

### 3. EXISTING TRAINSETS, NEW EQUIPMENT, AND MAINTENANCE

The San Joaquins Service currently utilizes eight trainsets for the existing seven daily round-trips. The fleet consists of a mix of locomotive types and train cars. The State of California owns or leases all locomotives and train cars utilized by the San Joaquins.

#### Existing Equipment

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The San Joaquins and Capitol Corridor currently share a combined fleet of 15 F59 PHI Locomotives, 3 P42 Locomotives (leased), 2 DASH-8 Locomotives, 6 Charger Locomotives, and 84 bi-level passenger coaches, food service and cab cars. The San Joaquins also utilizes 14 State-owned Comet Car coaches, as well as 3 Horizon Café cars and 3 F40 Cabbage cars (which the State leases from Amtrak). Taken together, this equipment is referred to as the Northern California Fleet.

#### California Cars

The San Joaquins primarily utilizes bi-level California Cars. The bi-level equipment was purchased by the State in the 1990's for use on the three California Intercity Passenger Rail Corridors. The Northern California Fleet is shared between the San Joaquins and Capitol Corridor services to allow for maximum flexibility in seating capacity. Bi-level equipment assignments for the Northern California Fleet is currently being studied to see if there can be further optimization of equipment based upon peak loads of paired trains.

An essential feature of the bi-level coaches is the ability for doors to be operated remotely on either side of the train from a single point of control. This feature allows the operator to maximize passenger flow in boarding and alighting operations, and thereby minimizing station dwell time.

#### Comet Cars

The San Joaquins currently operate two trainsets that utilize refurbished Comet Cars consisting of seven cars each. Comet Cars have proved to be a valuable resource in providing needed seating capacity while Caltrans Division of Rail and Mass Transportation pursues the procurement of a large order of new rail cars for the Northern California Fleet. While the use of Comet Car trainsets has accomplished the goal of increasing seating capacity, this equipment has

presented some challenging operational aspects. High-level boarding (which requires all passengers to climb a steep set of stairs), narrow doors, and use of a manually cranked wheelchair lift at all stations often cause boarding delays, increasing dwell times and reducing on-time performance. Additionally, Comet Car coach doors are all manually operated, requiring additional conductors to be onboard while also preventing some doors in the trainset from being used when the trains are at stations.

#### Charger Locomotives

Caltrans recently completed a procurement of six new diesel-electric locomotives – called “Charger Locomotives” – which were delivered by Siemens for use in the Northern California Fleet in early 2017. The six locomotives are shared between the San Joaquins and Capitol Corridor trains, with all in service as of October 2017. The Charger Locomotives meet EPA Tier IV emission standards and are capable of 125 mph operation. These new locomotives will allow for the eventual replacement of the P42 locomotives currently being leased from Amtrak. Caltrans also has an option to procure an additional 14 Charger Locomotives.

#### New Equipment

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Caltrans, in partnership with the Federal Railroad Administration and States for Passenger Rail Coalition, is working to provide new rail equipment to meet increased demand from growth on existing services and plans for service expansions on the three State-supported services. With the Charger Locomotive order complete, Caltrans is now in the process of procuring additional passenger rail cars for the Northern California Fleet. Caltrans was successful in bringing together Federal High-Speed Intercity Passenger Rail (HSIPR) program funding and Prop 1B funds to acquire this additional equipment.

#### Siemens Single-Level Passenger Rail Cars

Caltrans has an agreement with Siemens to provide 49 single-level rail cars for use in the California Fleet. SJJPA, CCJPA and LOSSAN are currently working with the State and Siemens to specify features in the new trains so they can operate efficiently in California.

Delivery of these new cars are scheduled to begin in the summer of 2020 and end in 2023. The structure and design of these new rail cars will be based on the passenger cars being used in the recently-opened Brightline Service, which runs between West Palm Beach and Miami in Florida.

### Accessibility of Equipment

SJJPA supports the State's goal to provide total accessibility to the State-owned equipment including all its features and amenities. No person shall be denied access on the basis of physical ability. Accessibility features for bi-level coaches include onboard wheelchair lifts, two designated spaces per train car for passengers in wheelchairs, and one wheelchair-accessible lavatory on the lower level of each train car.

On a temporary basis, the State has deployed Comet Car trainsets on the San Joaquins. Since the Comet Car trainsets have high-floors and do not have onboard wheelchair lifts, hand-cranked mobile wheelchair lifts are currently utilized to provide accessibility at all San Joaquins stations. Each single-level Comet Car coach has one wheelchair-accessible lavatory. SJJPA will continue to closely monitor the performance of the Comet Car trainsets in relation to accessibility.

As with the Comet cars, the new single-level Siemens passenger rail cars have high-floors. In-terms of accessibility, SJJPA is currently exploring more efficient ways to provide accessibility than the hand-cranked mobile wheelchair lifts. One option is to construct mini-high platforms. However, it is unclear if the current design of the Siemens car will provide a bridge plate long enough to span the distance to the mini-high platform (the host railroads require a wide setback requiring long bridge plates). Further planning will need to be undertaken to ensure that single-level rail cars are integrated effectively into the Northern California Fleet.

### Onboard Information System (OBIS) and Wi-Fi

Currently, each passenger coach is equipped with electronic passenger information displays that provide the train numbers and destination, plus other public information. The State, in conjunction with Amtrak, are currently developing a more robust information display for the Northern California Fleet, which will greatly enhance information given to passengers,

as well as being more accessible. This upgraded system is called "Onboard Information System" (OBIS). Staff is currently working with the State, Amtrak and CCJPA to implement a prototype for testing of the system in early FY 2018/19. Following completion of the prototype and testing, the State is considering taking on the responsibility of implementing the full rollout of OBIS in place of Amtrak. Initiation of OBIS is scheduled for late 2019.

Associated with this is an upgraded onboard Wi-Fi system, which OBIS will utilize. Previously Amtrak was going to implement this project, however as a result of their reorganization, Amtrak is no longer going to be providing support to the WiFi system. SJJPA and CCJPA are now working to take on responsibility for the Wi-Fi upgrade from Amtrak, with CCJPA being the lead agency for procurement.

### Renewable Diesel Implementation

SJJPA is committed to helping meet California's Greenhouse Gas (GHG) emission reduction goals. SJJPA is currently working with the Capitol Corridor to test the use of renewable diesel. Testing began for the older F59 Locomotives in November 2017 and is now complete. Testing in the Charger Locomotives is currently underway and scheduled for completion in early summer of 2018. Following the completion of testing, results will be documented in a report to be produced by the CCJPA. If results are favorable, renewable diesel could be in all the locomotives of the Northern California Fleet as early as the fall of 2018.

SJJPA is also committed to utilizing renewable diesel in bus fleets used to run the extensive Thruway Bus system. Several transit agencies, including the San



Francisco Municipal Transportation Agency, are already successfully using renewable diesel in bus and automobile fleets. SJJPA plans to work with Amtrak to require use of renewable diesel in all future contracts with bus operators.

### Maintenance and Renovation

Currently, SJJPA and CCJPA are responsible for the administration and maintenance supervision of the State-owned fleet of rail cars and locomotives assigned to Northern California. CCJPA is the lead agency in the maintenance program of the Northern California Fleet, with SJJPA serving in a monitoring role to ensure the fleet is operated and maintained to the high standards of reliability, cleanliness, and safety. SJJPA will continue to work closely with CCJPA, Caltrans, and Amtrak to refine the maintenance and operations programs to improve the reliability, safety, and cost-effectiveness of the rail fleet.

Caltrans, Amtrak, and CCJPA have created a program of periodic overhauls to the existing train fleet

that will result in improved performance. The main engines of the original fleet of F59 Locomotives were rebuilt and upgraded from 2011-2015 to exceed current EPA TIER II emissions standards. They are also scheduled for a mid-life overhaul during 2018 and 2019. All locomotives are now equipped with a digital security camera system to improve safety and security. In addition, 14 California Cab Cars have been converted to Cab/Baggage/Bike cars similar to the five newer Surfliner Cabs, to provide greater baggage storage and 13 more bike racks.

Additional projects underway include replacing HVAC units to provide better air quality and climate control using new environmentally-friendly technology and refrigerants; rehabbing the upper level of diner cars to improve seating capacity, food storage, lighting, and counter top space; improving monitoring equipment in cab cars and locomotives; and replacing door mechanics and side paneling on certain passenger cars. SJJPA and CCJPA are also planning to upgrade the Wi-Fi system during FY 2018/19.

