Consultant Prepared Advance Planning Study (APS) Checklist

Date:	Consultant Firm (for structures):		Phone No:
5/18/2011	Kimley-Horn and Associates, Inc.		818-227-2790
Designed by: Kevin Kimm, P.E.			Phone No: 818-227-2790
EA: 25720	County: Los Angeles	Rte: 101	KP(PM) 33.69
Project Description: Improvements and widening of the Palo Comado Canyon Road Overcrossing over U.S. Route 101.			
Bridge No(s): 53-1678	Bridge Name(s): Palo Comado Canyon Road Overcrossing		
Total number of bridges in project: 1		APS Alternative Letter or Number (if more than one): N/A	
Purpose of this APS:	Initial APS Cost & Feasibility ☒	Revised scope ☐	Update cost ☐

Part A Items to collect and considerations prior to beginning the APS

All items listed in Part A are to be made available and submitted if requested by the Liaison Engineer.
(Mark **N/A** if not applicable)

☒ Preliminary profile grade of proposed structure.

☒ Typical section of the proposed structure. (Including barrier type, sidewalks, cross slope %, etc.)

☒ Grades or spot elevations of roadway below the structure.

☒ Typical section of roadway below the structure. (Including shoulders, gutters, embankment slope.)

☒ Site map: including horizontal alignment of new structure and the roadway below, topo, contours, etc.

☒ Stage construction or detour plan for traffic on the structure.
(number of lanes to remain open, Temp Railing, etc.)

☐N/A Stage construction or detour plan for the roadway below the structure.
(falsework openings for each stage and any restrictions.)

☒ "As Built" plans for existing structures.

☐N/A Future widening plans of upper and lower roadway (verify with Route Concept Report).

☒ Site aerial photograph (at the proposed structure).

☐N/A Environmental and/or permit requirements (areas of potential impact, construction windows, etc.)

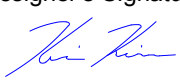
☒ Overhead and underground utility plans

☒ Any other information that you feel is necessary to complete the study. (Other concerns that may affect the APS: local agency requirements such as aesthetics, improvements in vicinity of structure, airspace usage, other obstructions, etc.)

Consultant Prepared Advance Planning Study (APS) Checklist

Part B Considerations during the APS design and cost estimate preparation

1.	Has this project been discussed with:	the OSFP Liaison Engineer?	Yes ☒ No ☐
		the Caltrans District Project Manager?	Yes ☒ No ☐
		the roadway consultant?	Yes ☒ No ☐
2.	Have the Caltrans Structures Maintenance records been reviewed?		Yes ☒ No ☐
	If the records recommend any work for the structure, is it included in the APS?		Yes ☒ No ☐
3.	Are there special aesthetic considerations?		Yes ☐ No ☒
4.	(Widenings and Modifications)		
	Has this project been reviewed for seismic retrofit requirements?		Yes ☒ No ☐
	Are seismic retrofit requirements included in the APS?		Yes ☐ No ☒
5.	Any special Railroad requirements?		Yes ☐ No ☒
	Shoofly required?		Yes ☐ No ☒
	Cost of shoofly included as a separate item in the project cost estimate?		Yes ☐ No ☒
6.	Any special foundation requirements, including scour critical work, special excavation such as Type A, Type D, and/or hazardous or contaminated material?		Yes ☐ No ☒
7.	Any special construction requirements, including limited site accessibility or seasonal work?		Yes ☐ No ☒
8.	Other items to be included in the cost such as slope paving, approach slabs, and/or adjacent retaining walls?		Yes ☒ No ☐
9.	Remove existing bridge? Total Deck Area:		Yes ☐ No ☒
10.	Any other unusual or special requirements?		Yes ☐ No ☒
11.	Provide and attach a consultant prepared Design Memo to summarize and document any important assumptions, discussions, decisions, unusual items, local agency requirements such as aesthetics, improvements in vicinity of the structure, airspace usage, other obstructions, or any items noted above.	Summary attached?	Yes ☒ No ☐

Designer: (Printed Name)	Designer's Signature:	Date:
Kevin Kimm, P.E.		5/18/2011

Advance Planning Study (APS)
Design Memorandum

Date: 5/18/2011	Consultant Firm (for structures): Kimley-Horn and Associates, Inc.		Phone No: 818-227-2790
Designed by: Kevin Kimm, P.E.			Phone No: 818-227-2790
EA: 25720	County: Los Angeles	Rte: 101	KP(PM) 33.69
Project Description: Improvements and widening of the Palo Comado Canyon Road Overcrossing over US Route 101.			
Bridge No(s): 53-1678	Bridge Name(s): Palo Comado Canyon Road Overcrossing		
Total number of bridges in project: 1		APS Alternative Letter or Number (if more than one): N/A	
Purpose of this APS:	Initial APS Cost & Feasibility ☒	Revised scope ☐	Update cost ☐

Introduction:

The California Department of Transportation (Caltrans) and The City of Agoura Hills (City), propose to construct improvements at the US101/Palo Comado Canyon Road interchange (PM 33.0/34.4), in Los Angeles County within the City of Agoura Hills. The project includes widening the Palo Comado Canyon Road and Palo Comado Canyon Road Overcrossing over US 101 and modification of the interchange ramps in order to improve circulation, safety, and bicycle/pedestrian access.

Overview of Structure Work:

Kimley-Horn and Associates, Inc. (Kimley-Horn) is currently preparing the Project Report and Environmental Documents for the improvements to the Palo Comado Canyon Road Overcrossing at the US 101 Freeway with the City of Agoura Hills within the County of Los Angeles. This project will include three APS alternatives; Alternative 1 will be “no build”; Alternatives 2 and 2A will include widening to the east and west side of the existing Palo Comado Canyon Road Overcrossing. The roadway geometry and bridge widening is identical for Alternatives 2 and 2A, the only difference is in the proposed girder layouts that allows for a wider girder spacing for the shorter spans. In addition to the bridge widening, the project will also include freeway ramp and signal modifications.

As-Built Information:

Palo Comado Canyon Road Overcrossing is a four-span bridge with precast prestressed "I" girders, having a total length of 234'-0" and depth of 5'-1 ½". The structure provides a 12'-0" travel way and 4'-0" shoulder in each direction, as well as a 5'-0" sidewalk on the west side of the bridge. The original structure was built in 1963, seismically retrofitted in 1986 and was repaired with a new exterior "I" girder on the east side span 3 in 2006. Abutment and Bent foundations are supported on pile caps with multiple 16" diameter, 45-ton Cast in Drilled Hole (CIDH) piles.

Based on the as-built plans there is a row of misplaced piles at each foundation location that were abandoned in place. The misplaced piles are approximately 2-ft to 3-ft to the east of the existing piles that were incorporated into the existing footing caps. The approximate location of the misplaced piles has been shown in the Typical Sections on the Planning Study General Plan sheets. The CIDH piles for the proposed widening will be located to avoid conflict with these misplaced and abandoned piles.

The most recent bridge inspection completed by Caltrans in July 2010, recommends some minor deck patching at a couple of deck spall locations. Estimated repair costs have been included in the bridge cost estimate. The inspection reports also note that the Type 'A' joint seals show some sign of deterioration, but do not warrant replacement at this time. It is recommended that replacement of these joints be reconsidered during final design to potentially complete this work with the proposed bridge widening.

Alternatives 2 and 2A (Bridge Widening)

Palo Comado Canyon Road Overcrossing configuration:

The widening of the Palo Comado Canyon Road Overcrossing will add 49'-6" of bridge width for an overall bridge width of 90'-0". The widening will consist of an additional 21'-8" of bridge width on the east side and 27'-11" of additional bridge width on the west side of the existing bridge. The new bridge will provide two 12'-0" travel lanes, an 8'-0" shoulder and a 6'-0" raised sidewalk in each direction with a 12'-0" center left turn lane. Concrete Barrier Type 26 with chain link fence will be provided along each side of the Palo Comado Canyon Road Overcrossing.

Structure Type:

The structure type for the Palo Comado Canyon Road Overcrossing widening is proposed to match in kind with the existing, while reducing structure depth in the widened portions to maintain vertical clearance no less than the existing bridge. The existing structure has a structure depth of 5'-1 ½" and consists of 54" precast prestressed "I" girders spaced at 7'-0" in the main spans 2 and 3 with a 6 ½" deck. The proposed widening utilizes 42" precast prestressed "I" girders at a reduced spacing with a 7 ½" deck, resulting in a total structure depth of 4'-3". The girder designs also utilize increased concrete strengths of up to 6000psi.

The overall bridge geometry and widening for Alternative 2 and Alternative 2A are the same, but the number of girders and spacing of the girders within the bridge spans differs.

Alternative 2 proposed girder layout consists of 6 girders at 4'-8 ½" spacing for the west side widening and 5 girders at 4'-5" for the east side widening. The design and spacing of the girders is controlled by span 2, the longest span on the bridge at 90'-0". This alternative utilizes the same girder spacing and layout in all spans.

Alternative 2A uses the same girder spacing and layout as Alternative 2 for span 2, but uses wider girder spacing in the other shorter spans with the design of this girder spacing controlled by span 3. The increased girder spacing allows 1 girder to be dropped in spans 1, 3 and 4 for each

side of the widening. Since the existing bridge is detailed with joints at each bent, the offset girder layout at bents 2 and 3 may be used without impacts to continuity and stiffness characteristics of the structure.

Foundations will consist of pile caps on CIDH piles as recommended in the Preliminary Foundation Report prepared by Kleinfelder West, Inc. The preliminary design utilizes 16" diameter CIDH piles at the abutments and 24" diameter CIDH piles at the bents. A 30-ft structure approach slab will be used on the approaches, including construction of a structure approach slab at the existing bridge abutments, and concrete slope paving will be utilized in front of each abutment to match the adjacent bridge structure.

Vertical Clearances:

The minimum vertical clearance for the existing structure is posted at 15'-0". The minimum vertical clearance is located in the northeast corner of the structure over the northbound US 101 lane at the edge of traveled way. Field survey completed as part of this project shows that the existing vertical clearance along edge of traveled way is 15.14' and existing vertical clearance along edge of pavement is 14.75'. The proposed widening is designed to maintain the same vertical clearance and to not worsen the existing condition. This will be completed by utilizing shallower structure depth in order to account for the cross-slope effect due to widening.

The exterior girders of the proposed widening will be set to match the elevation of the existing exterior girders such that in the event another impact occurs it will be against the new proposed exterior girders and the interior girders will be protected. Repair and/or replacement of interior girders is significantly more difficult that of exterior girders from a access point and due to the additional traffic control that would be required for traffic on the bridge.

Based on the field survey obtained as part of this project, the soffit elevation (bottom of girder) of the west exterior girder is 930.89'. Utilizing the aforementioned shallower girder depths and setting an appropriate cross-slope on the bridge, the soffit elevation for the proposed widened west exterior girder will be set at 930.89'. On the east side the soffit elevation of the east exterior girder is 930.92'. Utilizing the aforementioned shallower girder depths and setting an appropriate cross-slope on the widened portions of the bridge, the soffit elevation for the proposed widened east exterior girder will be set at 930.92'.

The structure has been hit in the past due to overheight loads, specifically the east exterior girder in span 3. Similar to the other bridges within this US 101 Corridor, the Palo Comado Canyon Road bridge clearance is marked on the structure which is visible to motorists. Based on inventory of the US 101 corridor bridges, many existing bridges have non-standard vertical clearance. Standard signage exists throughout the corridor. Currently, there are no additional special vertical clearance warning signs erected. There is no evidence of any other types of accidents being attributed to the existing nonstandard vertical clearance.

Impacts to Traffic:

Construction of falsework on Route US 101 will not be required for the structure construction due to the use of precast prestressed "I" girders. Temporary closures of the US 101 will be required during erection of the girders over the respective lanes. The use of stay-in-place forms should be considered during final design and coordinated with Caltrans to reduce impacts of removing deck formwork to traffic on US 101.

In addition to temporary closure for girder erection, traffic control measures will be required for construction of the bents and bent foundations. Construction of the Bent 3 in the US 101 median will require a minimum working space of 24'-0" between traffic faces of the temporary railing. The existing median (edge of traveled way to edge of traveled way) has a total width of 36'-0",

providing adequate width for the bent construction activities without impacting the existing US 101 traveled way.

Major impacts to vehicular traffic on Palo Comado Canyon Road during construction of the bridge widening are not anticipated since the widening will be achieved with limited removal of the existing structure and will be completed in stages. The existing sidewalk will have to be closed during the widening of the west side and pedestrian traffic will need to be rerouted. Assuming the east side widening is constructed first, the pedestrian traffic could be rerouted to the new sidewalk on the east side. Final construction phasing will need to be determined as part of final design, but at a minimum, one travel lane will be maintained in each direction during construction of the bridge widening.

Aesthetics:

No special aesthetic requirements are planned for the new bridge structure. Barrier finishes and chain link railing will be per the Caltrans Standards.

Seismic Considerations:

The existing bridge was seismically retrofitted in 1986, as part of Project Contract No. 07-004854, with hinge restrainers based on the limited existing bearing seat widths. The most recent Bridge Inspection Reports indicate that the restrainers are in good working condition. The existing bridge was screened out of the Caltrans' seismic retrofit program in 1991. At that time the seismic retrofit was analyzed for peak rock acceleration (PRA) of 0.4g according to Caltrans 1996 Hazard Map. The map has been revised and now shows a PRA of 0.5g in addition to the Caltrans Seismic Design Criteria having been updated. In 2009 the bridge was flagged for re-analysis to determine if it should be placed back into the seismic retrofit program for a more in-depth seismic analysis.

The existing bridge consists of relatively short spans consisting of multiple girders founded on three column bents supported by pile cap foundations providing a degree of redundancy. A review of the existing bridge plans shows the following potential seismic design and detailing deficiencies.

- No top mat of reinforcement in the existing footings.
- Limited development of column reinforcement at the footings (#11 bars with 2'-3" lap).
- Limited development of column reinforcement at the bent cap.
- Limited development of CIDH pile reinforcement into footings to provide tension capacity.

A preliminary seismic review has been performed for the widening configuration stated in this APS. Since the width of the proposed widening is greater than the width of the existing bridge, the preliminary seismic analysis assumed that the seismic loads are fully carried by the new structure and therefore minimizing the potential retrofit requirements to the existing structure. The preliminary column, footing and CIDH pile sizes and layouts shown in the Planning Study General Plan reflect the preliminary seismic analysis. Development of the proposed widening substructure provided consideration of the existing structure layout and misplaced and abandoned piles.

Kimley-Horn and Associates, Inc.

BRIDGE GENERAL PLAN ESTIMATE [ ] **or PLANNING ESTIMATE** [X]
ALTERNATIVE 2

STRUCTURE	BR. NO.
US 101 Palo Comado	53-1678

TYPE	DISTRICT	CO	RTE
Precast Prestressed Concrete Girder	7	LA	101

LENGTH 234 x WIDTH 49.58 = AREA 11602 FT2 STR DEPTH 4.25 FT

DESIGN SECTION: Kimley-Horn and Associates, Inc. QUANTITIES D. Leistiko ESTIMATE D. Leistiko

PROJECT INCLUDES: 1 STRUCTURE(S) CHECKED BY K. Kimm PRICE BY D. Leistiko

AND $ _____ ROADWAY CHARGE UNIT AND EA 25720 COST INDEX 2010

	CONTRACT ITEMS	UNIT	QUANTITY	PRICE	AMOUNT
1	BRIDGE REMOVAL (PORTION)	CY	100	$ 100.00	$ 10,000.00
2	STRUCTURE EXCAVATION (BRIDGE)	CY	265	$ 90.00	$ 23,850.00
3	STRUCTURAL BACKFILL (BRIDGE)	CY	120	$ 90.00	$ 10,800.00
4	STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	149	$ 650.00	$ 97,067.00
5	STRUCTURAL CONCRETE, BRIDGE	CY	749	$ 750.00	$ 561,667.00
6	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	CY	57	$ 300.00	$ 17,045.00
7	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	CY	42	$ 300.00	$ 12,456.00
8	FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (20'-30')	EA	11	$ 6,000.00	$ 66,000.00
9	FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (30'-40')	EA	11	$ 8,000.00	$ 88,000.00
10	FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (70'-80')	EA	11	$ 17,000.00	$ 187,000.00
11	FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (80'-90')	EA	11	$ 20,000.00	$ 220,000.00
12	ERECT PRECAST PRESTRESSED CONCRETE GIRDER	EA	44	$ 3,000.00	$ 132,000.00
13	JOINT SEAL	LF	153	$ 250.00	$ 38,188.00
14	BAR REINFORCING STEEL (BRIDGE SUPERSTRUCTURE)	LB	107305	$ 1.50	$ 160,958.00
15	BAR REINFORCING STEEL (BRIDGE SUBSTRUCTURE)	LB	78530	$ 1.50	$ 117,795.00
16	SLOPE PAVING (CONCRETE)	CY	64	$ 500.00	$ 32,000.00
17	CHAIN LINK RAILING (TYPE 7)	LF	468	$ 85.00	$ 39,780.00
18	CONCRETE BARRIER (TYPE 26)	LF	468	$ 100.00	$ 46,800.00
19	TEMPORARY RAILING (TYPE K)	LF	468	$ 30.00	$ 14,040.00
20	CIDH PILE (16" DIAMETER)	LF	563	$ 150.00	$ 84,375.00
21	CIDH PILE (24" DIAMETER)	LF	1593	$ 185.00	$ 294,705.00
22	EXISTING BRIDGE MAINTENACE REPAIR ALLOWANCE	LS	1	$ 10,000.00	$ 10,000.00
23					$ -
24					$ -
25					$ -
26					$ -

SUBTOTAL		$ 2,264,526.00
MOBILIZATION	10%	$ 226,452.60
SUB TOTAL STRUCTURE ITEMS		$ 2,490,978.60
CONTINGENCIES	25%	$ 622,744.65
BRIDGE TOTAL		$ 3,113,723.25
BRIDGE REMOVAL (COST INCL'D ABOVE)		$ -
		$ -
GRAND TOTAL		$ 3,113,723.25
FOR BUDGET PURPOSES- SAY		$ 3,120,000.00

COMMENTS $ 269.00 /FT2

Kimley-Horn and Associates, Inc.

BRIDGE GENERAL PLAN ESTIMATE [ ] **or PLANNING ESTIMATE** [X]
ALTERNATIVE 2A

STRUCTURE	BR. NO.
US 101 Palo Comado	53-1678

TYPE	DISTRICT	CO	RTE
Precast Prestressed Concrete Girder	7	LA	101

LENGTH 234 x WIDTH 49.58 = AREA 11602 FT2 STR DEPTH 4.25 FT

DESIGN SECTION: Kimley-Horn and Associates, Inc. QUANTITIES D. Leistiko ESTIMATE D. Leistiko

PROJECT INCLUDES: 1 STRUCTURE(S) CHECKED BY K. Kimm PRICE BY D. Leistiko

AND $ _____ ROADWAY CHARGE UNIT AND EA 25720 COST INDEX 2010

	CONTRACT ITEMS	UNIT	QUANTITY	PRICE	AMOUNT
1	BRIDGE REMOVAL (PORTION)	CY	100	$ 100.00	$ 10,000.00
2	STRUCTURE EXCAVATION (BRIDGE)	CY	265	$ 90.00	$ 23,850.00
3	STRUCTURAL BACKFILL (BRIDGE)	CY	120	$ 90.00	$ 10,800.00
4	STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	149	$ 650.00	$ 97,067.00
5	STRUCTURAL CONCRETE, BRIDGE	CY	746	$ 750.00	$ 559,417.00
6	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	CY	57	$ 300.00	$ 17,045.00
7	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	CY	42	$ 300.00	$ 12,456.00
8	FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (20'-30')	EA	9	$ 6,000.00	$ 54,000.00
9	FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (30'-40')	EA	9	$ 8,000.00	$ 72,000.00
10	FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (70'-80')	EA	9	$ 17,000.00	$ 153,000.00
11	FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (80'-90')	EA	11	$ 20,000.00	$ 220,000.00
12	ERECT PRECAST PRESTRESSED CONCRETE GIRDER	EA	38	$ 4,500.00	$ 171,000.00
13	JOINT SEAL	LF	153	$ 250.00	$ 38,188.00
14	BAR REINFORCING STEEL (BRIDGE SUPERSTRUCTURE)	LB	106630	$ 1.50	$ 159,945.00
15	BAR REINFOCRING STEEL (BRIDGE SUBSTRUCTURE)	LB	78530	$ 1.50	$ 117,795.00
16	SLOPE PAVING (CONCRETE)	CY	64	$ 500.00	$ 32,000.00
17	CHAIN LINK RAILING (TYPE 7)	LF	468	$ 85.00	$ 39,780.00
18	CONCRETE BARRIER (TYPE 26)	LF	468	$ 100.00	$ 46,800.00
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21	CIDH PILE (24" DIAMETER)	LF	1593	$ 185.00	$ 294,705.00
22	EXISTING BRIDGE MAINTENACE REPAIR ALLOWANCE	LS	1	$ 10,000.00	$ 10,000.00
23					$ -
24					$ -
25					$ -
26					$ -

SUBTOTAL		$ 2,238,263.00
MOBILIZATION	10%	$ 223,826.30
SUB TOTAL STRUCTURE ITEMS		$ 2,462,089.30
CONTINGENCIES	25%	$ 615,522.33
BRIDGE TOTAL		$ 3,077,611.63
BRIDGE REMOVAL (COST INCL'D ABOVE)		$ -
		$ -
GRAND TOTAL		$ 3,077,611.63
FOR BUDGET PURPOSES- SAY		$ 3,080,000.00

COMMENTS $ 266.00 /FT2

PREPARED FOR THE STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

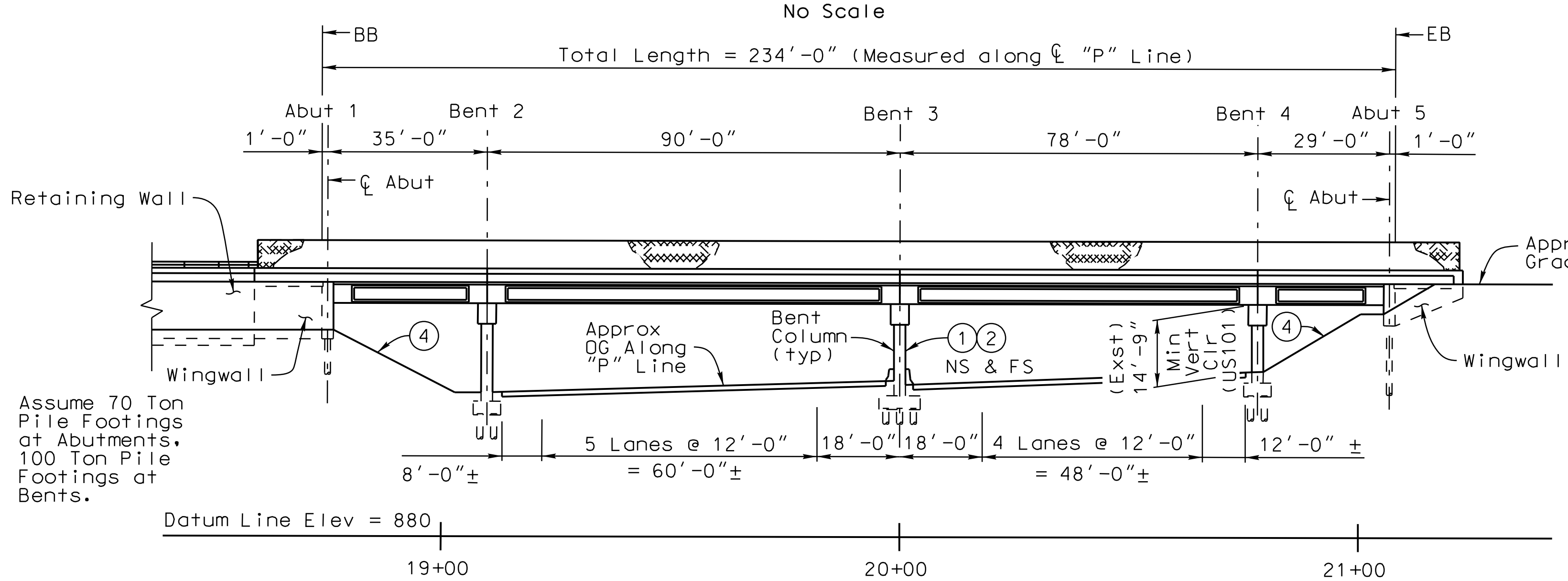
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
07	LA	101	33.69

City of Agoura Hills
30001 Ladyface Court
Agoura Hills, CA 91301
(818) 597-7300

Kimley-Horn and Associates, Inc.

PROFILE GRADE

No Scale

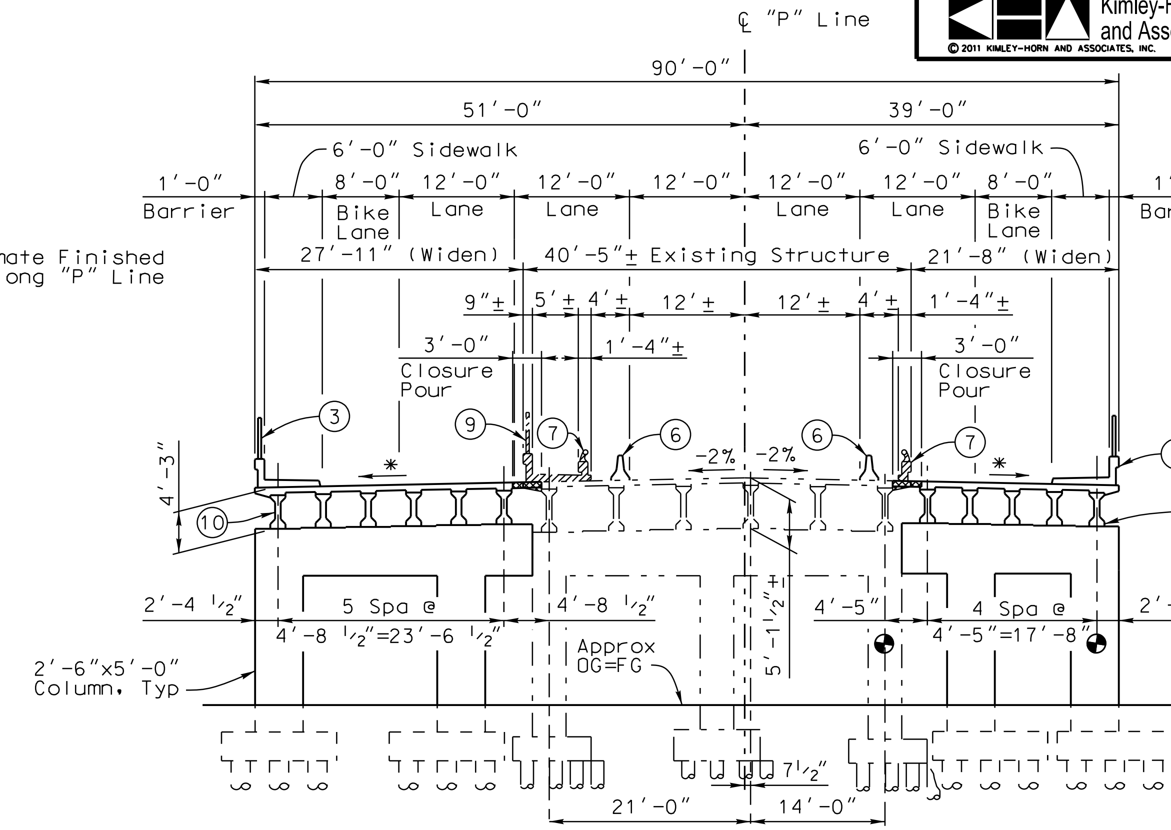


ELEVATION

Scale: 1:20'

VEHICULAR TRAFFIC

1. __ New Alignment. No traffic at the site.
2. __ Traffic will be detoured away from site.
3. X Traffic will be carried on the structure.
4. X Traffic will pass under the Structure on US 101
   - A. X No falsework required over traffic
   - B. __ Falsework openings required



TYPICAL SECTION

Scale: 1"=10'

* Match Exist Slope

LEGEND:

● Indicates Point of Minimum Vertical Clearance Base on Survey Dated January 2010

ETW Existing: 15.14' EP Existing: 14.75'
ETW Proposed: 15.14' EP Proposed: 14.75'

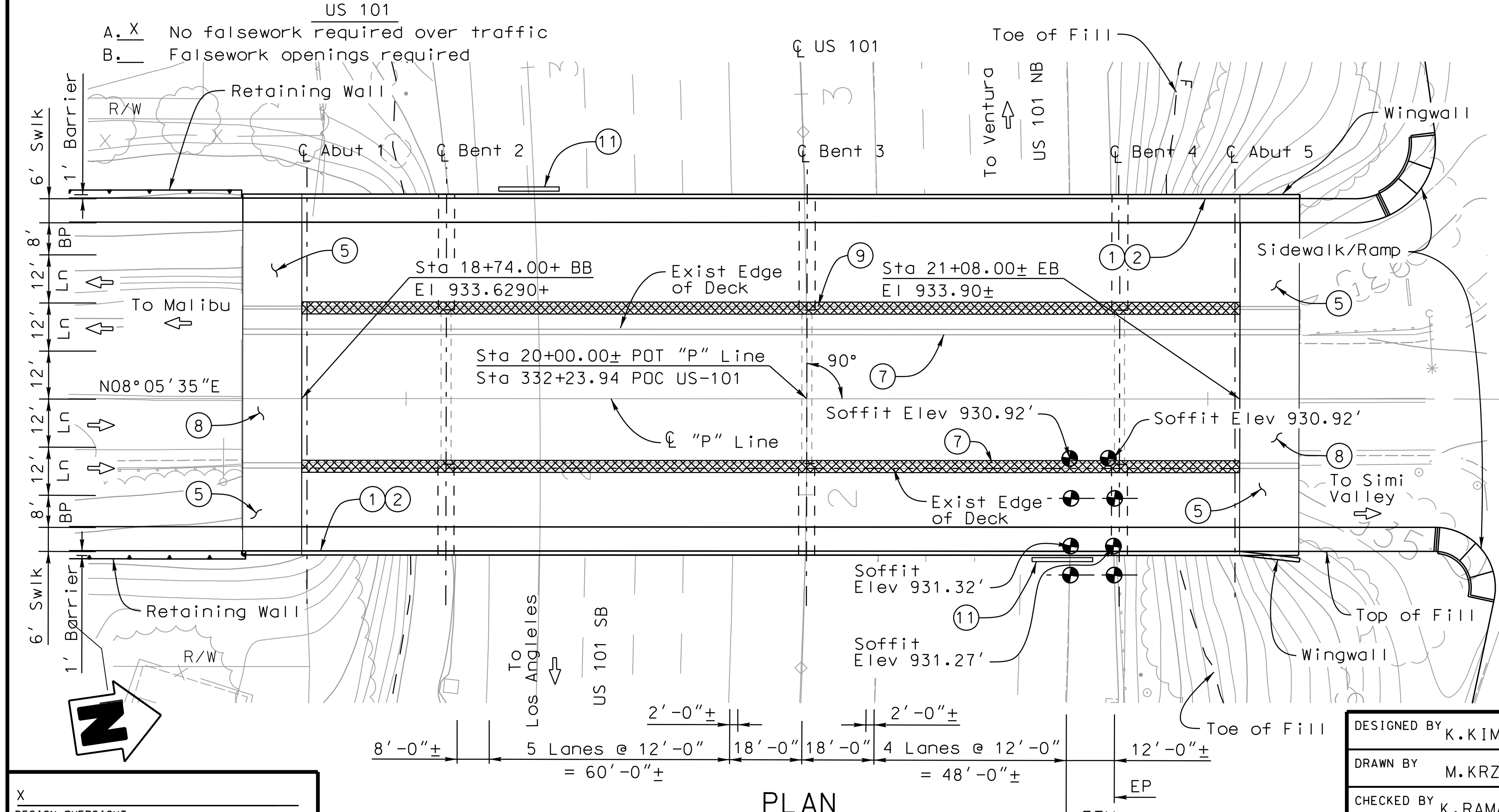
▨ Indicates Removal Structure

▩ Indicates Closure Pour

NOTES:

1. Paint "Br No. 53-1678"
2. Paint "Palo Comado Canyon Road OC"
3. Concrete Barrier Type 26 (Mod) w/Chain Link Railing Type 7
4. Concrete Slope Paving
5. Structure Approach Slab Type N(30S)
6. Temporary Railing Type K
7. Remove and Salvage Existing Type 1 Barrier Railing
8. Structure Approach Type R(30D)
9. Remove and Salvage Existing Pipe Railing
10. Precast P/S Concrete I Girder (42")
11. Relocate Existing Bridge Mounted Signs.

Date of Estimate	= 4/26/11
Bridge Removal	=
Structure Depth	= 4'-3"
Length	= 234'-0"
Width (Widened)	= 49'-7"
Area (Widened)	= 11,602 SF
Cost/Sf Including 10% Mobilization & 25% Contingency	= $269
Total Cost	= $3,120,000



PLAN

Scale: 1:20'

X
DESIGN OVERSIGHT
X
SIGN OFF DATE

DESIGNED BY	K.KIMM	DATE	05/11
DRAWN BY	M.KRZYZEWSKI	DATE	05/11
CHECKED BY	K.RAMANATHAN/D.LEISTIKO	DATE	05/11
APPROVED		DATE	

REGISTERED PROFESSIONAL ENGINEER
No. C75462
Exp. 3/31/12
CIVIL
STATE OF CALIFORNIA
05/18/2011

ALTERNATIVE 2 GENERAL PLAN

PLANNING STUDY

PALO COMADO CANYON RD OC (WIDEN)

BRIDGE NO. 53-1678 | UNIT: OSFP Structure Design

SCALE: AS NOTED | PROJECT NUMBER & PHASE: EA: 12-25720

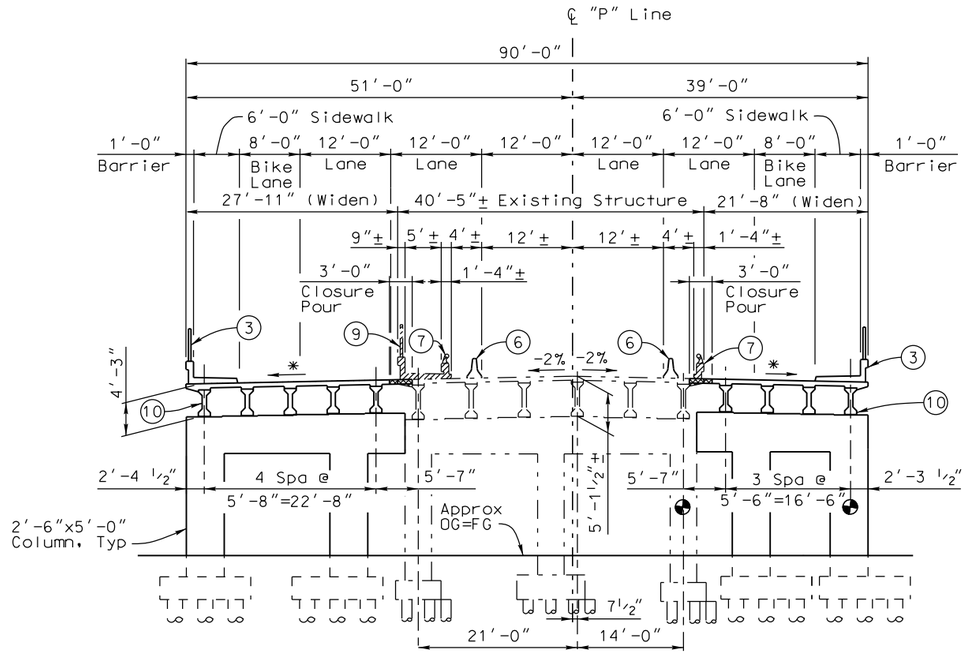
CONTRACT NO.: X

PREPARED FOR THE STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
07	LA	101	33.69

City of Agoura Hills
30001 Ladyface Court
Agoura Hills, CA 91301
(818) 597-7300

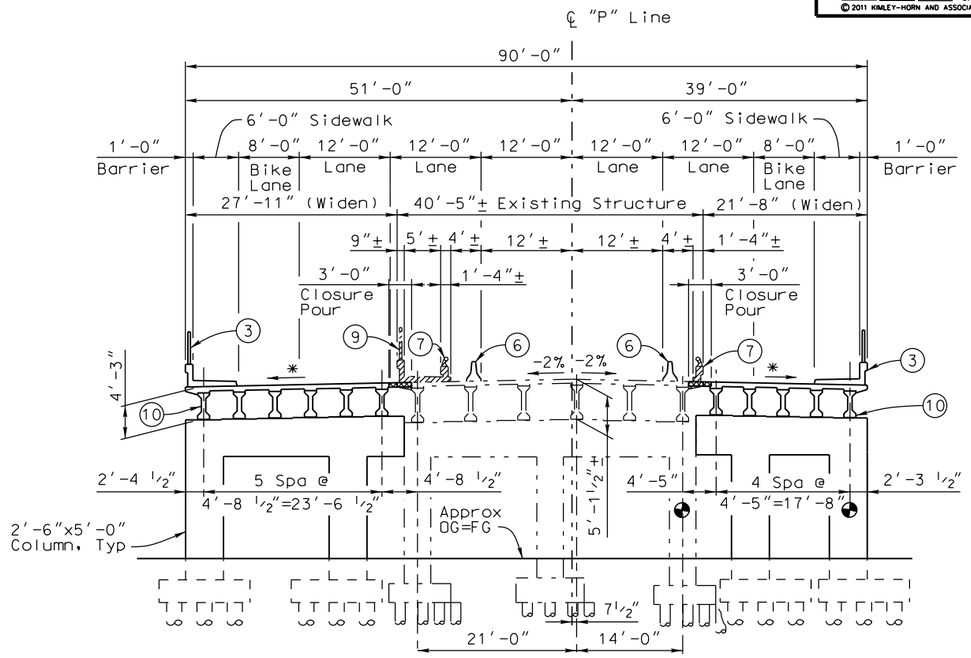
Kimley-Horn and Associates, Inc.



TYPICAL SECTION - SPANS 1,3 AND 4

Scale: 1:10'

* Match Exist Slope



TYPICAL SECTION - SPAN 2

Scale: 1:10'

* Match Exist Slope

GENERAL NOTES:

1. General Plan & Elevation for Alternative 2A similar to Alternative 2.

NOTES:

(1) Paint "Br No. 53-1678"
(2) Paint "Palo Comado Canyon Road OC"
(3) Concrete Barrier Type 26 (Mod) w/Chain Link Railing Type 7
(6) Temporary Railing Type K
(7) Remove and Salvage Existing Type 1 Barrier Railing
(9) Remove and Salvage Existing Pipe Railing
(10) Precast P/S Concrete I Girder (42")

Date of Estimate	= 4/26/11
Bridge Removal	=
Structure Depth	= 4'-3"
Length	= 234'-0"
Width (Widened)	= 49'-7"
Area (Widened)	= 11,602 SF
Cost/Sf Including 10% Mobilization & 25% Contingency	= $266
Total Cost	= $3,080,000

X
DESIGN OVERSIGHT
X
SIGN OFF DATE

DESIGNED BY	K.KIMM	DATE	05/11
DRAWN BY	M.KRZYZEWSKI	DATE	05/11
CHECKED BY	K.RAMANATHAN/D.LEISTIKO	DATE	05/11
APPROVED		DATE	

REGISTERED PROFESSIONAL ENGINEER — KEVIN J. KIMM — No. 075462 — Exp. 3/31/12 — CIVIL — STATE OF CALIFORNIA
05/18/2011

PLANNING STUDY

PALO COMADO CANYON RD OC (WIDEN)

BRIDGE NO. 53-1678	UNIT: OSFP Structure Design
SCALE: AS NOTED	PROJECT NUMBER & PHASE: EA: 12-25720

CONTRACT NO.: X

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 7/16/10)

PLOTTED: 5/18/2011
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