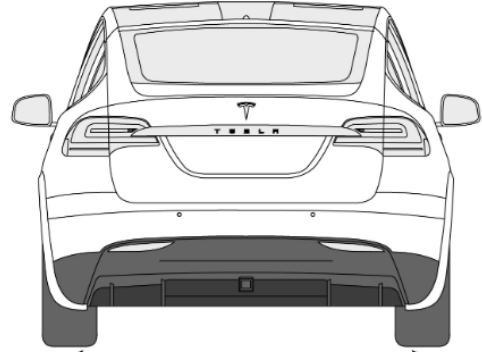
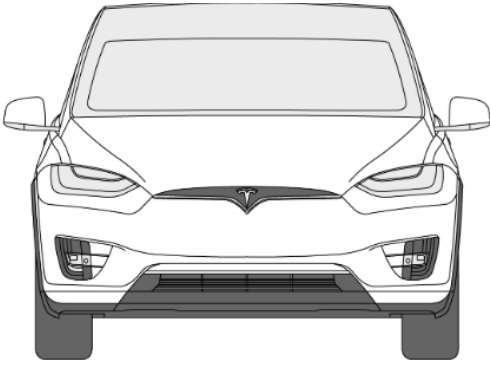


BETWEEN STATIONS 2 AND 3



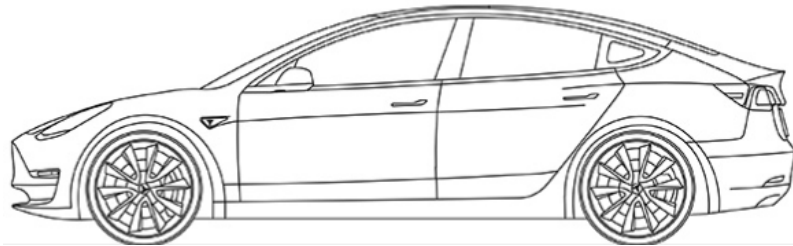
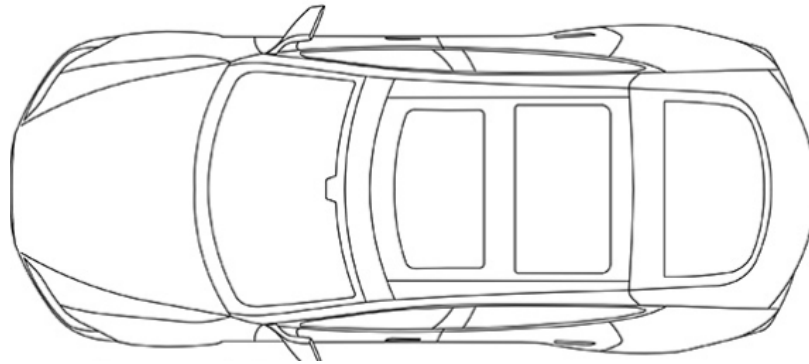
Please identify the damage on the corresponding vehicle diagram by marking the location with an "X".

MODEL X



*(CIRCLE **DRIVER** OR **PASSENGER** SIDE)*

MODEL 3



*(CIRCLE **DRIVER** OR **PASSENGER** SIDE)*

