Supplemental Attachment 5

DES SCOPING CHECKLIST

Division of Engineering Services
PSR-PDS Scoping Checklist

Project Information

District: 4	County:	Route:	Post Mile:	
	SM	Route: 101	19.2/26.1	EA 4H290K
	SF	Route: 101 & 280	0.0/2.0 & R4.2/T7.26	EA 4H290K

Project Description**:** In San Mateo County and the City and County of San Francisco on Route 101 from 1 mile south of Route 101/380 Separation to Route 101/280 Separation and on Route 280 from Route 101/280 Separation to 5th Street.

Project Manager:	Nidal Tuqan	Phone # (510) 286-5542
Project Engineer* (PE):	Dominic Chin	Phone # (510) 286-4858
DES Special Funded Projects Liaison Engineer:	Majid Madani	Phone # (916) 227-8366
Design Functional Manager:	Stephen Haas	Phone # (510) 286-4895

*The Project Engineer will provide assistance with the completion of this form.

Project Scope

Check applicable boxes describing proposed scope of project.

- ☐ New Expressway/Freeway on new alignment
- ☐ Construct Interchange
- ☒ Modify Interchange
- ☐ Bridge Replacement (Alt B) (New alignment? ☐ Yes ☐ No)
- ☐ Bridge Rehabilitation
- ☒ New Bridge
- ☒ Bridge Seismic Retrofit
- ☐ Other Design: Explain:
- ☐ Other Roadway Realignment
- ☐ Emergency/Storm Damage
- ☒ Bridge Widening
- ☐ Curve Correction
- ☐ Building Project
- ☐ Median Barrier Retrofit
- ☐ Construct Passing Lane
- ☒ Soundwall/Retaining Wall
- ☒ Roadway Rehabilitation
- ☒ Widen Highway
- ☐ Rockfall Project
- ☐ Left-turn Pocket
- ☐ Modify Slope
- ☐ Stabilize Subgrade
- ☐ Stabilize Roadway
- ☐ Landslide/Slip-out
- ☒ Bridge Deck Rehab.
- ☒ Bridge Joint Seals

Briefly describe proposed scope of DES involvement for all alternatives.

Propose to provide a Managed Lane (ML) facility in the northbound and southbound directions of US 101 from 1 mile south of US 101/ I-380 Interchange in San Mateo County to the US 101/ I-280 Interchange in San Francisco County and continue north on I-280 from the US 101/I-280 Interchange to the I-280 terminus at 5th and King Streets in San Francisco. Project includes: new and modified structures, new retaining walls, new and replacement sound walls, and ITS and toll system infrastructure.

Project Schedule

Product or Milestone	Delivery Date	Work Performed By	
		Caltrans	Consultant or Local Agency
PSR/PSR(PDS)/PSSR (Draft)	April 2019	☐	☒
PR(or PA/ED*)	March 2021	☐	☒
Structure Site Data Submittal	June 2021	☐	☒
Draft SPS&E (i.e. Activity 240 finish date)	January 2022	☐	☒
PS&E ☒ AADD	August 2022	☐	☒
RTL	October 2022	☒	☐
Construction Contract Acceptance *	December 2024	☒	☐

* Initial phase of construction to be determined during PA&ED

Project Programming

☐ SHOPP ☒ STIP ☐ EMERGENCY ☐ MAINTENANCE ☐ MINOR A/B ☒ Other: Local _____

Project Cost

Alternative # 1

Project Cost Range ($ 1000's)	Cost of Largest Structure ($ 1000's)
Roadway	$285,000 to $302,000
Structure**	$49,000 to $246,000
ROW	$48 to $56,000
Total	$381,000 to $604,000

**Structure Cost Range provided by (check one)

☒ Consultant ☐ Structure Design Technical Liaison.

Alternative # 2

Project Cost Range ($ 1000's)	Cost of Largest Structure ($ 1000's)
Roadway	$193,000 to $218,000
Structure**	$8,000 to $212,000
ROW	$0 to $44,000
Total	$200,000 to $474,000

**Structure Cost Range provided by (check one)

☒ Consultant ☐ Structure Design Technical Liaison.

Project Scope Breakdown by DES Function

Photogrammetry*

☒ Aerial Photography			
☐ Raster Imaging:	Est. Total Length (km)	Est. Avg. Width (m):	
☐ DTM Modeling (non-district):	Est. Total Length (km)	Est. Total Width (m):	
☒ Mapping:	Est. Total Length (mi)	Est. Avg. Width (mi)	Scale:1"=50'

Bridge Design Services (check applicable boxes): None Anticipated

Design by:

- ☐ Office of Structure Design
- ☐ Structure Maintenance Design
- ☐ Office of Structure Contract Management (Consultant Design Oversight)
- ☐ Office of Special Funded Projects (Consultant Design Oversight)

Bridge Information:

☒ New Bridge(s)	Number 1	Br. Name(s) & No(s).
☒ Bridge Replacement(s)	Number 1	Br. Name(s) & No(s).
☒ Bridge Widening(s)	Number 6	Br. Name(s) & No(s).
☐ New Bridge over water	Number	Br. Name(s) & No(s).
☐Bridge Replacement over water	Number	Br. Name(s) & No(s).
☐Bridge Widening over water	Number	Br. Name(s) & No(s).
☐ Bridge Rail Replacement(s)	Number	Br. Name(s) & No(s).
☒Approach Slab	Number 8	Br. Name(s) & No(s).
☒Bridge with Railroad Involved	Number 3	Br. Name(s) & No(s).
☐Bridge w/ Scour Analysis	Number	Br. Name(s) & No(s).
☒Bridge w/ Special Design or Retrofit	Number 6	Br. Name(s) & No(s).

Other DES functional units required for Structure Work: None Anticipated

- ☐ Structure Hydraulics (include if bridge is over or adjacent to water)
- ☐ Preliminary Investigations (Structure Foundation Plan)
- ☐ Geotechnical Services (Structure Foundations)

Wall Design Data for Structure Design & Geotechnical Services:

☒ Soundwall(s) Number TBD	Est. Max. Ht 16' Est. Length 5,000'	☒ Standard Design	☐ Special Design
☒ Ret. walls(s) Number 10	Est. Max. Ht 30' Est. Length 5,000'	☒ Standard Design	☐ Special Design
☐ MSE Wall(s) Number	Est. Max. Ht Est. Length	☐ Standard Design	☐ Special Design

Geotechnical Services

Is Oversight for consultant prepared geotechnical reports required?

☒ Yes ☐ No

Has the Geotechnical Design Liaison or other geotechnical person been contacted?

☐ Yes ☒ No If yes, who?

Terrain	☒ Flat	☐ Rolling	☐ Mountainous	
Cuts:	Est. Max Height	Est. Volume (cy):	☐ New	☒ Widen
Fills:	Est. Max Height	Est. Volume (cy):	☐ New	☒ Widen

Sign Structures

☒ Overhead Sign Foundations	Number: TBD in PS&E
☒ Changeable Message Sign Foundations	Number: TBD in PS&E

Other:

☐ Special Studies (slope stability, rockfall, erosion, seepage, ground water, settlement, liquefaction, slipout repair, rock slope, etc.) Explain

☐ Existing Maintenance Problems: Explain:

Technical Specialist Design

Anticipated insertable plan sheet(s) check below:

☒ Culvert(s)	Number TBD
☒ Barrier(s)	Number TBD
☒ Signs and Overhead Structures	Number TBD
☐ Other Design:	Explain:

Transportation Architecture Design

☐ Design New Building(s)	Explain:
☐ Remodel Existing Buildings(s)	Explain:
☐ Bridge Aesthetics Evaluation	Explain:
☐ Build scale model	Explain:
☒ Other Aesthetics work	Explain: Bridges and walls

Electrical, Mechanical, Water & Wastewater Design

☐ Pumping Plants	Explain:
☐ Movable bridge, drawbridge	Explain:
☐ Lighting control system for facilities	Explain:
☐ Sanitary Systems	Explain:

Materials Engineering & Testing Services

Pavement

☒ Rigid ☒ Flexible	Average Grade 2%	Average Superelevation 2%
☐ Deflection Studies Required	No. of Locations	Lane/miles to be tested

Consultation and Inspection

☒ Loop detectors	☒ Signal & Lighting Products	☒ Changeable Message Signs, Closed Circuit TV
☒ Concrete Bridge	☒ Steel Bridge	

Corrosion Tests

☒ Soil	☐ Concrete	☐ Cathodic Protection System

Other

☐ Special Products:	Explain

Structure Construction

Oversight for consultant construction administration required? ☐ Yes ☒ No

Division of Engineering Services Workload Estimate for PSR-PDS				
	Alternative Number			
WBS	**1**	**2**	**3**	**4**
100				
150				
160				
165				
175				
180				
Total PY's per Alternative				
			Total Project PY's	

Additional Studies, Investigations or Research from DES

Identify additional studies or investigations that may be required from DES Functional Units.

None

Reviewed by:

Project Manager __Tim Lee, WMH Corporation_____ Date _11/15/18_