

A Light Maintenance Facility (LMF) is a critical component of the California High-Speed Rail system that will be used to clean, service, and store trains. The LMF will serve as a base for operations crew members in Northern California and is one of three planned train maintenance facilities in the state that will support high-speed rail operations. The California High-Speed Rail Authority (“Authority”) evaluated several potential LMF sites and identified two options in Brisbane to further analyze in the Environmental Impact Report/Environmental Impact Statement (EIR/EIS). More information about the siting of the LMF can be found in the Northern California LMF Factsheet.



The Authority has prepared this resource to respond to frequently asked questions about the proposed Northern California LMF in Brisbane. Additional questions can be provided by email at [san.francisco\\_san.jose@hsr.ca.gov](mailto:san.francisco_san.jose@hsr.ca.gov) or by phone at 1-800-435-8670.

## OPERATIONS

### What operations will occur at the LMF?

The LMF will be used to clean, service, and store high-speed rail trains. Maintenance operations will include exterior and interior cleaning, wheel truing, testing, and inspections. The LMF will function as a service point for any high-speed rail trains in need of emergency repairs. It will supply trains and crew to the San Francisco terminal station at the start of each revenue day.

### What will be a typical work schedule at the LMF?

The LMF would operate 24-hours a day. Shifts will vary in level of activity, with the night shift being the most active for train maintenance activities. A representative operations schedule is shown below and will be further refined in the future.

<b>Morning Peak Hours</b>	6:00 am to 2:00 pm	Train crew prepares trains for departure.
<b>Afternoon and Evening Peak Hours</b>	2:00 pm to 10:00 pm	Afternoon and evening peak hours. Train crew returns to LMF. Deliveries may occur by rail or road.
<b>Night Maintenance</b>	10:00 pm to 6:00 am	Staff services trains. Trains move in and out of shop for cleaning, water replenishment, inspection and maintenance work. Trains move to storage tracks prior to dispatch for the next day’s start of revenue service.

### Will the LMF produce noise during operations?

Most noise generated at the LMF will occur between approximately 10:00 pm and 7:00 am. Train maintenance activities will take place inside the maintenance building with minimal spillover into surrounding areas. Noise generated from the electric trains moving in and out of the LMF will be modest (less than noise generated by diesel trains currently operating on the corridor).

Noise levels at the LMF will be less than the severe effect levels in the Federal Railroad Administration (FRA)’s High Speed Ground Transportation Noise and Vibration Impact Assessment Guideline.

### How will the LMF handle hazardous materials during operations?

Regular train maintenance activities will use chemicals, lubricants, fuels, metal filings, hydraulic fluids, and cleaning products. These materials and chemicals will be used and stored inside a designated building where most train maintenance will be performed. The LMF’s operators will comply with applicable state and federal regulations to avoid and prevent the accidental release of hazardous materials or wastes during transport, use, or disposal.

## LMF East Option (Alternative A)



## LMF West Option (Alternative B)



## TRAFFIC & PARKING

### How will the LMF affect traffic?

The LMF shift changes, likely around 6:00 am, 2:00 pm, and 10:00 pm, will generate vehicle traffic. At these times, the Authority expects additional traffic in close proximity to the LMF. Two locations east of US 101 may experience potential traffic congestion during peak evening conditions (Harney Way/Thomas Mellon Circle and the future Geneva Extension US 101 northbound ramps). LMF employees will be encouraged to use Caltrain service at the Bayshore Station or other public transportation options.

### How will the LMF interact with surrounding roads and bike facilities?

- Relocation of Brisbane Fire Station due to the relocation of Tunnel Avenue to maintain existing emergency response times. Relocation would depend on which Brisbane site is ultimately selected. Options include moving the building either 600 feet south of the existing location for Alternative A or 150 feet south of the existing location for Alternative B.
- Installation of Class II bike lanes along the reconfigured Tunnel Avenue and Lagoon Roads.

### Will the LMF impact public parking availability in the surrounding area?

It is unlikely LMF staff and visitors will use surrounding public parking. Employee and visitor parking for the facility will be on site and sufficient to accommodate demand. As the LMF will not serve the general public, the Authority does not expect the LMF to increase demand for public parking in the surrounding area.

## ENVIRONMENTAL CONSIDERATIONS

### Will the LMF be built to meet environmental sustainability goals?

In accordance with its Sustainability Policy, the Authority will implement sustainability practices for planning, siting, designing, construction, mitigation, operation, and maintenance of the LMF. The Authority is committed to:

- Net zero greenhouse gas and criteria pollutant emissions during construction.
- Operating the high-speed rail system entirely on renewable energy.
- Designing, constructing, and operating a LEED® Gold Certified maintenance facility.
- Planning and designing for climate change adaptation and resilience.
- Compliance with laws, regulations, and industry standard practices.

### How will the LMF impact air quality?

The high-speed rail project will improve air quality. High-speed trains run on electricity and therefore do not generate exhaust emissions. Regional air quality studies predict the high-speed rail system will reduce air pollutants, especially as consumers shift from polluting cars and airplanes to emission-free electric trains.

During construction, contractors will implement impact avoidance and minimization measures by controlling fugitive dust, selecting coatings with lower emissions, using renewable diesel for vehicles and equipment, using recent truck hauling equipment, and using construction equipment meeting Tier 4 engine requirements. During operations, LMF train maintenance will not negatively impact air quality: train cleaning, wheel truing, testing, and parts replacement do not produce air pollution.

### How will the LMF facility be designed for climate adaptation, resiliency, and sea level rise?

The LMF has been designed to address climate adaptation, resiliency, and sea level rise. The facility will be able to withstand forecasted changes in sea level over its 100-year projected life. The Authority will complete a site-specific hazard analysis for individual LMF buildings with potentially high consequences of flooding to determine if additional measures need to be taken to build in resiliency for a changing climate. To address emergencies, the LMF will be able to store up to 10 days of stand-alone water to maintain a water source independent of any well or city water system.

## COORDINATION

### Is the High-Speed Rail Authority coordinating its planning of the LMF with other projects in the area?

During the development of the LMF, the Authority has coordinated with the City of Brisbane, Baylands Development Inc., the San Francisco County Transportation Authority and San Francisco Municipal Transportation Agency (on the Geneva Avenue Extension), Caltrain, Kinder Morgan, and Recology. Coordination with agencies, property owners, and proponents of these other nearby projects serves to avoid or mitigate potential conflicts.

- The City of Brisbane's General Plan permits transit-oriented residential, employment, and revenue-generating uses, with residential uses limited to west of the Caltrain right-of-way in the northwest quadrant of the Baylands area.
- Baylands Development Inc. has submitted a Specific Plan to the City to develop up to 2,200 residential units and seven million square feet of commercial development at the Baylands. The City of Brisbane is preparing an Environmental Impact Report for the proposed Specific Plan. The Authority and developer have met to share project information, timelines, and the scope of the environmental analysis.
- SFCTA has a planned extension of Geneva Avenue from its current terminus at Bayshore Blvd. through the Baylands area to connect to Harney Avenue. SFMTA is planning to add Bus Rapid Transit (BRT) service and a connection to the Bayshore Caltrain Station. The Authority met with SFCTA and SFMTA to coordinate ways the Geneva Extension, BRT service, and connections with the LMF could all be realized in the Baylands area.
- The Authority is coordinating with Caltrain regarding the configuration of the Bayshore Station platforms and pedestrian access. The southbound platform will shift south and the above-grade pedestrian crossing will be rebuilt to accommodate the lead track into the LMF.
- The Authority met with Recology and confirmed that the LMF is a physically separate project from the planned modernization and expansion of the Recology Tunnel Avenue facility. The Authority and Recology will continue their ongoing communications as the two independent projects move forward.

# CONSTRUCTION

## How will LMF construction address potential landfill settlement?

The Preferred Alternative, Alternative A, is partially located on a closed landfill. The landfill is 364 acres in total area and varies in depth from 35 to 40 feet. LMF construction will require excavating in the landfill as well as placement of structures in areas of remaining landfill. Structures adding weight atop closed landfills can cause refuse to compress, which can make the surface of the ground subside or settle. The subsidence can damage structures and/or release landfill gas, which can be a flammable hazard.

Structures would adhere to the latest California Building Code, requiring contractors to account for ground settlement resulting from compression or decomposition of landfill refuse. Contractors may employ ground improvement techniques such as preloading to reduce future ground settlement or use deep foundation systems such as piles to transfer the weight of a building to soil/rock below the landfill refuse.

There are several examples of construction on landfills in the Bay Area, including Oyster Point, which is under construction, and Related's Santa Clara development, which is currently in the planning phase.

## How does the high groundwater table affect construction of the LMF?

In the Visitacion Valley Groundwater Basin, the groundwater level is generally 20 feet below the surface. This groundwater level is considered relatively high compared to other basins. High groundwater levels can make excavation for construction hazardous. The Authority will limit this potential construction hazard by using pumps or wells within the excavation area to draw down groundwater. In addition, the Authority may use deep pile foundations — concrete or steel columns underground — to support the structure in the presence of high groundwater conditions.

## Is construction of the LMF possible for an area of liquefaction?

Seismic hazard mapping found the East Brisbane LMF site at high risk of liquefaction during earthquakes. The contractor will assess geotechnical conditions to determine the extent of the hazard and recommend

engineering solutions to minimize impacts on people and structures, in accordance with the California Building Code and relevant geotechnical guidelines and standards. Potential engineering solutions could include the construction of stone columns, deep dynamic compaction, cement deep-soil mixing, jet grouting, and excavating and replacing liquefiable soil with engineered fill.

## How will hazardous materials be handled during construction of the LMF?

Both the East and West Brisbane LMF sites may require remediation to address potential hazardous materials present.

- The East LMF would be constructed partially within a closed landfill. Construction will require excavation and earthwork, potentially disturbing contaminants including heavy metals, organic compounds, petroleum hydrocarbons, pesticides, and asbestos products. Construction will also need to address potential landfill gas hazards. Construction could release landfill gas, a potentially flammable hazard.
- The West LMF site is on the former Bayshore Yard, which served freight rail operations. Construction will require excavation and earthwork, disturbing potential contaminants including metals, petroleum, and other organic compounds.

LMF contractors will follow a Construction Management Plan that will provide guidance on handling contaminated groundwater and soil extracted or excavated from the project area. They will apply best management practices outlined by the Authority to comply with regulations for the transport, use, and storage of hazardous materials to minimize accidental release of hazardous materials. The Authority will require contractors to develop and implement a spill prevention, control, and countermeasure plan to ensure (1) the cleanup of any released hazardous materials; (2) proper storage of containers housing hazardous materials; and (3) proper handling of hazardous materials away from natural watercourses, storm drains, and other sensitive receptors. If the East Brisbane LMF site is selected, the project would use safe and explosion-proof equipment, test for gases regularly, and install gas monitoring and venting systems to monitor for landfill gas.

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