NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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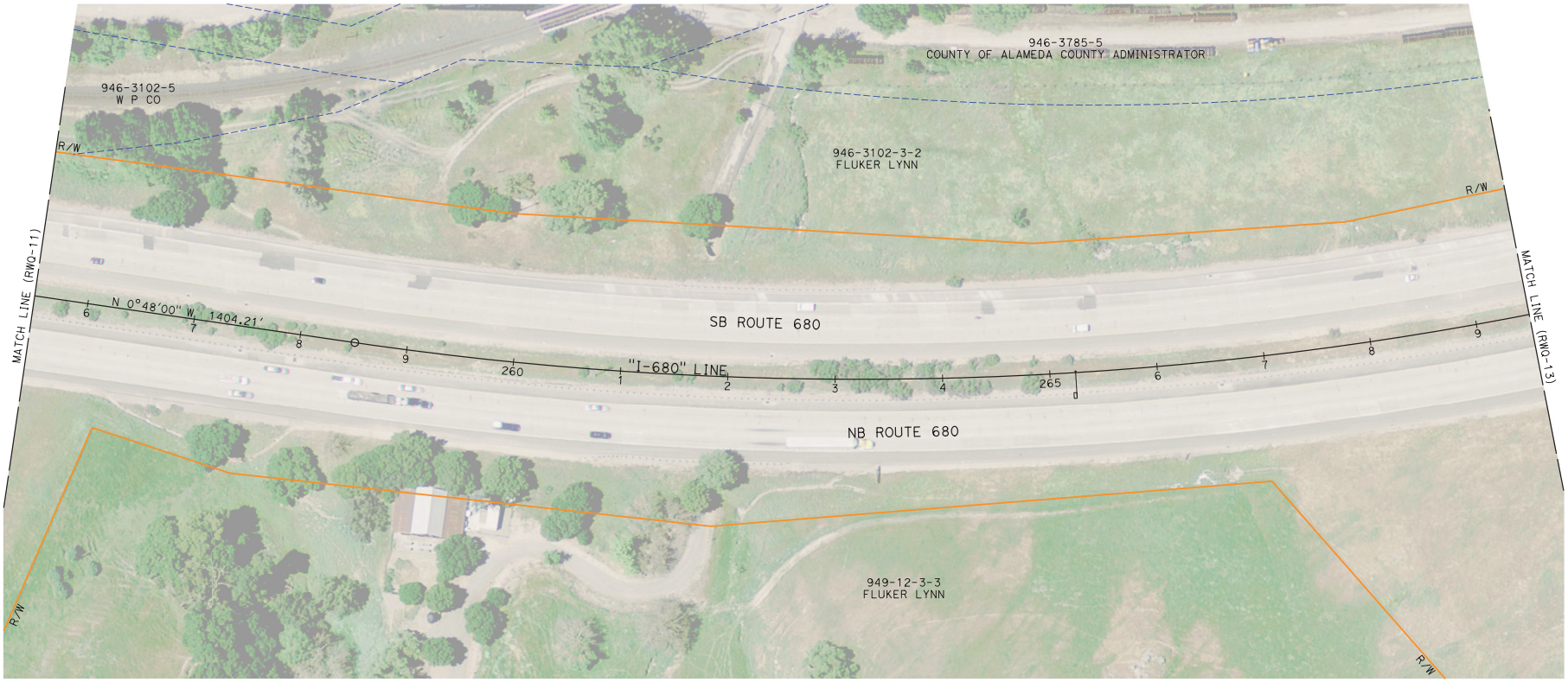

PRELIMINARY PLANS
SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

LAST REVISION
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:20

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-012.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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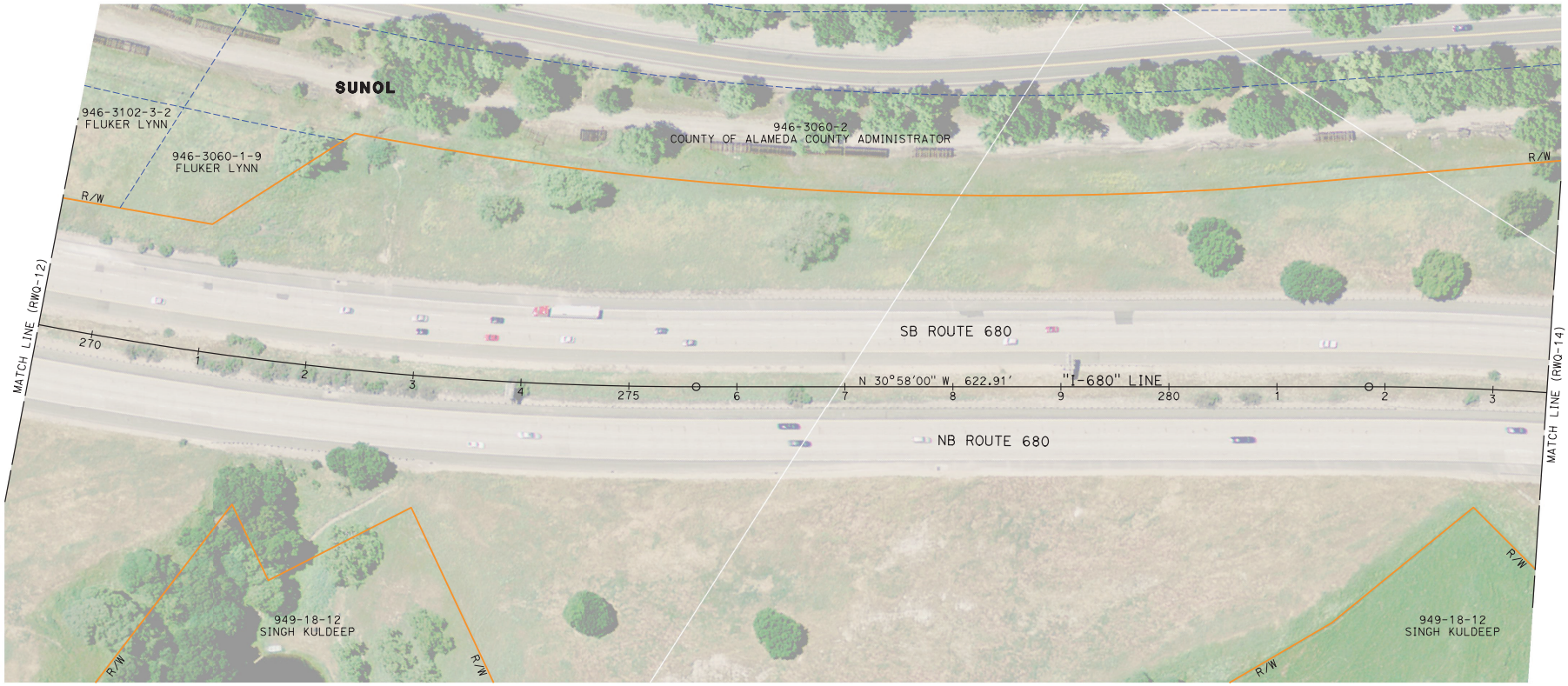

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

LAST REVISION DATE PLOTTED => 15-NOV-2019
11-18-19 TIME PLOTTED => 16:20

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-013.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

RIGHT OF WAY REQUIREMENTS

ASSESSOR'S PARCEL NUMBER	OWNER/ GRANTOR	AREA TEMPORARY CONSTRUCTION EASEMENT SQFT
946-3060-1-6	EMSEE TRANSPORTATION PLAN & WO	10,253

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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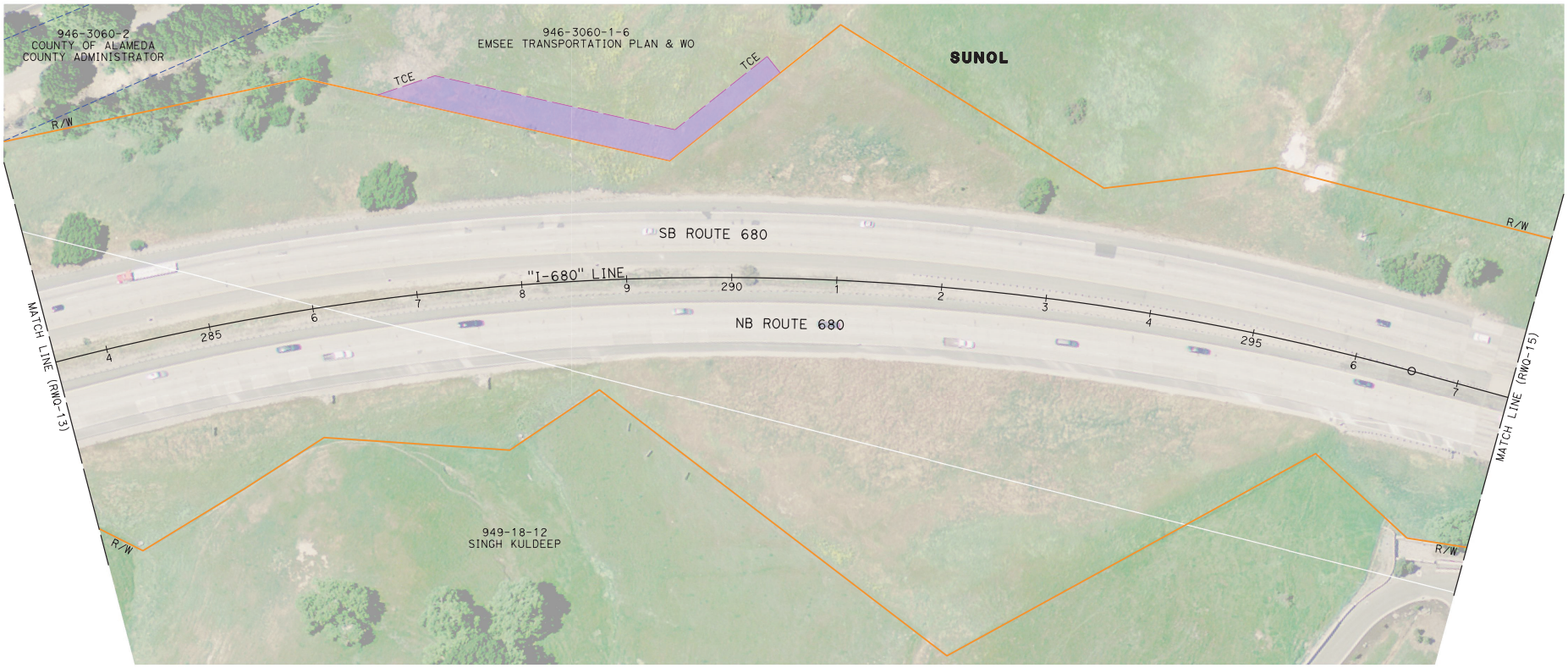

PRELIMINARY PLANS
SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-14

REVISED BY	DATE REVISED
.	.
M. FALLAHA	M. GOGOSANU

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION | DATE PLOTTED => 15-NOV-2019
11-18-19 | TIME PLOTTED => 16:20

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-014.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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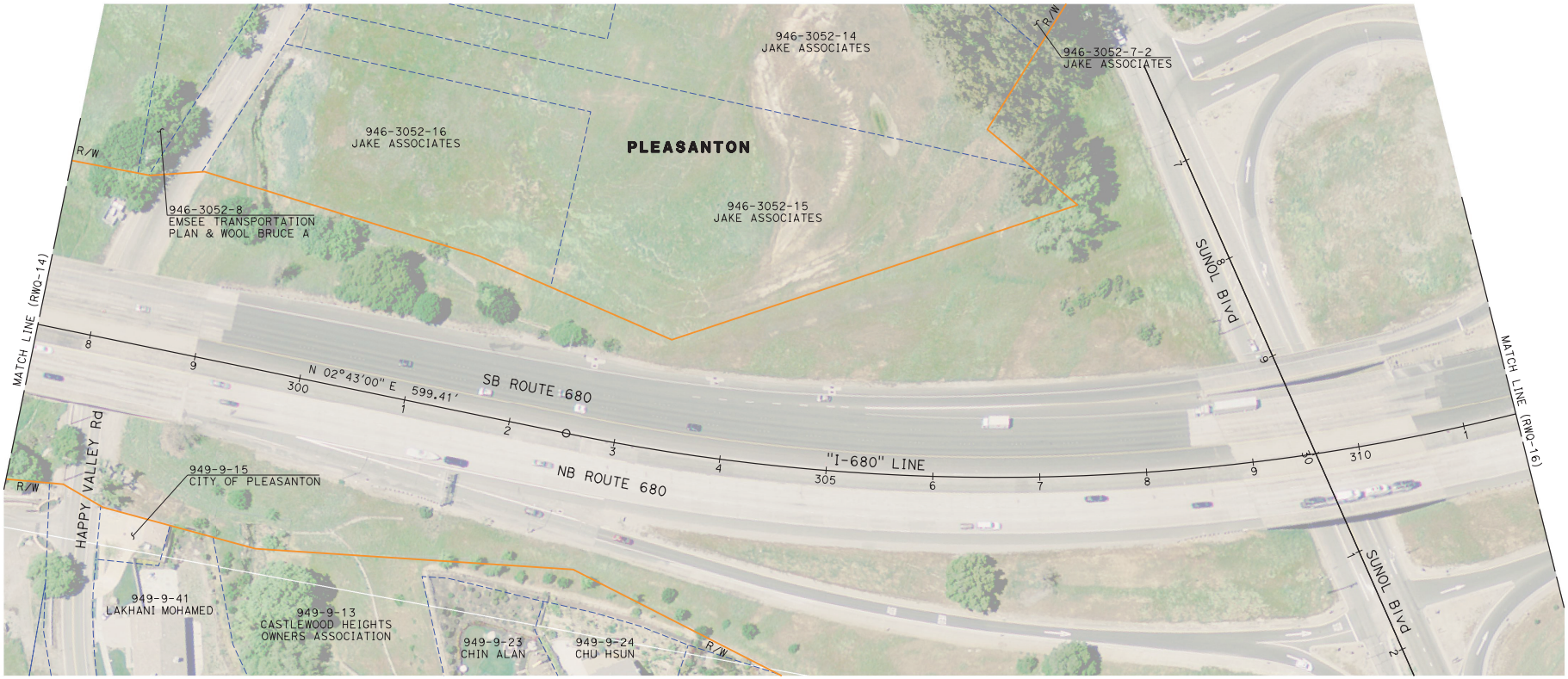

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

CALCULATED-DESIGNED BY: M. FALLAHA — CHECKED BY: M. GOGOSANU

REVISED BY . — DATE REVISED .

LAST REVISION — DATE PLOTTED => 15-NOV-2019 — TIME PLOTTED => 16:20

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-015.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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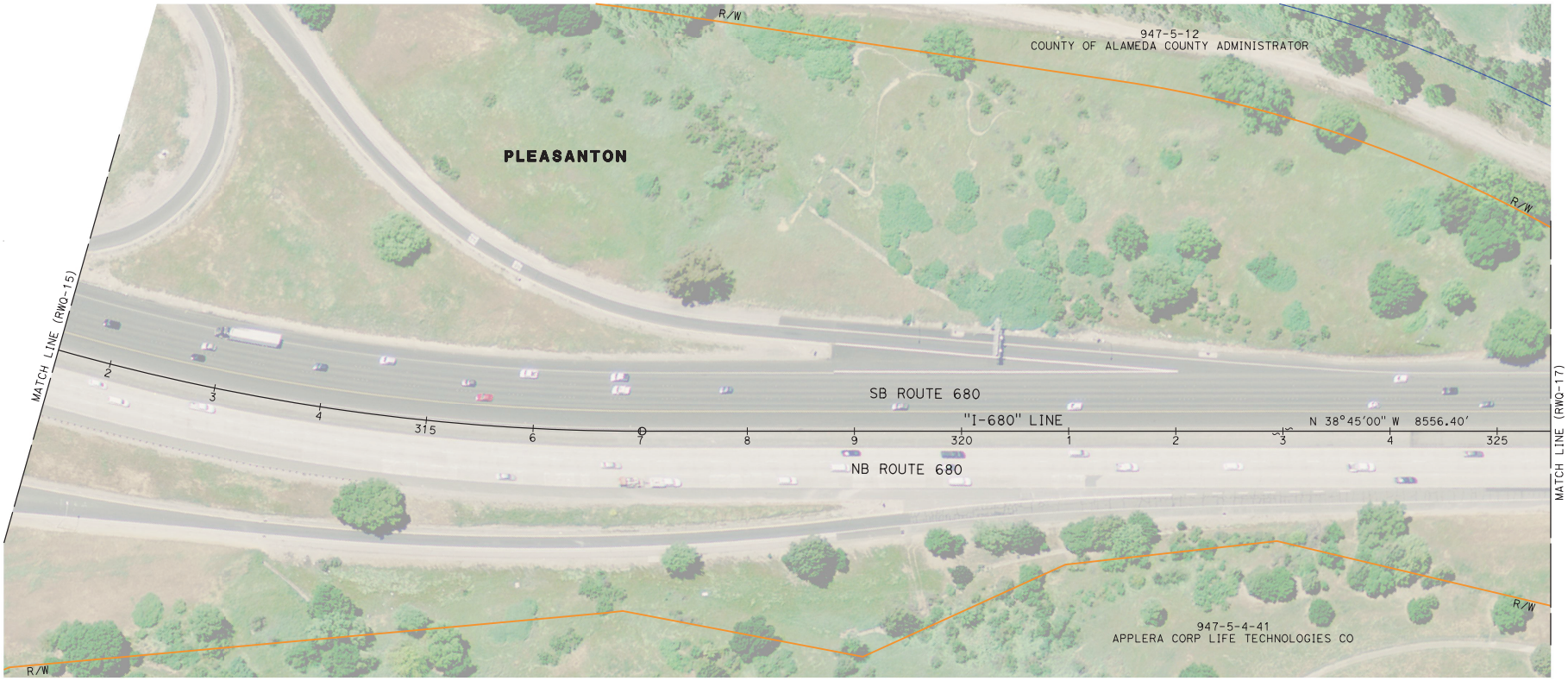

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-16

REVISED BY	DATE REVISED
.	.

CALCULATED-DESIGNED BY: M. FALLAHA
CHECKED BY: M. GOGOSANU

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:20

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => RWQ-016.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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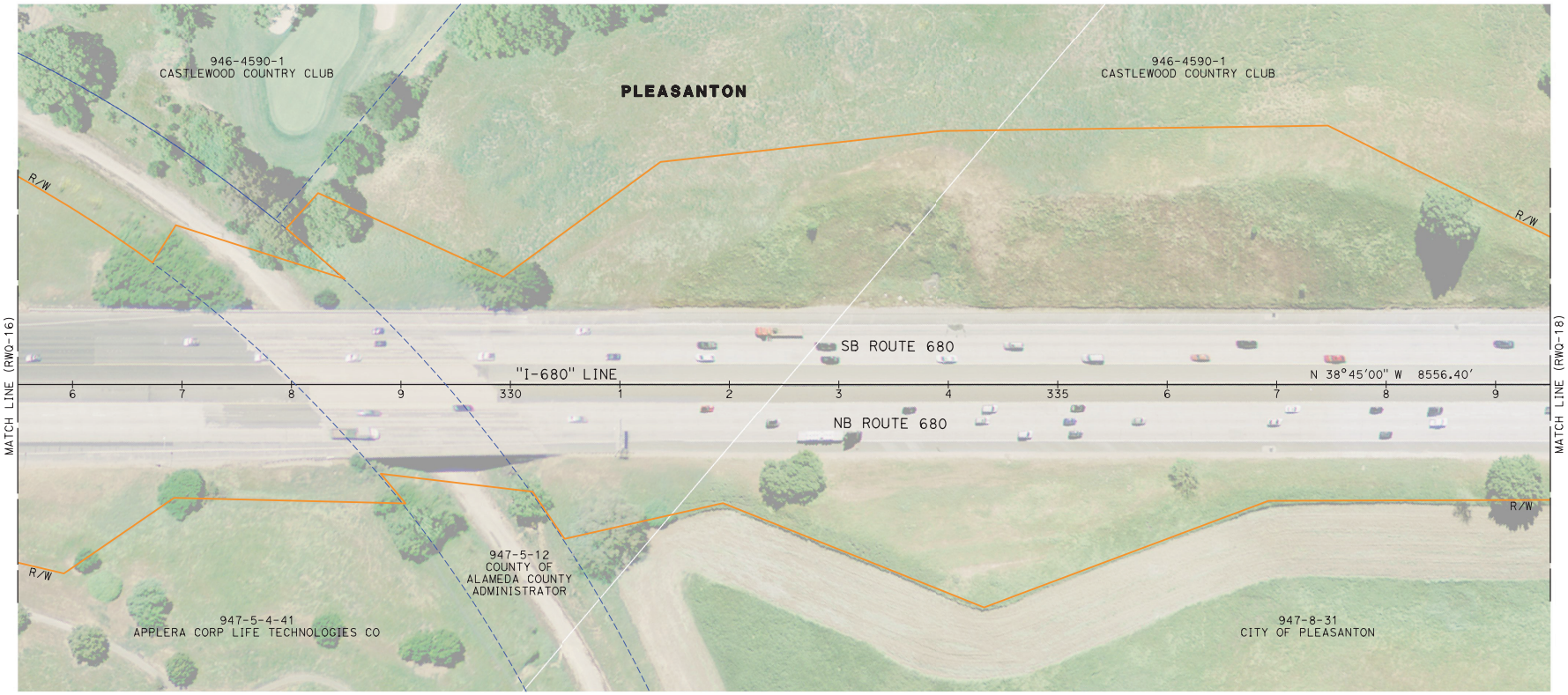

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:20

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-017.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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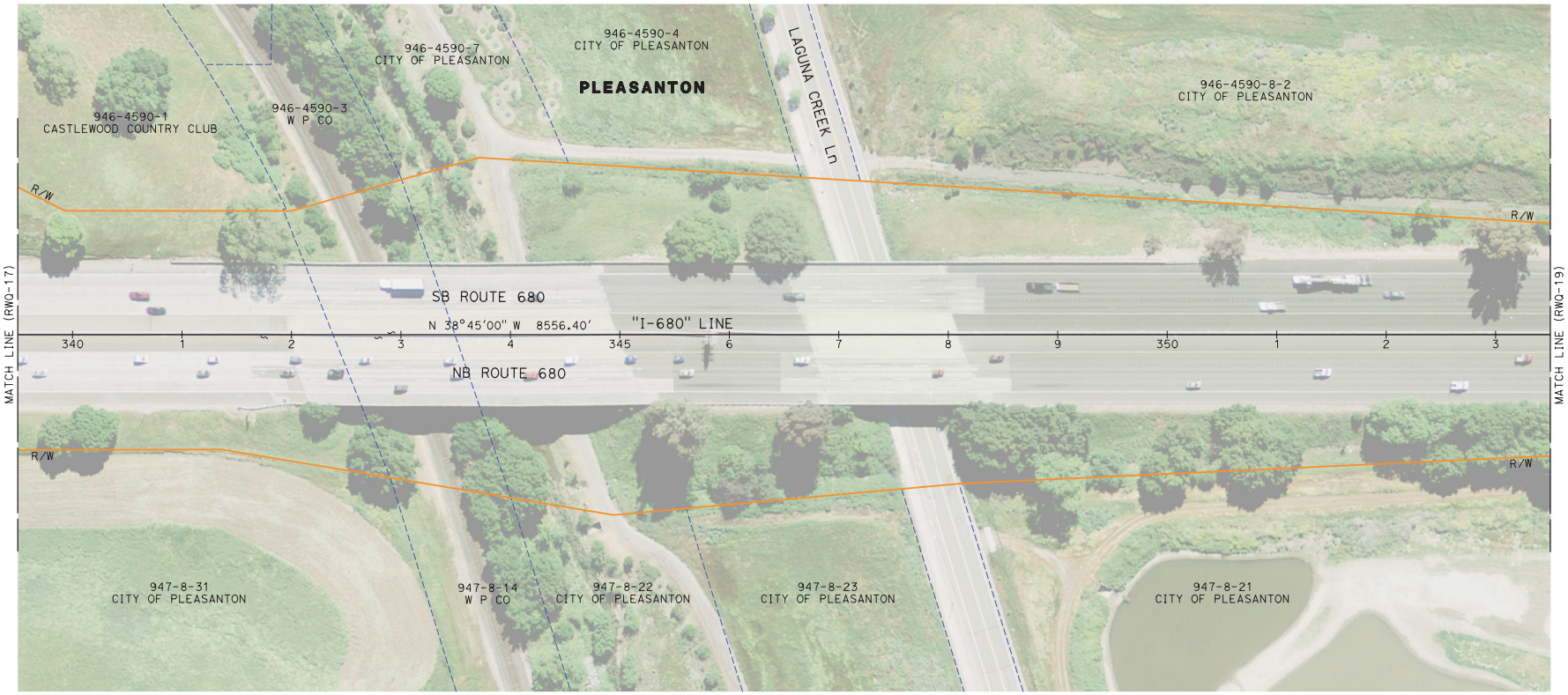

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-18

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

LAST REVISION DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:20

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-018.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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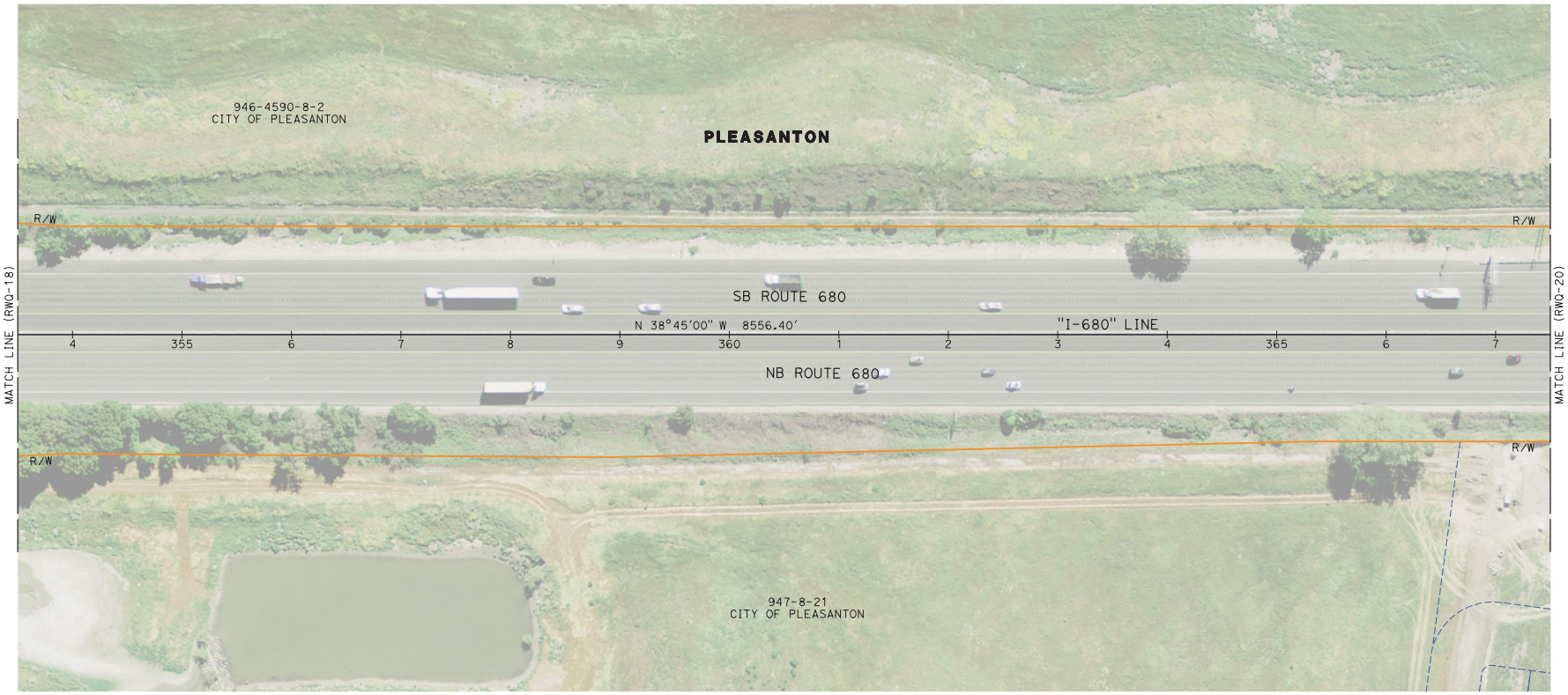

PRELIMINARY PLANS
SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

LAST REVISION 11-18-19
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BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-019.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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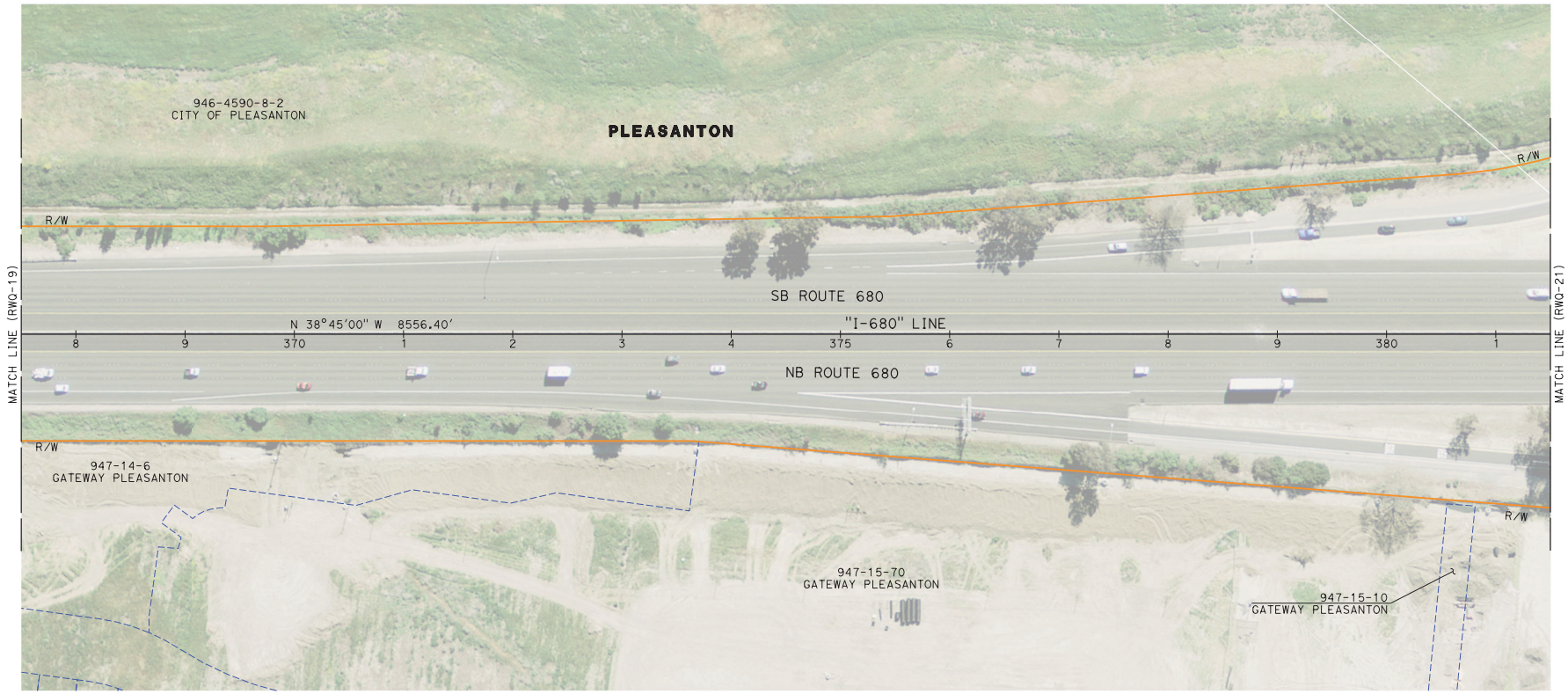

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
	RAMSEY HISSEN	CHECKED BY	DATE REVISED
		M. FALLAHA	.
		M. GOGOSANU	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:21

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-020.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

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RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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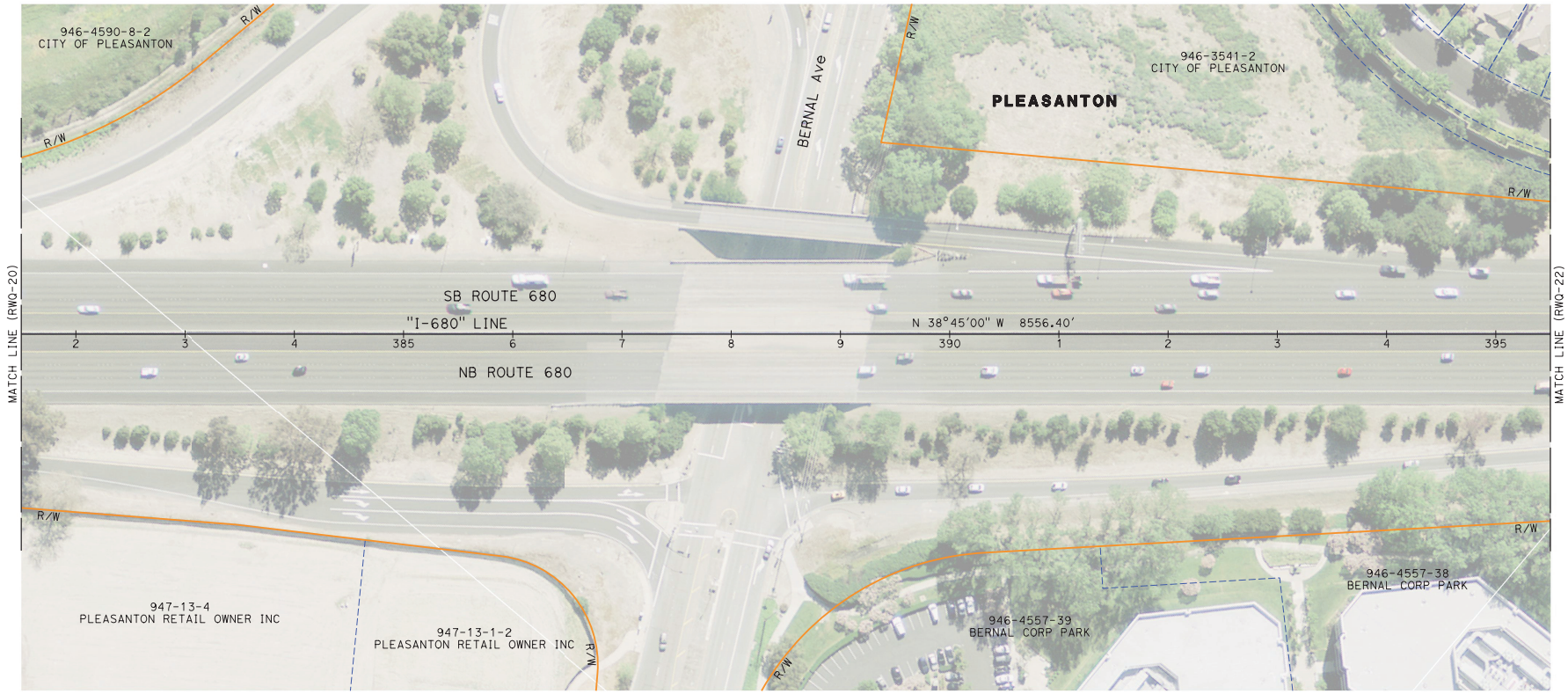

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-21

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

LAST REVISION DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:21

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-021.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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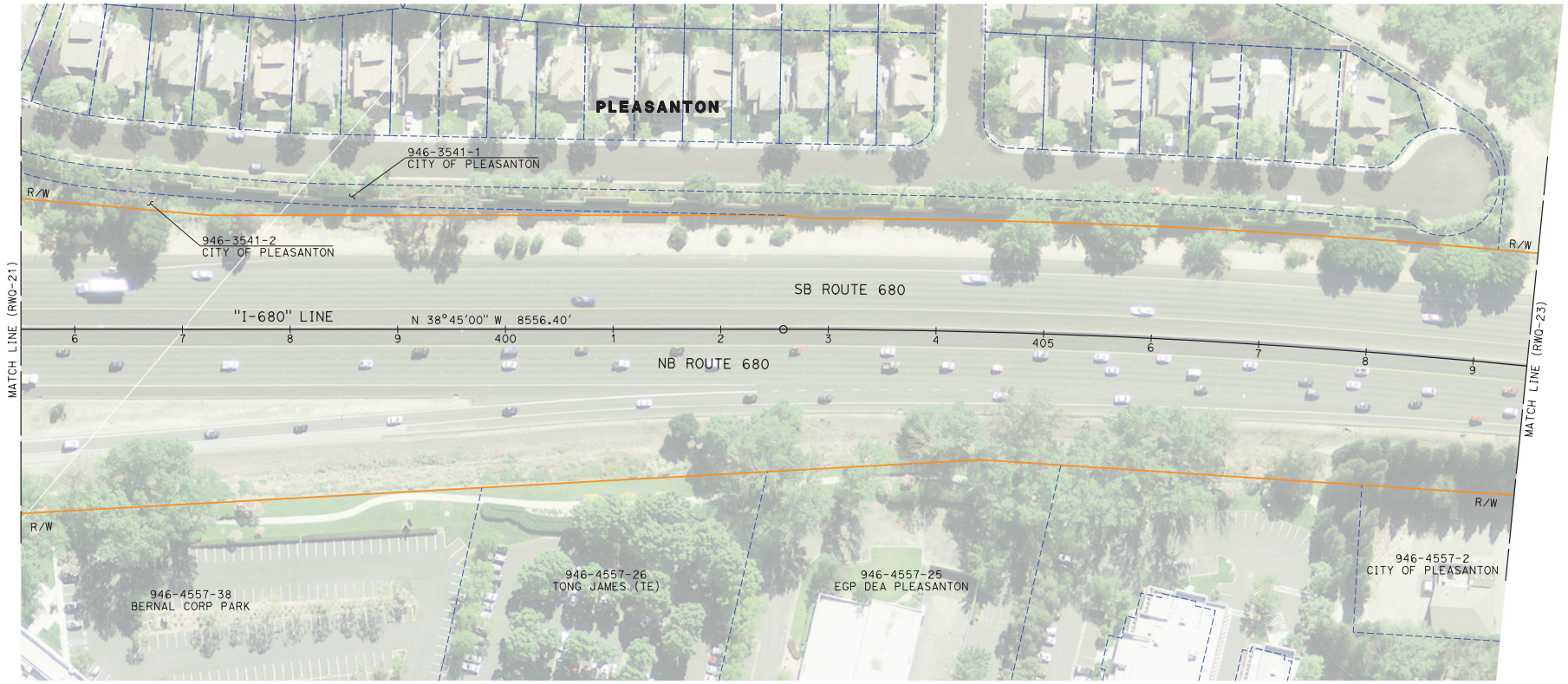

PRELIMINARY PLANS
SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-22

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:21

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-022.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

RIGHT OF WAY REQUIREMENTS

ASSESSOR'S PARCEL NUMBER	OWNER/ GRANTOR	AREA TEMPORARY CONSTRUCTION EASEMENT SQFT
946-3400-31	CITY OF PLEASANTON	5,900

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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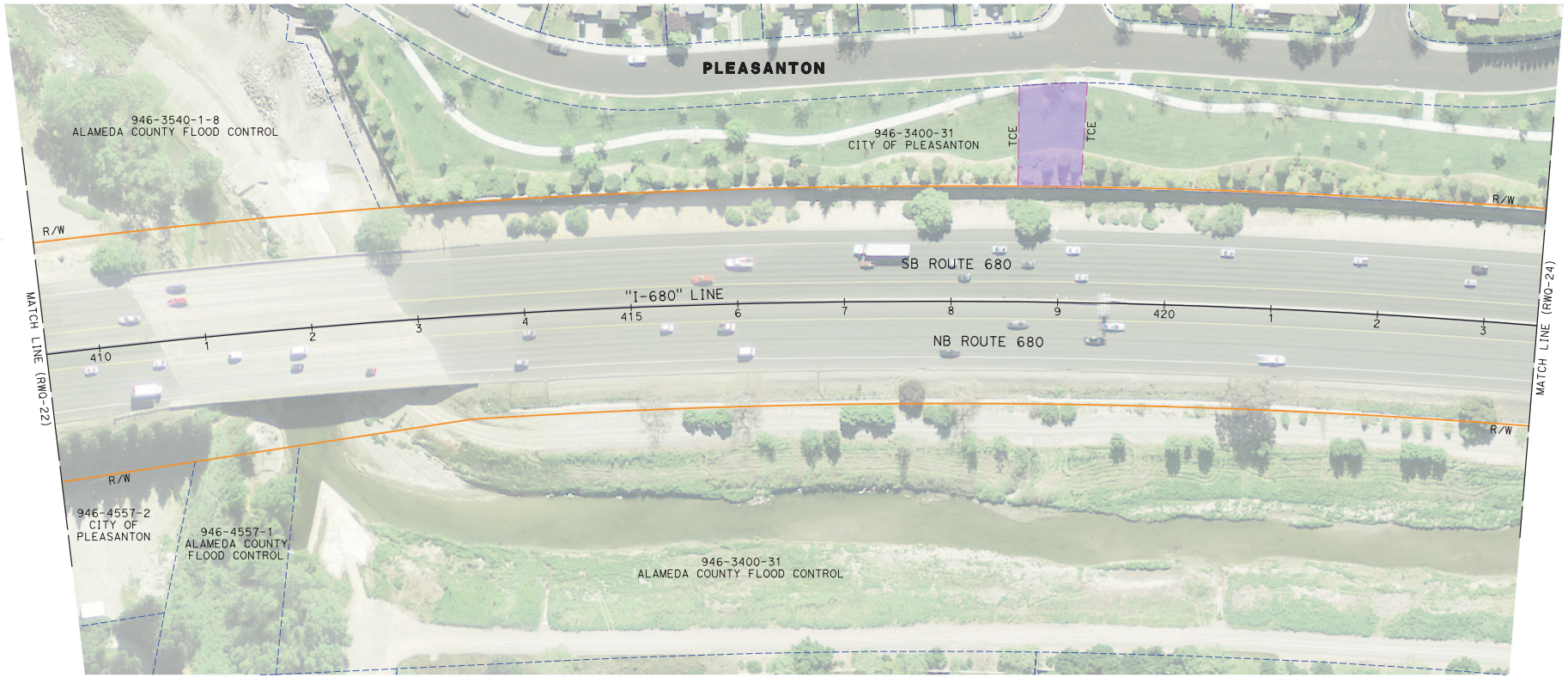

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-23

REVISED BY	DATE REVISED
.	.

CALCULATED-DESIGNED BY: M. FALLAHA
CHECKED BY: M. GOGOSANU

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION: DATE PLOTTED => 15-NOV-2019
11-18-19 TIME PLOTTED => 16:21

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-023.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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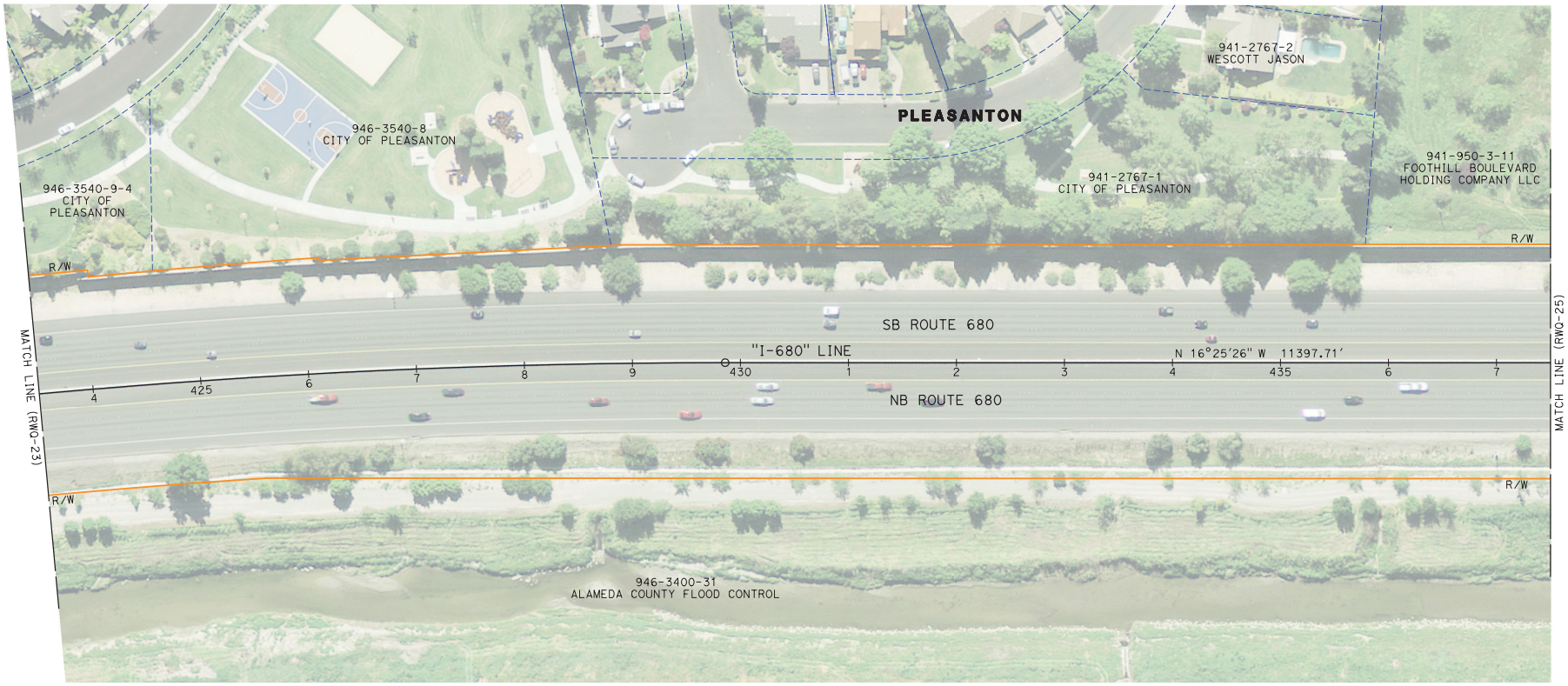

PRELIMINARY PLANS
SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-24

	REVISED BY	DATE REVISED
	.	.

CALCULATED-DESIGNED BY: M. FALLAHA
CHECKED BY: M. GOGOSANU

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:21

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => RWQ-024.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	941-942-37	NEWTON EDWARD
2	941-942-38	DEJESUS JOSE DEJESUS RUIKUN
3	941-942-39	GUZMAN DOLORES PAUL CHARLES & CHRISTINA
4	941-942-40	ESTRADA GARRETT ESTRADA BROOKE
5	941-942-41	WANG JENNIFER
6	941-942-42	JEFFRIES THOMAS I JEFFRIES KATHLEEN L
7	941-942-43	CORTEZ THOMAS A CORTEZ TAMARA L
8	941-942-44	PHAM HUONG
9	941-942-45	TOOVEY MICHAEL
10	941-942-120-1	CITY OF PLEASANTON
11	941-942-119-1	KAZMI AMIR A NAQVI AMINA

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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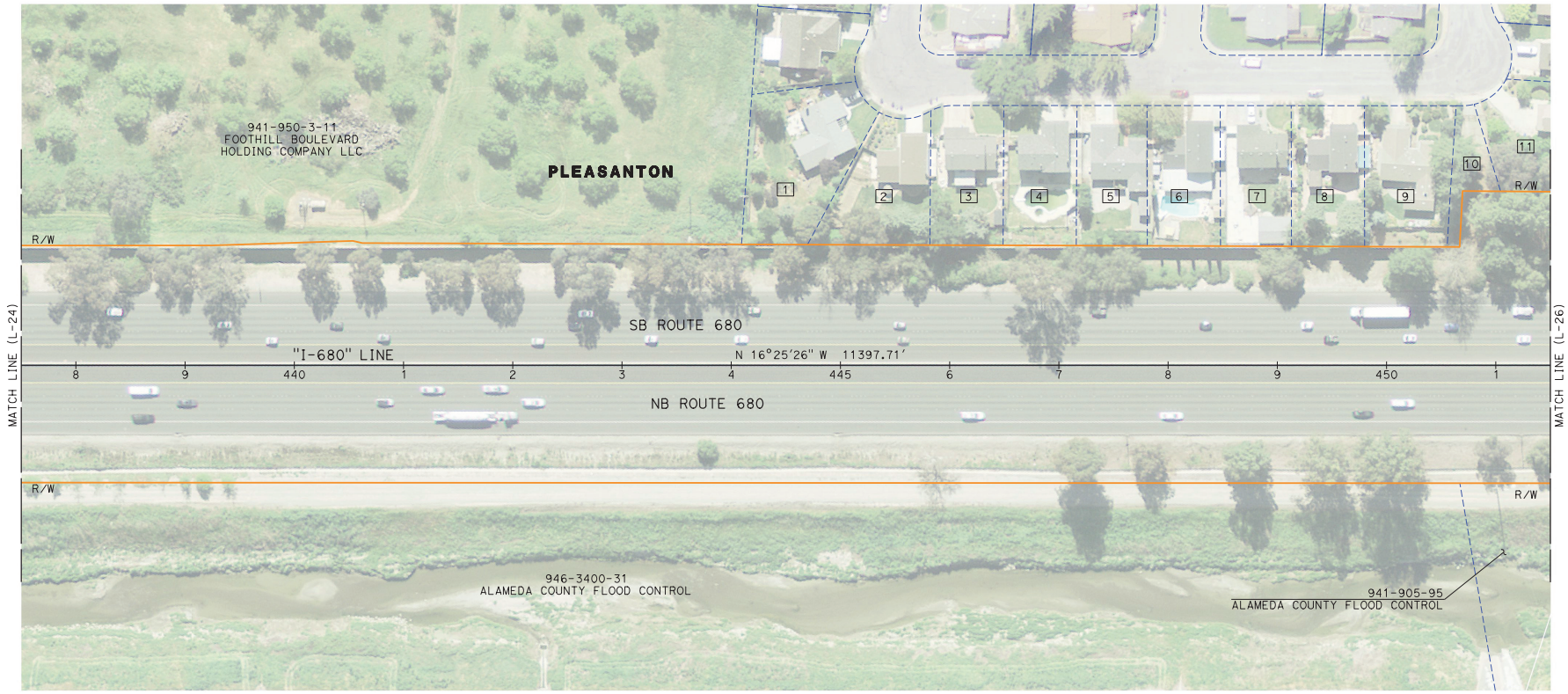

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:21

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-025.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	941-942-112-1	FISHER JULIETTE
2	941-942-98-3	HUK JOHN J HUK MARY T
3	941-942-91	YAN FAMILY TRUST
4	941-1007-156-3	KING WILLIAM A KING KRITAPORN C
5	941-1007-147	SAHOO BINAYA K SAHU SHIBANI
6	941-1007-146-3	MILES TIMOTHY L (TE) MILES KAREN A (TE)
7	941-1000-5	CITY OF PLEASANTON

RIGHT OF WAY REQUIREMENTS

ASSESSOR'S PARCEL NUMBER	OWNER/ GRANTOR	AREA TEMPORARY CONSTRUCTION EASEMENT SQFT
941-1000-5	CITY OF PLEASANTON	13,767

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-26

REVISED BY	DATE REVISED
.	.

CALCULATED-DESIGNED BY: M. FALLAHA
CHECKED BY: M. GOGOSANU

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:21
11-18-19

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => RWQ-026.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	941-1006-10	MEHMOOD ARIF KHAN SARAH
2	941-1006-9	KOENIG LLOYD R KOENIG BARBARA M
3	941-1006-8	KAAI ROSEMARIE KAAI MAKAILA S EST

RIGHT OF WAY REQUIREMENTS

ASSESSOR'S PARCEL NUMBER	OWNER/ GRANTOR	AREA TEMPORARY CONSTRUCTION EASEMENT SQFT
941-1000-5	CITY OF PLEASANTON	13,767

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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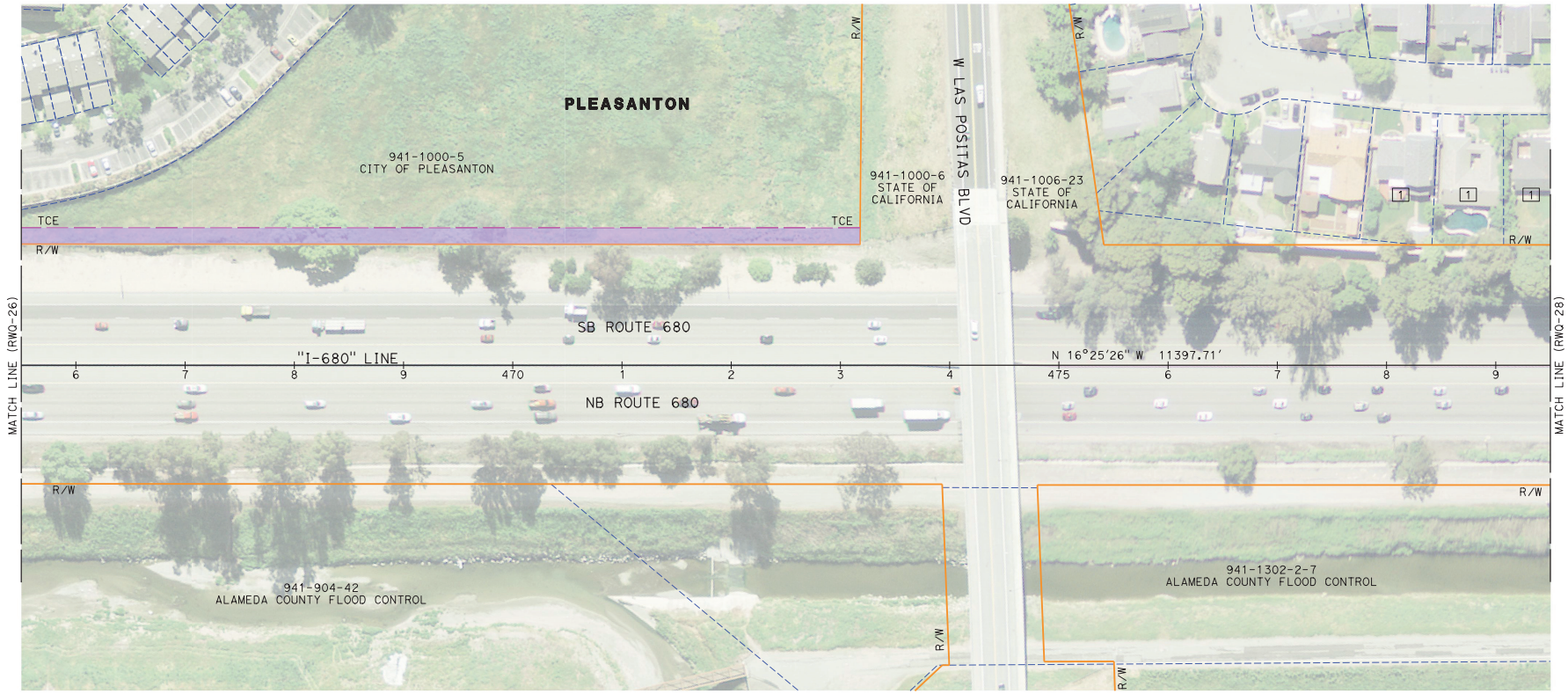

PRELIMINARY PLANS
SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-27

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

CALCULATED-DESIGNED BY: M. FALLAHA

CHECKED BY: M. GOGOSANU

REVISED BY . DATE REVISED .

LAST REVISION 11-18-19

DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:21

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => RWQ-027.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	941-1006-7	WONG PATTY P H TRUST
2	941-1006-6	CRUZ CYNTHIA M
3	941-1003-36	ALAMEDA COUNTY FLOOD CONTROL
4	941-1003-31	STROMBERG GARY STROMBERG SHIRLEY
5	941-1003-16	ROSE EDWARD A ROSE FRANCES
6	941-1003-15	FITZPATRICK ALTHEA B TRUST
7	941-1003-14	SOMASUNDARAM SURESHKUMAR
8	941-1003-13	SATTERLUND SCOT
9	941-1003-12	VANETTEN ROBERT E VANETTEN JULIE J
10	941-1003-11	CUDDY REX WHITE ANNE

No.	ASSESSOR'S PARCEL NUMBER	OWNER
11	941-1003-10	CULLISON ROBERT C CULLISON SUSAN D
12	941-1003-9	NELSON SCOTT R (TE) NELSON SUSAN A (TE)
13	941-1003-8	BANTA MERLE L BANTA PAULETTE K
14	941-1003-7	THOMPSON ROBERT A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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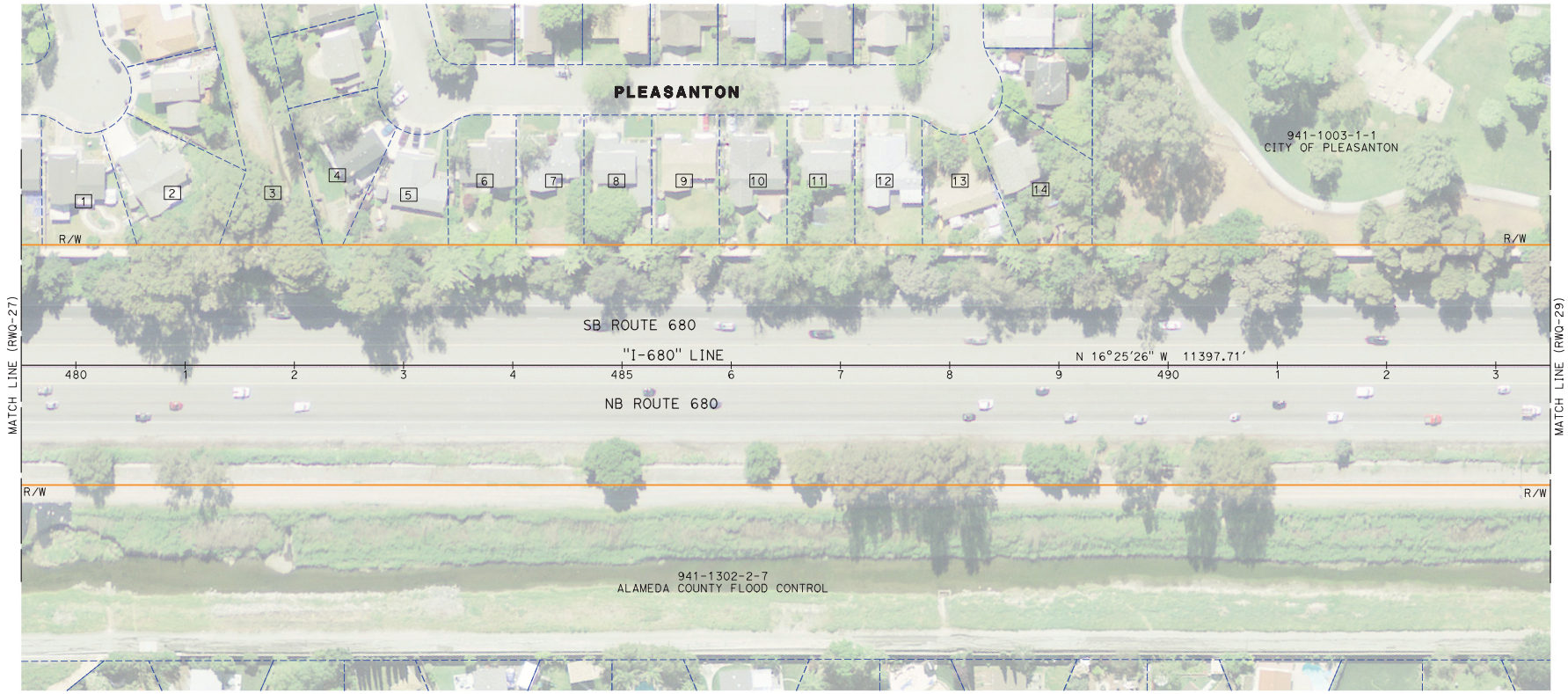

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-28

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-028.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

LAST REVISION DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:21

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	941-1045-29	SEQUEIRA DARYL A
2	941-1045-28	WOODWARD CLIFFORD G IV (TE)
3	941-1045-27	CHEW MIRANDA
4	941-1045-26	BANDOPADHYAY SHAMIK DASGUPTA AUDITI
5	941-1045-25	GALLERO JOLINA GALLERO ROGELIO JR
6	941-1045-24	OVAICI RAY K

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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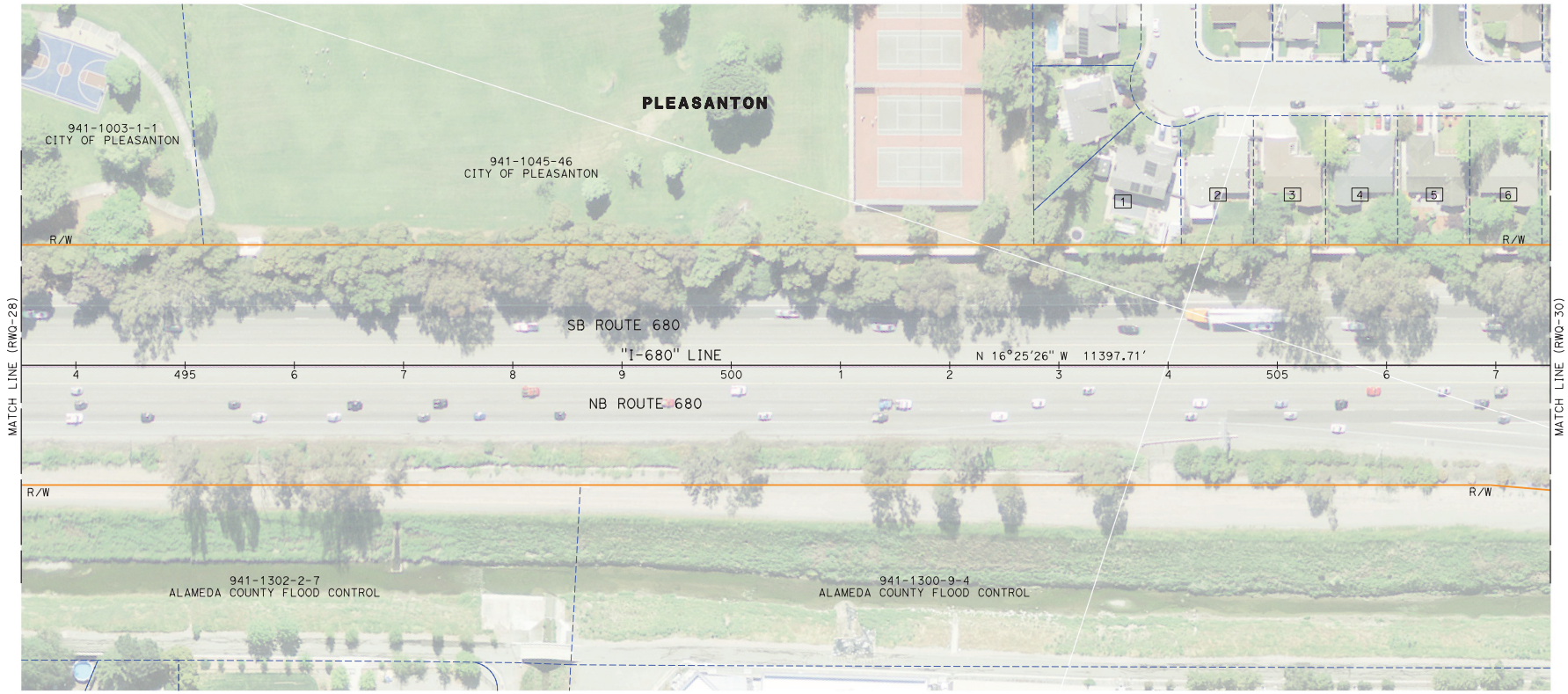

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-29

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

LAST REVISION DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:22

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-029.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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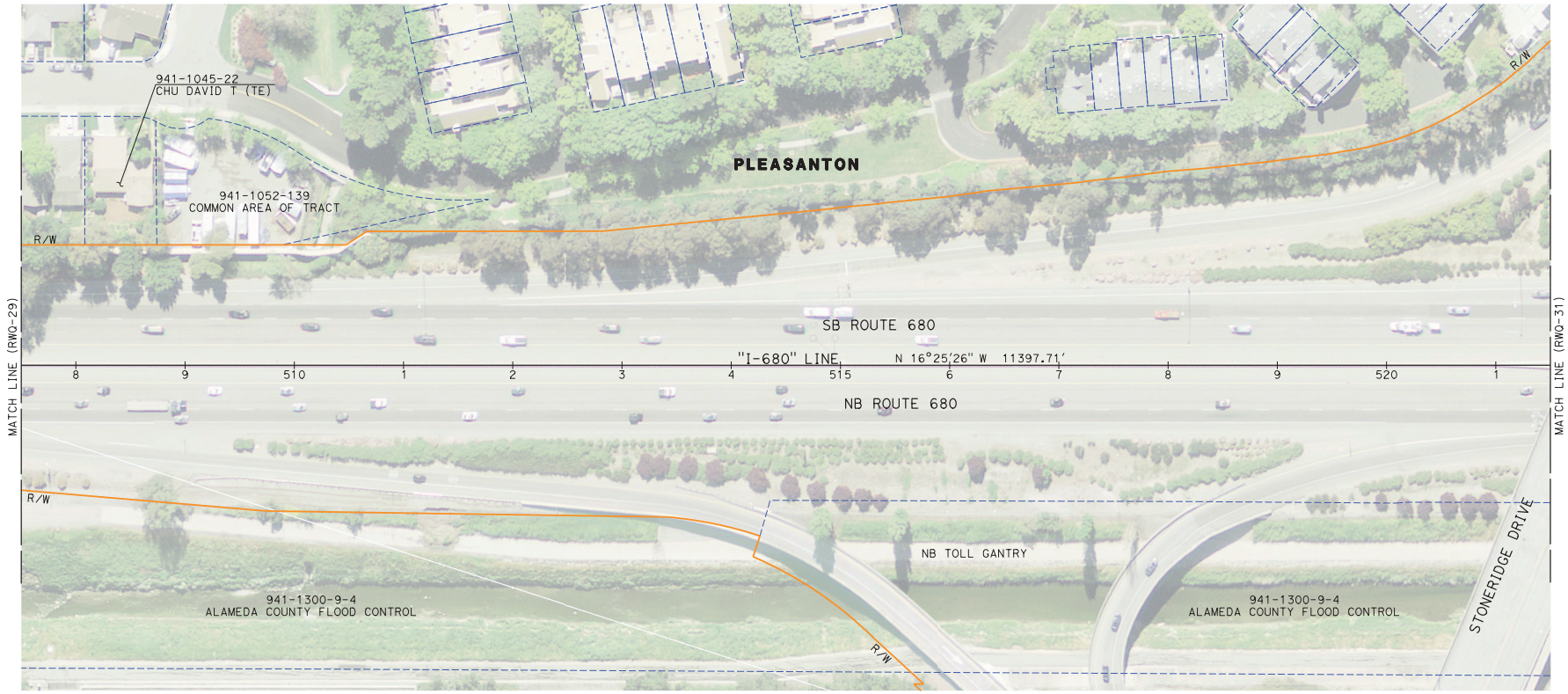

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-30

REVISED BY	DATE REVISED
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CALCULATED-DESIGNED BY	CHECKED BY
M. FALLAHA	M. GOGOSANU

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION: DATE PLOTTED => 15-NOV-2019
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BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => RWQ-030.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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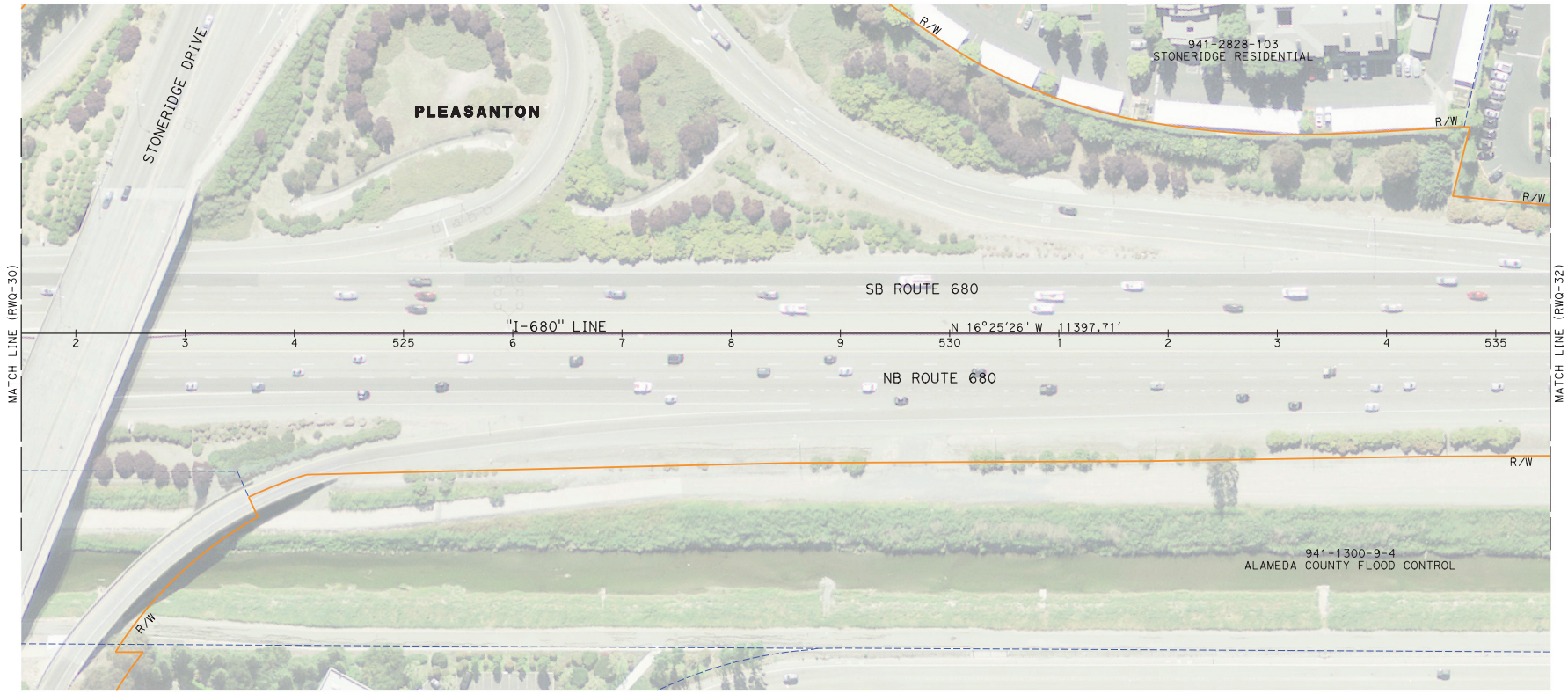

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-31

REVISED BY	.	.
DATE REVISED		
M. FALLAHA	M. GOGOSANU	RAMSEY HISSEN
CALCULATED-DESIGNED BY	CHECKED BY	CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION DATE PLOTTED => 15-NOV-2019
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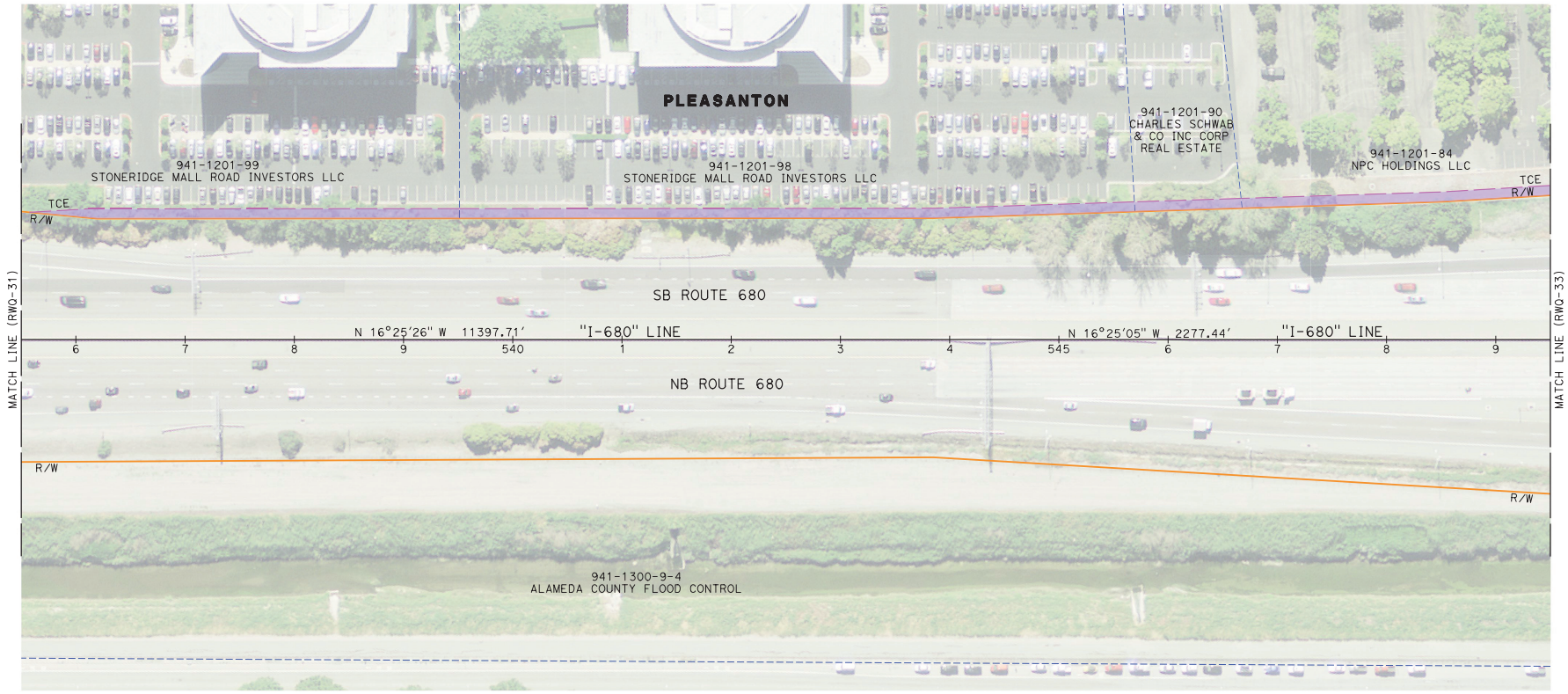
BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-031.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

RIGHT OF WAY REQUIREMENTS

ASSESSOR'S PARCEL NUMBER	OWNER/ GRANTOR	AREA TEMPORARY CONSTRUCTION EASEMENT SQFT
941-1201-99	STONERIDGE MALL ROAD INVESTORS LLC	3,278
941-1201-98	STONERIDGE MALL ROAD INVESTORS LLC	5,565
941-1201-90	CHARLES SCHWAB & CO INC CORP REAL ESTATE	882
941-1201-84	NPC HOLDINGS LLC	4,570



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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CALCULATED-DESIGNED BY	CHECKED BY
M. FALLAHA	M. GOGOSANU

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-32

LAST REVISION DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:22

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-032.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

RIGHT OF WAY REQUIREMENTS

ASSESSOR'S PARCEL NUMBER	OWNER/ GRANTOR	AREA TEMPORARY CONSTRUCTION EASEMENT SQFT
941-1201-84	NPC HOLDINGS LLC	4,570

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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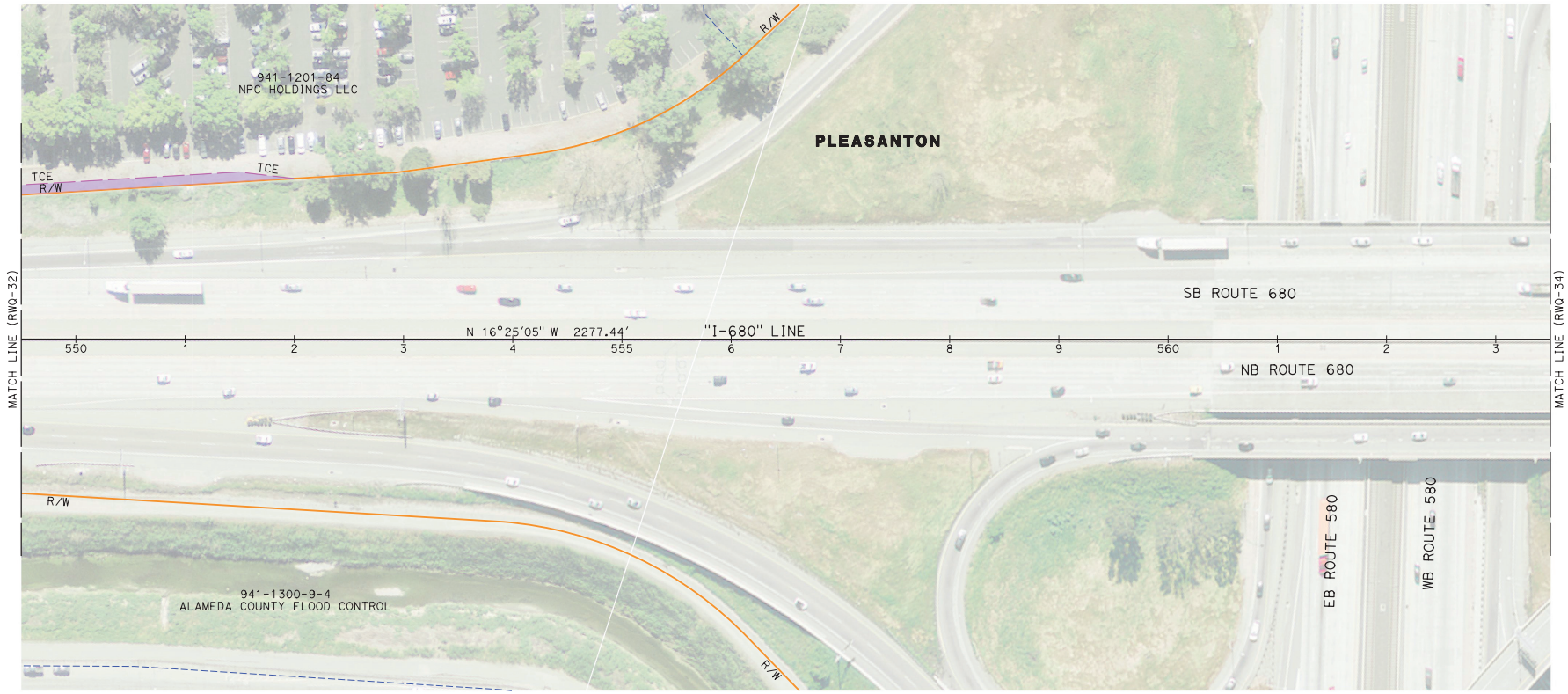

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-33

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => RWQ-033.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

LAST REVISION DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:22
11-18-19

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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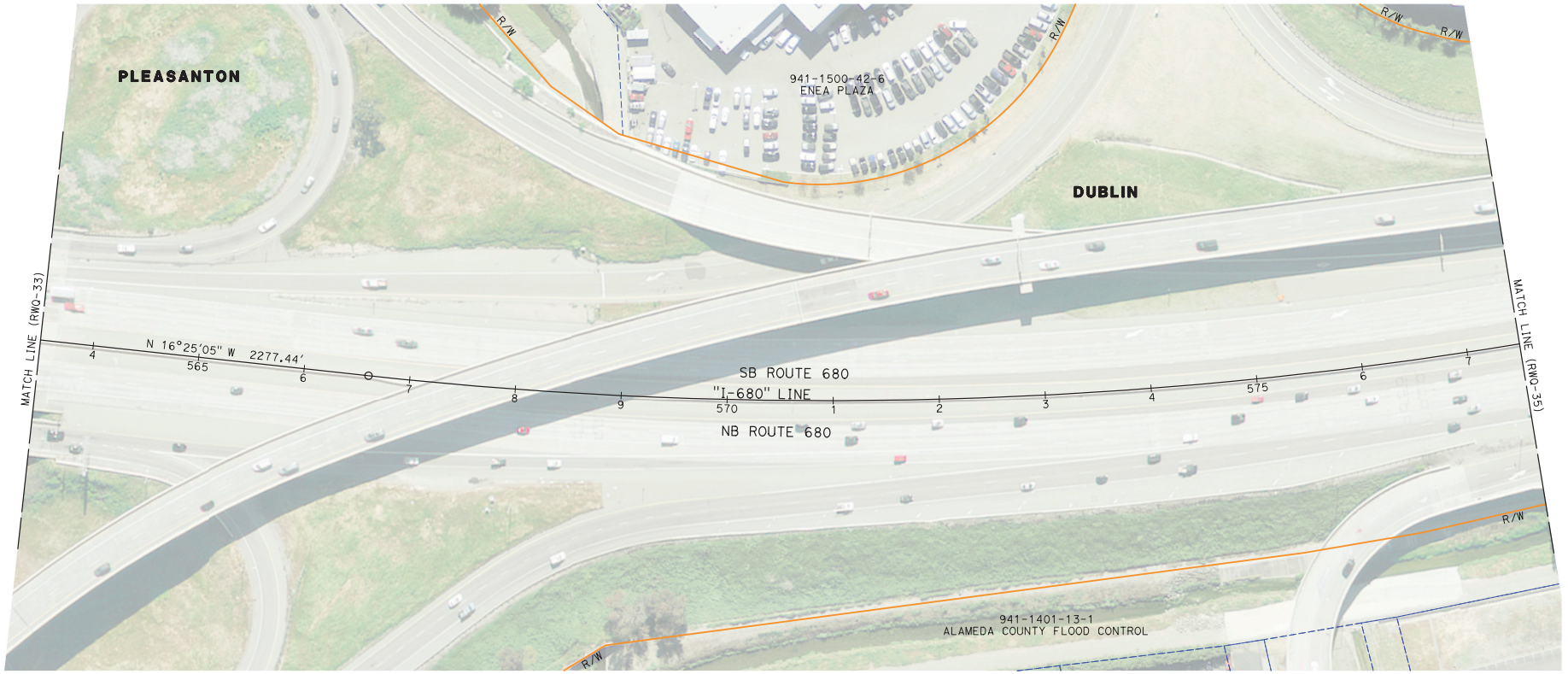

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-34

REVISED BY	DATE REVISED
.	.

CALCULATED-DESIGNED BY: M. FALLAHA
CHECKED BY: M. GOGOSANU

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION: DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:22

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-034.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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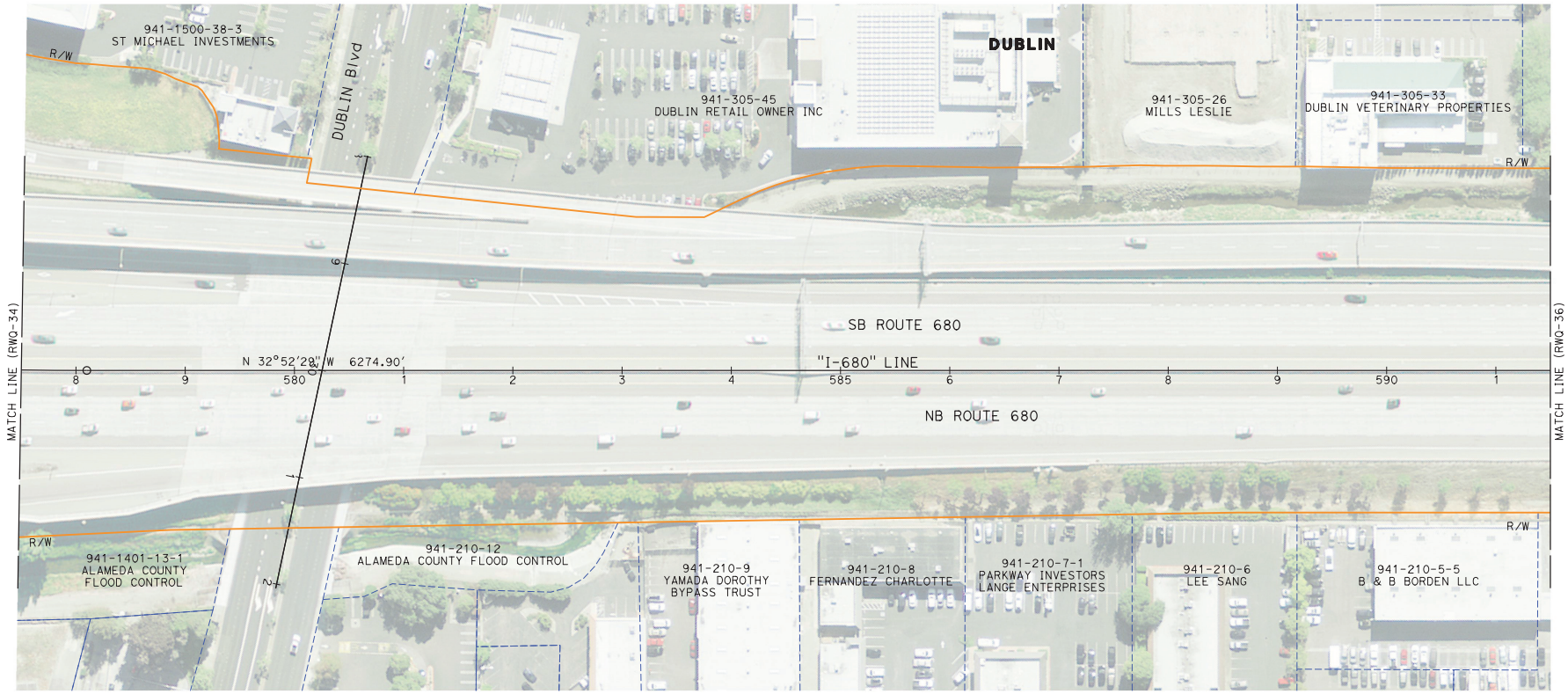

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-35

REVISED BY	DATE REVISED
.	.

CALCULATED-DESIGNED BY: M. FALLAHA
CHECKED BY: M. GOGOSANU

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION: DATE PLOTTED => 15-NOV-2019
11-18-19 TIME PLOTTED => 16:22

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => RWQ-035.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	941-170-130	ALAMEDA COUNTY FLOOD CONTROL
2	941-175-21-5	TOWNSEND DIANE L & F D TOWNSEND JO K (TE)
3	941-175-9	REIMBOLD MICHAEL T REIMBOLD ALICE M
4	941-175-8	MUNOZ DASCO L MUNOZ SABINA A
5	941-175-7	WANG JIMMY W J WONG SZE W
6	941-175-6	GOTT KEVIN M (TE) GOTT DONNA J (TE)
7	941-175-5	LI LI FAMILY TRUST
8	941-175-4	BENNETT PHILLIP E
9	941-175-3	SCOTT PAUL J SCOTT LISA K

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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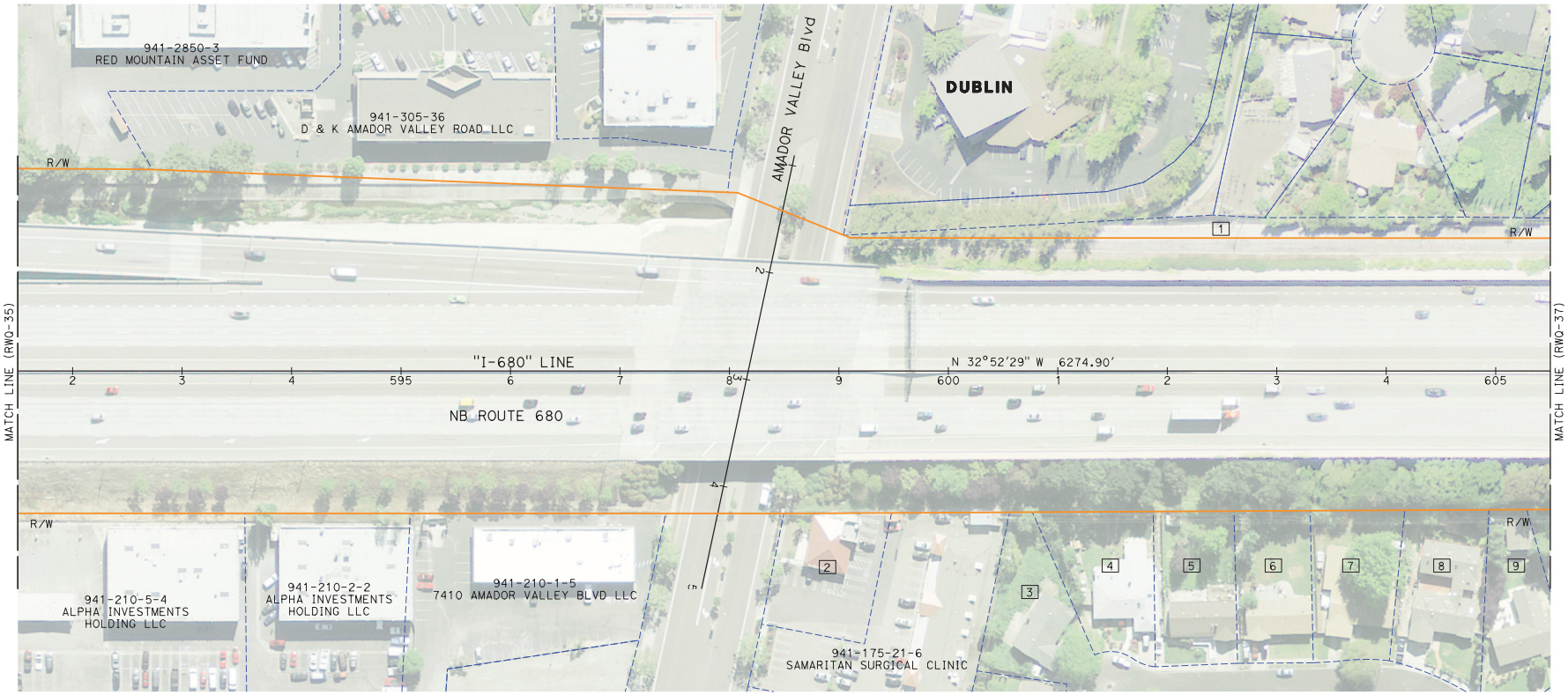

PRELIMINARY PLANS
SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-36

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN | CALCULATED-DESIGNED BY: M. FALLAHA | CHECKED BY: M. GOGOSANU | REVISED BY: . | DATE REVISED: .

LAST REVISION 11-18-19 | DATE PLOTTED => 15-NOV-2019 | TIME PLOTTED => 16:22

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-036.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	941-170-130	ALAMEDA COUNTY FLOOD CONTROL
2	941-175-2	MATALLANA JUAN F MATALLANA LYNETTE M
3	941-175-1	GANDHI ASHISH LIMDI SHWETA
4	941-176-124	NUTI JOSEPHINE A
5	941-176-123	OSULLIVAN DEBBIE J OSULLIVAN MICHAEL J
6	941-176-122	SIMONI STUART (TE) SIMONI SHERRI A (TE)
7	941-176-121	MOUAT JAMES C III
8	941-176-120	SHAFIQ FARAZ SHAKOOR SALEHA
9	941-176-119	WONG FRANK (TE) WONG CATHERINE (TE)
10	941-176-118	STANGELAND FAMILY TRUST

No.	ASSESSOR'S PARCEL NUMBER	OWNER
11	941-176-117	PARAWAN JOCELYN PARAWAN FERDINAND
12	941-176-116	ARANDA RIGOBERTO J ARANDA MARY B
13	941-176-115	WARE JOHNNY L
14	941-177-47	HOSSEINI MITRA
15	941-177-46	GLASS VELMA M
16	941-177-44	ABEL HARRY L ABEL DOROTHY J
17	941-177-43	DREYER HANS W
18	941-177-42	LUDDEN TIMOTHY P LUDDEN LISA M
19	941-177-32	MAIGE FAMILY TRUST

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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1111 Broadway, Suite 800
Oakland, CA 94607

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-37

REVISED BY	DATE REVISED
.	.

CALCULATED-DESIGNED BY	CHECKED BY
M. FALLAHA	M. GOGOSANU

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => RWQ-037.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	941-169-46	ALAMEDA COUNTY FLOOD CONTROL
2	941-166-49	ALAMEDA COUNTY FLOOD CONTROL
3	941-177-31	REUTER DAVID REUTER PATRICE A
4	941-177-14	HEKKING JOHN G HEKKING ANITA L
5	941-177-13	ROSAS THOMAS A ROSAS CATHI L
6	941-177-12	NOORY MARGARIT
7	941-177-11	RAMOS JAMES RAMOS ANGEL
8	941-177-10	MAMMOLA DOMINIC R (TE)
9	941-177-9	FONTELA RICHARD C DELROSARIO EUGENIA
10	941-177-8	BURKS COREY J BURKS LISA M
11	941-177-7	CADGENE GILLIAN

No.	ASSESSOR'S PARCEL NUMBER	OWNER
12	941-177-6	BALLARD DIANA G
13	941-177-5	SANCHEZ DAVID (TE) SANCHEZ CONNIE (TE)
14	941-177-4	PHAN TAM V HUYNH LANH T
15	941-177-3	SEVILLA JENNIFER D
16	941-177-2	CASTRO HECTOR L CASTRO LINDA L
17	941-177-105	GUTIERREZ PASCUAL E GUTIERREZ FELICA R
18	941-178-1	KEENEY CARL E (TE) KEENEY CAROLINE I (TE)
19	941-178-2	HAMPTON MATTHEW A HAMPTON STEFANIE A
20	941-178-3	COLEMAN BETTY J
21	941-178-4	SILVA NATHAN M

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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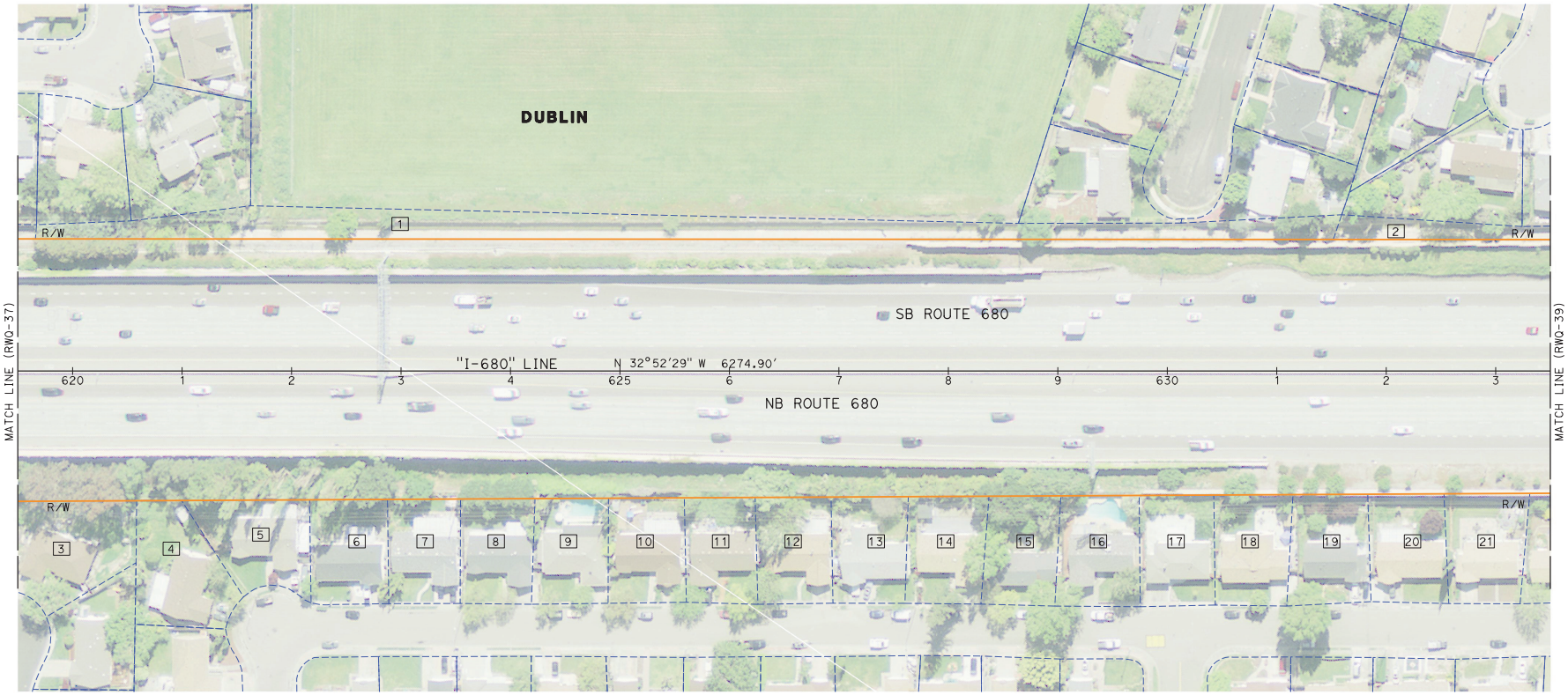

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-38

REVISED BY	DATE REVISED
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CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	941-166-49	ALAMEDA COUNTY FLOOD CONTROL
2	941-165-25	ALAMEDA COUNTY FLOOD CONTROL
3	941-178-5	WILSON FAMILY TRUST
4	941-178-6	ABBEY ROBERT G SR
5	941-178-7	TOMPKINS EBONI & GEORGE PARRA SUSAN
6	941-178-8	NGUYEN TAM V (TE) NGUYEN HUONG T (TE)
7	941-178-48	MONTESCLAROS ERIC MONTESCLAROS LUISITA
8	941-178-47	BREWER INYONG (TE) BREWER NOVEL H (TE)
9	941-183-23	RAKESTRAW DEBORAH H
10	941-183-22	STARK RICHARD H (TE) STARK JUDY L (TE)

No.	ASSESSOR'S PARCEL NUMBER	OWNER
11	941-183-21	PO EDILBERTO C (TE) PO THERESA G (TE)
12	941-183-20	RIVERA MARIA E RIVERA ROLANDO
13	941-183-19	VANHAEFTEN NICHOLAS A
14	941-183-18	CHOWDHURY AVISHEK G CHOWDHURY BIDISHA G
15	941-183-17	LEON LARRY
16	941-183-16	MITTAL AJAY K

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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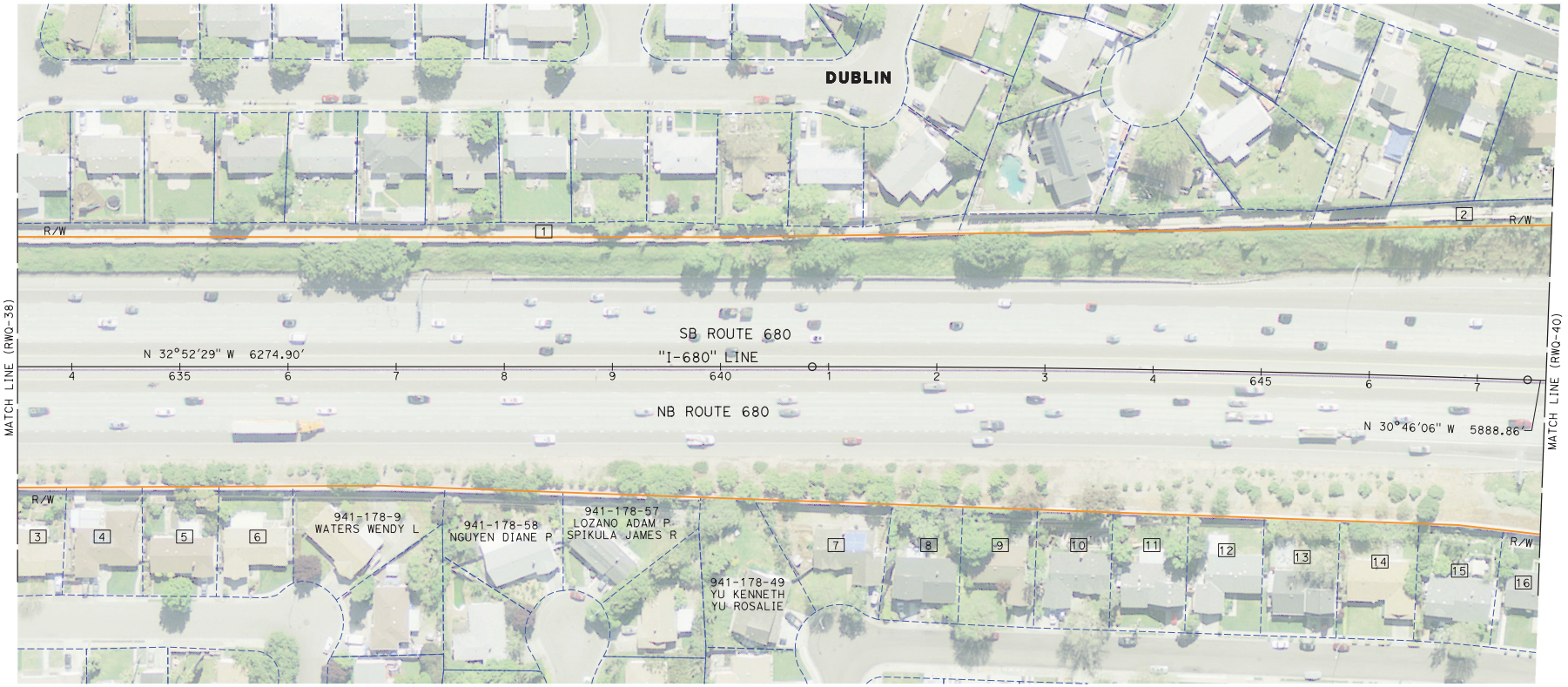

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-39

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CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	941-165-25	ALAMEDA COUNTY FLOOD CONTROL
2	941-2829-39	BRADDOCK & LOGAN GROUP III
3	941-2829-2	WILLOWS SAN RAMON VILLAGE
4	941-2829-21	BRADDOCK & LOGAN GROUP III
5	941-2829-1	WILLOWS SAN RAMON VILLAGE
6	941-164-3-9	LOTUS INVESTMENTS DUBLIN LLC
7	941-183-15	NGUYEN THUY U HOANG MARK
8	941-183-14	KOSTA LINDA F LAVAYSEE ANTHONY J
9	941-183-13	BOUDREAU MAURICE J BOUDREAU PLACIDA
10	941-183-12	DUONG BRUCE M NGUYEN TASHA T
11	941-183-11	ATTARD DAVID A ATTARD MELISSA A

No.	ASSESSOR'S PARCEL NUMBER	OWNER
12	941-183-10	BRUNTON RUTH J (TE) LINTEO SANDRA J (TE)
13	941-183-9	RODELA B & SIVAZLIAN N LIV TRUST
14	941-183-102	CORAL GATE HOMEOWNERS ASSOCIATION
15	941-183-87	NADAYAG FERNANDO P NADAYAG MAGRACITA L
16	941-183-86	HARDMAN MATTHEW HARDMAN SHA JULIE
17	941-183-85	SEO JONG H SONG SUNMI
18	941-183-84	STROH DIANE L
19	941-183-83	SADHU SUDHEER KATTA YAMINI
20	941-183-82	DERKSEN WILLIAM C
21	941-183-81	LEE EDWARD
22	941-183-80	ROSAURO MARIO A ROSAURO GRIZZEL C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

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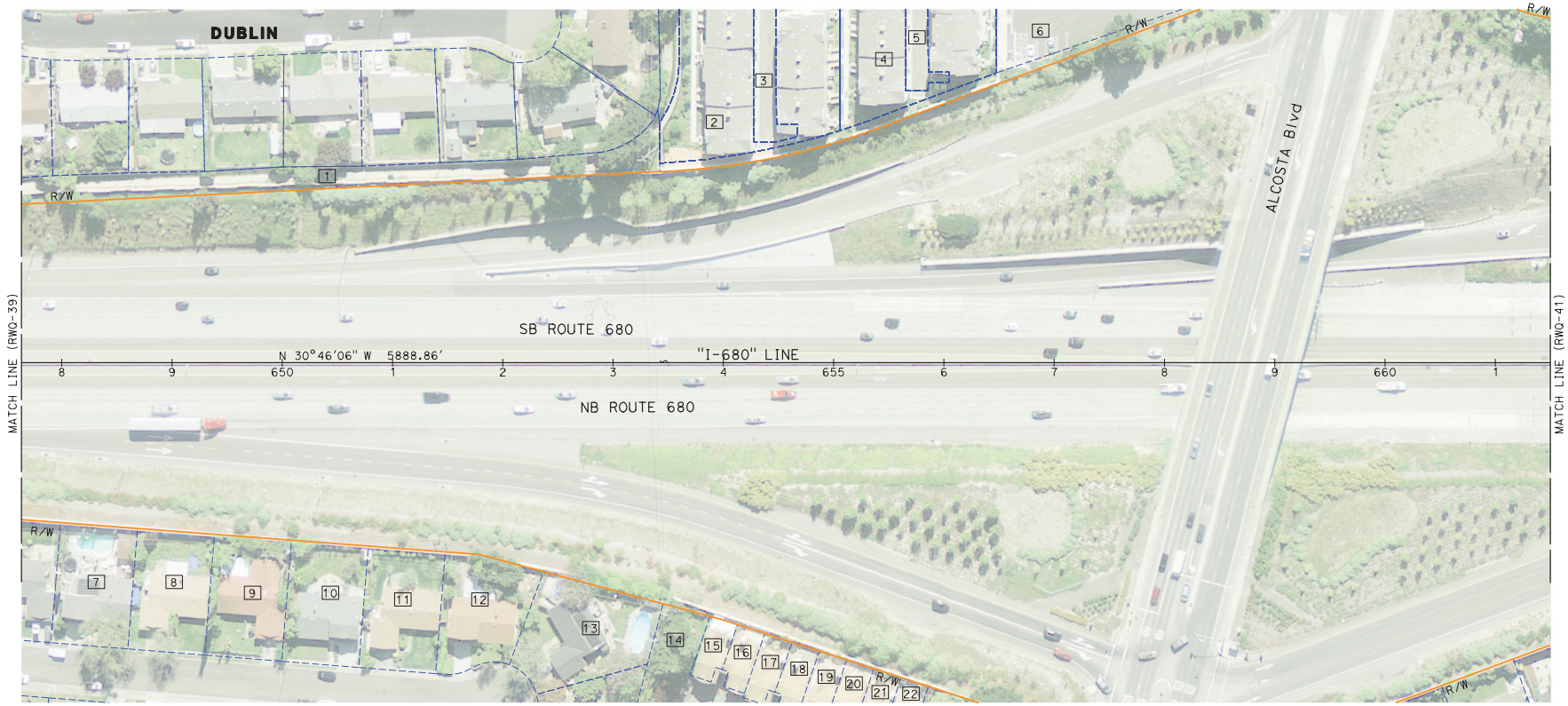

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-40

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M. FALLAHA	M. GOGOSANU

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	210371023	KRENZER DONALD LEE & JODENE G
2	210371024	WONG RYAN L & LUALHATI D
3	210371025	MANDAP RODOLFO P & PERPETUA
4	210371026	ESSE PETER M & JACQUELINE TRE
5	210384035	FRANCIS & MARTHA W S RICAFORT
6	210384034	RAPPOSELLI STEVEN & MYLYN
7	210384033	CAZARES JUAN M
8	210384032	HAUN LAWRENCE C & JANET L TRE
9	210384031	JUNIPHANT MICHAEL ANTHONY
10	210384030	BANERJEE ANIRBAN & SUBHASHREE

No.	ASSESSOR'S PARCEL NUMBER	OWNER
11	210384008	DUONG NHON & DARBY BRANDY B
12	210384007	ENGET LONNY D & ELOISE A
13	210384006	SAMRAT BANIK & SAMPA DAS
14	210384005	HILL BARBARA & JACQUELINE TRE
15	210384004	EVANGELISTA NESTOR L TRE
16	210384003	RIVAS ARMANDO & ELSA YOLANDA
17	210384002	PANGILINAN DALISAY V
18	210384001	LAW HENRY & WAN EDITH
19	210432020	ANCHETA B & C TRUST

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

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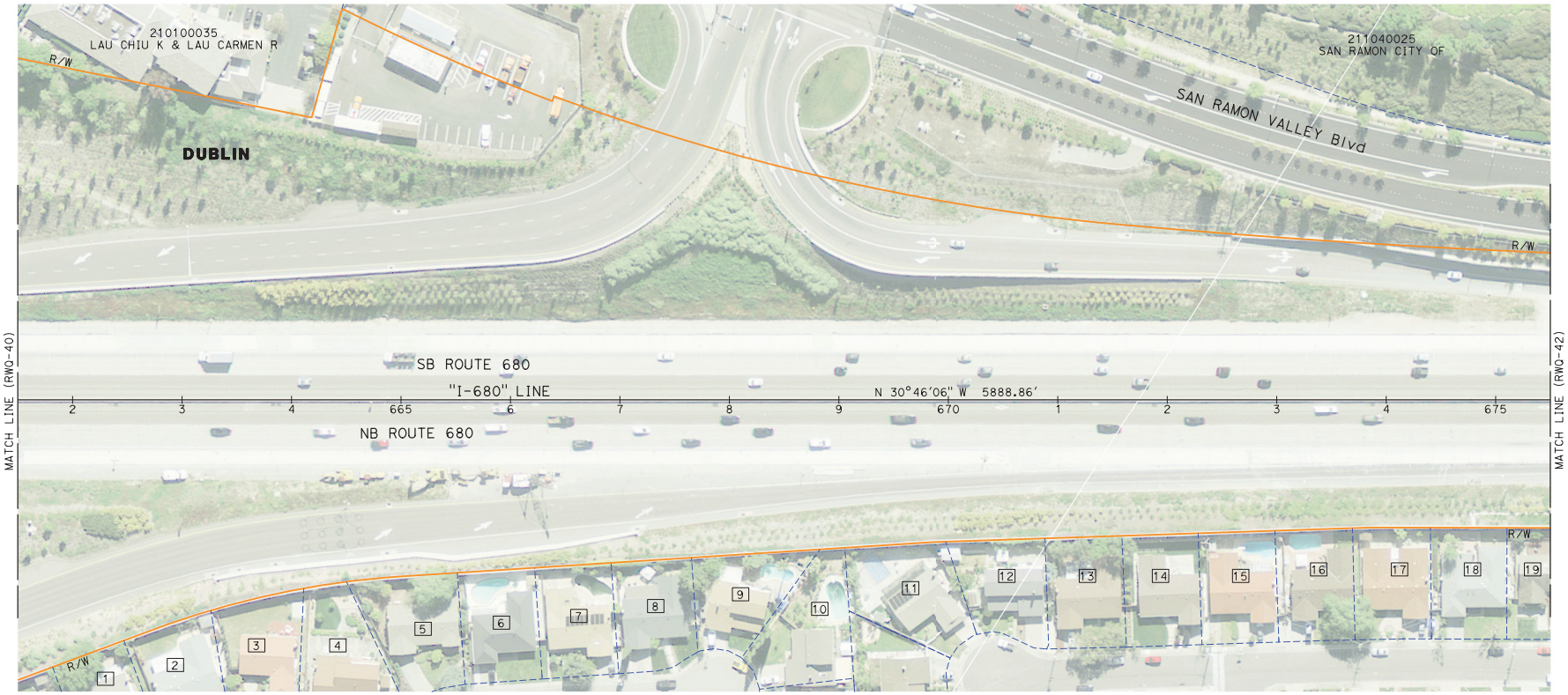

PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-41

REVISED BY	DATE REVISED
M. FALLAHA	M. GOGOSANU

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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USERNAME => josh.sun
DGN FILE => RWQ-041.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No.	ASSESSOR'S PARCEL NUMBER	OWNER
1	210432019	SMITH SEAN
2	210432018	MORGAN MITCHEL L
3	210432017	OBRIEN PATRICK J TRE
4	210432016	RAJPUT ABDUL HAMID & HAMID ABIDA
5	210432015	HURTADO LIVING TRUST
6	210432014	CANTLION HENRY C TRE
7	210432013	YOUNG ANNY L & HARRIS KEVIN M
8	210432012	GLORIA KIM & FELIX MIRANDA
9	210432011	ESTRADA FAUSTINO & MARIA A
10	210441010	SANTOS CELINA C & SANTOS-ALVINEZ RAYMUNDA

No.	ASSESSOR'S PARCEL NUMBER	OWNER
11	210441011	BANIKARIM HEDIEH
12	210441012	APODACA GILBERT L & K M TRE
13	210441013	LINVILLE RICHARD A & ANN MARIE
14	210441014	KWONG PATRICK Y & KATHY K
15	210441015	WONG LAWRENCE F & PAULANN
16	210441016	MISTRY PARESH M & VESTA R
17	210441017	HEMPEL ROBERT A TRE
18	210441018	FRANK CHARMAINE RENEE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	R10.6/R21.9		
04	CC	680	R0.0/R1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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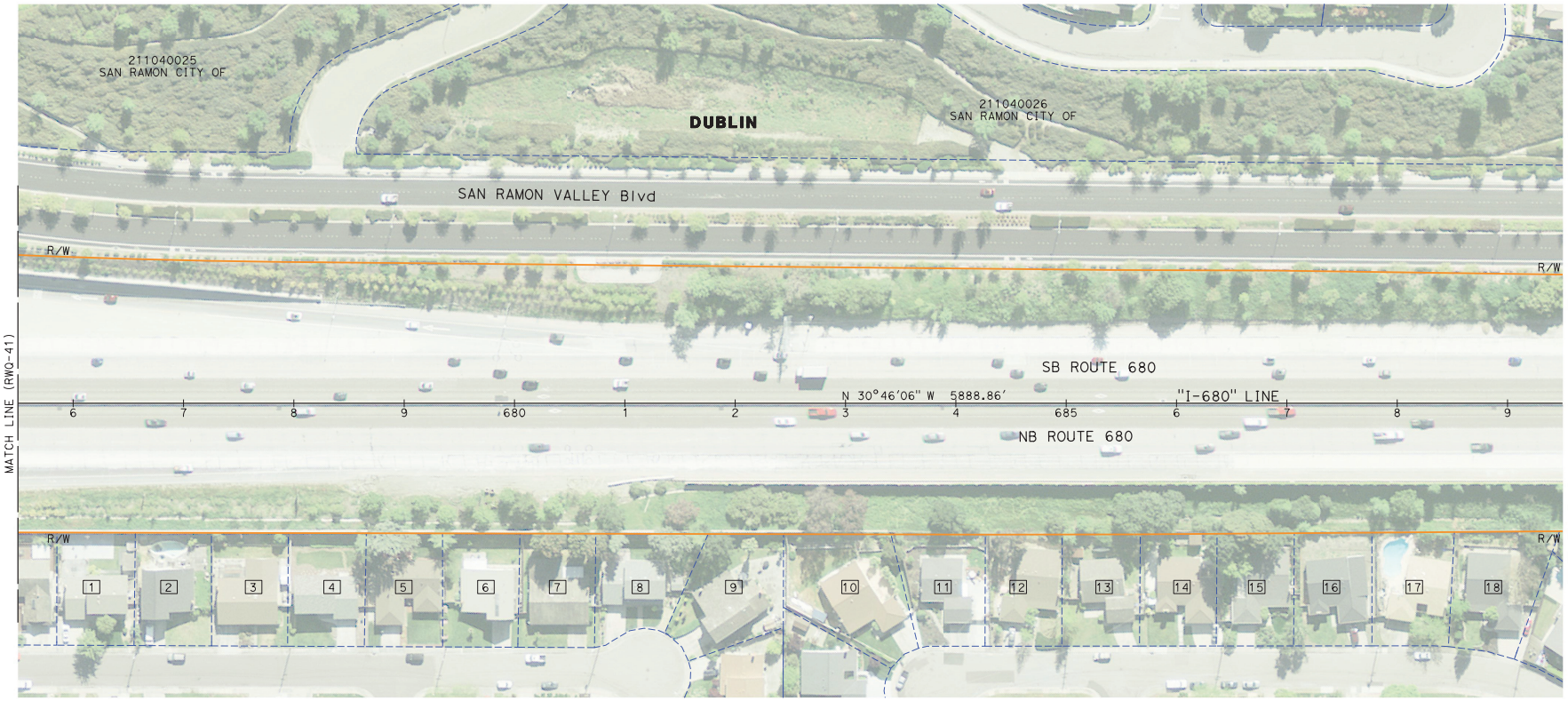


PRELIMINARY PLANS SUBJECT TO REVISION

RIGHT OF WAY REQUIREMENT MAP

SCALE: 1" = 50'

RWQ-42

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	M. FALLAHA	M. GOGOSANU	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:23

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => RWQ-042.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Attachment - H

Transportation Management Plan Data Sheet

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

(Preliminary TMP Elements and Costs)

PROJECT MANAGER Jack Siauw	(510) 286-4193
PROJECT ENGINEER Denis Ocampo/Abhijeet Bhoi(AECOM)	(510) 286-4697/(408) 508-2316
DIST-EA/PROJ ID: 04-0Q3000/0418000069 PROGRAM (HB1, HE11, etc.): Local Funds	
PROJECT COMMON NAME I-680 Express Lanes from SR 84 to Alcosta Boulevard	
CO-RTE-PM (KP): 04-ALA-680-PM R10.6/R21.9 04-CC-680-PM R0.0/R1.1	
LEGAL DESCRIPTION: Construction on State Highway in Alameda and Contra Costa Counties in and near Sunol, Pleasanton, Dublin and San Ramon on Route 680 from 0.7 Miles South of Scott's Corner Separation to 1.1 Miles North of Alcosta Blvd.	
DETAILED WORK DESCRIPTION: The project proposes to construct HOV/Express Lanes on northbound and southbound I-680 from SR 84 in Alameda County to north of Alcosta Boulevard in Contra Costa County.	
CONSTRUCTION COST ESTIMATE: $245,430,293 (Current Year Cost)	
PROJECT PHASE: PSR ☐ PR ☒ PS&E ☐ _____%	

Traffic Impact Descriptions

A) Does the proposed project includes long term closures (> 24 hours) Yes___ No X
[If "No", Continue to Item D (PreliminaryTMP Elements and Costs.). If "Yes", Check Applicable Facilities.]

- ☐ Freeway Lanes
- ☐ Freeway Shoulder
- ☐ Freeway Connectors
- ☐ Freeway Off-ramps
- ☐ Freeway On-ramps
- ☐ Local Streets
- ☐ Full Freeway Closures

B) Are there any construction strategies that can restore existing number of lanes?
(Check Applicable Strategies)

- ☐ Temporary Roadway Widening Structure Involvement? Yes____ No____
  (If yes, notify Project Manager)
- ☐ Lane Restriping (Temporary Narrow Lane Widths) Yes___ No____
- ☐ Roadway Realignment (Detour Around Work Area)
- ☐ Median and/or Right Shoulder Utilization
- ☐ Use of an HOV lane as a Temporary Mixed Flow Lane
- ☐ Staging Alternatives (Explain Below)

Notes:

_____

_____

C) Calculated Delays (To be performed if construction strategies in Item B do not mitigate congestion resulting from Item A)

1. Estimated Maximum Individual Vehicle Delay _____Minutes
2. Existing or Acceptable Individual Vehicle Delay _____Minutes
3. Estimated Individual Vehicle Delay Requiring Mitigation [(l) - (2)] _____Minutes
4. Estimated Delay Cost (Most Applicable)
   - ☐ Extended Weekend Closure $_____
   - ☐ Weekly (7 days) $_____
5. Estimated Duration of Project Related Delays _____
6. Cost of Construction Related Delays [(4 x 5)] $_____

D) Preliminary TMP Elements and Cost

1. Public Information
   - ☒ a. Brochures and Mailers $ 20,000
   - ☒ b. Press Release $ 15,000
   - ☐ c. Paid Advertising $_____
   - ☐ d. Public Information Center/Kiosk $_____
   - ☒ e. Public Meeting/Speakers Bureau $ 20,000
   - ☐ f. Telephone Hotline $_____
   - ☒ g. Internet $ 10,000
   - ☒ h. Notification to impacted groups (Bicycle users, Pedestrians with disability, others.) $ 20,000
   - ☒ i. Others _____ $ 40,000

   SUB TOTAL **$** 125,000

2. Motorists Information strategies
   - ☐ a Changeable Message Signs (Fixed) $_____
   - ☒ b. Changeable Message Signs (Portable) $ 600,000
   - ☒ c. Ground Mounted Signs $ 188,000
   - ☐ d. Highway Advisory Radio $_____
   - ☒ e. Caltrans Highway Information Network (CHIN) $ 5,000
   - ☐ f. Revised Transit Schedules/Maps $_____
   - ☐ g. Others _____ $_____

   SUB TOTAL **$** 793,000

3. Incident Management
   - ☒ a. Construction or Maintenance Zone Enhanced Enforcement Program (COZEEP or MAZEEP) $ 3,000,000
   - ☒ b. Freeway Service Patrol $ 365,000
   - ☒ c. Traffic Management Team $ 125,000
   - ☐ d. New CCTVs and Detectors $_____
   - ☐ e. Others _____ $_____

   SUB TOTAL **$** 3,490,000

4. Construction Strategies (In Addition to Elements Identified on Item B)

☒	a.. Off Peak/Night/Weekend Work (Lane Closure Charts)	$ 20,000
☐	b. Reversible Lanes	$_____
☐	c. Total Facility Closure	$_____
☐	d. Extended Weekend Closure	$_____
☐	e. Truck Traffic Restrictions	$_____
☒	f. Reduced Speed Zone	$ 100,000
☒	g. Connector and Ramp Closures	$ 20,000
☐	h. Incentive and Disincentive	$_____
☐	i. Moveable Barrier	$_____
☒	j. Others _____	$ 300,000
	SUB TOTAL	**$** 440,000

5. Demand Management

☐	a. HOV Lanes/Ramps (New or Convert)	$_____
☐	b. Park and Ride Lots	$_____
☐	c. Rideshare Incentives	$_____
☐	d. Variable Work Hours	$_____
☐	e. Telecommute	$_____
☒	f. Ramp Metering (New Installation)	$ 100,000
☐	g. Ramp Metering (Maintain Existing)	$_____
☐	h. Others _____	$_____
	SUB TOTAL	**$** 100,000

6. Alternate Route Strategies

☐	a. Add Capacity to Freeway Connector	$_____
☐	b. Street Improvement (widening, traffic signal, etc)	$_____
☐	c. Traffic Control Officers	$_____
☐	d.. Parking Restrictions	
☐	e. Others _____	$_____
	SUB TOTAL	**$**_____

7. Other Strategies

☐	a. Application of New Technology	$_____
☐	b. Others _____	$_____
	SUB TOTAL	**$**_____

8. The Project includes the following: (Check applicable type of facility closures)

- ☒ a. Highway or Freeway Lanes
- ☒ b. Highway or Freeway Shoulders
- ☐ c. Full Freeway Closure
- ☒ d. Freeway On/Off-Ramps
- ☐ e. Freeway Connectors
- ☒ f. Local Streets
- ☐ g. Prolonged Ramp Closures

9. Major operations requiring traffic control and working days for each

Operation	# of Working Days	# of Traffic Control Days
☒ a. Clearing and Grubbing	15	10
☒ b. Existing Feature Removal	25	20
☒ c. Excavation of Embankments Construction	80	75
☒ d. Structural Section Construction	120	110
☒ e. Drainage Feature Construction	40	30
☒ f. Structures Construction	240	200
☒ g. MBGR/Barrier Construction	45	40
☒ h. Striping	25	20
☒ i. Electrical Component Construction	70	60
☒ j. Other	40	35
Total days	700	600

TOTAL ESTIMATED COST OF TMP ELEMENTS = $ 4,948,000

Notes : Extensive TMP may be required for the significant impacts.

PREPARED BY (Consultant) Abhijeet Bhoi DATE 1/10/19

APPROVAL RECOMMENDED BY
(Caltrans Oversight Engineer) Dennis Ocampo DATE 1/10/19

APPROVED BY (TMP Office) Hasan Alale DATE 1/18/19

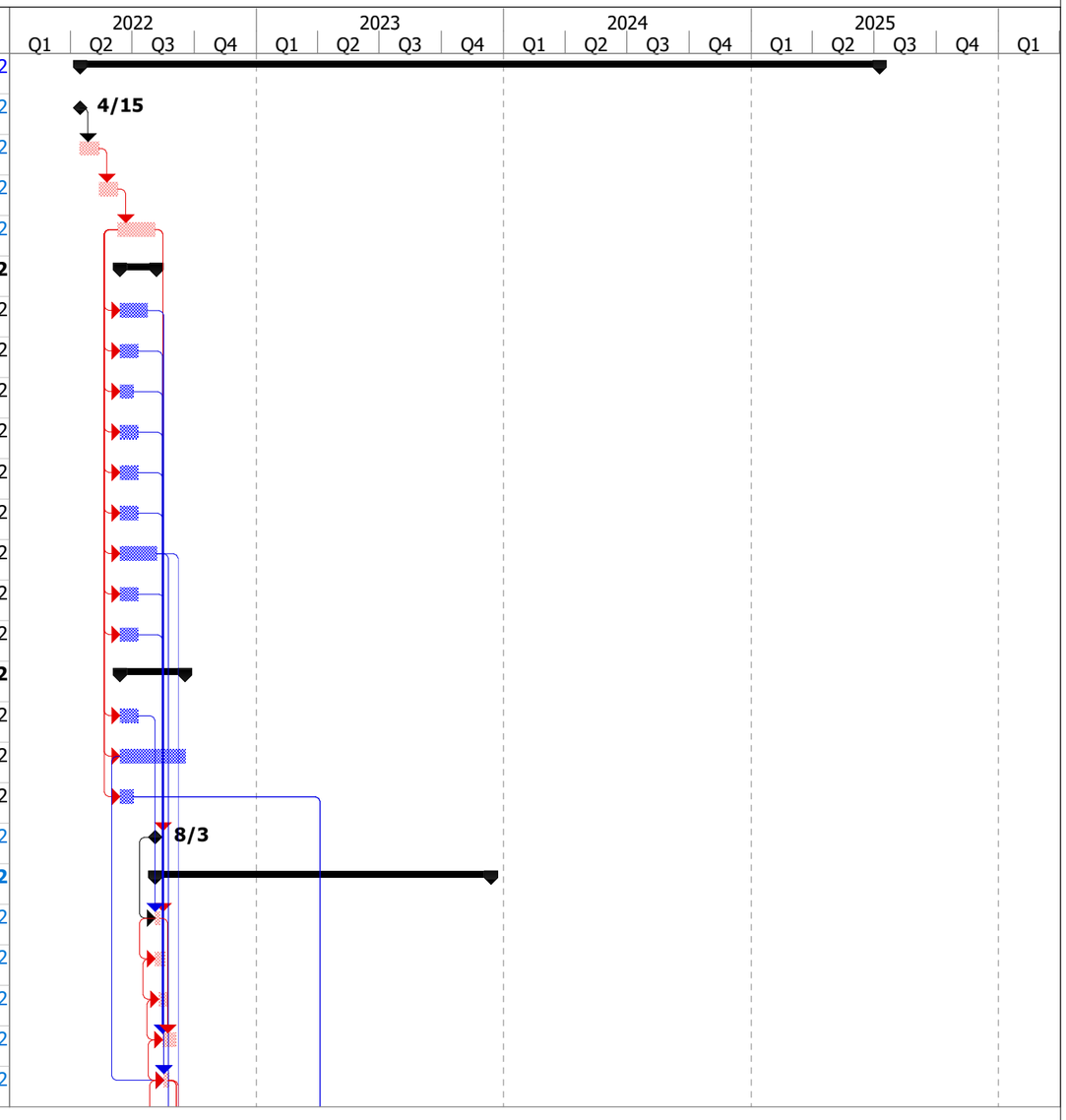
Attachment - I

Preliminary Construction Schedule and Proposed Construction Staging Plan

I-680 Express Lanes from SR 84 to Alcosta Blvd Project (PA&ED)
Preliminary Construction Schedule (11-15-2019)

04-ALA-680, PM R10.6/R21.9
04-CC-680, PM R0.0/R1.1
EA 04-0Q3000

ID	Task Name	Duration	Start
1	I-680 Alcosta Express Lanes Construction Schedule	843 days	Fri 4/15/22
2	Bid Opening	0 days	Fri 4/15/22
3	Bid Award (4 weeks after B.O.)	20 days	Fri 4/15/22
4	Contract Approval (4 week after B.A.)	20 days	Fri 5/13/22
5	55 Calendar days allowed to Start following Contract Approval	55 days	Fri 6/10/22
6	**Submittals**	**40 days**	**Mon 6/13/22**
7	Traffic Control Plan & Approval	30 days	Mon 6/13/22
8	Notification of DRB nominee & disclosure	20 days	Mon 6/13/22
9	SWPPP Submittal & Approval	15 days	Mon 6/13/22
10	Notice of Materials To Be Used	20 days	Mon 6/13/22
11	Contingency Plan for reopening public traffic closures	20 days	Mon 6/13/22
12	Vendor's Written Statements of electrical/structural/sign panel order	20 days	Mon 6/13/22
13	Temporary Shoring Plan	40 days	Mon 6/13/22
14	Express Lane Equipment	20 days	Mon 6/13/22
15	Baseline Schedule	20 days	Mon 6/13/22
16	**Procurement**	**70 days**	**Mon 6/13/22**
17	Reinforcing Steel	20 days	Mon 6/13/22
18	Traffic Signal Equipment	70 days	Mon 6/13/22
19	PC Conc Inlets	15 days	Mon 6/13/22
20	**1st Working Day**	0 days	Wed 8/3/22
21	**STAGE 1**	**354 days**	**Thu 8/4/22**
22	Mobilize	5 days	Thu 8/4/22
23	Temp Traffic Control Modifications	10 days	Thu 8/4/22
24	Initial Staking	10 days	Tue 8/9/22
25	Apply Sufficient SWPPP & ESA Fencing Measures for Entire Stage 1	15 days	Mon 8/15/22
26	Temp Traffic Controls (temp K-rail, delineators, crush cushions, signs, etc)	5 days	Wed 8/17/22

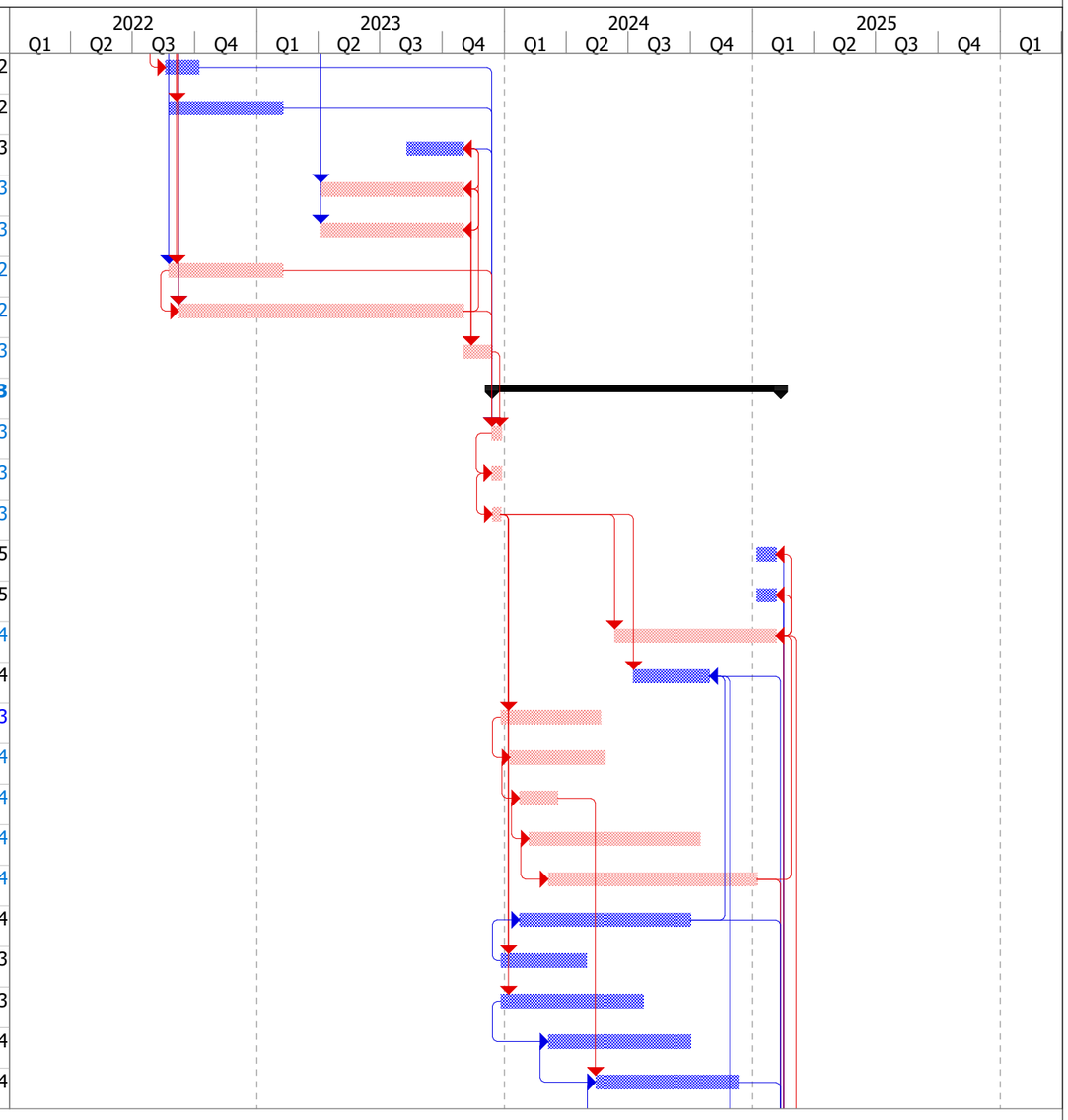


Task	Rolled Up Critical Task	Project Summary	Manual Task	Finish-only
Critical Task	Rolled Up Milestone	Group By Summary	Duration-only	Critical
Milestone	Rolled Up Progress	Inactive Task	Manual Summary Rollup	Critical Split
Summary	Split	Inactive Milestone	Manual Summary	Progress
Rolled Up Task	External Tasks	Inactive Summary	Start-only	Deadline

I-680 Express Lanes from SR 84 to Alcosta Blvd Project (PA&ED)
Preliminary Construction Schedule (11-15-2019)

04-ALA-680, PM R10.6/R21.9
04-CC-680, PM R0.0/R1.1
EA 04-0Q3000

ID	Task Name	Duration	Start
27	Construct concrete barriers along I-680 median	35 days	Fri 8/19/22
28	Construct overhead sign structures along I-680 median	120 days	Wed 8/24/22
29	Construct CHP area along I-680 median	60 days	Wed 8/9/23
30	Construct inside pavement widening for NB I-680 Express Lane	150 days	Wed 4/5/23
31	Construct inside pavement widening for SB I-680 Express Lane	150 days	Wed 4/5/23
32	Construct retaining wall No. 162 along I-680 median	120 days	Wed 8/24/22
33	Construct retaining wall No. 213 along I-680 median	300 days	Wed 9/7/22
34	Construct Midwest guardrail system along I-680 median	30 days	Wed 11/1/23
35	**STAGE 2 PHASE 1**	**304 days**	**Wed 12/13/23**
36	Temp Traffic Control Modifications	10 days	Wed 12/13/23
37	Clearing and Grubbing for Entire Stage 2 Phase 1	10 days	Wed 12/13/23
38	Modify SWPPP	8 days	Thu 12/14/23
39	Construct Maintenance Vehicle Pullout along SB I-680 right shoulder	20 days	Tue 1/7/25
40	Construct concrete barrier along NB I-680 right shoulder	20 days	Tue 1/7/25
41	Construct outside pavement widening along NB I-680 and retaining wall No. 180 & 424	170 days	Tue 6/11/24
42	Construct outside pavement widening along SB I-680	80 days	Tue 7/9/24
43	Construct retaining wall No. 153 along NB I-680 shoulder	105 days	Tue 12/26/23
44	Construct retaining wall No. 310 along NB I-680 shoulder	100 days	Tue 1/9/24
45	Construct retaining wall No. 579 along NB I-680 Dublin Blvd on-ramp right shoulder	40 days	Tue 1/23/24
46	Construct retaining wall No. 581 along NB I-680 shoulder	180 days	Tue 2/6/24
47	Construct retaining wall/sound wall No. 599 along NB I-680 shoulder	220 days	Tue 3/5/24
48	Construct retaining wall/sound wall No. 600 on SB I-680 shoulder	180 days	Tue 1/23/24
49	Construct retaining wall No. 633 on SB I-680 shoulder	90 days	Tue 12/26/23
50	Construct outside widening of Pleasanton-Sunol Road Undercrossing (Br No. 33-0387) along NB I-680	150 days	Tue 12/26/23
51	Construct outside widening of Amador Valley Blvd Undercrossing (Br No. 33-0356) along northbound I-680	150 days	Tue 3/5/24
52	Construct outside widening of Dublin Blvd Undercrossing (Br No. 33-0373) along northbound I-680	150 days	Tue 5/14/24

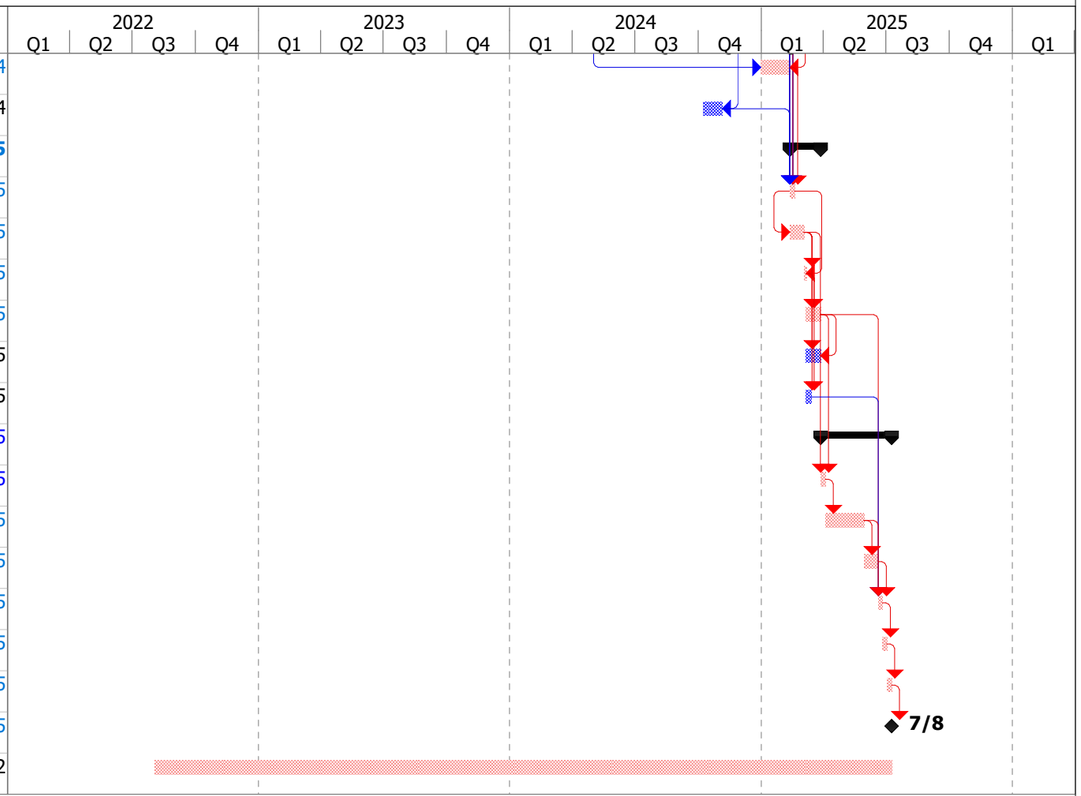


Task
Critical Task
Milestone
Summary
Rolled Up Task
Rolled Up Critical Task
Rolled Up Milestone
Rolled Up Progress
Split
External Tasks
Project Summary
Group By Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
Critical
Critical Split
Progress
Deadline

I-680 Express Lanes from SR 84 to Alcosta Blvd Project (PA&ED)
Preliminary Construction Schedule (11-15-2019)

04-ALA-680, PM R10.6/R21.9
04-CC-680, PM R0.0/R1.1
EA 04-0Q3000

ID	Task Name	Duration	Start
53	Construct Midwest guardrail system along NB I-680 right shoulder	30 days	Tue 12/31/24
54	Construct Midwest guardrail system along SB I-680 right shoulder	20 days	Tue 10/8/24
55	**STAGE 2 PHASE 2**	**33 days**	**Tue 2/11/25**
56	Temp Traffic Control Modifications	5 days	Tue 2/11/25
57	Clearing and Grubbing for Entire Stage 2 Phase 2	15 days	Tue 2/11/25
58	Modify SWPPP	3 days	Tue 3/4/25
59	Construct outside pavement widening along NB I-680	15 days	Fri 3/7/25
60	Construct outside pavement widening along SB I-680	15 days	Fri 3/7/25
61	Construct concrete barrier along NB I-680 right shoulder	5 days	Fri 3/7/25
62	**STAGE 3**	73 days	Fri 3/28/25
63	Temp Traffic Control Modifications	5 days	Fri 3/28/25
64	Place Final Overlay	40 days	Fri 4/4/25
65	Place Final Stripe	15 days	Fri 5/30/25
66	Remove SWPPP Measures	4 days	Fri 6/20/25
67	Removal Temporary Traffic Controls	4 days	Thu 6/26/25
68	Punch List Items	5 days	Wed 7/2/25
69	Construction Completion	0 days	Tue 7/8/25
70	**TOTAL WORKING DAYS**	765 days	Wed 8/3/22



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Critical Task	Rolled Up Milestone	Group By Summary	Duration-only	Critical
Milestone	Rolled Up Progress	Inactive Task	Manual Summary Rollup	Critical Split
Summary	Split	Inactive Milestone	Manual Summary	Progress
Rolled Up Task	External Tasks	Inactive Summary	Start-only	Deadline

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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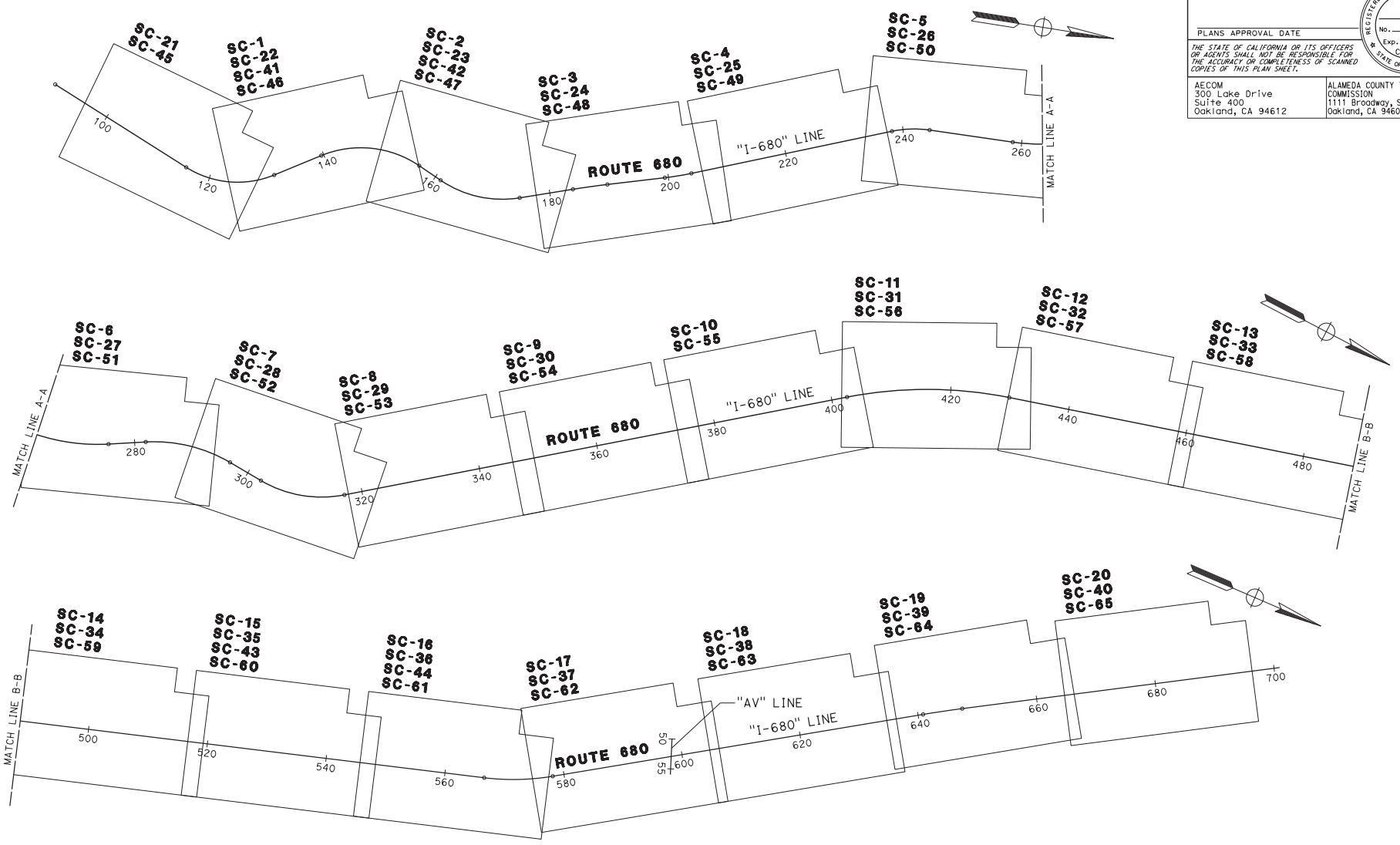
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607



STAGE CONSTRUCTION KEY MAP

NO SCALE

SCK-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SCK-001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

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NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FG SHOWN ON STAGE CONSTRUCTION IS FINAL GRADE.
3. UNLESS OTHERWISE NOTED, ALL TRAFFIC LANES SHALL BE 12' WIDE.
4. PLACE CB MARKERS ON ALL TEMPORARY RAILING (TYPE K).
5. ALL EXISTING SIGNS IN CONFLICT WITH TRAFFIC HANDLING PLAN SHALL BE COVERED OR REMOVED UNDER THE DIRECTION OF THE ENGINEER.
6. PRIOR TO OPENING ROADWAY TO PUBLIC TRAFFIC, ALL EXISTING OR TEMPORARY PAVEMENT DELINEATION IN CONFLICT WITH SIGNING PLAN SHALL BE REMOVED.
7. FOR PROPOSED OVERHEAD SIGNS, SEE LAYOUT SHEETS.

STAGE 1 TRAFFIC:

[1] MAINTAIN EXISTING TRAFFIC LANES UNLESS SHOWN OTHERWISE.

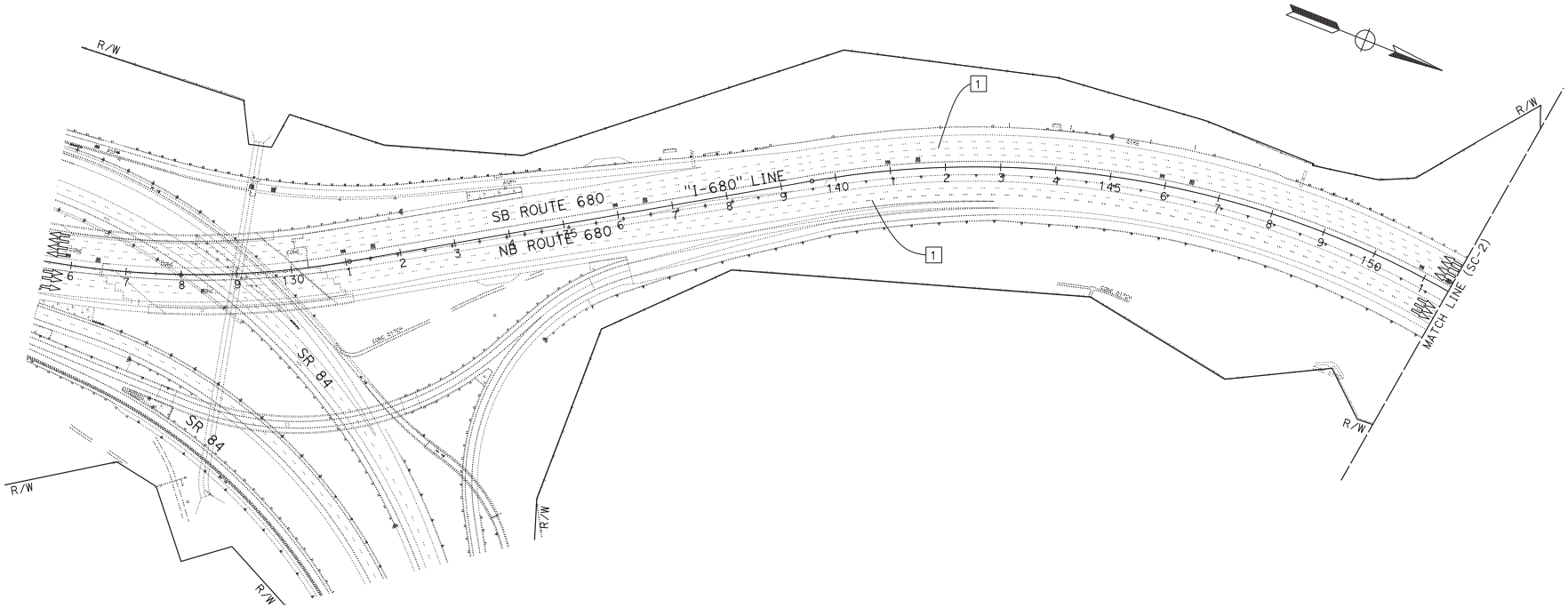
[2] SHIFT TRAFFIC LANES TO ACCOMMODATE CONSTRUCTION.

STAGE 1 CONSTRUCTION:

1. CONSTRUCT CONCRETE BARRIER ALONG I-680 MEDIAN.
2. CONSTRUCT OVERHEAD SIGN STRUCTURE ALONG I-680 MEDIAN
3. CONSTRUCT CHP AREA ALONG I-680 MEDIAN.
4. CONSTRUCT INSIDE PAVEMENT WIDENING FOR NB I-680 EXPRESS LANE.
5. CONSTRUCT INSIDE PAVEMENT WIDENING FOR SB I-680 EXPRESS LANE.
6. CONSTRUCT RETAINING WALL NO. 162 ALONG I-680 MEDIAN.
7. CONSTRUCT RETAINING WALL NO. 213 ALONG I-680 MEDIAN.
8. CONSTRUCT MIDWEST GUARDRAIL SYSTEM ALONG I-680 MEDIAN.

LEGEND:

- TEMPORARY RAILING (TYPE K)
- CONSTRUCTION THIS STAGE
- HMA OVERLAY THIS STAGE
- CONSTRUCTION OF STRUCTURE THIS STAGE
- STAGING AREA
- TEMPORARY SHORING
- TRAFFIC DIRECTION
- CONSTRUCTION ITEM No.
- TRAFFIC ITEM No.
- Temp ALTERNATIVE CRASH CUSHION



STAGE CONSTRUCTION PLAN
STAGE 1
SCALE 1" = 100'

SC-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
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TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

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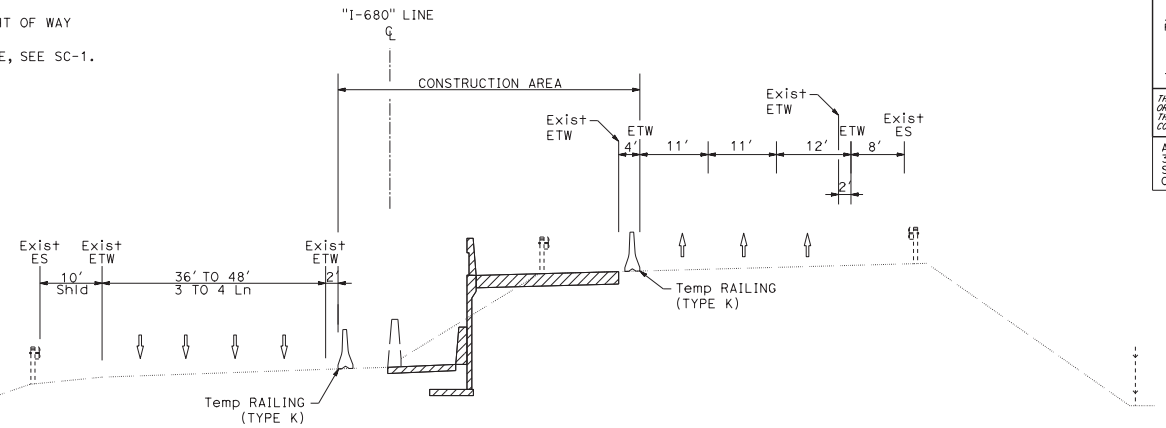
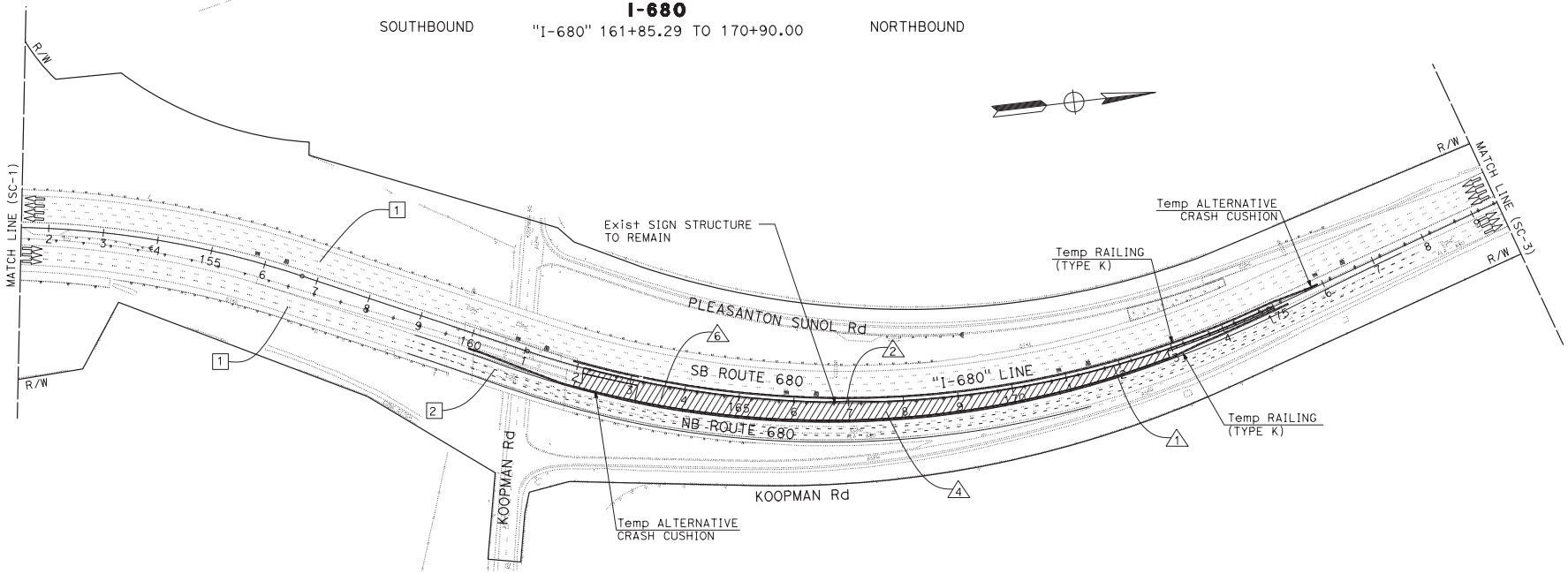
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



I-680

SOUTHBOUND "I-680" 161+85.29 TO 170+90.00 NORTHBOUND



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

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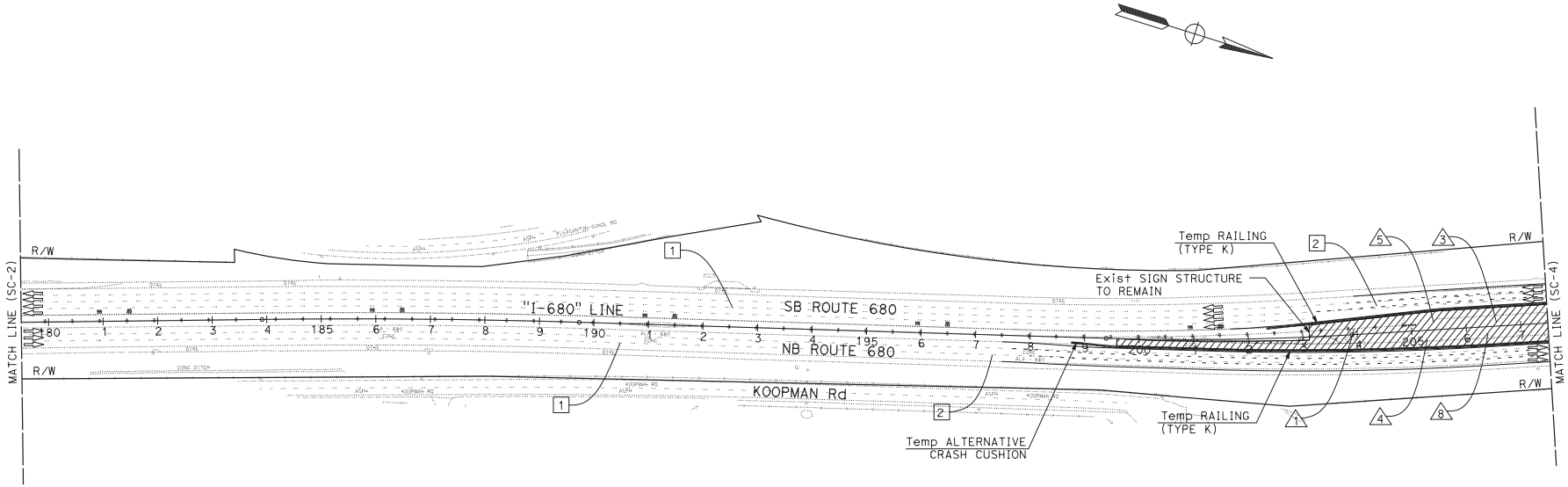
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

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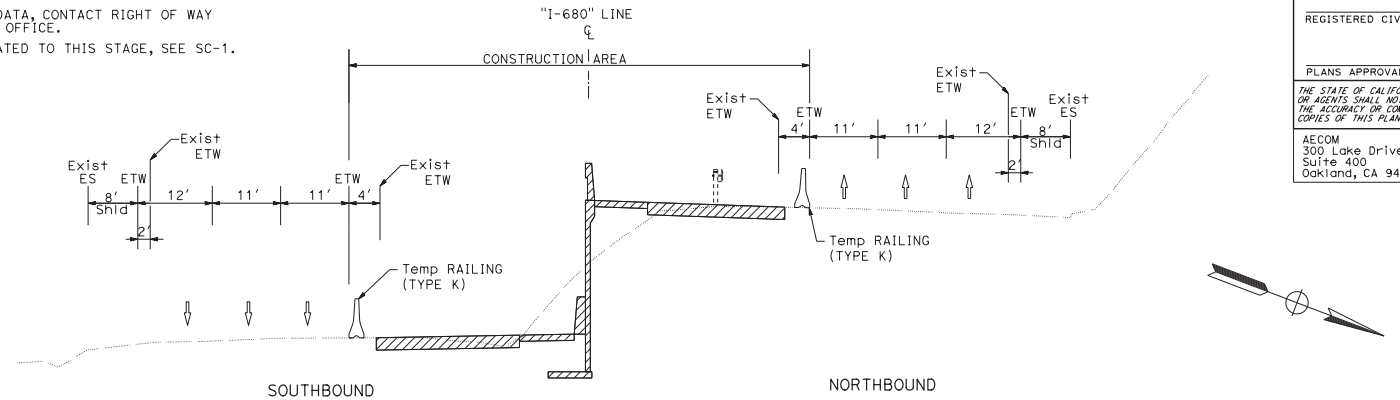
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



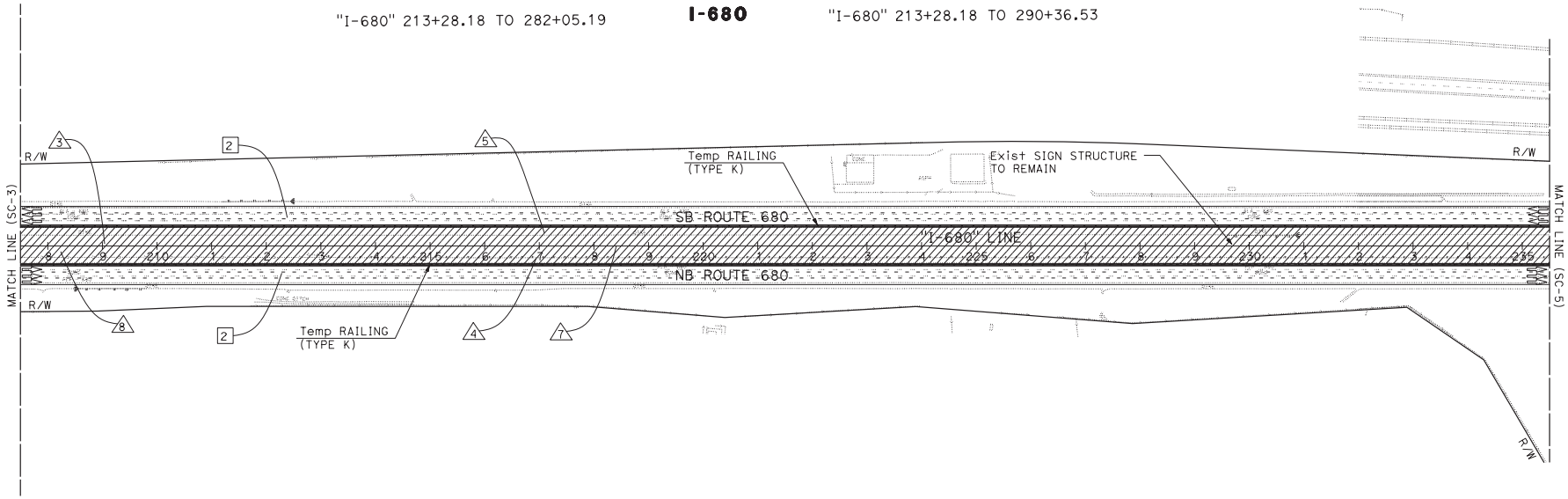
SOUTHBOUND

"I-680" 213+28.18 TO 282+05.19

I-680

NORTHBOUND

"I-680" 213+28.18 TO 290+36.53



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-4

REVISED BY	DATE REVISED
.	.

CALCULATED-DESIGNED BY: S. YARI
CHECKED BY: A. BHOI
CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
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BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-004.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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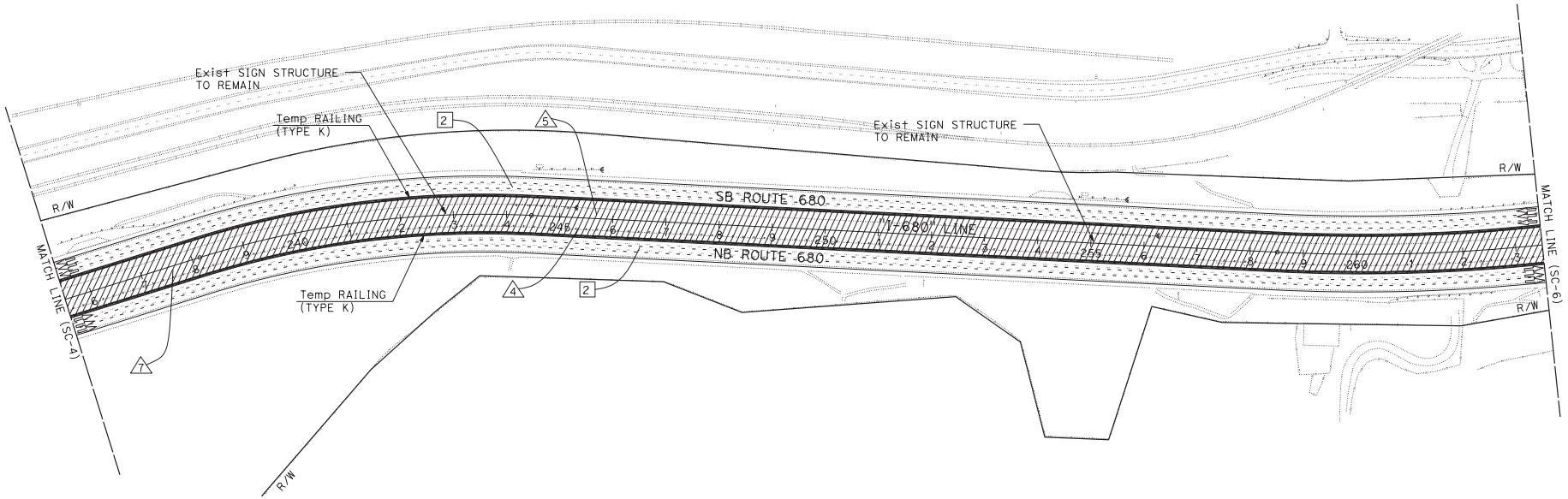
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN
STAGE 1
SCALE 1" = 100'

SC-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY / DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	. / .

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-005.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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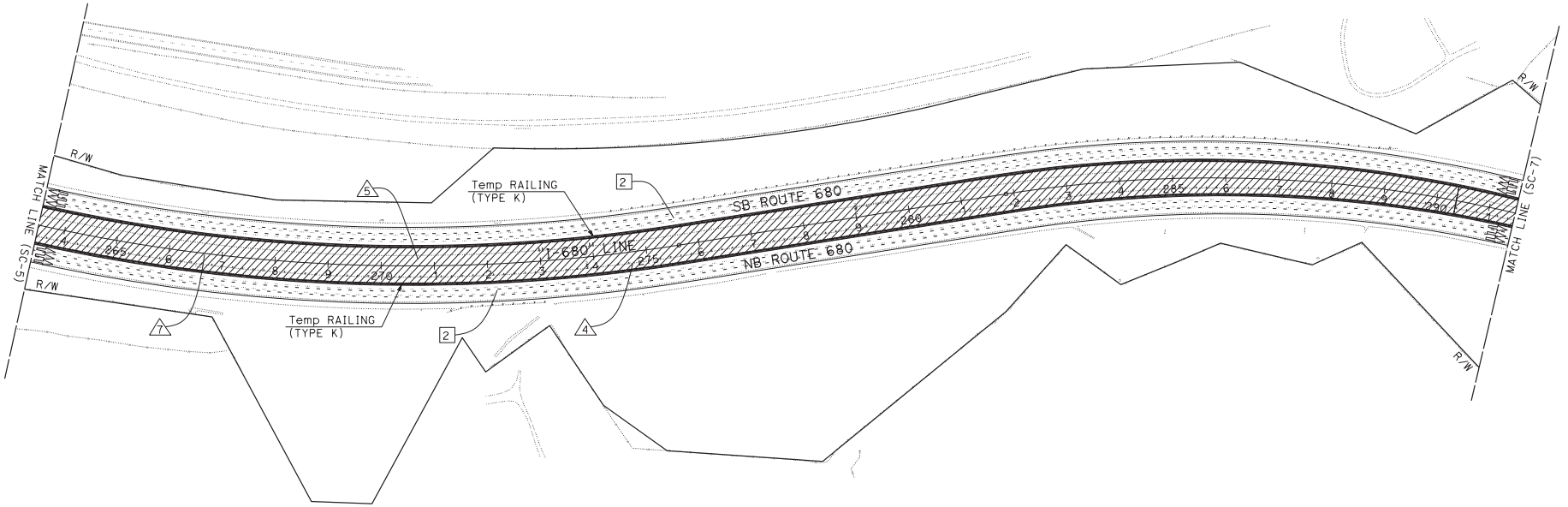

STAGE CONSTRUCTION PLAN
STAGE 1
SCALE 1" = 100'

SC-6

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
RAMSEY HISSEN	S. YARI	A. BHOI	.	.

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-006.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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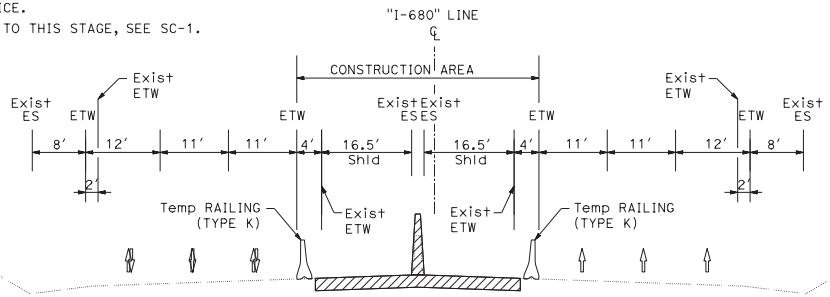
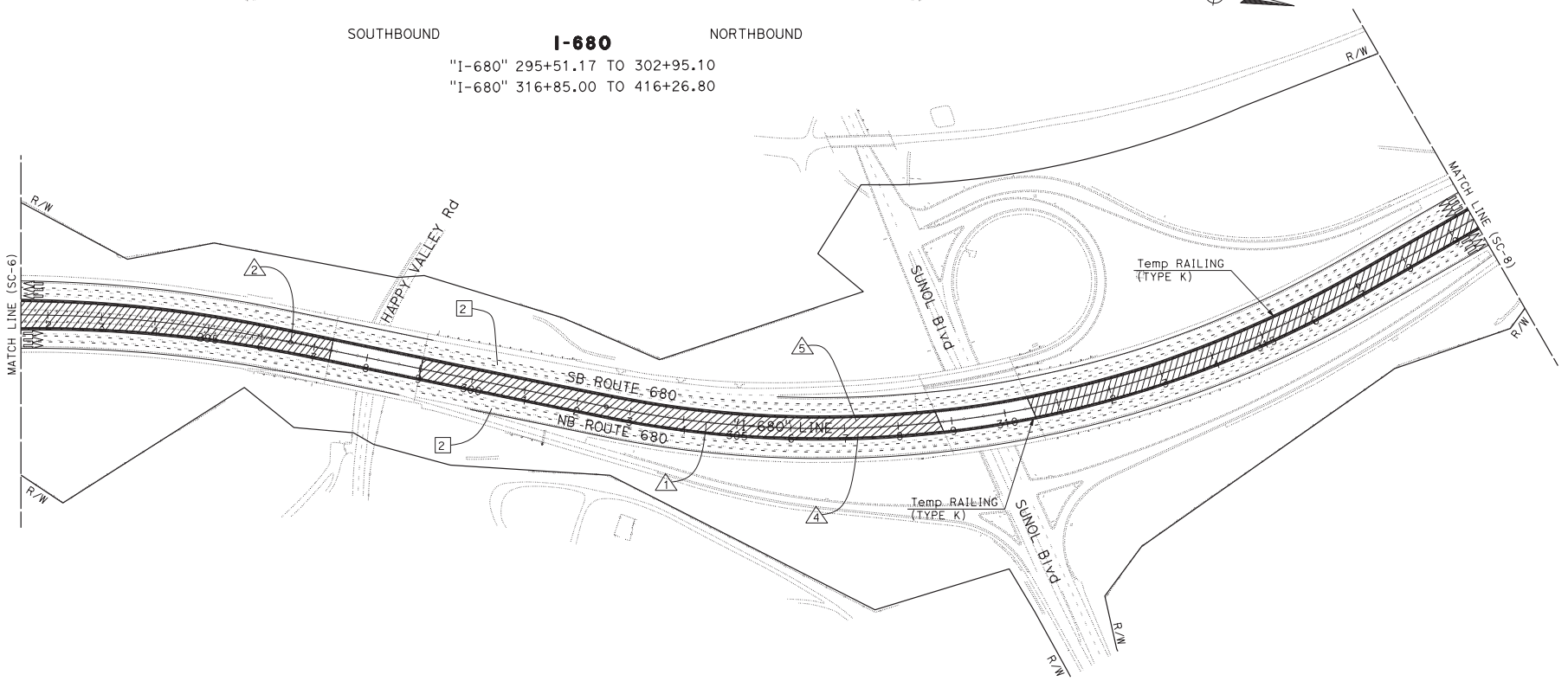
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



SOUTHBOUND **I-680** NORTHBOUND

"I-680" 295+51.17 TO 302+95.10
"I-680" 316+85.00 TO 416+26.80



STAGE CONSTRUCTION PLAN
STAGE 1

SCALE 1" = 100′

SC-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-007.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

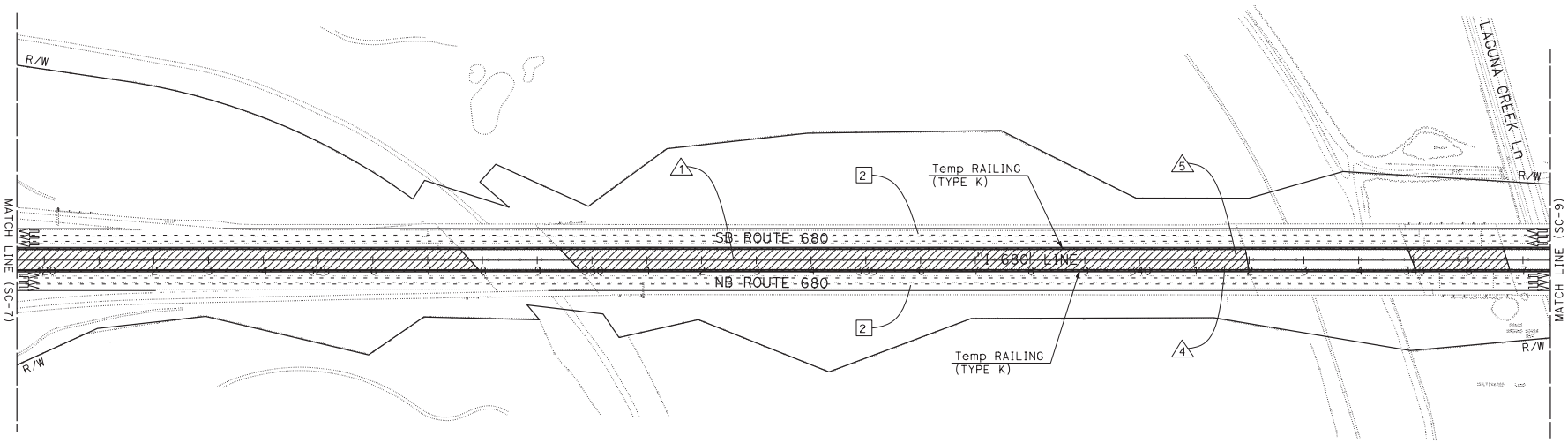
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-008.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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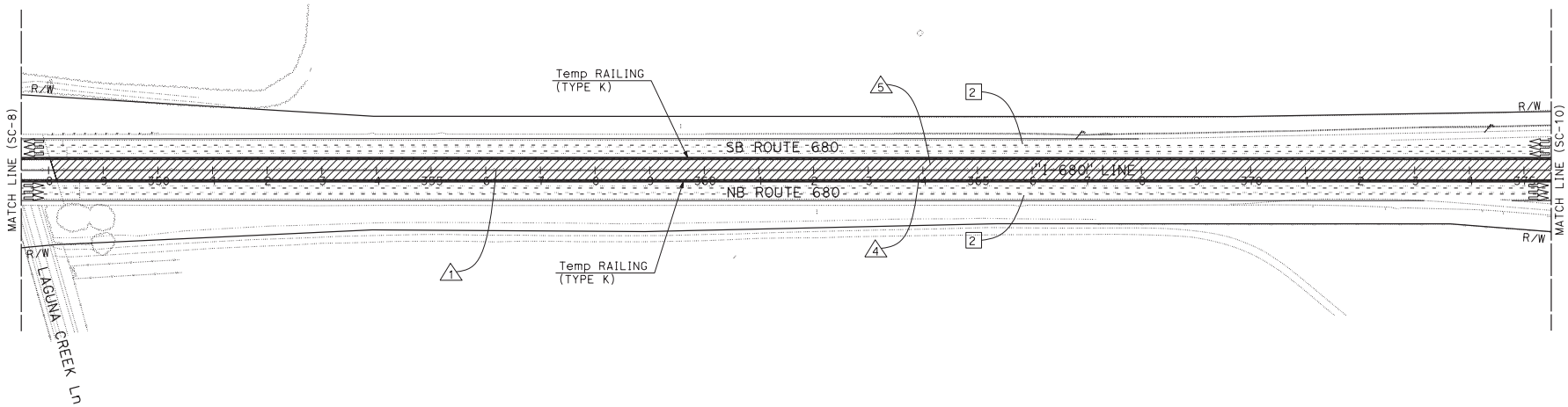
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-009.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

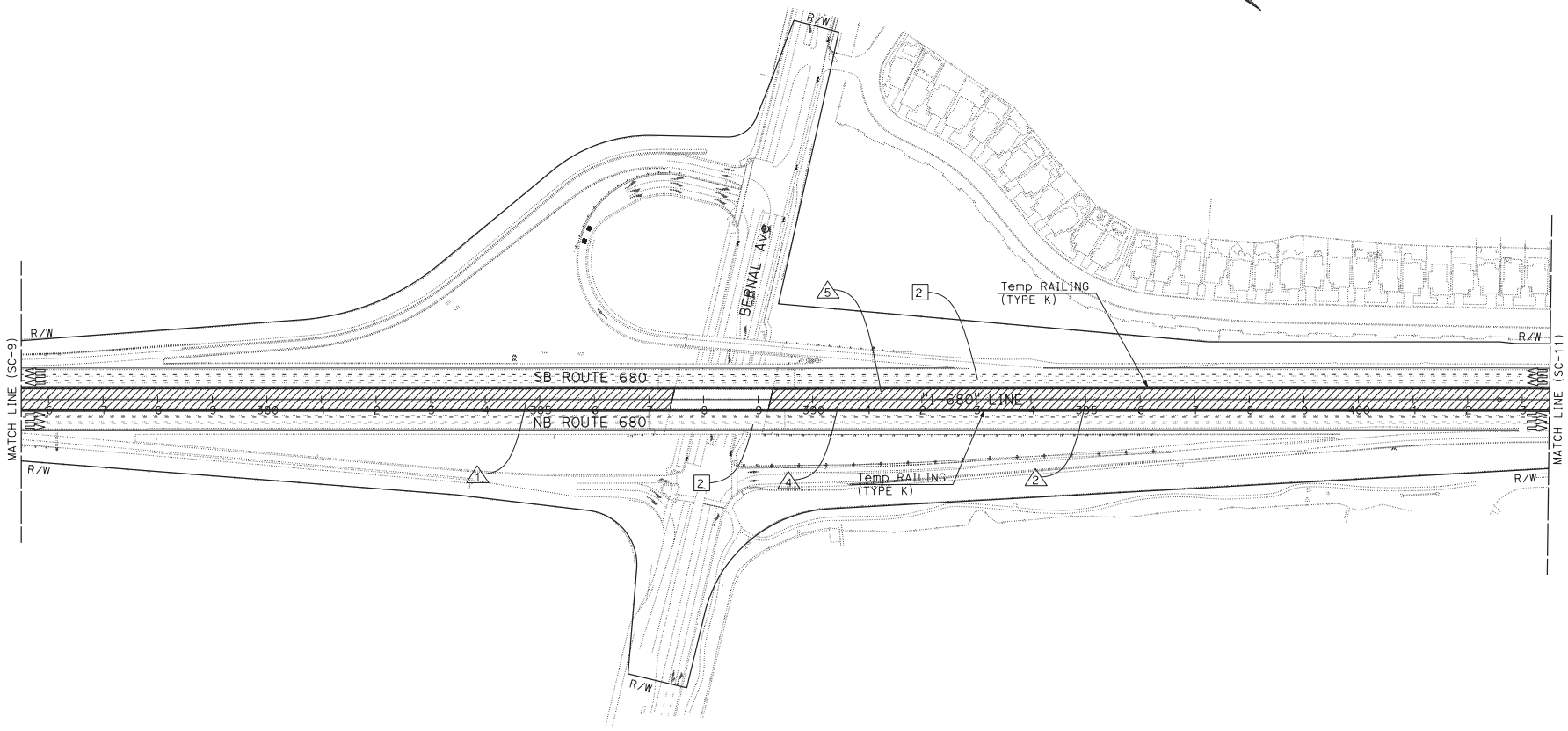
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN
STAGE 1
SCALE 1" = 100'

SC-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-010.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

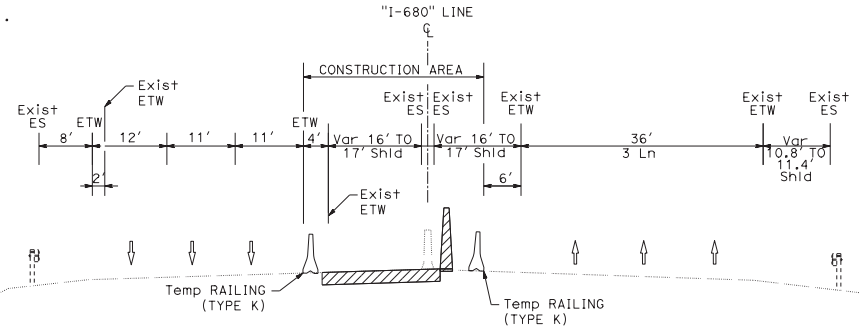
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

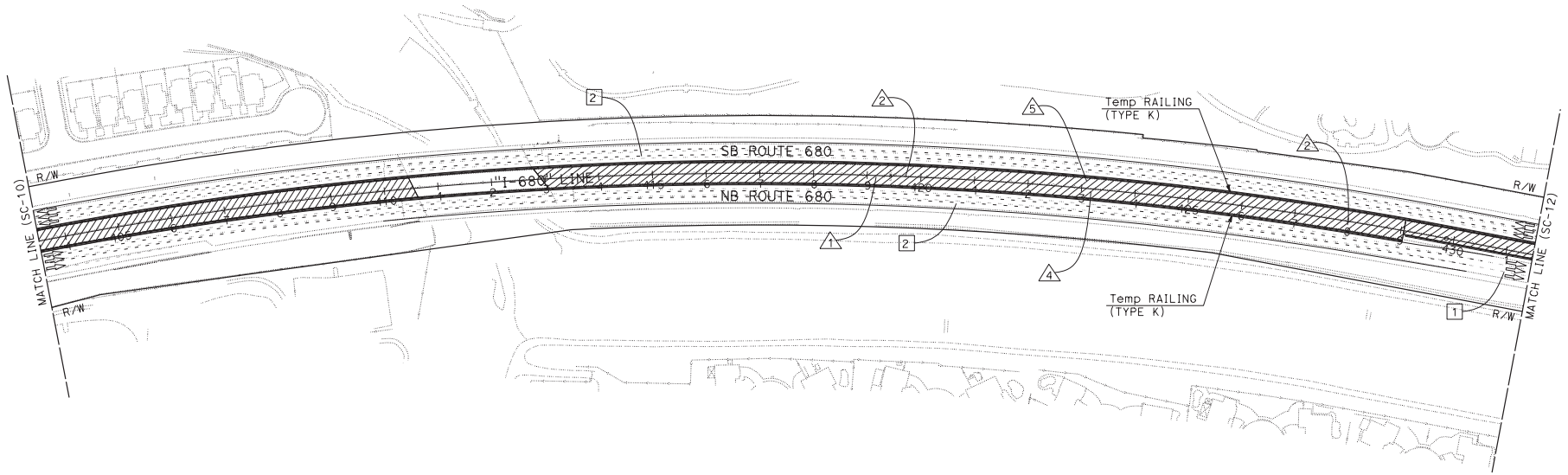
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



I-680

"I-680" 429+30.74 TO 469+73.33



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-011.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

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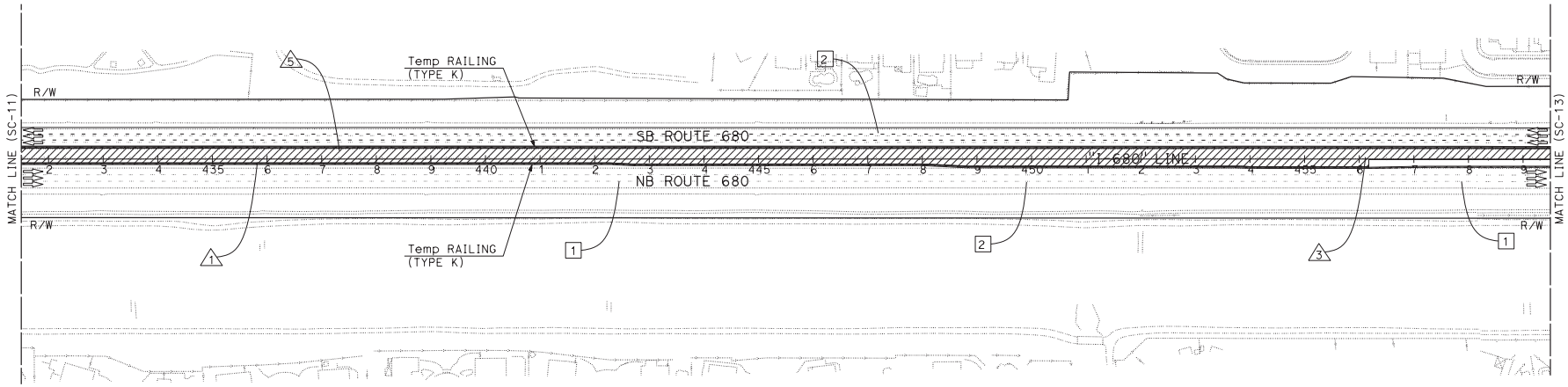
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-12

REVISED BY	.	S. YARI	CALCULATED-DESIGNED BY
DATE REVISED	.	A. BHOI	CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-012.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

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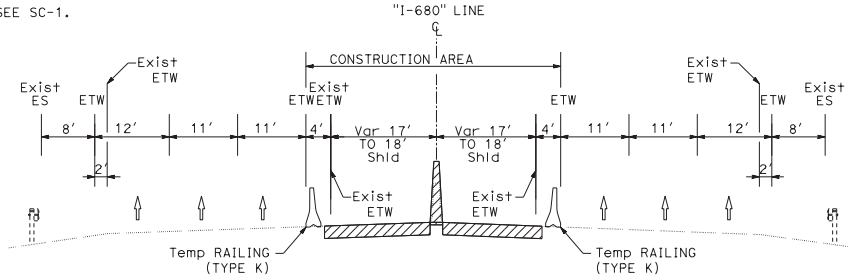
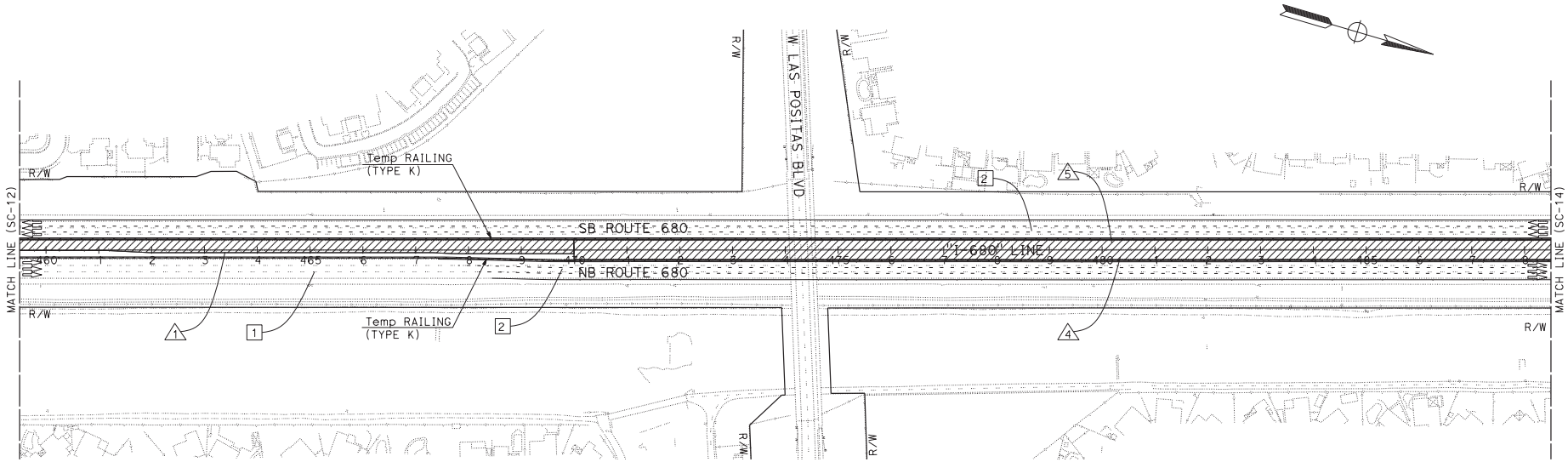


I-680

SOUTHBOUND "I-680" 483+80.00 TO 553+53.28 NORTHBOUND



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100′

SC-13

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
S. YARI	A. BHOI	.	.

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 11-18-19

DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-013.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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1111 Broadway, Suite 800
Oakland, CA 94607

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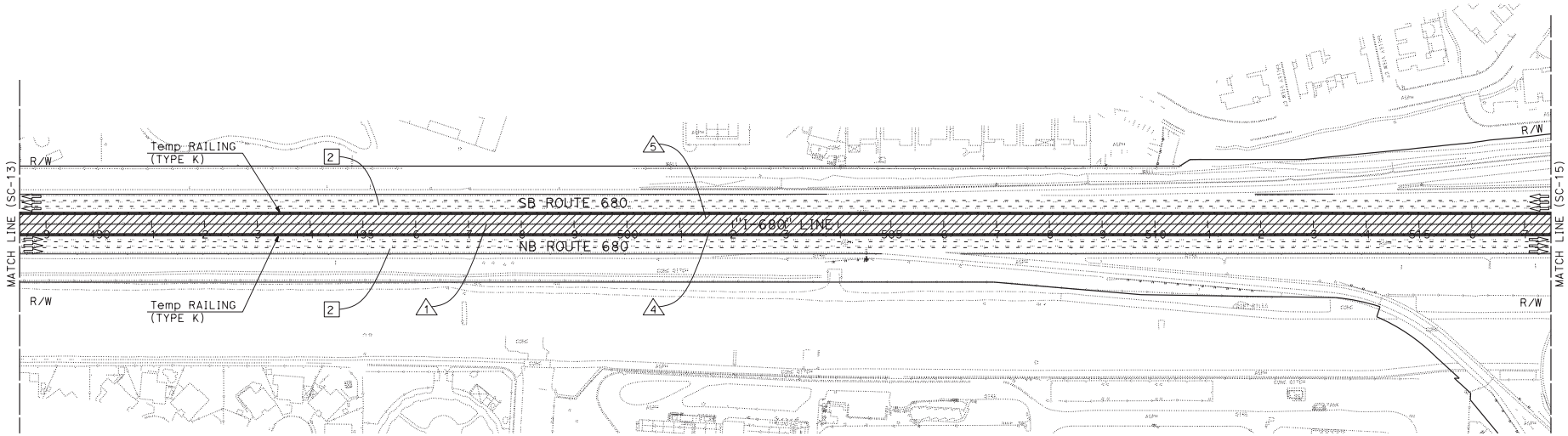
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

CALCULATED-DESIGNED BY: S. YARI

CHECKED BY: A. BHOI

REVISED BY: .

DATE REVISED: .

LAST REVISION
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31
11-18-19

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-014.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

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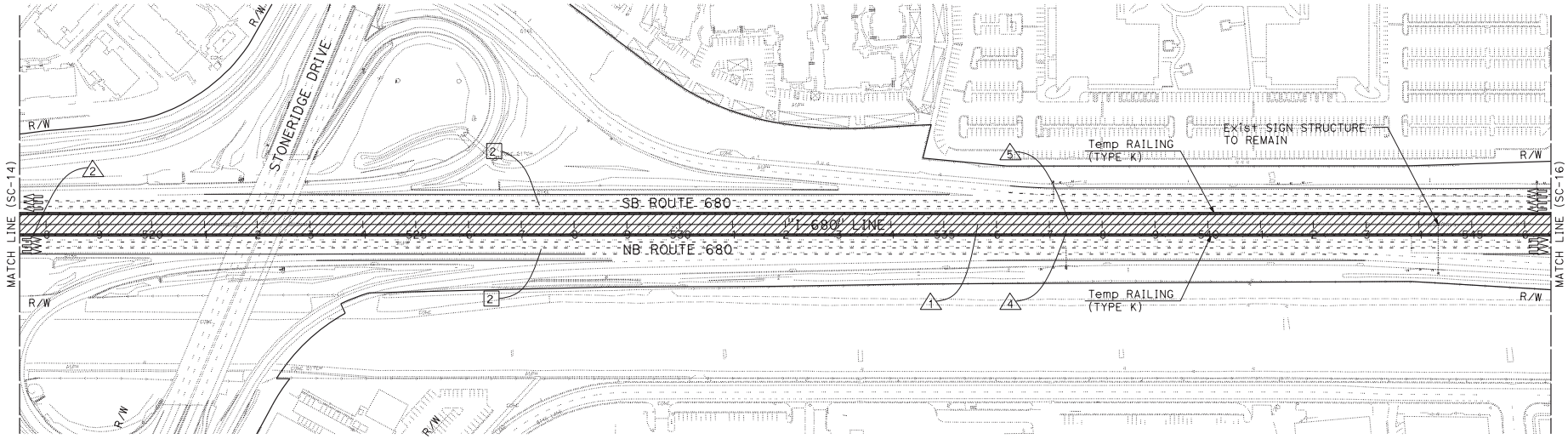
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN
STAGE 1
SCALE 1" = 100'

SC-15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	.
Caltrans	RAMSEY HISSEN	CHECKED BY	DATE REVISED	.
		S. YARI		
		A. BHOI		

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-015.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

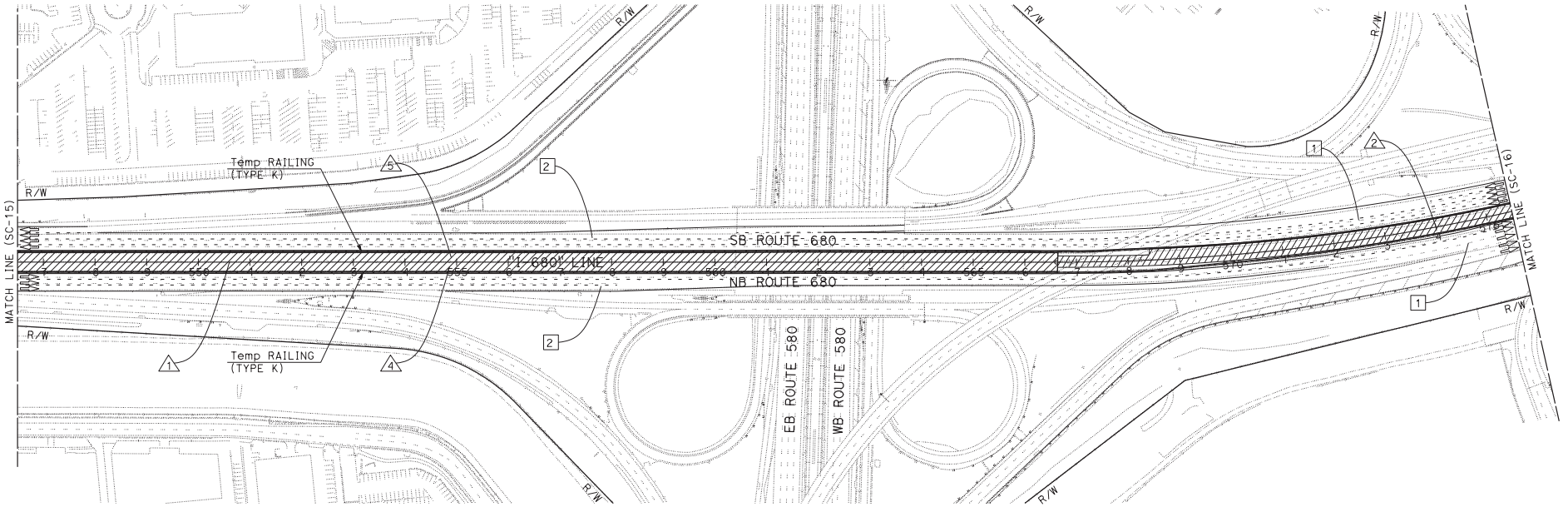
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN
STAGE 1
SCALE 1" = 100'

SC-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	.
Caltrans	RAMSEY HISSEN	CHECKED BY	DATE REVISED	.
		S. YARI		
		A. BHOI		

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-016.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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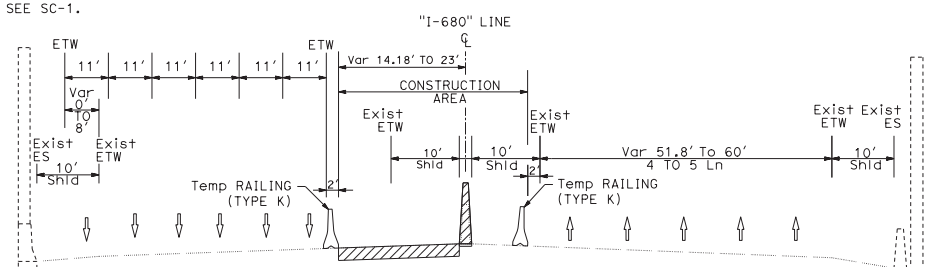
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

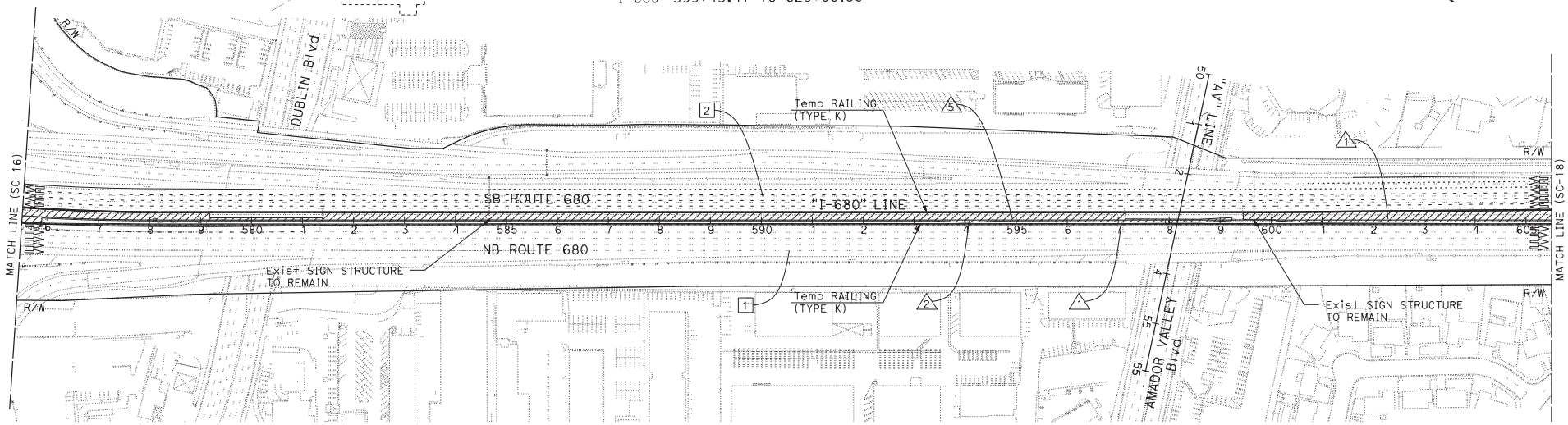
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



I-680

"I-680" 599+45.41 TO 629+06.56



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100′

SC-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

CALCULATED-DESIGNED BY: S. YARI

CHECKED BY: A. BHOI

REVISED BY: .

DATE REVISED: .

LAST REVISION 11-18-19

DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-017.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

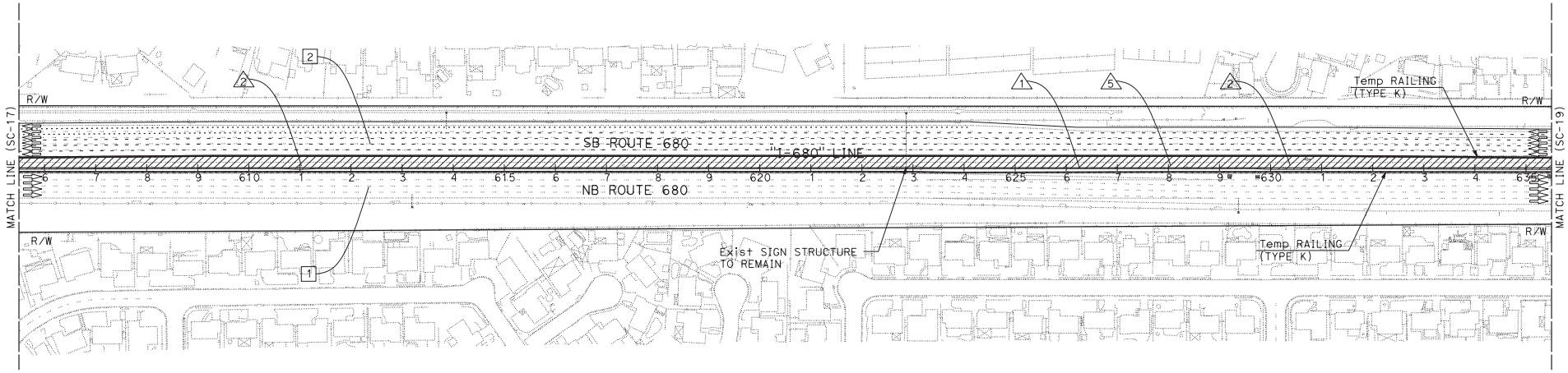
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-18

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-018.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

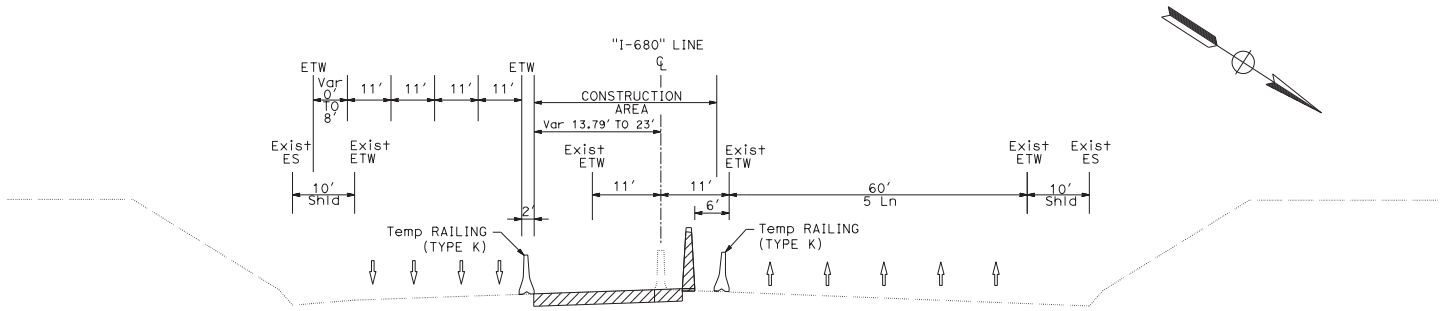
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

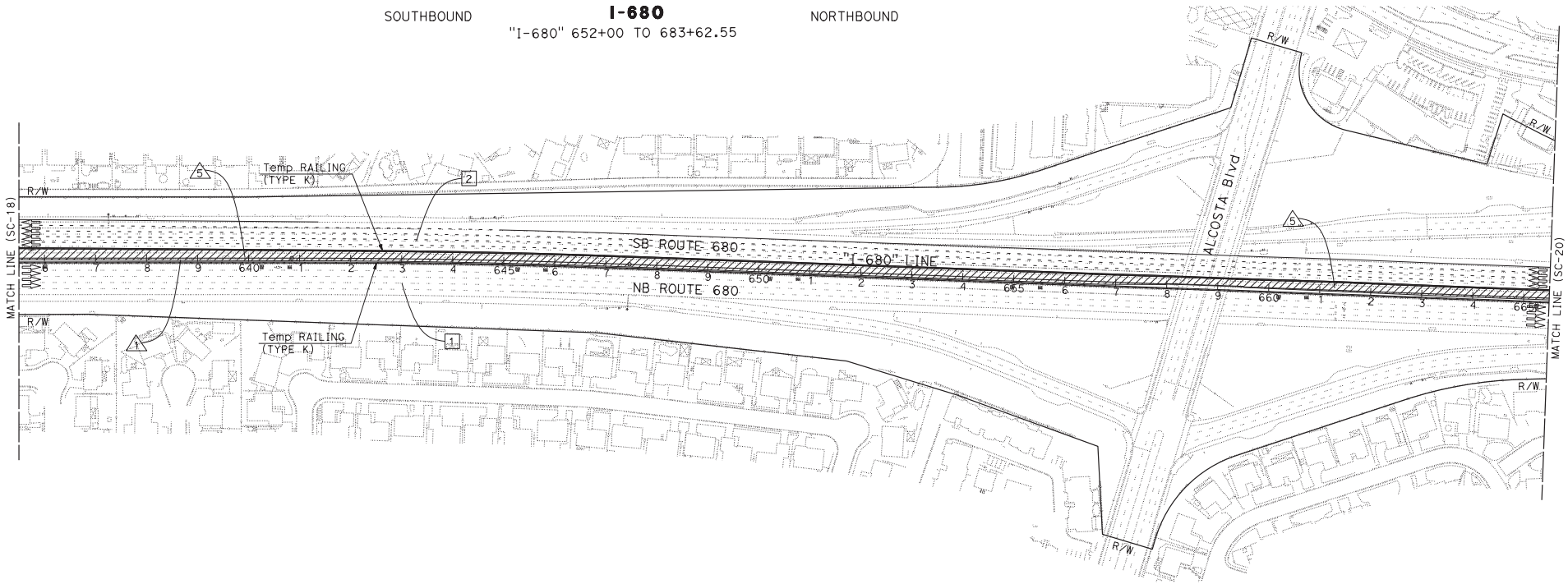
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



SOUTHBOUND **I-680** NORTHBOUND

"I-680" 652+00 TO 683+62.55



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-19

CALCULATED-DESIGNED BY	CHECKED BY
S. YARI	A. BHOI

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

REVISED BY	DATE REVISED
.	.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-019.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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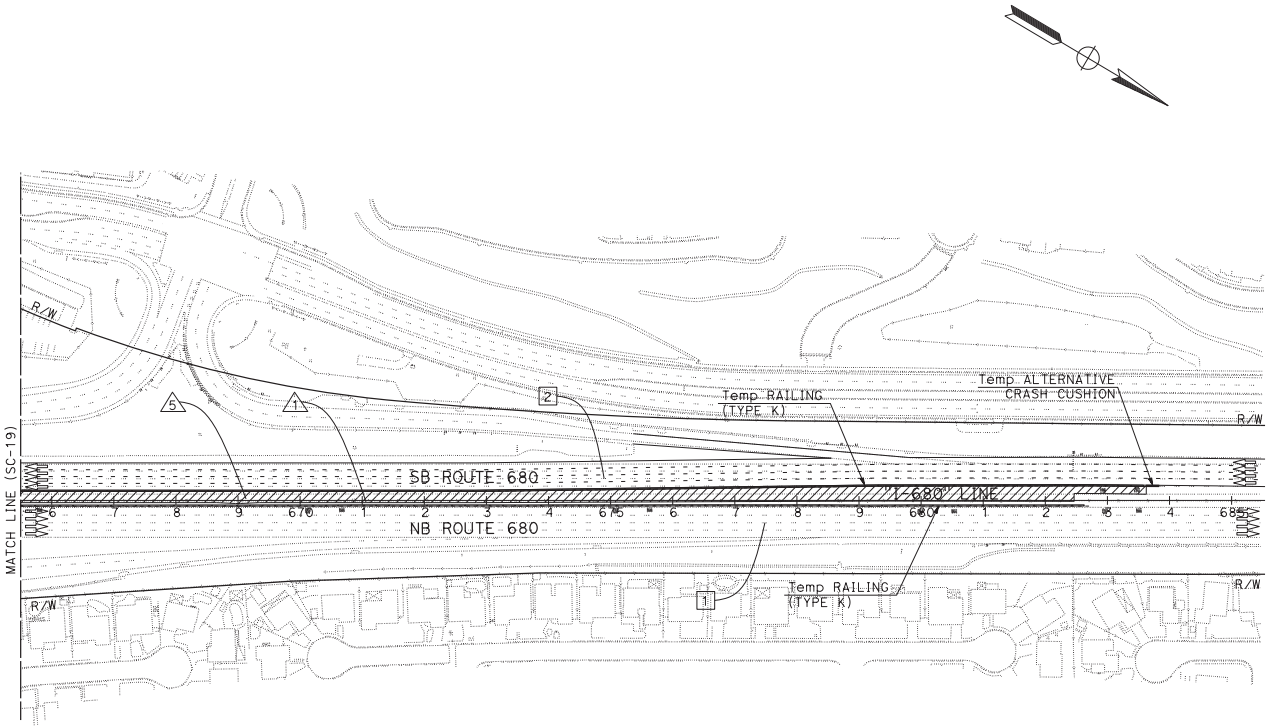
AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-1.



STAGE CONSTRUCTION PLAN

STAGE 1

SCALE 1" = 100'

SC-20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	
CONSULTANT FUNCTIONAL SUPERVISOR	RAMSEY HISSEN
CALCULATED-DESIGNED BY	S. YARI
CHECKED BY	A. BHOI
REVISED BY	.
DATE REVISED	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-020.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

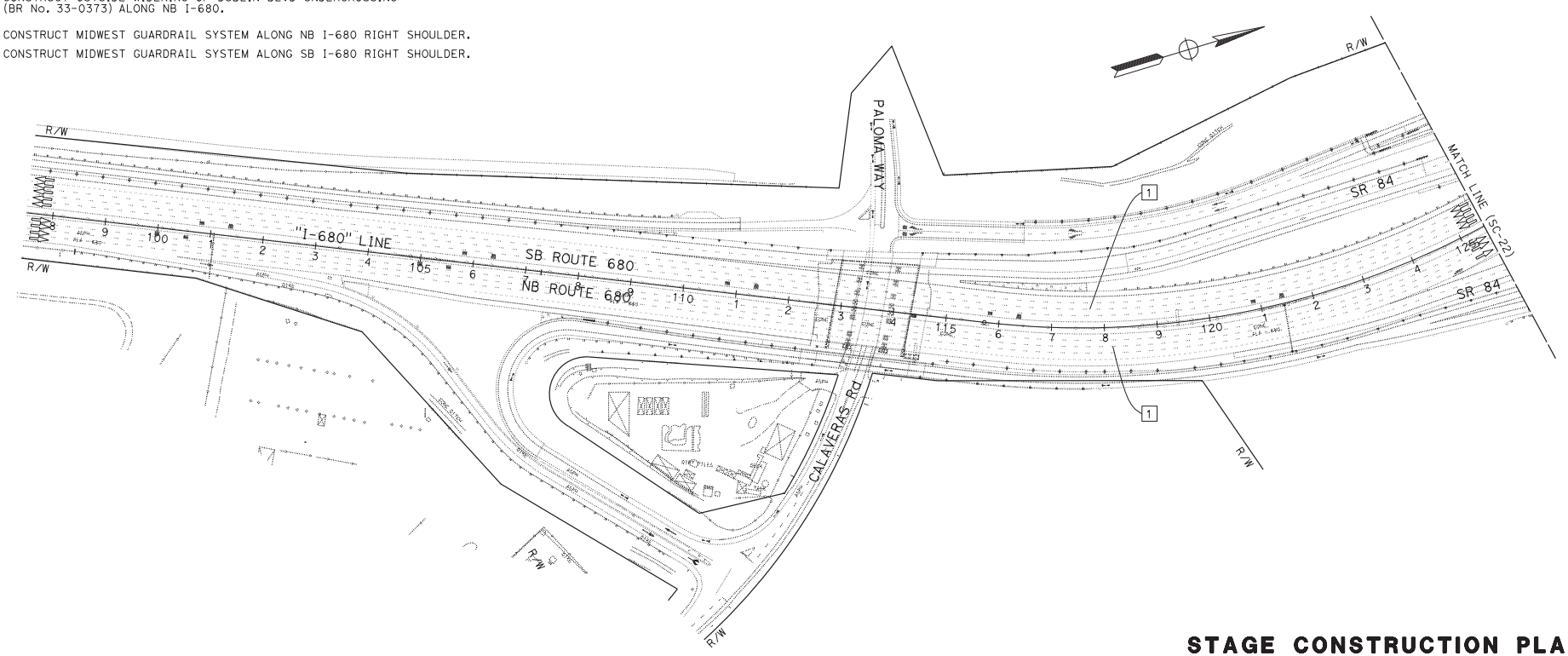
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STAGE 2 PHASE 1 CONSTRUCTION:

1. CONSTRUCT MAINTENANCE VEHICLE PULLOUT ALONG SB I-680 RIGHT SHOULDER.
2. CONSTRUCT CONCRETE BARRIER ALONG NB I-680 RIGHT SHOULDER.
3. CONSTRUCT OUTSIDE PAVEMENT WIDENING ALONG NB I-680 AND RETAINING WALL No. 180 AND 424.
4. CONSTRUCT OUTSIDE PAVEMENT WIDENING ALONG SB I-680.
5. CONSTRUCT RETAINING WALL No. 153 ALONG NB I-680 RIGHT SHOULDER.
6. CONSTRUCT RETAINING WALL No. 310 ALONG NB I-680 RIGHT SHOULDER.
7. CONSTRUCT RETAINING WALL No. 579 ALONG NB I-680 DUBLIN Blvd ON-RAMP RIGHT SHOULDER.
8. CONSTRUCT RETAINING WALL No. 581 ALONG NB I-680 RIGHT SHOULDER.
9. CONSTRUCT RETAINING WALL/SOUND WALL No. 599 ALONG NB I-680 RIGHT SHOULDER.
10. CONSTRUCT RETAINING WALL/SOUND WALL No. 600 ALONG SB I-680 RIGHT SHOULDER.
11. CONSTRUCT RETAINING WALL No. 633 ALONG SB I-680 RIGHT SHOULDER.
12. CONSTRUCT OUTSIDE WIDENING OF PLEASANTON-SUNOL ROAD UNDERCROSSING (BR No. 33-0387) ALONG NB I-680.
13. CONSTRUCT OUTSIDE WIDENING OF AMADOR VALLEY BLVD UNDERCROSSING (BR No. 33-0356) ALONG NB I-680.
14. CONSTRUCT OUTSIDE WIDENING OF DUBLIN BLVD UNDERCROSSING (BR No. 33-0373) ALONG NB I-680.
15. CONSTRUCT MIDWEST GUARDRAIL SYSTEM ALONG NB I-680 RIGHT SHOULDER.
16. CONSTRUCT MIDWEST GUARDRAIL SYSTEM ALONG SB I-680 RIGHT SHOULDER.

STAGE 2 PHASE 1 TRAFFIC:

1. MAINTAIN EXISTING TRAFFIC LANES UNLESS SHOWN OTHERWISE.
2. SHIFT TRAFFIC LANES TO ACCOMMODATE CONSTRUCTION.



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-21

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN | CALCULATED-DESIGNED BY: S. YARI | CHECKED BY: A. BHOI | REVISED BY: . | DATE REVISED: .

LAST REVISION 11-18-19 | DATE PLOTTED => 15-NOV-2019 | TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-021.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

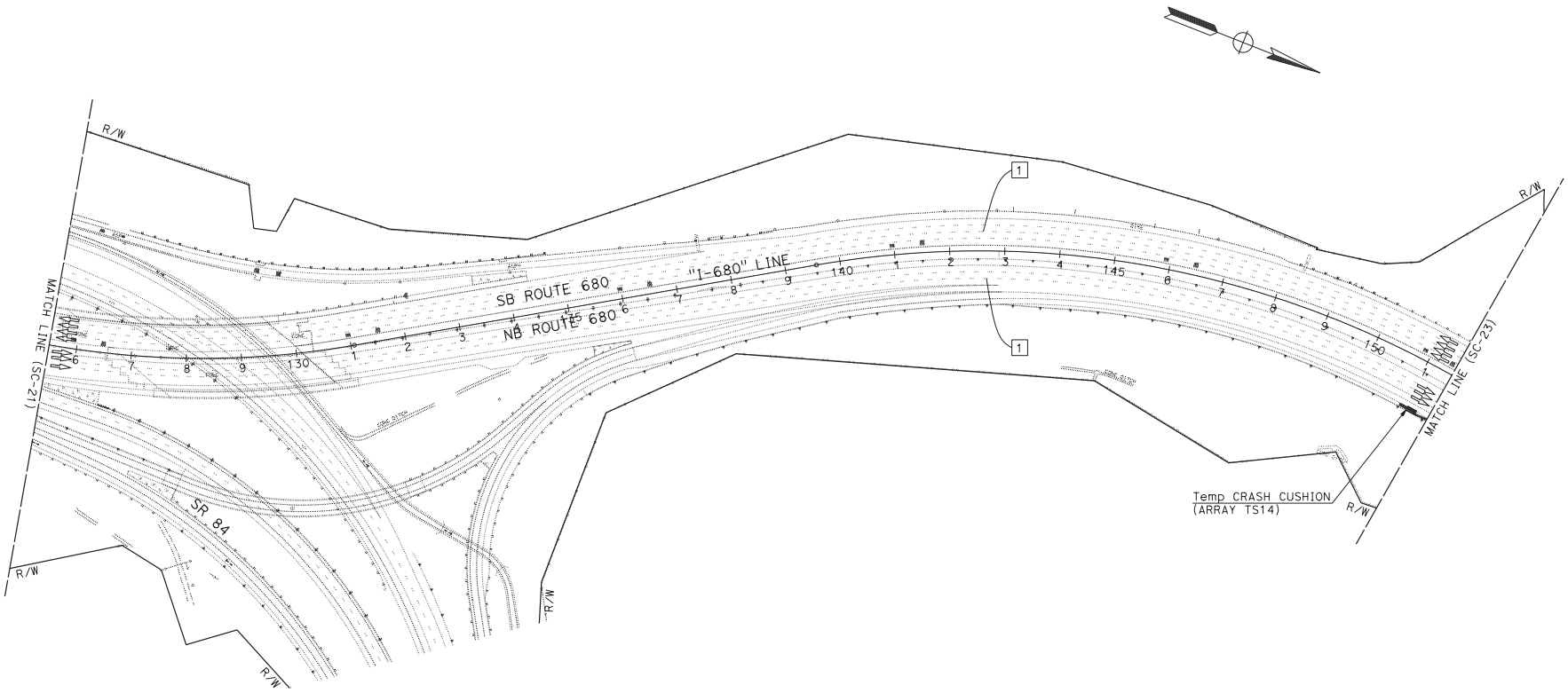
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN

STAGE 2 PHASE 1

SCALE 1" = 100'

SC-22

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-022.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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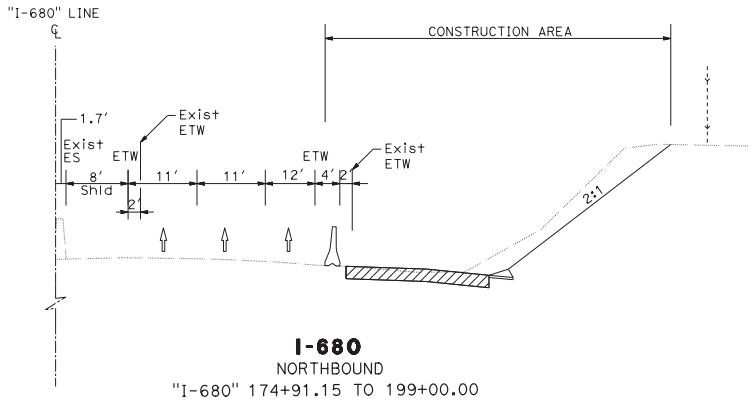
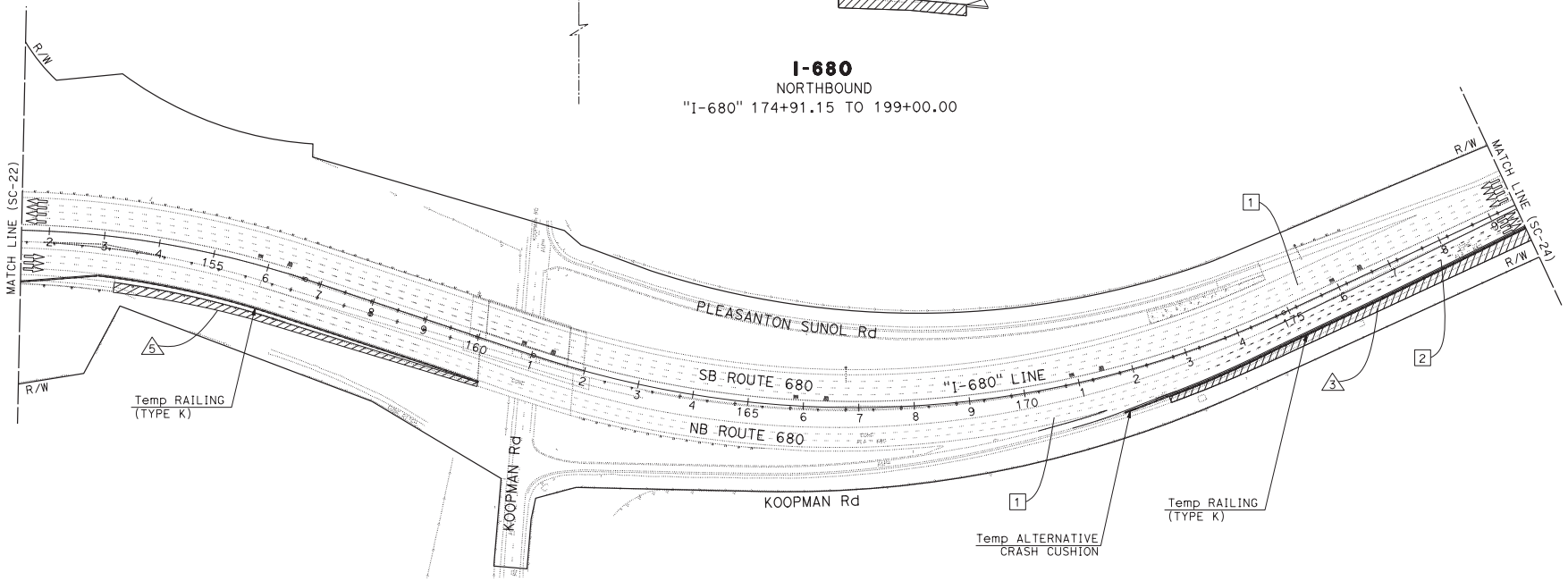
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



I-680
NORTHBOUND
"I-680" 174+91.15 TO 199+00.00



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-23

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

REVISED BY	DATE REVISED
.	.

CALCULATED-DESIGNED BY	CHECKED BY
S. YARI	A. BHOI

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-023.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTES:

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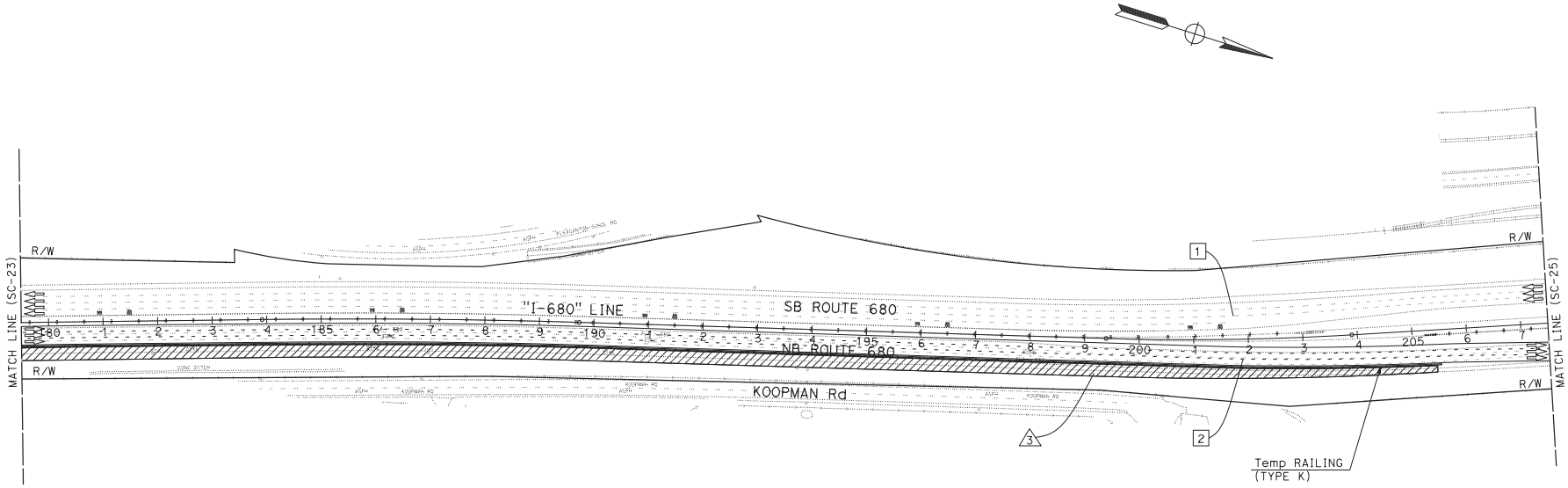
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-24

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	.
Caltrans	RAMSEY HISSEN	CHECKED BY	DATE REVISED	.
		S. YARI		
		A. BHOI		

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-024.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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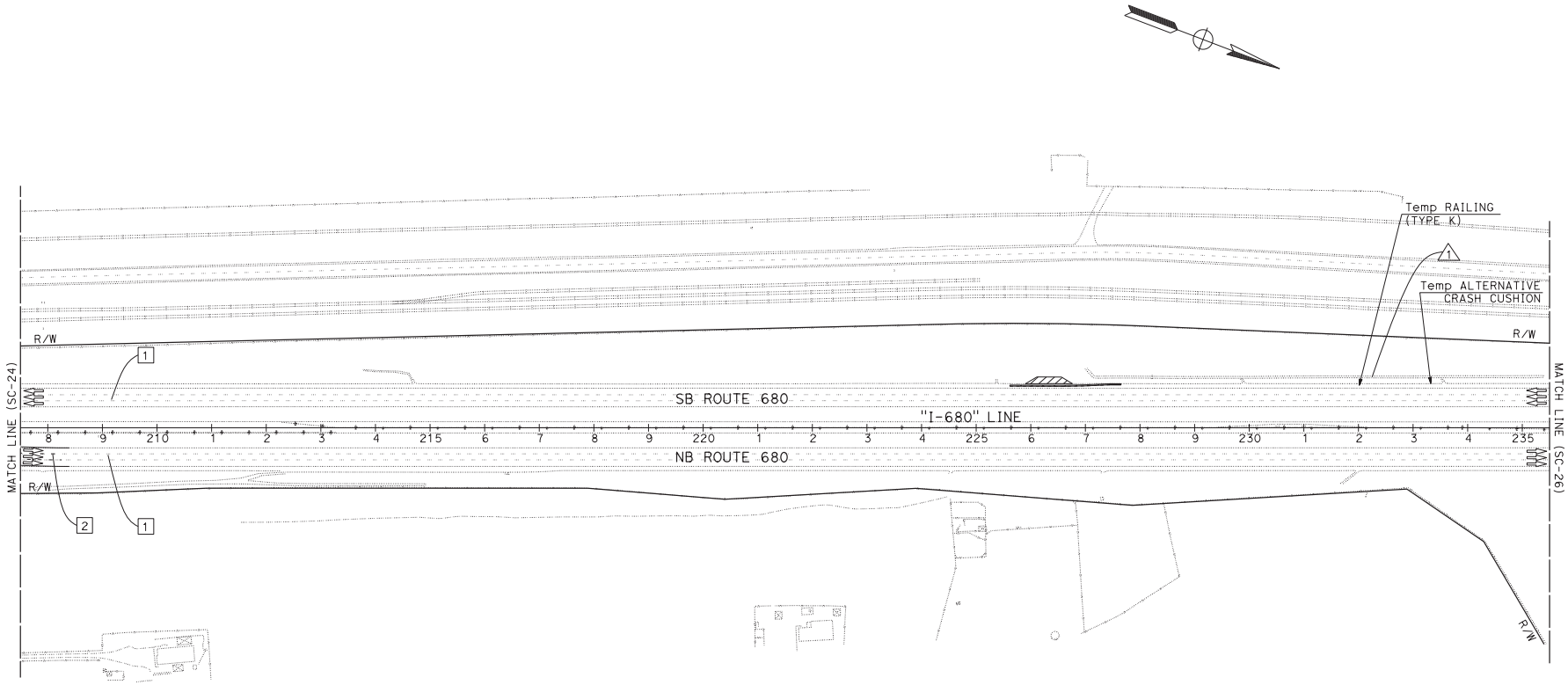
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY / DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	. / .

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-025.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

AECOM
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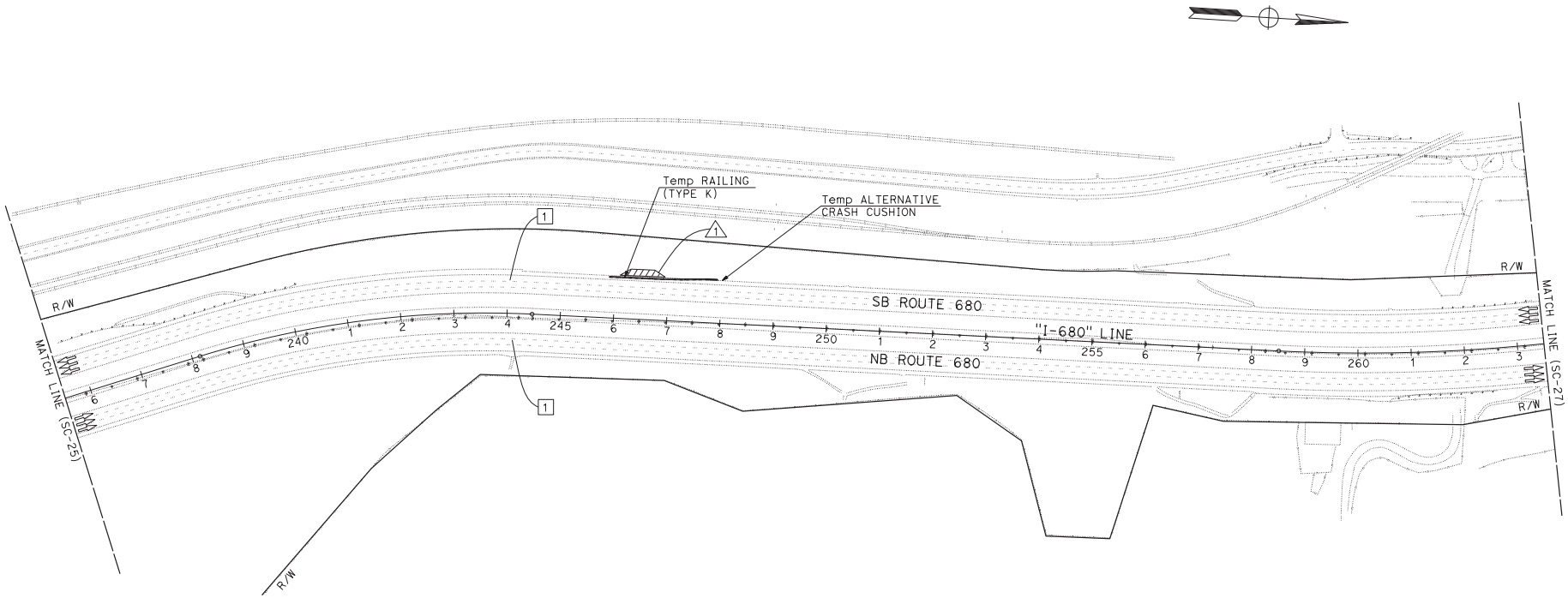
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-26

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
Caltrans	RAMSEY HISSEN	CHECKED BY	DATE REVISED
		S. YARI	.
		A. BHOI	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-026.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

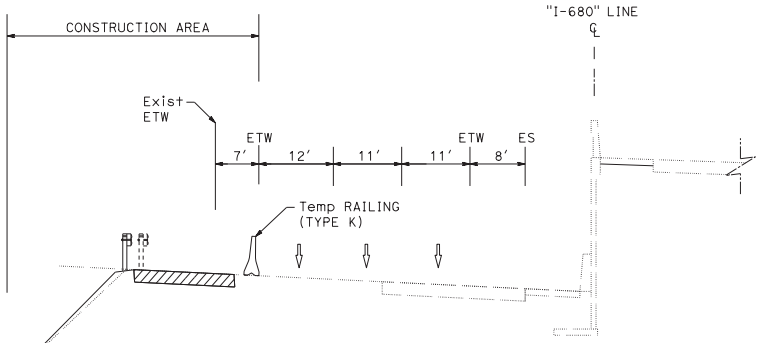
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

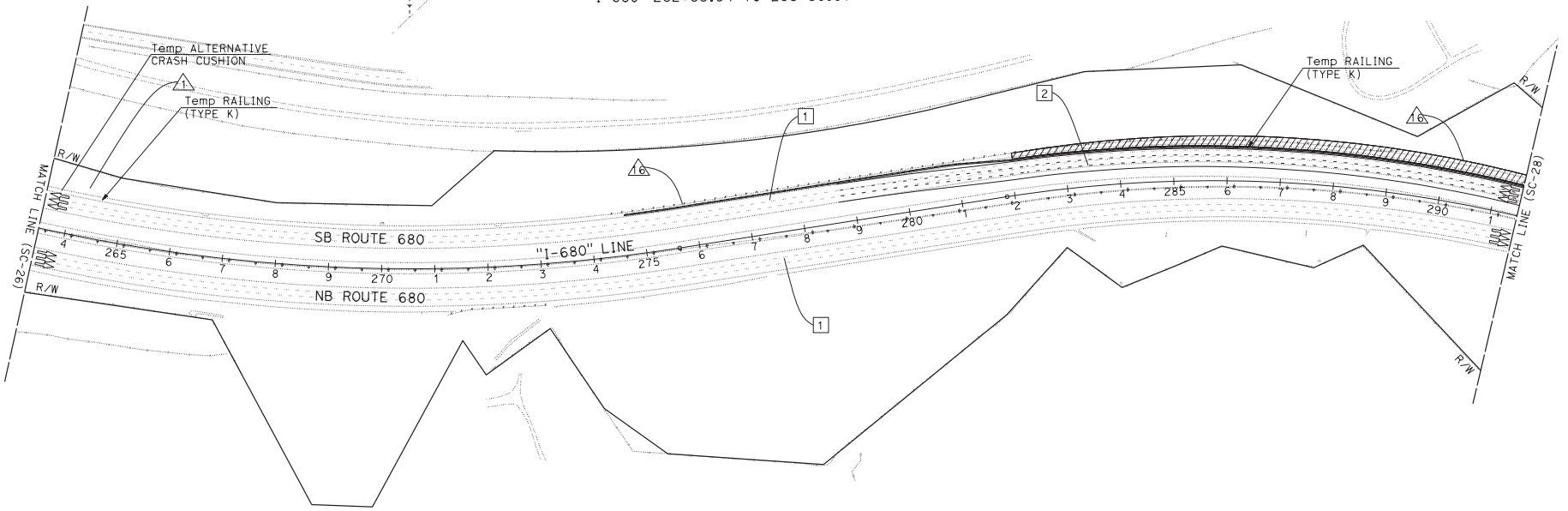
ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



I-680
SOUTHBOUND
"I-680" 282+35.94 TO 295+50.61



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100′

SC-27

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-027.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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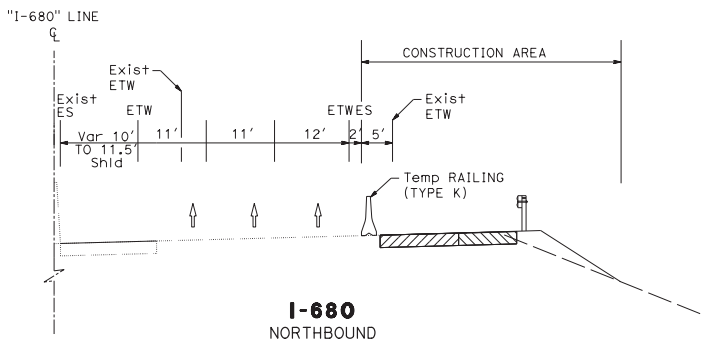
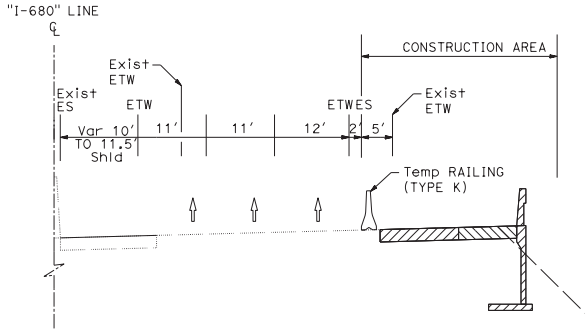
Oakland, CA 94607

NOTES:

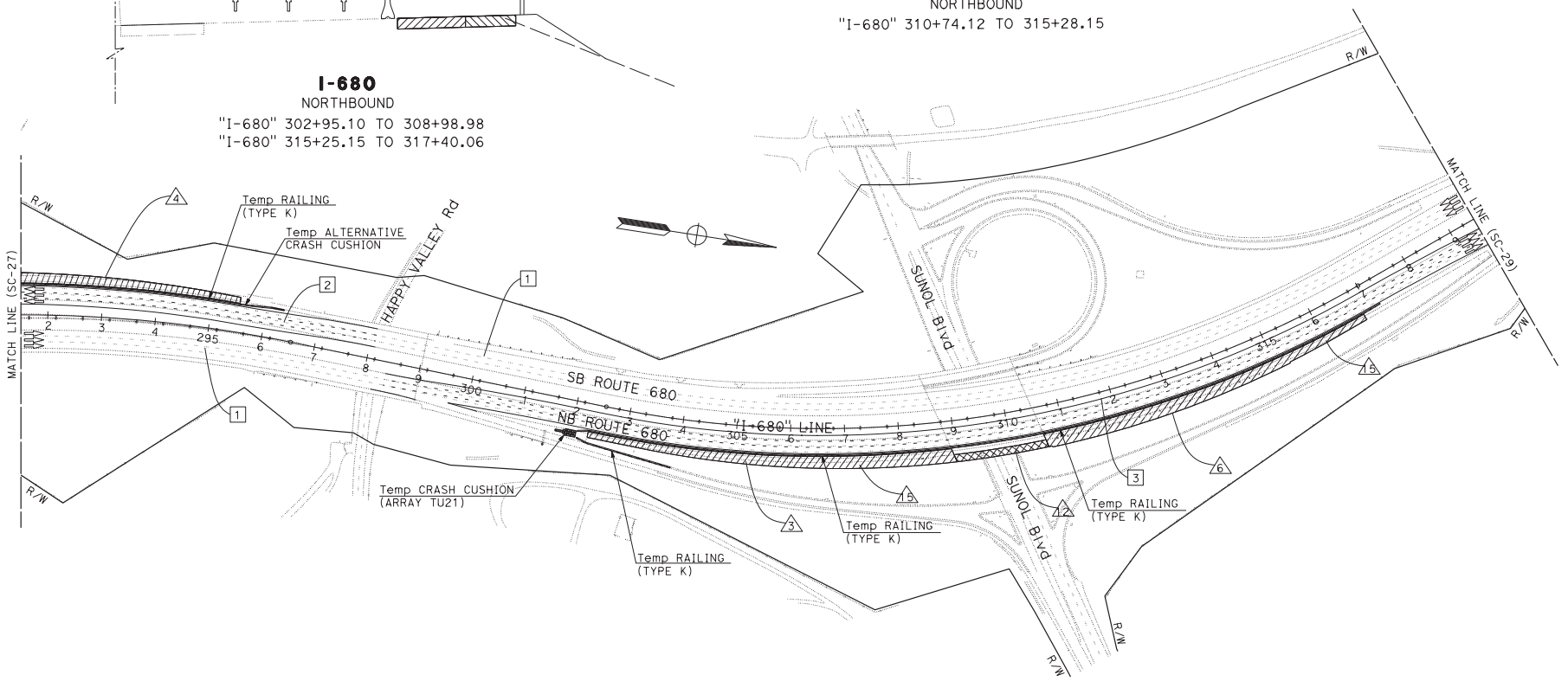
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



I-680
NORTHBOUND
"I-680" 302+95.10 TO 308+98.98
"I-680" 315+25.15 TO 317+40.06



NORTHBOUND
"I-680" 310+74.12 TO 315+28.15



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-28

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

REVISED BY	DATE REVISED
.	.

CALCULATED-DESIGNED BY	CHECKED BY
S. YARI	A. BHOI

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-028.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

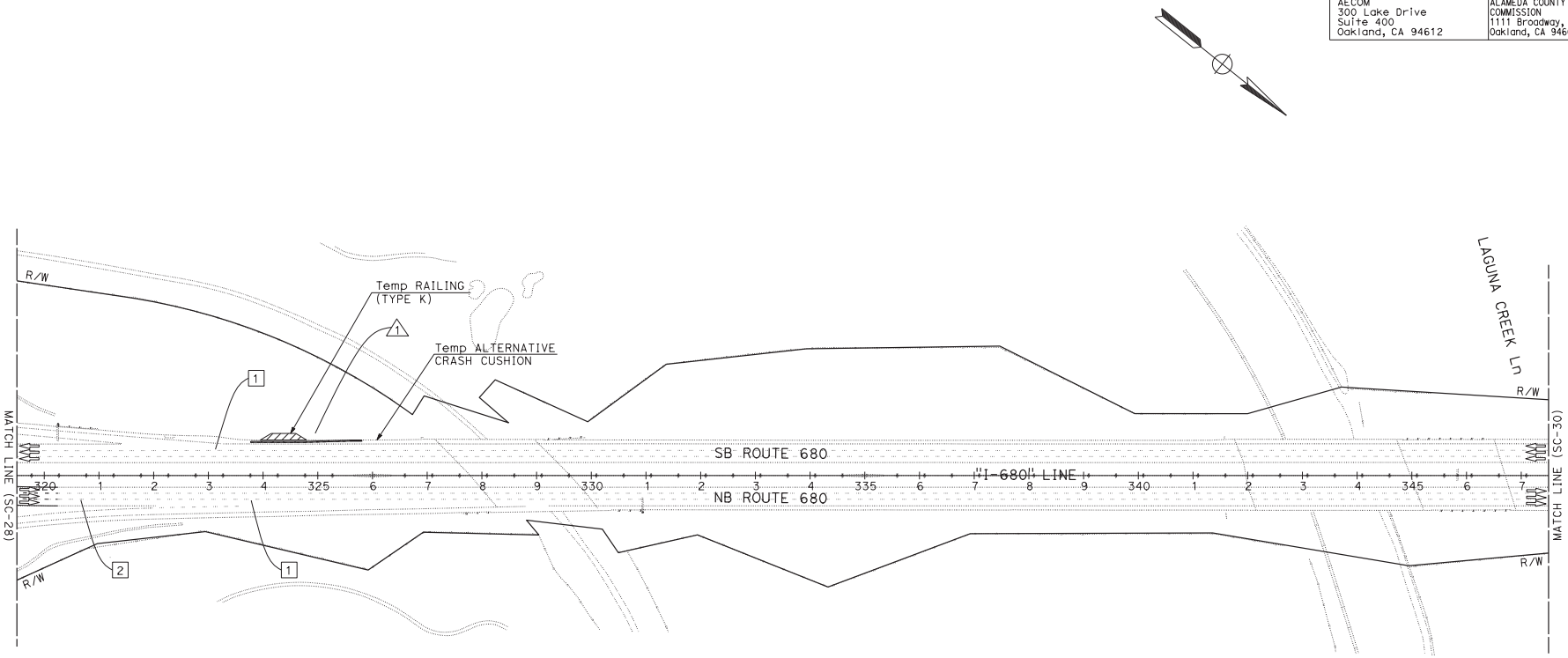
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN

STAGE 2 PHASE 1

SCALE 1" = 100'

SC-29

REVISED BY	.	.	S. YARI	CALCULATED-DESIGNED BY
DATE REVISED	.	.	A. BHOI	CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-029.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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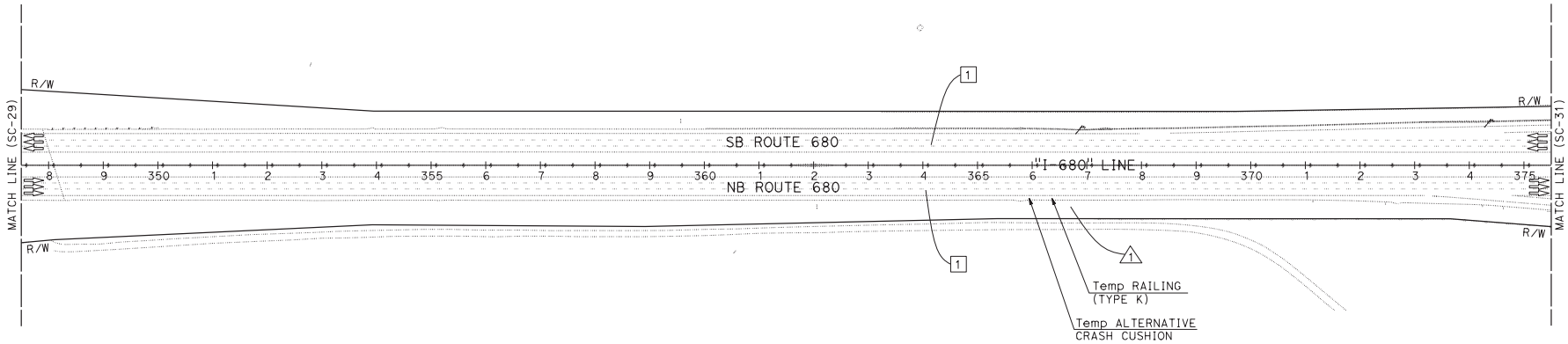
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-30

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-030.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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Suite 400
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ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

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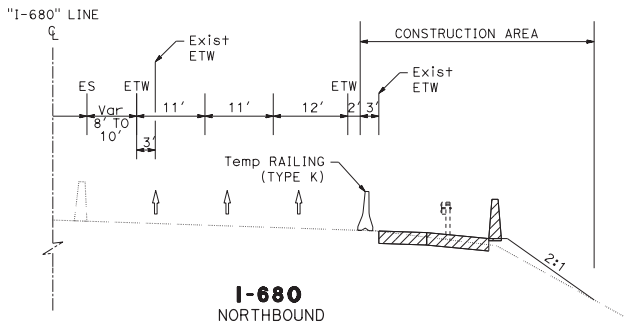
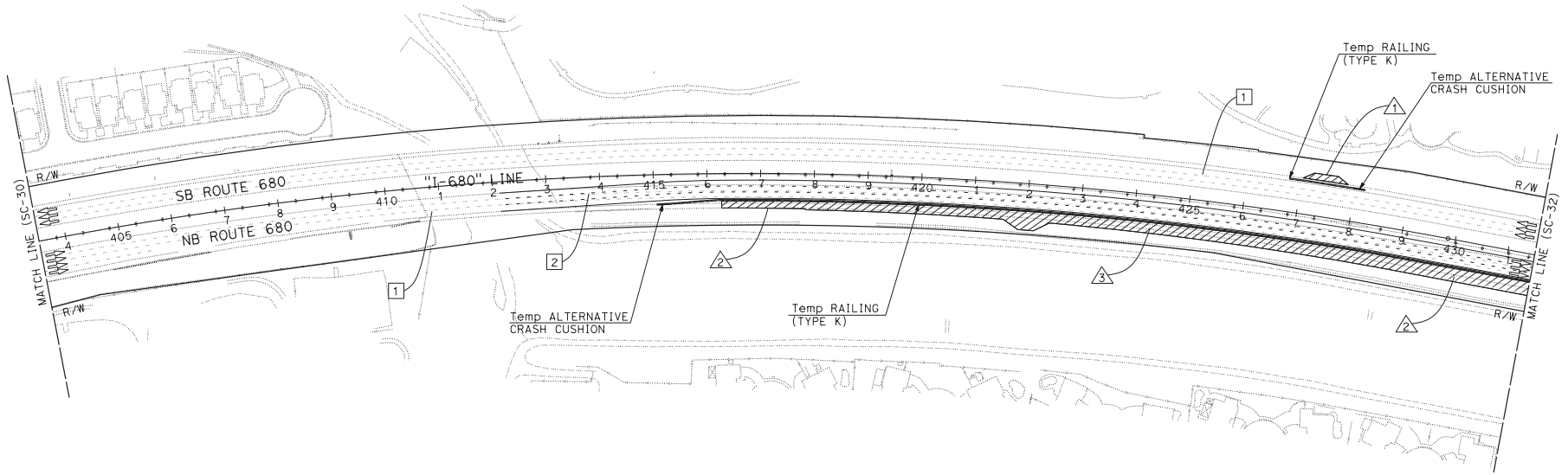
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



I-680
NORTHBOUND
"I-680" 417+80.08 TO 475+60.41



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-31

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN
CALCULATED-DESIGNED BY: S. YARI
CHECKED BY: A. BHOI
REVISED BY: .
DATE REVISED: .

LAST REVISION: 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010
USERNAME => josh.sun
DGN FILE => SC-031.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0000
PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

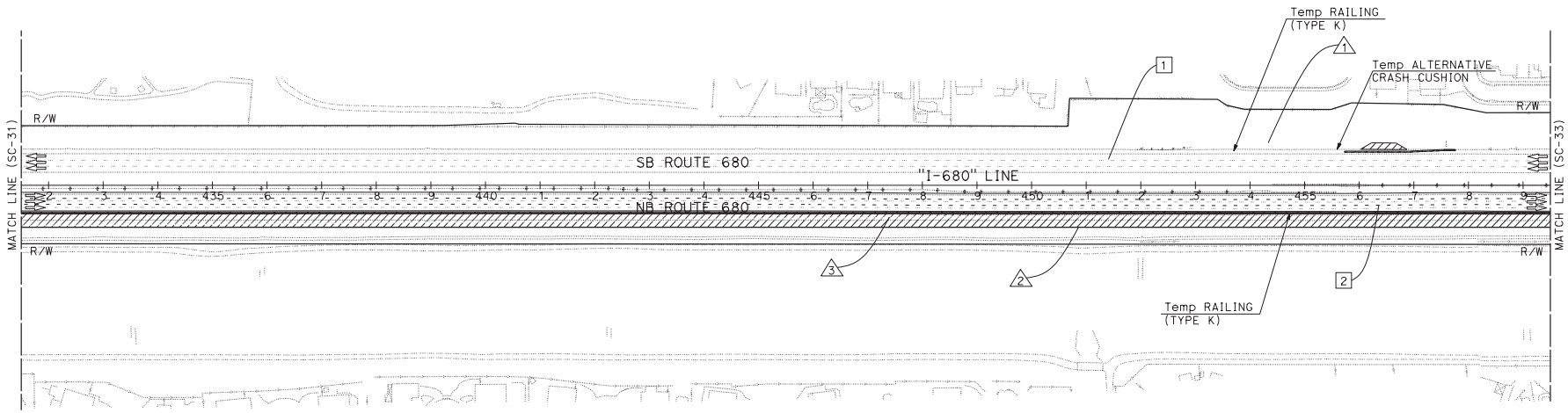
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-32

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-032.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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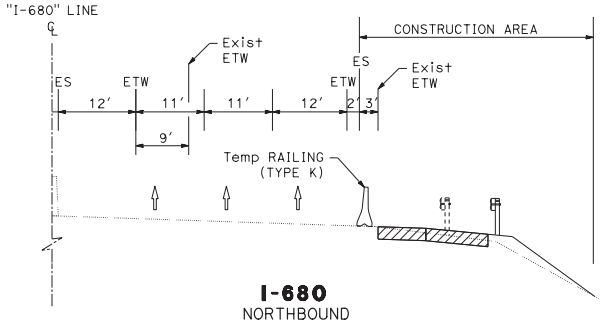
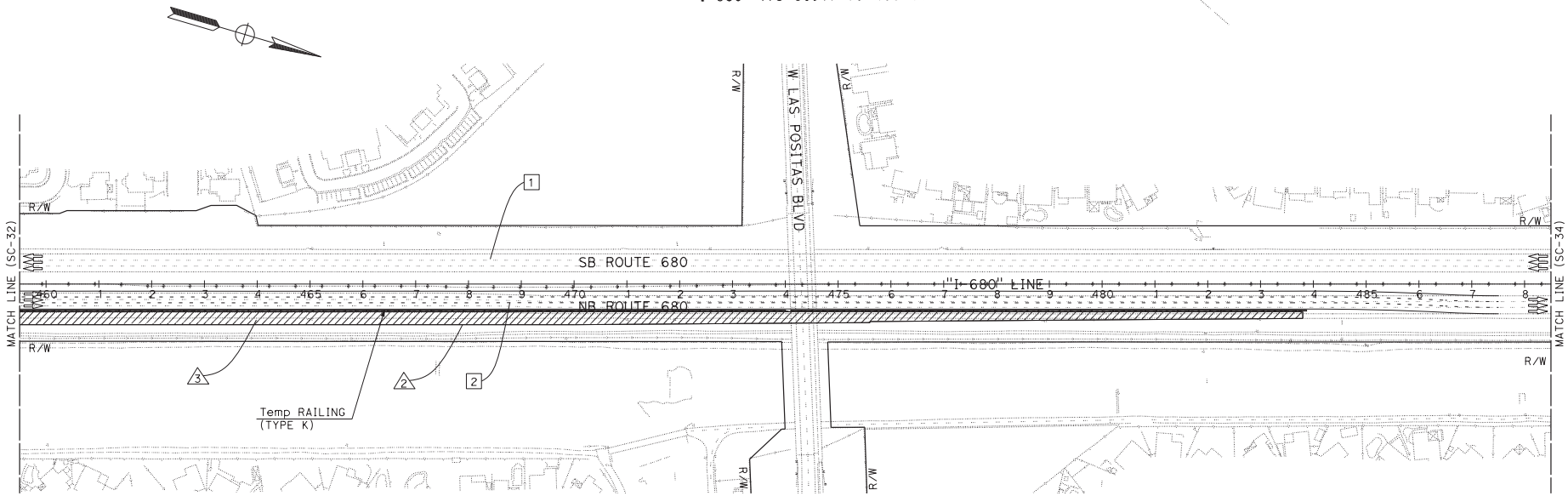
ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



I-680
NORTHBOUND
"I-680" 475+60.41 TO 483+80.00



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100′

SC-33

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN
CALCULATED-DESIGNED BY: S. YARI
CHECKED BY: A. BHOI
REVISED BY: .
DATE REVISED: .

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-033.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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Oakland, CA 94612

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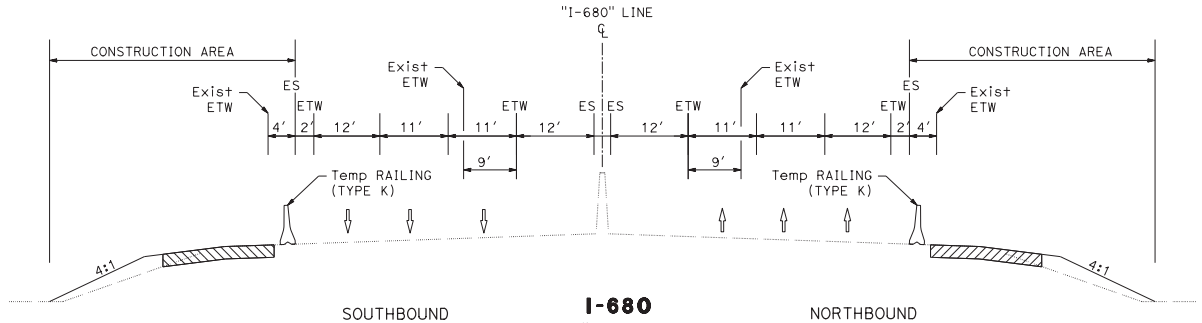
1111 Broadway, Suite 800
Oakland, CA 94607

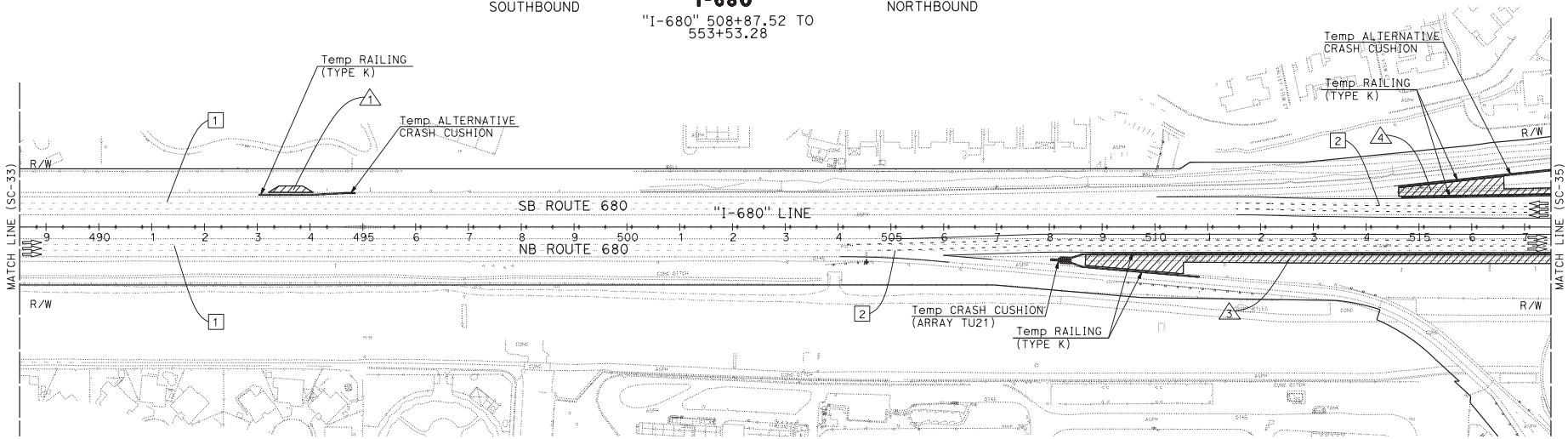
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



I-680

"I-680" 508+87.52 TO 553+53.28



STAGE CONSTRUCTION PLAN

STAGE 2 PHASE 1

SCALE 1" = 100′

SC-34

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-034.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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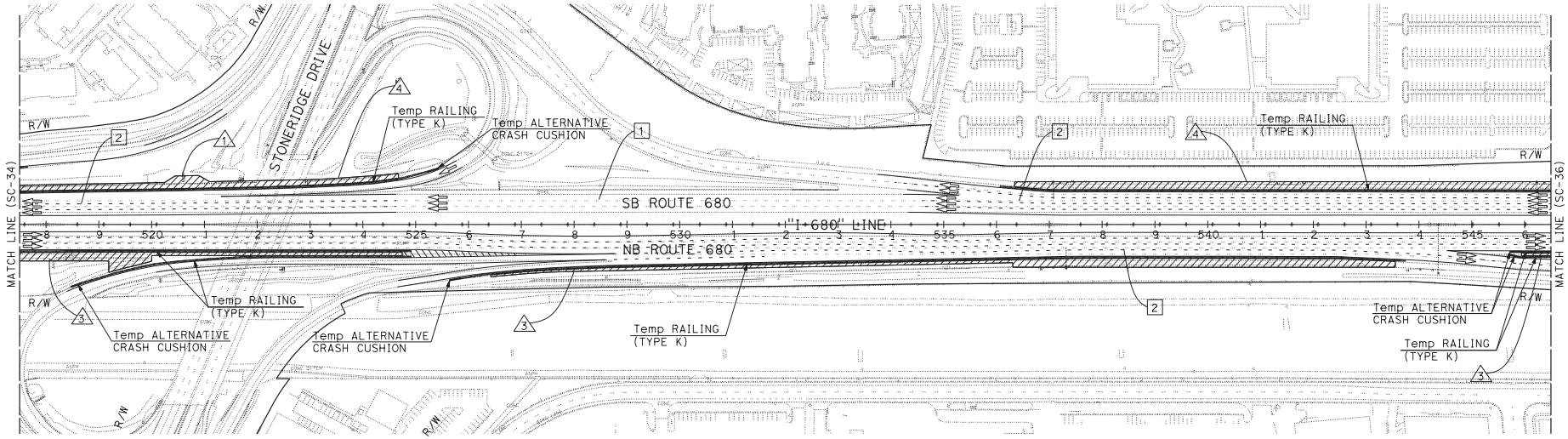
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1

SCALE 1" = 100'

SC-35

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
S. YARI	A. BHOI	.	.

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-035.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

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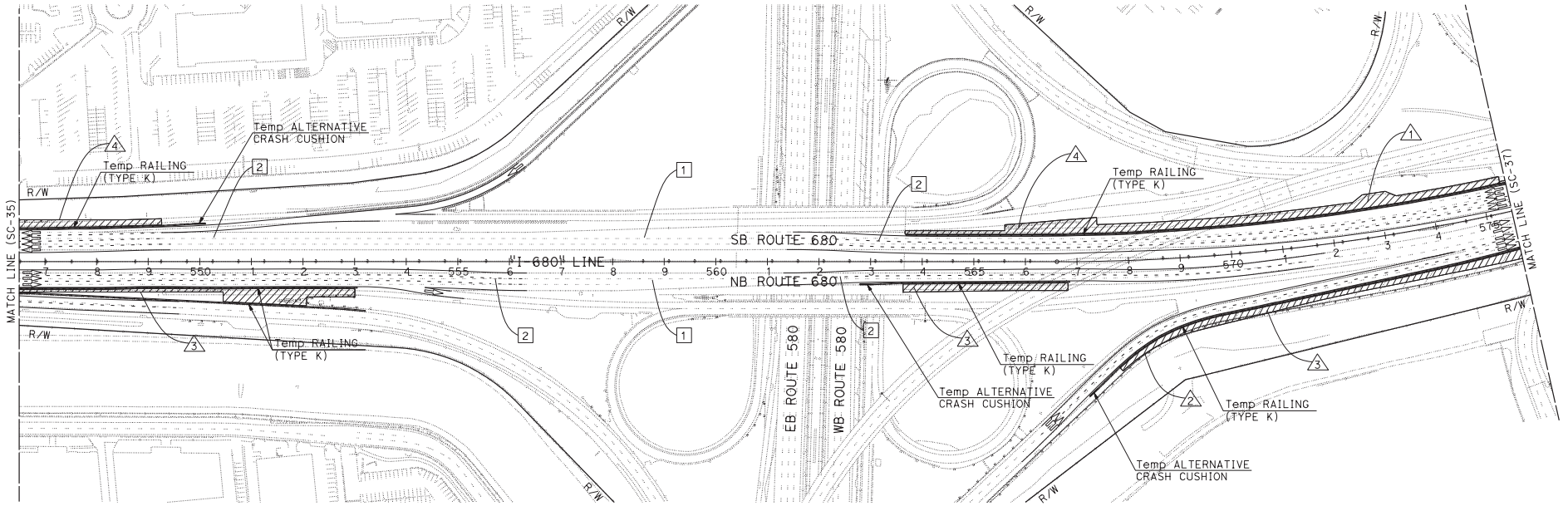
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-36

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
S. YARI	A. BHOI	.	.

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION: DATE PLOTTED => 15-NOV-2019
11-18-19 TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-036.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

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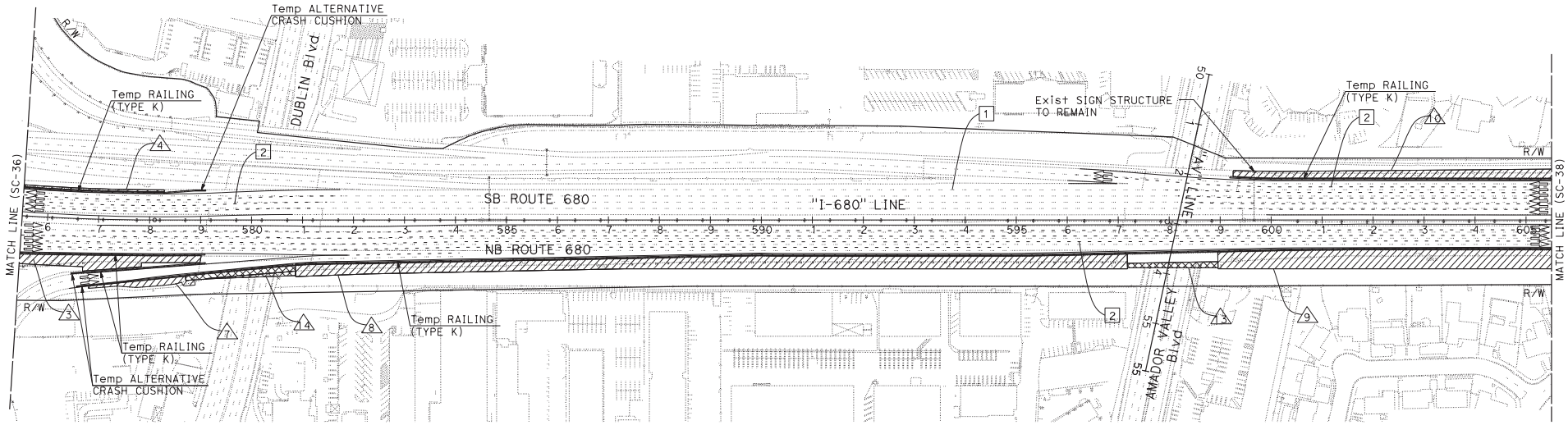
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN

STAGE 2 PHASE 1

SCALE 1" = 100'

SC-37

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-037.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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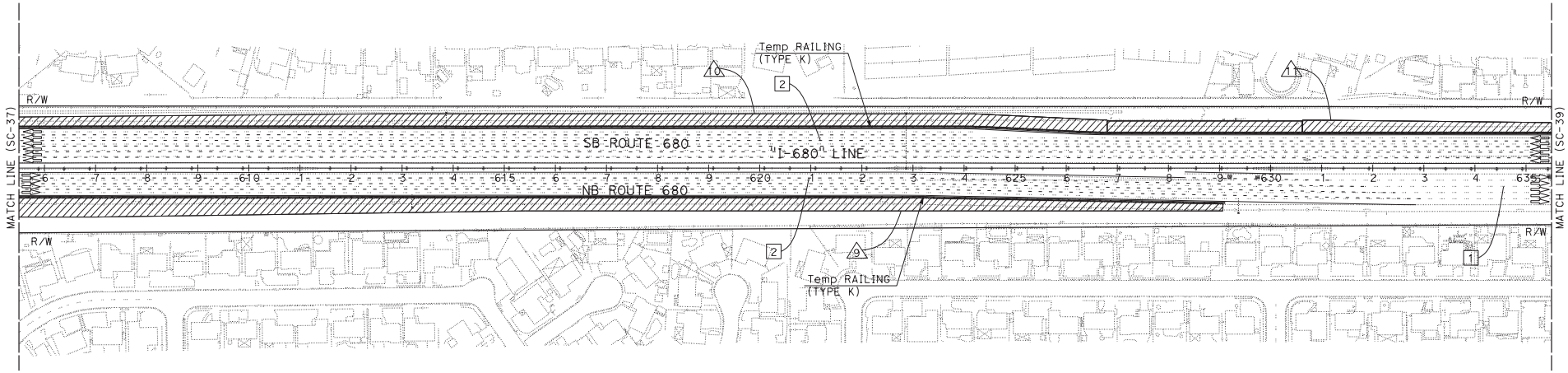
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1
SCALE 1" = 100'

SC-38

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	.
	RAMSEY HISSEN	CHECKED BY	DATE REVISED	.
		S. YARI		
		A. BHOI		

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-038.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.

STAGE CONSTRUCTION PLAN
STAGE 2 PHASE 1

SCALE 1" = 100'

SC-39

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-039.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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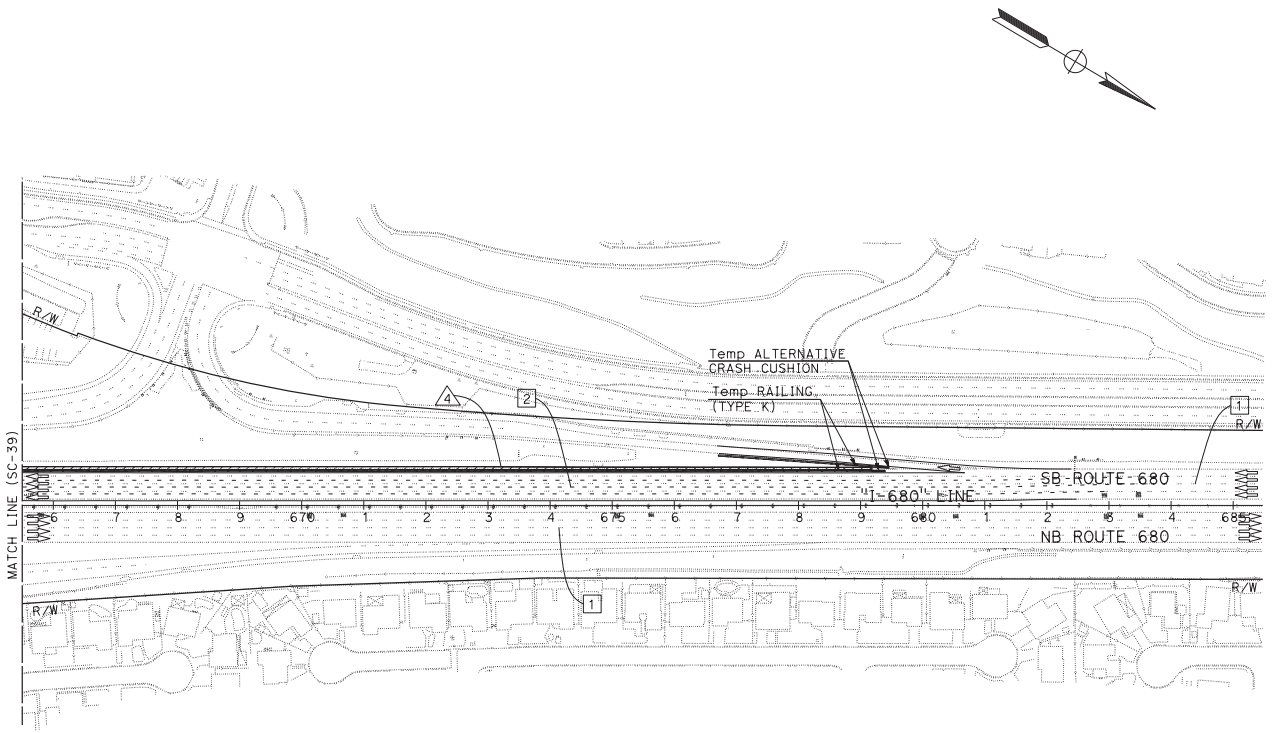
AECOM 300 Lake Drive Suite 400 Oakland, CA 94612	ALAMEDA COUNTY TRANSPORTATION COMMISSION 1111 Broadway, Suite 800 Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-21.



STAGE CONSTRUCTION PLAN

STAGE 2 PHASE 1

SCALE 1" = 100'

SC-40

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-040.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STAGE 2 PHASE 2 TRAFFIC:

[1] MAINTAIN EXISTING TRAFFIC LANES UNLESS SHOWN OTHERWISE.

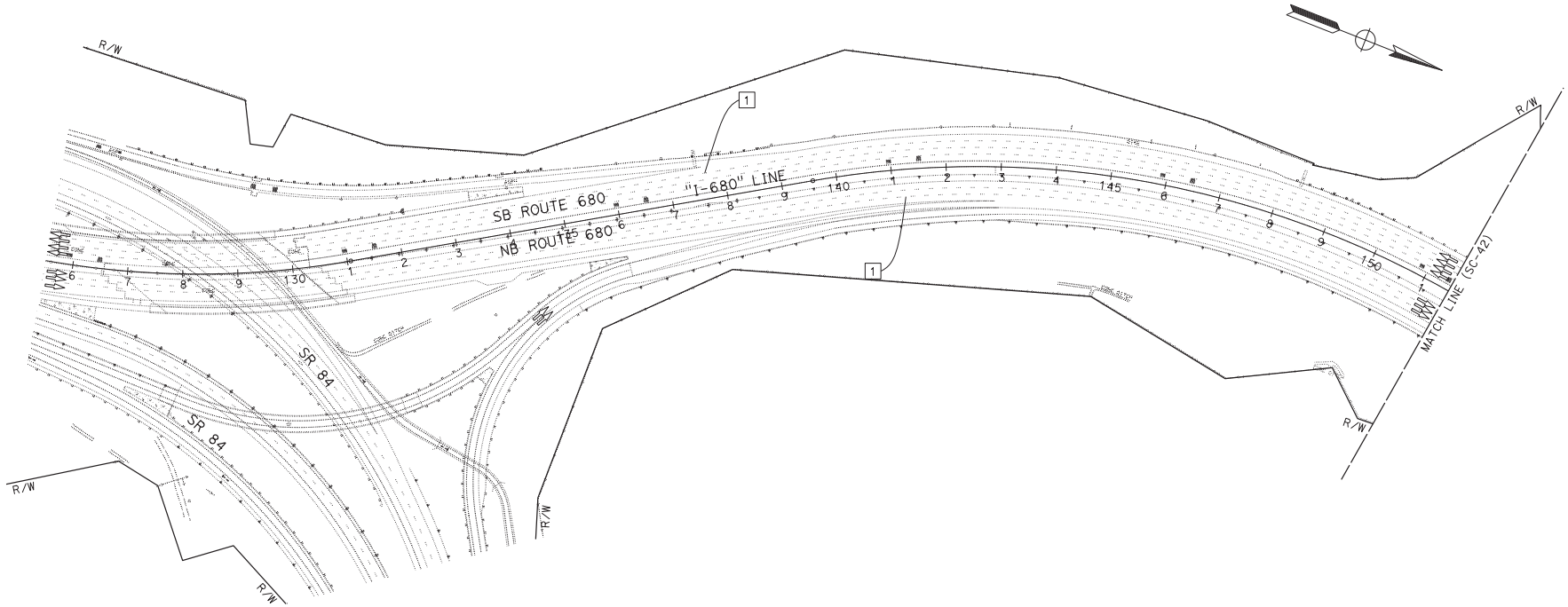
[2] SHIFT TRAFFIC LANES TO ACCOMMODATE CONSTRUCTION.

STAGE 2 PHASE 2 CONSTRUCTION:

1 CONSTRUCT OUTSIDE PAVEMENT WIDENING ALONG NB I-680.

2 CONSTRUCT OUTSIDE PAVEMENT WIDENING ALONG SB I-680.

3 CONSTRUCT CONCRETE BARRIER ALONG NB I-680 RIGHT SHOULDER.



STAGE CONSTRUCTION PLAN

STAGE 2 PHASE 2

SCALE 1" = 100'

SC-41

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
Caltrans	RAMSEY HISSEN	CHECKED BY	DATE REVISED
		S. YARI	.
		A. BHOI	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-041.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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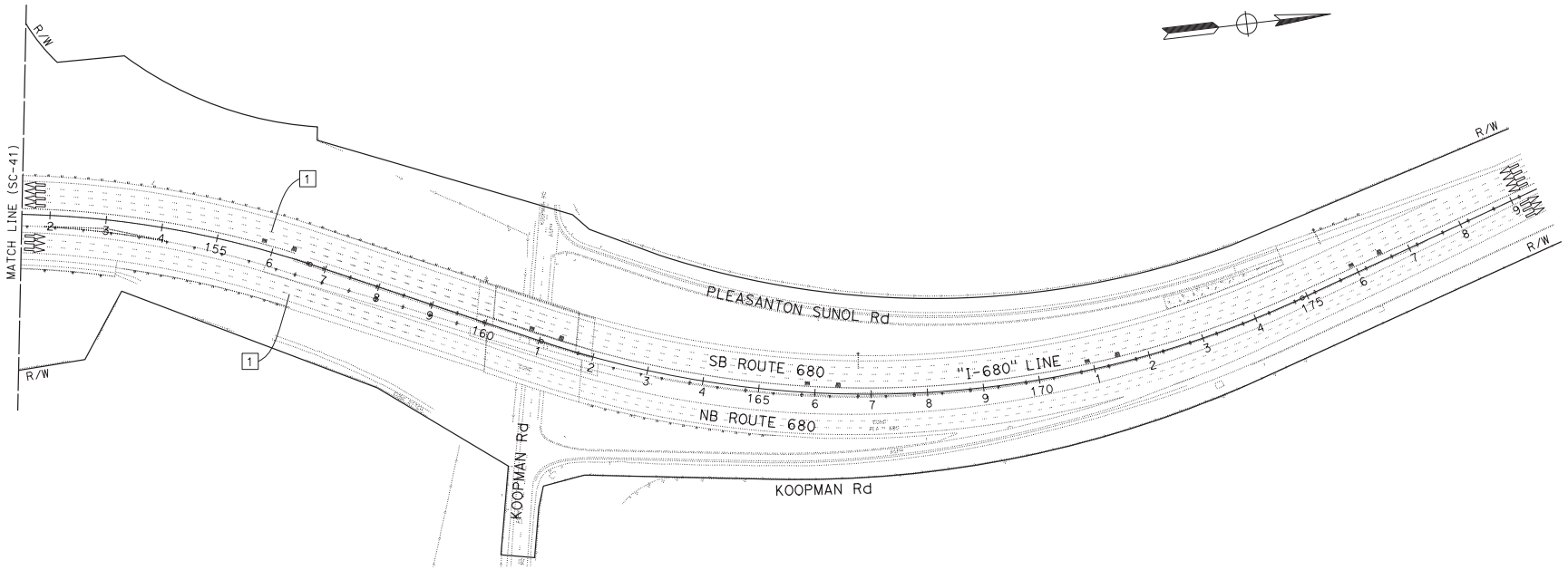
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-41.



STAGE CONSTRUCTION PLAN

STAGE 2 PHASE 2

SCALE 1" = 100'

SC-42

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-042.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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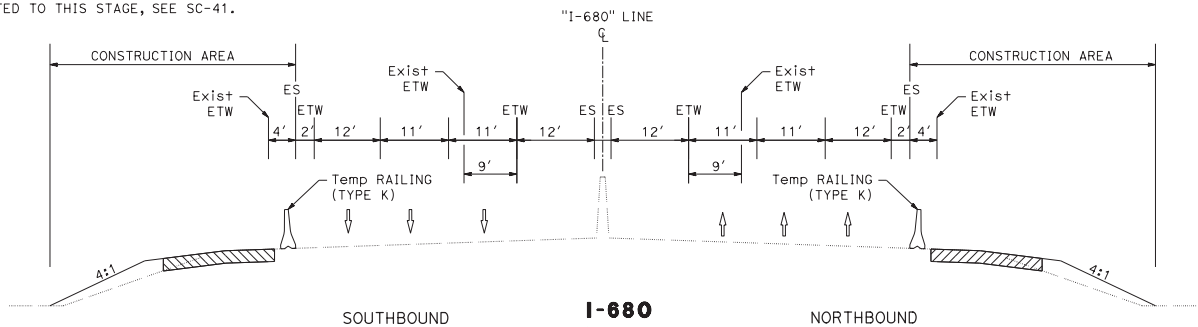
1111 Broadway, Suite 800
Oakland, CA 94607

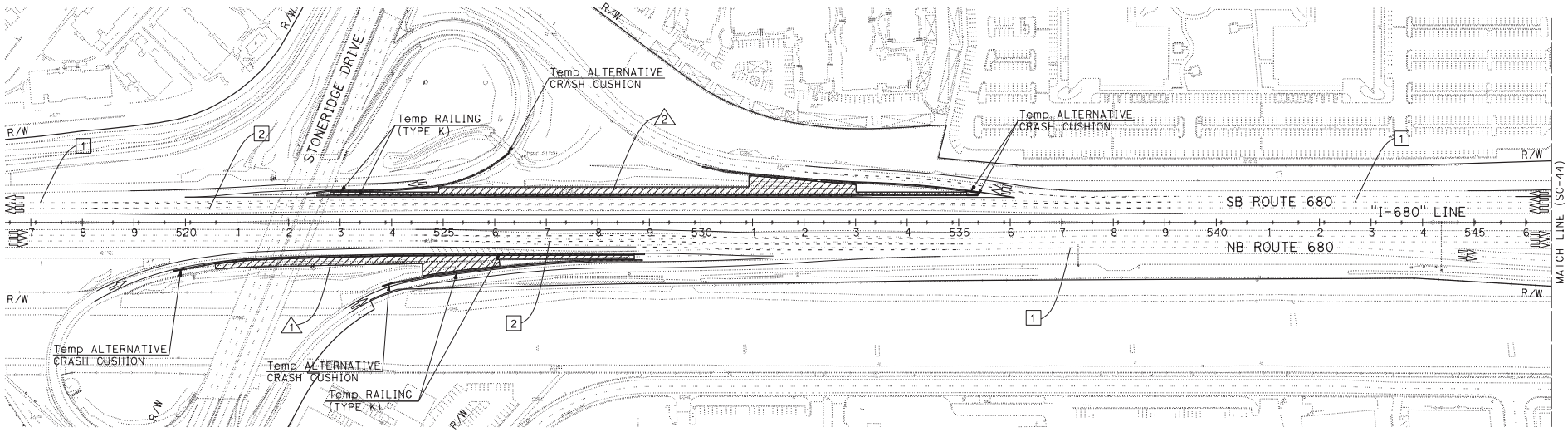
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-41.



I-680

"I-680" 508+87.52 TO 553+53.28



STAGE CONSTRUCTION PLAN

STAGE 2 PHASE 2

SCALE 1" = 100'

SC-43

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:31

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-043.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

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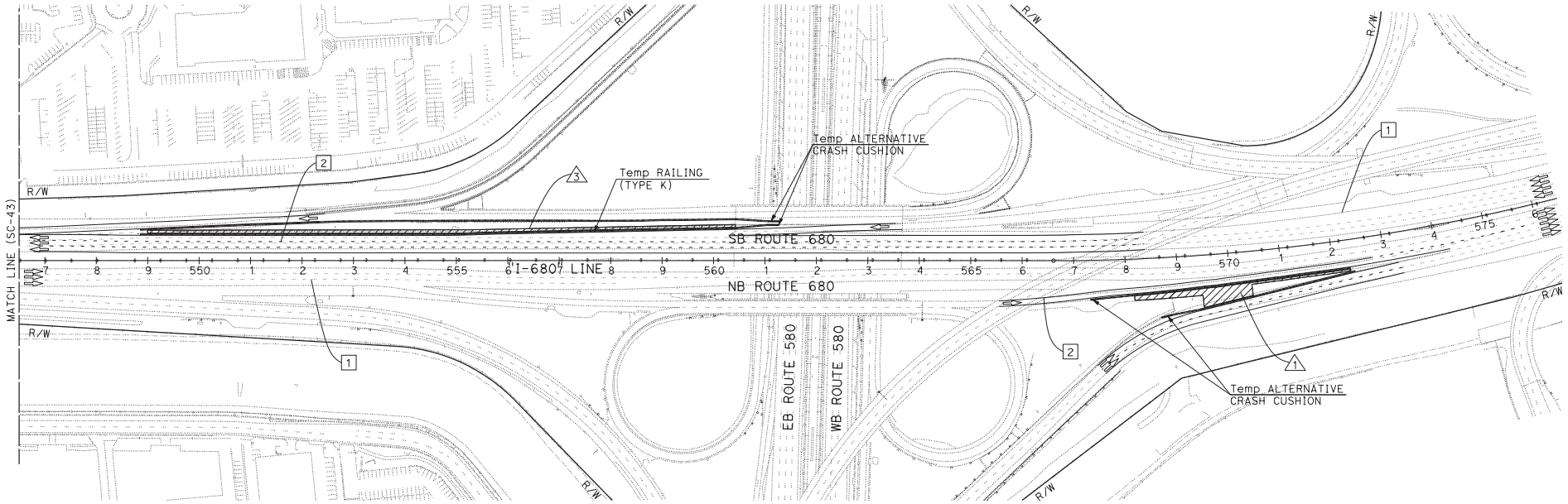
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-41.



STAGE CONSTRUCTION PLAN

STAGE 2 PHASE 2

SCALE 1" = 100'

SC-44

CALCULATED-DESIGNED BY	CHECKED BY	CONSULTANT FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
S. YARI	A. BHOI	RAMSEY HISSEN	.	.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION DATE PLOTTED => 15-NOV-2019
11-18-19 TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-044.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

AECOM
300 Lake Drive
Suite 400
Oakland, CA 94612

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Oakland, CA 94607

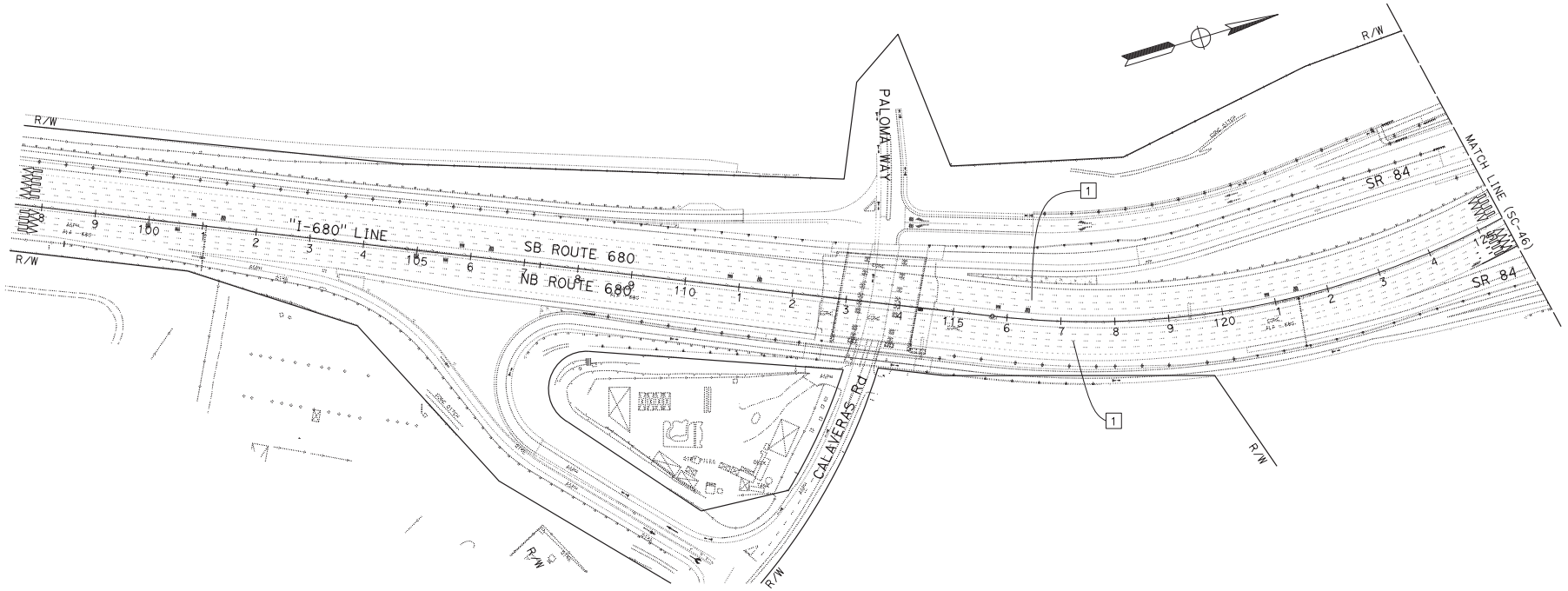
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STAGE 3 TRAFFIC:

[1] MAINTAIN EXISTING TRAFFIC LANES UNLESS SHOWN OTHERWISE.

[2] COLD PLANE AND OVERLAY AC PAVEMENT ON MAINLINE; RESTRIPE TRAFFIC LANES TO NEWLY CONSTRUCTED I-680.



STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-45

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
S. YARI	A. BHOI	.	.

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-045.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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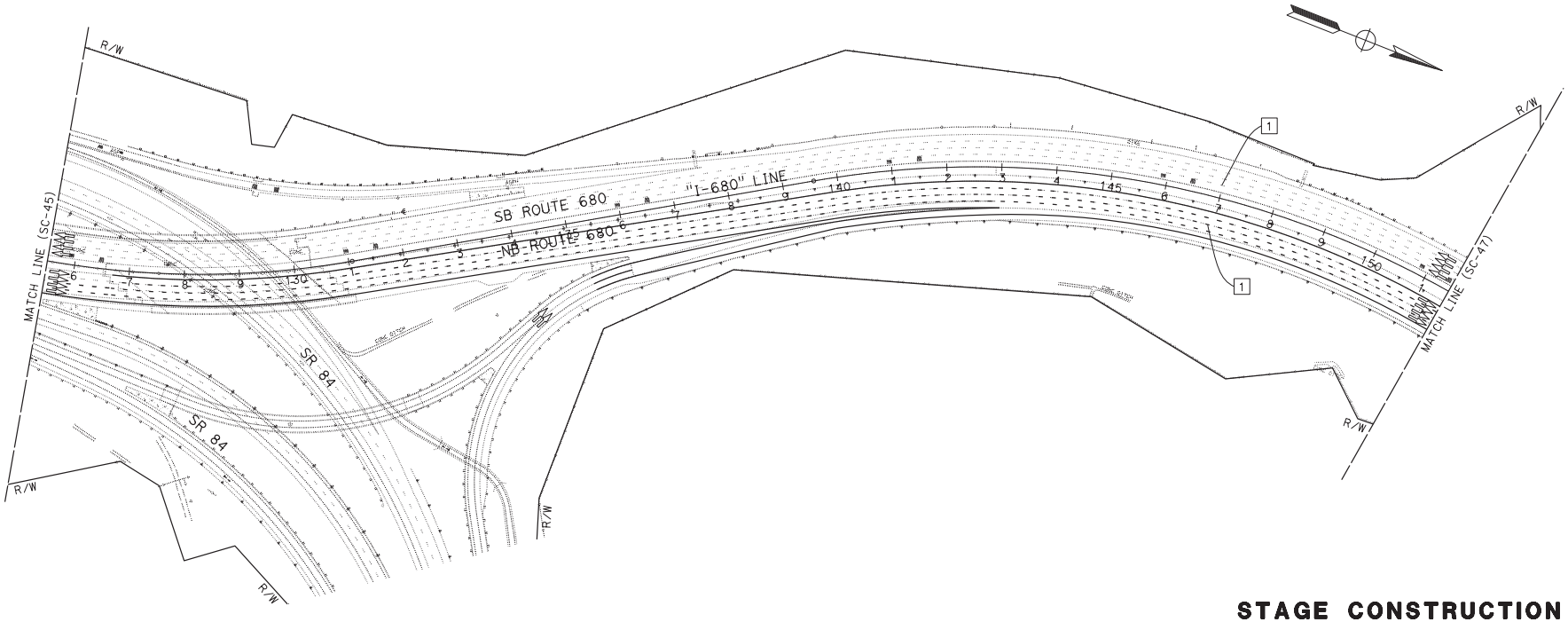
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-45.



STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-46

CALCULATED-DESIGNED BY	CHECKED BY	CONSULTANT FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
S. YARI	A. BHOI	RAMSEY HISSEN	.	.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-046.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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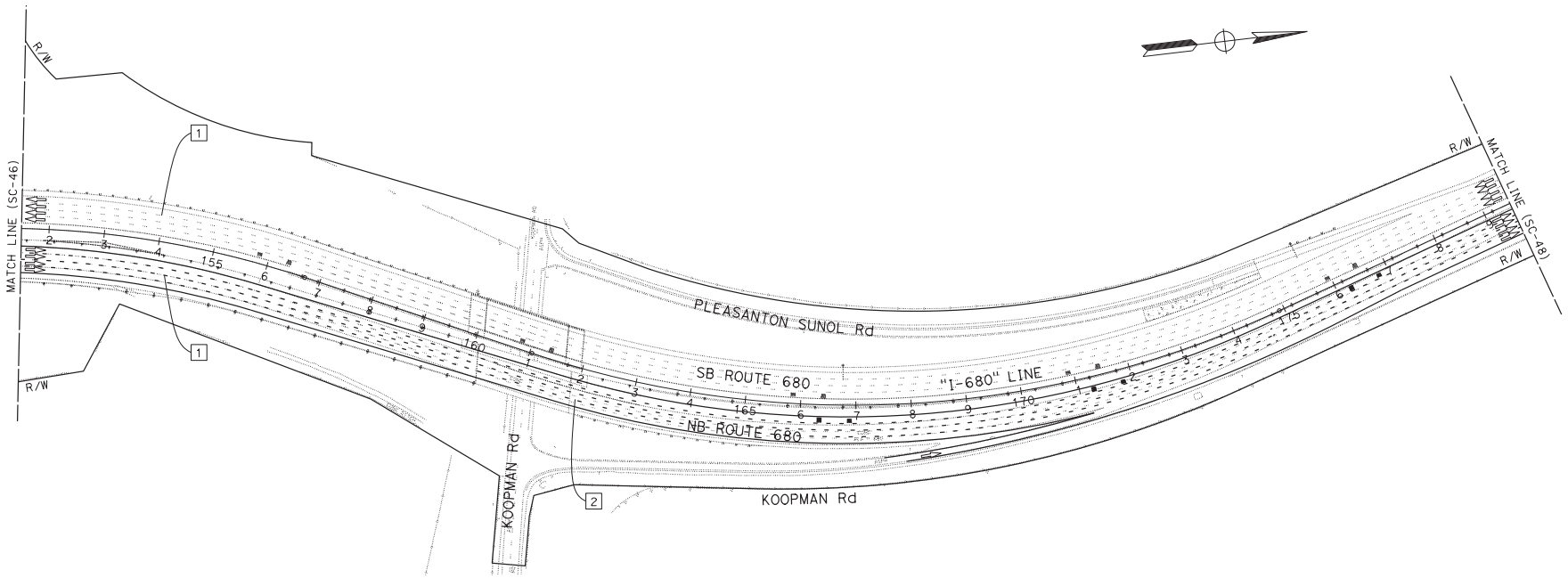

STAGE CONSTRUCTION PLAN

STAGE 3

SCALE 1" = 100'

SC-47

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-047.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

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PLANS APPROVAL DATE

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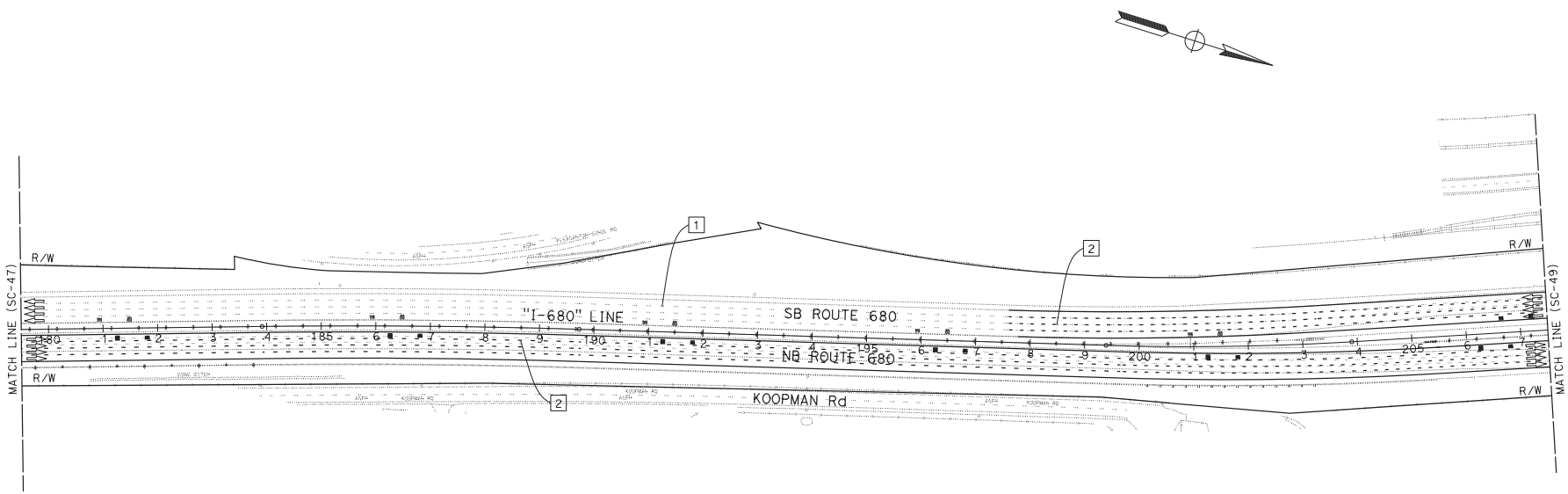

STAGE CONSTRUCTION PLAN

STAGE 3

SCALE 1" = 100'

SC-48

CALCULATED-DESIGNED BY	S. YARI
CHECKED BY	A. BHOI
REVISED BY	.
DATE REVISED	.
CONSULTANT FUNCTIONAL SUPERVISOR	RAMSEY HISSEN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	Caltrans

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-048.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

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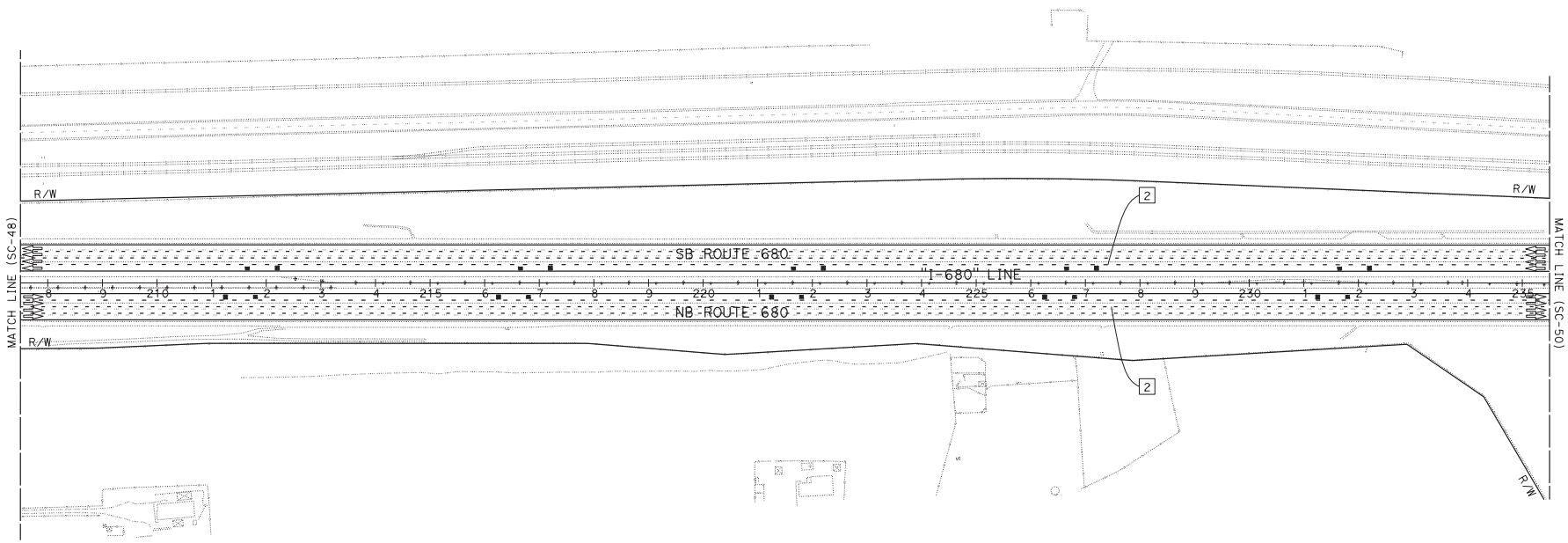

STAGE CONSTRUCTION PLAN

STAGE 3

SCALE 1" = 100'

SC-49

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-049.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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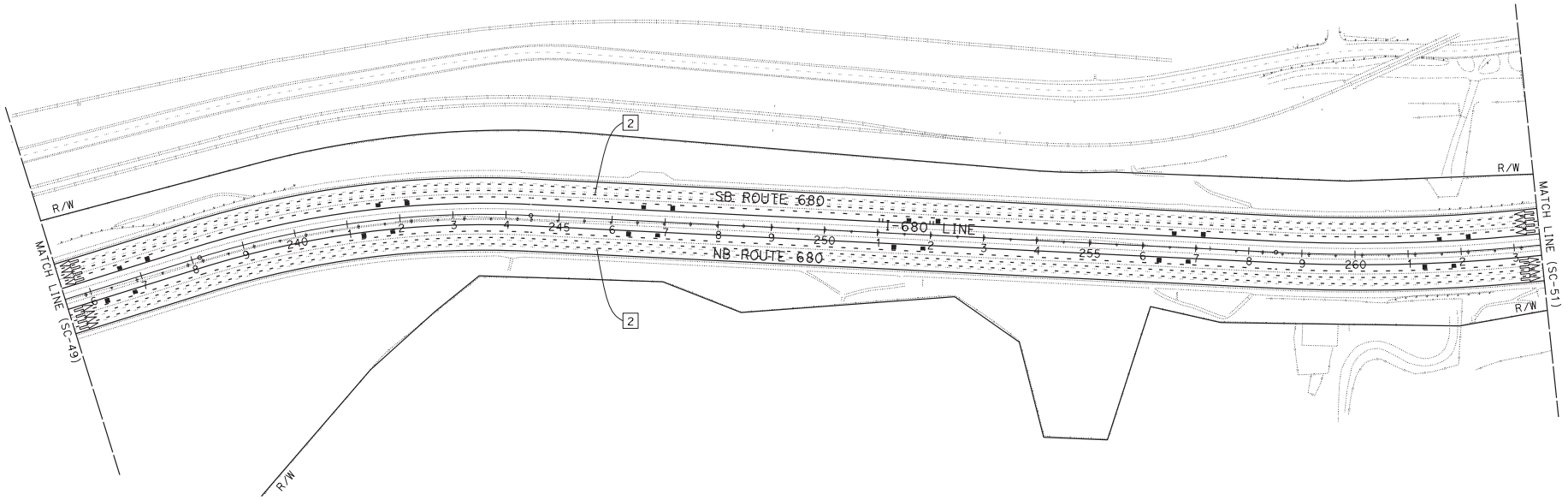

STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-50

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-050.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

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PLANS APPROVAL DATE

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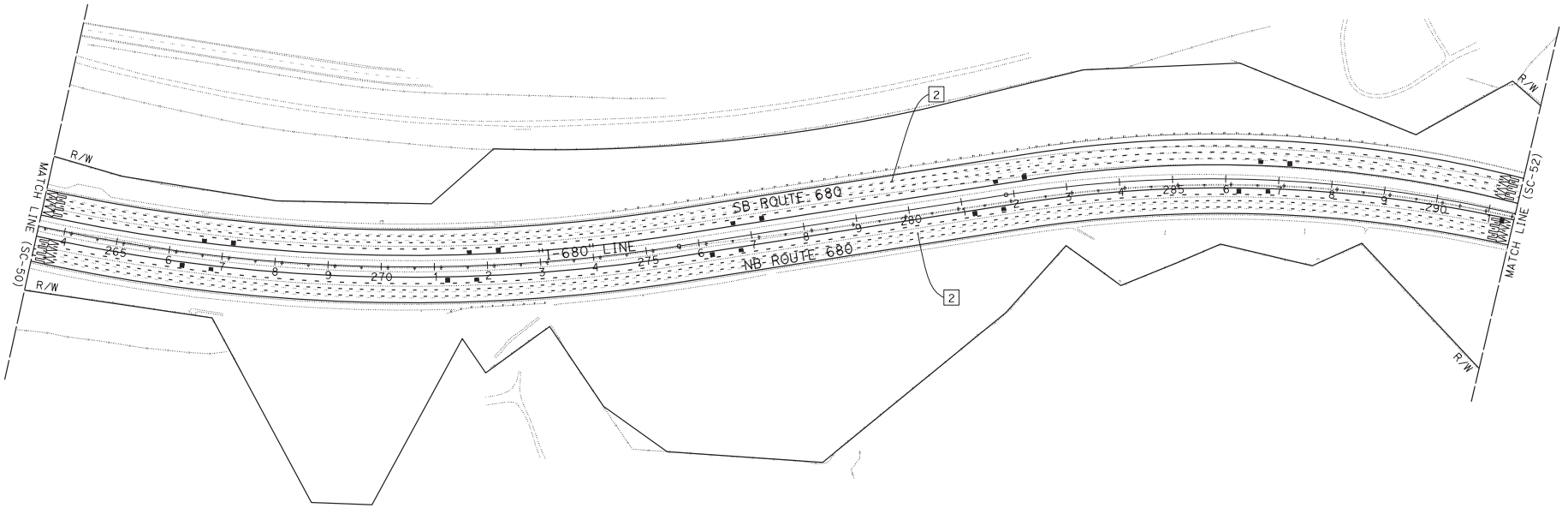

STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-51

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-051.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

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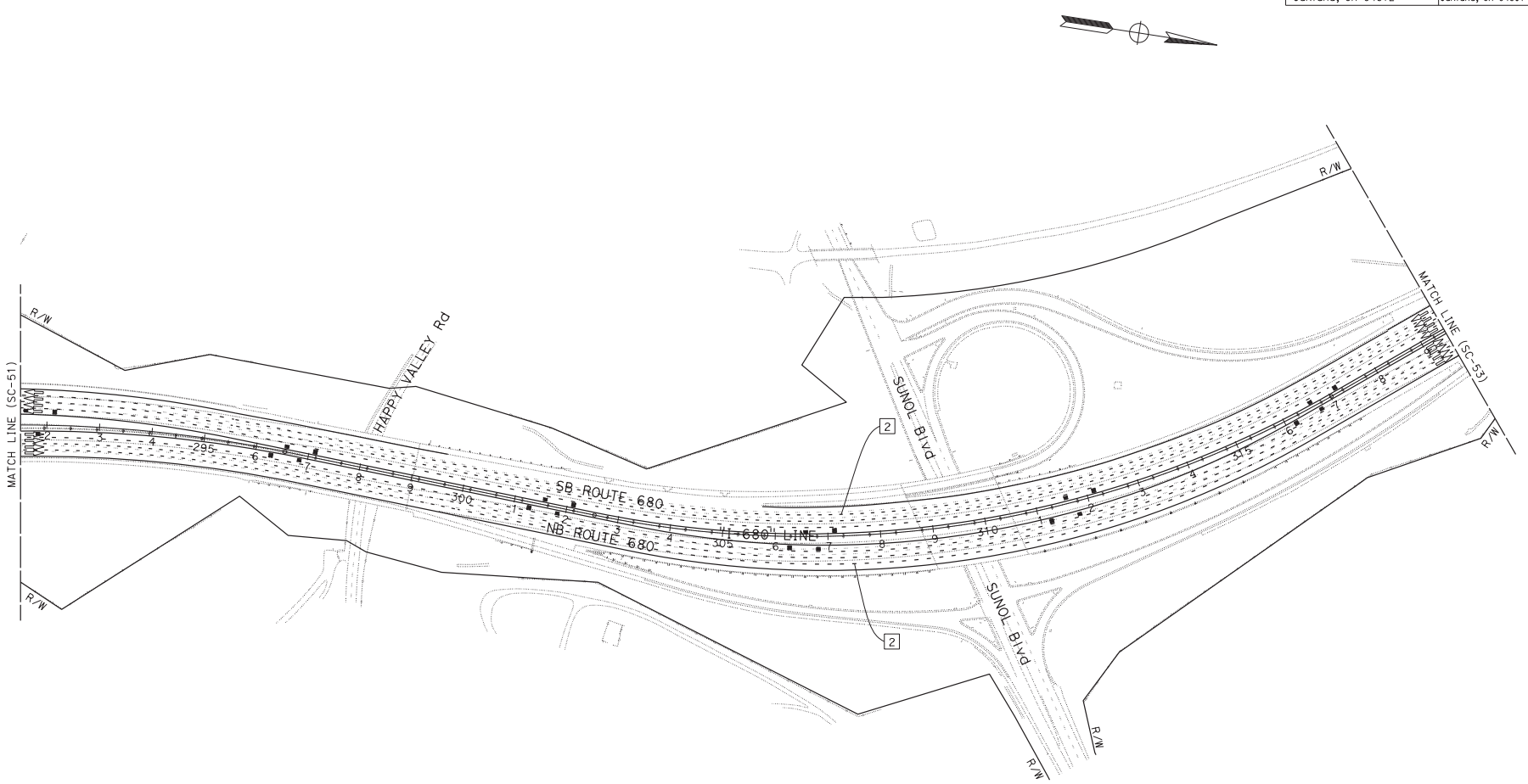

STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-52

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	
CONSULTANT FUNCTIONAL SUPERVISOR	RAMSEY HISSEN
CALCULATED-DESIGNED BY	S. YARI
CHECKED BY	A. BHOI
REVISED BY	.
DATE REVISED	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-052.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

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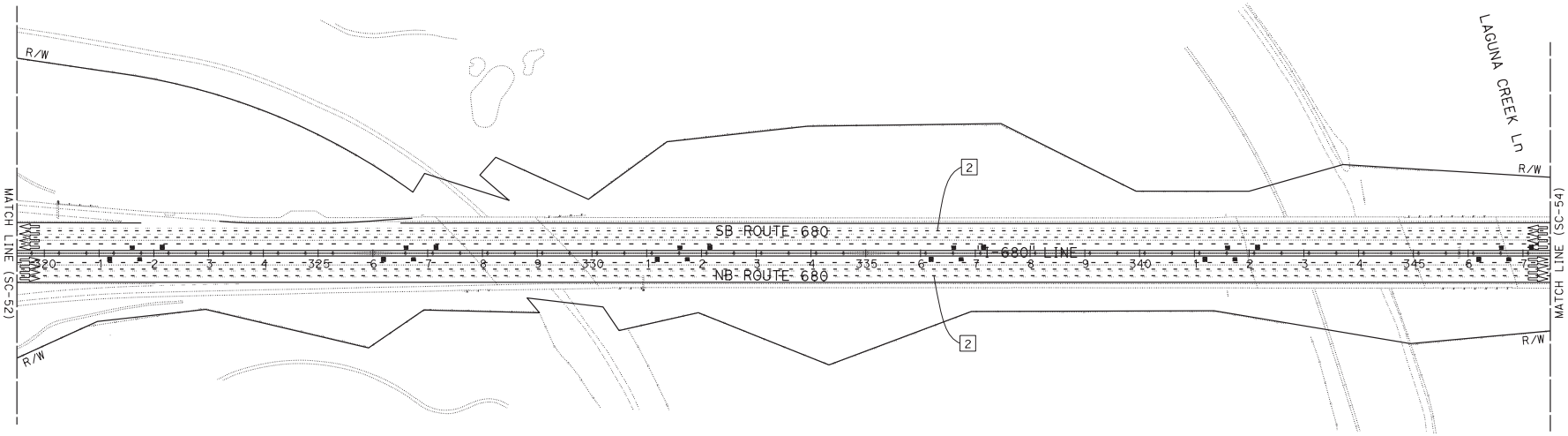

STAGE CONSTRUCTION PLAN

STAGE 3

SCALE 1" = 100'

SC-53

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010	USERNAME => josh.sun DGN FILE => SC-053.dgn	RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3	UNIT 0000	PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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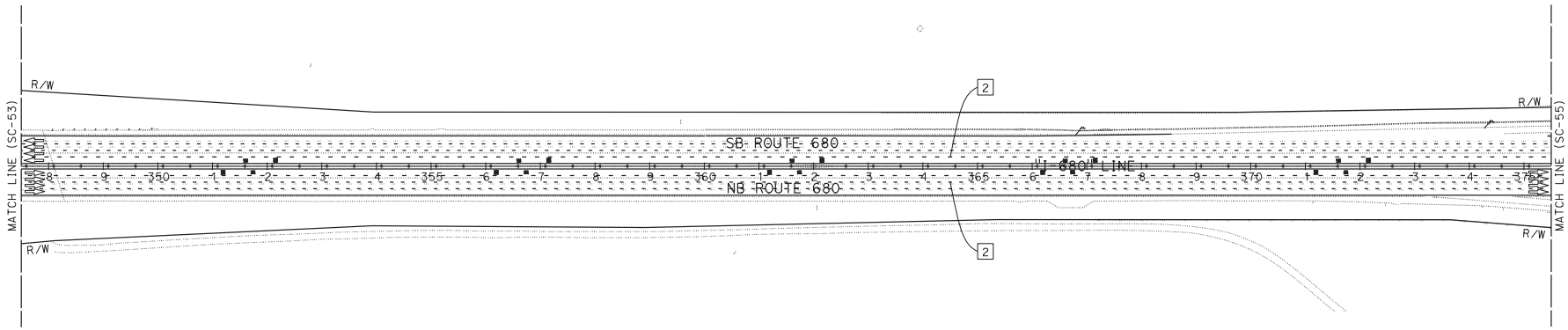

STAGE CONSTRUCTION PLAN

STAGE 3

SCALE 1" = 100'

SC-54

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-054.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

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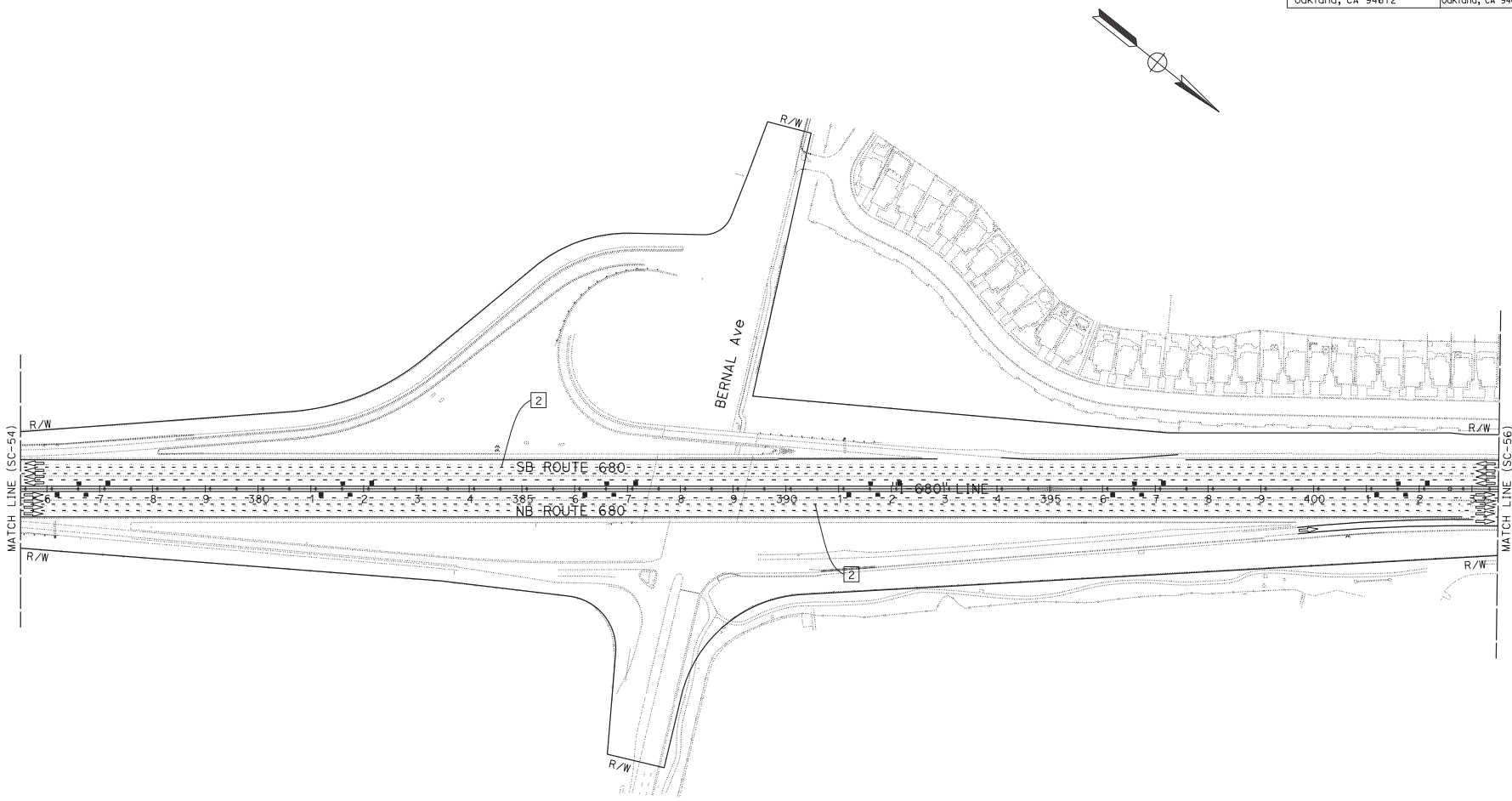

STAGE CONSTRUCTION PLAN

STAGE 3

SCALE 1" = 100'

SC-55

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

CALCULATED-DESIGNED BY: S. YARI

CHECKED BY: A. BHOI

REVISED BY: .

DATE REVISED: .

LAST REVISION
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-055.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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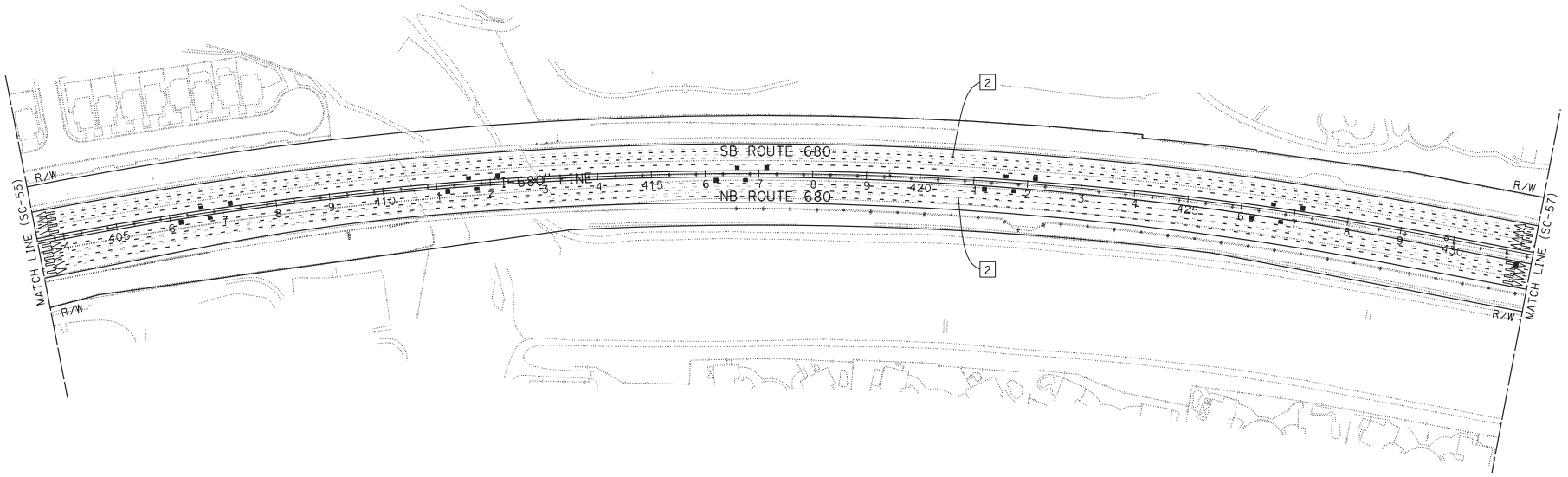
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-45.



STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-56

CALCULATED-DESIGNED BY	S. YARI
CHECKED BY	A. BHOI
CONSULTANT FUNCTIONAL SUPERVISOR	RAMSEY HISSEN
REVISED BY	.
DATE REVISED	.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32
11-18-19

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-056.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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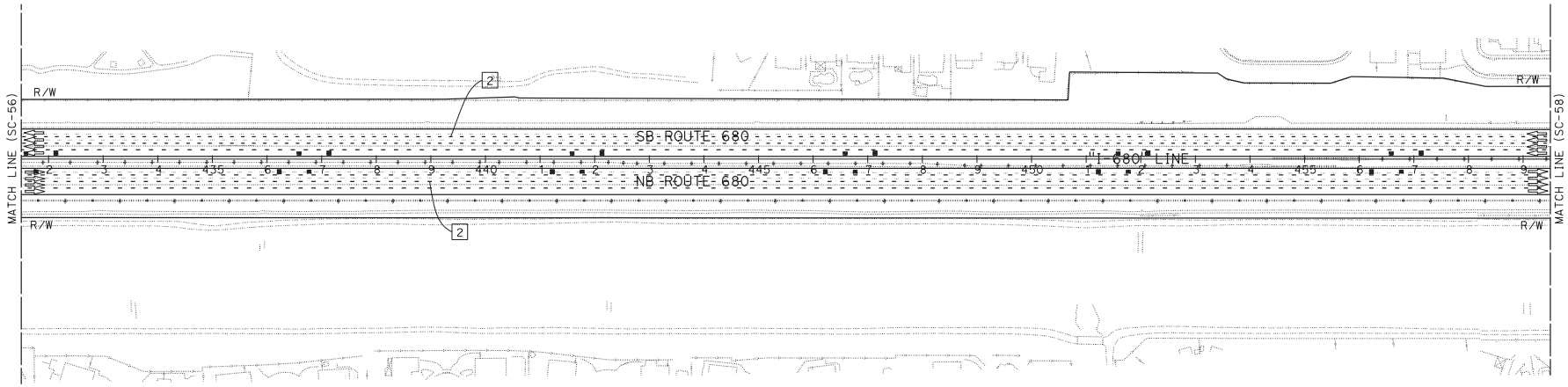

STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-57

CALCULATED-DESIGNED BY	S. YARI
CHECKED BY	A. BHOI
REVISED BY	.
DATE REVISED	.
CONSULTANT FUNCTIONAL SUPERVISOR	RAMSEY HISSEN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	Caltrans

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-057.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

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PLANS APPROVAL DATE

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Oakland, CA 94607

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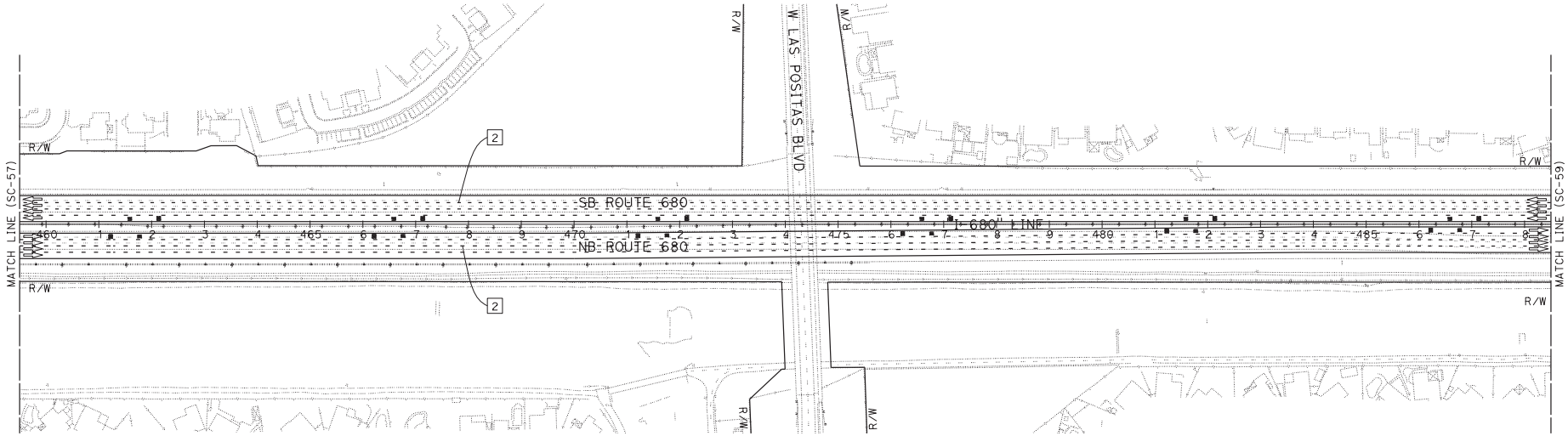

STAGE CONSTRUCTION PLAN

STAGE 3

SCALE 1" = 100'

SC-58

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

CALCULATED-DESIGNED BY: S. YARI

CHECKED BY: A. BHOI

REVISED BY . .

DATE REVISED . .

LAST REVISION 11-18-19

DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010

USERNAME => josh.sun
DGN FILE => SC-058.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

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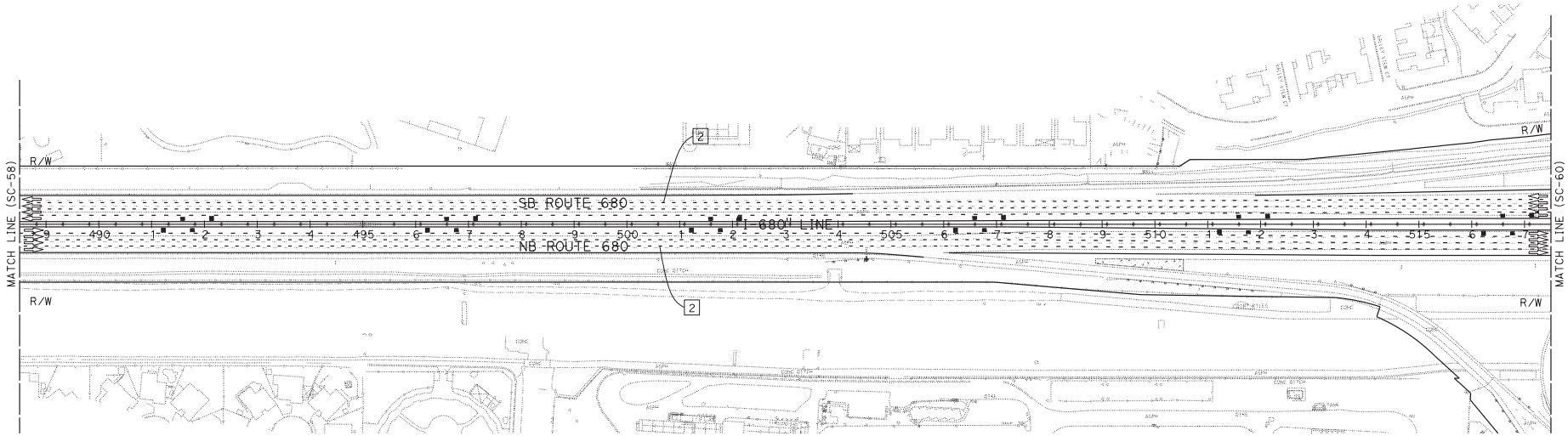
2. FOR CONSTRUCTION NOTES RELATED TO THIS STAGE, SEE SC-45.



STAGE CONSTRUCTION PLAN

STAGE 3

SCALE 1" = 100'

SC-59

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-059.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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ALAMEDA COUNTY TRANSPORTATION COMMISSION
1111 Broadway, Suite 800
Oakland, CA 94607

NOTES:

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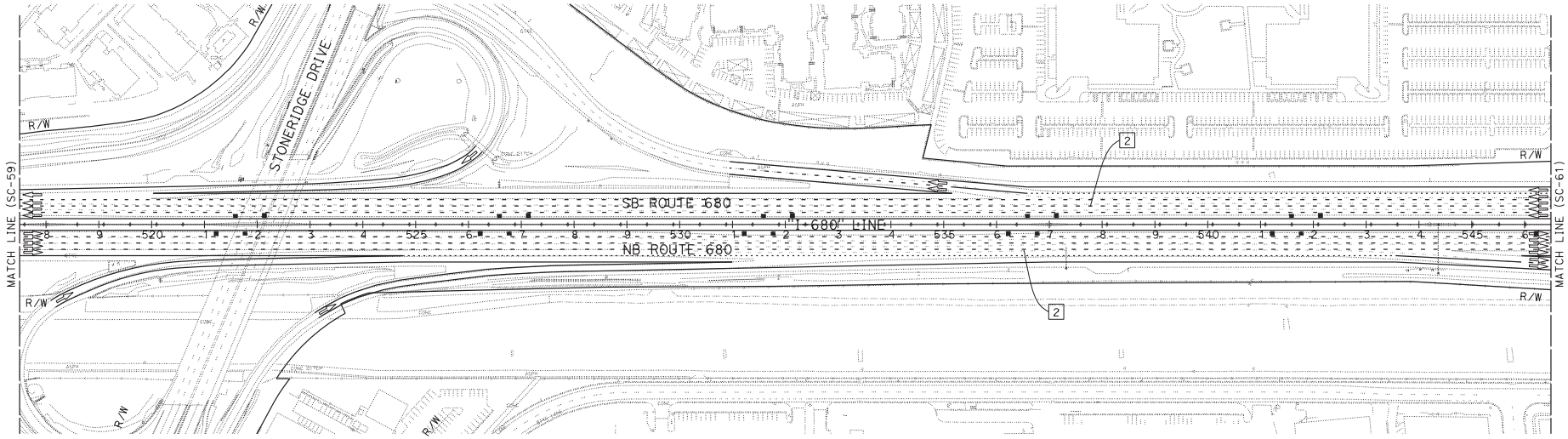

STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-60

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

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BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-060.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

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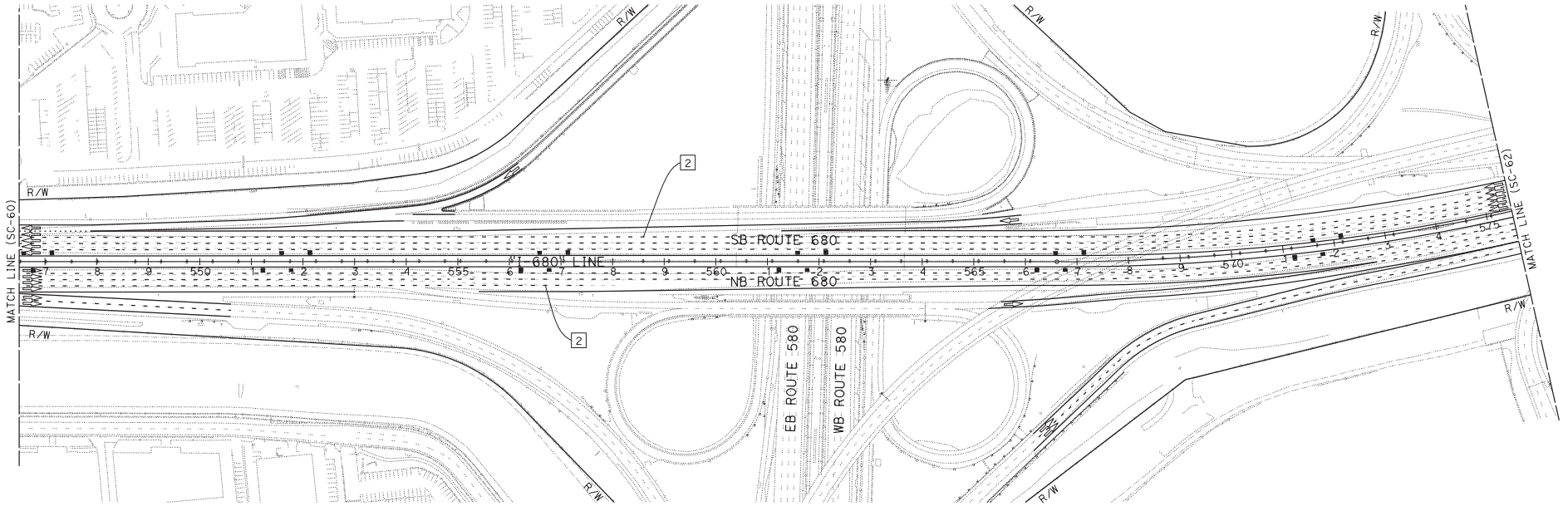

STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-61

CALCULATED-DESIGNED BY	CHECKED BY	CONSULTANT FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
S. YARI	A. BHOI	RAMSEY HISSEN	.	.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 11-18-19
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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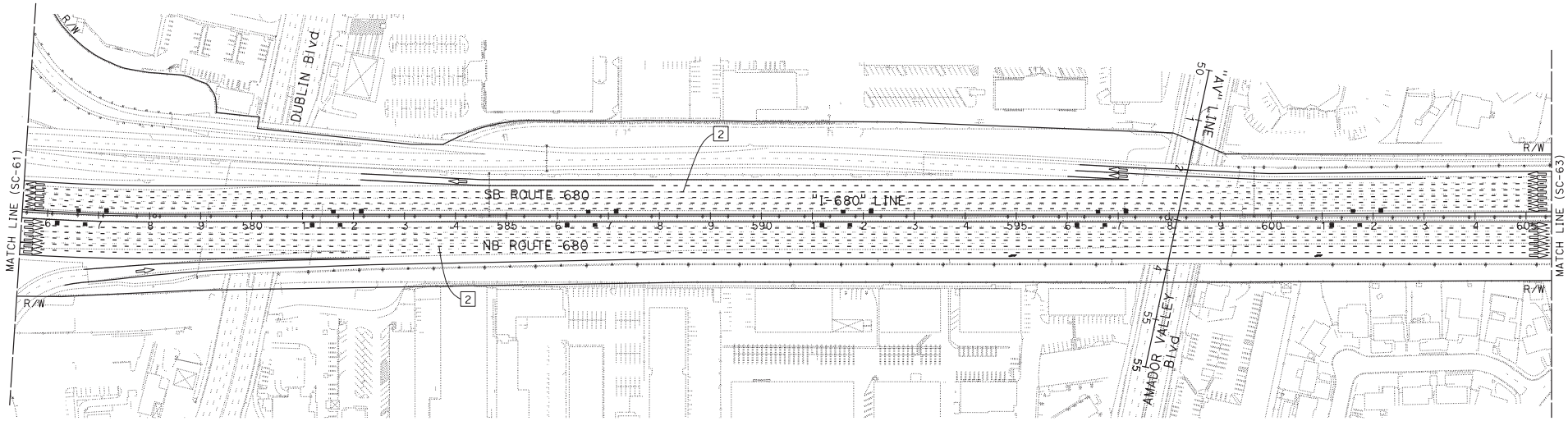

STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-62

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
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TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-062.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

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04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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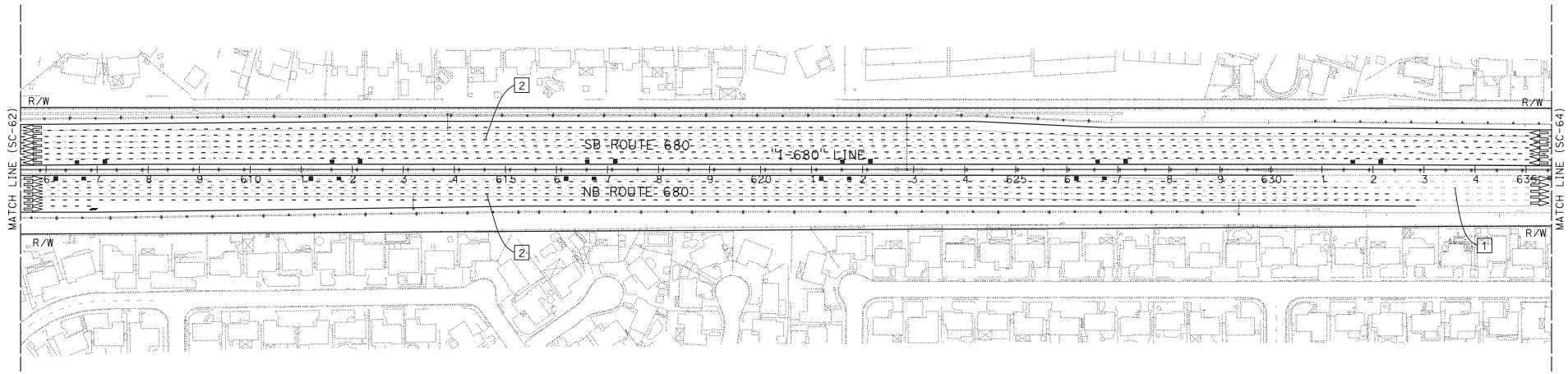

STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-63

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
S. YARI	A. BHOI	.	.

CONSULTANT FUNCTIONAL SUPERVISOR: RAMSEY HISSEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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04	CC	680	0.0/1.1		

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STAGE CONSTRUCTION PLAN
STAGE 3

SCALE 1" = 100'

SC-64

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	RAMSEY HISSEN	S. YARI	A. BHOI	.	.

LAST REVISION 11-18-19
DATE PLOTTED => 15-NOV-2019
TIME PLOTTED => 16:32

BORDER LAST REVISED 7/2/2010 | USERNAME => josh.sun | DGN FILE => SC-064.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	680	10.6/21.4		
04	CC	680	0.0/1.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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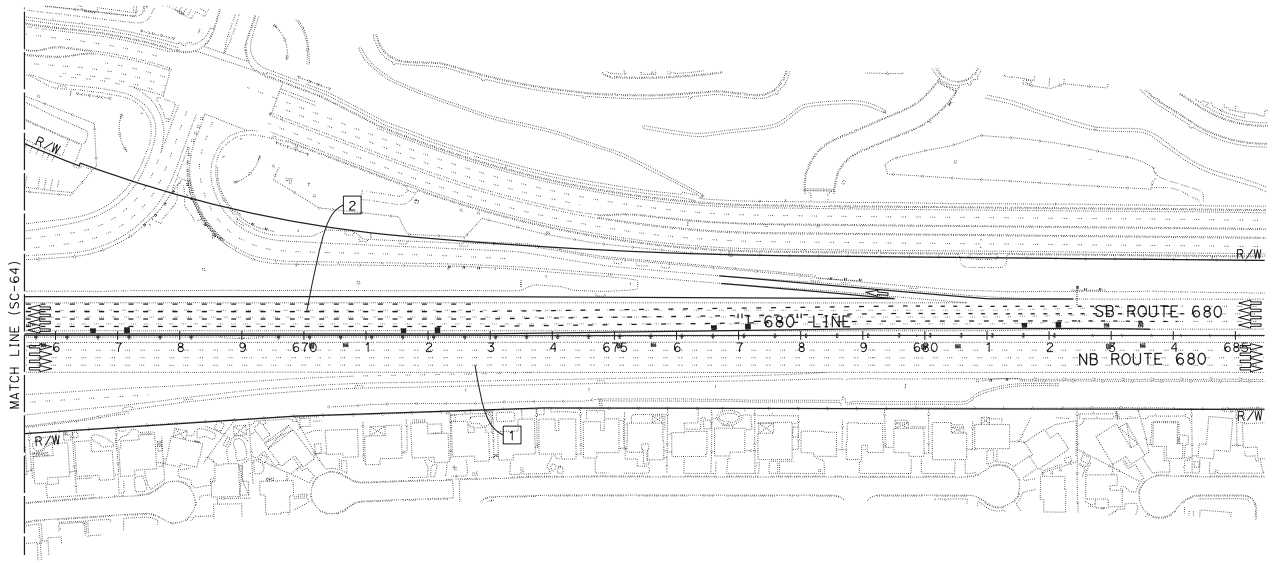

STAGE CONSTRUCTION PLAN
STAGE 3
SCALE 1" = 100'

SC-65

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	S. YARI
Caltrans	RAMSEY HISSEN	CHECKED BY	A. BHOI
		REVISED BY	.
		DATE REVISED	.

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Attachment - J

Risk Management Plan

RISK REGISTER LEVEL	3	PROJECT NAME	I-680 Express Lanes SR 84 to Alcosta Blvd	DIST-EA	04-0Q3000	Project Manager	Jack Siauw	RISK MANAGER	Gary Sidhu(Alameda CTC)	TOTAL COST (Capital +Support)	$431,019,934.50
PROJECT PHASE	PA&ED	PDT MEMBERS		RISK ASSESSMENT INFORMATION						TOTAL DAYS (Construction + Initial review (30 days)+ Closeout (60 days))	855

Risk Identification						Probability		Cost Impact ($)				Time Impact (days)				Phase	Capital / Support	Individual Risk	Risk Response			
Status	ID #	Category	Title	Risk Statement	Current Status/ Assumptions	Prob Low	Prob High	Cost Low	Cost Most likely	Cost High	Cost Probable	Low	Most likely	High	Time Probable	ENG/ CON	C/S	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	04-0Q3000-1	Environmental	Private Property Access	Late discovery of need to access private property for environmental field surveys, due to unanticipated property impacts from conduit or other work. Delays in requesting or obtaining Permissions to Enter (PTEs) could result in delays in technical reports and Environmental Document.	Potential to occur during PA&ED and PS&E. The current project design does not include property acquisitions but utility easements may be needed, and noise surveys will need to include some private properties.	10	30	$25,000	$32,000	$40,000	$6,433	30	40	60	9	ENG	C	Electrical and communications connections for the express lanes have undergone preliminary design but cannot be confirmed until PS&E.	Mitigate	No further PTEs are anticipated to be needed during PA&ED.	Lynn McIntyre	11/7/2019
Active	04-0Q3000-2	Design/ Environmental	Major Changes in Sign Locations, Lighting Assumptions, or Other Project Components	Ongoing changes to overhead sign locations, the locations and amounts of lighting, and other potential triggers for visual, cultural, or biological impacts could result in changes to the scopes and/or study areas for environmental technical studies. May also result in redesign and higher project cost.	Potential to occur during PA&ED and PS&E.	40	60	$2,500,000	$4,000,000	$5,000,000	$1,958,333	30	40	60	22	ENG	C	Design is preliminary, electrical and communications connection routes could change, DPR and DED review is upcoming.	Mitigate	In Visual Impact Assessment, present the locations of project components as preliminary but representative of anticipated impacts. For Cultural, developed strategy to characterize sensitivity in areas where project component locations are uncertain. For Bio, conservative study area assumed. Allocate higher contingency.	Lynn McIntyre /Abhijeet Bhoi	8/5/2019
Active	04-0Q3000-3	Design/ Environmental	Scope and schedule impacts from Rehab Project	Ongoing coordination with Caltrans on the I-680 Pavement Rehabilitation Project (04-ALA-680 PM M12.4/R21.9; EA 04-0J620) due to overlap in timing with the two projects may result in the addition of features such as cross slope correction, additional median barrier replacement, throw away features etc., that affect the project design and environmental clearance scope and schedule.	Potential to occur during PA&ED and PS&E.	25	40	$25,000	$300,000	$500,000	$93,438	30	40	120	21	ENG	C	Additional project features could affect right-of-way needs, sign placement, and/or electrical/ communications connections; Value Analysis process identified scope changes for construction efficiency.	Mitigate	Coordination is ongoing with Caltrans on Rehab Project. Pavement and barrier work has been identified. Any shift in project elements between the two projects is expected to occur after PA&ED. Allocate reasonable contingency.	Lynn McIntyre /Abhijeet Bhoi	11/15/2019
Active	04-0Q3000-4	Design/ Environmental	Scope impacts from phasing	The PR and ED will need to present a phasing strategy as funding may not be available to construct the full Build Alternative at once. The ED and many technical reports will need to quantify impacts by phase. During PS&E, depending on how much time elapses between construction phases, new or revised technical studies and/or supplemental environmental documentation/ revalidation could be needed.	Phasing has been defined and technical studies are being updated as needed. During PS&E, only a CEQA/NEPA Re-Validation is typically needed for RTL of each phase.	50	75	$250,000	$600,000	$1,000,000	$380,208	60	90	240	81	ENG	C	PA&ED Proposed phasing is in agreement with TOAR findings. During PS&E Wetland delineations are only valid for 5 years, and changes in regulatory requirements could affect planned mitigation. If the project phasing is undertaken differently than described in the ED or has different impacts, a supplemental ED could be needed.	Mitigate	Developed phasing concept for PA&ED. In PS&E, develop plan for funding individual phases; consider benefit of advance mitigation purchases for full Build vs. purchasing mitigation by phase.	Gary Sidhu/ Alameda CTC/ Ramsey H/ Abhijeet B/ Lynn McIntyre	7/16/2019
Retired	04-0Q3000-5	Environmental	CEQA EIR instead of Initial Study	Environmental issues or public controversy could escalate the projected environmental document type from a CEQA Initial Study (IS) to an Environmental Impact Report (EIR). This will require formal scoping and add 15 days to the public review period (to 45 days total).	Potential to occur during PA&ED	20	40	$10,000	$60,000	$100,000	$17,500	15	60	45	12	ENG	C	Environmental document has already circulated as CEQA Initial Study.	Mitigate	Not applicable.	Lynn McIntyre	8/19/2020
Retired	04-0Q3000-6	Environmental	NEPA Complex EA or EIS instead of Routine EA	Environmental issues or public controversy could escalate the projected environmental document type from a NEPA Routine Environmental Assessment (EA) to a Complex EA (or, less likely, an Environmental Impact Statement [EIS]). This would change the Caltrans and public review periods. Schedule delays would occur due to Caltrans Headquarters reviews. The length of delay would depend on the NEPA document type.	Very minor potential to occur during PID.	0	15	$10,000	$170,000	$250,000	$11,750	30	60	1255	34	ENG	C	Class of Action approved 9/6/18.	Mitigate	Not applicable.	Lynn McIntyre	10/22/2018
Active	04-0Q3000-7	Environmental	Separate stormwater treatment areas from linear ditch replacement	Per Regional Water Quality Control Board, the project cannot combine restoration of "potentially non-jurisdictional waters of U.S." with stormwater treatment. Either the relocated/restored linear features can be used as mitigation or as treatment; not both.	Project currently has treatment deficit of approximately 8 acres.	75	100	$200,000	$600,000	$1,000,000	$525,000	30	60	90	53	ENG	C	Based on experience with previous projects in the vicinity.	Mitigate	Coordinating with local agencies to identify off-site options. Continuing to work with Caltrans and RWQCB as needed to refine project design for stormwater treatment and waters of the State replacement to avoid delays with 401 permit issuance.	Lynn McIntyre/ Abhijeet B/Ramsey H	7/16/2019

RISK REGISTER LEVEL	3	PROJECT NAME	I-680 Express Lanes SR 84 to Alcosta Blvd	DIST-EA	04-0Q3000	Project Manager	Jack Siauw	RISK MANAGER	Gary Sidhu(Alameda CTC)	TOTAL COST (Capital +Support)	$431,019,934.50
PROJECT PHASE	PA&ED	PDT MEMBERS		RISK ASSESSMENT INFORMATION						TOTAL DAYS (Construction + Initial review (30 days)+ Closeout (60 days))	855

Risk Identification						Probability		Cost Impact ($)				Time Impact (days)				Phase	Capital / Support	Individual Risk	Risk Response			
Status	ID #	Category	Title	Risk Statement	Current Status/ Assumptions	Prob Low	Prob High	Cost Low	Cost Most likely	Cost High	Cost Probable	Low	Most likely	High	Time Probable	ENG/ CON	C/S	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	04-0Q3000-8	Environmental	Wildlife crossings	I-680 is considered a barrier to wildlife movement, and the project does not propose or include culvert work that could be augmented to increase wildlife connectivity. However, USFWS/CDFW have been advocating for wildlife crossings on recent projects in the area. Disagreement between the project team and agencies could delay the Biological Opinion and a result delay environmental document approval.	Very low potential to occur during PA&ED	30	60	$200,000	$500,000	$1,000,000	$240,000	30	60	90	27	ENG	C	CDFW comments received during public comment period include requests for commitment to study and implement additional crossings.	Mitigate	Caltrans is in talks with CDFW to reconcile comments.	Lynn McIntyre	8/19/2020
Retired	04-0Q3000-9	Environmental	More than 5 acres of permanent impacts to USACE waters	If the NEPA document type is determined to be an EIS *and* the project will have permanent impacts to more than 5 acres of waters of the U.S., the NEPA 404 process would be triggered. The EPA, USACE, and USFWS must be involved in project development and review, and have authority to choose the build alternative.	The NEPA document will not be an EIS.	0	10	$50,000	$75,000	$100,000	$3,750	730	0	1255	33	ENG	C	Class of Action approved 9/6/18.	Avoid	Not applicable.	Lynn M/ Abhijeet B	1/15/2019
Active	04-0Q3000-10	Environmental	Challenge to Environmental Document	The project is a gap closure and is not expected to be controversial, but changes to environment could present issues with regards to community acceptance. Potential lawsuits may challenge the environmental report, delaying the start of construction or threatening loss of funding.	Potential to occur during, after PA&ED. On a previous express lane project to the north, there was major community concern about glare and light intrusion from OH signs.	0	50	$50,000	$70,000	$100,000	$17,917	60	75	90	19	ENG	C	Public comments included requests for a higher level environmental document. Technically the project is not subject to SB 743; however, the potential for legal action cannot be ruled out.	Mitigate	AECOM and Caltrans are developing comment responses that clearly lay out why the project is not subject to SB 743.	Lynn McIntyre	8/19/2020
Retired	04-0Q3000-11	Environmental	Buried cultural resources	Extended Phase I (XPI) testing could uncover sensitive prehistoric archaeological resources in the ROW that cannot be avoided by the project. If so, a Recovery Plan and additional State Historic Preservation Officer consultation would be needed, which could delay circulation of the Draft Environmental Document.	XPI testing completed and no sensitive resources found.	30	60	$100,000	$225,000	$300,000	$97,500	30	60	120	32	ENG	C	Based on experience with past projects. If realized in the field, to be covered by project contingency.	Mitigate	Not applicable.	Lynn McIntyre	11/7/2019
Retired	04-0Q3000-12	Environmental	Delays in Archaeological Testing	A delay in obtaining Caltrans approval of the Extended Phase I (XPI) testing plan or delays caused by weather or drilling/backhoe contractor unavailability could delay the completion of XPI testing, preparation of the XPI Report, and the schedule for the Cultural submittals to SHPO and the Draft EIR/EA circulation.	Testing completed.	30	60	$0	$0	$0	$0	10	45	90	22	ENG	C	Based on experience with past projects.	Mitigate	Not applicable.	Lynn McIntyre	11/7/2019
Active	04-0Q3000-13	Environmental	Supplemental Environmental Document	A geometry change that is outside of the parameters contemplated in the Environmental Document could trigger a supplemental ED and delay due to an additional public comment period.	Negligible potential to occur before ED approval.	0	10	$50,000	$75,000	$100,000	$3,750	30	45	60	2	ENG	C	Based on experience with past projects.	Mitigate	During PA&ED, most changes can be addressed even after Draft Environmental Document issuance without triggering recirculation. After PA&ED, most changes can be addressed through the Re-Validation process without triggering a supplement.	Lynn McIntyre	7/16/2019
Retired	04-0Q3000-14	Environmental	Effects to a Historic Property	Adverse effect to a built resource historic property may require additional coordination with SHPO and other agencies and delay the project schedule.	At this time, no built resource historic properties would be affected by project.	25	40	$25,000	$45,000	$60,000	$14,354	30	60	90	20	ENG	C	Based on experience with past projects.	Mitigate	No private parcels where TCEs are proposed contain historic properties. Will be reassessed if partial acquisitions needed.	Lynn McIntyre	4/17/2019
Active	04-0Q3000-15	Environmental	Timely execution of agreements with regulatory agencies	Approval may take longer than project has scheduled. Could present major delays for construction.	Potential to occur during PS&E.	10	20	$10,000	$15,000	$20,000	$2,250	30	90	120	12	ENG	C	Based on experience with previous projects in the vicinity.	Mitigate	Request Caltrans to begin consultation early to identify any possible issues. Biological Assessment close to approval and can be submitted to USFWS soon to initiate Section 7 consultation.	Lynn McIntyre	7/16/2019
Retired	04-0Q3000-16	Environmental	Extensive Wetland Mitigation Required	Opportunities for wetland mitigation are very limited. Compliance with regulatory agency requirements may have cost and schedule implications.	Potential to occur during PA&ED and PS&E; however, very minor wetland impacts are expected. Mitigation options can be identified early and secured before PS&E.	10	25	$100,000	$300,000	$500,000	$52,500	30	60	90	11	ENG	C	Based on experience with mitigation banks in the project area.	Mitigate	Project currently would have extremely minor temporary impacts to other waters of the U.S., no permanent impacts and no wetland impacts. Research and make early arrangements for mitigation options during PA&ED. Explore availability of mitigation at same facility being used for SR 84 "Pigeon Pass" Project.	Lynn McIntyre	5/15/2019
Active	04-0Q3000-17	PM	Scope creep/Project Scope Consensus and lack of coordination	Multiple stakeholders may present opposing views and require additional design and environmental clearance, and create delays.	very low Potential to occur during PA&ED	5	10	$75,000	$110,000	$150,000	$8,313	60	70	120	6	ENG	C	Based on experience with projects involving multiple stakeholders.	Mitigate	Proactively seek stakeholder requirements and expectations. Obtain consensus regarding the project footprint from stakeholders and community throughout the development of the project.	Gary S/Abhijeet B/ Ramsey H	11/15/2019
Active	04-0Q3000-18	Organizational	Timely execution of Co-Op and maintenance agreements with local agencies and Caltrans	Draft Agreements need to be executed	Potential to occur during all phases of project	0	10	$0	$0	$0	$0	60	80	90	4	ENG	C	Based on experience with past projects.	Mitigate	Start draft agreements based on feasible assumptions early in PS&E process.	Gary Sidhu/Jack Siauw	5/14/2018

RISK REGISTER LEVEL	3	PROJECT NAME	I-680 Express Lanes SR 84 to Alcosta Blvd	DIST-EA	04-0Q3000	Project Manager	Jack Siauw	RISK MANAGER	Gary Sidhu(Alameda CTC)	TOTAL COST (Capital +Support)	$431,019,934.50
PROJECT PHASE	PA&ED	PDT MEMBERS		RISK ASSESSMENT INFORMATION						TOTAL DAYS (Construction + Initial review (30 days)+ Closeout (60 days))	855

Risk Identification						Probability		Cost Impact ($)				Time Impact (days)				Phase	Capital / Support	Individual Risk	Risk Response			
Status	ID #	Category	Title	Risk Statement	Current Status/ Assumptions	Prob Low	Prob High	Cost Low	Cost Most likely	Cost High	Cost Probable	Low	Most likely	High	Time Probable	ENG/ CON	C/S	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	04-0Q3000-19	Organizational	Increased project cost and schedule delays due to Project Phasing	The project is proposed to be phased due to limited availability of funding, which could result in higher costs and schedule delays.	Potential to occur during all phases of project	40	60	$30,000,000	$45,000,000	$60,000,000	$22,500,000	40	50	60	25	ENG	C	Based on current funding scenario	Mitigate	Develop plan for funding individual phases. Identify additional sources of project funding.	Project team	7/16/2019
Active	04-0Q3000-20	Organizational	Inability to deliver project on an accelerated schedule and obtain expeditious reviews/approvals	Desire to shorten schedule, to avoid losing funds	Potential to occur during all phases of project	20	40	$0	$0	$0	$0	45	80	120	25	ENG	C	Based on experience with past projects.	Mitigate	Project has identified a single build alternative footprint early in PID phase and a realistic PA&ED and PS&E milestone schedule. Breaking up the project in construction phases will require close coordination with pavement rehab project. Progress the project with effective Caltrans and agency coordination.	Gary Sidhu/Abhijeet B/Ramsey H	7/16/2019
Retired	04-0Q3000-21	Design	Approval for Non-Standard Design Elements (Existing and Proposed)	Inability to secure approval from City of Dublin and Caltrans during PA&ED could lead to potential schedule delays, i.e. non-standard lane widths and shoulder widths between Alcosta Blvd and Stoneridge IC, and reduced vertical clearance due to widening of structures. This may also lead to additional environmental and right of way impacts.	Non-standard design elements currently exist, a design standard risk assessment has been completed for PID. Document existing non-standard features in PA&ED.	25	40	$0	$0	$0	$0	60	75	90	24	ENG	C	Based on experience with past projects.	Mitigate	Geometry meetings w/ CT held, existing and proposed non-standard design features were presented early on in PID process, Obtained concurrence for the design standards risk assessment before setting project footprint. Coordinated with Caltrans early in PA&ED phase, requested design exceptions have been concurred.	Gary S/Abhijeet B/ Ramsey H	11/15/2019
Active	04-0Q3000-22	DES	Caltrans additional Seismic Design Requirements	Three Structure widenings, non standard retaining walls and soundwalls may require additional design requirements resulting in delays.	Caltrans standards have been revised. Project is in vicinity of active seismic faults and high acceleration area.	5	10	$2,000,000	$3,000,000	$5,000,000	$237,500	60	75	90	6	ENG	C	Based on proximity of active seismic faults and geology conditions	Mitigate	Coordinate early in the type selection process with CT Structures group to understand expectations and requirements. Low probability based on APS review.	Gary S/Abhijeet B/ Ramsey H	8/5/2019
Active	04-0Q3000-23	Design	Delay of geotechnical subsurface exploration (due to permits/agreements or lane closure/traffic) or unforeseen agreements required	Due to possibility of Caltrans Permits issuing limited encroachment permit along I-680, access may not be available to all areas to drill.	Potential to occur during Design phase	10	30	$45,000	$55,000	$75,000	$11,333	30	40	60	9	ENG	C	Based on experience with past projects.	Mitigate	Account for potential delays in project schedule. If possible, modify drilling workplan to minimize adverse effect.	Abhijeet B/ Ramsey H	1/28/2019
Active	04-0Q3000-24	PM	Unanticipated escalation in construction costs	Improved economy could present cost implications to the project. In addition to funding concerns.	Potential to occur during PA&ED and PS&E	50	75	$25,000,000	$14,000,000	$30,000,000	$11,562,500	15	25	60	21	ENG	C	Based on experience with recent bids.	Mitigate	Follow latest bids and seek additional funding opportunities. Update project estimate frequently and factor in reasonable contingency and escalation.	Gary S/Abhijeet B/ Ramsey H	11/15/2019
Active	04-0Q3000-25	ROW	Additional access to adjacent properties maybe necessary to resolve constructability requirements during construction	Unforeseen right of way and access requirements not determined during PA&ED phase could require additional environmental clearance, schedule, and cost implications for the project.	Potential to occur in PS&E phase.	20	30	$200,000	$350,000	$500,000	$87,500	20	25	45	8	ENG	C	Based on experience with similar projects.	Mitigate	Consider constructability early on in right of way/design process; submit environmental permit applications including adequate buffer in project footprint.	Gary S/Abhijeet B/ Ramsey H	8/5/2019
Active	04-0Q3000-26	ROW	Unidentified utilities and conflicts	Utility data received from utility companies maybe inaccurate and could present utility conflicts. Requiring additional clearances, utility easements and leading to additional cost implications in PA&ED and Design phase.	Potential to occur during all phases	40	60	$500,000	$600,000	$750,000	$304,167	40	50	90	30	ENG	C	Based on experience with past projects.	Mitigate	Coordinate and verify existing utilities and utility plans early in PA&ED and design phase with utility companies. Perform additional Potholing where necessary.	Gary S/Abhijeet B/ Ramsey H	8/5/2019
Active	04-0Q3000-27	Design	Additional pavement rehab required, overlap with adjacent projects.	Reconstruction of pavement work completed by the rehab project and any unexpected pavement deterioration in the project area due to proximity to faults could require some patchwork and thus additional repair; will have an impact on project cost.	Proximity to fault line may deteriorate pavement further along I-680 before express lanes construction.	30	50	$1,000,000	$3,000,000	$5,000,000	$1,200,000	20	30	60	15	ENG	C	Based on current pavement and geotechnical conditions	Mitigate	Coordinate with CT Design, Maintenance and Materials group for the pavement rehab project. Pavement condition after the rehab project is implemented would be surveyed in PS&E phase.	Gary S/Abhijeet B/ Ramsey H	1/29/2019
Active	04-0Q3000-28	Design	Tolling Equipment Standards and compatibility between ACTC and BAIFA tolling equipment	Toll System design is currently undergoing revisions for consistency in standards. By the time of project completion, tolling standards may be revised. ACTC and BAIFA systems may need to be correctly interfaced for compatibility	Current PA&ED design is based on existing standards and guidelines. ACTC and BAIFA are currently coordinating on Toll system layout	25	40	$3,000,000	$4,500,000	$6,000,000	$1,462,500	90	120	180	42	ENG	C	The tolling portion of the project may need to be redesigned before construction or change orders may need to be issued during construction for standards update and anny issues arising from incompatibility between ACTC and BAIFA tolling systems.	Mitigate	Coordinate closely on the development of tolling standards. Coordination between ACTC and BAIFA regarding tolling interface design in the north of I-580 area Allocate reasonable contingency for funds during construction.	Gary S/Abhijeet B/ Ramsey H	11/6/2019
Active	04-0Q3000-29	Environmental	Implementing of Bio Permit Conditions	New lighting analysis impact and mitigation requirements from USFWS and CDFW may delay PA&ED.	USFWS is now requiring analysis of project lighting impacts on special-status species before they issue a Biological Opinion for the project. CDFW comments included requests for lighting impacts and compensatory mitigation.	30	60	$50,000	$125,000	$250,000	$60,000	15	30	60	16	ENG	C	Based on recent regulatory agency developments.	Mitigate	A preliminary lighting analysis has been conducted and will be submitted to USFWS. For CDFW, lighting impacts will be provided as part of the ITP process during PS&E.	Lynn McIntyre	8/19/2020

Attachment - K

Noise Abatement Decision Report (NADR) Signature Page

Noise Study Report

I-680 Express Lanes Project

From SR 84 to Alcosta Boulevard

San Ramon, Dublin, Pleasanton, Sunol, and Unincorporated Alameda County, CA

04-ALA-680-PM R10.6 to R21.9 / 04-CC-680-PM R0.0 to R1.13

EA 04-0Q3000 / EFIS 0418000069

December 2019

Prepared By: _____ Date: 12/19/19

Deborah A. Jue, Principal
Wilson Ihrig
6001 Shellmound Street, Suite 400
Emeryville, CA 94608

Approved By: _____ Date: 12/27/19

for

Kevin Krewson, PE
Branch Chief, Air and Noise
Office of Environmental Engineering
Division of Environmental Planning and Engineering
California Department of Transportation, District 4
111 Grand Avenue
Oakland, CA 94612

Noise Abatement Decision Report

Based on the I-680 Express Lanes Project from SR 84 to Alcosta Boulevard
Noise Study Report (Wilson Ihrig, September 2019)

San Ramon, Dublin, Pleasanton, Sunol, and Unincorporated Alameda County, CA

04-ALA-680-PM R10.6 to R21.9 / 04-CC-680-PM R0.0 to R1.1

EA 04-0Q3000 / EFIS 0418000069

December 2019

Prepared By: _____ Date: December 10, 2019

Lynn McIntyre
Environmental Project Manager
AECOM
300 Lakeside Drive, Suite 400
Oakland, CA 94612

Approved By: _____ Date: 12/27/19

Kevin Krewson, PE
Branch Chief, Air and Noise
Office of Environmental Engineering
Division of Environmental Planning and Engineering
California Department of Transportation, District 4
111 Grand Avenue
Oakland, CA 94612

Attachment - L

Pavement Strategy Checklist, Preliminary Materials Recommendations and LCCA results

PAVEMENT STRATEGY CHECKLIST

Date: June 12, 2019

Project description and project elements: Interstate 680 Express Lanes

The project would widen and upgrade I-680 to expressway standards between the SR 84/I-680 Interchange and Alcosta Boulevard. One HOV lane would be added in the northbound direction, and one Express lane would be added in the southbound direction.

EA: 04-0Q3000 Project Manager: _Jack Siauw (Caltrans)

Initial: _____

Co/Rte: 04-Ala-680

04-CC-680

Project Engineer: Abhijeet Bhoi (AECOM)/Keyvan Fotoohi (AGS) Program:

Design Senior: _Vince Bonner (Caltrans Design Contra Costa) PM Limits: R10.6/R21.9 & R0.0/R1.1_

Materials Engineer: Guanzhi Deng (AGS) / Leonardo De Leon (Caltrans)

Signature: Guanzhi Deng /

_____

This project is at the following phase (please check one):

☐PID (PSSR, etc.) ☒PR ☐PS&E ☐OTHER

Describe existing structural section (e.g., shoulder, traveled way). Show limits if different sections are within the project.

See the Attachment A, Plans (Typical Cross Sections).

What pavement types/structural sections does Materials propose for each segment (shoulders and traveled way?)

A. Please See the Attachment B, Preliminary Material Report (PMR).
B.
C.

Pavement is involved in:

☒Entire Project OR ☐Part of the project

Assumptions (Is future widening in Regional Transportation Plan? Yes or no?): No

Please provide information for all of the following items that apply to this project.

	YES	NO	Question
1.	☐	☒	Are you implementing an innovative strategy (e.g., cold foam Hot-Mix Asphalt (HMA)), pre-cast concrete pavement, continuously reinforced pavement, etc)? If so, which are you implementing and why? If not, why not?
2.	☐	☒	Has Rapid Rehab strategy been considered (e.g., weekend closures and lane replacements)? Explain: The project is about widening and not about rehabilitation. Also, daily closure instead of weekend closure was selected based on LCCA Manual.
3.	☒	☐	Are you using Rubberized Hot-Mix Asphalt (RHMA) in this project? If not, justify:
4.	☒	☐	Was Life Cycle Analysis performed? Provide Life Cycle Analysis and results. See Attachment B, Life Cycle Cost Analysis Report
5.	☐	☒	Does existing pavement have a settlement problem? Explain:
6.	☒	☐	a) Is this project (or part of project) maintaining the grade profile? Existing roadway profile will be maintained. b) If not, explain how the profile change affects the pavement strategy choice (cut v. fill):
7.	☒	☐	Will there be a new barrier? Yes, median barrier will be placed in various locations along I-680
8.	☒	☐	Is the proposed structural section on cut or fill or both? Provide limits of both, if applicable. Both. See Attachment A, Plans (Typical Cross Sections).
9.	☐	☐	Are highly expansive basement soils present? This will be determined during actual soil tests.
10.	☒ ☐	☐ ☒	Are as-builts (including structural section information regarding edge drains, under drains, lime treatment, permeable blanket, etc.) available? If no, did you check map files and online? If yes, existing structural section was based on (check one): ☒ As-Builts ☐ actual boring

11.	☒ ☐	Do the project limits have problems with groundwater (e.g., high water table, flow requirements, etc.)? If yes, explain: In general, groundwater in the project area may be encountered within 4 to 40 feet of the ground surface, with the shallowest groundwater likely to be encountered between approximate Stations 105+00 to 372+00, and north of the Arroyo de la Laguna bridge at approximate Stations 412+00 to 622+00. In addition, drainages generally flow southward in the project area. Drainages in the project vicinity generally flow in lined or unlined engineered channels or underground culverts.
12.	☒ ☐	Has the availability of pavement materials (i.e., long haul distances from plants) been considered? If yes, how does material availability affect pavement type selection? A number of suppliers for hot mix asphalt and PCC are available in close proximity (within 10 miles) of the project area, so long haul distances from plants are not anticipated.
13.	☒ ☐ ☐ ☐	Will the existing pavement be rehabilitated? Yes, Pavement will be rehabilitated by Caltrans under a separate contract What are the age and condition of the existing adjacent lanes? Explain: The pavement age and condition varies along the project limits. Pavement Condition Surveys were completed and areas deemed needing of rehabilitation will be constructed or rehabilitated prior to the construction of this project. See Attachment D, Pavement Condition Survey.
14.	☒ ☐	What is the type of pavement/structural section (corridor pavement type/structural section continuity) on upstream/downstream roadway? Explain if several: See Attachement A, As-builts.
15.	☐ ☒ ☒ ☐	Is TMP data (lane closure charts) available and was it considered? Lane closure charts will be developed during the final design (PS&E) phase in consultation with Caltrans and Alameda County Transportation Commission Will there be nighttime paving? If so, provide lane closure hours: Yes, nighttime closures will be needed to reduce traffic impacts. Hours of operation will be 0 to 5 and 21 to 24.
16.	☒ ☐	Was field Maintenance input considered?
17.	☒ ☒	Were climate conditions (extreme temperature, rainfall, etc.) considered? If so, which ones do you anticipate affecting the pavement job? Low atmospheric temperature may affect the placement of HMA and RHMA.
18.	☐ ☐	Which stage construction requirements (matching adjacent sections, temporary paving, etc.) were considered? The adjacent roadways are composed of flexible asphalt concrete with or without pavement drains; matching these sections was an important factor when determining the proposed pavement structural section. Also, temporary

		pavement was considered when selecting the proposed pavement structural section.
19.	☒ ☐	Is this a large-scale project? Explain all quantity take-off: Yes this is a large-scale project. Quantity take-offs were made using 2-D take-offs in addition to 3-D modeling to determine the preliminary earthwork volumes.
20.	☒ ☐	Is there Open-Graded Hot-Mix Asphalt (OGHMA) on the existing pavement?
21.	☐ ☒	Was environmental impact considered? Explain: Potential environmental impacts to be considered by others
22.		What is the proposed pavement design life? 40-years per recommendations in Life Cycle Cost Analysis (LCCA) Report.
23.		What is the final lane line configuration? See Attachment A, Plans (Layout).
24.	☒ ☐	Are there vertical clearance issues? If yes, explain: Yes, there are existing structures and roadways that present vertical clearance issues along the project. They include Happy Valley Road UC, Pleasanton-Sunol Road UC, South Pleasanton OH, Pleasanton Industrial Park OH, Laguna Creek Lane UC, Bernal Avenue UC, Arroyo De La Laguna Bridge, West Las Positas Blvd OC, Alamo Canal Bridge, Stoneridge Drive OC, Route 680/580 Separation, Big Canyon Creek Bridge, Dublin Boulevard UC, Amador Valley Blvd UC, and Alcosta Boulevard OC.
25.		What is the traffic index? Traffic Index varies along the project, from 11.0 to 15.5
26.	☐ ☒	Are there existing retrofit edge drains?
27.	☒ ☐	Will shoulders be used as detours? The project has added cost to reconstruct portions of outside shoulders with full depth HMA which would be used as detour.
28.	☐ ☒ ☐ ☒	Is there settlement at bridge approaches? Are bridge approach slabs being replaced? Does such replacement include shoulders?
29.	☒ ☐	Is there a minimum standard (2% or 1.5%) cross-slope? If not standard, provide date of design exception approval:_____
30.		Provide the pavement condition report. See Attachment C, Pavement Condition Survey
31.		Other factors? Explain: None

SHOPP Project - Accomplishment - Performance Measures - Benefits

District: 04 **Tool ID:** 13351 **Project ID:** 0414000019 **EA:** 0J620 **Co-Rte-PM:** ALA-680-12.4/21.9 (Primary Location) View/Print PIR (Performance) Report

Res In PID WP: 07/01/13 **Project Manager:** Emily Landin-Lowe **HQ PM Conc TYP:** 05/17/12 **HQ PM Conc PID:** 05/17/12 **HQ PM Conc PRG:** 12/04/17 **HQ PM Conc PCR:** 03/27/18

☐ Bridge ☑ Pavement ☐ Drainage ☐ Facilities ☐ Safety ☑ Mobility ☐ Roadside ☐ Complete Streets ☐ Sustainability /Climate Change ☐ Advance Mitigation/Mitigation ☐ Major Damage ☐ Green-house Gases ☐ Relinquishment

Performance & Accomplishments (PRG)

	Activity Detail	Performance Objective	Unit of Measurement	Quantity	Assets in Good Cond	Assets in Fair Cond	Assets in Poor Cond	New Asset Added	Comment
1	Mainline existing Concrete Pavement Rehabilitation {e.g. Lane Replace, Conc overlay, CSOL, etc...} (201.122, 120)	Pavement Class I	Lane Miles	63.000	6.640	50.300	6.060		SE=39.07, RE=15.97
2	ADA - Repair/upgrade curb ramp (201.361)	No Performance Objective in the SHSMP	EA	27.000			27.000		
3	ADA - Deficient Elements	ADA Pedestrian Infrastructure	Deficient Elements	27.000			27.000		

4.0 PRELIMINARY MATERIAL RECOMMENDATIONS

4.1 GENERAL TRAVELLING LANES

According to Caltrans' "Pavement Rehabilitation Recommendation for PA&ED Phases Memorandum", Dated March 16, 2017, and February 6, and August 1, 2018, the existing travel lanes within the project area will be repaired based on " Design Guidance and Standards for Roadway Re habilitation Projects (2R and 3R)" and LCCA is required to select the pavement rehabilitation strategy. The pavement recommendations for the existing travel lanes (2R and 3R) are not part of this project.

4.2 EXPRESS LANES

The express lane project includes conversion of median and outside shoulders to a travel lane; therefore a complete new pavement structure construction should be evaluated for this project. Preliminary recommendations for new construction of express lane and of conversion of existing median and shoulder to express lane is presented below.

According to HDM, Section 612.3, either 40 years or 20 years design life can be considered for pavement widening. The rehabilitation repair project of the existing travelling lanes, which will be performed by Caltrans, may consider 20 years design life. The LCCA includes comparisons of design lives of 20 years and 40 years.

AGS developed the Life Cycle Cost Analyses (LCCA) approach based on LCCA Lane Widening Flowchart (Figure 2.2) of Life -Cycle Cost Analyses Procedures Manual (2013).The LCCA includes comparison of rigid pavement andflexible pavement of design lives of 40 years and 20 years. The pavement design life should either match existing adjacent roadway or be no less than 20 years. Ac cording to Caltrans Memorandums (2017, 2018), the existing general purpose travelling lanes will be repaired for design life of either 40 and/or 20 years. In general, four (4) pavement section alternatives including 2 rigid pavement and 2 flexible pavement was developed for LCCA.

In gener al, 15 segments is used for pavement widening and new construction of the project (Table 1). The 15 New Construction segments are located in different areas of I -680 with different Traffic Index (TI). Traffic data was reviewed and analyzed to develop

a specific TI for each segment. Then, four pavement section alternatives were developed for each segment based on the TI of the segment.

Rigid Pavement

Rigid pavement sections were determined according to Caltrans HDM, table 623.1G, without lateral support option. According to Caltrans HDM, Table 623.1A, and available geotechnical data, Subgrade Type II was used for concrete pavement structure selection. Using Caltrans HDM, Topic 615, Inland Valley was selected for project.

Flexible Pavement

Flexible pavement sections were determined according to Caltrans HDM, Topic 633. R-Values for the underlying material of each pavement segment were determined through discussion with Caltrans personnel. In general, pavement sections that are planned to be constructed on fill material assume an R-value of 20, while sections planned to be constructed on cut or flat areas assume an R-value of 10. Actual R-value of soil along each segment will be determined during PS&E phase report.

Low R-Value

For subgrade soil with clayey materials and R-value less than 5, subgrade/subbase treatment such as lime stabilized soil and cement stabilized soil, over excavation, or geotextile is necessary. The low R-value soils can be chemically treated with a cementitious binder to improve strength to at least 300 psi. Lime can be used with highly plastic, fine grained clayey soils, to increase R-value of the subgrade, in accordance to HDM, Section 614.4. The maximum thickness of lime and cement treated subgrade is limited to 2 feet; the minimum is 1 foot. Other option is using Enhancement Geotextile to provide a stabilization function. The Geotextile should be selected accordance to HDM, Section 665. If there are a few exceptionally low California R-values and they represent a relatively small volume of subgrade or they are concentrated in a small area, it may be more cost effective to remove and replace with import materials.

LCCA

LCCA should be performed to determine the alternative with the lowest Life -Cycle Cost (LCC) or the most cost effective. The pavement section alternatives for each segment are tabulated below.

Acronyms used in the Pavement Design Alternatives tables include:

RHMA-O: Rubberized Hot Mix Asphalt – Open Graded Friction Course
HMA-A: Hot Mix Asphalt, Caltrans Type A
AB: Class 2 Aggregate Base meeting the material requirements of Caltra ns Standard Specifications, Chapter 26
AS: Class 2 Aggregate Subbase meeting the material requirements of Caltrans Standard Specifications, Chapter 25
LCB: Lean Concrete Base
JPCP: Jointed Plain Concrete Pavement
CRCP: Continuously Reinforced Concrete Pavement

Segment 1

Alternative 1	**Alternative 2**	**Alternative 3**		**Alternative 4**	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 15.0	TI=15.0	TI = 15.0 R-Value = 20 GE (required) = 3.84		TI=14 R-Value = 20 GE (required) = 3.58	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
1.00 CRCP	1.15 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	3.96	0.20 RHMA-G	1.22
0.70 AS	0.70 AS	1.60 HMA-A		0.60 HMA-A	
		0.50 AB		0.65 LCB	1.24
		Total	3.96	1.20 AS	1.20
				Total	3.66

Segment 2

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 15.0	TI=15.0	TI = 15.0 R-Value = 10 GE (required) = 4.32		TI=13.5 R-Value = 10 GE (required) = 3.89	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
1.00 CRCP	1.15 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	4.40	0.20 RHMA-G	1.22
0.70 AS	0.70 AS	1.75 HMA-A		0.60 HMA-A	
		0.50 AB		0.60 LCB	1.14
		Total	4.40	1.60 AS	1.60
				Total	3.96

Segment 3

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 15.0	TI=15.0	TI = 15.0 R-Value = 20 GE (required) = 3.84		TI=13.5 R-Value = 20 GE (required) = 3.46	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
1.00 CRCP	1.15 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	3.96	0.20 RHMA-G	1.22
0.70 AS	0.70 AS	1.60 HMA-A		0.60 HMA-A	
		0.50 AB		0.60 LCB	1.14
		Total	3.96	1.20 AS	1.20
				Total	3.56

Segment 4

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 15.0	TI=15.0	TI = 15.0 R-Value = 20 GE (required) = 3.84		TI=14.0 R-Value = 20 GE (required) = 3.58	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
1.00 CRCP	1.15 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	3.96	0.20 RHMA-G	1.22
0.70 AS	0.70 AS	1.60 HMA-A		0.60 HMA-A	
		0.50 AB		0.65 LCB	1.24
		Total	3.96	1.20 AS	1.20
				Total	3.66

Segment 5

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 15.0	TI=15.0	TI = 15.0 R-Value = 20 GE (required) = 3.84		TI=14.0 R-Value = 20 GE (required) = 3.58	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
1.00 CRCP	1.15 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	3.96	0.20 RHMA-G	1.22
0.70 AS	0.70 AS	1.60 HMA-A		0.60 HMA-A	
		0.50 AB		0.65 LCB	1.24
		Total	3.96	1.20 AS	1.20
				Total	3.66

Segment 6

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 12.0	TI=12.0	TI = 12.0 R-Value = 20 GE (required) = 3.07		TI=11.0 R-Value = 20 GE (required) = 2.82	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
0.85 CRCP	0.95 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	3.16	0.20 RHMA-G	1.03
0.60 AS	0.60 AS	1.20 HMA-A		0.40 HMA-A	
		0.50 AB		0.50 LCB	0.95
		Total	3.16	0.95 AS	0.95
				Total	2.93

Segment 7

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 12.0	TI=12.0	TI = 12.0 R-Value = 20 GE (required) = 3.07		TI=11.0 R-Value = 20 GE (required) = 2.82	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
0.85 CRCP	0.95 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	3.16	0.20 RHMA-G	1.03
0.60 AS	0.60 AS	1.20 HMA-A		0.40 HMA-A	
		0.50 AB		0.50 LCB	0.95
		Total	3.16	0.95 AS	0.95
				Total	2.93

Segment 8

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 12.0	TI=12.0	TI = 12.0 R-Value = 10 GE (required) = 3.46		TI=11.0 R-Value = 10 GE (required) = 3.17	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
0.85 CRCP	0.95 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	3.62	0.20 RHMA-G	1.03
0.60 AS	0.60 AS	1.35 HMA-A		0.40 HMA-A	
		0.50 AB		0.50 LCB	0.95
		Total	3.62	1.30 AS	1.30
				Total	3.28

Segment 9

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 12.0	TI=12.0	TI = 12.0 R-Value = 10 GE (required) = 3.46		TI=11.0 R-Value = 10 GE (required) = 3.17	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
0.85 CRCP	0.95 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	3.62	0.20 RHMA-G	1.03
0.60 AS	0.60 AS	1.35 HMA-A		0.40 HMA-A	
		0.50 AB		0.50 LCB	0.95
		Total	3.62	1.30 AS	1.30
				Total	3.28

Segment 10

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 12.0	TI=12.0	TI = 12.0 R-Value = 10 GE (required) = 3.46		TI=11.0 R-Value = 10 GE (required) = 3.17	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
0.85 CRCP	0.95 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	3.62	0.20 RHMA-G	1.03
0.60 AS	0.60 AS	1.35 HMA-A		0.40 HMA-A	
		0.50 AB		0.50 LCB	0.95
		Total	3.62	1.30 AS	1.30
				Total	3.28

Segment 11

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 15.0	TI=15.0	TI = 15.0 R-Value = 20 GE (required) = 3.84		TI=13.5 R-Value = 20 GE (required) = 3.46	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
1.00 CRCP	1.15 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	3.96	0.20 RHMA-G	1.22
0.70 AS	0.70 AS	1.60 HMA-A		0.60 HMA-A	
		0.50 AB		0.60 LCB	1.14
		Total	3.96	1.20 AS	1.20
				Total	3.56

Segment 12

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 15.0	TI=15.0	TI = 15.0 R-Value = 10 GE (required) = 4.32		TI=13.5 R-Value = 10 GE (required) = 3.89	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
1.00 CRCP	1.15 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	4.40	0.20 RHMA-G	1.22
0.70 AS	0.70 AS	1.75 HMA-A		0.60 HMA-A	
		0.50 AB		0.60 LCB	1.14
		Total	4.40	1.60 AS	1.60
				Total	3.96

Segment 13

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 15.0	TI=15.0	TI = 15.0 R-Value = 10 GE (required) = 4.32		TI=14.0 R-Value = 10 GE (required) = 4.03	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
1.00 CRCP	1.15 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	4.40	0.20 RHMA-G	1.22
0.70 AS	0.70 AS	1.75 HMA-A		0.60 HMA-A	
		0.50 AB		0.65 LCB	1.24
		Total	4.40	1.65 AS	1.65
				Total	4.11

Segment 14

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 15.5	TI=15.5	TI = 15.5 R-Value = 20 GE (required) = 3.97		TI=14.5 R-Value = 20 GE (required) = 3.71	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
1.05 CRCP	1.20 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	4.10	0.20 RHMA-G	1.24
0.70 AS	0.70 AS	1.65 HMA-A		0.65 HMA-A	
		0.50 AB		0.70 LCB	1.33
		Total	4.10	1.25 AS	1.25
				Total	3.82

Segment 15

Alternative 1	Alternative 2	Alternative 3		Alternative 4	
40-year CRCP	40-year JPCP	40-year Flexible		20-year Flexible	
TI = 15.5	TI=15.5	TI = 15.5 R-Value = 10 GE (required) = 4.54		TI=14.5 R-Value = 10 GE (required) = 4.18	
Thickness (ft)	Thickness (ft)	Thickness (ft)	Gravel Equivalent (ft)	Thickness (ft)	Gravel Equivalent (ft)
1.05 CRCP	1.20 JPCP	0.10 RHMA-O		0.10 RHMA-O	
0.25 HMA-A	0.25 HMA-A	0.20 RHMA-G	4.55	0.20 RHMA-G	1.24
0.70 AS	0.70 AS	1.80 HMA-A		0.65 HMA-A	
		0.50 AB		0.70 LCB	1.33
		Total	4.55	1.70 AS	1.70
				Total	4.27

Optional 20-year JPCP Alternative

Per request of Caltrans, an optional 20-Years JPCP alternative was developed for possible consideration in future design. According to Table R-1 of LCCA Manual, the optional 20-years JPCP alternative will not be used for LCCA. The pavement sections of 15 segments for optional 20-years JPCP alternative is presented below.

Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
TI = 14	TI=13.5	TI = 13.5	TI=14	TI=14
Thickness (ft)	Thickness (ft)	Thickness (ft)	Thickness (ft)	Thickness (ft)
1.05 JPCP	1.05 JPCP	1.05 JPCP	1.05 JPCP	1.05 JPCP
0.25 HMA-A	0.25 HMA-A	0.25 HMA-A	0.25 HMA-A	0.25 HMA-A
0.70 AS	0.70 AS	0.70 AS	0.70 AS	0.70 AS

Segment 6	Segment 7	Segment 8	Segment 9	Segment 10
TI = 11	TI=11	TI = 11	TI=11	TI=11
Thickness (ft)	Thickness (ft)	Thickness (ft)	Thickness (ft)	Thickness (ft)
0.90 JPCP	0.90 JPCP	0.90 JPCP	0.90 JPCP	0.90 JPCP
0.25 HMA-A	0.25 HMA-A	0.25 HMA-A	0.25 HMA-A	0.25 HMA-A
0.60 AS	0.60 AS	0.60 AS	0.60 AS	0.60 AS

Segment 11	Segment 12	Segment 13	Segment 14	Segment 15
TI = 13.5	TI=13.5	TI = 14	TI=14.5	TI=14.5
Thickness (ft)	Thickness (ft)	Thickness (ft)	Thickness (ft)	Thickness (ft)
1.05 JPCP	1.05 JPCP	1.05 JPCP	1.15 JPCP	1.15 JPCP
0.25 HMA-A	0.25 HMA-A	0.25 HMA-A	0.25 HMA-A	0.25 HMA-A
0.70 AS	0.70 AS	0.70 AS	0.70 AS	0.70 AS

4.3 PAVEMENT MATERAILS SUPPLIERS

A list of pavement materials suppliers near the project location is presented below.

Hot Mix Asphalt suppliers:

1. Granite Construction Co
   1544 Stanley Blvd, Pleasanton, CA 94566

2. Mission Valley Asphalt Co
   7999 Athenour Way, Sunol, CA 94586

3. Vulcan Materials
   50 El Charro Road, Pleasanton, CA 94588

PCC Suppliers:

1. CEMEX
   1645 Stanley Blvd, Pleasanton, CA 94566

2. Vulcan Materials
   50 El Charro Road, Pleasanton, CA 94588

3. Pleasanton Ready Mix Concrete Inc.
   3400 Boulder St.
   Pleasanton, CA 94566

3.0 LIFE-CYCLE COST ANALYSIS (LCCA)

3.1 BACKUP CALCULATION

AGS calculated the quantities and cost estimate of initial pavement construction of 15 segments. Unit prices of pavement materials were provided by AECOM based on Caltrans' Contract Cost Database of the years 2018 and 2019, and assuming the whole material quantities of the pavement sections are provided through one single bidding. The quantities and cost estimates are presented in Appendix B.

3.2 LCCA RESULTS

AGS used RealCost 2.5.4CA program for LCCA to determine the alternative with the lowest Life-Cycle Cost (LCC) or the most cost effective. The input and output results of 15 segments are presented in Appendix C.

The LCCA should be updated in next phase of the project when the actual R-Value of soil along each segment is determined in PS&E phase, and the pavement rehabilitation recommendation of the existing travel lanes is finalized by Caltrans.

3.3 LCCA DESIGN ALTERNATIVE SUMMARY

Based on the output results of LCCA, a design alternative analysis was developed for fifteen segments. The preliminary LCCA design alternative of 15 segments are presented in Appendix D.

AGS

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 1 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 1 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate th e HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.00’ CRCP/0.25 HMA-A/0.70’ Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*151,794*
Total Agency Costs:	$	174,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	174,000

Segment 1 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.15’ JPCP/0.25 HMA-A/0.70’ Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*161,236*
Total Agency Costs:	$	175,000
Total User Costs:	$	288,000
TOTAL LIFE CYCLE COSTS:	$	463,000

Segment 1 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix As phalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.60 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*68,177*
Total Agency Costs:	$	155,000
Total User Costs:	$	99,000
TOTAL LIFE CYCLE COSTS:	$	254,000

Segment 1 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 13.5, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.60' HMA-A/0.65' LCB/1.20' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*67,263*
Total Agency Costs:	$	195,000
Total User Costs:	$	115,000
TOTAL LIFE CYCLE COSTS:	$	310,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

AGS

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 2 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 2 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.00' CRCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*371,100*
Total Agency Costs:	$	433,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	433,000

Segment 2 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.15' JPCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*394,183*
Total Agency Costs:	$	459,000
Total User Costs:	$	288,000
TOTAL LIFE CYCLE COSTS:	$	747,000

Segment 2 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.75 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*178,091*
Total Agency Costs:	$	553,000
Total User Costs:	$	198,000
TOTAL LIFE CYCLE COSTS:	$	751,000

Segment 2 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 13.5, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.60' HMA-A/0.60' LCB/1.60' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*166,385*
Total Agency Costs:	$	579,000
Total User Costs:	$	258,000
TOTAL LIFE CYCLE COSTS:	$	837,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 3 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 3 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Co ncrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.00' CRCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*215,448*
Total Agency Costs:	$	248,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	248,000

Segment 3 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use J ointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.15' JPCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*228,849*
Total Agency Costs:	$	253,000
Total User Costs:	$	288,000
TOTAL LIFE CYCLE COSTS:	$	541,000

Segment 3 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.60 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*96,767*
Total Agency Costs:	$	237,000
Total User Costs:	$	99,000
TOTAL LIFE CYCLE COSTS:	$	336,000

Segment 3 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 13.5, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.60' HMA-A/0.60' LCB/1.20' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*92,648*
Total Agency Costs:	$	253,000
Total User Costs:	$	115,000
TOTAL LIFE CYCLE COSTS:	$	368,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 4 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 4 - Alternative 1 (40 year design life Rigid Pavement)

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.00' CRCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*1,680,776*
Total Agency Costs:	$	1,924,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	1,924,000

Segment 4 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.15' JPCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*1,785,323*
Total Agency Costs:	$	1,898,000
Total User Costs:	$	348,000
TOTAL LIFE CYCLE COSTS:	$	2,246,000

Segment 4 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.60 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*754,905*
Total Agency Costs:	$	1,472,000
Total User Costs:	$	704,000
TOTAL LIFE CYCLE COSTS:	$	2,176,000

Segment 4 - Alternative 4 (20 year design life Flexible Pavement) – Preferred Alternative

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 14.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.60' HMA-A/0.65' LCB/1.20' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*744,782*
Total Agency Costs:	$	1,637,000
Total User Costs:	$	495,000
TOTAL LIFE CYCLE COSTS:	$	2,132,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is not selected as the preferred alternative. The 20-year flexible pavement (Alternative 4) is selected as the preferred alternative to be consistent with the existing flexible pavement.

AGS

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 5-1 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 5-1 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.00' CRCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*2,562,605*
Total Agency Costs:	$	2,921,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	2,921,000

Segment 5-1 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.15' JPCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*2,722,003*
Total Agency Costs:	$	2,853,000
Total User Costs:	$	381,000
TOTAL LIFE CYCLE COSTS:	$	3,234,000

Segment 5-1 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.60 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*1,150,971*
Total Agency Costs:	$	2,076,000
Total User Costs:	$	845,000
TOTAL LIFE CYCLE COSTS:	$	2,921,000

Segment 5-1 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 14.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.60' HMA-A/0.65' LCB/1.20' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*1,135,536*
Total Agency Costs:	$	2,615,000
Total User Costs:	$	1,970,000
TOTAL LIFE CYCLE COSTS:	$	4,585,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 5-2 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 5-2 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.00' CRCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*1,990,960*
Total Agency Costs:	$	2,274,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	2,274,000

Segment 5-2 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.15' JPCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*2,114,800*
Total Agency Costs:	$	2,235,000
Total User Costs:	$	737,000
TOTAL LIFE CYCLE COSTS:	$	2,972,000

Segment 5-2 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.60 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*894,221*
Total Agency Costs:	$	1,718,000
Total User Costs:	$	2,010,000
TOTAL LIFE CYCLE COSTS:	$	3,728,000

Segment 5-2 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 14.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.60' HMA-A/0.65' LCB/1.20' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*882,230*
Total Agency Costs:	$	2,094,000
Total User Costs:	$	9,242,000
TOTAL LIFE CYCLE COSTS:	$	11,336,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 6 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 6 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 12.0 for Type II subgrade in Inland Valley climate region.

New construction – 0.85' CRCP/0.25 HMA-A/0.60' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*157,479*
Total Agency Costs:	$	182,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	182,000

Segment 6 - Alternative 2 (40 year design life Rigid Pavement)

The pavement sect ion will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 12.0 for Type II subgrade in Inland Valley climate region.

New construction – 0.95' JPCP/0.25 HMA-A/0.60' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*162,887*
Total Agency Costs:	$	183,000
Total User Costs:	$	288,000
TOTAL LIFE CYCLE COSTS:	$	471,000

Segment 6 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 12.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.20 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*67,387*
Total Agency Costs:	$	190,000
Total User Costs:	$	99,000
TOTAL LIFE CYCLE COSTS:	$	289,000

Segment 6 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 11.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.40' HMA-A/0.50' LCB/0.95' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*64,495*
Total Agency Costs:	$	210,000
Total User Costs:	$	115,000
TOTAL LIFE CYCLE COSTS:	$	325,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

AGS

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 7 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 7 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 12.0 for Type II subgrade in Inland Valley climate region.

New construction – 0.85' CRCP/0.25 HMA-A/0.60' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*3,128,326*
Total Agency Costs:	$	3,567,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	3,567,000

Segment 7 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 2.0 for Type II subgrade in Inland Valley climate region.

New construction – 0.95' JPCP/0.25 HMA-A/0.60' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*3,235,763*
Total Agency Costs:	$	3,408,000
Total User Costs:	$	289,000
TOTAL LIFE CYCLE COSTS:	$	3,697,000

Segment 7 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 12.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.20 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*1,338,649*
Total Agency Costs:	$	2,523,000
Total User Costs:	$	428,000
TOTAL LIFE CYCLE COSTS:	$	2,951,000

Segment 7 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 11.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.40' HMA-A/0.50' LCB/0.95' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*1,281,208*
Total Agency Costs:	$	3,015,000
Total User Costs:	$	544,000
TOTAL LIFE CYCLE COSTS:	$	3,559,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 3) is not selected as the preferred alternative. The 40-year rigid pavement (Alternative 1) is selected as the preferred alternative to be consistent with the existing flexible pavement.

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 8 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 8 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is bas ed on a 40 -year design life, Traffic Index 12.0 for Type II subgrade in Inland Valley climate region.

New construction – 0.85' CRCP/0.25 HMA-A/0.60' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*7,390,018*
Total Agency Costs:	$	8,441,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	8,441,000

Segment 8 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane constr uction. The design is based on a 40 -year design life, Traffic Index 12.0 for Type II subgrade in Inland Valley climate region.

New construction – 0.95' JPCP/0.25 HMA-A/0.60' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*7,643,815*
Total Agency Costs:	$	8,126,000
Total User Costs:	$	597,000
TOTAL LIFE CYCLE COSTS:	$	8,723,000

Segment 8 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 12.0, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.35 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*3,427,242*
Total Agency Costs:	$	6,705,000
Total User Costs:	$	2,820,000
TOTAL LIFE CYCLE COSTS:	$	9,525,000

Segment 8 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 11.0, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.40' HMA-A/0.50' LCB/1.30' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*3,164,765*
Total Agency Costs:	$	7,708,000
Total User Costs:	$	1,645,000
TOTAL LIFE CYCLE COSTS:	$	9,353,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The existing travel lanes of the segment has both flexible and rigid pavement, therefore different pavement alternatives were selected to be consistent with the existing pavement. From PM ALA R15.1 to PM ALA R15.9, the 40-year rigid pavement (Alternative 1) was selected; from PM ALA R15.9 to PM ALA R19.7, the 20-year flexible pavement (Alternative 4) was selected, and from PM ALA R19.7 to PM ALA R20.3, the rigid pavement (Alternative 1) was selected, to be consistent with the existing pavement.

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 9 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 9 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane constructi on. The design is based on a 40 -year design life, Traffic Index 12.0 for Type II subgrade in Inland Valley climate region.

New construction – 0.85' CRCP/0.25 HMA-A/0.60' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*3,328,831*
Total Agency Costs:	$	3,766,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	3,766,000

Segment 9 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/ express lane construction. The design is based on a 40 -year design life, Traffic Index 12.0 for Type II subgrade in Inland Valley climate region.

New construction – 0.95' JPCP/0.25 HMA-A/0.60' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*3,443,154*
Total Agency Costs:	$	3,499,000
Total User Costs:	$	286,000
TOTAL LIFE CYCLE COSTS:	$	3,785,000

Segment 9 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 12.0, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.35 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*1,543,800*
Total Agency Costs:	$	2,143,000
Total User Costs:	$	671,000
TOTAL LIFE CYCLE COSTS:	$	2,814,000

Segment 9 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 11.0, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.40' HMA-A/0.50' LCB/1.30' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*1,425,567*
Total Agency Costs:	$	2,896,000
Total User Costs:	$	730,000
TOTAL LIFE CYCLE COSTS:	$	3,626,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative3) is not selected as the preferred alternative. The 40-year rigid pavement (Alternative 1) is selected as the preferred alternative to be consistent with the existing rigid pavement.

AGS

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 10 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 10 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane const ruction. The design is based on a 40 -year design life, Traffic Index 12.0 for Type II subgrade in Inland Valley climate region.

New construction – 0.85' CRCP/0.25 HMA-A/0.60' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*9,768,745*
Total Agency Costs:	$	11,158,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	11,158,000

Segment 10 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 12.0 for Type II subgrade in Inland Valley climate region.

New construction – 0.95' JPCP/0.25 HMA-A/0.60' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*10,104,236*
Total Agency Costs:	$	10,742,000
Total User Costs:	$	1,446,000
TOTAL LIFE CYCLE COSTS:	$	12,188,000

Segment 10 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 12.0, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.35 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*4,530,416*
Total Agency Costs:	$	8,865,000
Total User Costs:	$	4,710,000
TOTAL LIFE CYCLE COSTS:	$	13,575,000

Segment 10 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 11.0, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.40' HMA-A/0.50' LCB/1.30' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*4,183,452*
Total Agency Costs:	$	10,215,000
Total User Costs:	$	3,873,000
TOTAL LIFE CYCLE COSTS:	$	14,088,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The existing travel lanes of the segment has both flexible and rigid pavement, therefore different pavement alternatives were selected to be consistent with the existing pavement. From PM ALA R15.3 to PM ALA R15.9, the 40-year rigid pavement (Alternative 1) was selected; from PM ALA R15.9 to PM ALA R19.7, the 20-year flexible pavement (Alternative 4) was selected, and from PM ALA R19.7 to PM CC R0.35, the 40-year rigid pavement (Alternative 1) was selected, to be consistent with the existing pavement.

AGS

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 11 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 11 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.00' CRCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*132,162*
Total Agency Costs:	$	152,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	152,000

Segment 11 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.15' JPCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*140,383*
Total Agency Costs:	$	153,000
Total User Costs:	$	285,000
TOTAL LIFE CYCLE COSTS:	$	438,000

Segment 11 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.60 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*59,360*
Total Agency Costs:	$	130,000
Total User Costs:	$	166,000
TOTAL LIFE CYCLE COSTS:	$	296,000

Segment 11 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 13.5, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.60' HMA-A/0.60' LCB/1.20' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*56,833*
Total Agency Costs:	$	141,000
Total User Costs:	$	152,000
TOTAL LIFE CYCLE COSTS:	$	293,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

AGS

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 12 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 12 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use C ontinuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.00’ CRCP/0.25 HMA-A/0.70’ Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*115,175*
Total Agency Costs:	$	132,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	132,000

Segment 12 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.15’ JPCP/0.25 HMA-A/0.70’ Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*122.339*
Total Agency Costs:	$	134,000
Total User Costs:	$	285,000
TOTAL LIFE CYCLE COSTS:	$	419,000

Segment 12 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.75 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*55,273*
Total Agency Costs:	$	120,000
Total User Costs:	$	166,000
TOTAL LIFE CYCLE COSTS:	$	286,000

Segment 12 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 13.5, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.60' HMA-A/0.60' LCB/1.60' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*51,640*
Total Agency Costs:	$	128,000
Total User Costs:	$	152,000
TOTAL LIFE CYCLE COSTS:	$	280,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 13 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 13 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.00' CRCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*1,156,607*
Total Agency Costs:	$	1,329,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	1,329,000

Segment 13 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.0 for Type II subgrade in Inland Valley climate region.

New construction – 1.15' JPCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*1,228,550*
Total Agency Costs:	$	1,331,000
Total User Costs:	$	1,764,000
TOTAL LIFE CYCLE COSTS:	$	3,095,000

Segment 13 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.0, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.75 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*555,057*
Total Agency Costs:	$	1,194,000
Total User Costs:	$	2,835,000
TOTAL LIFE CYCLE COSTS:	$	4,029,000

Segment 13 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 14.0, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.60' HMA-A/0.65' LCB/1.65' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*536,368*
Total Agency Costs:	$	1,285,000
Total User Costs:	$	3,235,000
TOTAL LIFE CYCLE COSTS:	$	4,520,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 14 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 14 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.5 for Type II subgrade in Inland Valley climate region.

New construction – 1.05' CRCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*568,692*
Total Agency Costs:	$	656,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	656,000

Segment 14 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.5 for Type II subgrade in Inland Valley climate region.

New construction – 1.20' JPCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*600,735*
Total Agency Costs:	$	660,000
Total User Costs:	$	768,000
TOTAL LIFE CYCLE COSTS:	$	1,428,000

Segment 14 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.5, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.65 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*249,805*
Total Agency Costs:	$	625,000
Total User Costs:	$	753,000
TOTAL LIFE CYCLE COSTS:	$	1,378,000

Segment 14 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 14.5, and an R-value of 20.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.65' HMA-A/0.70' LCB/1.25' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*254,896*
Total Agency Costs:	$	704,000
Total User Costs:	$	606,000
TOTAL LIFE CYCLE COSTS:	$	1,310,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

LIFE CYCLE COST ANALYSIS FORM

(SEGMENT 15 I-680 EXPRESS LANES)

Project Description

The California Department of Transportation (Caltrans), in cooperation with the Alameda County Transportation Commission (ACTC), proposes High Occupancy Vehicle/express lanes (HOV/express lane) between the SR 84 interchange and Alcosta Boulevard.

Segment 15 - Alternative 1 (40 year design life Rigid Pavement) – Preferred Alternative

The pavement section will use Continuously Reinforced Concrete Pavement (CRCP) to accommodate the HOV/express lane construction. The design is based on a 40 -year design life, Traffic Index 15.5 for Type II subgrade in Inland Valley climate region.

New construction – 1.05' CRCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*268,435*
Total Agency Costs:	$	309,000
Total User Costs:	$	0
TOTAL LIFE CYCLE COSTS:	$	309,000

Segment 15 - Alternative 2 (40 year design life Rigid Pavement)

The pavement section will use Jointed Plane Concrete Pavement (JPCP) to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.5 for Type II subgrade in Inland Valley climate region.

New construction – 1.20' JPCP/0.25 HMA-A/0.70' Class 2 AS		
Pavement Design Life:		40 Years
Initial Construction Costs:	$	*283,560*
Total Agency Costs:	$	312,000
Total User Costs:	$	768,000
TOTAL LIFE CYCLE COSTS:	$	1,080,000

Segment 15 - Alternative 3 (40 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 40-year design life, Traffic Index 15.5, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/1.80 HMA-A/0.50' Class 2 AS

Pavement Design Life:		40 Years
Initial Construction Costs:	$	*125,808*
Total Agency Costs:	$	305,000
Total User Costs:	$	544,000
TOTAL LIFE CYCLE COSTS:	$	849,000

Segment 15 - Alternative 4 (20 year design life Flexible Pavement)

The pavement section will use Rubberized Hot Mix Asphalt – Open Graded Friction Course (RHMA-O), Rubberized Hot Mix Asphalt (Type G), Hot Mix Asphalt (HMA-A), Lean Concrete Base (LCB) and Class 2 Aggregate Base to accommodate the HOV/express lane construction. The design is based on a 20-year design life, Traffic Index 14.5, and an R-value of 10.

New construction – 0.10' RHMA-O/0.20' RHMA-G/0.65' HMA-A/0.70' LCB/1.70' Class 2 AS

Pavement Design Life:		20 Years
Initial Construction Costs:	$	*125,610*
Total Agency Costs:	$	339,000
Total User Costs:	$	425,000
TOTAL LIFE CYCLE COSTS:	$	764,000

Is the lowest life cycle cost option selected as the preferred alternative? If not, why?

The lowest life cycle cost option (Alternative 1) is selected as the preferred alternative because it is consistent with the existing rigid pavement.

Attachment - M

Draft Cooperative Agreement for PS&E Phase

COOPERATIVE AGREEMENT

This AGREEMENT, effective on _____, is between the State of California, acting through its Department of Transportation, referred to as CALTRANS, and:

Alameda County Transportation Commission, a California joint powers authority, referred to hereinafter as ALAMEDA CTC.

An individual signatory agency in this AGREEMENT is referred to as a PARTY. Collectively, the signatory agencies in this AGREEMENT are referred to as PARTIES.

RECITALS

1. PARTIES are authorized to enter into a cooperative agreement for improvements to the State Highway System per the California Streets and Highways Code, Sections 114 and 130.

2. For the purpose of this AGREEMENT, *I-680 Northbound and Southbound High Occupancy Vehicle/High Occupancy Toll Lanes (HOV/HOT) from State Route 84 (SR84) to Alcosta Blvd.* will be referred to hereinafter as PROJECT. The PROJECT scope of work is defined in the project initiation and approval documents (e.g. Project Study Report, Permit Engineering Evaluation Report, or Project Report).

3. All obligations and responsibilities assigned in this AGREEMENT to complete the following PROJECT COMPONENTS will be referred to hereinafter as WORK:

   - PLANS, SPECIFICATIONS, AND ESTIMATE (PS&E)
   - RIGHT-OF-WAY

   Each PROJECT COMPONENT is defined in the CALTRANS Workplan Standards Guide as a distinct group of activities/products in the project planning and development process.

4. The term AGREEMENT, as used herein, includes this document and any attachments, exhibits, and amendments.

   This AGREEMENT is separate from and does not modify or replace any other cooperative agreement or memorandum of understanding between the PARTIES regarding the PROJECT.

   PARTIES intend this AGREEMENT to be their final expression that supersedes any oral understanding or writings pertaining to the WORK. The requirements of this AGREEMENT will preside over any conflicting requirements in any documents that are made an express part of this AGREEMENT.

   If any provisions in this AGREEMENT are found by a court of competent jurisdiction to be, or are in fact, illegal, inoperative, or unenforceable, those provisions do not render any or all other AGREEMENT provisions invalid, inoperative, or unenforceable, and those provisions will be automatically severed from this AGREEMENT.

   Except as otherwise provided in the AGREEMENT, PARTIES will execute a written amendment if there are any changes to the terms of this AGREEMENT.

   PARTIES agree to sign a CLOSURE STATEMENT to terminate this AGREEMENT. However, all indemnification, document retention, audit, claims, environmental commitment, legal challenge, maintenance and ownership articles will remain in effect until terminated or modified in writing by mutual agreement or expire by the statute of limitations.

5. The following work associated with this PROJECT has been completed or is in progress:

   - ALAMEDA CTC approved the Cooperative Agreement for the Project Approval and Environmental Document (PA&ED) on November 13, 2018 (Cooperative Agreement No. 04-2698).

   - ALAMEDA CTC approved Cooperative Agreement for the Project Initiation Document (PID) on December 1, 2017 (Cooperative Agreement No. 04-2672).

6. In this AGREEMENT capitalized words represent defined terms, initialisms, or acronyms.

7. PARTIES hereby set forth the terms, covenants, and conditions of this AGREEMENT.

RESPONSIBILITIES

Sponsorship

8. A SPONSOR is responsible for establishing the scope of the PROJECT and securing the financial resources to fund the WORK. A SPONSOR is responsible for securing additional funds when necessary or implementing PROJECT changes to ensure the WORK can be completed with the funds obligated in this AGREEMENT.

   PROJECT changes, as described in the CALTRANS Project Development Procedures Manual, will be approved by CALTRANS as the owner/operator of the State Highway System.

9. ALAMEDA CTC is the SPONSOR for the WORK in this AGREEMENT.

Implementing Agency

10. The IMPLEMENTING AGENCY is the PARTY responsible for managing the scope, cost, schedule, and quality of the work activities and products of a PROJECT COMPONENT.

    - ALAMEDA CTC is the Plans, Specifications, and Estimate (PS&E) IMPLEMENTING AGENCY.

      PS&E includes the development of the plans, specifications, and estimate; obtaining any resource agency permits; and the advertisement/award of the construction contract.

    - ALAMEDA CTC is the RIGHT OF WAY IMPLEMENTING AGENCY

      RIGHT OF WAY includes coordination with utility owners for the protection, removal, or relocation of utilities; the acquisition of right-of-way interests; and post-construction work such as right-of-way monumentation/recordation, relinquishments/vacations, and excess land transactions. The RIGHT OF WAY component budget identifies the cost of the capital costs of right-of-way acquisition (RIGHT-OF-WAY CAPITAL) and the cost of the staff work in support of the acquisition (RIGHT-OF-WAY SUPPORT).

11. The IMPLEMENTING AGENCY for a PROJECT COMPONENT will provide a Quality Management Plan (QMP) for the WORK in that component. The QMP describes the IMPLEMENTING AGENCY's quality policy and how it will be used. The QMP will include a process for resolving disputes between the PARTIES at the team level. The QMP is subject to CALTRANS review and approval.

12. Any PARTY responsible for completing WORK will make its personnel and consultants that prepare WORK available to help resolve WORK-related problems and changes for the entire duration of the PROJECT including PROJECT work that may occur under separate agreements.

Funding

13. Funding sources, PARTIES committing funds, funding amounts, and invoicing/payment details are documented in the Funding Summary section of this AGREEMENT.

    PARTIES will amend this AGREEMENT by updating and replacing the Funding Summary, in its entirety, each time the funding details change. Funding Summary replacements will be executed by a legally authorized representative of the respective PARTIES. The most current fully executed Funding Summary supersedes any previous Funding Summary created for this AGREEMENT.

14. PARTIES will not be reimbursed for costs beyond the funds obligated in this AGREEMENT.

    If an IMPLEMENTING AGENCY anticipates that funding for the WORK will be insufficient to complete the WORK, the IMPLEMENTING AGENCY will promptly notify the SPONSOR.

15. Unless otherwise documented in the Funding Summary, overall liability for project costs within a PROJECT COMPONENT will be in proportion to the amount contributed to that PROJECT COMPONENT by each fund type.

16. Unless otherwise documented in the Funding Summary, any savings recognized within a PROJECT COMPONENT will be credited or reimbursed, when allowed by policy or law, in proportion to the amount contributed to that PROJECT COMPONENT by each fund type.

17. WORK costs, except those that are specifically excluded in this AGREEMENT, are to be paid from the funds obligated in the Funding Summary. Costs that are specifically excluded from the funds obligated in this AGREEMENT are to be paid by the PARTY incurring the costs from funds that are independent of this AGREEMENT.

CALTRANS' Quality Management

18. CALTRANS, as the owner/operator of the State Highway System (SHS), will perform quality management work including Quality Management Assessment (QMA) and owner/operator approvals for the portions of WORK within the existing and proposed SHS right-of-way.

19. CALTRANS' Quality Management Assessment (QMA) efforts are to ensure that ALAMEDA CTC's quality assurance results in WORK that is in accordance with the applicable standards and the PROJECT's quality management plan (QMP). QMA does not include any efforts necessary to develop or deliver WORK or any validation by verifying or rechecking WORK.

    When CALTRANS performs QMA it does so for its own benefit. No one can assign liability to CALTRANS due to its QMA.

20. CALTRANS, as the owner/operator of the State Highway System, will approve WORK products in accordance with CALTRANS policies and guidance and as indicated in this AGREEMENT.

21. ALAMEDA CTC will provide WORK-related products and supporting documentation upon CALTRANS' request for the purpose of CALTRANS' quality management work.

CEQA/NEPA Lead Agency

22. CALTRANS is the CEQA Lead Agency for the PROJECT.

23. CALTRANS is the NEPA Lead Agency for the PROJECT.

Environmental Permits, Approvals and Agreements

24. PARTIES will comply with the commitments and conditions set forth in the environmental documentation, environmental permits, approvals, and applicable agreements as those commitments and conditions apply to each PARTIES responsibilities in this AGREEMENT.

25. Unless otherwise assigned in this AGREEMENT, the IMPLEMENTING AGENCY for a PROJECT COMPONENT is responsible for all PROJECT COMPONENT WORK associated with coordinating, obtaining, implementing, renewing, and amending the PROJECT permits, agreements, and approvals whether they are identified in the planned project scope of work or become necessary in the course of completing the PROJECT.

26. The PROJECT requires the following environmental permits/approvals:

ENVIRONMENTAL PERMITS/REQUIREMENTS
404, US Army Corps of Engineers
401, Regional Water Quality Control Board
National Pollutant Discharge Elimination System (NPDES), State Water Resources Control Board
Federal Endangered Species Act Section 7 USFWS
1602 Department of Fish and Games
BO Section 7 USFWS

Plans, Specifications, and Estimate (PS&E)

27. As the PS&E IMPLEMENTING AGENCY, ALAMEDA CTC is responsible for all PS&E WORK except those activities and responsibilities that are assigned to another PARTY and those activities that are excluded under this AGREEMENT.

28. CALTRANS will be responsible for completing the following PS&E activities:

CALTRANS Work Breakdown Structure Identifier (If Applicable)	AGREEMENT Funded Cost
100.15.10.xx Quality Management	Yes
255.20 Final PS&E Package	Yes
260 Contract Bid Documents Ready to List	Yes
265 Awarded and Approved Construction Contract	Yes

29. ALAMEDA CTC will prepare Utility Conflict Maps identifying the accommodation, protection, relocation, or removal of any existing utility facilities that conflict with construction of the PROJECT or that violate CALTRANS' encroachment policy.

    ALAMEDA CTC will provide CALTRANS a copy of Utility Conflict Maps for CALTRANS' concurrence prior to issuing the Notices to Owner and executing the utility agreement. All utility conflicts will be addressed in the PROJECT plans, specifications, and estimate.

30. ALAMEDA CTC will determine the cost to positively identify and locate, accommodate, protect, relocate, or remove any utility facilities whether inside or outside the State Highway System right-of-way in accordance with federal and California laws and regulations, and CALTRANS' policies, procedures, standards, practices, and applicable agreements including but not limited to Freeway Master Contracts.

31. PARTIES acknowledge that the activities Final District PS&E Package (255.20) and Contract Bid Documents "Ready to List" (260) will be performed by CALTRANS. Because CALTRANS is anticipated to perform the advertisement, award, and administration (AAA) of the construction contract, the PS&E package must be reviewed and approved by CALTRANS District and HQ Office Engineers prior to advertisement.

    ALAMEDA CTC will ensure that any consultant involved in the preparation of the PS&E package will remain available to address all comments generated during the performance of the Final District PS&E Package and Contract Bid Documents "Ready to List" activities.

RIGHT-OF-WAY

32. As the RIGHT-OF-WAY IMPLEMENTING AGENCY, ALAMEDA CTC is responsible for all RIGHT-OF-WAY WORK except those activities and responsibilities that are assigned to another PARTY and those activities that are excluded under this AGREEMENT.

33. CALTRANS will be responsible for completing the following RIGHT-OF-WAY activities:

CALTRANS Work Breakdown Structure Identifier (If Applicable)	AGREEMENT Funded Cost
100.25.10.xx Quality Management	Yes

34. The selection of personnel performing RIGHT-OF-WAY WORK will be in accordance with federal and California laws and regulations, and CALTRANS' policies, procedures, standards, practices, and applicable agreements.

35. ALAMEDA CTC will make all necessary arrangements with utility owners for the timely accommodation, protection, relocation, or removal of any existing utility facilities that conflict with construction of the PROJECT or that violate CALTRANS' encroachment policy.

36. ALAMEDA CTC will provide CALTRANS a copy of conflict maps, relocation plans, proposed notices to owner, reports of investigation, and utility agreements (if applicable) for CALTRANS' concurrence prior to issuing the notices to owner and executing the utility agreement. All utility conflicts will be fully addressed prior to Right-of-Way Certification and all arrangements for the protection, relocation, or removal of all conflicting facilities will be completed prior to construction contract award and included in the PROJECT plans, specifications, and estimate.

37. ALAMEDA CTC will provide a land surveyor licensed in the State of California to be responsible for surveying and right-of-way engineering. All survey and right-of-way engineering documents will bear the professional seal, certificate number, registration classification, expiration date of certificate, and signature of the responsible surveyor.

38. Acquisition of right-of-way will not occur prior to the approval of the environmental document without written approval from the CEQA Lead Agency.

39. ALAMEDA CTC will hear and adopt Resolutions of Necessity when authorized to do so by law or will work with local agencies having jurisdiction and authorized under the law to hear and adopt Resolutions of Necessity.

    ALAMEDA CTC will conduct and document Condemnation Evaluation and Condemnation Panel Review meetings as required in accordance with CALTRANS policy and guidance. CALTRANS will be notified in advance of any Condemnation Panel Review meetings.

40. If ALAMEDA CTC acquires any right-of-way to be incorporated into the State Highway System, ALAMEDA CTC will first acquire in its own name.

    Title to the State Highway System right-of-way will ultimately be vested in the State. CALTRANS' acceptance of title will occur after the Right-of-Way Closeout activities are complete.

41. ALAMEDA CTC will utilize a public agency currently qualified by CALTRANS or a properly licensed consultant for all RIGHT-OF-WAY activities. A qualified right-of-way agent will administer all right-of-way consultant contracts.

    ALAMEDA CTC will submit a draft Right-of-Way Certification to CALTRANS six weeks prior to the scheduled Right-of-Way Certification milestone date for review.

    ALAMEDA CTC will submit a final Right-of-Way Certification to CALTRANS for approval prior to the advertising the construction contract.

42. Physical and legal possession of the right-of-way must be completed prior to advertising the construction contract, unless PARTIES mutually agree to other arrangements in writing.

43. CALTRANS' acceptance of right-of-way title is subject to review of an Updated Preliminary Title Report provided by ALAMEDA CTC verifying that the title is free of all encumbrances and liens. Upon acceptance, ALAMEDA CTC will provide CALTRANS with a Policy of Title Insurance in CALTRANS' name.

44. Right-of-way conveyances must be completed prior to WORK completion unless PARTIES mutually agree to other arrangements in writing.

Schedule

45. PARTIES will manage the WORK schedule to ensure the timely use of obligated funds and to ensure compliance with any environmental permits, right-of-way agreements, construction contracts, and any other commitments. PARTIES will communicate schedule risks or changes as soon as they are identified and will actively manage and mitigate schedule risks.

46. The IMPLEMENTING AGENCY for each PROJECT COMPONENT will furnish PARTIES with written monthly progress reports during the completion of the WORK.

Additional Provisions

Standards

47. PARTIES will perform all WORK in accordance with federal and California laws, regulations, and standards; Federal Highway Administration (FHWA) standards; and CALTRANS standards. CALTRANS standards include, but are not limited to, the guidance provided in the:

- CADD Users Manual
- CALTRANS policies and directives
- Plans Preparation Manual
- Project Development Procedures Manual (PDPM)
- Workplan Standards Guide
- Standard Environmental Reference
- Highway Design Manual
- Right of Way Manual

Noncompliant Work

48. CALTRANS retains the right to reject noncompliant WORK. ALAMEDA CTC agrees to suspend WORK upon request by CALTRANS for the purpose of protecting public safety, preserving property rights, and ensuring that all WORK is in the best interest of the State Highway System.

Qualifications

49. Each PARTY will ensure that personnel participating in WORK are appropriately qualified or licensed to perform the tasks assigned to them.

Consultant Selection

50. ALAMEDA CTC will invite CALTRANS to participate in the selection of any consultants that participate in the WORK.

Encroachment Permits

51. CALTRANS will issue, upon proper application, the encroachment permits required for WORK within State Highway System (SHS) right-of-way. ALAMEDA CTC, their contractors, consultants, agents and utility owners will not work within the SHS right-of-way without an encroachment permit issued in their name. CALTRANS will provide encroachment permits to ALAMEDA CTC, their contractors, consultants, and agents at no cost. CALTRANS will provide encroachment permits to utility owners at no cost. If the encroachment permit and this AGREEMENT conflict, the requirements of this AGREEMENT will prevail.

52. ALAMEDA CTC will issue any encroachment permits that are necessary for WORK within its jurisdiction and outside the State Highway System right-of-way. ALAMEDA CTC will provide encroachment permits to CALTRANS, its contractors, consultants and agents, at no cost.

53. The IMPLEMENTING AGENCY for a PROJECT COMPONENT will coordinate, prepare, obtain, implement, renew, and amend any encroachment permits needed to complete the WORK.

Protected Resources

54. If any PARTY discovers unanticipated cultural, archaeological, paleontological, or other protected resources during WORK, all WORK in that area will stop and that PARTY will notify all PARTIES within 24 hours of discovery. WORK may only resume after a qualified professional has evaluated the nature and significance of the discovery and CALTRANS approves a plan for its removal or protection.

Disclosures

55. PARTIES will hold all administrative drafts and administrative final reports, studies, materials, and documentation relied upon, produced, created, or utilized for the WORK in confidence to the extent permitted by law and where applicable, the provisions of California Government Code, Section 6254.5(e) will protect the confidentiality of such documents in the event that said documents are shared between PARTIES.

    PARTIES will not distribute, release, or share said documents with anyone other than employees, agents, and consultants who require access to complete the WORK without the written consent of the PARTY authorized to release them, unless required or authorized to do so by law.

56. If a PARTY receives a public records request pertaining to the WORK, that PARTY will notify PARTIES within five (5) working days of receipt and make PARTIES aware of any disclosed public records.

Hazardous Materials

57. HM-1 is hazardous material (including, but not limited to, hazardous waste) that may require removal and disposal pursuant to federal or state law, irrespective of whether it is disturbed by the PROJECT or not.

    HM-2 is hazardous material (including, but not limited to, hazardous waste) that may require removal and disposal pursuant to federal or state law only if disturbed by the PROJECT.

    The management activities related to HM-1 and HM-2, including and without limitation, any necessary manifest requirements and disposal facility designations are referred to herein as HM-1 MANAGEMENT and HM-2 MANAGEMENT respectively.

58. If HM-1 or HM-2 is found the discovering PARTY will immediately notify all other PARTIES.

59. CALTRANS, independent of the PROJECT, is responsible for any HM-1 found within the existing State Highway System right-of-way. CALTRANS will undertake, or cause to be undertaken, HM-1 MANAGEMENT with minimum impact to the PROJECT schedule.

    CALTRANS will pay, or cause to be paid, the cost of HM-1 MANAGEMENT for HM-1 found within the existing State Highway System right-of-way with funds that are independent of the funds obligated in this AGREEMENT.

60. ALAMEDA CTC, independent of the PROJECT, is responsible for any HM-1 found within the PROJECT limits and outside the existing State Highway System right-of-way. ALAMEDA CTC will undertake, or cause to be undertaken, HM-1 MANAGEMENT with minimum impact to the PROJECT schedule.

    ALAMEDA CTC will pay, or cause to be paid, the cost of HM-1 MANAGEMENT for HM-1 found within the PROJECT limits and outside of the existing State Highway System right-of-way with funds that are independent of the funds obligated in this AGREEMENT.

61. The CONSTRUCTION IMPLEMENTING AGENCY is responsible for HM-2 MANAGEMENT within the PROJECT limits.

    ALAMEDA CTC and CALTRANS will comply with the Soil Management Agreement for Aerially Deposited Lead Contaminated Soils (Soil Management Agreement) executed between CALTRANS and the California Department of Toxic Substances Control (DTSC). Under Section 3.2 of the Soil Management Agreement, CALTRANS and ALAMEDA CTC each retain joint and severable liability for noncompliance with the provisions of the Soil Management Agreement. ALAMEDA CTC will assume all responsibilities assigned to CALTRANS in the Soil Management Agreement during PROJECT COMPONENTS for which they are the IMPLEMENTING AGENCY except for final placement and burial of soil within the State right-of-way, per Section 4.5 of the Soil Management Agreement, which is subject to CALTRANS concurrence and reporting to DTSC which will be performed by CALTRANS.

62. CALTRANS' acquisition or acceptance of title to any property on which any HM-1 or HM-2 is found will proceed in accordance with CALTRANS' policy on such acquisition.

Claims

63. Any PARTY that is responsible for completing WORK may accept, reject, compromise, settle, or litigate claims arising from the WORK without concurrence from the other PARTY.

64. PARTIES will confer on any claim that may affect the WORK or PARTIES' liability or responsibility under this AGREEMENT in order to retain resolution possibilities for potential future claims. No PARTY will prejudice the rights of another PARTY until after PARTIES confer on the claim.

65. If the WORK expends state or federal funds, each PARTY will comply with the Federal Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards of 2 CFR, Part 200. PARTIES will ensure that any for-profit consultant hired to participate in the WORK will comply with the requirements in 48 CFR, Chapter 1, Part 31. When state or federal funds are expended on the WORK these principles and requirements apply to all funding types included in this AGREEMENT.

Accounting and Audits

66. PARTIES will maintain, and will ensure that any consultant hired by PARTIES to participate in WORK will maintain, a financial management system that conforms to Generally Accepted Accounting Principles (GAAP), and that can properly accumulate and segregate incurred PROJECT costs and billings.

67. PARTIES will maintain and make available to each other all WORK-related documents, including financial data, during the term of this AGREEMENT.

    PARTIES will retain all WORK-related records for three (3) years after the final voucher.

    PARTIES will require that any consultants hired to participate in the WORK will comply with this Article.

68. PARTIES have the right to audit each other in accordance with generally accepted governmental audit standards.

    CALTRANS, the State Auditor, FHWA (if the PROJECT utilizes federal funds), and ALAMEDA CTC will have access to all WORK -related records of each PARTY, and any consultant hired by a PARTY to participate in WORK, for audit, examination, excerpt, or transcription.

    The examination of any records will take place in the offices and locations where said records are generated and/or stored and will be accomplished during reasonable hours of operation. The auditing PARTY will be permitted to make copies of any WORK-related records needed for the audit.

    The audited PARTY will review the draft audit, findings, and recommendations, and provide written comments within thirty (30) calendar days of receipt.

    Upon completion of the final audit, PARTIES have forty-five (45) calendar days to refund or invoice as necessary in order to satisfy the obligation of the audit.

    Any audit dispute not resolved by PARTIES is subject to mediation. Mediation will follow the process described in the General Conditions section of this AGREEMENT.

69. If the WORK expends state or federal funds, each PARTY will undergo an annual audit in accordance with the Single Audit Act in the Federal Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards as defined in 2 CFR, Part 200.

70. When a PARTY reimburses a consultant for WORK with state or federal funds, the procurement of the consultant and the consultant overhead costs will be in accordance with the Local Assistance Procedures Manual, Chapter 10.

Interruption of Work

71. If WORK stops for any reason, each PARTY will continue with environmental commitments included in the environmental documentation, permits, agreements, or approvals that are in effect at the time that WORK stops, and will keep the PROJECT in environmental compliance until WORK resumes.

Penalties, Judgements and Settlements

72. The cost of awards, judgements, or settlements generated by the WORK are to be paid from the funds obligated in this AGREEMENT.

73. The cost of legal challenges to the environmental process or documentation may be paid from the funds obligated in this AGREEMENT.

74. Any PARTY whose action or lack of action causes the levy of fines, interest, or penalties will indemnify and hold all other PARTIES harmless per the terms of this AGREEMENT.

Environmental Compliance

75. If during performance of WORK additional activities or environmental documentation is necessary to keep the PROJECT in environmental compliance, PARTIES will amend this AGREEMENT to include completion of those additional tasks.

GENERAL CONDITIONS

Venue

76. PARTIES understand that this AGREEMENT is in accordance with and governed by the Constitution and laws of the State of California. This AGREEMENT will be enforceable in the State of California. Any PARTY initiating legal action arising from this AGREEMENT will file and maintain that legal action in the Superior Court of the county in which the CALTRANS district office that is signatory to this AGREEMENT resides, or in the Superior Court of the county in which the PROJECT is physically located.

Exemptions

77. All CALTRANS' obligations under this AGREEMENT are subject to the appropriation of resources by the Legislature, the State Budget Act authority, programming and allocation of funds by the California Transportation Commission (CTC).

Indemnification

78. Neither CALTRANS nor any of their officers and employees, are responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by ALAMEDA CTC, its contractors, sub-contractors, and/or its agents under or in connection with any work, authority, or jurisdiction conferred upon ALAMEDA CTC under this AGREEMENT. It is understood and agreed that ALAMEDA CTC, to the extent permitted by law, will defend, indemnify, and save harmless CALTRANS and all of their officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories and assertions of liability occurring by reason of anything done or omitted to be done by ALAMEDA CTC, its contractors, sub-contractors, and/or its agents under this AGREEMENT.

79. Neither ALAMEDA CTC nor any of their officers and employees, are responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by CALTRANS, its contractors, sub-contractors, and/or its agents under or in connection with any work, authority, or jurisdiction conferred upon CALTRANS under this AGREEMENT. It is understood and agreed that CALTRANS, to the extent permitted by law, will defend, indemnify, and save harmless ALAMEDA CTC and all of their officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories and assertions of liability occurring by reason of anything done or omitted to be done by CALTRANS, its contractors, sub-contractors, and/or its agents under this AGREEMENT.

Non-parties

80. PARTIES do not intend this AGREEMENT to create a third party beneficiary or define duties, obligations, or rights for entities not signatory to this AGREEMENT. PARTIES do not intend this AGREEMENT to affect their legal liability by imposing any standard of care for fulfilling the WORK different from the standards imposed by law.

81. PARTIES will not assign or attempt to assign obligations to entities not signatory to this AGREEMENT without an amendment to this AGREEMENT.

Ambiguity and Performance

82. ALAMEDA CTC will not interpret any ambiguity contained in this AGREEMENT against CALTRANS. ALAMEDA CTC waives the provisions of California Civil Code, Section 1654.

    A waiver of a PARTY's performance under this AGREEMENT will not constitute a continuous waiver of any other provision.

83. A delay or omission to exercise a right or power due to a default does not negate the use of that right or power in the future when deemed necessary.

Defaults

84. If any PARTY defaults in its performance of the WORK, a non-defaulting PARTY will request in writing that the default be remedied within thirty (30) calendar days. If the defaulting PARTY fails to do so, the non-defaulting PARTY may initiate dispute resolution.

Dispute Resolution

85. PARTIES will first attempt to resolve AGREEMENT disputes at the PROJECT team level as described in the Quality Management Plan. If they cannot resolve the dispute themselves, the CALTRANS District Director and the Executive Officer of ALAMEDA CTC will attempt to negotiate a resolution. If PARTIES do not reach a resolution, PARTIES' legal counsel will initiate mediation. PARTIES agree to participate in mediation in good faith and will share equally in its costs.

    Neither the dispute nor the mediation process relieves PARTIES from full and timely performance of the WORK in accordance with the terms of this AGREEMENT. However, if any PARTY stops fulfilling its obligations, any other PARTY may seek equitable relief to ensure that the WORK continues.

    Except for equitable relief, no PARTY may file a civil complaint until after mediation, or forty-five (45) calendar days after filing the written mediation request, whichever occurs first.

    PARTIES will file any civil complaints in the Superior Court of the county in which the CALTRANS District Office signatory to this AGREEMENT resides or in the Superior Court of the county in which the PROJECT is physically located.

86. PARTIES maintain the ability to pursue alternative or additional dispute remedies if a previously selected remedy does not achieve resolution.

Prevailing Wage

87. When WORK falls within the Labor Code § 1720(a)(1) definition of "public works" in that it is construction, alteration, demolition, installation, or repair; or maintenance work under Labor Code § 1771, PARTIES will conform to the provisions of Labor Code §§ 1720-1815, and all applicable provisions of California Code of Regulations, Title 8, Division 1, Chapter 8, Subchapter 3, Articles 1-7. PARTIES will include prevailing wage requirements in contracts for public work and require contractors to include the same prevailing wage requirements in all subcontracts.

    Work performed by a PARTY's own employees is exempt from the Labor Code's Prevailing Wage requirements.

    If WORK is paid for, in whole or part, with federal funds and is of the type of work subject to federal prevailing wage requirements, PARTIES will conform to the provisions of the Davis-Bacon and Related Acts, 40 U.S.C. §§ 3141-3148.

When applicable, PARTIES will include federal prevailing wage requirements in contracts for public works. WORK performed by a PARTY's employees is exempt from federal prevailing wage requirements.

Contact Information

CALTRANS

Jack Siauw, Project Manager
111 Grand Avenue
Oakland, CA 94612
Office Phone: (510) 622-8824
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Email: jack.siaux@dot.ca.gov

ALAMEDA COUNTY TRANSPORTATION COMMISSION

Gary Huisingh, Deputy Executive Director of Projects
1111 Broadway, Suite 800
Oakland, CA 94607
Office Phone: (510) 208-7414
Email: ghuisingh@alamedactc.org

SIGNATURES

PARTIES are empowered by California Streets and Highways Code to enter into this AGREEMENT and have delegated to the undersigned the authority to execute this AGREEMENT on behalf of the respective agencies and covenants to have followed all the necessary legal requirements to validly execute this AGREEMENT.

Signatories may execute this AGREEMENT through individual signature pages provided that each signature is an original. This AGREEMENT is not fully executed until all original signatures are attached.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

_____

Helena (Lenka) Culik-Caro
Deputy District Director, Project Delivery

VERIFICATION OF FUNDS AND AUTHORITY:

_____

Jeffrey Armstrong
District Budget Manager

CERTIFIED AS TO FINANCIAL TERMS AND POLICIES:

_____

Accounting Administrator I
HQ Accounting

ALAMEDA COUNTY
TRANSPORTATION COMMISSION

_____

Arthur L.Dao
Executive Director

Attest:

_____

Gary Huisingh
Deputy Executive Director of Projects

Reviewed as to Budget/Financial Controls:

_____

Patricia Reavey
Deputy Executive Director of
Finance and Administration

Approved as to form and procedure:

_____

Wendel Rosen LLP
Legal Counsel to Alameda CTC

FUNDING SUMMARY NO. 01

FUNDING TABLE

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IMPLEMENTING AGENCY→			ALAMEDA CTC	ALAMEDA CTC		
Source	Party	Fund Type	PS&E	R/W SUPPORT	R/W CAPITAL	Totals
LOCAL	ALAMEDA CTC	Measure	20,000,000	200,000	6,000,000	26,200,000
Totals			20,000,000	200,000	6,000,000	26,200,000

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SPENDING SUMMARY

Fund Type	PS&E		R/W Support		R/W CAPITAL	Totals
	CALTRANS	ALAMEDA CTC	CALTRANS	ALAMEDA CTC	ALAMEDA CTC	
Measure	1,000,000	19,000,000	200,000		6,000,000	26,200,000
Totals	1,000,000	19,000,000	200,000		6,000,000	26,200,000

Funding

1. If there are insufficient funds available in this AGREEMENT to place the PROJECT right-of-way in a safe and operable condition, the appropriate IMPLEMENTING AGENCY will fund these activities until such time as PARTIES amend this AGREEMENT.

   That IMPLEMENTING AGENCY may request reimbursement for these costs during the amendment process.

2. If there are insufficient funds in this AGREEMENT to implement the obligations and responsibilities of this AGREEMENT, including the applicable commitments and conditions included in the PROJECT environmental documentation, permits, agreements, and/or approvals that are in effect at a time that WORK stops, each PARTY accepts responsibility to fund their respective WORK until such time as PARTIES amend this AGREEMENT.

   Each PARTY may request reimbursement for these costs during the amendment process.

ICRP Rate

3. The cost of any engineering support performed by CALTRANS includes all direct and applicable indirect costs. CALTRANS calculates indirect costs based solely on the type of funds used to pay support costs. State and federal funds administered by CALTRANS are subject to the current Program Functional Rate. All other funds are subject to the current Program Functional Rate and the current Administration Rate. The Program Functional Rate and Administration Rate are adjusted periodically.

   In accordance with California Senate Bill 848, the Administration Rate is capped at 10 percent until July 1, 2021, for Self-Help Counties with a countywide sales tax measure dedicated to transportation improvements.

Invoicing and Payment

4. PARTIES will invoice for funds where the SPENDING SUMMARY shows that one PARTY provides funds for use by another PARTY. PARTIES will pay invoices within forty-five (45) calendar days of receipt of invoice when not paying with Electronic Funds Transfer (EFT). When paying with EFT, ALAMEDA CTC will pay invoices within five (5) calendar days of receipt of invoice.

5. If ALAMEDA CTC has received EFT certification from CALTRANS, then ALAMEDA CTC will use the EFT mechanism and follow all EFT procedures to pay all invoices issued from CALTRANS.

6. When a PARTY is reimbursed for actual cost, invoices will be submitted each month for the prior month's expenditures. After all PROJECT COMPONENT WORK is complete, PARTIES will submit a final accounting of all PROJECT COMPONENT costs. Based on the final accounting, PARTIES will invoice or refund as necessary to satisfy the financial commitments of this AGREEMENT.

Plans, Specifications, and Estimate (PS&E)

7. CALTRANS will invoice ALAMEDA CTC for a $200,000 initial deposit after execution of this AGREEMENT and forty-five (45) working days prior to the commencement of PS&E expenditures. This deposit represents two (2) months' estimated costs.

   Thereafter, CALTRANS will invoice and ALAMEDA CTC will reimburse for actual costs incurred and paid.

RIGHT-OF-WAY (R/W) Support

8. CALTRANS will invoice ALAMEDA CTC for a $40,000 initial deposit after execution of this AGREEMENT and forty-five (45) working days prior to the commencement of R/W SUPPORT PROJECT COMPONENT expenditures. This deposit represents two (2) months' estimated costs.

   Thereafter, CALTRANS will invoice and ALAMEDA CTC will reimburse for actual costs incurred and paid..

RIGHT-OF-WAY (R/W) Capital

9. No invoicing or reimbursement will occur for the R/W CAPITAL PROJECT COMPONENT.