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## **TP ATTACHMENT 1-1 – SCOPE OF WORK**

## SCOPE OF WORK

### 1.1 INTRODUCTION

This TP Attachment 1-1 provides a summary description of the physical components of the Project that Design-Builder must design, furnish, construct, and/or install.

Do not rely solely on the description contained in this TP Attachment 1-1 to identify either all Project components to be designed, furnished, constructed, and/or installed or requirements of such design and construction. Design-Builder must determine the full scope of the Project through thorough examination of the Contract Documents and the Project Site and as may be reasonably inferred from such examination.

Design, furnish, construct, and/or install all components of the Project in accordance with the requirements of the Contract Documents. For materials that the Contract Documents provide will be furnished by Caltrans, submit a request to RCTC, inspect prior to pick-up, pick-up, notify RCTC of pick-up, deliver, store, and install Department-furnished materials, TP Attachment 1-3 (Department-Furnished Materials), complete in place in accordance with the requirements of the Contract Documents.

RCTC has made a determination in accordance with Public Contract Code section 3400 that certain specified items are necessary for compatibility and operability with other products in use on or in support of the Project.

### 1.2 PROJECT LIMITS

The Project is approximately eight miles long and is located in Orange County, Riverside County and the City of Corona. The anticipated limits for the Project Site are as follows and are depicted on the Project Schematics:

- West limit – East of the SR-91/SR 241 Foothill Transportation Corridor Interchange at Orange County post mile R16.0.
- East limit – West of the SR-91/Pierce Street intersection at Riverside County post mile R11.1.
- North limit – Approximately at the I-15/SR-91 Interchange at Riverside County post mile R37.8.
- South limit – Approximately at the I-15/Ontario Avenue Interchange at Riverside County post mile R40.7.

The Work may extend beyond the anticipated limits to the locations necessary to complete the Work as set forth in the Contract Documents. The Work includes all impacted roadways, all other areas affected by construction activities such as adjacent routes along which Project-related construction will occur (i.e., roadways that will be affected by utility relocations, etc.), detour routes, alternate routes, and truck haul routes marked or otherwise used for MOT related to the Project. Roadways requiring advance notice of construction on SR-91 are considered part of the Work. Temporary type work such as maintenance of traffic may occur outside the anticipated Project limits. Any permanent work outside the Planned ROW Limits and the Project's approved Area of Potential Effect (APE) may require supplemental Governmental Approvals, for which Design-Builder is solely responsible in accordance with the Contract Documents.

### 1.3 ELEMENTS OF THE WORK

The Project includes, but is not limited to the following elements of Work:

## 1. SR-91 CIP

### 1.1. Project Management

#### 1.1.1. Administration

##### 1.1.1.1. Project Management

Develop, implement, and maintain the project management organization and systems that effectively manage all elements of the Work. Define and follow the project management effort as established in the Project Management Plan. Develop, implement, and maintain a comprehensive Project Management Plan that is consistent with and expands upon the preliminary Project Management Plan submitted with the Proposal. The Project Management Plan must describe Design-Builder's managerial approach, strategy, and quality procedures to design, build, maintain (during construction) the Project and comply with all requirements of the Contract Documents.

Develop, prepare, submit and secure all applicable and necessary Governmental Approvals, excluding Appendix 3 Approvals, in accordance with the Contract Documents and Governmental Rules.

##### 1.1.1.2. Quality Program

Design-Builder is solely responsible for performance and documentation of the quality of all components of the Work.

Design-Builder must maintain its own internal quality control staff and contract for all quality assurance services in accordance with the requirements of the Contract Documents. The quality control/quality assurance for the Work includes, but is not limited to, design, survey, inspection, material sampling, testing, geotechnical, environmental compliance monitoring, and auditing to ensure that the Work is completed in accordance with the Contract Documents.

##### 1.1.1.3. Health and Safety Program

Develop, implement, and maintain a comprehensive Health and Safety Plan which fully describes Design-Builder's policies, plans, training programs, Work Site controls, and Incident Management to ensure the health and safety of Project personnel as well as the general public during the term of the Contract.

#### 1.1.2. Environmental Management Program

Perform the environmental commitments reflected in the NEPA/CEQA Approval and all other Governmental Approvals. Except as expressly stated otherwise in the Contract Documents, all duties, responsibilities, and obligations assigned to RCTC in the NEPA/CEQA Approval, are the responsibility of Design-Builder.

#### 1.1.3. Public Outreach

The objective of the public outreach strategy is to promote trust and confidence among the Project team members and with the general public throughout the design

and construction period. Principal segments of the affected public have been identified, and Design-Builder must work closely with RCTC, Caltrans and the PCM to develop specific strategies to be responsive to the public's needs. It is imperative RCTC and Design-Builder gain and maintain public support for the Project. Members of the public will better support RCTC and Design-Builder if they are kept abreast of Project issues in a timely manner, have opportunities to provide feedback, are notified of construction and potential impacts in advance, and perceive a well-executed plan for keeping them informed and up-to-date.

#### 1.1.4. Bonding

#### 1.1.5. Permits

### 1.2. Design

#### 1.2.1. Environmental

#### 1.2.2. Railroad

The Project interfaces with the San Bernardino Subdivision, California Subdivision railroad corridor owned and operated by the BNSF Railway Company (BNSF). In addition Metrolink and Amtrak have operating rights on this corridor. Coordinate, design, and construct both temporary and permanent structures in accordance with the railroad companies' criteria and requirements, as necessary to maintain the level of service and to accommodate the Project construction. Design-Builder is responsible for obtaining and complying with all applicable design and construction specifications and requirements for each location.

#### 1.2.3. Roadway

Conduct all work necessary to meet the requirements of grading, including Project ROW preparation, embankment, subgrade preparation and stabilization, slopes, topsoil, and sodding.

Add one general purpose lane, convert the existing HOV lane to an express lane and add a second express lane in each direction on SR-91.

Add two express lanes in each direction on I-15 from SR-91 to the Ontario Avenue Interchange and add an elevated express lane connector from SR-91 to I-15.

Rehabilitate and upgrade the existing pavement for the two inside express lanes of SR-91 in each direction as specified in TP Section 11 (Pavements).

Add auxiliary lanes at traffic interchanges and modification to interchange geometrics to improve traffic operations. Local access from all current interchanges is expected to be maintained except at West Grand Boulevard. The existing non-standard ramps will be removed. Provide interchange improvements at Green River Road, SR-71, Serfas Club Drive/Auto Center Drive, Maple Street, Lincoln Avenue/Grand Boulevard, and Main Street. Specific interchange improvements include:

Green River Road. Modify westbound off-ramp and on-ramp to accommodate the SR-91 widening and provide additional storage on the ramps.

SR-71. Modify the southbound SR-71 to westbound SR-91 connector and widen a

portion of the southbound SR-71 to eastbound SR-91 connector. Modify the westbound SR-91 to northbound SR-71 connector to accommodate the SR-91 widening.

Auto Center Drive (Serfas Club Drive south of SR-91) / Maple Street (Sixth Street south of SR-91). Maintain the existing diamond interchange configuration on the west side of Auto Center Drive (eastbound off-ramp and westbound on-ramp), adjusting the ramps only as necessary to accommodate the SR-91 widening in each direction. Grade separate (braid) the eastbound on-ramp from Auto Center Drive under the eastbound off-ramp to Maple Street. Realign the existing frontage road on the south side of SR-91 which connects Auto Center Drive and Maple Street to accommodate the added freeway lanes and braided ramps.

Maple Street Replace and straighten the existing Maple Street overcrossing. Remove the westbound SR-91 on ramp and replace with an on ramp from West 6th Street passing over SR-91. Move the existing eastbound SR-91 on ramp to the Paseo Grande / West 6th Street intersection. Realign the south side frontage road connection with Paseo Grande.

Lincoln Avenue / Grand Boulevard Modify to a tight diamond configuration, eliminating the constrained geometry of the existing hook ramps, relocating the existing north side frontage road in the northwest quadrant outward to accommodate the SR-91 widening and ramp revisions. Remove and replace the Grand Boulevard ramps with local access to the Lincoln Avenue interchange ramps. Provide a new frontage road on the north side of SR-91, extending from Buena Vista Avenue to the existing West frontage road connecting with Grand Boulevard. Provide a new frontage road on the south side of SR-91, extending from Lincoln Avenue opposite D Street to 2nd Street at Buena Vista Avenue and continues to Grand Boulevard.

Main Street / I-15. Modify the existing diamond interchange ramps on the west side of Main Street only as necessary to accommodate the SR-91 widening in each direction. Provide diamond interchange ramps on the east side of Main Street. Combine the Main Street eastbound onramp and westbound off-ramp to and from the I-15 connectors within a collector-distributor (C-D) road that is barrier separated from SR-91 to eliminate weaving conflicts that currently exist between this local and system interchange. Split the Main Street eastbound on-ramp traffic to SR-91 from I-15 traffic and braid under the I-15 C-D road before merging onto eastbound SR-91. Exit the Main Street westbound off-ramp traffic from SR-91 into the C-D road and merge with traffic from the I-15 connectors before exiting to Main Street.

Modify existing local roadways impacted by the Project, and implement current ADA standards for any removed curb ramps and sidewalks.

Accommodate all bicycle and pedestrian facilities for the Project. Provide bicycle and pedestrian facilities as required by Appendix 3 Approvals, and incorporate bicycle and pedestrian travel into Project development as appropriate. Coordinate the elements of this Project with the existing and planned trails and other facilities of Local Agencies for pedestrians and cyclists. Preserve the existing Santa Ana Canyon bikeway and any other bicycle facilities affected on local streets.

Provide routine and toll enforcement areas for use by California Highway Patrol, Freeway Service Patrol, and maintenance activities.

#### 1.2.4. Drainage

Provide drainage improvements to account for all sources of runoff that may reach the Project, whether originating within or outside the Project ROW. Provide temporary best management practices (BMPs) for application during construction and permanent BMPs for long-term treatment of storm water runoff. Provide a structures and improvements appurtenant to the Santa Ana River levee.

#### 1.2.5. Geotechnical

Perform all inspections and examinations of the Site and surrounding locations, geotechnical investigations, field and laboratory testing and studies, research, and analyses, and other appropriate activities sufficient to effectively determine and understand the existing surface and subsurface conditions of the Project ROW to be used by Design-Builder to carry out the Work. Ensure the inspections, examinations, geotechnical investigations, studies, and analyses are both thorough and complete, so as to provide accurate information for the design of roadways, embankments, pavements, foundations, structures, and other facilities that result in a Project that is safe, and meets all Contract requirements.

#### 1.2.6. Structures

##### 1.2.6.1. Bridges

- 1.2.6.1.1. Westbound Green river off-ramp (New Bridge)
- 1.2.6.1.2. Westbound Maple On-ramp (New Bridge)
- 1.2.6.1.3. Eastbound Maple off-ramp (New Bridge)
- 1.2.6.1.4. 91-15 Express Viaduct (New Bridge)
- 1.2.6.1.5. 91-15 SW Express Viaduct (New Bridge)
- 1.2.6.1.6. E. Grand Blvd UC (New Bridge)
- 1.2.6.1.7. N15/S15-W91 connector BOH (New Bridge)
- 1.2.6.1.8. Main St E91 On-ramp BOH (New Bridge)
- 1.2.6.1.9. E91-N15/S15 BOH (New Bridge)
- 1.2.6.1.10. Maple Street OC (Replace Bridge)
- 1.2.6.1.11. Main Street UC (Replace Bridge)
- 1.2.6.1.12. West Prado OH (Widen Bridge)
- 1.2.6.1.13. E91-N71 Connector Separation (Widen Bridge)
- 1.2.6.1.14. Route 91/71 Separation (Widen Bridge)
- 1.2.6.1.15. Prado OH (Widen Bridge)
- 1.2.6.1.16. Serfac Club Drive UC (Auto Center Drive UC) (Widen Bridge)
- 1.2.6.1.17. Lincoln Avenue OC (Widen Bridge)
- 1.2.6.1.18. Buena Vista Avenue UC (Widen Bridge)
- 1.2.6.1.19. West Grand Blvd UC (Widen Bridge)
- 1.2.6.1.20. East Grand Blvd UC (Widen Bridge)
- 1.2.6.1.21. Temescal Wash BOH (Widen Bridge)
- 1.2.6.1.22. Old Temescal Road UC (Widen Bridge)
- 1.2.6.1.23. Ontario Avenue UC (Widen Bridge)

##### 1.2.6.2. Retaining Walls

1.2.6.3. Noise Walls: Provide new or replacement sound barriers as required in the NADR.

1.2.6.4. Miscellaneous Structures: Provide structural design for non-standard culverts, drainage structures, signage supports, illumination assemblies, and traffic signals.

### 1.2.7. Traffic

Restripe existing SR-91 in Orange County from west of Coal Canyon to the Riverside / Orange County line. Restripe eastbound SR-91 from I-15 to Magnolia Avenue.

Install all necessary guide, warning, supplemental, sequential, service, tolling and regulatory signs; all delineation and pavement markings; and all lighting

Install, modify and/or retrofit signals at the following locations identified in TP Section 15 (Traffic).

### 1.2.8. Transportation Management Systems

Caltrans and the City of Corona have Transportation Management System (TMS) infrastructure within the Planned ROW Limits to support their Advanced Traffic Management System. The TMS system will remain operational at all times and will be the responsibility of Design-Builder through Final Acceptance. Coordinate the TMS planning and implementation with RCTC, Caltrans and other Governmental Entities that have roadways within or intersecting the Project.

Install and/or modify ramp metering for all on-ramps to SR-91 in the Planned ROW Limits, as shown on the Project Schematics.

### 1.2.9. Land Survey

Provide accurate and consistent land surveying and mapping necessary to support design, and construction of the Project. Review existing survey data and determine the requirements for updating or extending the existing survey and mapping data. Design-Builder is responsible for the precision, accuracy, and comprehensiveness of all survey and mapping.

### 1.2.10. Maintenance of Traffic

Design and construct the Project to provide for the safe and efficient movement of people, goods, and services, through and around the Project, while minimizing negative impacts to users, residents, and businesses.

### 1.2.11. ETTM Infrastructure

Design and construct Electronic Toll and Traffic Management (ETTM) Infrastructure necessary to support the electronic collection of tolls, revenue management, and traffic management to provide a corridor specific ETTM System for the Project. During the design phase of the Project, Design-Builder must coordinate with RCTC and the Systems Integrator to finalize the design of all ETTM Infrastructure to support ETTM System and the schedule and process for ETTM Infrastructure Turnover. ETTM Infrastructure Work includes design and construction of: the ETTM changeable message signs (CMSs); cameras; ETTM communication conduit network; Tolling Zone facilities; and Toll Utility Building (TUB).

### 1.2.12. Aesthetics and Landscaping

Landscaping and aesthetic treatments at various locations along the Project corridor.

## 1.3. Property Acquisition

The Project will be constructed within Project ROW. It is possible that some right of way from Orange County, Riverside County and/or the City of Corona will be utilized. RCTC is securing RCTC-Provided Property as set forth in TP Section 9 (Right of Way). Design-Builder may use the full Planned ROW Limits for staging areas, except as otherwise limited by the Contract Documents.

#### 1.4. Utility Relocation

Except as otherwise provided in the Contract Documents, cause all Utility Relocations necessary to accommodate construction, operation, maintenance and/or use of the Project.

Some Utility Relocations may be performed by the Utility Owner with its own forces and/or contractors and consultants (i.e., Owner-Managed); Design-Builder must perform all other Utility Relocations. The allocation of responsibility for the Utility Relocation Work between Design-Builder and the Utility Owners is specified in the Contract Documents.

#### 1.5. Construction: Construct Work referenced in items 1.2 through 1.4.

- 1.5.1. Mobilization
- 1.5.2. Railroad
- 1.5.3. Roadway
- 1.5.4. Drainage
- 1.5.5. Structures
- 1.5.6. Traffic
- 1.5.7. Transportation Management Systems
- 1.5.8. Maintenance of Traffic
- 1.5.9. ETTM Infrastructure
- 1.5.10. Aesthetics and Landscaping