State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: FUK NYAN KURNIAWAN
Program Advisor
Bridge Seismic Restoration

Date: September 15, 2011
File: 04-SOL-80-PM 31.4/32.6
201.113
Project ID TBD (EA 04-4A060K)
Bridge Seismic Restoration and Replacement

From: JAMES HSIAO
Project Management North

Subject: Project Initiation Document (PID) Refresher

Background
The Project Scope Summary Report (PSSR) for the above-referenced project was approved on November 19, 2009 to program in the 2010 State Highway Operation and Protection Program (SHOPP) but not programmed. This project has been "refreshed" for cost for programming in the 2012 SHOPP.

Project Scope
This project proposes to seismically retrofit Meridian Road Overcrossing, Bridge #23-0147, and seismically restore Midway Road Overcrossing, Bridge #23-0148, by bridge replacement.

Preliminary Project Cost Estimate
- Current project cost estimate is $9.4 M
- Mid-year construction cost in November 2016 is $11.5 M.
- District 04 recommended escalation rate of 4% was used for all escalation computations, with 25% contingency.

Attachments:
(1) Updated Project Schedule in Fact Sheet
(2) Updated Preliminary Project Cost Estimate
(3) Updated Support Cost Estimate
(4) Updated Right of Way Data Sheet
(5) Updated Advance Planning Estimate
(6) Original Approved PSSR

September 16, 2011
04-SOL-80-PM 31.4/32.6
201.113
Project ID TBD (EA 04-4A060K)
Bridge Seismic Restoration and
Replacement

UPDATED PROJECT SUPPORT COSTS

(Mid Year Construction – Nov 2016)

	PROJECT SUPPORT COMPONENTS								
	PA&ED 0 Phase		**Design 1 Phase**		**Right of way 2 Phase**		**Construction 3 Phase**		**Total**
	Dist	**DES**	**Dist**	**DES**	**Dist**	**DES**	**Dist**	**DES**	
Estimated PY's	4.4	0.3	5.76	0.85	1.08	0	4.54	3.72	20.65
Estimated PS $'s	$0.97 M	$0.07 M	$1.27M	$0.19 M	$0.24 M	$0	$1 M	$0.82 M	$4.55M
Estimated PYE $'s ($1000's)									
Total $'s	$0.97 M	$0.07 M	$1.27M	$0.19 M	$0.24 M	$0	$1M	$0.82 M	$4.55 M

State of California

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: ALLISON G. PAICH
District Office Chief
Project Management & Relocation Services
Division of Right of Way

Date: August 19, 2011

File: 04-SOL-80-PM 31.36/32.63
04-4A060K
Bridge Replacement and Seismic Retrofit
Project Scope Summary Report Refresher

From: ROBERT BLANCO
Branch Chief
Office of Advance Planning – PSR II

Subject: Request for Update on Right of Way Data Sheet

The Office of Advance Planning is preparing a refresher of Project Scope Summary Report (PSSR) for a bridge seismic restoration project on the SOL 80 Meridian Road overcrossing (bridge number 23-0147) and Midway Road overcrossing (bridge number 23-0148) in Solano County. The original PSSR was approved on November 12, 2009 and the recommendations were to seismic retrofit Midway Bridge overcrossing (OC) by bridge replacement and for Meridian Bridge OC, the following work: seismic retrofit, upgrade bridge railing, drainage work and compaction grouting, bridge deck methacrylate treatment and replace approach slabs.

Enclosed for your information please find a copy of the Right of Way Data Sheet (RWDS) for this project prepared by your office dated March 23, 2009. Please review the attached RWDS and provide us with an updated RWDS.

This project has been scheduled for programming in the SHOPP 2012 cycle. To meet this deadline, it is requested that this update be completed by **Friday, September 9, 2011** per discussions with Mark Shindler, Allison Paich, Gary Pursell, and Pat Pang on August 17, 2011.

Should you have any questions or need additional information, please contact Albert Tan at (510) 622-1665 or myself at (510) 286-5676.

c: RBlanco, ATan, File

PM: ~~Jason Mao~~
J. Hsiao

T0: Advance Planning-PSR II

Date September 1, 2011

Dist 4 Co Sol Rte 80-PM
31.36/32.63

Attention: Albert Tan
Project Engineer

From: ENID LAU
Right of Way Resource Manager

EA 4A060K
Bridge Replacement and Retrofit
D.S. #5987 (Updated)

Subject: Current Estimated Right of Way Costs

We have completed an estimate of the right of way costs for the above referenced project based on maps we received from you on August 22, 2011 and the following assumptions and limiting conditions.

[ ] 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.

[ ] 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damages to any of the remainder parcels affected by the project.

[ ] 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.

[ ] 4. This estimate does not include $_____right of way costs previously incurred on the project, which may affect the total project right of way costs for programming purposes.

[ ] 5. We have determined there are no right of way functional involvements in the proposed project at this time, as designed.

Right of Way Lead Time will require a minimum of 6 months after we begin receiving final right of way requirements (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node No. 265), we will require a minimum of 4 months prior to the date of certification of the project. Shorter lead times will require either more right of way resources or an increased number of condemnation suits to be filed. Either of these actions may reflect adversely on the District's other programs or our public image generally.

Right of Way Resource Manager

Attachments:

[✓] Right of Way Data Sheet – Page One (always required)
[✓] Right of Way Data Sheet – All Pages (required when interest in real property is being acquired)
[✓] Utility Information Sheet
[ ] Railroad Information Sheet

RIGHT OF WAY DATA SHEET

TO: Office of Advance Planning
PSR II

Date 8/25/11 D.S. # 5987

Dist 04 Co Sol Rte 80 PM 31.36/32.63

ATTN: ROBERT BLANCO

EA 04-4A060K (0400001102)

Project Description: Bridge Seismic Restoration

SUBJECT: Right of Way Data – Alternate No.

1. Right of Way Cost Estimate:

		Current Value (Future Use)	Escalation Rate	Escalated Value
A.	Acquisition, including Excess Lands, Damages, and Goodwill.	$ 0.00	%	$ 0.00
	Project Permit Fees			$ 0.00
	Grantor's Appraisal Cost			$ 0.00
B.	Utility Relocation (State Share)	$ 10,000.00	%	$ 10,000.00
C.	Relocation Assistance	$ 0.00	%	$ 0.00
D.	Clearance/Demolition	$ 0.00	%	$ 0.00
E.	Title and Escrow Fees	$ 0.00	%	$ 0.00
F.	TOTAL ESCALATED VALUE			$ 10,000.00
G.	Construction Contract Work	$ 0.00		

2. Anticipated Date of Right of Way Certification 6/2013

3. Parcel Data:

Type		Dual/Appr	Utilities		RR Involvements	
X			U4-1		None	X
A			-2		C&M Agrmt	
B			-3		Svc Contract	
C			-4		Design	
D			U5-7	2	Const.	
E	XXXX		-8		Lic/RE/Clauses	
F	XXXX		-9			

Misc R/W Work

RAP Displ	0
Clear Demo	0
Const. Permits	0
Condemnation	0

Total 0

Areas: Right of Way _____ No. Excess Parcels _____ Excess _____

Enter PMCS Screens 8 / 29 / 11 by M.C.Hunt

Enter AGRE Screen (Railroad data only) _____/_____/_____ by _____

4. Are there any major items of construction contract work?
Yes ☐ No ☒ (If yes, explain)

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.). No right of way required ☒

All work is within existing right of way.

6. Is there an effect on assessed valuation?
Yes ☐ Not Significant ☐ No ☒ (If yes, explain)

7. Are utility facilities or rights of way affected? Yes ☒ No ☐
(If yes, attach Utility Information Sheet Exhibit 01-01-05)

8. Are railroad facilities or rights of way affected? Yes ☐ No ☒
(If yes, attach Railroad Information Sheet Exhibit 01-01-06)

9. Were any previously unidentified sites with hazardous waste and/or material found?
Yes ☐ None evident ☒ (If yes, attach memorandum per Procedural Handbook Volume 1, Section 101.011)

10. Are RAP displacements required? Yes ☐ No ☒
(If yes, provide the following information)

No. of single family _____ No. of business/non profit _____

No. of multi-family _____ No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated _____, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

11. Are there material borrow and/or disposal sites required? Yes ☐ No ☒
(If yes, explain)

12. Are there potential relinquishments and/or abandonments? Yes ☐ No ☒
(If yes, explain)

13. Are there any existing and/or potential Airspace sites? Yes ☐ No ☒
(If yes, explain)

14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if District proposes less that PMCS lead time and/or if significant pressures for project advancement are anticipated.)

PYPSCAN lead time (from Regular R/W to project certification) 6 months

15. Is it anticipated that all Right of Way work be performed by CALTRANS staff?
Yes ☒ No ☐ (If no, discuss)

Assumptions and Limiting Conditions

- This data sheet was completed without a hazardous waste/materials report.
- Information on this data sheet was based on maps provided by Robert Blanco on August 19, 2011.

Evaluation Prepared By: Renata Frey

Right of Way:	Name	Renata Frey	Date	8/25/11
Railroad:	Name	[illegible]	Date	8-25-11
Utilities:	Name	[illegible]	Date	8-25-11

Recommended for Approval:

Right of Way Capital Cost Coordinator

I have personally reviewed this Right of Way Data Sheet and all supporting information. It is my opinion that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and find this Data Sheet complete and current.

Chief, R/W Appraisal Services

9.1.11
Date

cc: Program Manager
Project Manager

UTILITY INFORMATION SHEET

1. Utility Owners located within project limits:

   PG&E, AT&T

2. Facilities potentially impacted by project (if known, include Owner(s) and facility type(s)):

3. Anticipated Workload:
   - X Utility Verification required
   - ____ Positive Identification
   - ____ Utility Relocation
   - ____ Other (Specify)

4. Additional information concerning anticipated utility involvements (include limiting conditions and a narrative addressing likelihood that conflicts will occur);

   ____ Involves possible relocation of electric transmission facilities
   (If X'd, Data sheet should be forwarded to environmental)

5. PMCS input information

U4-1	____	Owner Expense Involvements	U5-7	2	Verifications-without involvements
U4-2	____	State Expense Involvements *(Conventional, No Fed Aid)*	U5-8	____	Verifications-50% involvements
U4-3	____	State Expense Involvements *(Freeway, No Fed Aid)*	U5-9	____	Verifications resulting in involvements
U4-4	____	State Expense Involvements *(Conventional or Freeway, No Fed Aid)*			

NOTE: The sum of the U-4's must equal the sum of ½ of the U5-8's and all of the U5-9's.

ESTIMATED STATE SHARE OF COSTS $10,000.00

Prepared by: Nick Psiol

Right of Way Utility Coordinator

8-25-11
Date

TO: Advance Planning

Date March 23, 2009

Dist 4 Co SOL Rte 80
PM 31.36/32.63

Attention: Cederick Dong

EA 4A060K

From: ENID LAU
Right of Way Resource Manager

Bridge Seismic Restoration
D.S. #5587 (UPDATED)

Subject: Current Estimated Right of Way Costs

We have completed an estimate of the right of way costs for the above referenced project based on maps we received from you on January 5, 2009 and the following assumptions and limiting conditions.

[ ] 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.

[ ] 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damages to any of the remainder parcels affected by the project.

[ ] 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.

[ ] 4. This estimate does not include $_____right of way costs previously incurred on the project, which may affect the total project right of way costs for programming purposes.

[ ] 5. We have determined there are no right of way functional involvements in the proposed project at this time, as designed.

Right of Way Lead Time will require a minimum of 6 months after we begin receiving final right of way requirements (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node No. 265), we will require a minimum of 7 months prior to the date of certification of the project. Shorter lead times will require either more right of way resources or an increased number of condemnation suits to be filed. Either of these actions may reflect adversely on the District's other programs or our public image generally.

Right of Way Resource Manager

Attachments:

[ ] Right of Way Data Sheet – Page One (always required)
[ ] Right of Way Data Sheet – All Pages (required when interest in real property is being acquired)
[ ] Utility Information Sheet
[ ] Railroad Information Sheet

RIGHT OF WAY DATA SHEET

TO: Project Study Report II - Branch
Office of Advance Planning

Date 2/19/09 D.S. # 5587

Dist 04 Co Sol Rte 80 PM 31.36/32.63

ATTN: Robert Blanco

EA 04-4A060K

Project Description: Bridge Seismic Restoration

SUBJECT: Right of Way Data – Alternate No.

1. Right of Way Cost Estimate:

		Current Value (Future Use)	Escalation Rate	Escalated Value
A.	Acquisition, including Excess Lands, Damages, and Goodwill.	$ 0.00	%	$ 0.00
	Project Permit Fees			$ 0.00
	Grantor's Appraisal Cost			$ 0.00
B.	Utility Relocation (State Share)	$ 10,000.00	%	$ 10,000.00
C.	Relocation Assistance	$ 0.00	%	$ 0.00
D.	Clearance/Demolition	$ 0.00	%	$ 0.00
E.	Title and Escrow Fees	$ 0.00	%	$ 0.00
F.	TOTAL ESCALATED VALUE			$ 10,000.00
G.	Construction Contract Work	$ 0.00		

2. Anticipated Date of Right of Way Certification

3. Parcel Data:

Type		Dual/Appr	Utilities		RR Involvements	
X			U4-1		None	X
A			-2		C&M Agrmt	
B			-3		Svc Contract	
C			-4		Design	
D			U5-7	2	Const.	
E	XXXX		-8		Lic/RE/Clauses	
F	XXXX		-9			

Misc R/W Work

RAP Displ	0
Clear Demo	0
Const. Permits	0
Condemnation	0

Total 0

Areas: Right of Way _____ No. Excess Parcels _____ Excess _____

Enter PMCS Screens 2 / 24 / 09 by M. Collins

Enter AGRE Screen (Railroad data only) ____/____/____ by _____

4. Are there any major items of construction contract work?
Yes ☐ No ☒ (If yes, explain)

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.). No right of way required ☒

All work is within existing right of way.

6. Is there an effect on assessed valuation?
Yes ☐ Not Significant ☐ No ☒ (If yes, explain)

7. Are utility facilities or rights of way affected? Yes ☒ No ☐
(If yes, attach Utility Information Sheet Exhibit 01-01-05)

8. Are railroad facilities or rights of way affected? Yes ☐ No ☒
(If yes, attach Railroad Information Sheet Exhibit 01-01-06)

9. Were any previously unidentified sites with hazardous waste and/or material found?
Yes ☐ None evident ☒ (If yes, attach memorandum per Procedural Handbook Volume 1, Section 101.011)

10. Are RAP displacements required? Yes ☐ No ☒
(If yes, provide the following information)

No. of single family _____ No. of business/non profit _____

No. of multi-family _____ No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated _____, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

11. Are there material borrow and/or disposal sites required? Yes ☐ No ☒
(If yes, explain)

12. Are there potential relinquishments and/or abandonments? Yes ☐ No ☒
(If yes, explain)

13. Are there any existing and/or potential Airspace sites? Yes ☐ No ☒
(If yes, explain)

14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if District proposes less that PMCS lead time and/or if significant pressures for project advancement are anticipated.)

PYPSCAN lead time (from Regular R/W to project certification) 6 months

15. Is it anticipated that all Right of Way work be performed by CALTRANS staff?
Yes ☒ No ☐ (If no, discuss)

Assumptions and Limiting Conditions

- This data sheet was completed without a hazardous waste/materials report.
- Information on this data sheet was based on maps provided by Robert Blanco on 1/5/09.

Evaluation Prepared By: Renata Frey

Right of Way:	Name	Renata Frey	Date	2-19-09
Railroad:	Name	[illegible]	Date	2-19-09
Utilities:	Name	[illegible]	Date	2.19.09

Recommended for Approval:

[illegible]

Right of Way Capital Cost Coordinator

I have personally reviewed this Right of Way Data Sheet and all supporting information. It is my opinion that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and find this Data Sheet complete and current.

[illegible]

Chief, R/W Appraisal Services

3/17/09

Date

cc: Program Manager
Project Manager

UTILITY INFORMATION SHEET

1. Utility Owners located within project limits:

   PG&E, AT&T

2. Facilities potentially impacted by project (if known, include Owner(s) and facility type(s)):

3. Anticipated Workload:
   - __X__ Utility Verification required
   - _____ Positive Identification
   - _____ Utility Relocation
   - _____ Other (Specify)

4. Additional information concerning anticipated utility involvements (include limiting conditions and a narrative addressing likelihood that conflicts will occur);

   _____ Involves possible relocation of electric transmission facilities
   (If X'd, Data sheet should be forwarded to environmental)

5. PMCS input information

U4-1	____	Owner Expense Involvements	U5-7	2	Verifications-without involvements
U4-2	____	State Expense Involvements *(Conventional, No Fed Aid)*	U5-8	____	Verifications-50% involvements
U4-3	____	State Expense Involvements *(Freeway, No Fed Aid)*	U5-9	____	Verifications resulting in involvements
U4-4	____	State Expense Involvements *(Conventional or Freeway, No Fed Aid)*			

NOTE: The sum of the U-4's must equal the sum of ½ of the U5-8's and all of the U5-9's.

ESTIMATED STATE SHARE OF COSTS $10,000.00

Prepared by: Nick Psiol

Right of Way Utility Coordinator

2·19·09
Date

R/W General Project Matrix

Project Management Costs (Not Associated With An Individual Parcel) - FILE NAME: RWWORKPLANSAM

DATE PREPARED: 8/29/2011

DATE UPDATED: **29-Aug-11**

PROJECT E.A. 4A060K

(all measures are in HOURS)

ADJUSTMENT FACTOR = 0.00%

WBS Activity Code		Minimum R/W Low
100	**Perform Project Management**	
100.25	***Project Management - Right of Way Component***	
.25.05	Initiiation and Planning	16
.25.10	Execution and Control	32
.25.15	Close Out	16
100 Sub-Total		**64**
150	**Develop Project Initiation Document (PID)**	
150.05	***Define Transportation Problem & Assess Site***	
.05.15	Perform Utility Search	8
150.10	***Develop Initial Alternatives***	
.10.10	Perform Value Analysis	0
150.15	***Analyze Alternatives***	
.15.05	Prepare R/W Data Sheets	8
.15.10	Assess Utility Relocation Requirements	8
.15.15	Determine Railroad Involvement	8
150.25	***Prepare and Approve PID (PSR, PSSR, etc.)***	
.25.20	Circulate, Review & Approve PID	8
150 Sub-Total		**40**

R/W General Project Matrix

Project Management Costs (Not Associated With An Individual Parcel) - FILE NAME: RWWORKPLANSAM

DATE PREPARED: 8/29/2011

DATE UPDATED: 29-Aug-11

PROJECT E.A. 4A060K

(all measures are in HOURS)

WBS Activity Code		Minimum R/W Low
160	**Perform Preliminary Engineering Studies & Prepare Draft Project Report.**	
160.05	***Review and Update Project Information***	
.05.35	Review Project Cost Estimate	8
160.10	***Perform Engineering Studies***	
.10.20	Perform Value Analysis	0
.10.40	Review & Update Right of Way Data Sheet	16
.10.45	Re-assess Utility Impacts	8
.10.50	Perform Railroad Study	0
160.15	***Prepare Draft Project Report***	
.15.15	Obtain Approval for Exceptions to Encroachment Policy	0
.15.25	Circulate, Review & Approve Draft Project Report	8
160 Sub-Total		**40**
165	**Perform Environmental Studies & Prepare Draft Environmental Document (DED)**	
165.10	***Perform General Environmental Studies***	
.10.10	Obtain Rights of Entry for Environmental Studies	0
.10.55	Prepare Draft Right of Way Relocation Impact Document	0
165 Sub-Total		**0**
175	**Circulate Draft Environmental Document & Select Preferred Project Alternative**	

R/W General Project Matrix

Project Management Costs (Not Associated With An Individual Parcel) - FILE NAME: RWWORKPLANSAM

DATE PREPARED: 8/29/2011

DATE UPDATED: **29-Aug-11**

PROJECT E.A. 4A060K

(all measures are in HOURS)

WBS Activity Code		Minimum R/W Low
175.10	***Prepare for and Hold Public Hearing***	
.10.25	Review Map Displays & Discuss Public Hearing	0
.10.35	Hold Public Hearing	0
175.15	***Respond to Public Comments and Correspondence***	
.15	Respond to Public Comments and Correspondence	0
175 Sub-Total		**0**
180	**Prepare & Approve Project Report & Final Environmental Document**	
180.10	***Prepare & Approve Final Environmental Document (FED)***	
.10.15	Prepare Final Right of Way Relocation Impact Document	0
180 Sub-Total		**0**

***DO NOT TYPE DIRECTLY INTO HOUR FIELDS FOR ACT. 195 AS THEY ARE FORMULA DRIVEN BY TABS BELOW!**

195	**Right of Way Property Management and Excess Land**	
195.40	***Property Management***	
.40.05	Fair Market Rent Determination (Residential)	0
.40.10	Fair Market Rent Determination (Non-Residential)	0
.40.15	Regular Property Management	0
.40.20	Property Maintenance and Rehabilitation (Rentable Property)	0
.40.25	Property Maintenance and Rehabilitation (Non-Rentable Property)	0
.40.30	Hazardous Waste and Hazardous Materials	0
.40.35	Transfer of Property to Clearance Status	0

R/W General Project Matrix

Project Management Costs (Not Associated With An Individual Parcel) - FILE NAME: RWWORKPLANSAM

DATE PREPARED: 8/29/2011

DATE UPDATED: **29-Aug-11**

PROJECT E.A. 4A060K

(all measures are in HOURS)

WBS Activity Code		Minimum R/W Low
195.45	***Excess Land***	
.45.05	Excess Land Inventory	0
.45.10	Excess Land Appraisal and Public Sale Estimate	0
.45.15	Administering Government Code Section 54235	0
.45.20	Property Disposal of Unit up to $15,000 in Value	0
.45.25	Property Disposal of Unit between $15,001 and $500,000 in Value	0
.45.30	Property Disposal of Unit over $500,000 in Value	0
.45.35	CTC and AAC Coordination	0
195 Sub-Total		**0**
200	**Coordinate Utilities**	
200.05	***Perform Preliminary Utility Verification***	
.05	Perform Preliminary Utility Verification	16
200.10	***Determine Utility Locations(Potholing) & Prepare Conflict Maps***	
.10.05	Prepare Notices & Obtain Agreements for Potholing	0
.10.10	Perform Potholing	8
.10.15	Perform Utility Surveys	0
.10.20	Review for Conflicts after Utility Surveys	8
.10.25	Prepare Utility Conflict Maps	0
.10.30	Pothole Revised Notice, Amended UA & Process Billing per UA	0
200.15	***Utility Conflict Resolution***	
.15	Utility Conflict Resolution	8
200.20	***Implement Utility Relocation Plan***	

R/W General Project Matrix

Project Management Costs (Not Associated With An Individual Parcel) - FILE NAME: RWWORKPLANSAM

DATE PREPARED: 8/29/2011

DATE UPDATED: **29-Aug-11**

PROJECT E.A. 4A060K

(all measures are in HOURS)

WBS Activity Code		Minimum R/W Low
.20.05	Prepare, Approve and Transmit Liability/FHWA Authorization Package	0
.20.25	Relocation Revised Notice, Amended UA & Process Billing per UA	0
.20.30	Prepare Utility JUA/CCUA/Conveyance Document Package	0
200.25	***Manage the Utility Relocation***	
.25	Manage the Utility Relocation	8
200 Sub-Total		**48**
205	**Obtain Permits, Agreements & Route Adoptions**	
205.10	***Obtain Permits***	
.10.95	Obtain "Other" Permits	16
205.15	***Obtain Railroad Agreements***	
.15.15	Prepare Service Contract for Railroads	0
.15.20	Prepare PUC Exhibits & Application	0
205.35	***Prepare & Execute Cooperative Agreement***	
.35.05	Prepare & Execute Cooperative Agreement for Environmental Process	0
.35.10	Prepare & Execute Cooperative Agreement for Design	0
.35.20	Prepare & Execute Cooperative Agreement for Right of Way	0
205.50	***Prepare & Execute Cooperative Agreement for Relinquishment***	
.50	Prepare & Execute Cooperative Agreement for Relinquishment	0
205 Sub-Total		**16**

R/W General Project Matrix

Project Management Costs (Not Associated With An Individual Parcel) - FILE NAME: RWWORKPLANSAM

DATE PREPARED: 8/29/2011

DATE UPDATED: 29-Aug-11

PROJECT E.A. 4A060K

(all measures are in HOURS)

WBS Activity Code

***DO NOT TYPE DIRECTLY INTO HOUR FIELDS FOR ACT. 225 AS THEY ARE FORMULA DRIVEN BY TABS BELOW!**

WBS Activity Code		Minimum R/W Low
225	**Obtain Right of Way Interest for Project Right of Way Certification**	
	Parcel and Project Documentation	
225.50	Parcel and Project Documentation	8
225.55	***Obtain Right of Way Interest***	
.55.05	Right of Way Appraisals	43
.55.10	Right of Way Acquisitions	78
.55.15	Right of Way Relocation Assistance	0
.55.20	Right of Way Clearance	0
.55.25	Right of Way Condemnation	0
225 Sub-Total		**129**
230	**Prepare Draft PS&E**	
230.25	***Prepare Draft Utility Plans***	
.25.10	Prepare Utility Relocation Plans	0
230.35	***Prepare Draft Specifications***	
.35.25	Develop Utility Specifications	0
230 Sub-Total		**0**
235	**Mitigate Environmental Impacts & Clean-up Hazardous Waste**	
235.05	***Perform Environmental Mitigation***	
.05.20	Perform Environmental Mitigation R/W Work	0

R/W General Project Matrix

Project Management Costs (Not Associated With An Individual Parcel) - FILE NAME: RWWORKPLANSAM

DATE PREPARED: 8/29/2011

DATE UPDATED: **29-Aug-11**

PROJECT E.A. 4A060K

(all measures are in HOURS)

WBS Activity Code		Minimum R/W Low
235.10	***Perform Detailed Site Investigation for Hazardous Waste***	
.10.05	Obtain Right or Permit for Hazardous Waste Site Investigations	8
235 Sub-Total		**8**

***DO NOT TYPE DIRECTLY INTO HOUR FIELDS FOR ACT. 245 AS THEY ARE FORMULA DRIVEN BY TABS BELOW!**

245	**Post Right of Way Certification Work**	
245.50	***Parcel and Project Documentation***	
.50	Parcel and Project Documentation	8
245.55	***Close Out Right of Way Interests***	
.55.05	Right of Way Appraisals	14
.55.10	Right of Way Acquisitions	26
.55.15	Right of Way Relocation Assistance	0
.55.20	Right of Way Clearance	0
.55.25	Right of Way Condemnation	0
245 Sub-Total		**48**

255	**Circulate, Review & Prepare Final District PS&E Package**	
255.05	***Circulate & Review Draft District PS&E Package***	
.05	Circulate & Review Draft District PS&E Package	8
255.10	***Update PS&E Package***	
.10.30	Update Utility PS&E	8

R/W General Project Matrix

Project Management Costs (Not Associated With An Individual Parcel) - FILE NAME: RWWORKPLANSAM

DATE PREPARED: 8/29/2011

DATE UPDATED: **29-Aug-11**

PROJECT E.A. 4A060K

(all measures are in HOURS)

WBS Activity Code		Minimum R/W Low
255 Sub-Total		16
270	**Perform Construction Engineering & General Contract Administration**	
270.20	***Perform Construction Engineering Work***	
.20.01.50	Provide Technical Support	0
270.25	***Perform Construction Contract Administration Work***	
.25.02.05	Secure Lease for Resident Engineer Office Space or Trailer	0
270 Sub-Total		0
285	**Prepare & Administer Contract Change Orders**	
285.10	***Provide Functional Support***	
.10.01.95	Provide "Other" Functional Support	8
285 Sub-Total		8
TOTALS	***SEE COMMENTS BELOW***	417

These numbers are for RIGHT OF WAY EFFORTS ONLY, not the efforts of other RBS groups.

The hours for Right of Way Engineering and Surveys and Mapping are provided directly from that unit to the Project Manager.

R/W General Project Matrix

Project Management Costs (Not Associated With An Individual Parcel) - FILE NAME: RWWORKPLANSAM

DATE PREPARED: 8/29/2011

DATE UPDATED: **29-Aug-11**

PROJECT E.A. 4A060K

(all measures are in HOURS)

WBS Activity Code

Minimum R/W
Low

THIS TEMPLATE WAS LAST "UPDATED" ON : March 18, 2004

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy

efficient!

To: ALBERT TAN
PROJECT ENGINEER
District 4

Date: September 2, 2011

File: 04-SOL-RTE 80-PM
EA 04-4A060K
Project ID 0400001102
MERIDIAN ROAD OC (RETROFIT)
BR.NO. 23-0147

From: GORDON DANKE
Bridge Design Branch 9
Office of Bridge Design West
Structure Design
Division of Engineering Services MS 9-4/8I

Subject: UPDATED ADVANCED PLANNING STUDY

Attached are the updated cost estimates for Meridian Road Overcrossing (Retrofit) and the associated maintenance work for the bridge. Working days are included.

The estimated construction cost, including 8% time-related overhead, 8.7% mobilization and 25% contingencies, is as follows:

Structure Name	Br. No.	Estimated Cost
Meridian Road OC (Retrofit)	23-0147	$ 645,714.00
Meridian Road OC (Maintenance)	23-0147	$ 253286.00
~~Total Combined EstimatedCost~~		~~$ 899,000.00~~

Working days remain the same as the previous estimate = 54 working days for the Retrofit work and 41 days for Maintenance work.

The APS Plans and Associated Cost Estimate are based on the following assumptions:
Pile depths are approximate. It is assumed that night work will be done for the majority of the retrofit work. For work at Bent 4, the No. 3 lane (west bound) and off ramp (Ramp D) can be closed for night work and a detour for (Ramp D) can be accomplished. For Bent 3 the No. 1 lanes (east and west bound lanes) can be closed for foundation work. The Onramp East Bound ("B" Line) and No. 3 Lane (East Bound) can be closed for night work for work at Bent 2 and a detour for the On Ramp can be accomplished. Shoring will be required for Abutment work, which will require traffic signal lighting for one way traffic for stage 1 construction and Stage 2 construction.

PLEASE FORWARD A COPY OF GENERAL PLANS TO ANY INTERESTED FUNCTIONAL UNIT IN THE DISTRICT.

If you have any questions or if you need additional information regarding this memo, please contact Glenn Matthews at 916-227-3713 or John Railey at 916-227-8279.

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: ALBERT TAN
PROJECT ENGINEER
District 4

Date: September 6, 2011

File: 04-SOL-RTE 80-PM
EA 04-4A060K
Project ID 0400020035
MIDWAY ROAD OC (REPLACE)
BR.NO. 23-0148

From: GORDON DANKE
Bridge Design Branch 9
Office of Bridge Design West
Structure Design
Division of Engineering Services MS 9-4/8I

Subject: UPDATED ADVANCED PLANNING STUDY

Attached are the updated cost estimates for Alternatives 1 and 2 for the bridge replacement for Midway Road OC Bridge.

The estimated construction cost, including 8% time-related overhead, 9.9% mobilization and 25% contingencies, are as follows:

Structure Name	Br. No.	Estimated Cost
Midway Road OC Replace ALT 1	23-0148	$4,088,000
Midway Road OC Replace ALT 2	23-0148	$5,286,000

Working days for ALT 1 remain the same as the Previous estimate = 170 working Days
Working days for ALT 1 remain the same as the Previous estimate = 196 working Days

The General Plan and associated cost estimate were based on the following assumptions:
Pile depths are approximate.

PLEASE FORWARD A COPY OF GENERAL PLANS TO ANY INTERESTED FUNCTIONAL UNIT IN THE DISTRICT.

If you have any questions or if you need additional information regarding this memo, please contact Glenn Matthews at 916-227-3713.

Attachments

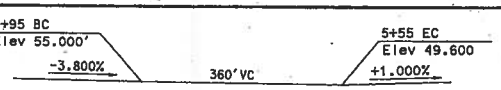
c: LAURA LUCE, Status & Tracking Branch
CRAIG WHITTEN, Specification Branch Chief MS 9-2/2H
JOHN STANTON, Estimates Branch Chief MS 9-2/2H
OFELIA ALCANTARA, Bridge Design Office Chief MS 9-4/11G
JOHN BABCOCK, Structure Construction Assistant Deputy Division Chief MS 9-2/11H
STEVE JAQUES, Preliminary Investigations Branch Chief MS 9-1/1G
PETE WHITFIELD, Maintenance and Investigations, North
KEVIN WALL, HA21 Program Coordinator MS 9-1/9I

FHWA MS4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

DIST	COUNTY	ROUTE	POST MILE
04	SoL	780	7.07

To get to the Caltrans web site, go to: http://www.dot.ca.gov



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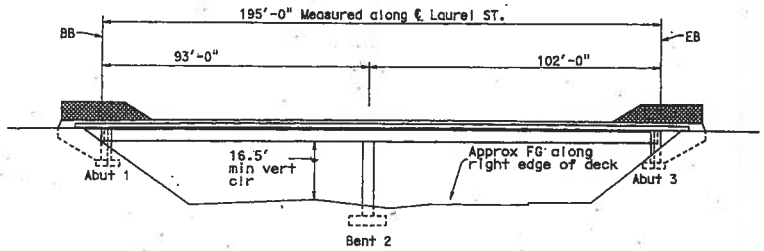
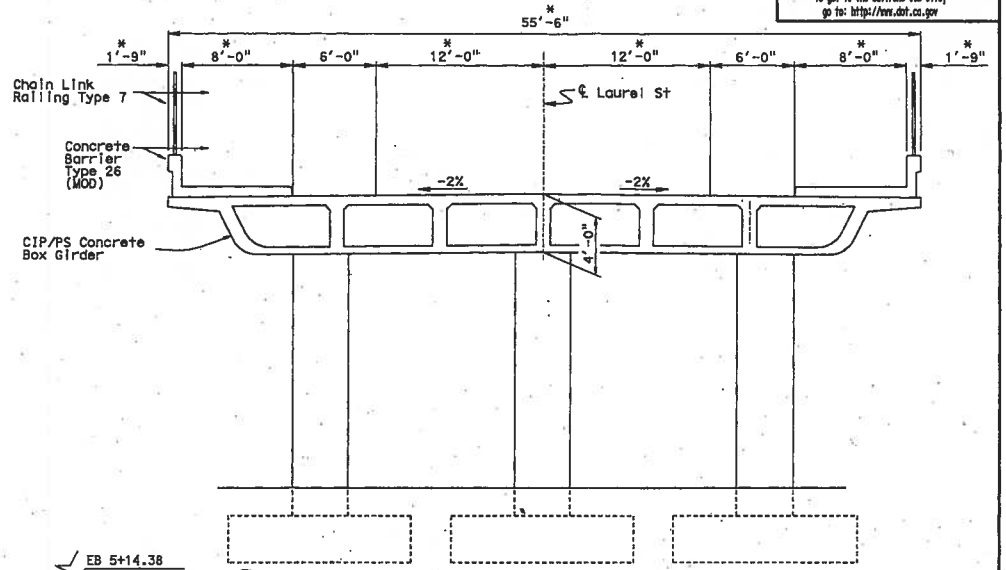
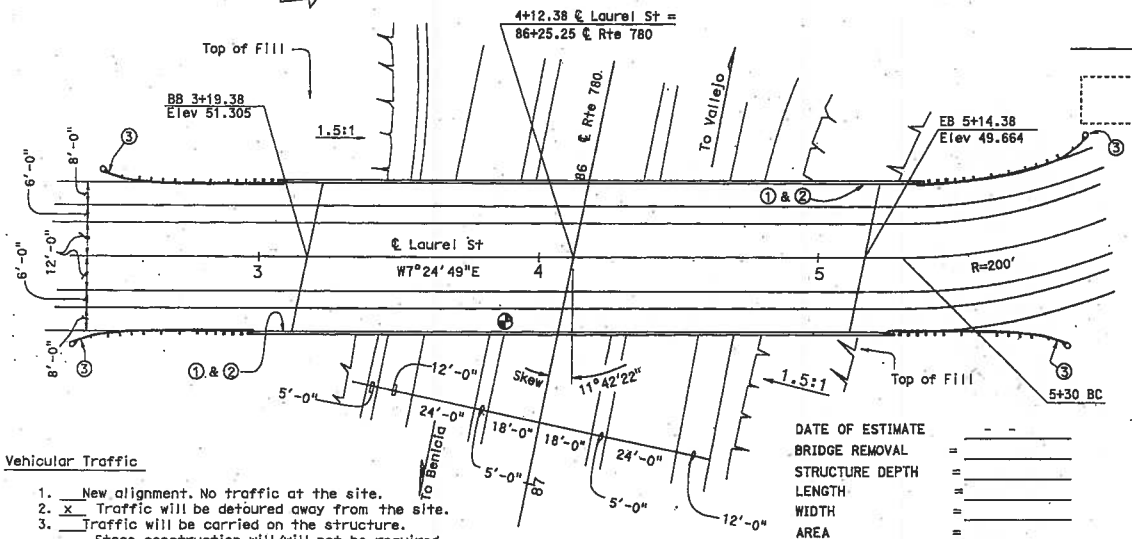


ELEVATION
1"=20'



TYPICAL SECTION
1/4"=1' * Measured Normal to ℄ On Laurel St



PLAN
1"=20'

LEGEND
- ① Paint "Laurel St. Overcrossing"
- ② Paint "Bridge Number 23-0119"
- ③ MBGR - See "Road Plans"
- ◐ Denotes Point Of Minimum Vertical Clearance
- —— Denotes new construction

Notes/Assumptions (In no particular order):
1. Structure to be built high and then lowered due to limitations on false work openings
2. Traffic will pass under structure during construction
3. One Lane closure in each direction is considered on Rte 780 during construction
4. Structure configuration and aesthetics are subject to change
5. Elevations on Rte 780 calculated based on Contours provided by the District
6. Existing bridge will be closed to traffic and then totally removed
7. Utility relocation needed
8. Ramps alignment will not be modified
9. Spread footings are adequate, no piles needed
10. Route 780's median OK to work in
11. Profile adjustment may be needed

Vehicular Traffic

1. ___ New alignment. No traffic at the site.
2. x Traffic will be detoured away from the site.
3. ___ Traffic will be carried on the structure. Stage construction will/will not be required.
4. x Traffic will pass under the structure on Rte 780
   - A. ___ No falsework allowed over traffic.
   - B. x Falsework opening(s) required:

		Temporary Vertical Clearance	Width of Traffic Opening
East	Bnd	16.5'	25'
West	Bnd	16.5'	25'
	Two-way		

   - C. ___ Temporary traffic lane reduction needed for footing excavation.

DATE OF ESTIMATE	- -
BRIDGE REMOVAL =	
STRUCTURE DEPTH =	
LENGTH =	
WIDTH =	
AREA =	
COST/ ☐ INCLUDING 10% MOBILIZATION & 25% CONTINGENCY =	
TOTAL COST =	

DESIGNED BY Isolas Yalan	DATE 9/11	STRUCTURE DESIGN BRANCH 9	PLANNING STUDY
DRAWN BY Gordy Danke	DATE 9/11		Laurel ST. Overcrossing (ALT-1)
CHECKED BY Rosa Candiotti	DATE 9/11		BRIDGE NO. 23-0119 / CU
APPROVED	DATE		SCALE: AS SHOWN / EA 4A040K

USERNAME => s129349 DATE PLOTTED => 13-SEP-2011 TIME PLOTTED => 13:11

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 10/25/05)

FILE => Updated 050710 APSplansland2.dgn

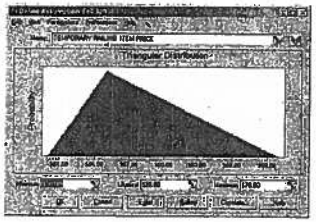
PROBABILISTIC STRUCTURE COST ESTIMATE

[ ] GENERAL PLAN ESTIMATE [X] ADVANCE PLANNING ESTIMATE

Revised - November 18, 2010

		IN EST:	
		OUT EST:	
BRIDGE:	Laurel St. OC Alt 1		
TYPE:	CIP/PS Concrete Box Girder	DISTRICT:	04
CU:	04-000	CO:	SOL
EA:	04-4A040K	RTE:	780.00
PROJECT ID:		PM:	7.07
		LENGTH	195
		WIDTH	42
DESIGN SECTION:	9	AREA	8,190
# OF STRUCTURES IN PROJECT :		EST. NO.	3
PRICES BY :	Wing Sze Siu	COST INDEX:	305
PRICES CHECKED BY :		DATE:	
QUANTITIES BY:	Isaias Yalan	DATE:	08/18/11

INPUT



The Assumption Curves, unless noted otherwise, are modeled with a triangular distribution with the "Minimum, Likeliest and Maximum values."

	CONTRACT ITEMS	UNIT	QUANTITY RANGE MINIMUM	LIKELIEST	MAXIMUM	ITEM PRICE RANGE MINIMUM	LIKELIEST	MAXIMUM	AMOUNT
1	Structure Excavation (Bridge)	CY		466		$100.00		$140.00	$55,920
2	Structure Backfill (Bridge)	CY		286		$120.00		$130.00	$35,750
3	Structural concrete Bridge	CY		810		$850.00		$1,200.00	$810,000
4	Structural concrete Bridge, Footing	CY		116		$500.00		$600.00	$63,800
5	Bar Reinforcing Steel (Bridge)	LB		173701		$0.90		$1.10	$173,701
6	Prestressing Steel	LB		22875		$2.50		$3.50	$68,625
7	Concrete Barrier Type 26 MOD	LF		451		$100.00		$175.00	$63,140
8	Chain Link Railing Type 7	LF		451		$60.00		$100.00	$33,825
9	Jacking Superstructure	sqft		10823		$5.00		$10.00	$86,584
10	Elastomeric Pads	EA		14		$1,000.00		$2,000.00	$22,400
11	Joint Seal MR = 1.5"	LF		111		$50.00		$65.00	$6,549
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
								SUBTOTAL	$1,420,294
						7%	8%	9%	$113,624
						0.0870	0.0989	0.1110	$151,704
									$1,685,622
							25%		$421,405
								SUBTOTAL	
	BRIDGE REMOVAL (CONTINGENCIES INCL.)	SF		6.641		$20.00		$30.00	

Comments
Jacking Superstructure = 10,823 sqft

TIME RELATED OVERHEAD	7%	8%	9%
MOBILIZATION	0.0870	0.0989	0.1110
SUBTOTAL BRIDGE ITEMS			
CONTINGENCIES		25%	

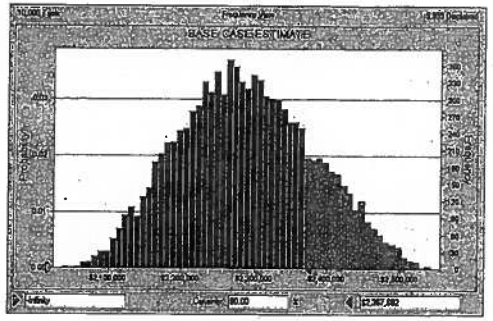
BASELINE ESTIMATE TO ASSUMED MIDPOINT OF CONSTRUCTION
BASE CASE ESTIMATE

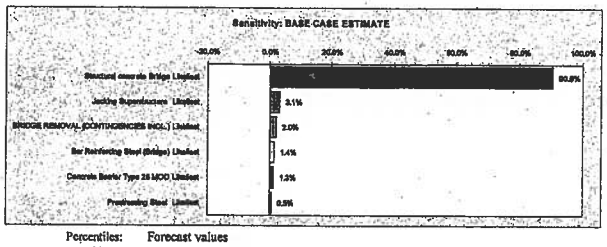
Notes

Highlighted cells represent the quantities and prices that are included in the model.
Base Case Estimate is the sum of the "Likeliest" Quantity multplied by "Likeliest" Item Price

OUTPUT

The estimate ranges generated below were prepared using Crystal Ball software. Crystal Ball software automatically calculates and records the results of thousands of different "what if" cases. Analysis of these scenarios reveals to you the range of possible outcomes, their probability of occurring, the inputs that most impact your model, and where you should focus your efforts.





Percentiles:	Forecast values
0%	$2,036,196
10%	$2,169,538
20%	$2,206,138
30%	$2,234,638
40%	$2,260,162
50%	$2,283,789
60%	$2,308,524
70%	$2,336,073
80%	$2,367,682
90%	$2,411,870
100%	$2,544,021

Recommended Range

BASED ON THE ASSUMPTIONS USED TO CREATE THE MODEL, THE DES-. STRUCTURE OFFICE ENGINEER RECOMMENDS THAT THE PROGRAMMING LEVEL BUDGET FOR THIS PROJECT BE DESIGNATED AT THE 80% FORECAST VALUE.

80% FORECAST VALUE = $2,368,000.00

*80% Forecast Value Escalated Budget Estimate to Assumed Midpoint of Construction

Years Beyond Midpoint	Escalation Rate	Escalated Budget Est.
1	2.3%	$2,422,000
2	3.0%	$2,495,000
3	4.0%	$2,595,000
4	3.8%	$2,694,000
5	2.7%	$2,767,000

* Escalated structure cost is provided for information only, actual construction costs may vary. Escalated structure costs provided do not replace Departmental policy to update cost estimates annually. Escalation rate used are based on Global Insight data posted at http://www.dot.ca.gov/hq/oppd/costest/data.htm

80 % Forecast

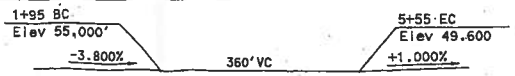
BRIDGE COST PER SQUARE FOOT	=	$269
BRIDGE REMOVAL	=	$178,300

Bridge Cost per Square Foot and/or Bridge Removal costs modeled independently. Their 80% Forecast Values Provided for informational purposes only.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

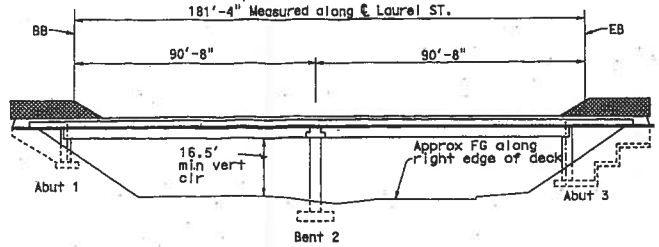
DIST.	COUNTY	ROUTE	POST MILE
04	SoL	780	7.07

To get to the Caltrans web site, go to: http://www.dot.ca.gov



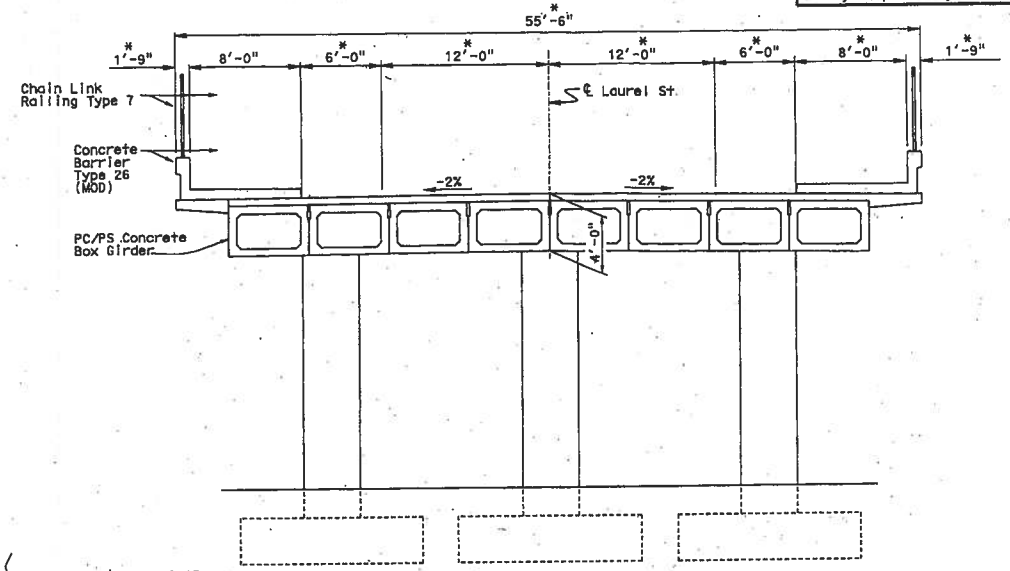
PROFILE GRADE

NO SCALE



ELEVATION

1"=20'



TYPICAL SECTION

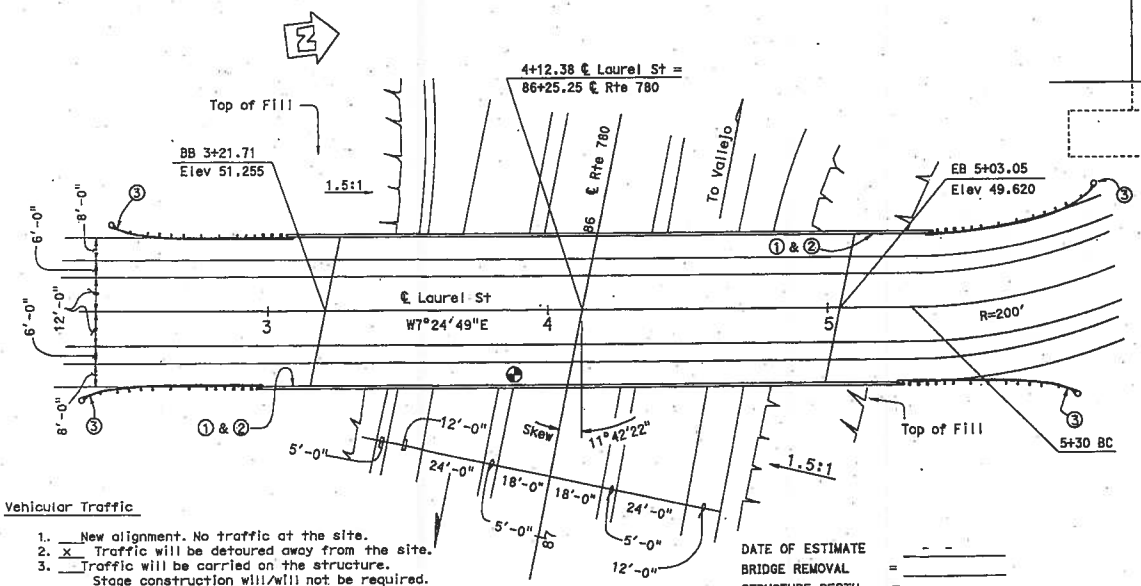
¼"=1' * Measured Normal to ℄ On Laurel St

LEGEND

1. Paint "Laurel St. Overcrossing"
2. Paint "Bridge Number 23-0119"
3. MBGR - See "Road Plans"

Denotes Point Of Minimum Vertical Clearance

Denotes new construction



PLAN

1"=20'

Notes/Assumptions (In no particular order):

1. Laurel St closed during construction. No stage construction
2. Closed end abutments are OK
3. Structure configuration and aesthetics are subject to change
4. Elevations on Rte 780 calculated based on Contours provided by the District
5. Existing bridge will be closed to traffic and then totally removed
6. Utility relocation needed
7. Ramps alignment will not be modified
8. Spread footings are adequate, no piles needed
9. Route 780's median OK to work in
10. Profile adjustment may be needed

Vehicular Traffic

1. ___ New alignment. No traffic at the site.
2. x Traffic will be detoured away from the site.
3. ___ Traffic will be carried on the structure. Stage construction will/will not be required.
4. ___ Traffic will pass under the structure on Rte 780
   - A. x No falsework allowed over traffic.
   - B. ___ Falsework opening(s) required:

	Temporary Vertical Clearance	Width of Traffic Opening
___ Bnd		
___ Bnd		
___ Two-way		

   - C. ___ Temporary traffic lane reduction needed for footing excavation.

DATE OF ESTIMATE	- -
BRIDGE REMOVAL =	
STRUCTURE DEPTH =	
LENGTH =	
WIDTH =	
AREA =	
COST/ ☐ INCLUDING 10% MOBILIZATION & 25% CONTINGENCY =	
TOTAL COST =	

DESIGNED BY Isaias Yalan	DATE 9/11	STRUCTURE DESIGN BRANCH 9	PLANNING STUDY
DRAWN BY Rosa Candiotti	DATE 9/11		Laurel ST Overcrossing (ALT-2)
CHECKED BY Rosa Candiotti	DATE 9/11		BRIDGE NO. 23-0119 / CU
APPROVED	DATE		SCALE: AS SHOWN / EA 4A040K

FILE => Updated 090710 APSplanstand2.dgn

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 10/25/03)

USERNAME => s128349 DATE PLOTTED => 13-SEP-2011 TIME PLOTTED => 13:10

PROBABILISTIC STRUCTURE COST ESTIMATE

[ ] GENERAL PLAN ESTIMATE [X] ADVANCE PLANNING ESTIMATE

Revised - November 18, 2010

		IN EST:	
		OUT EST:	
BRIDGE:	Laurel St. OC Alt 2	DISTRICT:	04
TYPE:	PC/TS Concrete Box Girder	CO:	SOL
CU:	04-000	RTE:	780.00
EA:	04-4A040K	PM:	7.07
PROJECT ID:		LENGTH	181
		WIDTH	42
DESIGN SECTION:	9	AREA	7,615
# OF STRUCTURES IN PROJECT :		EST. NO.	3
PRICES BY :	Wing Sze Siu	COST INDEX:	305
PRICES CHECKED BY :		DATE:	
QUANTITIES BY:	Isaias Yalan	DATE:	08/18/11

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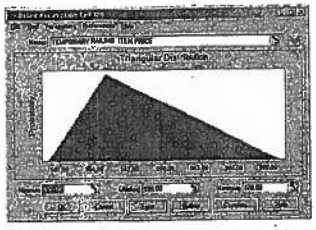


The Assumption Curves, unless noted otherwise, are modeled with a triangular distribution with the "Minimum, Likeliest and Maximum values."

	CONTRACT ITEMS	UNIT	QUANTITY RANGE MINIMUM	QUANTITY RANGE LIKELIEST	QUANTITY RANGE MAXIMUM	ITEM PRICE RANGE MINIMUM	ITEM PRICE RANGE LIKELIEST	ITEM PRICE RANGE MAXIMUM	AMOUNT
1	Structure Excavation (Bridge)	CY		637		$100.00	[redacted]	$130.00	$70,070
2	Structure Backfill (Bridge)	CY		527		$95.00	[redacted]	$120.00	$57,970
3	Structural concrete Bridge	CY		1073		$850.00	[redacted]	$1,050.00	$1,019,350
4	Structural concrete Bridge, Footing	CY		116		$500.00	[redacted]	$600.00	$63,800
5	Bar Reinforcing Steel (Bridge)	LB		211525		$0.90	[redacted]	$1.10	$211,525
6	Prestressing Steel	LB		21280		$2.50	[redacted]	$3.50	$63,840
7	Concrete Barrier Type 26 MOD	LF		452		$100.00	[redacted]	$175.00	$63,280
8	Chain Link Railing Type 7	LF		452		$60.00	[redacted]	$100.00	$33,900
9	Elastomeric Pads	EA		32		$1,000.00	[redacted]	$2,000.00	$51,200
10	Joint Seal MR = 1.5"	LF		111		$50.00	[redacted]	$65.00	$6,549
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
								SUBTOTAL	$1,641,484
	TIME RELATED OVERHEAD					7%	8%	9%	$131,319
	MOBILIZATION					0.0870	0.0989	0.1110	$175,330
	SUBTOTAL BRIDGE ITEMS								$1,948,133
	CONTINGENCIES						25%		$487,033
								SUBTOTAL	[redacted]
	BRIDGE REMOVAL (CONTINGENCIES INCL.)	SF		6,641		$20.00	[redacted]	$30.00	[redacted]

Comments

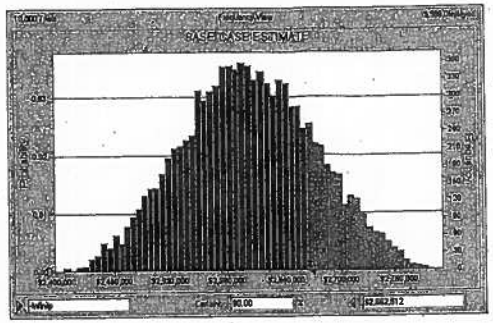
Notes

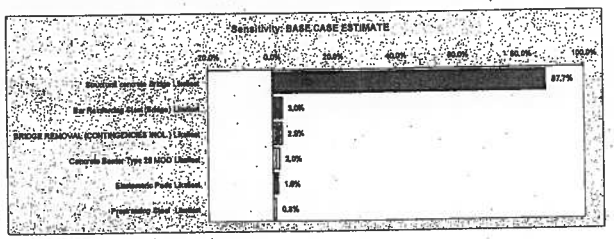
Highlighted cells represent the quantities and prices that are included in the model.
Base Case Estimate is the sum of the "Likeliest" Quantity multplied by "Likeliest" Item Price

BASELINE ESTIMATE TO ASSUMED MIDPOINT OF CONSTRUCTION
BASE CASE ESTIMATE [redacted]

OUTPUT

The estimate ranges generated below were prepared using Crystal Ball software. Crystal Ball software automatically calculates and records the results of thousands of different "what if" cases. Analysis of these scenarios reveals to you the range of possible outcomes, their probability of occurring, the inputs that most impact your model, and where you should focus your efforts.





Percentiles:	Forecast values
0%	$2,390,491
10%	$2,510,262
20%	$2,541,424
30%	$2,563,597
40%	$2,582,576
50%	$2,600,708
60%	$2,619,629
70%	$2,639,562
80%	$2,662,512
90%	$2,693,466
100%	$2,817,088

Recommended Range

BASED ON THE ASSUMPTIONS USED TO CREATE THE MODEL, THE DES-STRUCTURE OFFICE ENGINEER RECOMMENDS THAT THE PROGRAMMING LEVEL BUDGET FOR THIS PROJECT BE DESIGNATED AT THE 80% FORECAST VALUE.

80% FORECAST VALUE = $2,663,000.00

*80% Forecast Value Escalated Budget Estimate to Assumed Midpoint of Construction

Years Beyond Midpoint	Escalation Rate	Escalated Budget Est.
1	2.3%	$2,724,000
2	3.0%	$2,806,000
3	4.0%	$2,918,000
4	3.8%	$3,029,000
5	2.7%	$3,111,000

* Escalated structure cost is provided for information only, actual construction costs may vary. Escalated structure costs provided do not replace Departmental policy to update cost estimates annually. Escalation rate used are based on Global Insight data posted at http://www.dot.ca.gov/hq/oppd/costest/data.htm

80 % Forecast
BRIDGE COST PER SQUARE FOOT = $328
BRIDGE REMOVAL = $178,000

Bridge Cost per Square Foot and/or Bridge Removal costs modeled independently. Their 80% Forecast Values Provided for Informational purposes only.

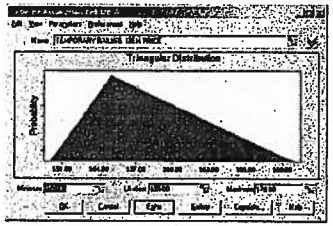
PROBABILISTIC STRUCTURE COST ESTIMATE

[ ] GENERAL PLAN ESTIMATE [X] ADVANCE PLANNING ESTIMATE

Revised - November 19, 2010

		IN EST:	09/01/11
		OUT EST:	09/05/11
BRIDGE:	Midway Road OC, Bridge Replace Alt 1	DISTRICT:	04
TYPE:	CIP P/S Box Girder	CO:	SOL
CU:	04-000	RTE:	80.00
EA:	04-4A060K	PM:	32.60
PROJECT ID:		LENGTH	305
		WIDTH	52
DESIGN SECTION:	9	AREA	15,843
# OF STRUCTURES IN PROJECT :	2	EST. NO.	4
PRICES BY :	Wing Sze Siu	COST INDEX:	305
PRICES CHECKED BY :		DATE:	
QUANTITIES BY:	Glen Mathews	DATE:	01/23/08

INPUT



The Assumption Curves, unless noted otherwise, are modeled with a triangular distribution with the "Minimum, Likeliest and Maximum values."

	CONTRACT ITEMS	UNIT	QUANTITY RANGE MINIMUM	QUANTITY RANGE LIKELIEST	QUANTITY RANGE MAXIMUM	ITEM PRICE RANGE MINIMUM	ITEM PRICE RANGE LIKELIEST	ITEM PRICE RANGE MAXIMUM	AMOUNT
1	Structure Excavation (Bridge)	CY		1,001		$80.00	$100.00	$125.00	$100,100
2	Structure Backfill (Bridge)	CY		709		$85.00	$105.00	$110.00	$74,445
3	Pervious Backfill Material	CY		63		$75.00	$86.00	$93.00	$5,418
4	Structural Concrete, Bridge	CY		1,445		$775.00	$900.00	$1,050.00	$1,300,500
5	Bar Reinforcing Steel, Bridge	LBS		303,727		$0.90	$1.10	$1.20	$334,100
6	Stricturol Concrete, Bridge Footing	CY		136		$475.00	$500.00	$550.00	$68,000
7	Structural Concrete, Approach Slab N	CY		113		$550.00	$675.00	$750.00	$76,275
8	Slope Paving	CY		33		$1,000.00	$1,100.00	$1,200.00	$36,300
9	Prestressing Steel	LBS		63,280		$1.80	$2.00	$2.40	$126,560
10	Concrete Barrier Rail Type 26 MOD	FT		609		$130.00	$145.00	$165.00	$88,305
11	Bridge Deck Drainage	LBS		2,277		$6.50	$7.00	$7.75	$15,939
12	Furnish Class 140 Piles	FT		1,496		$20.00	$25.00	$30.00	$37,400
13	Drive Class 140 Piles	EA		76		$2,300.00	$2,390.00	$2,450.00	$181,640
14	8" Dia CSP Down Drain	FT		132		$65.00	$70.00	$75.00	$9,240
15	Metal Railing, Chain Link Type 7	FT		609		$65.00	$75.00	$85.00	$45,675
16	Joint Seal (MR<2")	FT		112		$65.00	$73.00	$78.00	$8,176
17	BRIDGE [illegible]								
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
								SUBTOTAL	$2,508,073
	TIME RELATED OVERHEAD					7%	8%	9%	$200,646
	MOBILIZATION					0.0870	0.0989	0.1111	$267,892
	SUBTOTAL BRIDGE ITEMS								$2,976,611
	CONTINGENCIES						25%		$744,153
								SUBTOTAL	$3,720,763
	BRIDGE REMOVAL (CONTINGENCIES INCL.)	SF		9,800		$20.00	$25.00	$30.00	$245,000

Comments

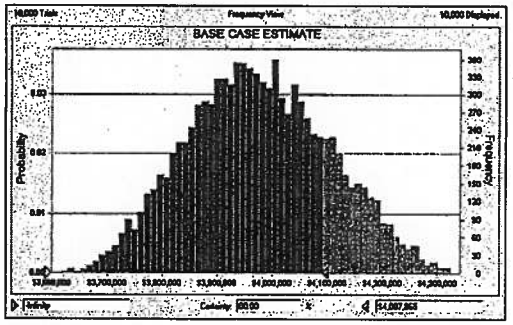
Notes

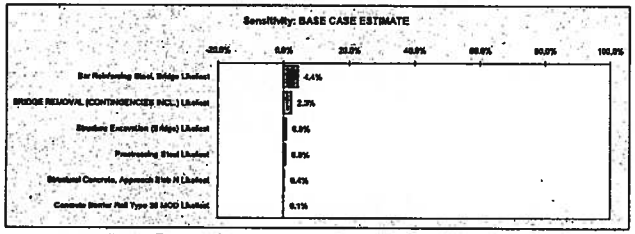
Highlighted cells represent the quantities and prices that are included in the model.
Base Case Estimate is the sum of the "Likeliest" Quantity multplied by "Likeliest" Item Price

BASELINE ESTIMATE TO ASSUMED MIDPOINT OF CONSTRUCTION	
BASE CASE ESTIMATE	$3,965,763

OUTPUT

The estimate ranges generated below were prepared using Crystal Ball software. Crystal Ball software automatically calculates and records the results of thousands of different "what if" cases. Analysis of these scenarios reveals to you the range of possible outcomes, their probability of occurring, the inputs that most impact your model, and where you should focus your efforts.





Percentiles:	Forecast values
0%	$3,617,370
10%	$3,806,517
20%	$3,861,307
30%	$3,900,513
40%	$3,936,017
50%	$3,969,620
60%	$4,004,597
70%	$4,042,670
80%	$4,087,865
90%	$4,148,094
100%	$4,322,944

Recommended Range

BASED ON THE ASSUMPTIONS USED TO CREATE THE MODEL, THE DES-STRUCTURE OFFICE ENGINEER RECOMMENDS THAT THE PROGRAMMING LEVEL BUDGET FOR THIS PROJECT BE DESIGNATED AT THE 80% FORECAST VALUE.

80% FORECAST VALUE = $4,088,000.00

*80% Forecast Value Escalated Budget Estimate to Assumed Midpoint of Construction

Years Beyond Midpoint	Escalation Rate	Escalated Budget Est.
1	2.3%	$4,182,000
2	3.0%	$4,307,000
3	4.0%	$4,479,000
4	3.8%	$4,649,000
5	2.7%	$4,775,000

* Escalated structure cost is provided for information only, actual construction costs may vary. Escalated structure costs provided do not replace Departmental policy to update cost estimates annually. Escalation rate used are based on Global Insight data posted at http://www.dot.ca.gov/hq/oppd/costest/data.htm

80 % Forecast		
BRIDGE COST PER SQUARE FOOT	=	$242
BRIDGE REMOVAL	=	$263,500

Bridge Cost per Square Foot and/or Bridge Removal costs modeled independently. Their 80% Forecast Values Provided for informational purposes only.

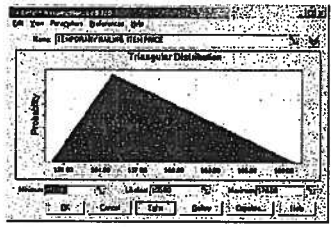
PROBABILISTIC STRUCTURE COST ESTIMATE

[ ] GENERAL PLAN ESTIMATE [X] ADVANCE PLANNING ESTIMATE

Revised - November 15, 2010

		IN EST:	09/01/11
		OUT EST:	09/05/11
BRIDGE:	Midway Road OC, Bridge Replace Alt 2	DISTRICT:	04
TYPE:	CIP P/S Box Girder	CO:	SOL
CU:	04-000	RTE:	80.00
EA:	04-4A060K	PM:	32.60
PROJECT ID:		LENGTH	305
		WIDTH	52
DESIGN SECTION:	9	AREA	15,843
# OF STRUCTURES IN PROJECT :	2	EST. NO.	4
PRICES BY :	Wing Sze Siu	COST INDEX:	305
PRICES CHECKED BY :		DATE:	
QUANTITIES BY:	Glen Mathews	DATE:	01/23/08

INPUT



The Assumption Curves, unless noted otherwise, are modeled with a triangular distribution with the "Minimum, Likeliest and Maximum values."

	CONTRACT ITEMS	UNIT	QUANTITY RANGE MINIMUM	LIKELIEST	MAXIMUM	ITEM PRICE RANGE MINIMUM	LIKELIEST	MAXIMUM	AMOUNT
1	Structure Excavation (Bridge)	CY		947		$85.00	$110.00	$140.00	$104,170
2	Structure Backfill (Bridge)	CY		712		$85.00	$105.00	$110.00	$74,760
3	Pervious Backfill Material	CY		78		$75.00	$85.00	$93.00	$6,630
4	Structural Concrete, Bridge	CY		1,691		$750.00	$900.00	$1,050.00	$1,521,900
5	Bar Reinforcing Steel, Bridge	LBS		498,450		$0.85	$0.90	$1.05	$448,605
6	Permanent Steel Casing, 84 x .75	FT		60		$1,600.00	$2,000.00	$2,500.00	$120,000
7	Cast in Drilled Hole Concrete Piling, 6 ft dia	FT		250		$950.00	$1,250.00	$1,650.00	$312,500
8	Structural Concrete, Bridge Footing	CY		78		$500.00	$550.00	$600.00	$42,900
9	Structural Concrete, Approach Slab N	CY		143		$550.00	$600.00	$650.00	$85,800
10	Slope Paving	CY		62		$950.00	$1,100.00	$1,250.00	$68,200
11	Prestressing Steel	LBS		80,413		$1.80	$2.00	$2.25	$160,826
12	Concrete Barrier Type 26 MOD	FT		609		$130.00	$145.00	$165.00	$88,305
13	Bridge Deck Drainage	LBS		2,277		$6.50	$7.00	$7.75	$15,939
14	Furnish Class 140 Piles	FT		1,300		$20.00	$25.00	$30.00	$32,500
15	Drive Class 140 Piles	EA		52		$2,300.00	$2,390.00	$2,450.00	$124,280
16	8" Dia CSP Down Drain	FT		132		$65.00	$70.00	$75.00	$9,240
17	Metal Railing, Chain Link Type 7	FT		609		$65.00	$75.00	$86.00	$45,675
18	Joint Seal (MR<2")	FT		135		$60.00	$70.00	$80.00	$9,450
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
								SUBTOTAL	$3,271,680
	TIME RELATED OVERHEAD					7%	8%	9%	$261,734
	MOBILIZATION					0.0870	0.0989	0.1110	$349,455
	SUBTOTAL BRIDGE ITEMS								$3,882,869
	CONTINGENCIES						25%		$970,717
								SUBTOTAL	$4,853,586
	BRIDGE REMOVAL (CONTINGENCIES INCL.)	SF		9,800		$20.00	$25.00	$30.00	$245,000

Comments

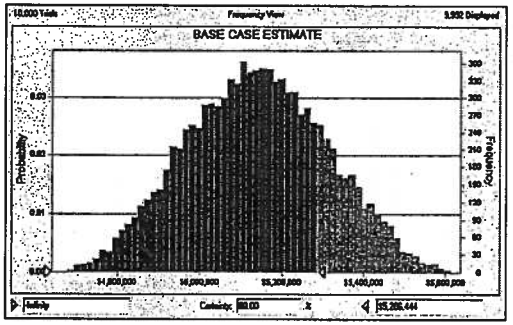
Notes

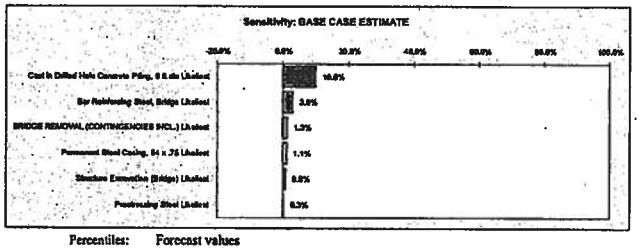
Highlighted cells represent the quantities and prices that are included in the model.
Base Case Estimate is the sum of the "Likeliest" Quantity multiplied by "Likeliest" Item Price

BASELINE ESTIMATE TO ASSUMED MIDPOINT OF CONSTRUCTION	
BASE CASE ESTIMATE	$5,098,586

OUTPUT

The estimate ranges generated below were prepared using Crystal Ball software. Crystal Ball software automatically calculates and records the results of thousands of different "what if" cases. Analysis of these scenarios reveals to you the range of possible outcomes, their probability of occurring, the inputs that most impact your model, and where you should focus your efforts.





Percentiles:	Forecast values
0%	$4,609,266
10%	$4,916,023
20%	$4,986,295
30%	$5,043,016
40%	$5,092,726
50%	$5,136,993
60%	$5,182,298
70%	$5,230,094
80%	$5,286,444
90%	$5,363,295
100%	$5,685,155

Recommended Range

BASED ON THE ASSUMPTIONS USED TO CREATE THE MODEL, THE DES-STRUCTURE OFFICE ENGINEER RECOMMENDS THAT THE PROGRAMMING LEVEL BUDGET FOR THIS PROJECT BE DESIGNATED AT THE 80% FORECAST VALUE.

80% FORECAST VALUE = $5,286,000.00

*80% Forecast Value Escalated Budget Estimate to Assumed Midpoint of Construction

Years Beyond Midpoint	Escalation Rate	Escalated Budget Est.
1	2.3%	$5,408,000
2	3.0%	$5,570,000
3	4.0%	$5,793,000
4	3.8%	$6,013,000
5	2.7%	$6,175,000

* Escalated structure cost is provided for information only, actual construction costs may vary. Escalated structure costs provided do not replace Departmental policy to update cost estimates annually. Escalation rate used are based on Global Insight data posted at http://www.dot.ca.gov/hq/oppd/costest/data.htm

80 % Forecast

BRIDGE COST PER SQUARE FOOT	=	$318
BRIDGE REMOVAL	=	$263,300

Bridge Cost per Square Foot and/or Bridge Removal costs modeled independently. Their 80% Forecast Values Provided for informational purposes only.

Attachments

c: LAURA LUCE, Status & Tracking Branch
CRAIG WHITTEN, Specification Branch Chief MS 9-2/2H
JOHN STANTON, Estimates Branch Chief MS 9-2/2H
OFELIA ALCANTARA, Bridge Design Office Chief MS 9-4/11G
JOHN BABCOCK, Structure Construction Assistant Deputy Division Chief MS 9-2/11H
STEVE JAQUES, Preliminary Investigations Branch Chief MS 9-1/1G
PETE WHITFIELD, Maintenance and Investigations, North
KEVIN WALL, HA21 Program Coordinator MS 9-1/9I
HOOSHMAND NIKOUI, Chief Branch A, Office of Geotechnical Design West
MAJID MADANI, Technical Liaison Engineer
ROBERT BLANCO, Branch Chief, Project Study Report II-Office of Advanced Planning D4

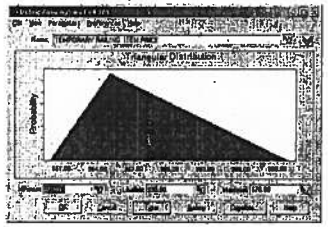
PROBABILISTIC STRUCTURE COST ESTIMATE

[ ] GENERAL PLAN ESTIMATE [x] ADVANCE PLANNING ESTIMATE

Revised - November 18, 2010

		IN EST:	09/01/11
		OUT EST:	96-11
BRIDGE:	Meridian Road OC, Seismic Retrofit	DISTRICT:	04
TYPE:	Prestressed Precast Girder	CO:	SOL
CU:	04-000	RTE:	80.00
EA:	04-4A060K	PM:	31.36
PROJECT ID:		LENGTH	284
		WIDTH	34
DESIGN SECTION:	9	AREA	9,656
# OF STRUCTURES IN PROJECT :	2	EST. NO.	4
PRICES BY :	Wing Sze Siu	COST INDEX:	305
PRICES CHECKED BY :		DATE:	
QUANTITIES BY:	John Railey	DATE:	10/20/08

INPUT



The Assumption Curves, unless noted otherwise, are modeled with a triangular distribution with the "Minimum, Likeliest and Maximum values."

	CONTRACT ITEMS	UNIT	QUANTITY RANGE MINIMUM	QUANTITY RANGE LIKELIEST	QUANTITY RANGE MAXIMUM	ITEM PRICE RANGE MINIMUM	ITEM PRICE RANGE LIKELIEST	ITEM PRICE RANGE MAXIMUM	AMOUNT
1	STRUCTURE EXCAVATION (BRIDGE)	CY		169		$85.00	[illegible]	$135.00	$18,590
2.00	STRUCTURE BACKFILL (BRIDGE)	CY		125		$95.00	[illegible]	$130.00	$14,375
3	PERVIOUS BACKFILL MATERIAL	CY		14		$70.00	[illegible]	$150.00	$1,680
4	CIDH CONCRETE PILING 140KIPS-16"	LF		180		$75.00	[illegible]	$130.00	$19,800
5	STRUCTURAL CONCRETE, BRIDGE	CY		108		$850.00	[illegible]	$1,050.00	$102,600
6	STRUCTURAL CONCRETE, BRIDGE FOOTING	CY		37		$750.00	[illegible]	$950.00	$31,450
7	STRUCTURAL CONCRETE, APPROACH SLAB	CY		62		$800.00	[illegible]	$1,300.00	$68,200
8	BAR REINFORCING STEEL (BRIDGE)	LB		27,400		$1.15	[illegible]	$2.00	$41,100
9	DRILL AND BOND DOWEL	LF		1,792		$20.00	[illegible]	$22.00	$37,632
10	JOINT SEAL (MR =) 2" max	LF		68		$49.00	[illegible]	$65.00	$4,012
11	CONCRETE BARRIER Type 732 MOD	LF		568		$110.00	[illegible]	$170.00	$79,520
12	CONCRETE BARRIER Type 732	LF		48		$80.00	[illegible]	$195.00	$5,760
13	SALVAGE METAL GUARD RAIL	LF		648		$6.50	[illegible]	$8.00	$4,698
14	REFINISH BRIDGE DECK	SQFT		1,140		$7.00	[illegible]	$17.00	$13,680
15	Clean Bridge Deck	SQFT		7952		$1.20	[illegible]	$2.50	$15,506
16	Treat Bridge Deck	SQFT		7952		$1.30	[illegible]	$2.70	$15,904
17	Furnish Bridge Deck Treatment Material	GAL		88		$68.00	[illegible]	$85.00	$6,600
18	Slope Paving	CY		33		$650.00	[illegible]	$1,200.00	$33,000
19	8" DIA CSP Down Drain	FT		132		$85.00	[illegible]	$120.00	$13,200
20	Compaction Grouting	LS		1		$67,000.00	[illegible]	$85,000.00	$78,000
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
								SUBTOTAL	$605,307
	TIME RELATED OVERHEAD					7%	8%	9%	$48,425
	MOBILIZATION					0.0753	0.0870	0.0989	$56,875
	SUBTOTAL BRIDGE ITEMS								$710,607
	CONTINGENCIES						25%		$177,652
								SUBTOTAL	[illegible]
	BRIDGE REMOVAL (CONTINGENCIES INCL.)	SF							

Comments

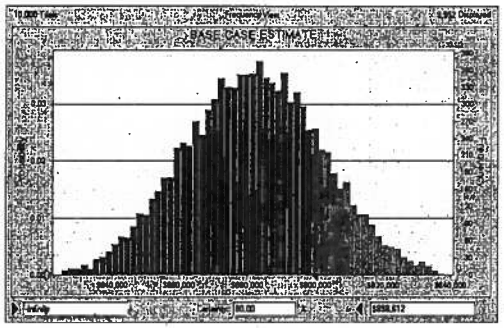
Notes

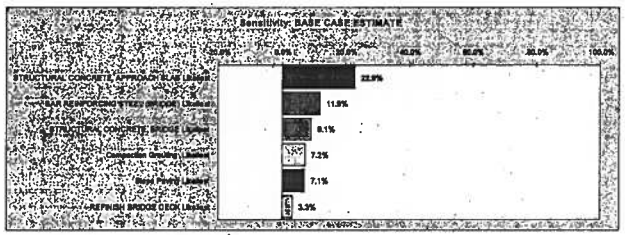
Highlighted cells represent the quantities and prices that are included in the model.
Base Case Estimate is the sum of the "Likeliest" Quantity multplied by "Likeliest" Item Price

BASELINE ESTIMATE TO ASSUMED MIDPOINT OF CONSTRUCTION
BASE CASE ESTIMATE [illegible]

OUTPUT

The estimate ranges generated below were prepared using Crystal Ball software. Crystal Ball software automatically calculates and records the results of thousands of different "what if" cases. Analysis of these scenarios reveals to you the range of possible outcomes, their probability of occurring, the inputs that most impact your model, and where you should focus your efforts.





Percentiles:	Forecast values
0%	$808,313
10%	$855,415
20%	$864,271
30%	$870,802
40%	$876,457
50%	$881,729
60%	$886,824
70%	$892,440
80%	$898,612
90%	$907,440
100%	$953,479

Recommended Range

BASED ON THE ASSUMPTIONS USED TO CREATE THE MODEL, THE DES-STRUCTURE OFFICE ENGINEER RECOMMENDS THAT THE PROGRAMMING LEVEL BUDGET FOR THIS PROJECT BE DESIGNATED AT THE 80% FORECAST VALUE.

80% FORECAST VALUE = $899,000.00

*80% Forecast Value Escalated Budget Estimate to Assumed Midpoint of Construction

Years Beyond Midpoint	Escalation Rate	Escalated Budget Est.
1	2.3%	$919,000
2	3.0%	$947,000
3	4.0%	$985,000
4	3.8%	$1,022,000
5	2.7%	$1,050,000

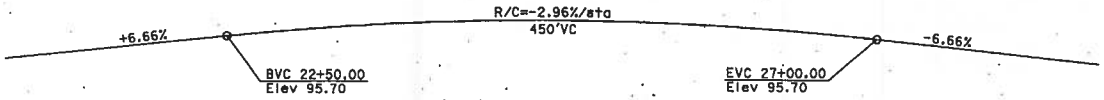
* Escalated structure cost is provided for information only, actual construction costs may vary. Escalated structure costs provided do not replace Departmental policy to update cost estimates annually. Escalation rate used are based on Global Insight data posted at http://www.dot.ca.gov/hq/oppd/costest/data.htm

80 % Forecast
BRIDGE COST PER SQUARE FOOT = $93
BRIDGE REMOVAL =

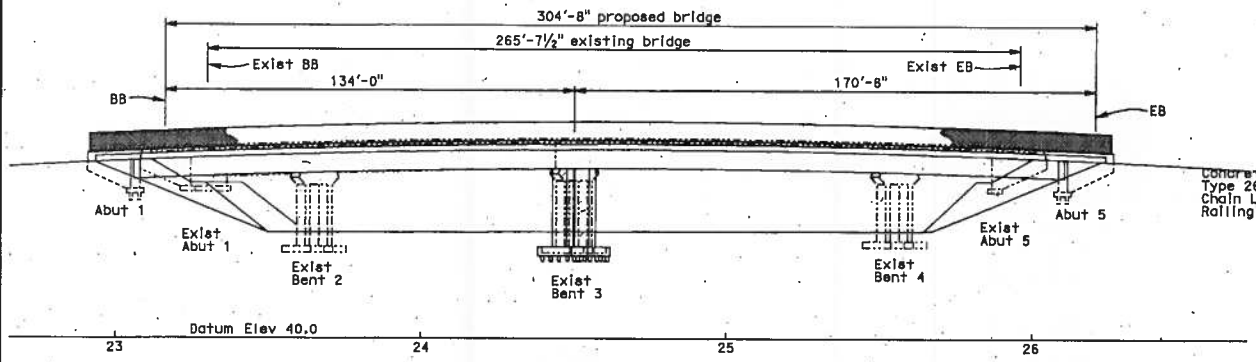
Bridge Cost per Square Foot and/or Bridge Removal costs modeled independently. Their 80% Forecast Values Provided for informational purposes only.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

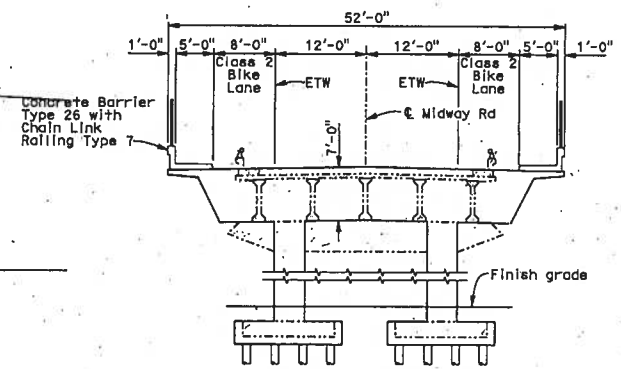
DIST.	COUNTY	ROUTE	POST MILE
04	Sol	80	32.60



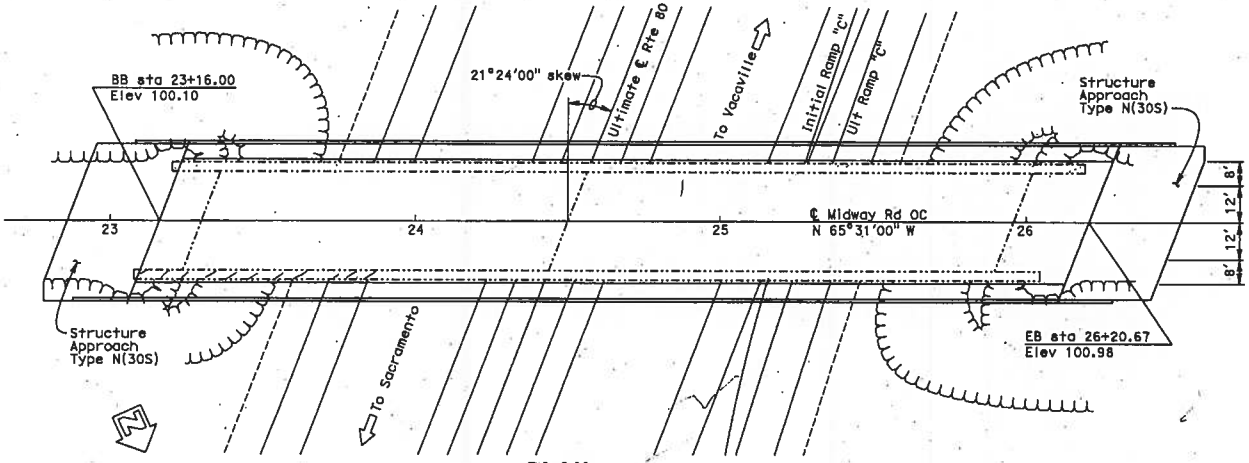
PROFILE GRADE
No scale



ELEVATION
1"=20'-0"



TYPICAL SECTION
⅛"=1'-0"



PLAN
1"=20'-0"

DATE OF ESTIMATE	09-5-11
BRIDGE REMOVAL	= $263,300
STRUCTURE DEPTH	= 7'- 0"
LENGTH	= 304'-8"
WIDTH	= 52'
AREA	= 15845 ft²
COST/ □ INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	= 4,088,000.00

Notes:
—— Indicates new structure
-·-·- Indicates existing structure
Design assumes profile grade can be modified to provide 15'-0" temporary minimum clearance

ALTERNATIVE 1

DESIGNED BY Glenn Matthews	DATE	STRUCTURE DESIGN SECTION 13	PLANNING STUDY
DRAWN BY A. Onodera	DATE		MIDWAY ROAD OC REPLACE
CHECKED BY John Railey	DATE		BRIDGE NO. 23-0148 / CU 04
APPROVED	DATE		SCALE: As Shown / EA 4A060K

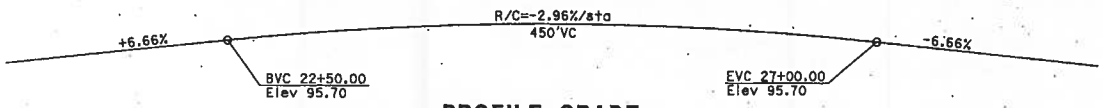
STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV.1/1/99)

FILE => 23-0148-aps01.dgn

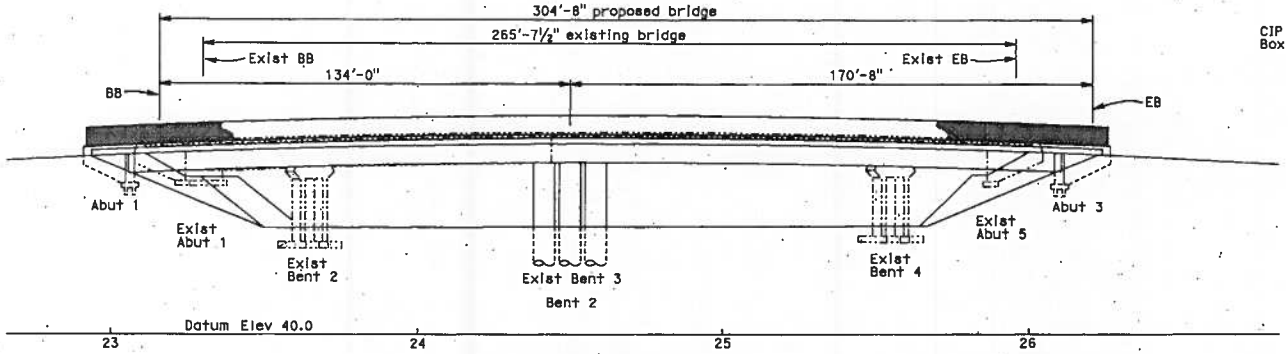
USERNAME => s124907 DATE PLOTTED => 02-SEP-2011 TIME PLOTTED => 09:09

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

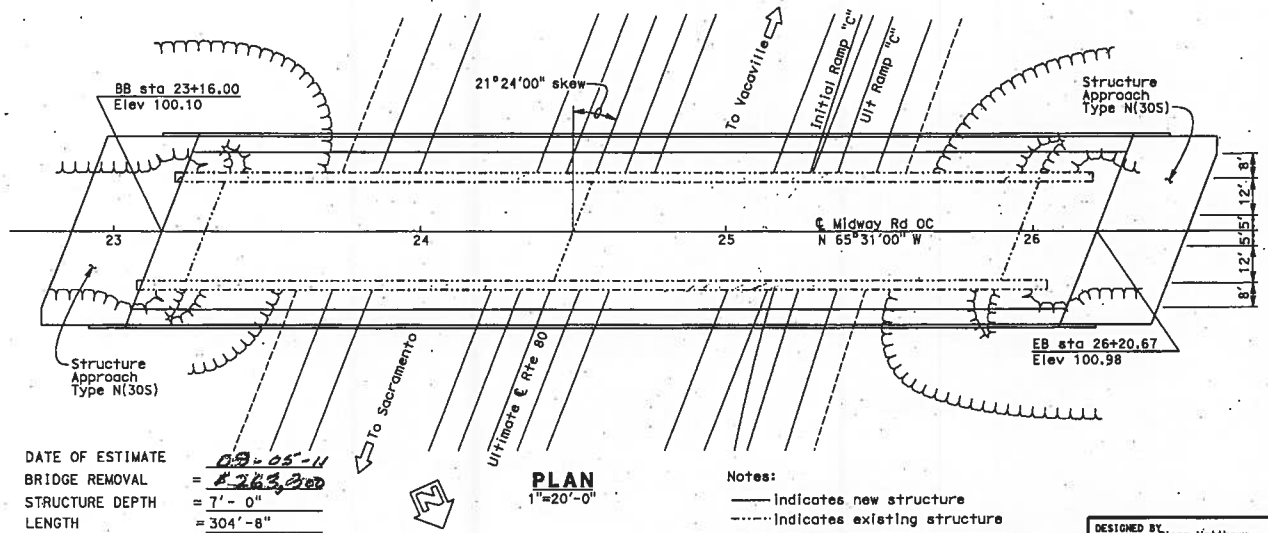
DIST.	COUNTY	ROUTE	POST MILE
04	Sol	80	32.60



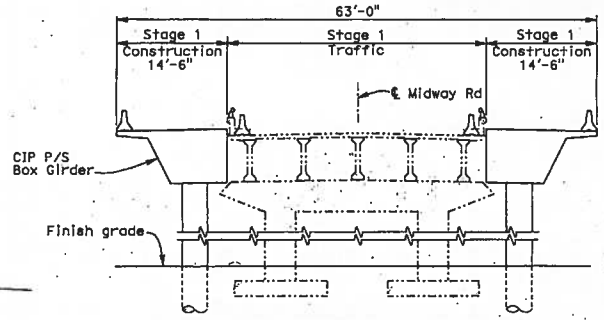
PROFILE GRADE
No scale



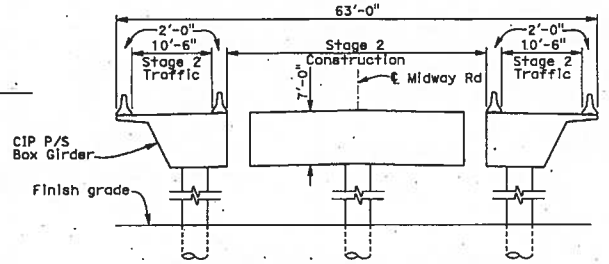
ELEVATION
1"=20'-0"



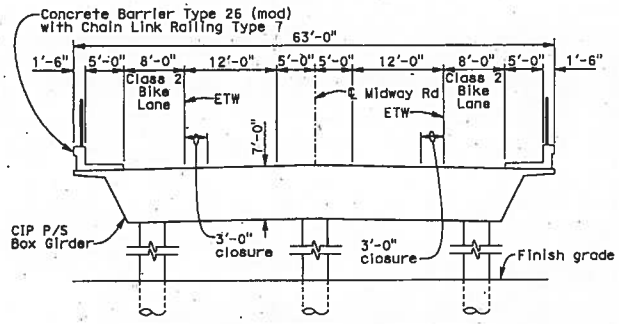
PLAN
1"=20'-0"



TYPICAL SECTION - STAGE 1
⅛"=1'-0"



TYPICAL SECTION - STAGE 2
⅛"=1'-0"



TYPICAL SECTION - STAGE 3
⅛"=1'-0"

ALTERNATIVE 2

DATE OF ESTIMATE 09-05-11
BRIDGE REMOVAL = $263,300
STRUCTURE DEPTH = 7'- 0"
LENGTH = 304'-8"
WIDTH = 63'-0"
AREA = 19195 ft²
COST/ ☐ INCLUDING 10% MOBILIZATION & 25% CONTINGENCY = $5,286,000

Notes:
——— Indicates new structure
-·-·- Indicates existing structure
Design assumes profile grade can be modified to provide 15'-0" temporary minimum clearance

DESIGNED BY Glenn Matthews	DATE	STRUCTURE DESIGN SECTION 13	PLANNING STUDY
DRAWN BY A. Onodera	DATE		MIDWAY ROAD OC REPLACE
CHECKED BY John Ralley	DATE		BRIDGE NO. 23-0148 / CU 04
APPROVED	DATE		SCALE: As Shown / EA 4A060K

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV.1/1/98)

FILE => 23-0148-ops02.dgn

USERNAME => s129507 DATE PLOTTED => 06-SEP-2011 TIME PLOTTED => 08:34

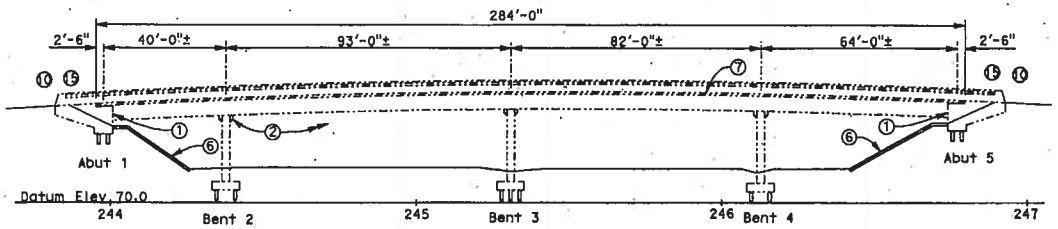
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

DIST.	COUNTY	ROUTE	POST MILE
04	Sol	80	31.36

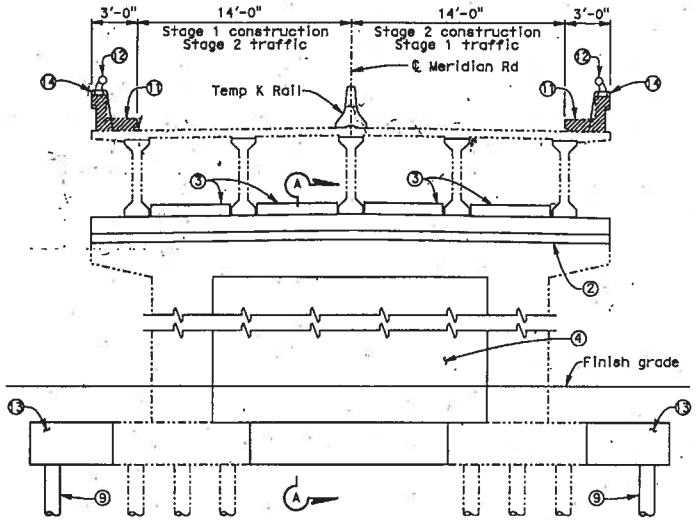
DATE OF ESTIMATE 09-06-11
BRIDGE REMOVAL =
STRUCTURE DEPTH = 5'-7½"
LENGTH = 284'-0"
WIDTH = 34'-0"
AREA = 9656
COST/ □ INCLUDING 8.7% ~~10%~~ MOBILIZATION & 25% CONTINGENCY = 1.25
SEISMIC RETROFIT COST = $ 645,714.00
ADDITIONAL MAINTENANCE WORK COST = $ 253,286.00
TOTAL COST $ 899,000.00

Notes:
* ① Remove and modify Abutment Backwalls
* ② Add Corbels
* ③ Add Shear Keys
* ④ Add Infill Walls
* ⑤ Add Joint Seals
** ⑥ Add Slope Paving
** ⑦ Metacrylate Bridge Deck
* ⑧ Approach Slab Type N(30S)
* ⑨ Add CIDH Piles
** ⑩ Compaction Grouting
⑪ Remove exist barrier, rail & sidewalk
⑫ Salvage Metal Guard Rail
⑬ Add Footing Extension @ Bent 3
⑭ Add Conc Barrier Type 732 (mod)
⑮ Add Conc Barrier Type 732

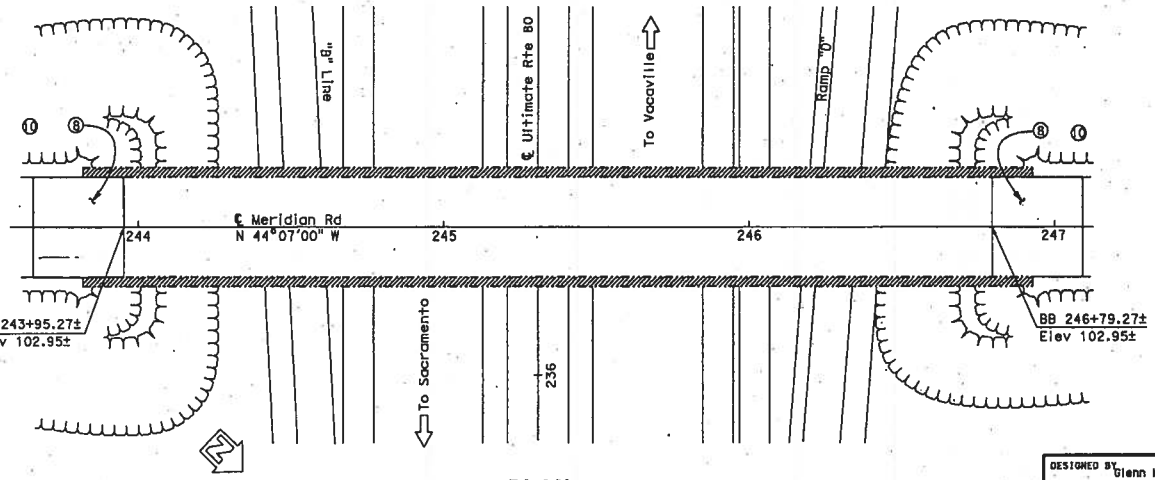
——— indicates new structure
-·-·- indicates existing structure
▨ denotes concrete removal
* Denotes Seismic Retrofit
** Denotes additional maintenance work



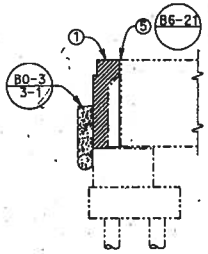
ELEVATION
1"=20'-0"



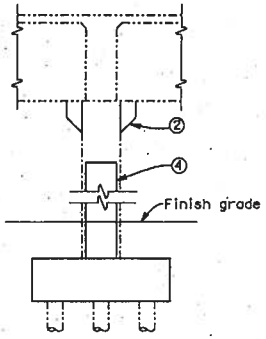
TYPICAL SECTION
¼"=1'-0"



PLAN
1"=20'-0"



ABUTMENT
¼"=1'-0"



SECTION A-A
¼"=1'-0"

DESIGNED BY Glenn Matthews	DATE	STRUCTURE DESIGN SECTION 13	PLANNING STUDY
DRAWN BY A. Onodera	DATE		MERIDIAN ROAD OC
CHECKED BY John Railey	DATE		BRIDGE NO. 23-0147 / CU 04
APPROVED	DATE		SCALE: As Shown / EA 4A060K

USERNAME => s124907 DATE PLOTTED => 02-SEP-2011 TIME PLOTTED => 08:59

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV.1/1/99)

FILE => 23-0147-gp.dgn

Dist-County-Route: 04-SOL-80

Post Mile Limits: 31.4/32.6

Project Type: Bridge Seismic Retrofit

Project ID (or EA): 4A060K

Program Identification: SHOPP 201.113

Phase: X PID

☐ PA/ED

☐ PS&E

Regional Water Quality Control Board(s): Central Valley (Region 5)

Is the Project required to consider Treatment BMPs? Yes X No ☐

If yes, can Treatment BMPs be incorporated into the project? Yes X No ☐

If No, a Technical Data Report must be submitted to the RWQCB at least 30 days prior to the projects RTL date. List RTL Date:

Total Disturbed Soil Area: 3+ acres Risk Level: 1

Estimated: Construction Start Date: 07/2017 Construction Completion Date: 01/2019

Notification of Construction (NOC) Date to be submitted: 7 days prior to Construction

Erosivity Waiver	Yes ☐	Date:	No X
Notification of ADL reuse (if Yes, provide date)	Yes ☐	Date:	TBD X
Separate Dewatering Permit (if yes, permit number)	Yes ☐	Permit #	No X

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Albert Tan 9-16-11

Albert Tan, Registered Project Engineer/~~Landscape Architect~~ Date

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

9/16/11

James Hsiao, Project Manager *Date*

Robert Braga, Designated Maintenance Representative *Date*

David Yam, Designated Landscape Architect Representative *Date*

[Stamp Required for PS&E only) *Norman Gonsalves, District/Regional Design SW Coordinator or Designee* *Date*

STORM WATER DATA INFORMATION

1. Project Description

This project involves work on two bridges on Route 80 in Solano County. The Meridian Road Overcrossing (bridge number 23-0147) at post mile 31.36 will be seismically retrofitted. Proposed work will inlcude seismic retrofit, refinish bridge deck with methacrylate treatment, salvage bridge metal guard rail and replace it with a concrete barrier, install new approach slab, CIDH concrete piling, additional drill ans bond for the barrier to bridge deck and for footing addtion, and compaction grouting.

The Midway Road Overcrossing (bridge number 23-0148) at postmile 32.62 will be replaced due to a nine-inch settlement of one of its abutment (#5). The bridge will be widened to provide for 12 ft lanes, 8 ft bike lanes and 5 ft wide sidewalks in both directions. The roadway leading to the bridge will need to be reconstructed to conform to the new elevation of the proposed bridge.

The disturbed soil area (DSA) is approximately 3 acres. The DSA includes the new paved area, areas of cut and fill and all areas of construction activities including temporary construction easements and detours. The table below notes the anticipated new and reworked impervious areas for the project.

Bridge	Disturbed Soil (ac)	New (ac)	Reworked (ac)
Meridian	0.5	0	0
Midway (Alt 1)	2.66	0.49	0.58

Portions of the project limits fall within urban MS4 areas under the Phase II permit.

2. Site Data and Storm Water Quality Design Issues (refer to Checklists SW-1, SW-2, and SW-3)

The project is within the Valley Putah – Cache Elmira Hydrologic Area [#511.10], under the jurisdiction of the Central Valley Regional Water Quality Control Board. Both bridges are not over water; however, water bodies close to the project site include Sweeney creek and Gibson Canyon creek. Pavement runoff flows southeasterly by way of these small creeks to portions of the Delta Waterways and eventually drains to the Sacramento River. This portion of the Delta Waterways is impaired for chlorpyrifos, DDT, diazinon, electrical conductivity, exotic species, group A pesticides, mercury, and unknown toxicity. Chlorpyrifos and diazinon are TMDLs with sources from agriculture and urban runoff/sewer systems. Soils in the area include Clear Lake clay, and San Ysidro sandy loam.

A 401 certification is not required. No drinking water reservoirs and/or recharge facilities exist within or nearby the area that would be impacted by the project. There are no known RWQCB special requirements/ concerns. No local agency requirements/ concerns are currently known. Reuse of soil containing Aerially Deposited Lead (ADL) is not known at this time and will be deferred until the design phase. The project area is characterized by hot, dry summers and wet mild winters. The average annual rainfall is 18.4 inches. The topography is rolling and urban.

Currently no Treatment BMPs exist within the project limits. Measures for avoiding or reducing potential storm water impacts are discussed in other sections of this SWDR.

The risk level for the project is 1. This will be re-evaluated during PA/ED and PSE.

3. Regional Water Quality Control Board Agreements

There are no key negotiated understandings or agreements with the Central Valley RWQCB pertaining to this project. A 401 permit is not required for the project. Consideration of treatment BMPs and hydromodification will be conducted during the design phase.

4. Proposed Design Pollution Prevention BMPs to be used on the Project.

Downstream Effects Related to Potentially Increased Flow, Checklist DPP-1, Parts 1 and 2

The project is anticipated to increase impervious runoff at the Midway bridge; however, velocity and volume of downstream flow is anticipated to be minimal due to the small amount of additional impervious area and the design pollution prevention BMPs to be incorporated into the project. Existing and post construction and hydraulic conditions will be similar.

Slope/Surface Protection Systems, Checklist DPP-1, Parts 1 and 3

The majority of the new slopes at the Midway Rd overcrossing is anticipated to be 4(H):1(V). In areas where it is necessary to reduce environmental impacts, slopes will be steepened. Disturbed soil areas shall be re-vegetated pursuant to the Erosion Control measures discussed below. Any environmentally sensitive areas will be delineated on the plans to prevent disturbance by the construction of the project.

Erosion control measures will be used to address soil stabilization and reduce the deposition of sediments into adjacent water-bodies. Erosion control treatment such as 'Type D' hydroseeding will be applied to disturbed soil areas and to slopes where Erosion Control (Netting) is installed. Fiber Rolls will be installed along disturbed slopes to intercept and slow storm water runoff allowing sediments to settle out and release water as sheet flow.

Concentrated Flow Conveyance Systems, Checklist DPP-1, Parts 1 and 4

Concentrated Conveyance Systems to be implemented for this project will be considered during later phases.

Preservation of Existing Vegetation, Checklist DPP-1, Parts 1 and 5

The project will be designed to minimize disturbance and to preserve critical areas (wetlands, floodplains, problem soils and steep slopes). Most of the existing vegetation is being preserved except in areas where slopes are modified. Where there is non-native vegetation, it will be removed and replaced with new landscaping better suited to the project area and treated with erosion control.

5. Proposed Permanent Treatment BMPs to be used on the Project

Pursuant to the Evaluation Documentation Form, this project need to consider Treatment BMPs. Treatment BMPs will be considered to maximum extent practicable during the design phase.

6. Proposed Temporary Construction Site BMPs to be used on Project

A SWPPP is anticipated for the project due to a disturbance of over one acre. Dewatering is anticipated due to the foundation work involved with the bridge replacement. A separate Dewatering Permit is not anticipated; however, dewatering specifications will be included in the project to address its handling and discharge.

Coordination with Water Pollution Control and Erosion Control will be conducted during the Design Phase to determine the appropriate Construction Site BMPs to be incorporated into the project as separate line

items. Construction will also provide a more detailed review and concurrence during the Design Phase. As a minimum, the following line item Construction Site BMPs will be investigated.

Silt Fence

Fiber Rolls

Temporary Cover

Hydraulic Mulch such as Bonded Fiber Matrix

Drainage Inlet Protection

Check Dams and Gravel Bag Berms

Dewatering and/or non-storm water control nssp

Concrete washouts

Construction entrances and exits

$150,000 and $55,000 of the construction costs is recommended to be allocated to Water Pollution Control and Erosion Control, respectively and another $150,000 for treatment BMPs and hydromodification.

7. Maintenance BMPs (Drain Inlet Stenciling)

Drain inlet stenciling will be recommended within designated MS4 areas and areas accessible to pedestrians.

Required Attachments

- Vicinity Map
- Evaluation Documentation Form (EDF)
- ~~Construction Site BMP Consideration Form (required at PS&E only)~~
- ~~RUSLE2 Summary Sheet, as applicable (required at PS&E only)~~
- Risk Level Determination Documentation
- ~~Treatment BMP Summary Spreadsheets (required, if Treatment BMPs are incorporated into project, required at PS&E only)~~
- ~~Quantities for Construction Site BMPs (required at PS&E only)~~
- ~~Rainfall Erosivity Waiver, if applicable (required at PS&E)~~

DATE: 09/09/2011_____

Project ID (or EA): 4A060K_____

NO.	CRITERIA	YES ✓	NO ✓	SUPPLEMENTAL INFORMATION FOR EVALUATION
1.	Begin Project Evaluation regarding requirement for consideration of Treatment BMPs	✓		See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs. Go to 2
2.	Is this an emergency project?		✓	If **Yes**, go to 10. If **No**, continue to 3.
3.	Have TMDLs or other Pollution Control Requirements been established for surface waters within the project limits? Information provided in the water quality assessment or equivalent document.	✓		If **Yes**, contact the District/Regional NPDES Coordinator to discuss the Department's obligations under the TMDL (if Applicable) or Pollution Control Requirements, go to 9 or 4. _____ *(Dist./Reg. SW Coordinator initials)* If **No**, continue to 4.
4.	Is the project located within an area of a local MS4 Permittee?	✓		If **Yes**. *(Solano)*, go to 5. If **No**, document in SWDR go to 5.
5.	Is the project directly or indirectly discharging to surface waters?	✓		If **Yes**, continue to 6. If **No**, go to 10.
6.	Is it a new facility or major reconstruction?	✓		If **Yes**, continue to 8. If **No**, go to 7.
7.	Will there be a change in line/grade or hydraulic capacity?			If **Yes**, continue to 8. If **No**, go to 10.
8.	Does the project result in a net increase of one acre or more of new impervious surface?	✓		If **Yes**, continue to 9. If **No**, go to 10. _____ *(Net Increase New Impervious Surface)*
9.	Project is required to consider approved Treatment BMPs.	✓	See Sections 2.4 and either Section 5.5or 6.5 for BMP Evaluation and Selection Process. Complete Checklist T-1 in this Appendix E.	
10.	Project is not required to consider Treatment BMPs. _____*(Dist./Reg. Design SW Coord. Initials)* _____*(Project Engineer Initials)* _____ *(Date)*		Document for Project Files by completing this form, and attaching it to the SWDR.	

1 ***See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs***

Combined Risk Level Matrix

Receiving Water Risk	Sediment Risk: Low	Sediment Risk: Medium	Sediment Risk: High
Low	Level 1	Level 2	
High	Level 2		Level 3

Project Sediment Risk: Low

Project RW Risk: Low

Project Combined Risk: Level 1

FACT SHEET

Bridge Seismic Restoration/Replacement

Project EA:	**04-4A060K**
Project Location:	**04-SOL-80-PM 31.36/32.62** **On Rte 80 in Solano County at Meridian Road OC (Br #23-0147) and Midway Road OC (Br # 23-0148)**
Project Description:	**Seismic retrofit and maintenance work on Meridian Rd OC and replace Midway Rd OC**
Purpose and Need:	**The original PSSR was approved on November 12, 2009. This fact sheet is for the refresher of the PSSR.** **The original purpose of the project was to seismically retrofit both bridges. Further field investigations added maintenance work to Meridian, and Midway Rd OC was found to have a 9-inch settlement in one of its abutments. Subsequently, a decision was made to study the replacement of Midway Rd OC. In March of 2008, just as the PID was about to be completed, another request from Structure Maintenance came to have District 4 Hydraulics inspect Meridian Bridge. Beginning the new fiscal year 2008/09, another field investigation came up with additional work.** **The proposed seismic restoration and/or bridge replacement will improve the bridges' resistance to earthquake and minimize the potential for collapse. This project will carry out the 7/1/2001 and 3/2/2007 STRAIN Report recommendations. Proposed work for Meridian OC will include seismic retrofit, refinish bridge deck with methacrylate treatment, salvage bridge metal guard rail and replace it with concrete barrier, install new approach slab, CIDH concrete piling, additional drill & bond for the barrier to bridge deck and for footing addition, and compaction grouting. Midway Road OC will be demolished and replaced.**
Sponsor Agency:	**Caltrans**
Fund Sources:	**SHOPP 201.113, Bridge Seismic**
Type of PID:	**PSSR**
Current Status:	**Working on refresher of approved PSSR.**
Outstanding Issues:	**None**
Environ Doc:	**TBD**

Project Capital Cost (estimated current year, September 2011): $7.9 Million in SHOPP funds

Tentative Schedule: (As of September 2011)

PSSR **Refresher** Approval	09/2011
PA&ED	01/2014
PS&E	07/2015
R/W Certification	10/2015
RTL	11/2015
Advertising	01/2016
Award/Begin Construction	03/2016
Contract Acceptance	06/2017
End Project	12/2017

Responsible Unit (*Indicate if oversight or lead*): Lead

Robert Blanco - Branch Chief, PSR II (510) 286-5676
Albert Tan - Project Engineer (510) 622-1665
James Hsiao - Project Manager (510) ~~286-5907~~
622-8810