Tasks 4.2 and 5.2:

Goals, Objectives, Outcomes, Performance Measures, and Data Needs

SLOCOG Coast Rail Corridor Study

August 31, 2020

CONTENTS

ACRONYMS

AB	Assembly Bill
ADA	Americans with Disabilities Act
CARB	California Air Resources Board
CBD	Central Business District
CO	Carbon Monoxide
COVID-19	Coronavirus disease 2019
CRCC	Coast Rail Coordinating Council
CSRP	California State Rail Plan
CWG	Community Working Group
EMFAC	California Emission Factors model
CalEPA	California Environmental Protection Agency
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GHG	Greenhouse gases
GIS	Geographic information system
NHTSA	National Highway Traffic Safety Administration
NO_2	Nitrogen dioxide
PM	Particulate matter
PRIS	Passenger Rail Improvement Study
RTC	Rail Traffic Controller
RTP	Regional Transportation Plan
SB	Senate Bill
SO_2	Sulfur Dioxide
SIP	Service Implementation Plan
SLOCOG	San Luis Obispo Council of Governments
TAC	Technical Advisory Committee
US	United States
VMT	Vehicle Miles Travelled

1 Introduction

The objective of Tasks 4.2 and 5.2 of the Coast Rail Corridor Study is to develop the draft goals, objectives, outcomes, performance measures, and data for use in developing the analytical framework for the Service Implementation Plan (SIP) and the Passenger Rail Improvement Study (PRIS).

The purpose of this document is to present the draft goals, service objectives, study outcomes, performance measures, and data needs for the SIP and the PRIS. These have been refined based on input from SLOCOG staff, the CRCC, and technical and community stakeholders, then approved by the SLOCOG Board to provide the guiding policy direction for the study. Following SLOCOG Board ratification of the goals, objectives, and outcomes for the SIP and PRIS, the consultant team identified appropriate draft performance measures and data needs that will be used to assess how each SIP and PRIS service alternative meets the goals and objectives.

2 Guiding Plans

The 2018 California State Rail Plan (CSRP) and 2019 SLOCOG Regional Transportation Plan (RTP) served as guiding documents during the development of goals and objectives for this study. While phrasing is slightly different, the goals listed in the RTP are consistent with those listed in the CSRP (as shown below).

SLOCOG RTP	CSRP
Preserve the transportation system	Preserve the multimodal transportation system
Improve intermodal mobility and accessibility for all people	Improve multimodal mobility and accessibility for all people
Support a vibrant economy	Support a vibrant economy
Improve public safety and security	Improve public safety and security
Foster livable, healthy communities and promote social equity	Foster livable and healthy communities and promote social equity
Practice environmental stewardship	Practice environmental stewardship
Practice financial stewardship	

3 Methodology

Each of the goals in the CSRP and RTP can be applicable to both intercity and regional rail transit. Therefore, to maintain consistency with the guiding plan for the San Luis Obispo region, it is recommended that this study use the same seven goals as the RTP. Multiple objectives were then identified for each goal, informed by the detailed policy objectives contained in the aforementioned plans, as well as an understanding of the context of the Coast Corridor gained from reviewing other relevant plans and studies. The objectives are specific and measureable statements intended to support achievement of the corresponding goal.

Draft goals and objectives were presented to the CRCC Policy Committee, a Technical Advisory Committee (TAC) composed of SLOCOG and partner agency staff, and a Community Working Group (CWG) composed of representatives from local stakeholder groups. Feedback from these groups was used to refine the list of objectives, and informed the identification of associated performance measures and data needs for each objective. The performance measures will be used to evaluate the service options for intercity rail/intercity bus through the Central Coast area in the SIP Task 4.4, and for regional

rail service feasibility in the greater San Luis Obispo region in the PRIS Task 5.6. The goals, objectives, performance measures and data needs for the SIP and PRIS are identified in Table 6-1 and Table 7-1, respectively.

Table 6-1 contains 21 study objectives, of which 18 will be used to evaluate service options for the SIP. Table 7-1 contains 26 study objectives, of which 23 will be used to evaluate service options for the PRIS. The three SIP study objectives and three PRIS study objectives that will not be part of the evaluation framework (and thus do not have performance measures associated with them) are still priorities for the region and will remain important considerations in the planning process. However, since all SIP and PRIS service options will satisfy the respective "core objectives", they are not considered differentiating factors that will be significant in determining which service options best achieve the goals of the SIP and PRIS and have therefore been excluded from the evaluation framework.

4 Study Outcomes

Study outcomes for the SIP were derived from the service targets laid out in the 2018 CSRP. Study outcomes for the PRIS align with the policy related to future commuter rail contained in the passenger rail component of the 2019 RTP. As detailed below, the study outcomes of the SIP and PRIS are the development of phased implementation plans for intercity and regional rail service improvements, respectively, and the PRIS will also evaluate the feasibility of regional rail implementation.

4.1 Service Improvement Plan

The outcome of the SIP will be the development of a phased implementation plan to achieve higher integrated intercity rail and bus service levels, providing bus connections to trains that terminate in Goleta, San Luis Obispo, Salinas, or San Jose. The phases of the plan will include the following intercity service improvement milestones, consistent with the 2018 CSRP:

- By 2022
  - Integrated intercity bus every 2 hours between San Jose-Santa Barbara
  - Integrated intercity bus from Paso Robles to the Central Valley
- By 2027
  - Integrated intercity rail and intercity bus from Salinas to San Luis Obispo, including at least 1 intercity rail service in addition to Amtrak Coast Starlight
  - Integrated intercity rail and intercity bus every 2 hours from San Luis Obispo to Santa Barbara, including at least 3 intercity rail frequencies in addition to Amtrak Coast Starlight
  - Integrated intercity bus every 2 hours from Paso Robles to the Central Valley
- By 2040
  - Integrated intercity rail and intercity bus every hour from Salinas to San Luis Obispo, including intercity rail at least every 4 hours
  - Integrated intercity rail and intercity bus every hour from San Luis Obispo to Goleta/Santa Barbara, including at least bi-hourly intercity rail service
  - Integrated intercity bus every hour from Paso Robles to the Central Valley

4.2 Passenger Rail Improvement Study

The PRIS will produce two primary outcomes:

- Evaluation of the feasibility of introducing a commuter rail service in the greater SLO area
- Development of a phased implementation plan to introduce a commuter rail service between San Luis Obispo County and northern Santa Barbara County that provides a viable alternative to driving on US-101 in the next 20-25 years. The plan will address the following elements:

- Technology options
- Service levels
- Integration with other rail and transit services
- Stations
- Rail infrastructure construction
- Governance
- Funding sources and whether the scenario is financially constrained or unconstrained

5 Service Implementation Plan

Table 6-1: Goals, Objectives, Performance Measures, and Data Needs of the Service Improvement Plan

Goal	Service Objective	Performance Measure(s)	Data Needs	Source(s)
Preserve the transportation system	Maximize the efficiency of the existing transportation system (primarily US-101) by shifting trips from private automobiles to transit	Reduced VMT	Estimated ridership, average vehicle occupancy, average trip length	Regional Travel Demand Model
	Maintain resilience to projected climate change impacts (e.g., extreme weather, landslides) in the development of increased passenger rail service along the Coast Corridor	Surplus seated capacity	Service frequencies, vehicle capacities	Proposed Rail Service Plan
Improve intermodal mobility and accessibility for all people	Increase intercity rail and bus ridership	Increased rail and bus ridership	Caltrans intercity rail demand model, demographic and employment projections	Regional Travel Demand Model, Caltrans/Amtrak Intercity Mode Choice Model
	Provide more convenient, frequent, and reliable intercity rail and bus service (especially to colleges/universities, tourist destinations)	Major origins and destinations served within 5 miles of rail stations/bus stops	Locations of colleges/universities, major employers/jobs, Central Business Districts and Neighborhoods	Regional Travel Demand Model, US Census Bureau, Geographic Information System (GIS)
	Provide intercity bus service to population centers not on the existing rail line	Increased intercity bus service to population centers not on the existing rail line	Station/stop locations, proposed bus schedules, demographic data	Regional Travel Demand Model, US Census Bureau, GIS
	Ensure that all stations and trains are ADA accessible	This objective will not be used to evaluate and compare SIP service options. In light of SLOCOG's commitment to equitable access, all alternatives will utilize stations and trains that are accessible to individuals with disabilities.		

Table 6-1: Goals, Objectives, Performance Measures, and Data Needs of the Service Improvement Plan (Continued)

Goal	Service Objective	Performance Measure(s)	Data Needs	Source(s)
Support a vibrant economy	Expand transit options for tourists and visitors to Central Coast communities	Increased rail and bus ridership among visitors	Ridership increases for tourists and visitors	Regional Travel Demand Model, Caltrans/Amtrak Intercity Mode Choice Model and GIS
	Avoid impacting freight rail operations with implementation of passenger rail service improvements	Capital cost, to avoid impacts to freight operations	Intercity Rail Service Plan, infrastructure unit costs	Viriato and RTC modelling, infrastructure improvement costs for similar projects
Improve public safety and security	Reduce the likelihood of transportation-related injuries and fatalities	Collisions (and attendant injuries and deaths) avoided	VMT reduced, accident rates per VMT	Caltrans/Amtrak Intercity Mode Choice Model, NHTSA collision rates
	Provide sufficient capacity to allow social distancing to slow spread of diseases like the COVID-19 Pandemic	Peak and average passenger load factors	Projected ridership, percentage of ridership that occurs during peak periods, seated capacity	Proposed Rail Service Plan and Regional Travel Demand Model, Caltrans/Amtrak Intercity Mode Choice Model
Foster livable, healthy communities and promote social equity	Improve access to major destinations (e.g., colleges/universities, tourist attractions)	Increased rail and bus ridership	Proposed schedules and intercity bus routes, location of major destinations	Regional Travel Demand Model, Geographic Information System (GIS) and Proposed Regional Rail Service Plans
	Expand travel options for populations who cannot or do not drive (i.e. seniors, people with disabilities, people who don't own a car)	Service availability to transit-dependent groups within 5 miles of stations	Demographic data, station locations, proposed schedules	Source: US Census Bureau, Proposed Rail Service Plan, GIS
	Encourage walking and biking	This objective will not be used to evaluate and compare SIP service options. All service options will utilize trains that enable passengers to bring bicycles on board, and providing transit as an alternative to driving will encourage both walking and cycling as a first mile/last mile option.		
	Provide affordable access to economically or socially disadvantaged groups	Service availability to state priority populations within 5 miles of stations	Station locations, location of priority populations (SB 535 Disadvantaged/AB 1550 Low Income)	CalEPA, CARB, GIS, Proposed Rail Service Plan

Table 6-1: Goals, Objectives, Performance Measures, and Data Needs of the Service Improvement Plan (Continued)

Goal	Service Objective	Performance Measure(s)	Data Needs	Source(s)
Practice environmental stewardship	Support state climate goals by reducing vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions	Reduced GHG Emissions, Reduced VMT	VMT reduced, Ridership estimates	EMFAC emission rates and Regional Travel Demand Model, Caltrans/Amtrak Intercity Mode Choice Model
	Improve air quality by reducing criteria emissions	Reduced Criteria Pollutants (CO, Lead, NO_2, Ozone, PM, SO_2)	VMT reduced, Ridership estimates	EMFAC emission rates and Regional Travel Demand Model, Caltrans/Amtrak Intercity Mode Choice Model
	Preserve community character by reducing the need for roadway expansions and parking	Reduced VMT	Estimated ridership, average vehicle occupancy, average trip length	Proposed Rail Service Plan, Caltrans/Amtrak Intercity Mode Choice Model
Practice financial stewardship	Plan intercity rail and bus improvements that are well-positioned to compete for local, state, and federal funds	Grant competitiveness	Grant criteria for applicable funding programs	Available Grant Programs
	Plan intercity rail and bus improvements that are coordinated with related projects in surrounding areas to make strategic investments (e.g. passenger rail extensions from San Jose to Salinas) and strengthen intermodal connectivity throughout the region	Compatibility with related intercity rail and bus projects	Information on scheduling and routing of related service improvements, transfer policies, proposed rail and bus schedules	Proposed Rail Service Plan, consultation with partner agencies
	Provide cost effective service	Cost per trip Cost per passenger mile	Ridership projections, capital and operating cost estimates	Proposed Rail Service Plan, Caltrans/Amtrak Intercity Mode Choice Model, recent rail industry and planning costs
	Generate fare revenue by providing attractive rail service	Farebox recovery	Ridership projections, fare policy, operating cost estimate	Proposed Rail Service Plan, Current Fare Box Models for Amtrak Services in CA, Caltrans/Amtrak Intercity Mode Choice Model

6 Passenger Rail Improvement Study

Table 7-1: Goals, Objectives, Performance Measures, and Data Needs of the Passenger Rail Improvement Study

Goal	Service Objective(s)	Performance Measure(s)	Data Needs	Source(s)
Preserve the transportation system	Maximize the efficiency of the existing transportation system (primarily US-101) by shifting trips from private automobiles to transit	Reduced VMT	Estimated ridership, average vehicle occupancy, average trip length	Regional Travel Demand Model
	Maintain resilience to projected climate change impacts (e.g., extreme weather, landslides) in the development of increased passenger rail service along the Coast Corridor	Surplus seated capacity	Service patterns, vehicle capacities	Proposed Rail Service Plans
Improve intermodal mobility and accessibility for all people	Increase transit mode share among commuters	Ridership among commuters	Rail schedules	Regional Travel Demand Model
	Provide rail service that is reliable and competitive with automobile travel time (especially to colleges/universities, jobs, and tourist destinations)	Rail versus auto travel times for select origin/destination pairs	Travel time for US-101, rail schedules	Regional Travel Demand Model, Proposed Rail Service Plans
	Develop a rail system that complements other transit services by enabling convenient transfers within San Luis Obispo County and northern Santa Barbara County	Connectivity with local transit	Local transit routes and service levels	Bus Transit Schedules, Proposed Rail Service Plans, GIS
	Plan for a rail service that will be well used, with projected ridership comparable to similar regional rail systems elsewhere	Ridership	Rail schedules, ridership for comparable systems	Regional Travel Demand Model
	Ensure that all stations and trains are ADA-accessible	This objective will not be used to evaluate and compare PRIS service options. In light of SLOCOG's commitment to equitable access, all alternatives will utilize stations and trains that are accessible to individuals with disabilities		

Table 7-1: Goals, Objectives, Performance Measures, and Data Needs of the Passenger Rail Improvement Study (Continued)

Goal	Service Objective(s)	Performance Measure(s)	Data Needs	Source(s)
Support a vibrant economy	Connect housing and jobs by providing transit service to areas with high employment and population densities	Service availability to jobs and workers accessible within 5 miles of a station	Demographic data, station locations	US Census Bureau, GIS
	Improve mobility and accessibility for tourists and other visitors to Central Coast communities	Ridership	Rail schedules	Regional Travel Demand Model
	Avoid impacting freight rail operations with introduction of commuter rail service	Cost of infrastructure to mitigate impacts	Freight operations, proposed passenger rail operations, infrastructure improvement unit costs	Viriato and RTC modelling, Proposed Rail Service Plans
Improve public safety and security	Reduce the likelihood of transportation-related injuries and fatalities	Collisions (and attendant injuries and deaths) avoided	VMT reduced, accident rates per VMT, projection of additional train collisions	Regional travel demand model, NHTSA collision rates
	Provide sufficient capacity to allow social distancing to slow spread of diseases like the COVID-19 Pandemic	Projected peak and average load factors	Projected average and peak period ridership, vehicle seated capacity	Regional travel demand model
	Provide passenger rail service that operates safely and efficiently with freight operations	This objective will not be used to evaluate and compare PRIS service options. Only rail vehicles that FRA has determined to be safe for operation on tracks shared with freight will be considered.		

Table 7-1: Goals, Objectives, Performance Measures, and Data Needs of the Passenger Rail Improvement Study (Continued)

Goal	Service Objective(s)	Performance Measure(s)	Data Needs	Source(s)
Foster livable, healthy communities and promote social equity	Provide a reliable and competitive alternative to driving, to address the long commute times resulting from the jobs-housing imbalance	Rail versus auto travel time for select origin/destination pairs	Travel time for US-101, vehicle operating parameters (average speed)	Regional travel demand model
	Expand travel options for populations who cannot or do not drive (i.e. seniors, people with disabilities, people who don't own a car, students)	Service availability for transit-dependent population within 5 miles of stations	Demographic data, station locations	US Census Bureau, GIS
	Provide affordable access to economically or socially disadvantaged groups	Service availability for priority populations within 5 miles of stations	Station locations, location of priority populations (SB 535 Disadvantaged/AB 1550 Low Income)	CalEPA, CARB, GIS
	Encourage walking and biking	This objective will not be used to evaluate and compare PRIS service options. All service options will utilize trains that enable passengers to bring bicycles on board, and providing transit as an alternative to driving will encourage both walking and cycling as a first mile/last mile option.		
	Locate stations in areas with affordable housing	Service availability to affordable units within 5 miles of stations	Locations of affordable housing units, station locations	Federal databases of subsidized housing units
	Support transit oriented development	Qualitative determination of the degree to which the rail service supports development	Service levels, station locations	Proposed Rail Service Plan, GIS

Table 7-1: Goals, Objectives, Performance Measures, and Data Needs of the Passenger Rail Improvement Study (Continued)

Goal	Service Objective(s)	Performance Measure(s)	Data Needs	Source(s)
Practice environmental stewardship	Support state climate goals by reducing vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions	VMT reduced GHG emissions avoided	VMT reduced, EMFAC emission rates	Regional travel demand model, CARB
	Improve air quality by reducing criteria emissions	Reduced Criteria Pollutants (CO, Lead, NO_2, Ozone, PM, SO_2)	VMT reduced, EMFAC emission rates	Regional travel demand model, CARB
	Promote alternative, energy-efficient rail technologies that reduce GHG emissions and improve air quality	Emissions from rail operations	Vehicle operating parameters	FTA operations-related emissions factors
	Preserve neighborhood character by reducing need for new parking and roadway expansions	VMT reduced	Estimated ridership, average vehicle occupancy, average trip length	Regional travel demand model. Proposed Rail Service Plans
Practice financial stewardship	Plan a regional rail system that is well-positioned to compete for local, state, and federal funds	Qualitative evaluation of grant competitiveness	Grant criteria for applicable funding programs	Available grant programs
	Plan for a cost-effective rail system	Subsidy per trip Subsidy per passenger mile	Ridership projections, capital and operating costs, fare revenue projections	Regional travel demand model, unit costs for comparable systems
	Generate fare revenue by providing attractive rail service	Farebox recovery	Ridership projections, fare policy, operating cost estimate	Regional travel demand model, unit costs for comparable systems