OC PUBLIC WORKS

SANTA ANA, CALIFORNIA

Record Drawings

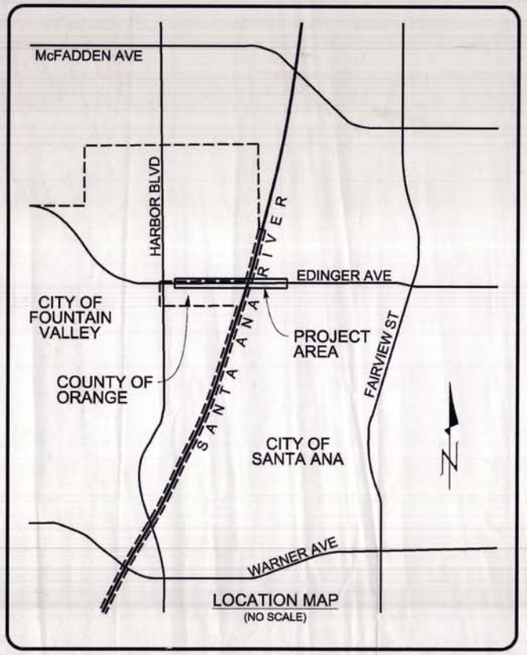
PLANS FOR CONSTRUCTION OF

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT BR. NO. 55C-0154

FROM 200' EAST OF HARBOR BOULEVARD TO 1600' WEST OF FAIRVIEW STREET

W.O. NO. ER09342

VICINITY MAP
(NO SCALE)



LOCATION MAP
(NO SCALE)

FUNDED BY: PROPOSITION 1B FUNDS AND COUNTY OF ORANGE ROAD FUNDS

MAINTAINED BY: COUNTY OF ORANGE
CITY OF FOUNTAIN VALLEY
CITY OF SANTA ANA

DEVIATIONS FROM STANDARDS

1. STANDARD PLAN 1103 PRIMARY HIGHWAY TYPICAL SECTIONS AND STANDARD PLAN 1205 SIDEWALK DETAILS
   - -SIDEWALK WIDTH VARIES FROM 6' TO 10'
   - -CROWN SLOPE VARIES DUE TO EXISTING CONDITIONS
   - -MODIFIED LANE WIDTHS DUE TO EXISTING CONDITIONS
2. HDM TOPIC 301.2 AND CALTRANS HDM TOPIC 301.2 CROWN SLOPES
   - -CROWN SLOPE LESS THAN 1.7% DUE TO EXISTING CONDITIONS
   - -CROWN SLOPE GREATER THAN 3% DUE TO EXISTING CONDITIONS

CITY OF SANTA ANA

APPROVED: 12-20-12
WILLIAM GALVEZ
CITY ENGINEER — DATE

CITY OF FOUNTAIN VALLEY

APPROVED: 12-20-12
MARK B. LEWIS
CITY ENGINEER
R.C.E. NO 49335 — DATE

OC PUBLIC WORKS

SUBMITTED: 12/20/12
JAVID SHARIFI, P.E.
MANAGER, ROAD/CAPITAL PROJECTS — DATE

RECOMMENDED: 1/2/13
KHALID BAZMI, P.E.
MANAGER, ROAD SECTION — DATE

APPROVED: 1/8/13
IGNACIO G. OCHOA, P.E.
DIRECTOR/CHIEF ENGINEER, OC ENGINEERING — DATE

QA/QC CERTIFICATION

QA/QC CERTIFICATION OF PEER REVIEW

THE UNDERSIGNED HEREBY CERTIFIES THAT A THOROUGH PROFESSIONAL QA/QC OF THESE PLANS AND THE REQUIRED DESIGNS WERE CONDUCTED BY ME, A PROFESSIONAL ENGINEER WITH EXPERTISE AND EXPERIENCE IN THE APPROPRIATE FIELDS OF ENGINEERING, AND THAT ALL APPROPRIATE CORRECTIONS HAVE BEEN MADE.

AECOM
REVIEWER
12/20/12
DATE

REGISTERED PROFESSIONAL ENGINEER — MOHAN S. CHAN — 57894 — 6/30/13 — CIVIL — STATE OF CALIFORNIA

PREPARED BY

AECOM
999 W. TOWN & COUNTRY ROAD
ORANGE, CA 92668
(714) 567-2501

PREPARED UNDER RESPONSIBLE CHARGE OF:

EDWARD NG, P.E.
PROJECT MANAGER
12/20/12
DATE

REGISTERED PROFESSIONAL ENGINEER — EDWARD NG — 46767 — 6/30/13 — CIVIL — STATE OF CALIFORNIA

UNDERGROUND SERVICE ALERT

CALL 1800-422-4133 TWO (2) WORKING DAYS PRIOR TO EXCAVATION

INDEX OF SHEETS

UTILITY OWNER	PHONE NO.	CONTACT
AT&T	714-237-6339	Ronny Stewart
CITY OF FOUNTAIN VALLEY	714-593-4609	Mark Sprague
ORANGE COUNTY SANITATION DISTRICT	714-593-7242	Rich Leon
ORANGE COUNTY WATER DISTRICT	714-378-3211	Benjamin Smith
SOUTHERN CALIFORNIA EDISON		
(FOUNTAIN VALLEY)	714-895-0109	Kasey Chapman
(SANTA ANA)	714-973-5728	Daniel Di Maio
SOUTHERN CALIFORNIA GAS	714-634-3267	Dave Baldwin
TIME WARNER CABLE	714-903-8422	Mike Silva
ORANGE COUNTY PARKS	714-973-6831	Pete Hillebrecht

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09342

BENCH MARK:

O.C.S. BENCHMARKS:
1L-104-09 ELEV. 71.625'
1F-176-04 ELEV. 56.528'

NGVD 1929 (1995 O.C.S. ADJ.)

BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN O.C.S. HORIZONTAL CONTROL STATION GPS NO. 4162 AND STATION GPS NO. 6069 (1991 EPOCH), BEING N62°42'38"E PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

NO.	DESCRIPTION	SHT.	APPROVED	DATE

REVISIONS

W. O. NO. ER09342
DWG. NO. N/A

SHEET 1 OF 76

DATE PLOTTED : 1/21/2013

FILE NAME:\\usom11fs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\01_Title Sheet.dgn

CONSTRUCTION NOTES

1. SAWCUT EXISTING PAVEMENT
2. CONSTRUCT TYPE A2-8 CURB & GUTTER PER OCPW STD. PLAN 120-1-OC
3. CONSTRUCT TYPE A1-6 CURB PER OCPW STD. PLAN 120-1-OC
4. CONSTRUCT A2-8 CURB & GUTTER PER CITY OF SANTA ANA STD. PLAN 1101
5. CONSTRUCT 4" PCC SIDEWALK PER OCPW STD. PLAN 1205
6. CONSTRUCT CURB RAMP (TYPE 2) PER OCPW STD. PLAN 1115
7. CONSTRUCT CURB RAMP (CASE E) PER CITY OF FOUNTAIN VALLEY STD. PLAN 204-5
8. CONSTRUCT MODIFIED PCC DEPRESSED CURB DRIVEWAY APPROACH DETAIL ON SHEET C-1
9. COLDMILL (0.17') EXISTING PAVEMENT AND ARHM OVERLAY
10. CONSTRUCT 0.17' ARHM OVER 0.33' WMA OVER 1.65' CMB OVER COMPACTED SUBGRADE
11. CONSTRUCT 4" DISINTEGRATED GRANITE OVER COMPACTED NATIVE SOIL
12. CONSTRUCT RETAINING WALL PER RETAINING WALL SHEETS RW-1 AND RW-2
13. RECONSTRUCT PARKWAY CULVERT PER DETAIL ON SHEET C-2
14. CONSTRUCT 4" PCC SIDEWALK PER CITY OF SANTA ANA STD. PLAN 1104
15. CONSTRUCT MASONRY BLOCK WALL PER OCPW STD. PLAN 1414, H PER PLAN
16. CONSTRUCT A3-6 CURB & GUTTER PER OCPW STD. PLAN 120-1-OC
17. CONSTRUCT 0.67' FULL-DEPTH AC OVER COMPACTED SUBGRADE
18. CONSTRUCT 4" PCC RIBBON GUTTER PER DETAIL ON SHEET P-5
19. CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-2
20. RECONSTRUCT PORTION OF WOOD FENCE AGAINST RETAINING WALL PER DETAIL ON SHEET C-2
21. CONSTRUCT RETAINING CURB PER DETAIL ON SHEET C-1
22. CONSTRUCT LOCAL DEPRESSION (TYPE E) PER APWA STD. 313-3
23. CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-1
24. CONSTRUCT INLET TYPE I PER OCPW STD. PLAN 1301 AND DETAILS ON SHEETS D-1 AND D-2
25. CONSTRUCT 12" CLASS I RCP
26. CONSTRUCT 6" PCC DRIVEWAY PAVEMENT OVER COMPACTED NATIVE SOIL
27. CONSTRUCT SIDEWALK AROUND STREET LIGHT POLE PER DETAILS ON SHEET C-1
28. CONSTRUCT PCC SLOPE PAVING PER DETAIL ON SHEET P-5
29. CONSTRUCT GUTTER TRANSITION AT BRIDGE APPROACH SLAB PER DETAIL ON SHEET C-2
30. RECONSTRUCT STEEL PICKET FENCE TO RETAINING WALL FACE PER PROJECT SPECIFICATIONS
31. REPLACE REMOVABLE WOOD PANEL IN KIND
32. CONSTRUCT 1.0' X 1.5' VINE POCKET CUTOUT PER DETAIL ON SHEET P-5
33. RECONSTRUCT EXISTING AC PAVEMENT BEHIND PROPOSED BLOCK WALL PER DETAIL ON SHEET P-1
34. RECONSTRUCT EXISTING BLOCK WALL PER DETAIL ON SHEET C-2
70. CONSTRUCT NO. 6 PULL BOX (FOR AT&T) PER CALTRANS STD PLAN ES-8
71. CONSTRUCT NO. 5 PULL BOX (FOR ELEC) PER CALTRANS STD PLAN ES-8
72. CONSTRUCT (2) 5" PVC CONDUIT WITH PULL ROPE
73. CONSTRUCT 5" PVC CONDUIT WITH PULL ROPE
74. CONSTRUCT 2" PVC CONDUIT WITH PULL ROPE
75. CONSTRUCT A1-8 CURB PER OCPW STD. PLAN 120-1-OC
76. ABANDON EXISTING LOOP DETECTORS AND REPLACE WITH TYPE E AS PER CALTRANS STANDARD PLAN ES-5B

SIGNING AND STRIPING NOTES

35. PROTECT EXISTING SIGN POST AND SIGN PANEL
36. REMOVE EXISTING SIGN PANEL
37. REMOVE EXISTING SIGN POST
38. INSTALL NEW ROADSIDE SIGN POST
39. INSTALL NEW ROADSIDE SIGN PANEL
40. INSTALL DETAIL 9 PER CALTRANS STD. PLAN A20A
41. INSTALL PAVEMENT MARKING PER CALTRANS STD. PLAN A24A
42. INSTALL DETAIL 38 PER CALTRANS STD. PLAN A20D
43. DETAIL 27B
44. INSTALL DETAIL 22 PER CALTRANS STD. PLAN A20A
45. INSTALL 12" SOLID LIMIT LINE PAVEMENT MARKING PER CALTRANS STD. PLAN A24E
46. INSTALL PAVEMENT MARKING PER CALTRANS STD. PLAN A24D
47. INSTALL 8" SOLID WHITE AT 45° DIAGONAL AT 50' OC
48. INSTALL 4" WHITE LANELINE AND INSTALL RAISED PAVEMENT MARKERS PER DETAIL "A" SHOWN HEREON
49. INSTALL 8" WHITE CHEVRONS AT 25' SPACING

STAGE CONSTRUCTION NOTES

50. REMOVE PORTION OF THE EXISTING SIDEWALK AND CONSTRUCT TEMPORARY ACCESS RAMP.
51. INSTALL TEMPORARY RAILING (TYPE-K) PER CALTRANS STD PLAN T3A. PROVIDE 5' PEDESTRIAN ACCESS IN CONSTRUCTION AREA.
52. INSTALL TEMPORARY CRASH CUSHION ARRAY 'TU14' PER CALTRANS STD PLAN T1A.
53. INSTALL TEMPORARY STRIPING.
54. CONSTRUCT BRIDGE - NORTH SIDE.
55. CONSTRUCT PORTION OF RETAINING WALLS.
56. CONSTRUCT CURB AND GUTTER, SIDEWALK AND CHANNEL ACCESS DRIVEWAY.
57. CONSTRUCT AC PAVEMENT.
58. INSTALL TEMPORARY PAVEMENT MARKINGS.
59. REMOVE EXISTING CONFLICTING STRIPING.
60. REMOVE POWER POLE.
61. INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCM)
62. REMOVE EXISTING SIGN
63. INSTALL TEMPORARY FENCE ALONG BRIDGE

DISPOSITION

1. PROTECT IN PLACE
2. REMOVE
3. RELOCATE
4. ADJUST TO GRADE
5. TO BE RELOCATED BY OTHERS
6. TO BE ADJUSTED TO GRADE BY OTHERS
7. REMOVE AND RECONSTRUCT

UTILITIES

- A AT&T
- B CITY OF FOUNTAIN VALLEY
- C ORANGE COUNTY SANITATION DISTRICT
- D ORANGE COUNTY WATER DISTRICT
- E SOUTHERN CALIFORNIA EDISON
- F SOUTHERN CALIFORNIA GAS
- G TIME WARNER CABLE
- H ORANGE COUNTY PARKS

ABBREVIATIONS

∆ PT	ANGLE POINT
℄	CENTERLINE
AC	ASPHALT CONCRETE
ARHM	ASPHALT RUBBERIZED HOT MIX
BC	BEGIN HORIZONTAL CURVE
BVC	BEGIN VERTICAL CURVE
C&G	CURB AND GUTTER
CL	CHAIN LINK
CONC	CONCRETE
EC	END HORIZONTAL CURVE
EVC	END VERTICAL CURVE
FG	FINISHED GRADE
FL	FLOWLINE
INV	INVERT
LOL	LAYOUT LINE
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
MH	MANHOLE
MOD	MODIFIED
OG	ORIGINAL GROUND
PRC	POINT OF REVERSING HORIZONTAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
R/W	RIGHT-OF-WAY
RW	RETAINING WALL
RT	RIGHT
SW	SIDEWALK
TC	TOP OF CURB
TCE	TEMPORARY CONSTRUCTION EASEMENT
TYP	TYPICAL
WM	WATER METER
WMA	WARM MIX ASPHALT
WV	WATER VALVE

AS BUILT
NO CORRECTIONS THIS SHEET
BY [illegible]
DATE COMPLETED 9/3/14
CONTRACT # EB09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG — DATE 1/21/13
REGISTERED PROFESSIONAL ENGINEER — EDWARD NG 46787 — Exp. 6/30/13 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

CONSTRUCTION NOTES

Sheet Reference Number
2

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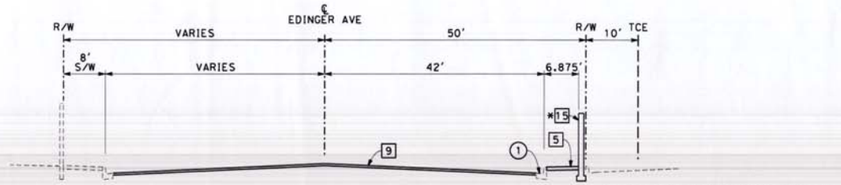
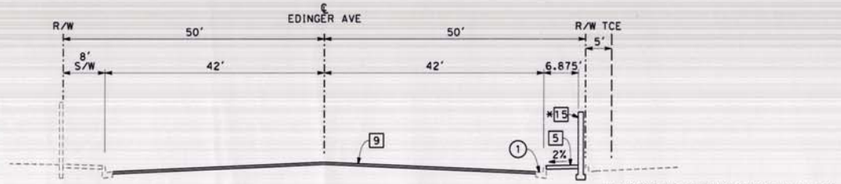


STA 11+95 TO STA 13+20
NOT TO SCALE

* LIMITS OF MASONRY BLOCK WALL ARE AS SHOWN ON PLAN AND PROFILE



STA 13+20 TO STA 17+02
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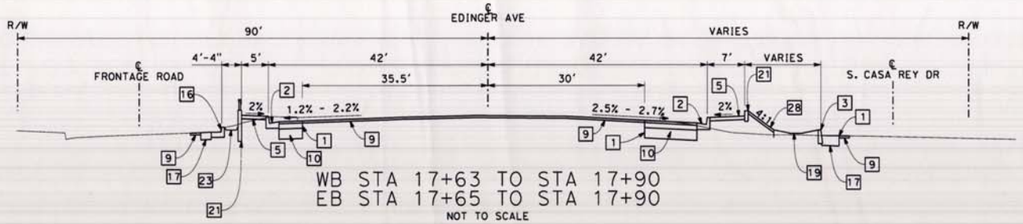
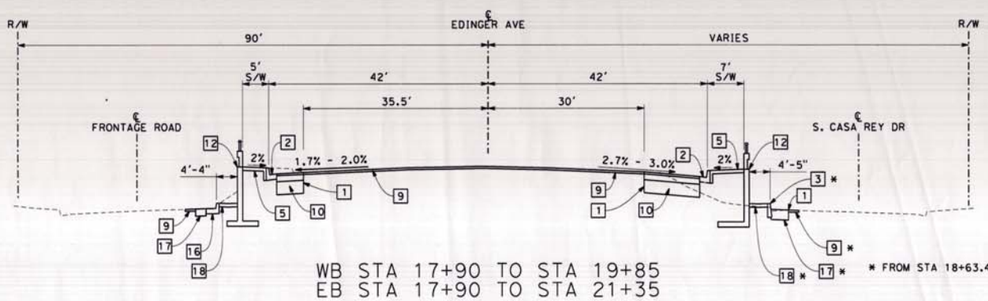
* LIMITS OF MASONRY BLOCK WALL ARE AS SHOWN ON PLAN AND PROFILE

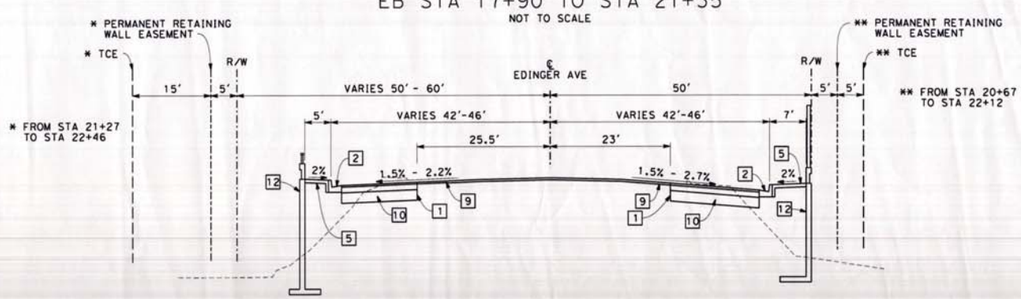


WB STA 17+63 TO STA 17+90
EB STA 17+65 TO STA 17+90
NOT TO SCALE



* FROM STA 18+63.42 TO STA 20+75.03

WB STA 17+90 TO STA 19+85
EB STA 17+90 TO STA 21+35
NOT TO SCALE



WB STA 19+85 TO STA 22+73
EB STA 21+35 TO STA 22+46
NOT TO SCALE

CONSTRUCTION NOTES

1. SAWCUT EXISTING PAVEMENT
2. CONSTRUCT TYPE A2-8 CURB & GUTTER PER OCPW STD. PLAN 120-1-OC
3. CONSTRUCT TYPE A1-6 CURB PER OCPW STD. PLAN 120-1-OC
4. CONSTRUCT A-2-8 CURB & GUTTER PER CITY OF SANTA ANA STD. PLAN 1101
5. CONSTRUCT 4" PCC SIDEWALK PER OCPW STD. PLAN 1205
9. COLDMILL (0.17') EXISTING PAVEMENT AND ARHM OVERLAY
10. CONSTRUCT 0.17' ARHM OVER 0.33' WMA OVER 1.65' CMB OVER COMPACTED SUBGRADE
12. CONSTRUCT RETAINING WALL PER RETAINING WALL SHEETS RW-1 AND RW-2
14. CONSTRUCT 4" PCC SIDEWALK PER CITY OF SANTA ANA STD. PLAN 1104
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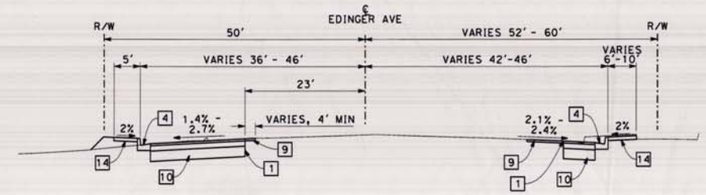
19. CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-2
21. CONSTRUCT RETAINING CURB PER DETAIL ON SHEET C-1
23. CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-1
28. CONSTRUCT PCC SLOPE PAVING PER DETAIL ON SHEET P-5

DISPOSITION

1. PROTECT IN PLACE



STA 25+61 TO STA 26+71
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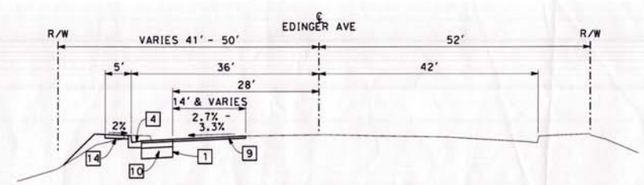

STA 26+71 TO STA 30+47
NOT TO SCALE

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # FR09342

NOTES:
1. SEE STRUCTURE PLANS FOR EDINGER AVE TYPICAL SECTION FROM STA 22+60.29 TO STA 25+60.96

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER EDWARD NG No. 46787 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA
EDWARD NG — DATE 1/24/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: WFILE
PLOT DATE: 1/24/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

TYPICAL SECTIONS

Sheet Reference Number
X-1

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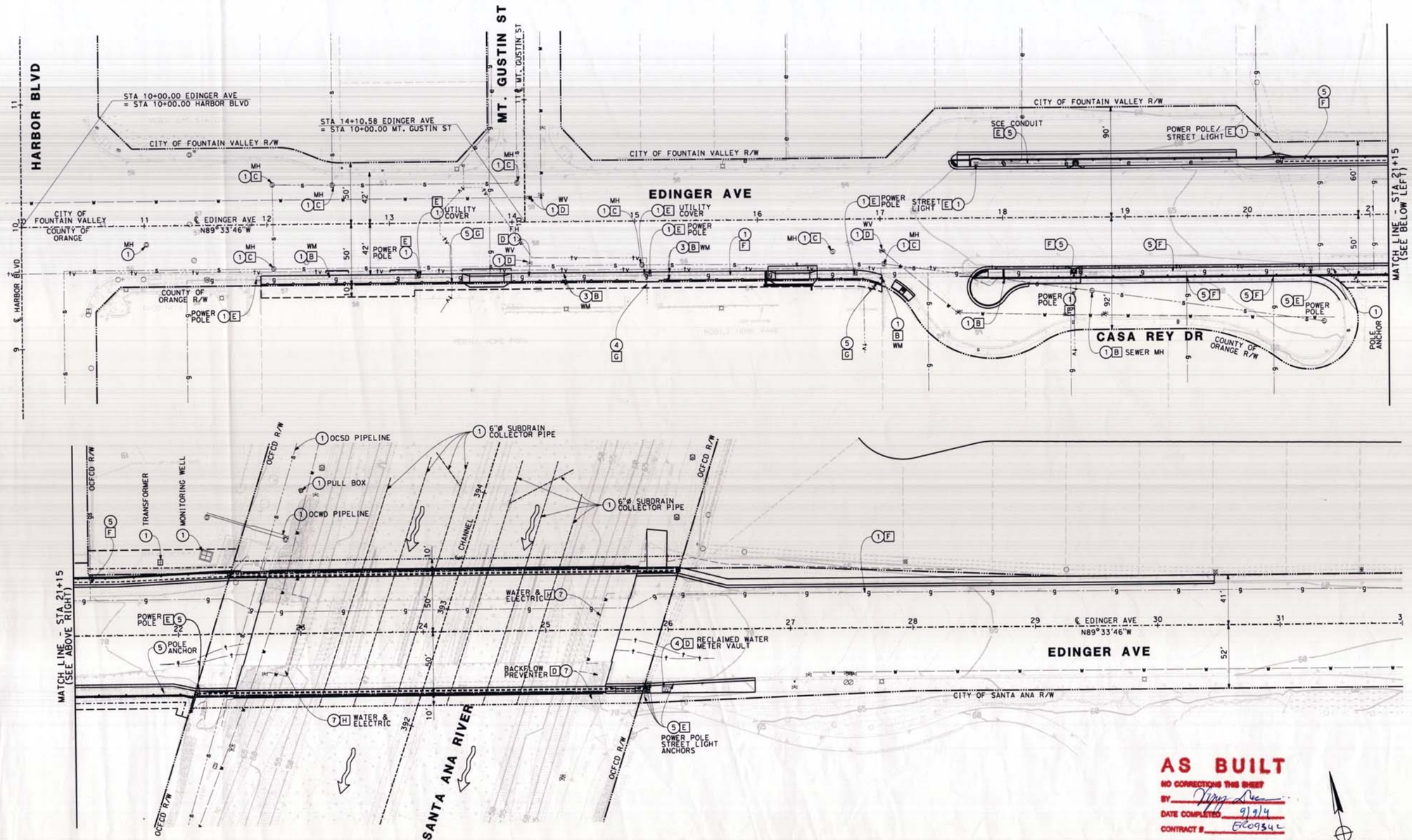


AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/4
CONTRACT # EC0934C

DISPOSITION

1. PROTECT IN PLACE
2. REMOVE
3. RELOCATE
4. ADJUST TO GRADE
5. TO BE RELOCATED BY OTHERS
6. TO BE ADJUSTED TO GRADE BY OTHERS
7. REMOVE AND RECONSTRUCT

UTILITIES

- A AT&T
- B CITY OF FOUNTAIN VALLEY
- C ORANGE COUNTY SANITATION DISTRICT
- D ORANGE COUNTY WATER DISTRICT
- E SOUTHERN CALIFORNIA EDISON
- F SOUTHERN CALIFORNIA GAS
- G TIME WARNER CABLE
- H ORANGE COUNTY PARKS

LEGEND

- RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT
- PERMANENT RETAINING WALL EASEMENT
- ROAD EASEMENT
- MASONRY BLOCK WALL
- RETAINING WALL

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER — EDWARD NG — No. 67871 — CIVIL — STATE OF CALIFORNIA
DATE 12/4/13
EDWARD NG

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE$
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

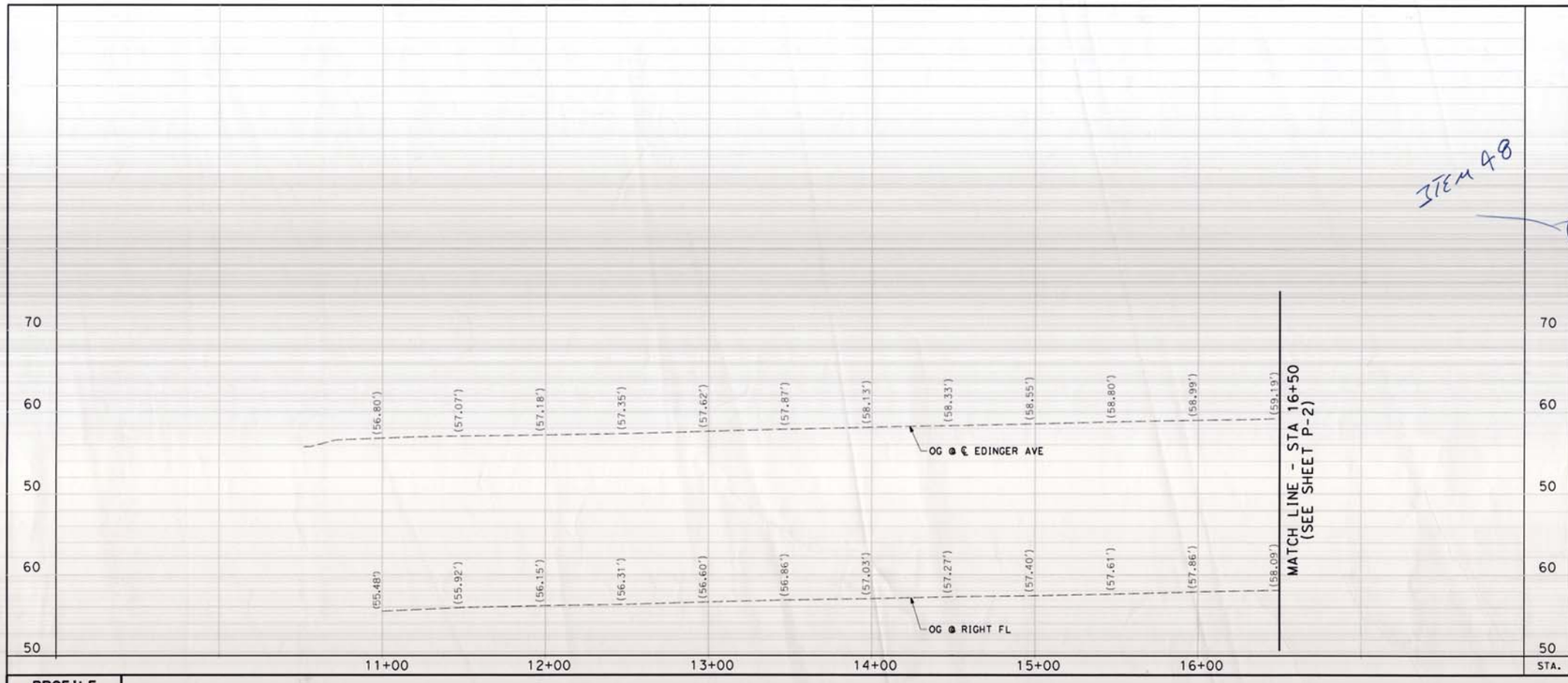
PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT
BR. NO. 55C-0154

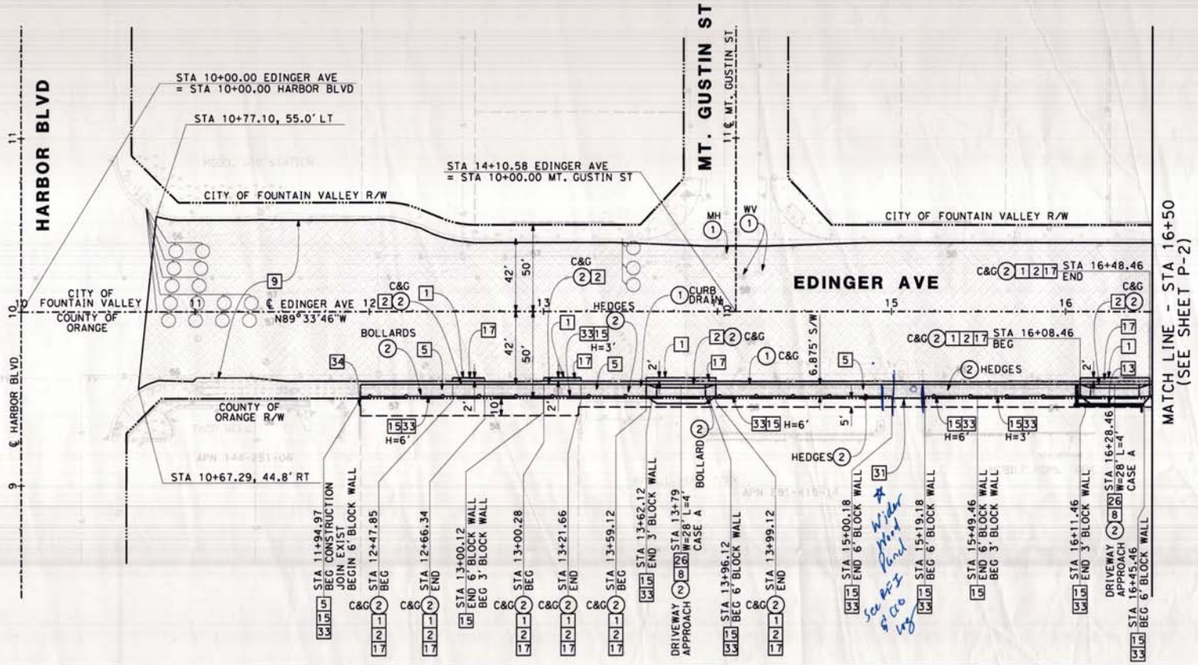
UTILITY PLAN

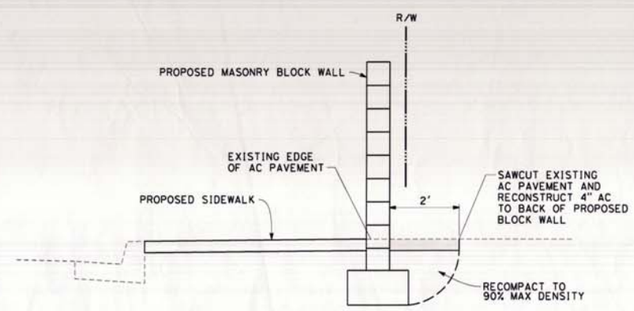
Sheet Reference Number
UT-1

FILE NAME : $REQUEST



PROFILE
HORIZ. 1"=40'
VERT. 1"=8'





33 AC PAVEMENT RECONSTRUCTION AT PROPOSED BLOCK WALL
NO SCALE

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/3/14
CONTRACT # 8R09342

0 20 40 80
SCALE: 1" = 40'

CONSTRUCTION NOTES

1. SAWCUT EXISTING PAVEMENT
2. CONSTRUCT TYPE A2-8 CURB & GUTTER PER OCPW STD. PLAN 120-1-OC
5. CONSTRUCT 4" PCC SIDEWALK PER OCPW STD. PLAN 1205
8. CONSTRUCT MODIFIED PCC DEPRESSED CURB DRIVEWAY APPROACH DETAIL ON SHEET C-1
9. COLDMILL (0.17') EXISTING PAVEMENT AND ARHM OVERLAY
13. RECONSTRUCT PARKWAY CULVERT PER DETAIL ON SHEET C-2
15. CONSTRUCT MASONRY BLOCK WALL PER OCPW STD. PLAN 1414, H PER PLAN
17. ~~CONSTRUCT 0.67' FULL-DEPTH AC OVER COMPACTED SUBGRADE~~
26. CONSTRUCT 6" PCC DRIVEWAY PAVEMENT OVER COMPACTED NATIVE SOIL
31. ~~REPLACE REMOVABLE WOOD PANEL~~ IN KIND
33. RECONSTRUCT EXISTING AC PAVEMENT BEHIND PROPOSED BLOCK WALL PER DETAIL ON SHEET P-1
34. RECONSTRUCT EXISTING BLOCK WALL PER DETAIL ON SHEET C-2

ITEM 48

DISPOSITION

1. PROTECT IN PLACE
2. REMOVE

LEGEND

- RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT
- MASONRY BLOCK WALL
- COLDMILL AND ARHM OVERLAY
- AC PAVEMENT

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG — DATE 1/21/13
REGISTERED PROFESSIONAL ENGINEER — EDWARD NG — 46167 — Exp. 6/30/13 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

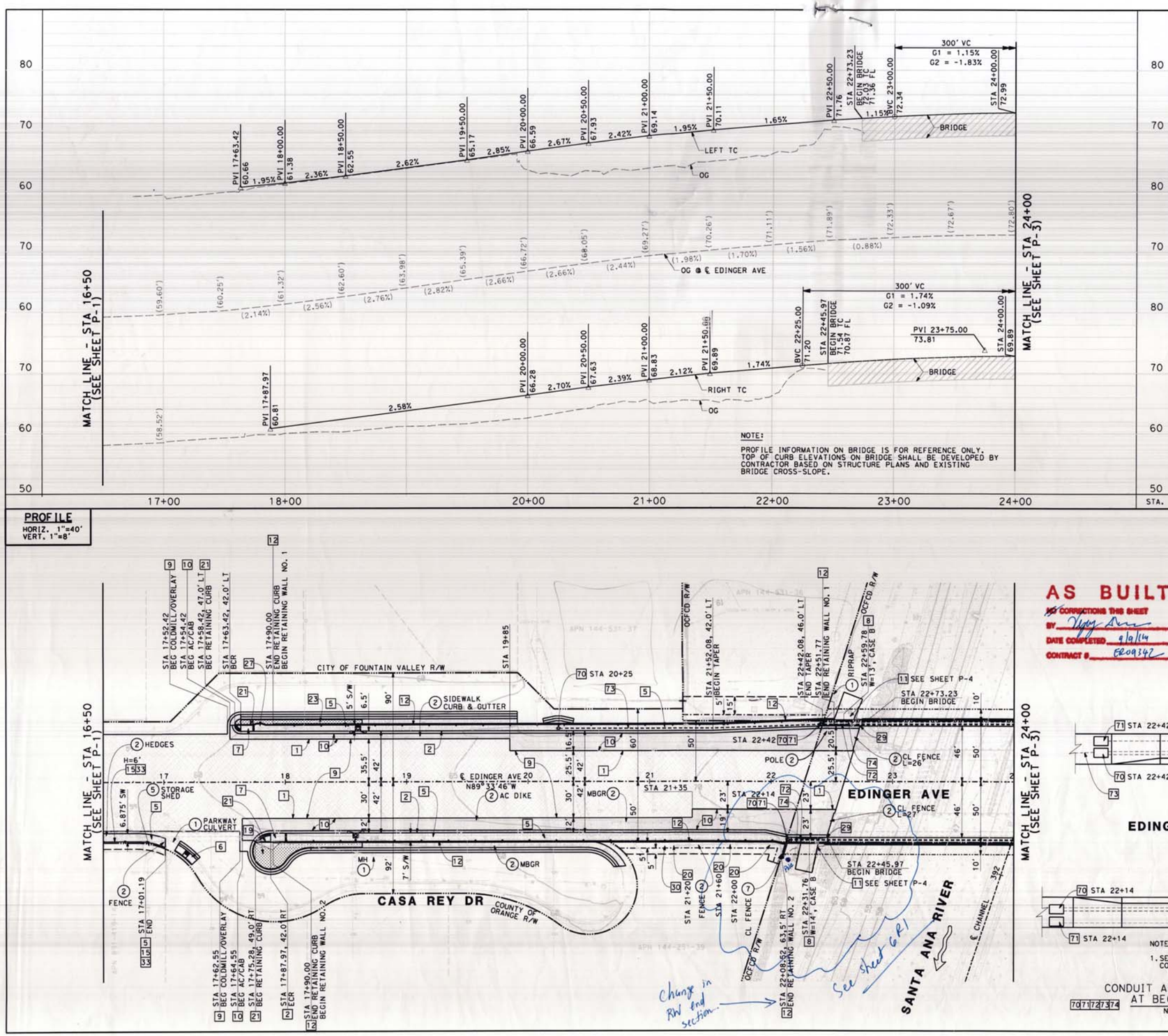
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

PLAN AND PROFILE

STA 10+00 TO STA 16+50

Sheet Reference Number
P-1

FILE NAME : $REQUEST



CONSTRUCTION NOTES

1. SAWCUT EXISTING PAVEMENT
2. CONSTRUCT TYPE A2-8 CURB & GUTTER PER OCPW STD. PLAN 120-1-OC
5. CONSTRUCT 4" PCC SIDEWALK PER OCPW STD. PLAN 1205
6. CONSTRUCT CURB RAMP (TYPE 2) PER OCPW STD. PLAN 1115
7. CONSTRUCT CURB RAMP (CASE E) PER CITY OF FOUNTAIN VALLEY STD. PLAN 204-5
8. CONSTRUCT MODIFIED PCC DEPRESSED CURB DRIVEWAY APPROACH DETAIL ON SHEET C-1
9. COLDMILL (0.17') EXISTING PAVEMENT AND ARHM OVERLAY
10. CONSTRUCT 0.17' ARHM OVER 0.33' WMA OVER 1.65' CMB OVER COMPACTED SUBGRADE
11. CONSTRUCT 4" DISINTEGRATED GRANITE OVER COMPACTED NATIVE SOIL
12. CONSTRUCT RETAINING WALL PER RETAINING WALL SHEETS RW-1 AND RW-2
15. CONSTRUCT 6' MASONRY BLOCK WALL PER OCPW STD. PLAN 1414
19. CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-2
20. RECONSTRUCT PORTION OF WOOD FENCE AGAINST RETAINING WALL PER DETAIL ON SHEET C-2
21. CONSTRUCT RETAINING CURB PER DETAIL ON SHEET C-1
23. CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-1
27. CONSTRUCT SIDEWALK AROUND STREET LIGHT POLE PER DETAIL ON SHEET C-1
29. CONSTRUCT GUTTER TRANSITION AT BRIDGE APPROACH SLAB PER DETAIL ON SHEET C-2
30. RECONSTRUCT STEEL PICKET FENCE TO RETAINING WALL FACE PER PROJECT SPECIFICATIONS
33. RECONSTRUCT EXISTING AC PAVEMENT BEHIND PROPOSED BLOCK WALL PER DETAIL ON SHEET P-1
70. CONSTRUCT NO. 6 PULL BOX (FOR AT&T) PER CALTRANS STD PLAN ES-8
71. CONSTRUCT NO. 5 PULL BOX (FOR ELEC) PER CALTRANS STD PLAN ES-8
72. CONSTRUCT (2) 5" PVC CONDUIT WITH PULL ROPE
73. CONSTRUCT 5" PVC CONDUIT WITH PULL ROPE
74. CONSTRUCT 2" PVC CONDUIT WITH PULL ROPE

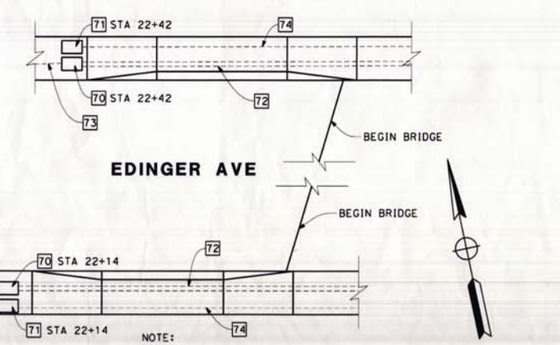
DISPOSITION

1. PROTECT IN PLACE
2. REMOVE
5. TO BE RELOCATED BY OTHERS
7. REMOVE AND RECONSTRUCT

LEGEND

- RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT
- PERMANENT RETAINING WALL EASEMENT
- ROAD EASEMENT
- MASONRY BLOCK WALL
- RETAINING WALL
- AC PAVEMENT
- COLDMILL AND ARHM OVERLAY
- PCC PAVEMENT
- BIOSWALE

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 8R09342



NOTE:
1. SEE STRUCTURE PLANS FOR LIGHTING CONDUIT AND PULL BOXES ON BRIDGE

CONDUIT AND PULL BOXES AT BEGIN BRIDGE
70 71 72 73 74
NO SCALE

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER
EDWARD NG
No. 47971
EXP. 6/30/15
CIVIL
STATE OF CALIFORNIA
DATE 12/2/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: #DATE#
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
KEYLON
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

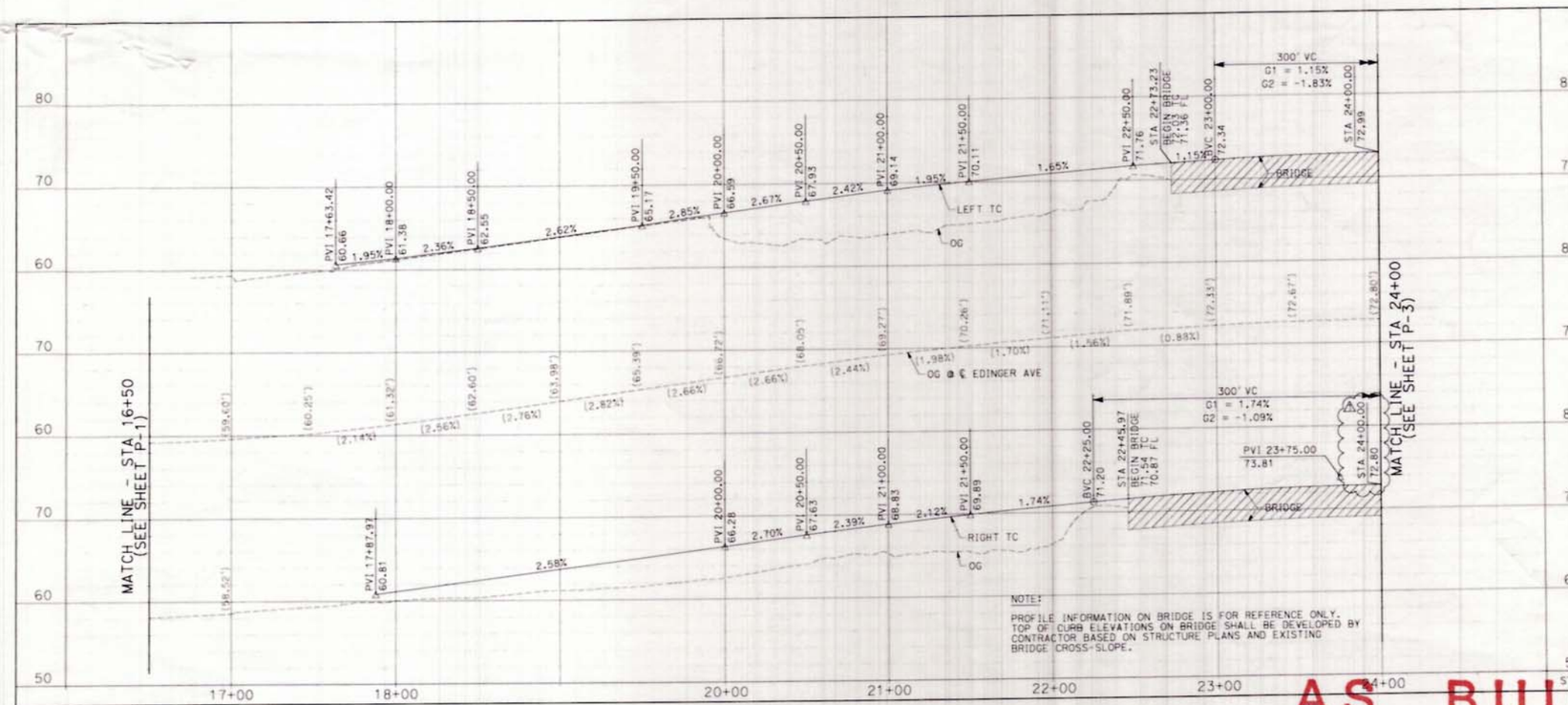
PLAN AND PROFILE

STA 16+50 TO STA 24+00

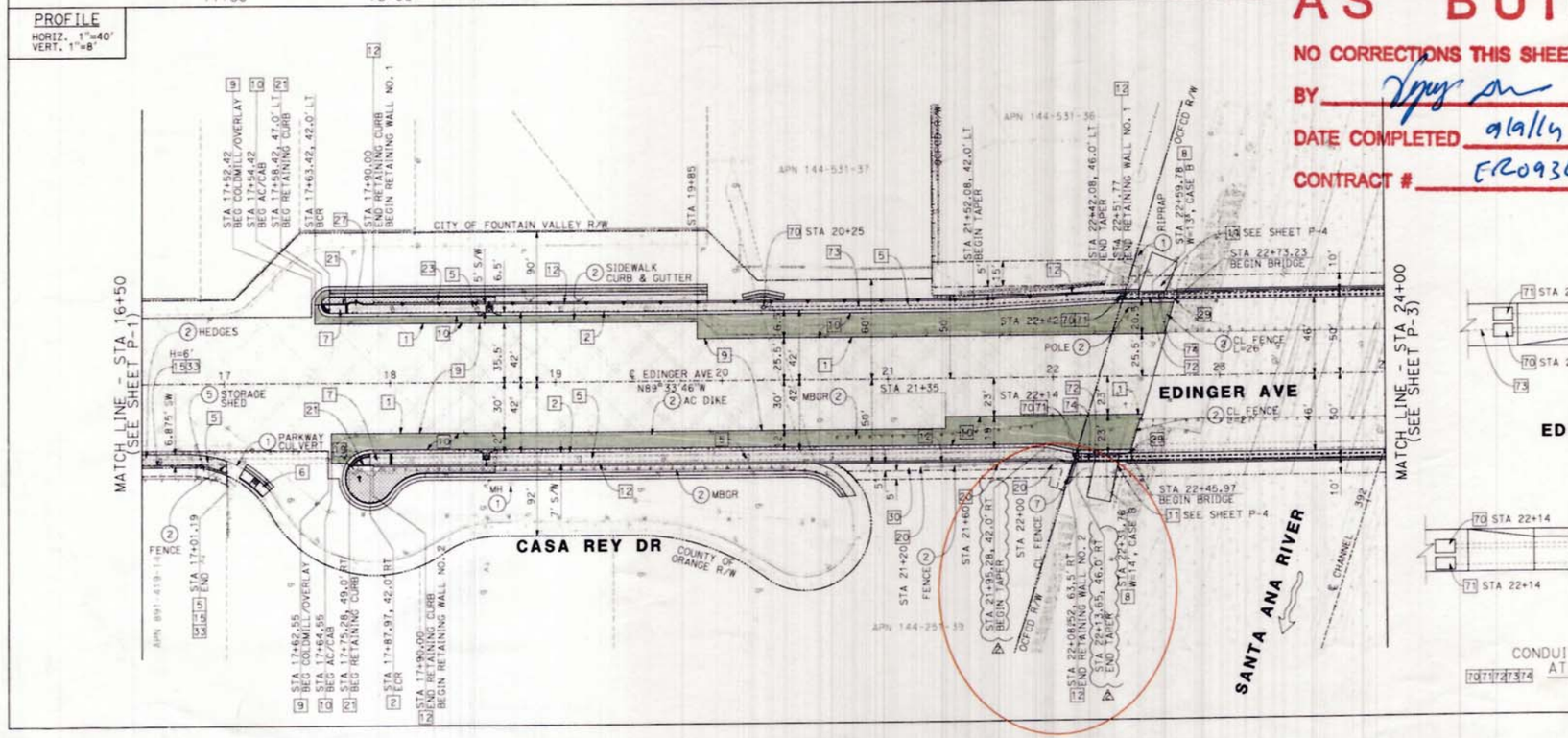
Sheet Reference Number
P-2

Sheet 6 of 76

FILE NAME : $REQUEST



PROFILE
HORIZ. 1"=40'
VERT. 1"=8'



AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09342

CONSTRUCTION NOTES

1. SAWCUT EXISTING PAVEMENT
2. CONSTRUCT TYPE A2-8 CURB & GUTTER PER OCPW STD. PLAN 120-1-OC
5. CONSTRUCT 4" PCC SIDEWALK PER OCPW STD. PLAN 1205
6. CONSTRUCT CURB RAMP (TYPE 2) PER OCPW STD. PLAN 1115
7. CONSTRUCT CURB RAMP (CASE E) PER CITY OF FOUNTAIN VALLEY STD. PLAN 204-5
8. CONSTRUCT MODIFIED PCC DEPRESSED CURB DRIVEWAY APPROACH DETAIL ON SHEET C-1
9. COLDMILL (0.17') EXISTING PAVEMENT AND ARHM OVERLAY
10. CONSTRUCT 0.17' ARHM OVER 0.33' WMA OVER 1.65' CMB OVER COMPACTED SUBGRADE
11. CONSTRUCT 4" DISINTEGRATED GRANITE OVER COMPACTED NATIVE SOIL
12. CONSTRUCT RETAINING WALL PER RETAINING WALL SHEETS RW-1 AND RW-2
15. CONSTRUCT 6' MASONRY BLOCK WALL PER OCPW STD. PLAN 1414
19. CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-2
20. RECONSTRUCT PORTION OF WOOD FENCE AGAINST RETAINING WALL PER DETAIL ON SHEET C-2
21. CONSTRUCT RETAINING CURB PER DETAIL ON SHEET C-1
23. CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-1
27. CONSTRUCT SIDEWALK AROUND STREET LIGHT POLE PER DETAIL ON SHEET C-1
29. CONSTRUCT GUTTER TRANSITION AT BRIDGE APPROACH SLAB PER DETAIL ON SHEET C-2
30. RECONSTRUCT STEEL PICKET FENCE TO RETAINING WALL FACE PER PROJECT SPECIFICATIONS
33. RECONSTRUCT EXISTING AC PAVEMENT BEHIND PROPOSED BLOCK WALL PER DETAIL ON SHEET P-1
70. CONSTRUCT NO. 6 PULL BOX (FOR AT&T) PER CALTRANS STD PLAN ES-8
71. CONSTRUCT NO. 5 PULL BOX (FOR ELEC) PER CALTRANS STD PLAN ES-8
72. CONSTRUCT (2) 5" PVC CONDUIT WITH PULL ROPE
73. CONSTRUCT 5" PVC CONDUIT WITH PULL ROPE
74. CONSTRUCT 2" PVC CONDUIT WITH PULL ROPE

DISPOSITION

1. PROTECT IN PLACE
2. REMOVE
3. TO BE RELOCATED BY OTHERS
4. REMOVE AND RECONSTRUCT

LEGEND

- RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT
- PERMANENT RETAINING WALL EASEMENT
- ROAD EASEMENT
- MASONRY BLOCK WALL
- RETAINING WALL
- AC PAVEMENT
- COLDMILL AND ARHM OVERLAY
- PCC PAVEMENT
- BIOSWALE

RECEIVED
OCT 18 2013
BY:

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
4	ADDED TAPER CALLOUTS	10/24/13	
3	REVISED PROFILE CALLOUT	5/23/13	

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG
1/21/13
DATE

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME:
TITLE
PLOT DATE: 10/24/13
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

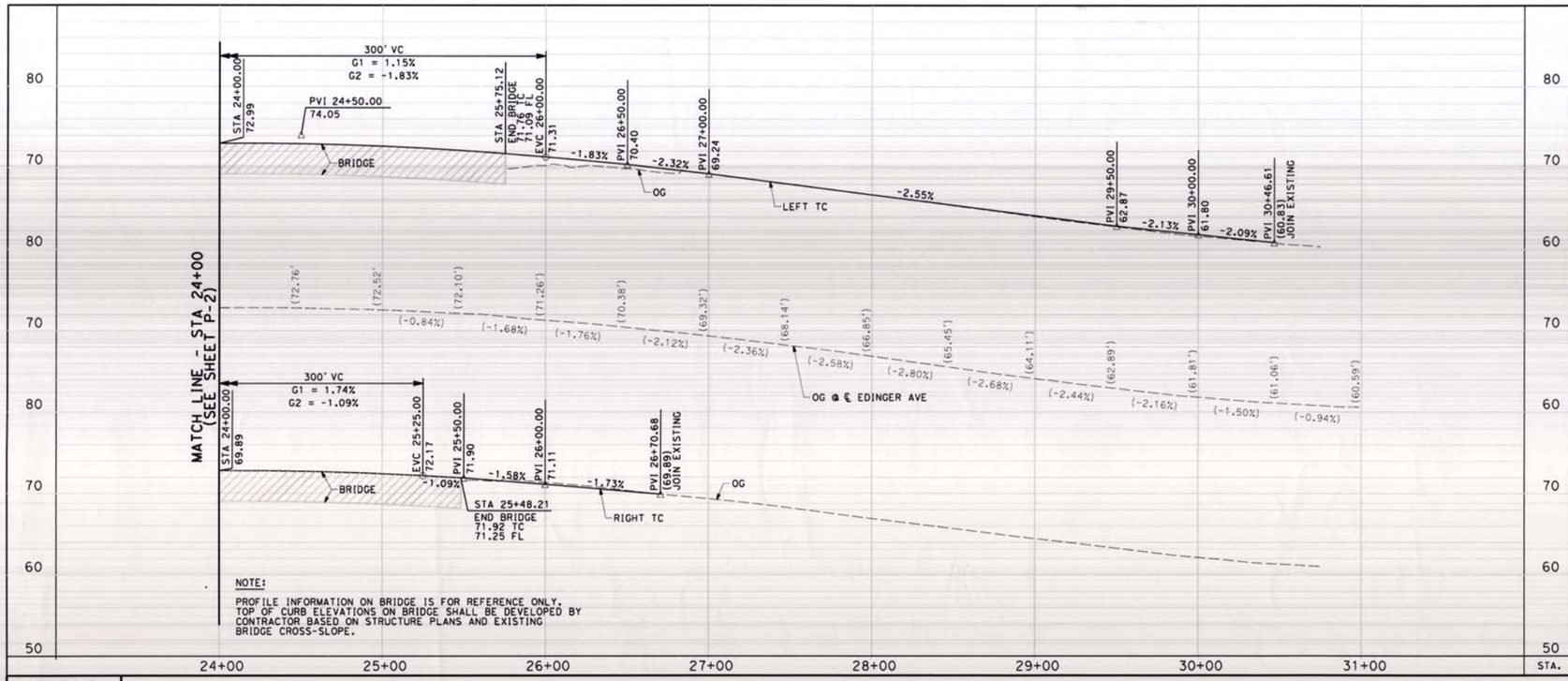
PLAN AND PROFILE

STA 16+50 TO STA 24+00

Sheet Reference Number
P-2

Sheet 6R1 of 76

FILE NAME : BREQUEST



PROFILE
HORIZ. 1"=40'
VERT. 1"=8'

CONSTRUCTION NOTES

1. SAWCUT EXISTING PAVEMENT
4. CONSTRUCT A-2-8 CURB & GUTTER PER CITY OF SANTA ANA STD. PLAN 1101
8. CONSTRUCT MODIFIED PCC DEPRESSED CURB DRIVEWAY APPROACH PER DETAIL ON SHEET C-1
9. COLDMILL (0.17') EXISTING PAVEMENT AND AC OVERLAY
10. CONSTRUCT 0.17' ARHM OVER 0.33' WMA OVER 1.65' CMB OVER COMPACTED SUBGRADE
11. CONSTRUCT 4" DISINTEGRATED GRANITE OVER COMPACTED NATIVE SOIL
14. CONSTRUCT 4" PCC SIDEWALK PER CITY OF SANTA ANA STD. PLAN 1104
29. CONSTRUCT GUTTER TRANSITION AT BRIDGE APPROACH SLAB PER DETAIL ON SHEET C-2
70. CONSTRUCT NO. 6 PULL BOX (FOR AT&T) PER CALTRANS STD PLAN ES-8
71. CONSTRUCT NO. 5 PULL BOX (FOR ELEC) PER CALTRANS STD PLAN ES-8
72. CONSTRUCT (2) 5" PVC CONDUIT WITH PULL ROPE
74. CONSTRUCT 2" PVC CONDUIT WITH PULL ROPE

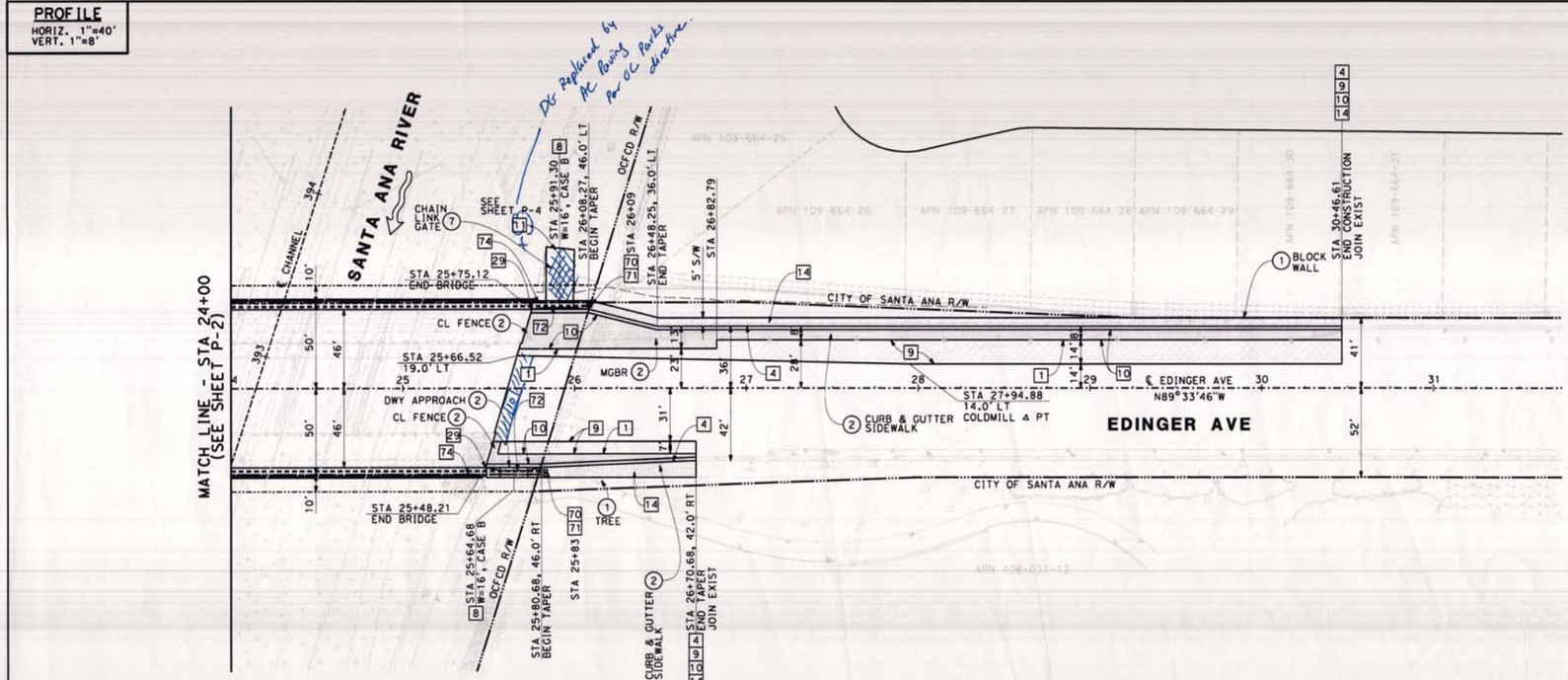
DISPOSITION

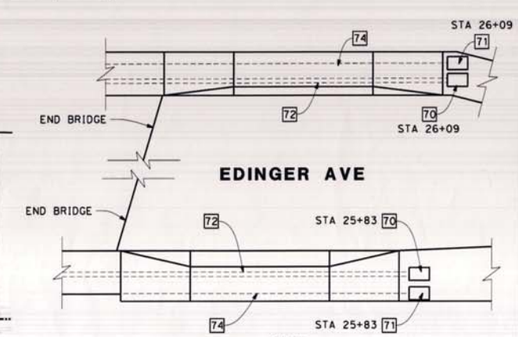
1. PROTECT IN PLACE
2. REMOVE
7. REMOVE AND RECONSTRUCT

LEGEND

RIGHT-OF-WAY
ROAD EASEMENT
AC PAVEMENT
COLDMILL AND ARHM OVERLAY

26+09





NOTE:
1. SEE STRUCTURE PLANS FOR LIGHTING CONDUIT AND PULL BOXES ON BRIDGE

CONDUIT AND PULL BOXES AT END BRIDGE
NO SCALE

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ERU9342

SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG
DATE 1/21/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE$
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
PLAN AND PROFILE
STA 24+00 TO STA 30+46

Sheet Reference Number
P-3

FILE NAME : $REQUEST

CONSTRUCTION NOTES

1. SAWCUT EXISTING PAVEMENT
8. CONSTRUCT MODIFIED PCC DEPRESSED CURB DRIVEWAY APPROACH PER DETAIL ON SHEET C-1
11. CONSTRUCT 4" DISINTEGRATED GRANITE OVER COMPACTED NATIVE SOIL

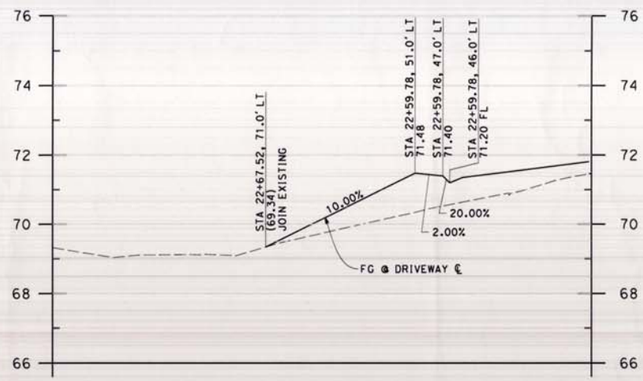
DISPOSITION

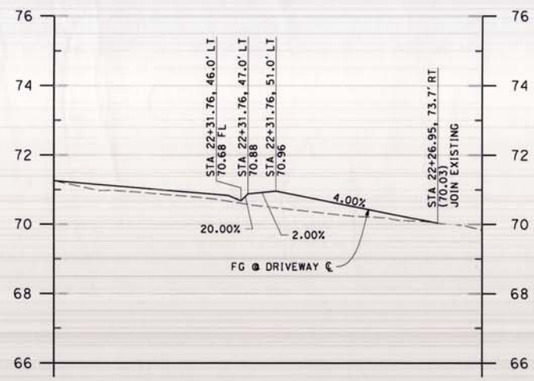
(2) REMOVE
(7) REMOVE AND RECONSTRUCT

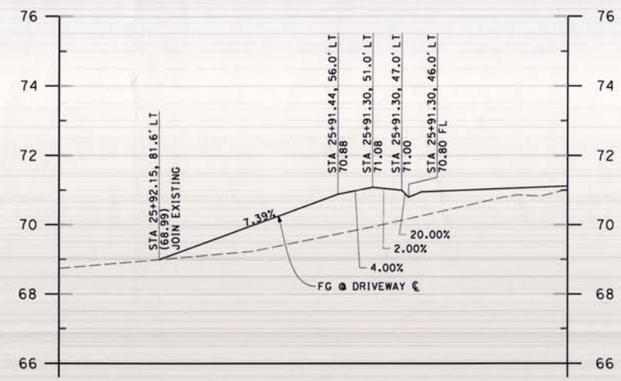
LEGEND

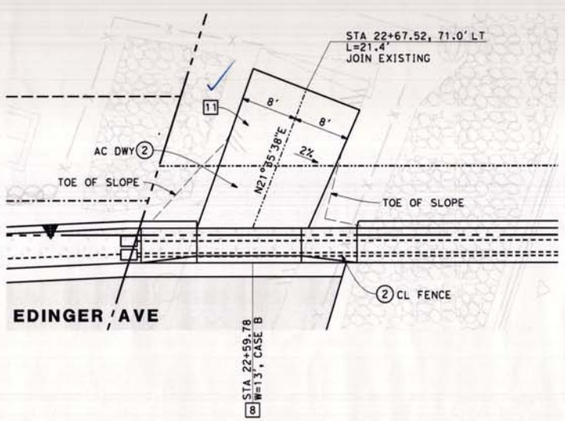
- RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT
- PERMANENT RETAINING WALL EASEMENT
- ROAD EASEMENT
- RETAINING WALL
- AC PAVEMENT
- COLDMILL AND ARHM OVERLAY

0 5 10 20
SCALE: 1" = 10'

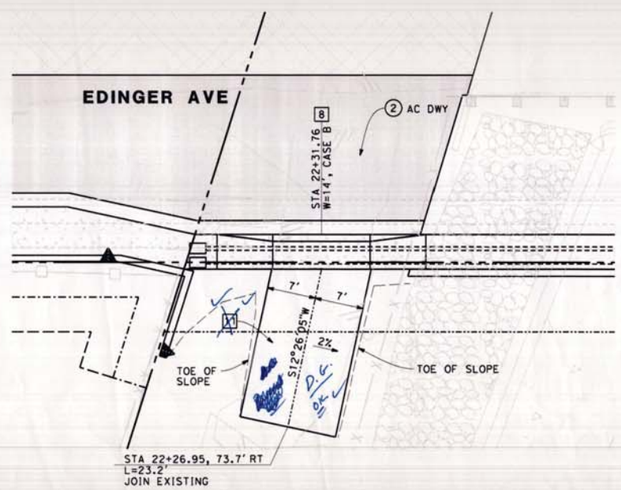




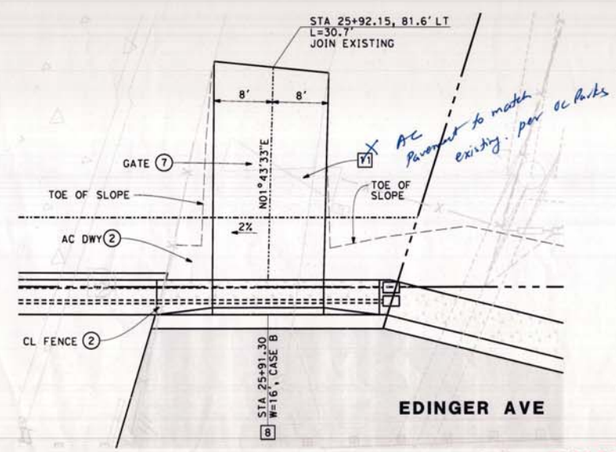




DRIVEWAY AT NORTHWEST BRIDGE CORNER
STA 22+59.78, LEFT



DRIVEWAY AT SOUTHWEST BRIDGE CORNER
STA 22+31.76, RIGHT



DRIVEWAY AT NORTHEAST BRIDGE CORNER
STA 25+91.30, LEFT

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # CR09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER
EDWARD NG
No. 46767
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA
DATE 1/21/13
EDWARD NG

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: #DATE#
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

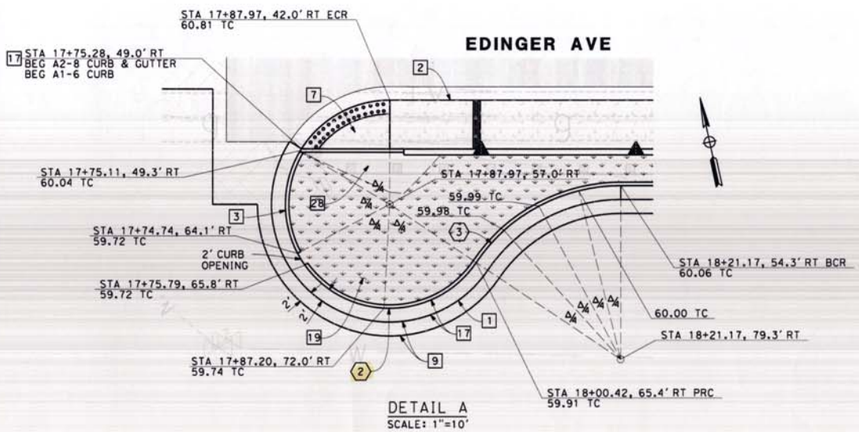
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT
BR. NO. 55C-0154

OCFCD ACCESS ROAD DETAILS

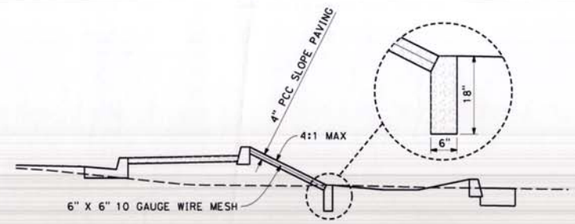
Sheet Reference Number
P-4

Sheet 8 of 76

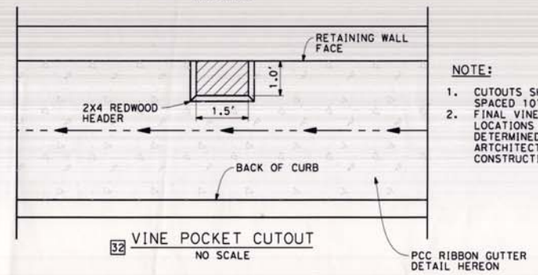
FILE NAME : $REQUEST



DETAIL A
SCALE: 1"=10'



28 PCC SLOPE PAVING
NO SCALE



32 VINE POCKET CUTOUT
NO SCALE

NOTE:

1. CUTOUTS SHALL BE SPACED 10' O.C.
2. FINAL VINE POCKET LOCATIONS TO BE DETERMINED BY LANDSCAPE ARTCHITECT PRIOR TO CONSTRUCTION

CONSTRUCTION NOTES

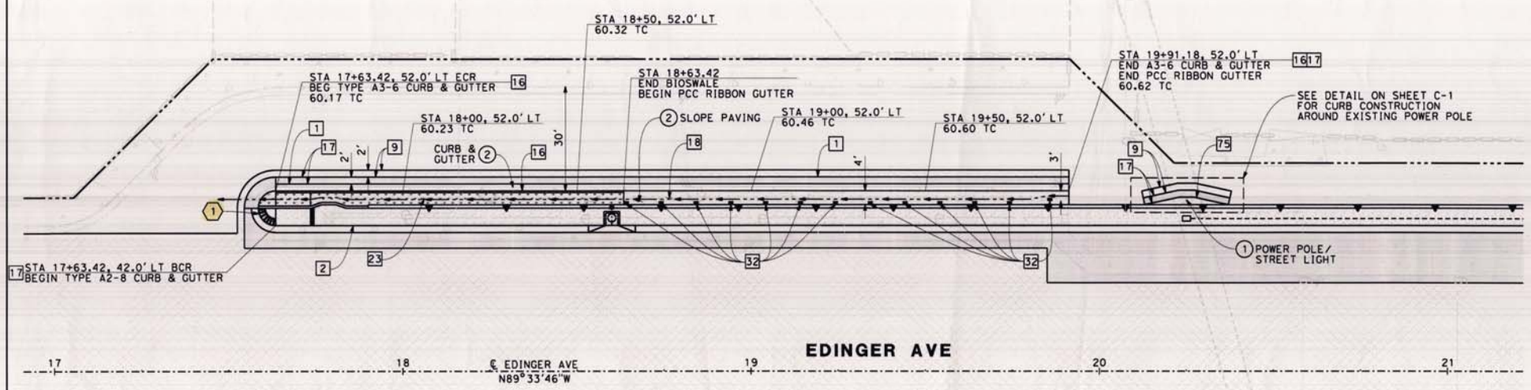
1. SAWCUT EXISTING PAVEMENT
2. CONSTRUCT TYPE A2-8 CURB & GUTTER PER OCPW STD. PLAN 120-1-OC
3. CONSTRUCT TYPE A1-6 CURB PER OCPW STD. PLAN 120-1-OC
7. CONSTRUCT CURB RAMP (CASE E) PER CITY OF FOUNTAIN VALLEY STD. PLAN 204-5
9. COLDMILL (0.17') EXISTING PAVEMENT AND ARHM OVERLAY
16. CONSTRUCT A3-6 CURB & GUTTER PER OCPW STD. PLAN 120-1-OC
17. CONSTRUCT 0.67' FULL-DEPTH WMA OVER COMPACTED SUBGRADE
18. CONSTRUCT 4" PCC RIBBON GUTTER PER DETAIL ON SHEET P-5
19. CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-2
23. CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-1
28. CONSTRUCT PCC SLOPE PAVING PER DETAIL ON SHEET P-5
32. CONSTRUCT 1.0' X 1.5' VINE POCKET CUTOUT PER DETAIL ON SHEET P-5
75. CONSTRUCT A1-8 CURB PER OCPW STD. PLAN 120-1-OC

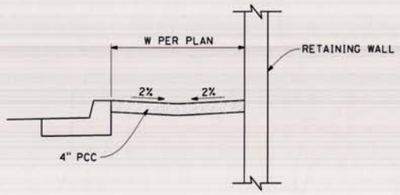
DISPOSITION

1. PROTECT IN PLACE
2. REMOVE

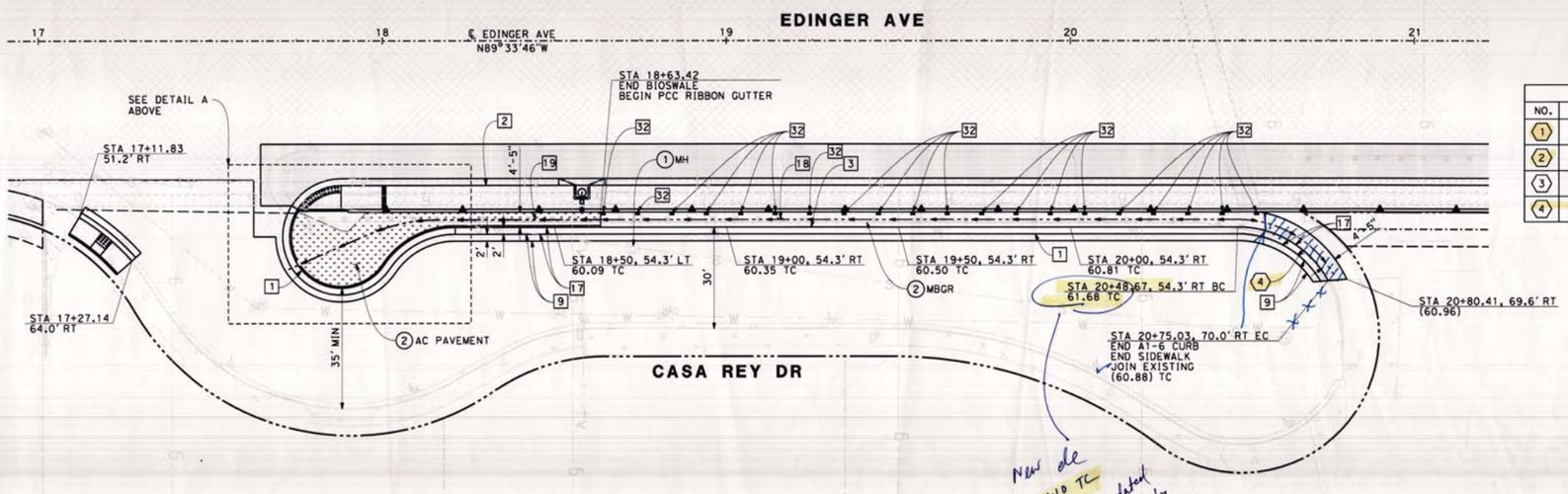
LEGEND

- RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT
- PERMANENT RETAINING WALL EASEMENT
- RETAINING WALL
- FLOW LINE
- AC PAVEMENT
- COLDMILL AND ARHM OVERLAY
- PCC PAVEMENT
- BIOSWALE
- VINE POCKET CUTOUT





18 PCC RIBBON GUTTER
NO SCALE



New ele
61.10 TC
per e-mail dated
12/9/13 by
AECOM

CURVE DATA				
NO.	R	Δ	T	L
1	5.00'	180°00'00"		15.71'
2	15.00'	236°05'49"	28.15'	61.81'
3	25.00'	56°05'37"	13.32'	24.48'
4	30.00'	61°31'04"	17.85'	32.21'

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 6R09542

0 10 20 40
SCALE: 1" = 20'

NOTE:

CONTRACTOR SHALL NOT STAGE EQUIPMENT AND/OR MATERIALS OVERNIGHT ON STREETS.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER EDWARD NG 46767 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA
DATE 12/2/13
EDWARD NG

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: #DATE#
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

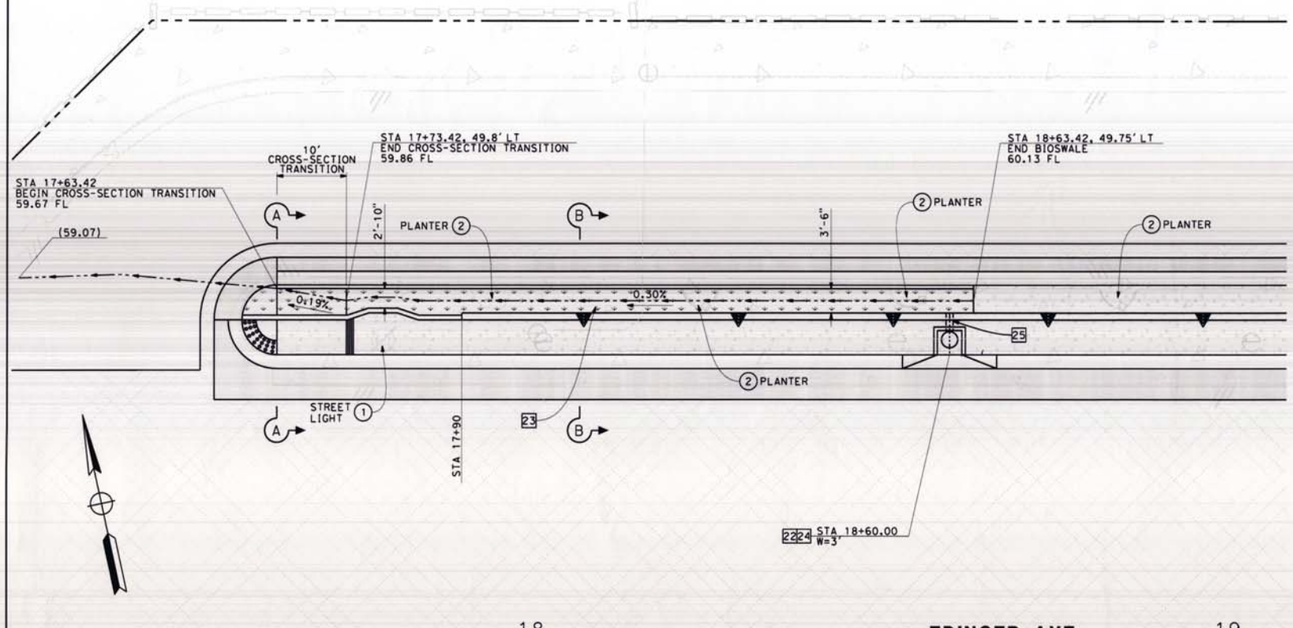
PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT
BR. NO. 55C-0154

FRONTAGE ROAD DETAILS

Sheet Reference Number
P-5

FILE NAME : $REQUEST



18 ℄ EDINGER AVE N89°33'46"W **EDINGER AVE** 19

PLAN
SCALE: 1"=10'

CONSTRUCTION NOTES

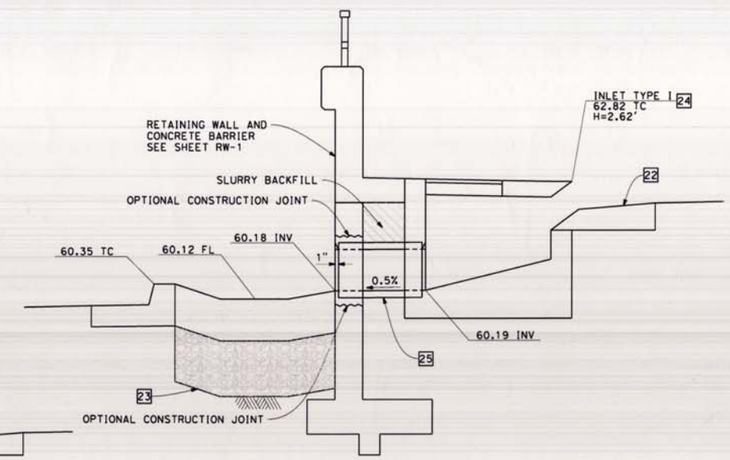
22 INLET DEPRESSION SHALL MATCH STANDARD GUTTER DEPRESSION
23 CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-1
24 CONSTRUCT INLET TYPE I PER RDMD STD. PLAN 1301 AND DETAILS ON SHEETS D-1 AND D-2
25 CONSTRUCT 12" CLASS I RCP

DISPOSITION

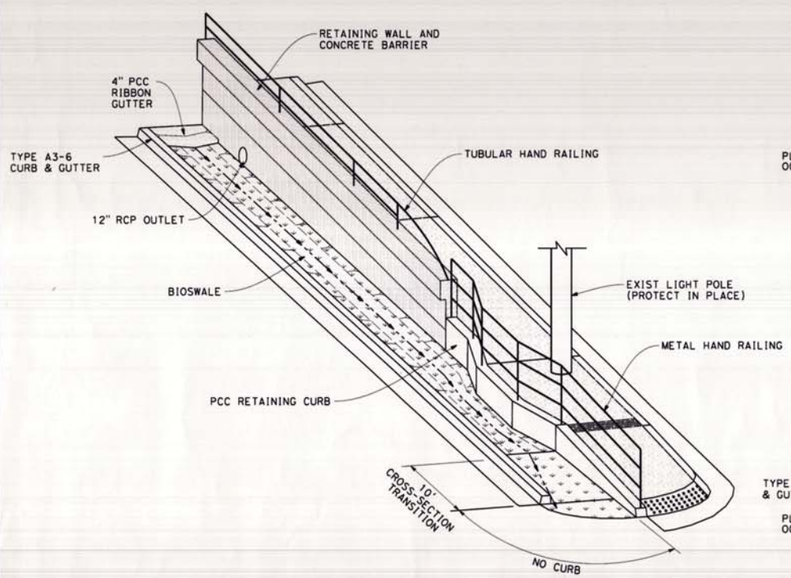
1 PROTECT IN PLACE
2 REMOVE

LEGEND

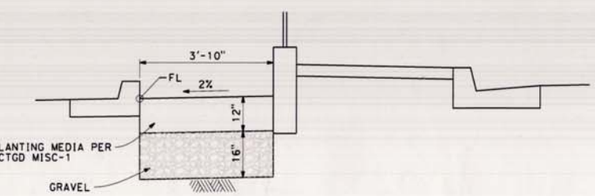
RIGHT-OF-WAY
RETAINING WALL
FLOW LINE
AC PAVEMENT
COLDMILL AND ARHM OVERLAY
PCC PAVEMENT
BIOSWALE



INLET TYPE I
24 STA 18+60, NORTH SIDE
NO SCALE



ISOMETRIC VIEW
NO SCALE



SECTION A-A
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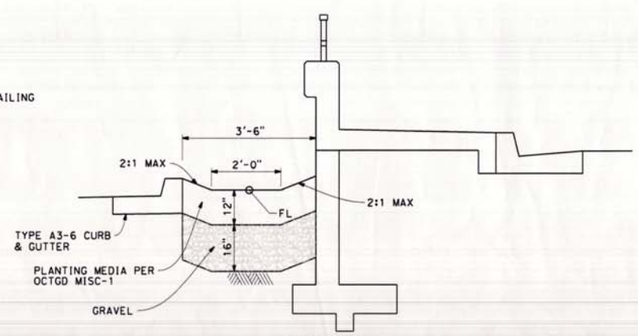
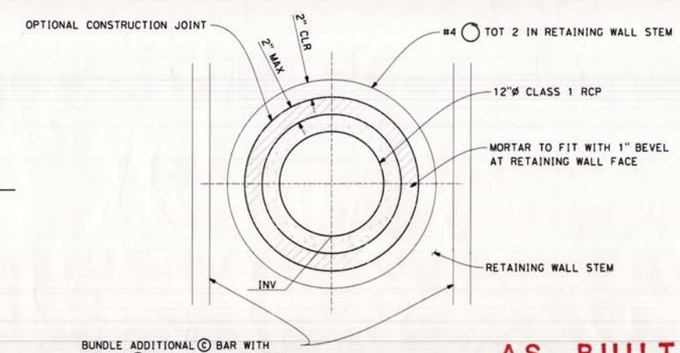


SECTION B-B
NO SCALE



BUNDLE ADDITIONAL © BAR WITH TYPICAL © BAR ADJACENT TO BOTH SIDES OF OPENING. SEE CALTRANS STD. PLAN B3-1 FOR © BAR DETAILS

DRAINAGE OUTLET
THROUGH RETAINING WALL
NO SCALE

23 BIOSWALE
NO SCALE

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 5RO9342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
PROFESSIONAL ENGINEER EDWARD NG 46167 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA
1/21/13 DATE
EDWARD NG

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE$
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER
SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

DRAINAGE DETAILS

Sheet Reference Number
D-1

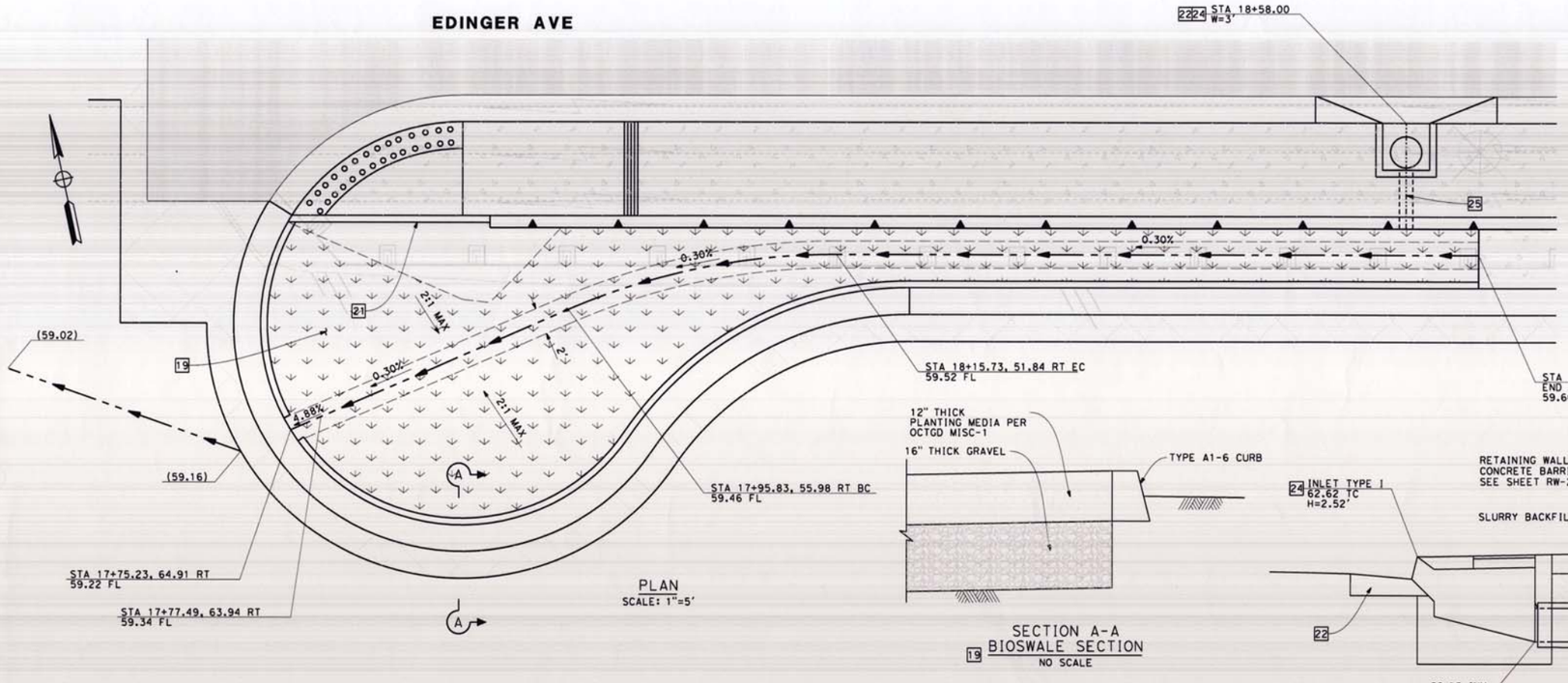
FILE NAME : $REQUEST

CONSTRUCTION NOTES

19 CONSTRUCT BIOSWALE PER DETAIL ON SHEET D-2
21 CONSTRUCT RETAINING CURB PER DETAIL ON SHEET C-1
22 CONSTRUCT LOCAL DEPRESSION (TYPE E) PER APWA STD. 313-3
24 CONSTRUCT INLET TYPE I PER OCPW STD. PLAN 1301 AND DETAILS ON SHEETS D-1 AND D-2
25 CONSTRUCT 12" CLASS I RCP

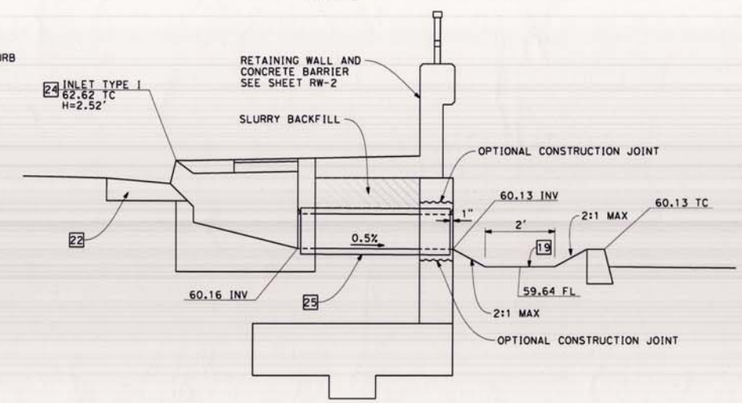
LEGEND

- RETAINING WALL
- FLOW LINE
- AC PAVEMENT
- COLDMILL AND ARHM OVERLAY
- BIOSWALE

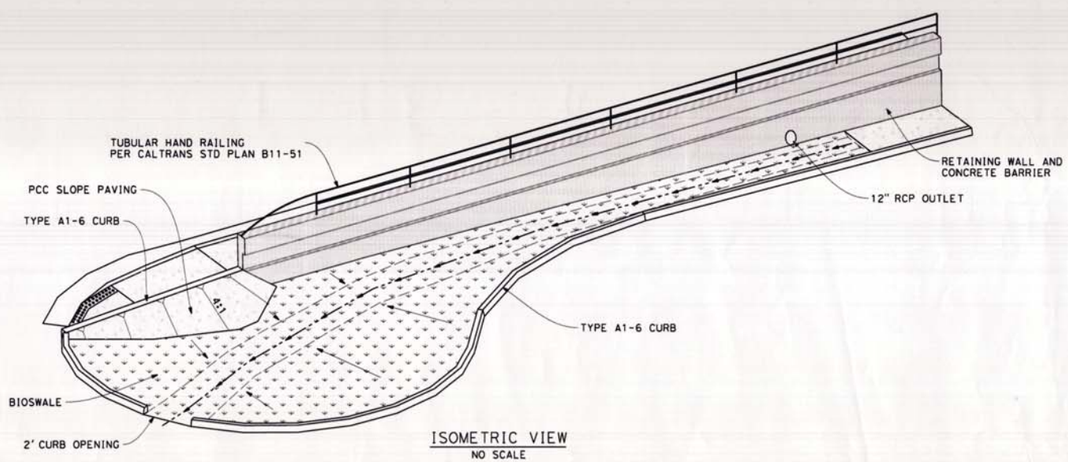


PLAN
SCALE: 1"=5'

SECTION A-A
19 BIOSWALE SECTION
NO SCALE

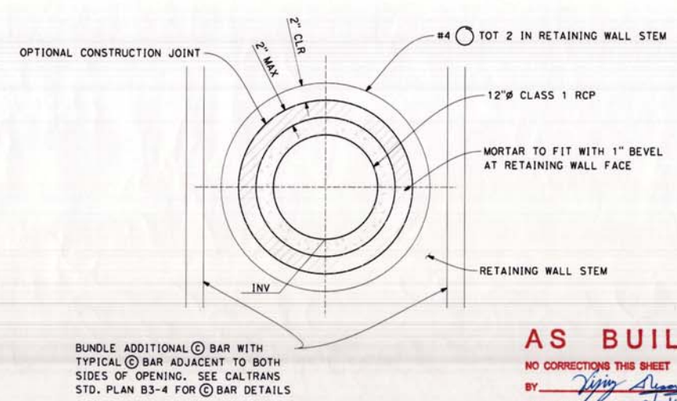


INLET TYPE I
24 STA 18+58, SOUTH SIDE
NO SCALE



ISOMETRIC VIEW
NO SCALE

19 BIOSWALE
NO SCALE



DRAINAGE OUTLET
THROUGH RETAINING WALL
NO SCALE

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER0 9342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG
DATE 12/1/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: #DATE#
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER
SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

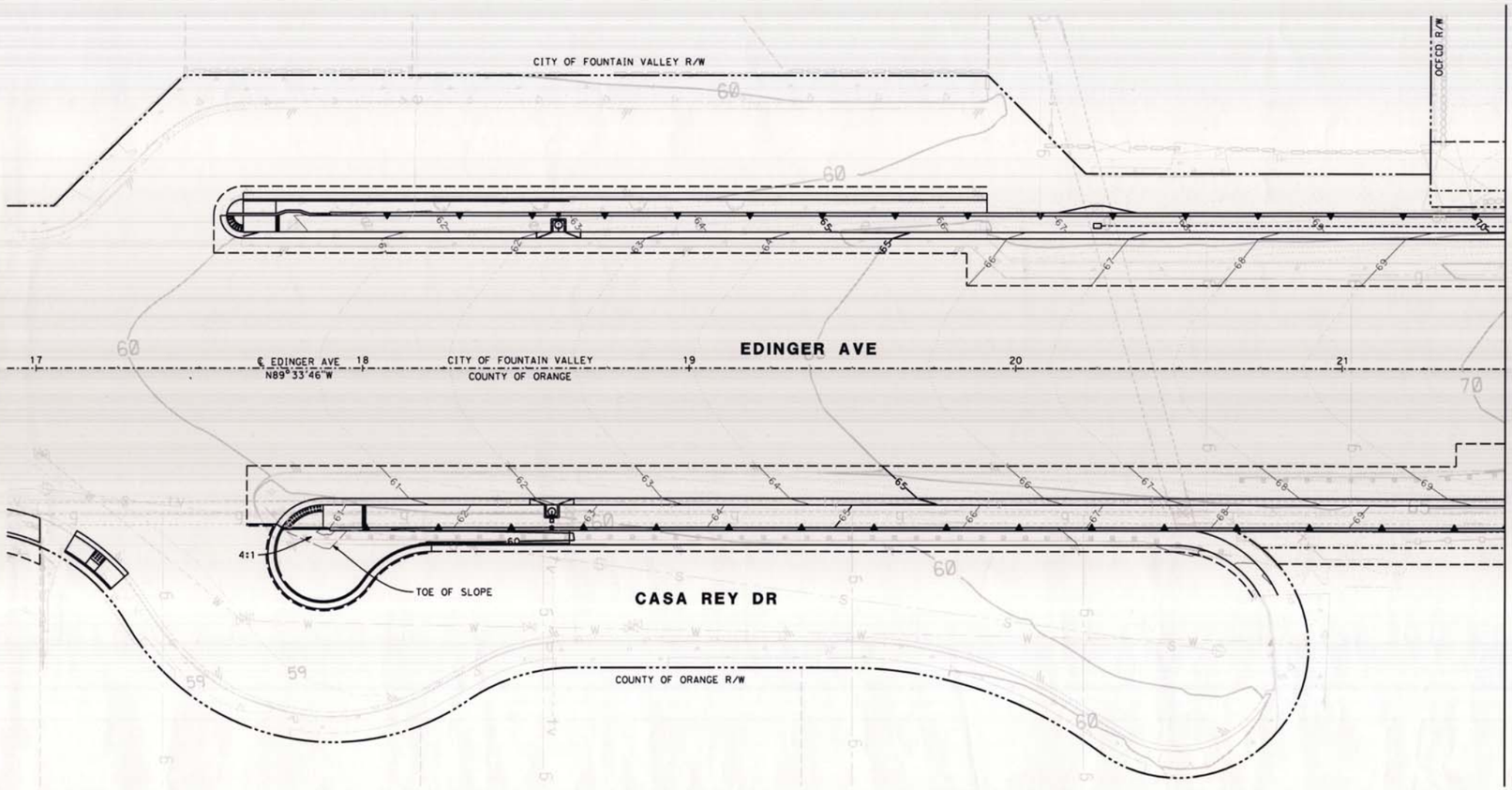
DRAINAGE DETAILS

Sheet Reference Number
D-2

FILE NAME : $REQUEST

LEGEND

- RIGHT-OF-WAY
- RETAINING WALL
- TEMPORARY CONSTRUCTION EASEMENT
- PERMANENT RETAINING WALL EASEMENT
- SAWCUT LINE



AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 8209342

0 10 20 40
SCALE: 1" = 20'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG
DATE 12/17/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE$
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

GRADING PLAN

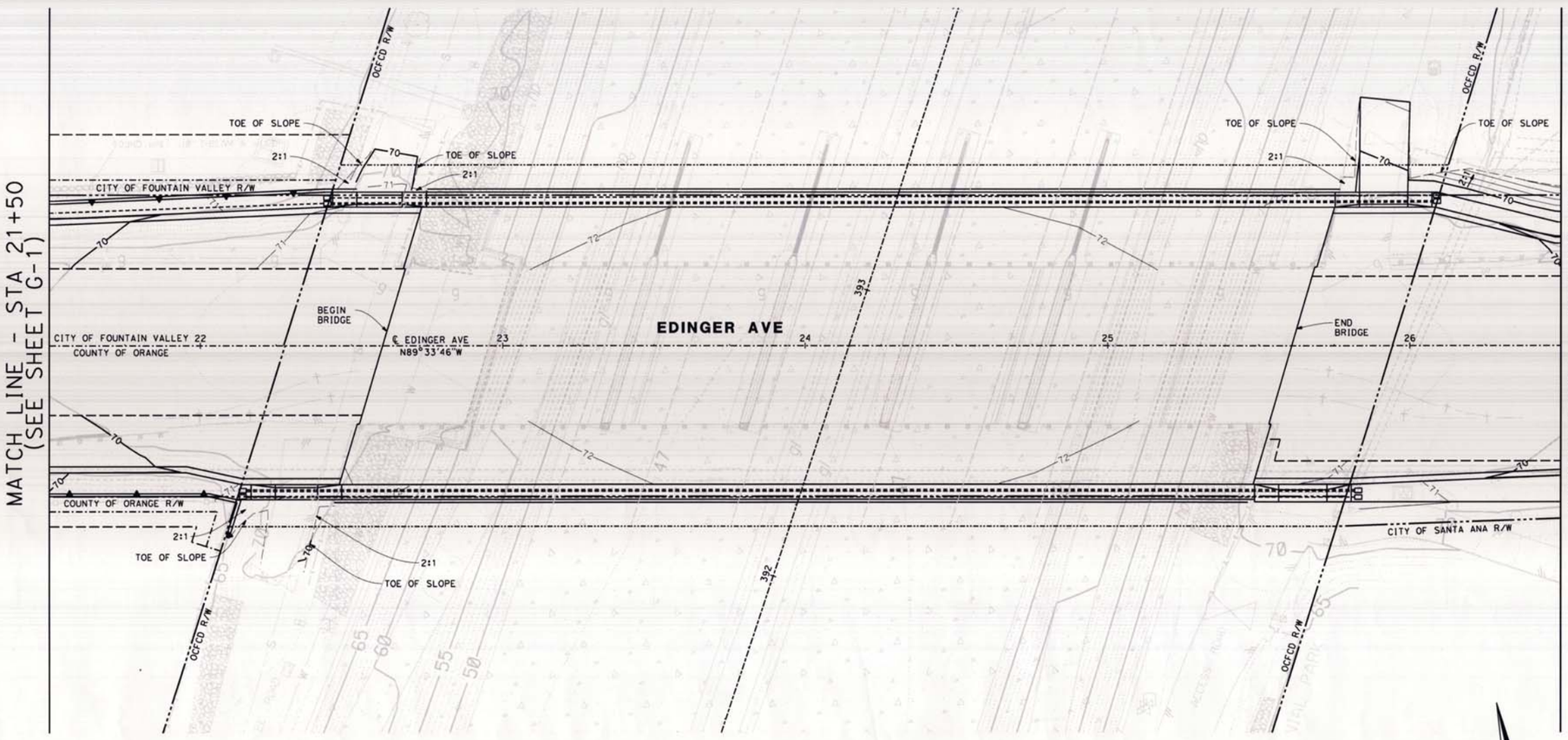
STA 17+00 TO STA 21+50

Sheet Reference Number
G-1

FILE NAME : $REQUEST

LEGEND

- RIGHT-OF-WAY
- RETAINING WALL
- TEMPORARY CONSTRUCTION EASEMENT
- PERMANENT RETAINING WALL EASEMENT
- ROAD EASEMENT
- SAWCUT LINE



AS BUILT
NO CORRECTIONS THIS SHEET
BY Vying Sears
DATE COMPLETED 9/9/14
CONTRACT # ER09342

0 10 20 40
SCALE: 1" = 20'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER
EDWARD NG
No. 46767
Exp. 6/30/15
CIVIL
STATE OF CALIFORNIA
1/21/13
DATE
EDWARD NG

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: #DATE#
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

GRADING PLAN

STA 21+50 TO STA 26+50

Sheet Reference Number

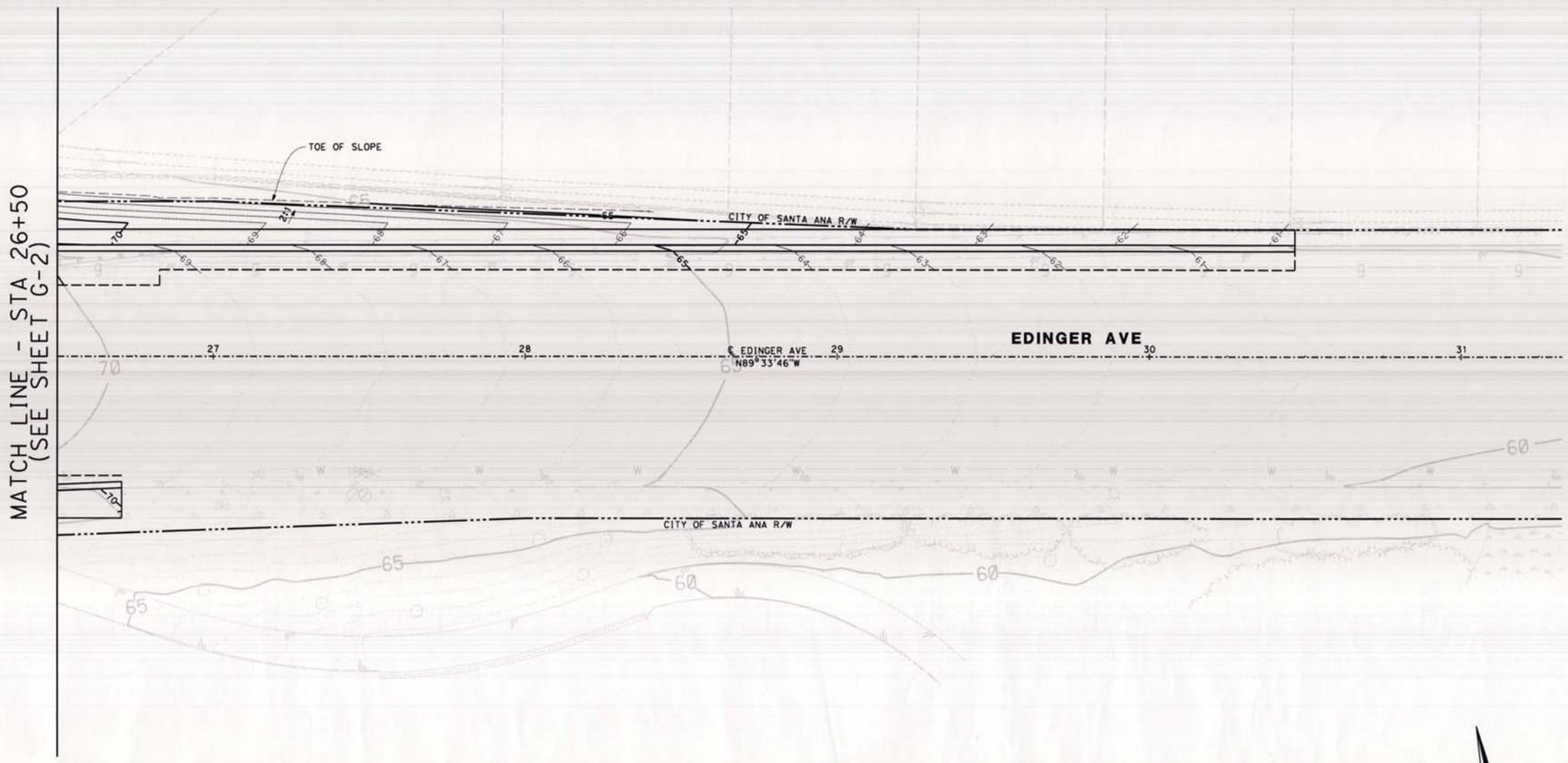
G-2

FILE NAME : $REQUEST

LEGEND

RIGHT-OF-WAY

SAWCUT LINE



AS BUILT

NO CORRECTIONS THIS SHEET

BY

DATE COMPLETED 9/9/14

CONTRACT # E209342

0 10 20 40

SCALE: 1" = 20'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:

REGISTERED PROFESSIONAL ENGINEER EDWARD NG No. 46767 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA

1/21/13

DATE

EDWARD NG

DESIGNED BY: J. YAP, P. LAU

DRAWN BY: J. YAP

CHECKED BY: E. NG

DRAWING CODE:

FILE NAME: #FILE

PLOT DATE: #DATE

SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

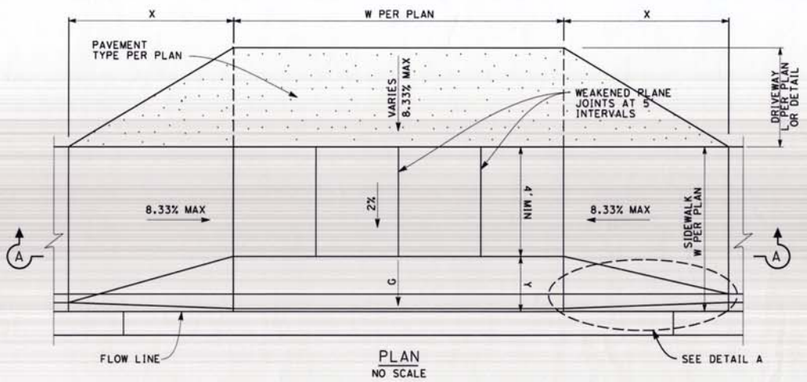
GRADING PLAN

STA 26+50 TO STA 31+25

Sheet Reference Number

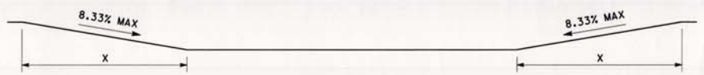
G-3

FILE NAME : $REQUEST

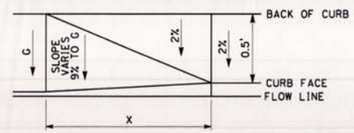


PLAN
NO SCALE

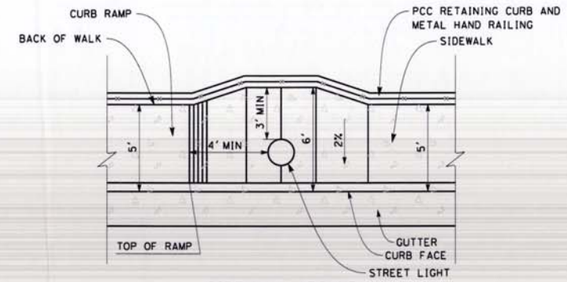
	X	Y	G
CASE A	6'	2'	12.5%
CASE B	8'	1'	20.0%



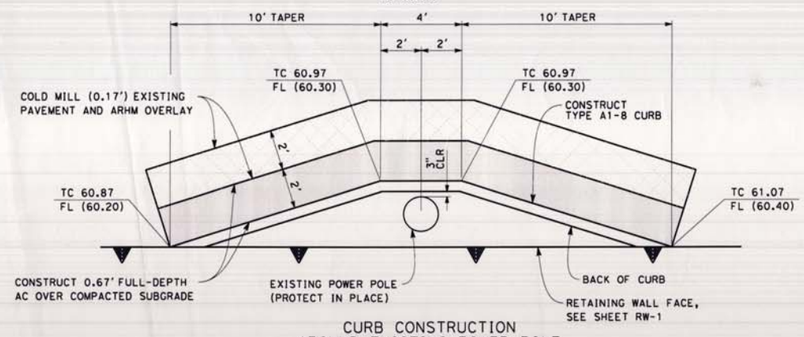
SECTION A-A
NO SCALE



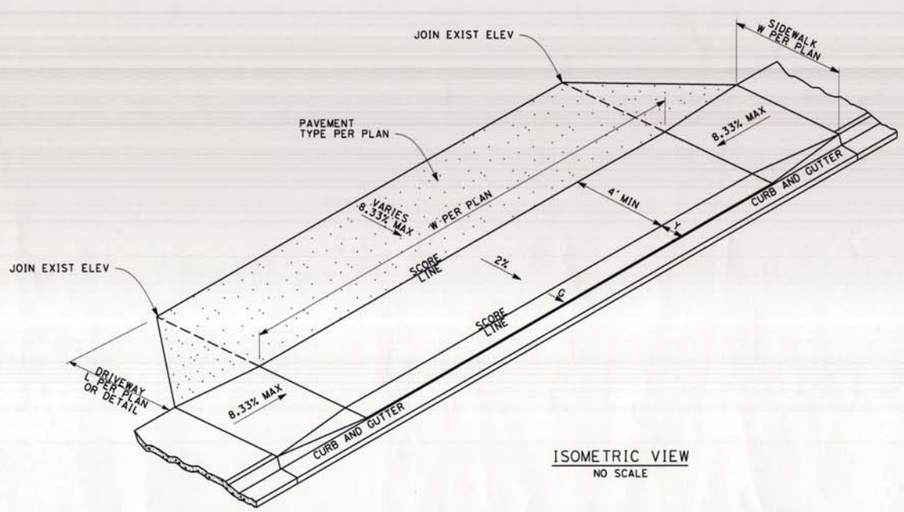
DETAIL A
NO SCALE



SIDEWALK AROUND
27 STREET LIGHT AT STA 17+79
NO SCALE



CURB CONSTRUCTION
75 AROUND EXISTING POWER POLE
NO SCALE

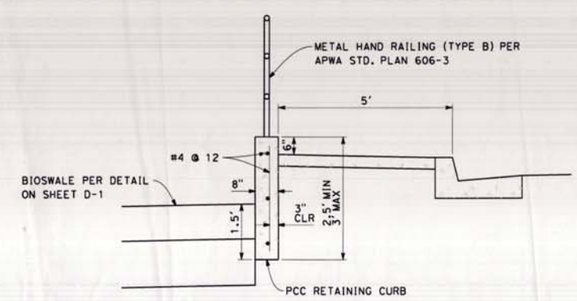


ISOMETRIC VIEW
NO SCALE

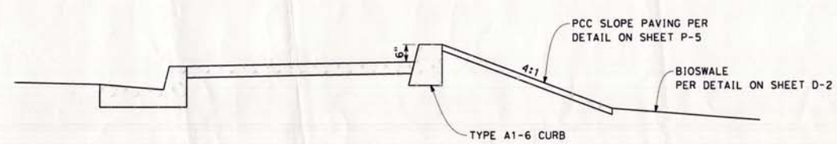
NOTES:

1. DRIVEWAY APPROACH SHALL BE 6" PCC CONCRETE
2. RELATIVE COMPACTION OF SUBGRADE UNDER DRIVEWAY APPROACH SHALL BE 95% (MIN.)

8 MODIFIED PCC DEPRESSED CURB DRIVEWAY APPROACH
NO SCALE



NORTH SIDE
STA 17+58 TO STA 17+90
NO SCALE



SOUTH SIDE
STA 17+75 TO STA 17+90
NO SCALE

21 PCC RETAINING CURB
NO SCALE

AS BUILT
NO CORRECTIONS THIS SHEET
BY Yping Arzu
DATE COMPLETED 9/2/14
CONTRACT # ER09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG, REGISTERED PROFESSIONAL ENGINEER, 46787, Exp. 6/30/13, CIVIL, STATE OF CALIFORNIA
1/21/13
DATE
EDWARD NG

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

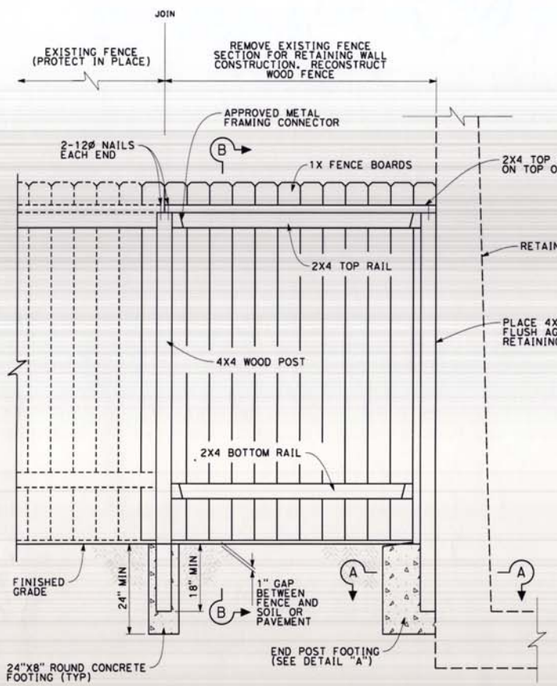
PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

CONSTRUCTION DETAILS

Sheet Reference Number
C-1

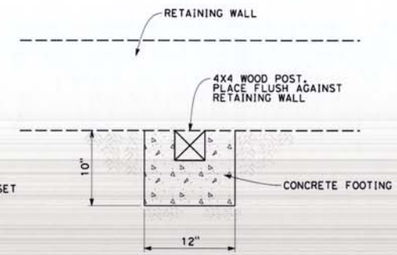
FILE NAME : \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\15_C-1 Construction Details.dgn



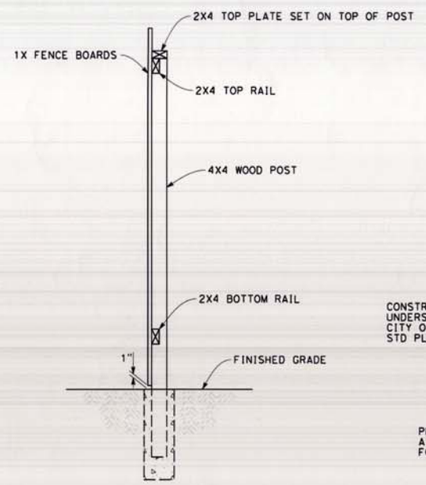
NOTES:

1. ALL MATERIALS SHALL BE TREATED WOOD, OR WOOD OF NATURAL RESISTANCE TO DECAY. ALL WOOD SHALL BE CONSTRUCTION GRADE 2 OR BETTER.
2. FENCE POSTS SHALL CONSIST OF 4X4 (NOMINAL) WOOD POSTS.
3. FENCE POSTS SHALL BE SPACED A MAXIMUM OF EIGHT FEET ON CENTER.
4. FENCES SHALL BE SET IN A MINIMUM 8" DIAMETER CONCRETE PIER, EXTENDING A MINIMUM OF TWO FEET DEEP UNLESS NOTED OTHERWISE ON PLANS.
5. VERTICAL WOODEN FENCE BOARDS SHALL BE A MINIMUM OF ONE INCH (NOMINAL) IN THICKNESS AND SHALL MATCH SIZE, HEIGHT, AND STYLE OF EXISTING FENCE BOARDS.
6. ALL NAILS ARE TO BE CORROSION RESISTANT TYPE.
7. NAIL EACH FENCE BOARD WITH TWO 6D GALVANIZED NAILS AT EACH RAIL.

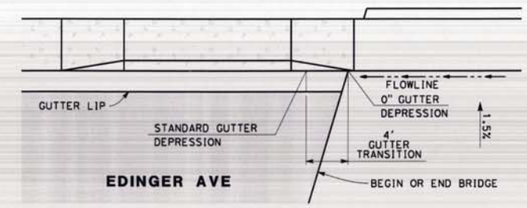
20 WOOD FENCE RECONSTRUCTION
NO SCALE



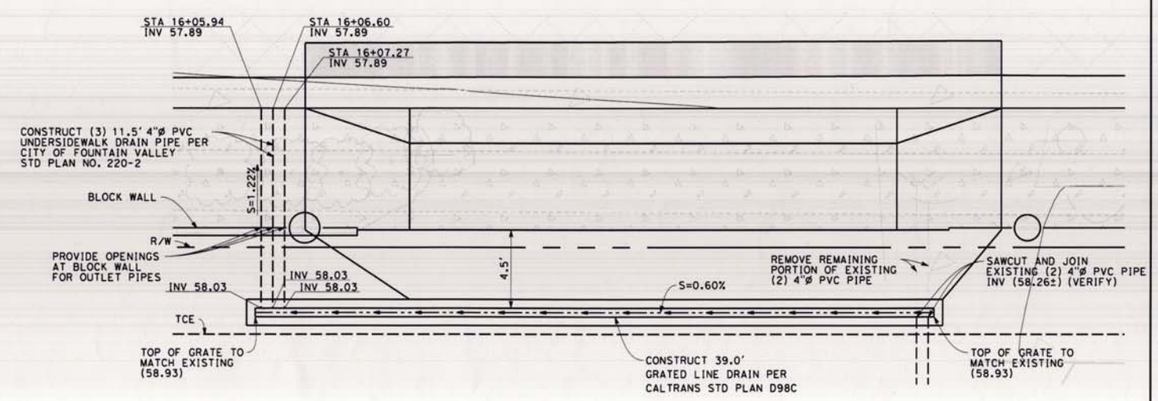
DETAIL "A"
END POST FOOTING DETAIL
SECTION A-A
NO SCALE



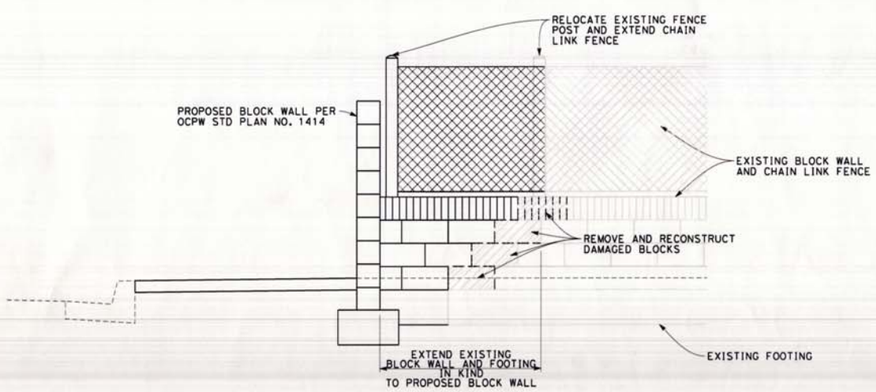
FENCE SECTION
SECTION B-B
NO SCALE



GUTTER TRANSITION
AT BRIDGE APPROACH SLAB
(NORTH AND SOUTH SIDES)
29
NO SCALE



13 RECONSTRUCT PARKWAY CULVERT
NO SCALE



33 EXISTING BLOCK WALL RECONSTRUCTION
NO SCALE

AS BUILT
NO CORRECTIONS THIS SHEET
BY Vijay Arora
DATE COMPLETED 9/9/14
CONTRACT # 6R09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER EDWARD NG 46787 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA
EDWARD NG — DATE 1/21/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME:
#FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

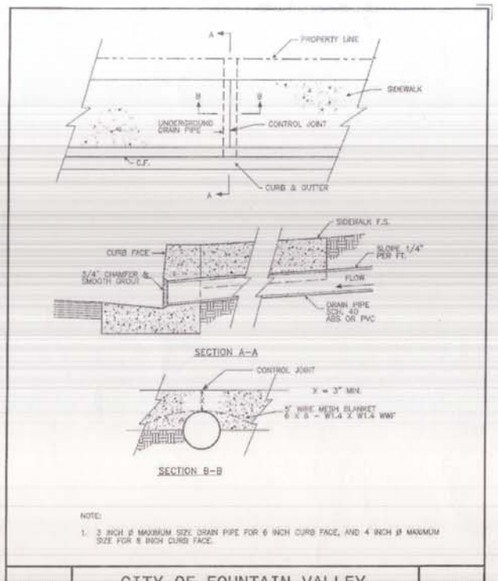
PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

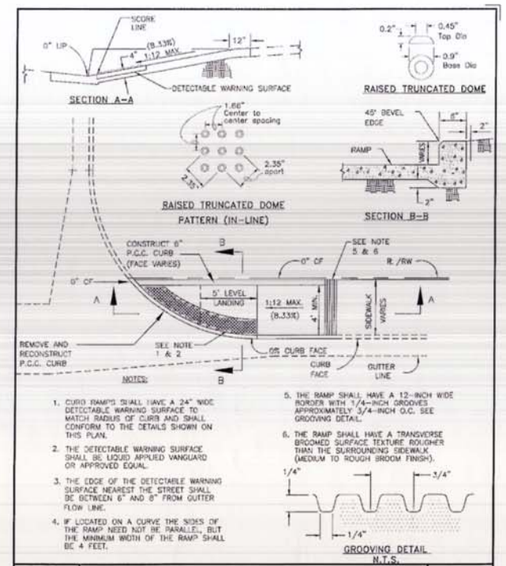
CONSTRUCTION DETAILS

Sheet Reference Number
C-2

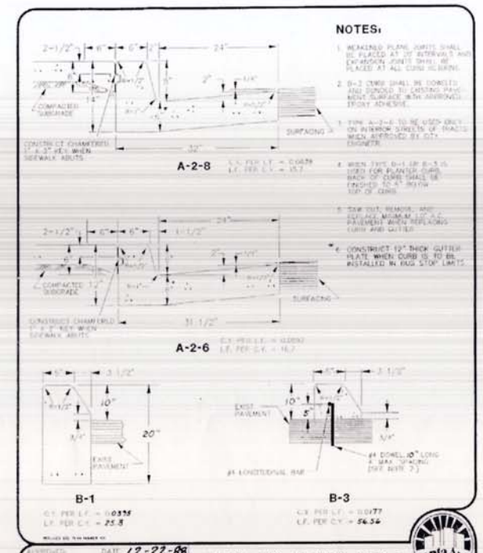
FILE NAME : \\usontlfs001\tron_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\16_C-2 Construction Details.dgn



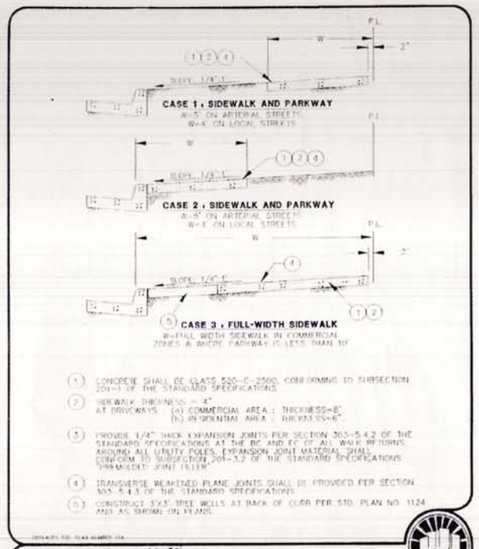
REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	UNDER SIDEWALK DRAIN- NEW CONSTRUCTION	220-2



REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
06/08/06	CURB RAMP CASE E	204-5
10/10/07		



	CITY OF SANTA ANA	
	PUBLIC WORKS AGENCY	
	CONCRETE CURB AND GUTTER	STD. PLAN NUMBER 1101



	CITY OF SANTA ANA	
	PUBLIC WORKS AGENCY	
	SIDEWALK DETAILS	STD. PLAN NUMBER 1104

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # EB09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG — DATE 1/21/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

CONSTRUCTION DETAILS

Sheet Reference Number
C-3

Sheet 17 of 76

FILE NAME : \\usontfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\17_C-3 Construction Details.dgn

STAGE CONSTRUCTION NOTES (STAGE 1)

50 REMOVE PORTION OF THE EXISTING SIDEWALK AND CONSTRUCT TEMPORARY ACCESS RAMP.

51 INSTALL TEMPORARY RAILING (TYPE-K) PER CALTRANS STD PLAN T3A. PROVIDE 5' PEDESTRIAN ACCESS IN CONSTRUCTION AREA.

52 INSTALL TEMPORARY CRASH CUSHION ARRAY 'TU14' PER CALTRANS STD PLAN T1A.

53 INSTALL TEMPORARY STRIPING.

54 CONSTRUCT BRIDGE - NORTH SIDE.

55 CONSTRUCT PORTION OF NORTH SIDE RETAINING WALLS.

56 CONSTRUCT CURB AND GUTTER, SIDEWALK AND CHANNEL ACCESS DRIVEWAY.

57 CONSTRUCT AC PAVEMENT.

61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).

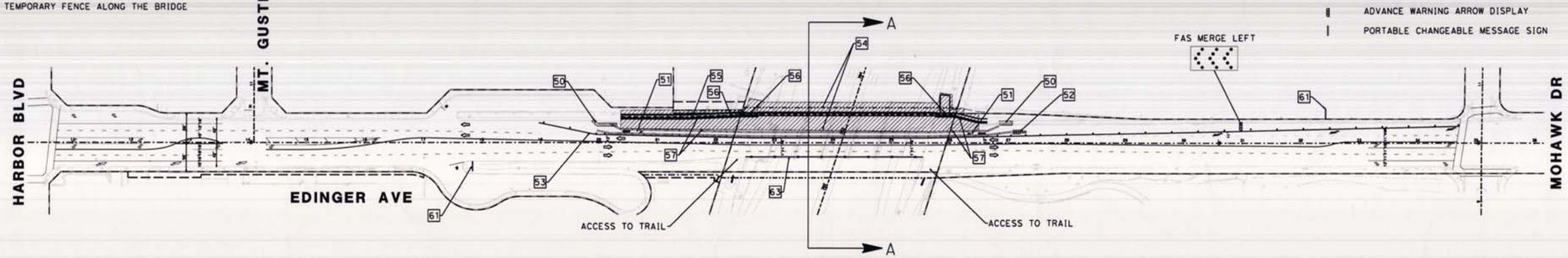
63 INSTALL TEMPORARY FENCE ALONG THE BRIDGE

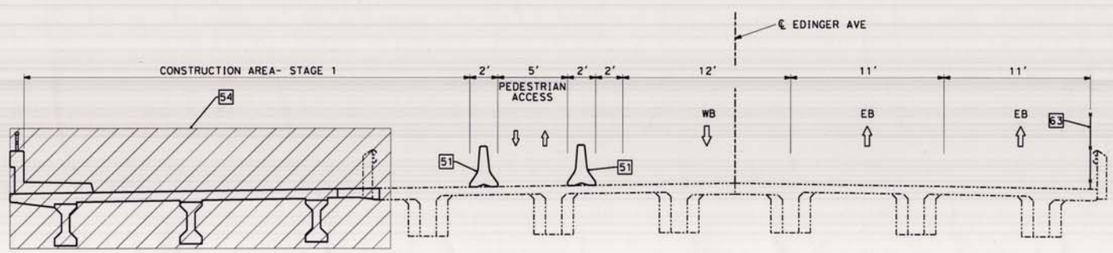
TRAFFIC HANDLING NOTES: STAGE 1 (SEE SHEETS TH-1 & TH-2)

1. EDINGER AVENUE WB TRAFFIC REDUCED TO 1 LANE ON EXISTING ROADWAY ALONG THE CONSTRUCTION WORK AREA.
2. EDINGER AVENUE EB TRAFFIC, MAINTAIN 2 EXISTING LANES DURING THIS STAGE.
3. MAINTAIN CHANNEL ACCESS ALONG SOUTH SIDE OF EDINGER AVENUE.
4. PROVIDE PEDESTRIAN ACCESS IN NORTH SIDE CONSTRUCTION AREA.
5. PROVIDE TEMPORARY LIGHTING THIS STAGE.

LEGEND:

- CONSTRUCTION WORK AREA
- CONSTRUCTED AREA FROM PREVIOUS STAGE
- TEMPORARY CONCRETE SIDEWALK/ACCESS RAMP
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- TEMPORARY CRASH CUSHION
- SIGN PANEL
- TEMPORARY RAILING (TYPE-K)
- TEMPORARY FENCING
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- PORTABLE CHANGEABLE MESSAGE SIGN





CROSS SECTION "A-A" - STAGE 1 CONSTRUCTION

NO SCALE

Stage 1 WB & Stage-3 EB construction combined to expedite bridge construction. Change was approved by County design and traffic with concurrence of City of FV/SA.

AS BUILT

NO CORRECTIONS THIS SHEET

BY

DATE COMPLETED 9/9/14

CONTRACT # FRN 93 42

0 50 100 200

SCALE: 1" = 100'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:

REGISTERED PROFESSIONAL ENGINEER EDWARD NG No. 46797 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA

1/21/13 DATE

EDWARD NG

DESIGNED BY: M. KHOOR

DRAWN BY: M. KHOOR

CHECKED BY: E. NG

DRAWING CODE:

FILE NAME: MFILE

PLOT DATE: 1/21/2013

SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

STAGE CONSTRUCTION

Sheet Reference Number

SC-1

FILE NAME : \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\18_SC-1.dgn

STAGE CONSTRUCTION NOTES (STAGE 2)

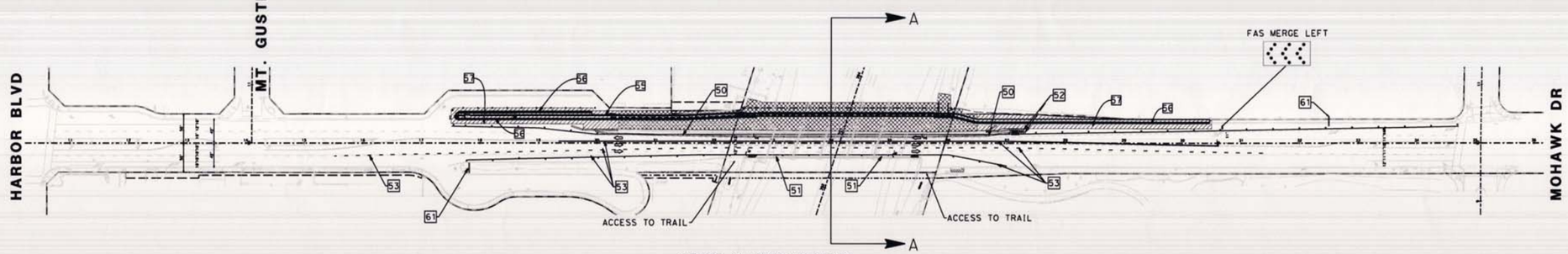
- 50 REMOVE PORTION OF THE TEMPORARY RAILING (TYPE-K).
- 51 INSTALL SURFACE MOUNTED CHANNELIZERS AND PROVIDE 6' PEDESTRIAN ACCESS IN CONSTRUCTION AREA.
- 52 RELOCATE EXISTING TEMPORARY CRASH CUSHION ARRAY 'TU14'.
- 53 INSTALL TEMPORARY STRIPING.
- 55 CONSTRUCT REMAINING RETAINING WALLS.
- 56 CONSTRUCT REMAINING CURB, GUTTER AND SIDEWALK.
- 57 CONSTRUCT REMAINING PAVEMENT SECTION.
- 61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).

TRAFFIC HANDLING NOTES: STAGE 2 (SEE SHEET TH-3 & TH-4)

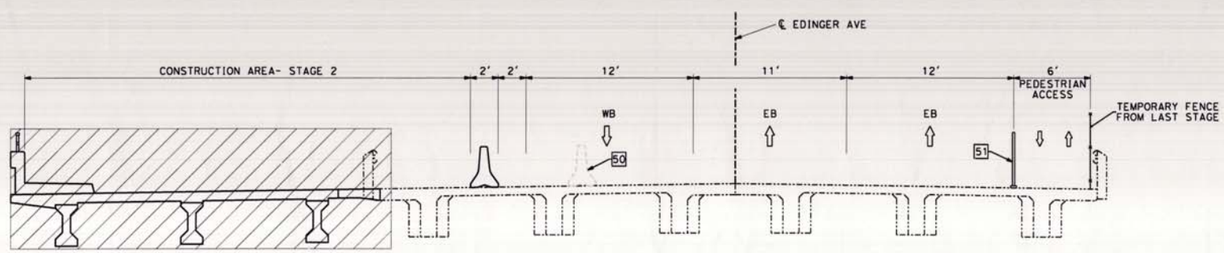
1. EDINGER AVENUE MAINTAIN 2 LANES FOR EB TRAFFIC AND 1 LANE FOR WB TRAFFIC AS PER STAGE 1 CONSTRUCTION.
2. MAINTAIN CHANNEL ACCESS ALONG SOUTH SIDE OF EDINGER AVENUE.
3. PROVIDE PEDESTRIAN ACCESS ALONG SOUTH SIDE OF EXISTING BRIDGE.
4. CLOSE NORTH SIDE SIDEWALK AND ROUTE PEDESTRIAN TRAFFIC TO USE SOUTH SIDE SIDEWALK AND NEW PEDESTRIAN ACCESS ALONG THE BRIDGE.
5. PROVIDE TEMPORARY LIGHTING THIS STAGE.

LEGEND:

- CONSTRUCTION WORK AREA
- CONSTRUCTED AREA FROM PREVIOUS STAGE
- TEMPORARY CONCRETE SIDEWALK/ACCESS RAMP
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- TEMPORARY CRASH CUSHION
- SIGN PANEL
- TEMPORARY RAILING (TYPE-K)
- TEMPORARY FENCING
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- PORTABLE CHANGEABLE MESSAGE SIGN



STAGE 2 CONSTRUCTION



CROSS SECTION "A-A" - STAGE 2 CONSTRUCTION

NO SCALE

See Note on SC-1

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 6243934-2

0 50 100 200
SCALE: 1" = 100'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG
DATE 1/21/13

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME:
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
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EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
STAGE CONSTRUCTION

Sheet Reference Number
SC-2

Sheet 19 of 76

FILE NAME : \\usontfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\19_SC-2.dgn

STAGE CONSTRUCTION NOTES (STAGE 3)

51 INSTALL TEMPORARY RAILING (TYPE-K) PER CALTRANS STD PLAN T3A.

52 INSTALL TEMPORARY CRASH CUSHION ARRAY 'TU14' PER CALTRANS STD PLAN T1A.

53 INSTALL TEMPORARY STRIPING.

54 CONSTRUCT BRIDGE - SOUTH SIDE.

55 CONSTRUCT PORTION OF SOUTH SIDE RETAINING WALLS.

56 CONSTRUCT CURB AND GUTTER, SIDEWALK AND CHANNEL ACCESS DRIVEWAY.

57 CONSTRUCT AC PAVEMENT.

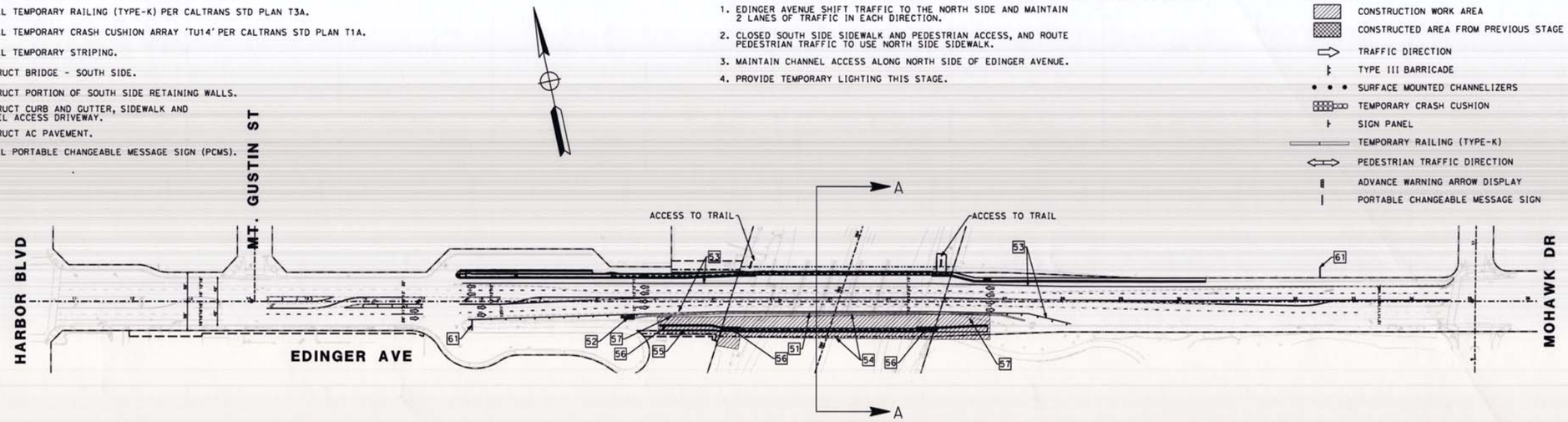
61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).

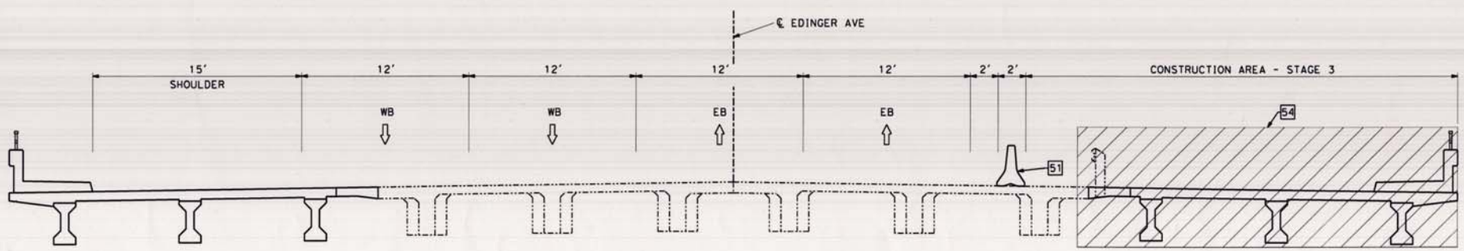
TRAFFIC HANDLING NOTES: STAGE 3 (SEE SHEET TH-5 & TH-6)

1. EDINGER AVENUE SHIFT TRAFFIC TO THE NORTH SIDE AND MAINTAIN 2 LANES OF TRAFFIC IN EACH DIRECTION.
2. CLOSED SOUTH SIDE SIDEWALK AND PEDESTRIAN ACCESS, AND ROUTE PEDESTRIAN TRAFFIC TO USE NORTH SIDE SIDEWALK.
3. MAINTAIN CHANNEL ACCESS ALONG NORTH SIDE OF EDINGER AVENUE.
4. PROVIDE TEMPORARY LIGHTING THIS STAGE.

LEGEND:

- CONSTRUCTION WORK AREA
- CONSTRUCTED AREA FROM PREVIOUS STAGE
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- TEMPORARY CRASH CUSHION
- SIGN PANEL
- TEMPORARY RAILING (TYPE-K)
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- PORTABLE CHANGEABLE MESSAGE SIGN





CROSS SECTION "A-A" - STAGE 3 CONSTRUCTION

NO SCALE

See Note on SC-1

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 6160 93 42

0 50 100 200

SCALE: 1" = 100'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:

EDWARD NG 46767 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA PROFESSIONAL ENGINEER

EDWARD NG — DATE 12/21/12

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: MFILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

STAGE CONSTRUCTION

Sheet Reference Number

SC-3

Sheet 20 of 76

FILE NAME : \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\20_SC-3.dgn

STAGE CONSTRUCTION NOTES (STAGE 4A)

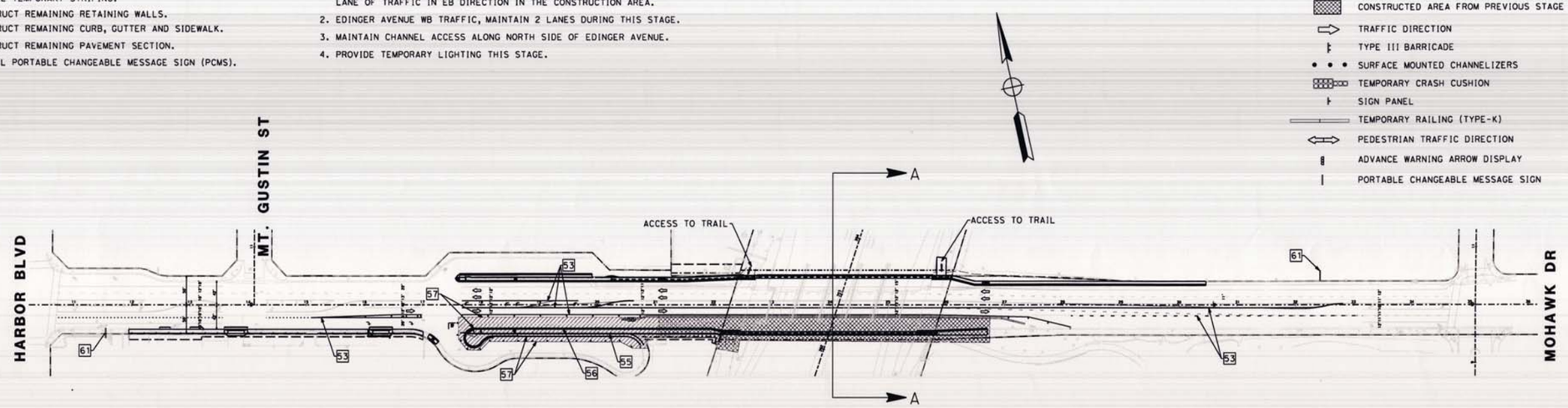
- 53 INSTALL TEMPORARY STRIPING.
- 55 CONSTRUCT REMAINING RETAINING WALLS.
- 56 CONSTRUCT REMAINING CURB, GUTTER AND SIDEWALK.
- 57 CONSTRUCT REMAINING PAVEMENT SECTION.
- 61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).

TRAFFIC HANDLING NOTES: STAGE 4A (SEE SHEET TH-7 & TH-8)

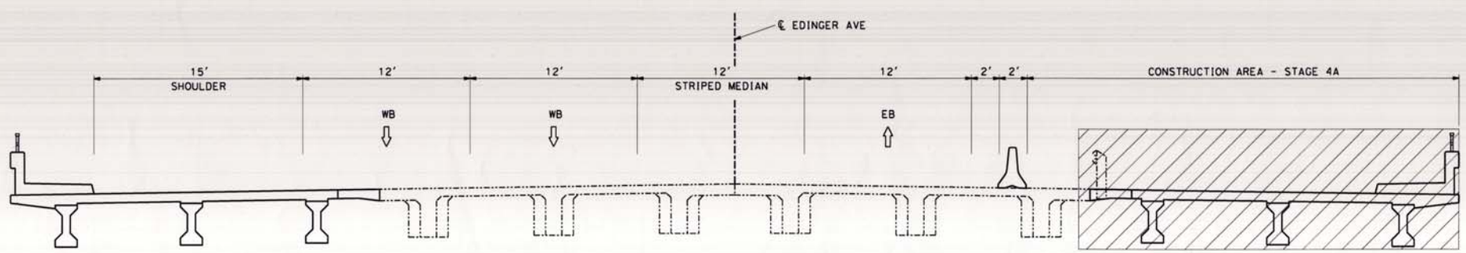
1. EDINGER AVENUE SHIFT TRAFFIC TO THE NORTH SIDE AND MAINTAIN 1 LANE OF TRAFFIC IN EB DIRECTION IN THE CONSTRUCTION AREA.
2. EDINGER AVENUE WB TRAFFIC, MAINTAIN 2 LANES DURING THIS STAGE.
3. MAINTAIN CHANNEL ACCESS ALONG NORTH SIDE OF EDINGER AVENUE.
4. PROVIDE TEMPORARY LIGHTING THIS STAGE.

LEGEND:

- CONSTRUCTION WORK AREA
- CONSTRUCTED AREA FROM PREVIOUS STAGE
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- TEMPORARY CRASH CUSHION
- SIGN PANEL
- TEMPORARY RAILING (TYPE-K)
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- PORTABLE CHANGEABLE MESSAGE SIGN



STAGE 4A CONSTRUCTION



CROSS SECTION "A-A" - STAGE 4A CONSTRUCTION

NO SCALE

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # E10093 42

0 50 100 200
SCALE: 1" = 100'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG
DATE 1/21/13

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME:
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
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999 W. Town & Country Road
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(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
STAGE CONSTRUCTION

Sheet Reference Number
SC-4

FILE NAME = \\usontfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\21_SC-4.dgn

STAGE CONSTRUCTION NOTES (STAGE 4B)

53 INSTALL TEMPORARY STRIPING.

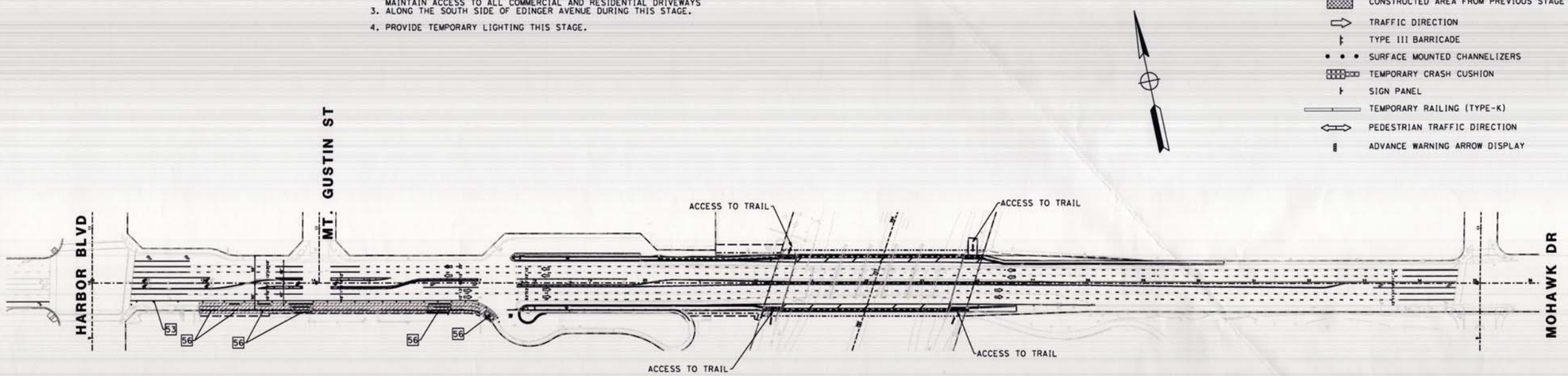
56 CONSTRUCT CURB, GUTTER, DRIVEWAYS ACCESS RAMP AND SIDEWALK.

TRAFFIC HANDLING NOTES: STAGE 4B (SEE SHEET TH-9).

1. EDINGER AVENUE MAINTAIN 2 LANES OF TRAFFIC IN EB DIRECTION IN THE CONSTRUCTION AREA.
2. EDINGER AVENUE WB TRAFFIC, MAINTAIN 2 LANES DURING THIS STAGE.
3. MAINTAIN ACCESS TO ALL COMMERCIAL AND RESIDENTIAL DRIVEWAYS ALONG THE SOUTH SIDE OF EDINGER AVENUE DURING THIS STAGE.
4. PROVIDE TEMPORARY LIGHTING THIS STAGE.

LEGEND:

- CONSTRUCTION WORK AREA
- CONSTRUCTED AREA FROM PREVIOUS STAGE
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- TEMPORARY CRASH CUSHION
- SIGN PANEL
- TEMPORARY RAILING (TYPE-K)
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY



STAGE 4B CONSTRUCTION

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 6R09342

0 50 100 200
SCALE: 1" = 100'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG
DATE 1/24/13

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: MFILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
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EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
STAGE CONSTRUCTION

Sheet Reference Number
SC-5

FILE NAME : \\usontfs001\tron_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\22_SC-5.dgn

TRAFFIC HANDLING NOTES: STAGE 1.

1. EDINGER AVENUE WB TRAFFIC REDUCED TO 1 LANE ON EXISTING ROADWAY ALONG THE CONSTRUCTION WORK AREA.
2. EDINGER AVENUE EB TRAFFIC, MAINTAIN 2 EXISTING LANES DURING THIS STAGE.
3. MAINTAIN CHANNEL ACCESS ALONG SOUTH SIDE OF EDINGER AVENUE.
4. PROVIDE TEMPORARY LIGHTING THIS STAGE.

TEMPORARY STRIPING

STRIPING DETAIL	QUANTITY
DETAIL 27B	900

CONSTRUCTION AREA SIGN

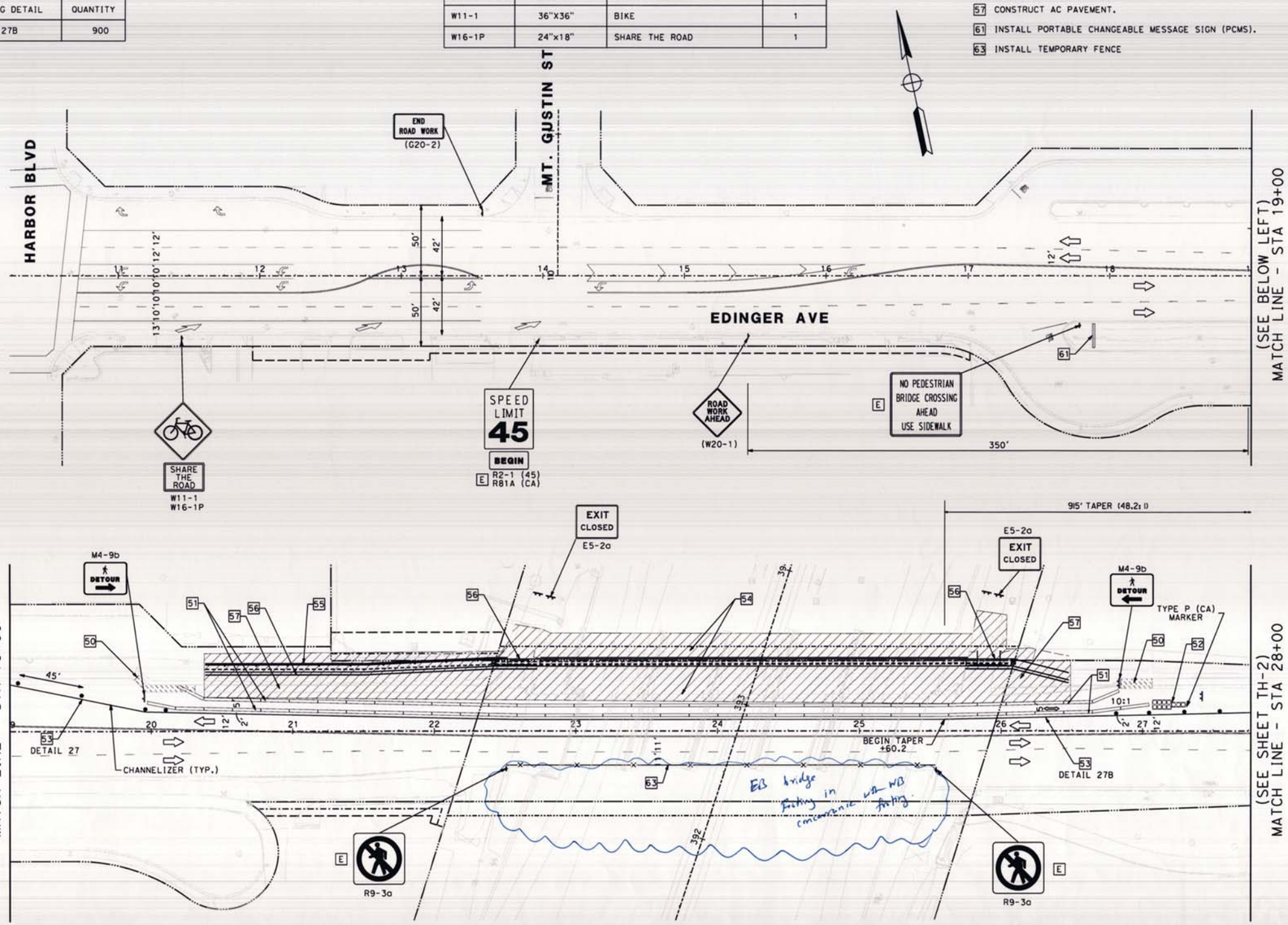
SIGN CODE	PANEL SIZE	SIGN MESSAGE OR PLAQUE	QUANTITY
W20-1	36"X36"	ROAD WORK AHEAD	1
M4-9b (R↑)	30"X24"	PEDESTRIAN DETOUR	1
M4-9b (L↑)	30"X24"	PEDESTRIAN DETOUR	1
G20-2	36"X18"	END ROAD WORK	1
E5-2a	48"X36"	EXIT CLOSED	2
TYPE P (CA)	36"X18"	OBJECT MARKER	1
W11-1	36"X36"	BIKE	1
W16-1P	24"x18"	SHARE THE ROAD	1

STAGE CONSTRUCTION NOTES

50 REMOVE PORTION OF THE EXISTING SIDEWALK AND CONSTRUCT TEMPORARY ACCESS RAMP.
51 INSTALL TEMPORARY RAILING (TYPE-K) PER CALTRANS STD PLAN T3A. PROVIDE 5' PEDESTRIAN ACCESS IN CONSTRUCTION AREA.
52 INSTALL TEMPORARY CRASH CUSHION ARRAY 'TU11'.
53 INSTALL TEMPORARY STRIPING WITH RPM.
54 CONSTRUCT BRIDGE - NORTH SIDE.
55 CONSTRUCT PORTION OF RETAINING WALLS.
56 CONSTRUCT CURB AND GUTTER, SIDEWALK AND CHANNEL ACCESS DRIVEWAY.
57 CONSTRUCT AC PAVEMENT.
61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).
63 INSTALL TEMPORARY FENCE

LEGEND:

- CONSTRUCTION WORK AREA
- TEMPORARY CONCRETE SIDEWALK/ACCESS RAMP
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- TEMPORARY CRASH CUSHION
- SIGN PANEL
- TEMPORARY RAILING (TYPE-K)
- TEMPORARY FENCING
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- E EXISTING SIGN OR FROM LAST STAGE
- PORTABLE CHANGEABLE MESSAGE SIGN



Note:-
Traffic control plan was followed per sheet, except EB bridge construction was included in Stage-1.
Traffic control equipment / strip approved by County design. concurrence with City at F/Sta.

AS BUILT
~~NO~~ CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # E4693342

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG
DATE 1/21/13

REGISTERED PROFESSIONAL ENGINEER EDWARD NG No. 46767 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

TRAFFIC HANDLING
STA 10+75 TO STA 28+00

Sheet Reference Number
TH-1

FILE NAME : \\usont1fs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\23_TH-1.dgn

TRAFFIC HANDLING NOTES: STAGE 1.

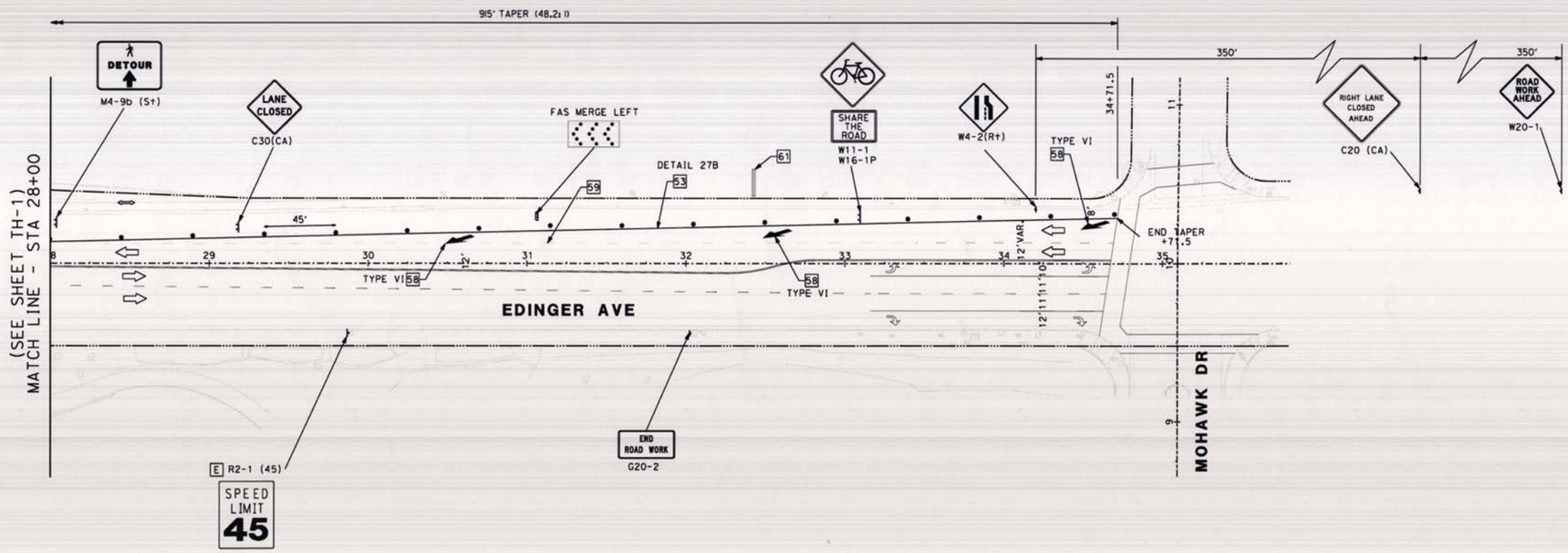
1. EDINGER AVENUE WB TRAFFIC REDUCED TO 1 LANE ON EXISTING ROADWAY ALONG THE CONSTRUCTION WORK AREA.
2. EDINGER AVENUE EB TRAFFIC, MAINTAIN 2 EXISTING LANES DURING THIS STAGE.
3. MAINTAIN CHANNEL ACCESS ALONG SOUTH SIDE OF EDINGER AVENUE.
4. PROVIDE TEMPORARY LIGHTING THIS STAGE.

STAGE CONSTRUCTION NOTES

- 53 INSTALL TEMPORARY STRIPING WITH RPM.
- 58 INSTALL TEMPORARY PAVEMENT MARKINGS.
- 59 REMOVE EXISTING CONFLICTING STRIPING.
- 61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).

LEGEND:

- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- SIGN PANEL
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- E EXISTING SIGN OR FROM LAST STAGE
- PORTABLE CHANGEABLE MESSAGE SIGN



CONSTRUCTION AREA SIGN

SIGN CODE	PANEL SIZE	SIGN MESSAGE OR PLAQUE	QUANTITY
W20-1	36"X36"	ROAD WORK AHEAD	1
W4-2 (R+)	36"X36"	LANE ENDS	1
C20 (CA)	36"X36"	RIGHT LANE CLOSED AHEAD	1
G20-2	36"X18"	END ROAD WORK	1
C30 (CA)	36"X36"	LANE CLOSED	1
M4-9b (S+)	36"X24"	PEDESTRIAN DETOUR	1
W11-1	36"X36"	BIKE	1
W16-1P	24"x18"	SHARE THE ROAD	1

TEMPORARY STRIPING

STRIPING DETAIL	QUANTITY
DETAIL 27B	670
TYPE VI ARROW	3

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER9342

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER EDWARD NG 46167 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA
EDWARD NG 1/21/13 DATE

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

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AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

TRAFFIC HANDLING

STA 28+00 TO STA 34+75

Sheet Reference Number

TH-2

Sheet 24 of 76

FILE NAME : \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\24_TH-2.dgn

TRAFFIC HANDLING NOTES: STAGE 2.

1. EDINGER AVENUE MAINTAIN 2 LANES FOR EB TRAFFIC AND 1 LANE FOR WB TRAFFIC AS PER STAGE 1 CONSTRUCTION.
2. MAINTAIN CHANNEL ACCESS ALONG SOUTH SIDE OF EDINGER AVENUE.
3. PROVIDE PEDESTRIAN ACCESS ALONG SOUTH SIDE OF EXISTING BRIDGE.
4. CLOSE NORTH SIDE SIDEWALK AND ROUTE PEDESTRIAN TRAFFIC TO USE SOUTH SIDE SIDEWALK AND NEW PEDESTRIAN ACCESS ALONG THE BRIDGE.
5. PROVIDE TEMPORARY LIGHTING THIS STAGE.

CONSTRUCTION AREA SIGN

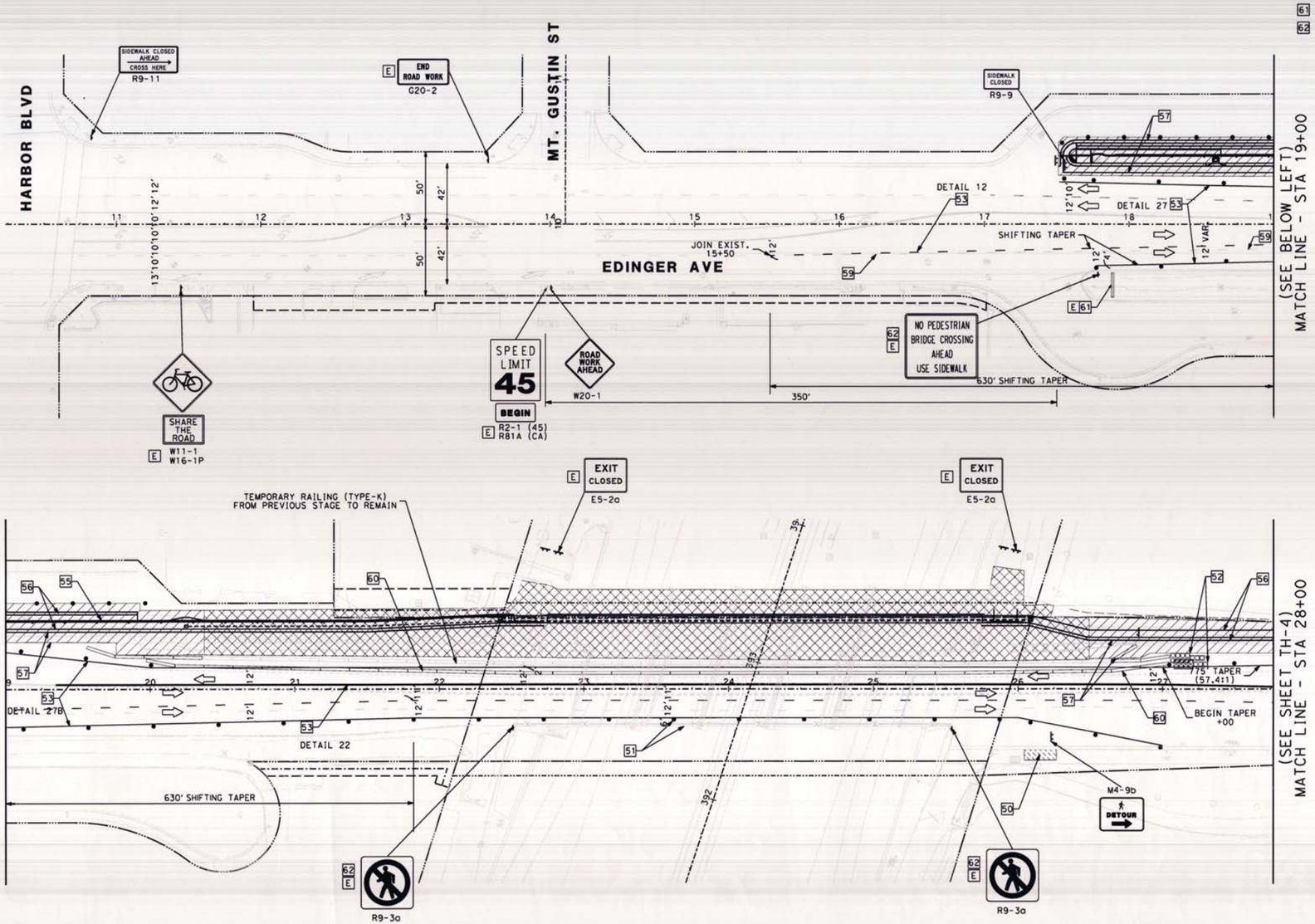
SIGN CODE	PANEL SIZE	SIGN MESSAGE OR PLAQUE	QUANTITY
W20-1	36"X36"	ROAD WORK AHEAD	1
R9-9	24"X12"	SIDEWALK CLOSED	1
R9-11	24"X12"	SIDEWALK CLOSED AHEAD, CROSS HERE	1
M4-9b (R+)	24"X12"	PEDESTRIAN DETOUR	1
W11-1	36"X36"	BIKE	1
W16-1P	24"x18"	SHARE THE ROAD	1

TEMPORARY STRIPING

STRIPING DETAIL	QUANTITY
DETAIL 12	1250
DETAIL 27	2175
DETAIL 22	865
TYPE VI ARROW	3

STAGE CONSTRUCTION NOTES

50 REMOVE PORTION OF THE EXISTING SIDEWALK AND CONSTRUCT TEMPORARY ACCESS RAMP.
51 INSTALL SURFACE MOUNTED CHANNELIZERS AND PROVIDE 6' PEDESTRIAN ACCESS IN CONSTRUCTION AREA.
52 INSTALL TEMPORARY CRASH CUSHION ARRAY 'TU14' PER CALTRANS STD PLAN T1A.
53 INSTALL TEMPORARY STRIPING WITH RPM.
55 CONSTRUCT REMAINING RETAINING WALLS.
56 CONSTRUCT REMAINING CURB, GUTTER AND SIDEWALK.
57 CONSTRUCT REMAINING PAVEMENT SECTION.
59 REMOVE EXISTING CONFLICTING STRIPING.
60 REMOVE PORTION OF THE TEMPORARY RAILING (TYPE-K).
61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).
62 REMOVE EXISTING SIGN



LEGEND:

- CONSTRUCTION WORK AREA
- CONSTRUCTED AREA FROM PREVIOUS STAGE
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- TEMPORARY CRASH CUSHION
- SIGN PANEL
- TEMPORARY RAILING (TYPE-K)
- TEMPORARY FENCING
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- E EXISTING SIGN OR FROM LAST STAGE.
- PORTABLE CHANGEABLE MESSAGE SIGN

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 1749342

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: EDWARD NG DATE 1/21/13

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE OC PUBLIC WORKS

PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT BR. NO. 55C-0154
TRAFFIC HANDLING
STA 10+75 TO STA 28+00

Sheet Reference Number
TH-3

FILE NAME : \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\25_TH-3.dgn

TRAFFIC HANDLING NOTES: STAGE 2.

1. EDINGER AVENUE MAINTAIN 2 LANES FOR EB TRAFFIC AND 1 LANE FOR WB TRAFFIC AS PER STAGE 1 CONSTRUCTION.
2. MAINTAIN CHANNEL ACCESS ALONG SOUTH SIDE OF EDINGER AVENUE.
3. PROVIDE PEDESTRIAN ACCESS ALONG SOUTH SIDE OF EXISTING BRIDGE.
4. CLOSE NORTH SIDE SIDEWALK AND ROUTE PEDESTRIAN TRAFFIC TO USE SOUTH SIDE SIDEWALK AND NEW PEDESTRIAN ACCESS ALONG THE BRIDGE.
5. PROVIDE TEMPORARY LIGHTING THIS STAGE.

TEMPORARY STRIPING

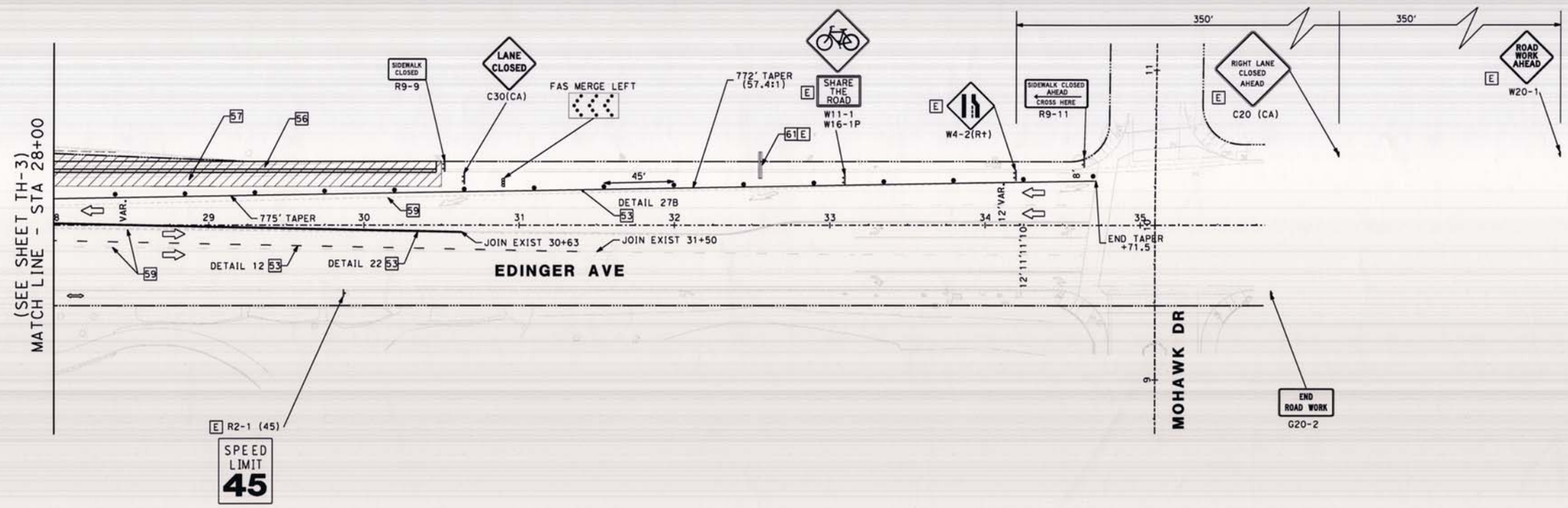
STRIPING DETAIL	QUANTITY
DETAIL 12	375
DETAIL 27B	670
DETAIL 22	263

STAGE CONSTRUCTION NOTES

53 INSTALL TEMPORARY STRIPING WITH RPM.
56 CONSTRUCT CURB AND GUTTER, SIDEWALK AND CHANNEL ACCESS DRIVEWAY.
57 CONSTRUCT AC PAVEMENT.
59 REMOVE EXISTING CONFLICTING STRIPING.
61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).

LEGEND:

- CONSTRUCTION WORK AREA
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- SIGN PANEL
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- E EXISTING SIGN OR FROM LAST STAGE.



CONSTRUCTION AREA SIGN

SIGN CODE	PANEL SIZE	SIGN MESSAGE OR PLAQUE	QUANTITY
W20-1	36"X36"	ROAD WORK AHEAD	1
W4-2 (R†)	36"X36"	LANE ENDS	1
C20 (CA)	36"X36"	RIGHT LANE CLOSED AHEAD	1
G20-2	36"X18"	END ROAD WORK	1
C30 (CA)	36"X36"	LANE CLOSED	1
R9-11	24"X18"	SIDEWALK CLOSED AHEAD, CROSS HERE	1
R9-9	24"X12"	SIDEWALK CLOSED	1
W11-1	36"X36"	BIKE	1
W16-1P	24"x18"	SHARE THE ROAD	1

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 0R19342

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER EDWARD NG No. 68767 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA
EDWARD NG DATE 1/21/13

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
TRAFFIC HANDLING
STA 28+00 TO STA 34+75

Sheet Reference Number
TH-4

Sheet 26 of 76

FILE NAME : \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\000_Civil\Sheets\26_TH-4.dgn

TRAFFIC HANDLING NOTES: STAGE 3.

1. EDINGER AVENUE SHIFT TRAFFIC TO THE NORTH SIDE AND MAINTAIN 2 LANES OF TRAFFIC IN EACH DIRECTION.
2. CLOSED SOUTH SIDE SIDEWALK AND PEDESTRIAN ACCESS, AND ROUTE PEDESTRIAN TRAFFIC TO USE NORTH SIDE SIDEWALK.
3. MAINTAIN CHANNEL ACCESS ALONG NORTH SIDE OF EDINGER AVENUE.
4. PROVIDE TEMPORARY LIGHTING THIS STAGE.

CONSTRUCTION AREA SIGN

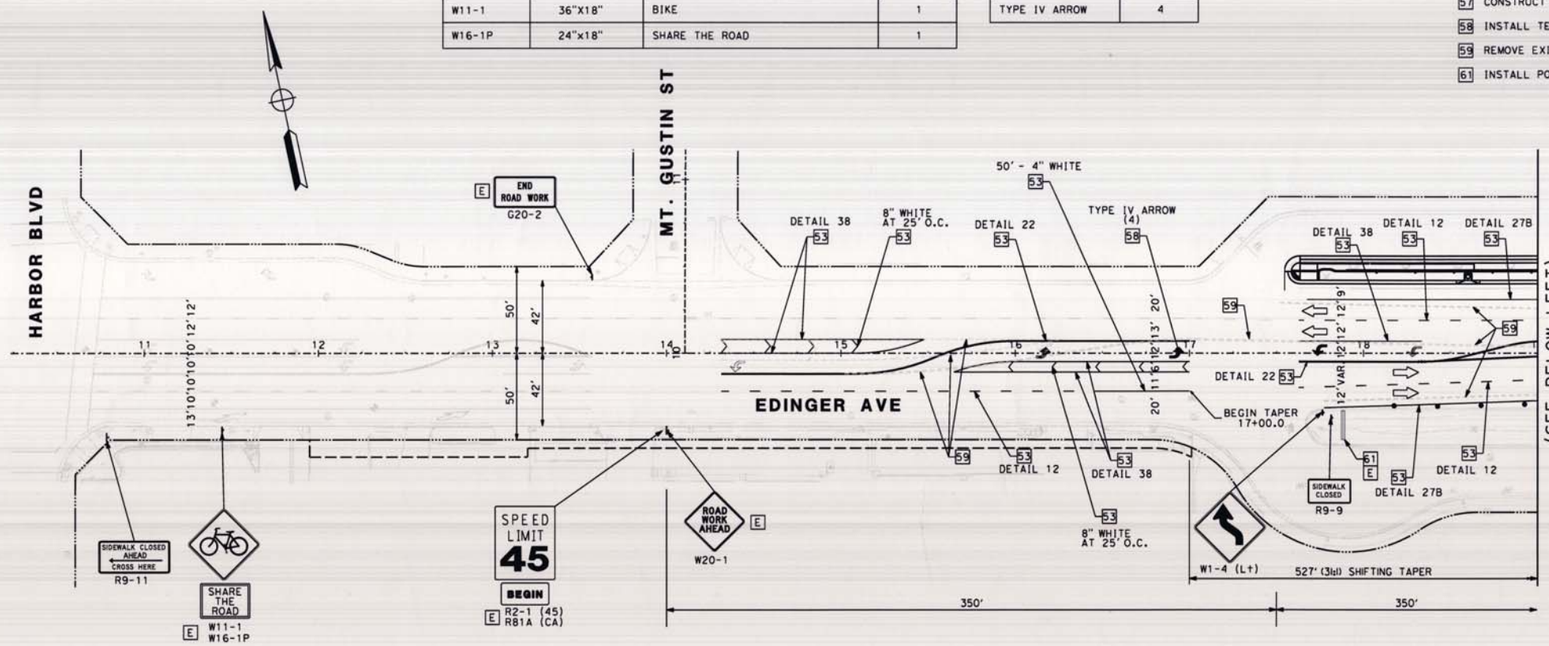
SIGN CODE	PANEL SIZE	SIGN MESSAGE OR PLAQUE	QUANTITY
W1-4	36"X36"	CURVE SIGN	1
R9-9	24"X12"	SIDEWALK CLOSED	1
R9-11	24"X18"	SIDEWALK CLOSED AHEAD, CROSS HERE	1
E5-2a	48"X36"	EXIT CLOSED	2
TYPE P (CA)	36"X18"	OBJECT MARKER	1
W11-1	36"X18"	BIKE	1
W16-1P	24"x18"	SHARE THE ROAD	1

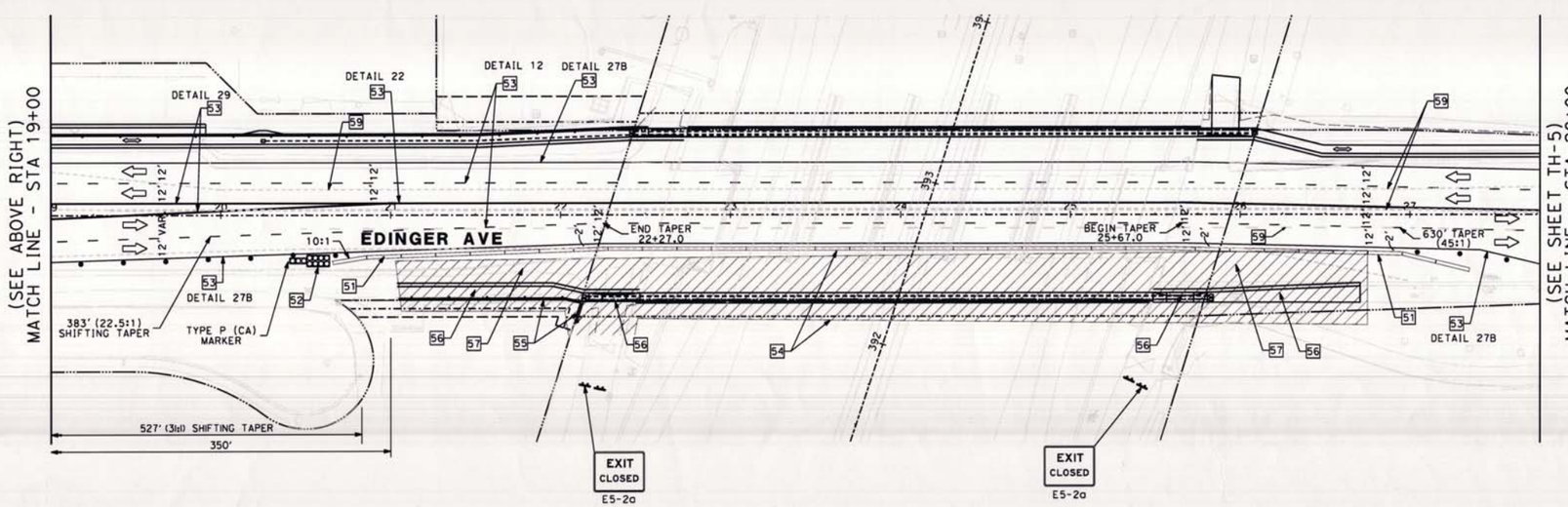
TEMPORARY STRIPING

STRIPING DETAIL	QUANTITY
DETAIL 12	2343
DETAIL 27B	2072
DETAIL 22	1042
DETAIL 29	341
DETAIL 38	341
TYPE IV ARROW	4

STAGE CONSTRUCTION NOTES

51 INSTALL TEMPORARY RAILING (TYPE-K) PER CALTRANS STD PLAN T3A.
52 INSTALL TEMPORARY CRASH CUSHION ARRAY 'TU14' PER CALTRANS STD PLAN T1A.
53 INSTALL TEMPORARY STRIPING WITH RPM.
54 CONSTRUCT BRIDGE - SOUTH SIDE.
55 CONSTRUCT PORTION OF RETAINING WALLS.
56 CONSTRUCT CURB AND GUTTER, SIDEWALK AND CHANNEL ACCESS DRIVEWAY.
57 CONSTRUCT AC PAVEMENT.
58 INSTALL TEMPORARY PAVEMENT MARKINGS.
59 REMOVE EXISTING CONFLICTING STRIPING.
61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).





LEGEND:

- CONSTRUCTION WORK AREA
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- TEMPORARY CRASH CUSHION
- SIGN PANEL
- TEMPORARY RAILING (TYPE-K)
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- [E] EXISTING SIGN OR FROM LAST STAGE.
- PORTABLE CHANGEABLE MESSAGE SIGN

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 5209342

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: EDWARD NG DATE 1/21/13

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: WFILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT
BR. NO. 55C-0154
TRAFFIC HANDLING
STA 10+75 TO STA 28+00

Sheet Reference Number
TH-5

FILE NAME : \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\27_TH-5.dgn

TRAFFIC HANDLING NOTES: STAGE 3.

1. EDINGER AVENUE SHIFT TRAFFIC TO THE NORTH SIDE AND MAINTAIN 2 LANES OF TRAFFIC IN EACH DIRECTION.
2. CLOSED SOUTH SIDE SIDEWALK AND PEDESTRIAN ACCESS, AND ROUTE PEDESTRIAN TRAFFIC TO USE NORTH SIDE SIDEWALK.
3. MAINTAIN CHANNEL ACCESS ALONG NORTH SIDE OF EDINGER AVENUE.
4. PROVIDE TEMPORARY LIGHTING THIS STAGE.

CONSTRUCTION AREA SIGN

SIGN CODE	PANEL SIZE	SIGN MESSAGE OR PLAQUE	QUANTITY
R9-9	24"X12"	SIDEWALK CLOSED	1
R9-11	24"X18"	SIDEWALK CLOSED AHEAD, CROSS HERE	1

STAGE CONSTRUCTION NOTES

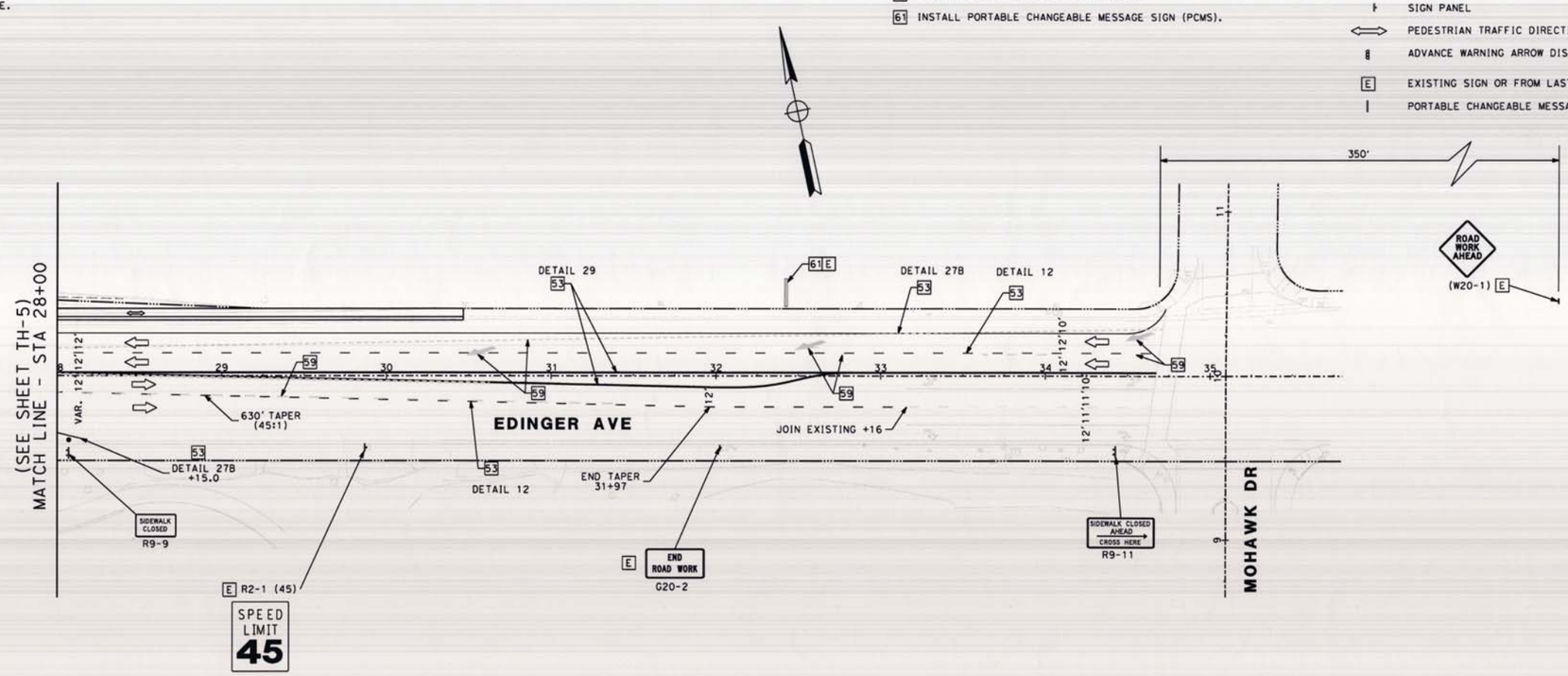
53 INSTALL TEMPORARY STRIPING WITH RPM.
58 INSTALL TEMPORARY PAVEMENT MARKINGS.
59 REMOVE EXISTING CONFLICTING STRIPING.
61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).

LEGEND:

- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- TEMPORARY CRASH CUSHION
- SIGN PANEL
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- E EXISTING SIGN OR FROM LAST STAGE.
- PORTABLE CHANGEABLE MESSAGE SIGN

TEMPORARY STRIPING

STRIPING DETAIL	QUANTITY
DETAIL 12	1184
DETAIL 27B	675
DETAIL 22	185
DETAIL 29	482



AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # E209342

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER EDWARD NG No. 44797 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA
EDWARD NG — DATE 1/21/13

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

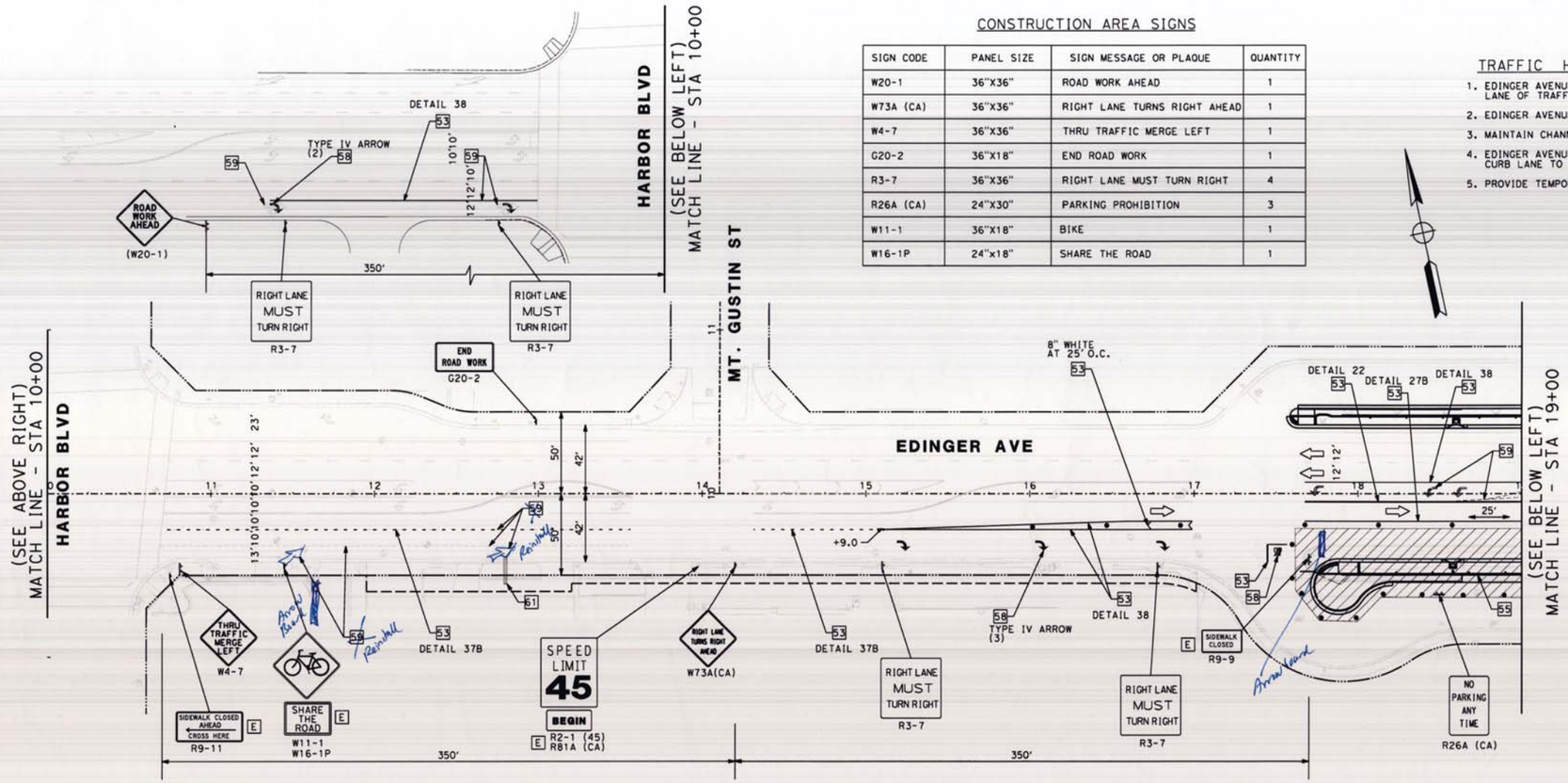
COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
TRAFFIC HANDLING
STA 28+00 TO STA 34+75

Sheet Reference Number
TH-6

FILE NAME : \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\28_TH-6.dgn



CONSTRUCTION AREA SIGNS

SIGN CODE	PANEL SIZE	SIGN MESSAGE OR PLAQUE	QUANTITY
W20-1	36"X36"	ROAD WORK AHEAD	1
W73A (CA)	36"X36"	RIGHT LANE TURNS RIGHT AHEAD	1
W4-7	36"X36"	THRU TRAFFIC MERGE LEFT	1
G20-2	36"X18"	END ROAD WORK	1
R3-7	36"X36"	RIGHT LANE MUST TURN RIGHT	4
R26A (CA)	24"X30"	PARKING PROHIBITION	3
W11-1	36"X18"	BIKE	1
W16-1P	24"x18"	SHARE THE ROAD	1

TRAFFIC HANDLING NOTES: STAGE 4A.

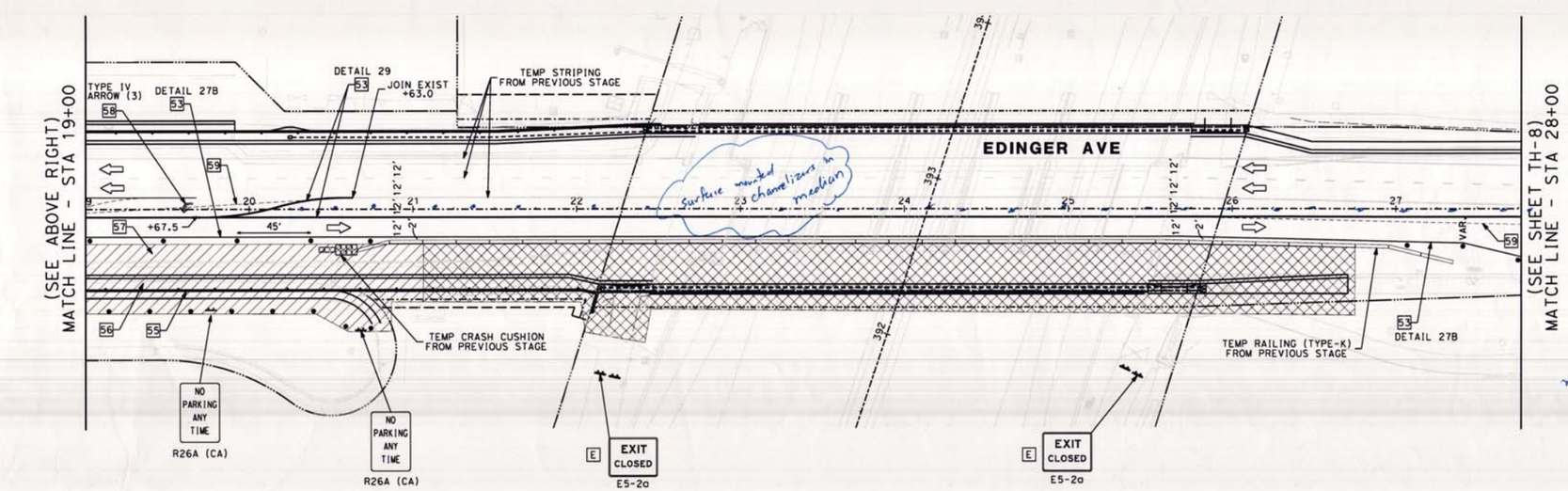
1. EDINGER AVENUE SHIFT TRAFFIC TO THE NORTH SIDE AND MAINTAIN 1 LANE OF TRAFFIC IN EB DIRECTION IN THE CONSTRUCTION AREA.
2. EDINGER AVENUE WB TRAFFIC, MAINTAIN 2 LANES DURING THIS STAGE.
3. MAINTAIN CHANNEL ACCESS ALONG NORTH SIDE OF EDINGER AVENUE.
4. EDINGER AVENUE WEST OF HARBOR BOULEVARD, TEMPORARY RESTRIPE EB CURB LANE TO RIGHT TURN ONLY WITH PAVEMENT MARKINGS THIS STAGE ONLY.
5. PROVIDE TEMPORARY LIGHTING THIS STAGE.

TEMPORARY STRIPING

STRIPING DETAIL	QUANTITY
DETAIL 22	90
DETAIL 38	633
DETAIL 27B	1128
DETAIL 29	1463
TYPE IV ARROW	8

LEGEND:

- CONSTRUCTION WORK AREA
- CONSTRUCTED AREA FROM PREVIOUS STAGE
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- TEMPORARY CRASH CUSHION
- SIGN PANEL
- TEMPORARY RAILING (TYPE-K)
- PEDESTRIAN TRAFFIC DIRECTION
- ADVANCE WARNING ARROW DISPLAY
- [E] EXISTING SIGN OR FROM LAST STAGE



STAGE CONSTRUCTION NOTES

- 53 INSTALL TEMPORARY STRIPING WITH RPM.
- 55 CONSTRUCT PORTION OF RETAINING WALLS.
- 56 CONSTRUCT CURB AND GUTTER, SIDEWALK AND CHANNEL ACCESS DRIVEWAY.
- 57 CONSTRUCT AC PAVEMENT.
- 58 INSTALL TEMPORARY PAVEMENT MARKINGS.
- 59 REMOVE EXISTING CONFLICTING STRIPING.
- 61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).

Temp. strip/sign revision/see RFO

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/01/14
CONTRACT # E6293 42

0 20 40 80
SCALE: 1" = 40'

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: EDWARD NG — DATE 1/21/13

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

TRAFFIC HANDLING

STA 10+75 TO STA 28+00

Sheet Reference Number
TH-7

FILE NAME : \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\29_TH-7.dgn

TRAFFIC HANDLING NOTES: STAGE 4A.

1. EDINGER AVENUE SHIFT TRAFFIC TO THE NORTH SIDE AND MAINTAIN 1 LANE OF TRAFFIC IN EB DIRECTION IN THE CONSTRUCTION AREA.
2. EDINGER AVENUE WB TRAFFIC, MAINTAIN 2 LANES DURING THIS STAGE.
3. MAINTAIN CHANNEL ACCESS ALONG NORTH SIDE OF EDINGER AVENUE.
4. PROVIDE TEMPORARY LIGHTING THIS STAGE.

STAGE CONSTRUCTION NOTES

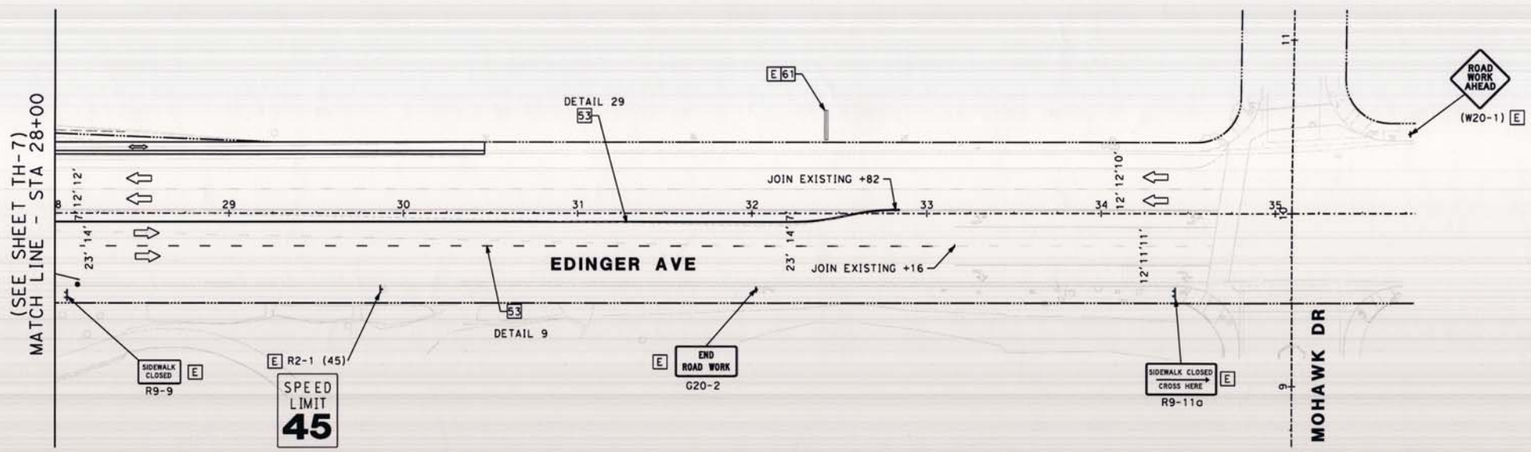
53 INSTALL TEMPORARY STRIPING WITH RPM.
61 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).

LEGEND:

- CONSTRUCTION WORK AREA
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- SIGN PANEL
- PEDESTRIAN TRAFFIC DIRECTION
- E EXISTING SIGN FROM LAST STAGE.
- PORTABLE CHANGEABLE MESSAGE SIGN

TEMPORARY STRIPING

STRIPING DETAIL	QUANTITY
DETAIL 12	516
DETAIL 29	482



AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09342

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER EDWARD NG No. 46763 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA
1/21/13 DATE
EDWARD NG

DESIGNED BY: M. KHOOR
DRAWN BY: M. KHOOR
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME:
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
TRAFFIC HANDLING
STA 28+00 TO STA 34+75

Sheet Reference Number
TH-8

Sheet 30 of 76

FILE NAME : \\usont1fs001\tron_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\30_TH-8.dgn

TRAFFIC HANDLING NOTES: STAGE 4B.

1. EDINGER AVENUE MAINTAIN 2 LANES OF TRAFFIC IN EB DIRECTION IN THE CONSTRUCTION AREA.
2. EDINGER AVENUE WB TRAFFIC, MAINTAIN 2 LANES DURING THIS STAGE.
3. MAINTAIN ACCESS TO ALL COMMERCIAL AND RESIDENTIAL DRIVEWAYS ALONG THE SOUTH SIDE OF EDINGER AVENUE DURING THIS STAGE.
4. PROVIDE TEMPORARY LIGHTING THIS STAGE.

STAGE CONSTRUCTION NOTES

53 INSTALL TEMPORARY STRIPING WITH RPM.

56 CONSTRUCT CURB AND GUTTER, SIDEWALK AND CHANNEL ACCESS DRIVEWAY.

59 REMOVE EXISTING CONFLICTING STRIPING.

LEGEND:

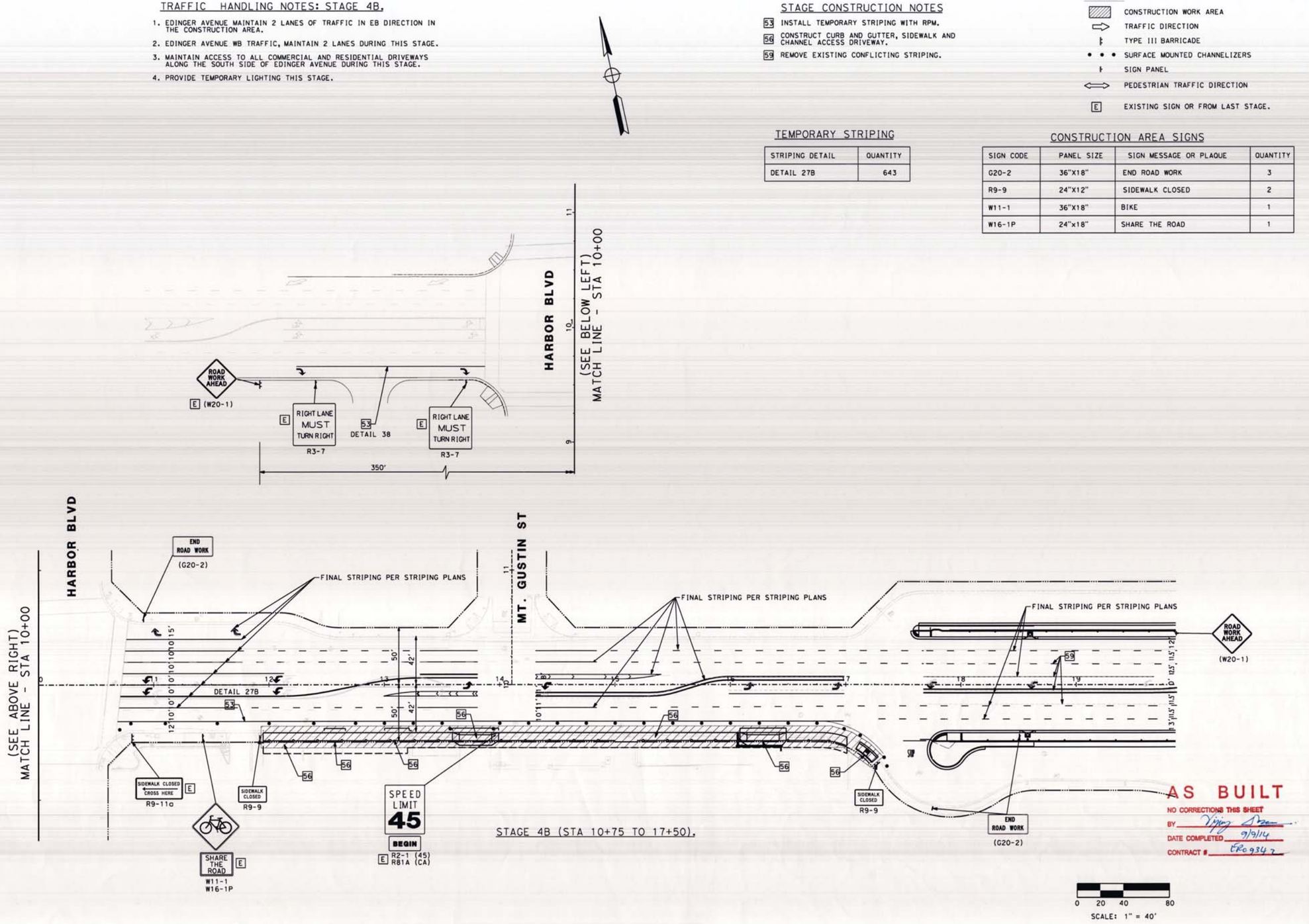
- CONSTRUCTION WORK AREA
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- SURFACE MOUNTED CHANNELIZERS
- SIGN PANEL
- PEDESTRIAN TRAFFIC DIRECTION
- E EXISTING SIGN OR FROM LAST STAGE.

TEMPORARY STRIPING

STRIPING DETAIL	QUANTITY
DETAIL 27B	643

CONSTRUCTION AREA SIGNS

SIGN CODE	PANEL SIZE	SIGN MESSAGE OR PLAQUE	QUANTITY
G20-2	36"X18"	END ROAD WORK	3
R9-9	24"X12"	SIDEWALK CLOSED	2
W11-1	36"X18"	BIKE	1
W16-1P	24"x18"	SHARE THE ROAD	1



STAGE 4B (STA 10+75 TO 17+50).

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER0934 7

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
EDWARD NG
DATE 1/21/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
TRAFFIC HANDLING
STA 28+00 TO STA 34+75

Sheet Reference Number
TH-9

Sheet 31 of 76

FILE NAME = \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\31_TH-9.dgn

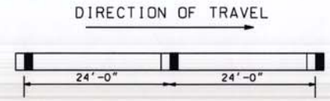
THERMOPLASTIC STRIPING

STRIPING DETAIL	TYPE	QUANTITY (LF)
DETAIL A	4" WHITE	800
DETAIL 9	4" WHITE	2516
DETAIL 22	4" YELLOW	646
DETAIL 29	4" YELLOW	2308
DETAIL 38	8" WHITE	1212
CHEVRON	8" WHITE	46

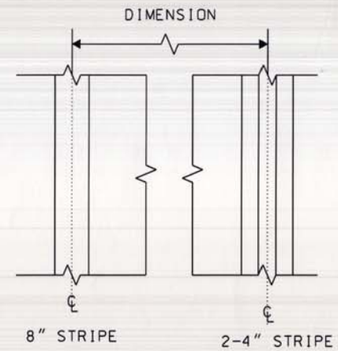
PAVEMENT MARKINGS

DETAIL	QUANTITY (EA)	AREA (SQFT)
TYPE IV ARROW	12	180
TYPE VII ARROW	2	54
12" LIMIT LINE		20
STOP	1	22

100' FOR SIGNALIZED INTERSECTIONS
50' FOR NON-SIGNALIZED INTERSECTIONS



DETAIL "A"
NO SCALE



DETAIL "B"
NO SCALE

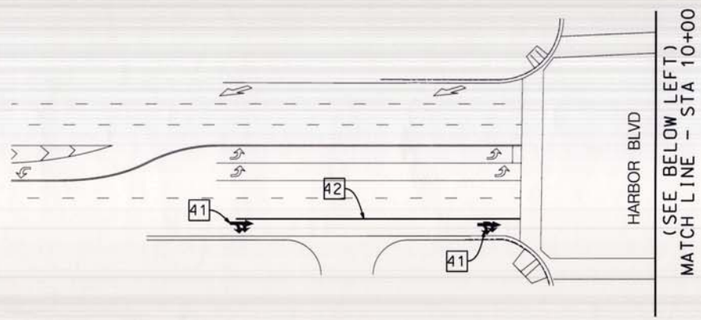
SIGNING AND STRIPING NOTES

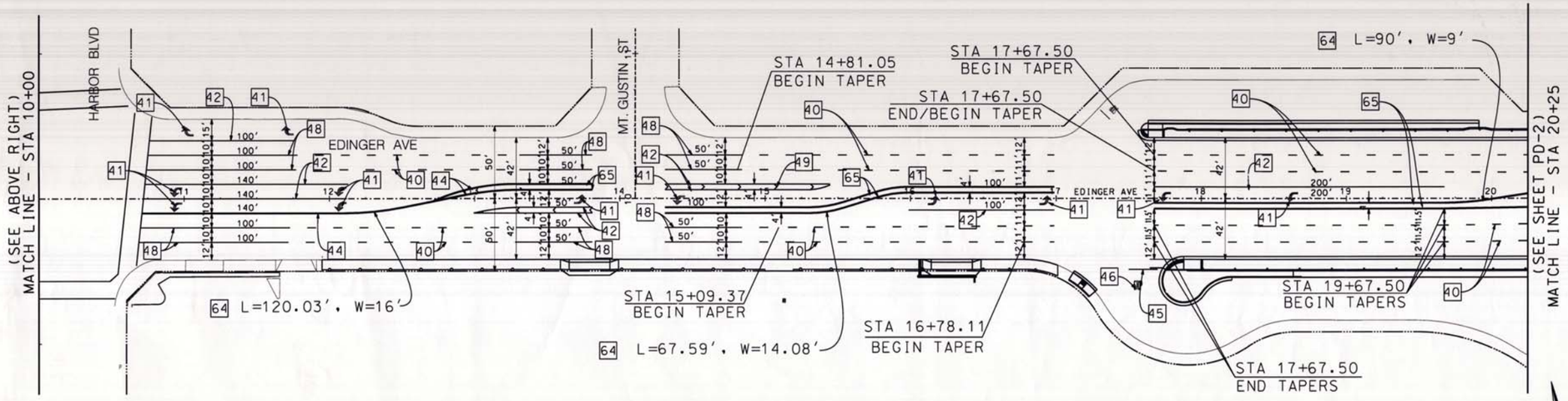
40 INSTALL DETAIL 9 PER CALTRANS STD. PLAN A20A
41 INSTALL PAVEMENT MARKING PER CALTRANS STD. PLAN A24A
42 INSTALL DETAIL 38 PER CALTRANS STD. PLAN A20D
44 INSTALL DETAIL 22 PER CALTRANS STD. PLAN A20A
45 INSTALL 12" SOLID LIMIT LINE PAVEMENT MARKING PER CALTRANS STD. PLAN A24E
46 INSTALL PAVEMENT MARKING PER CALTRANS STD. PLAN A24D
48 INSTALL 4" WHITE LANELINE AND INSTALL RAISED PAVEMENT MARKERS PER DETAIL "A" SHOWN HEREON
49 INSTALL 8" WHITE CHEVRONS AT 25' SPACING
64 INSTALL MEDIAN TAPER PER OCPW STD. PLAN 140-2
65 INSTALL DETAIL 29 PER CALTRANS STD. PLAN A20B

NOTES:
1. LANE WIDTH DIMENSIONS ARE TO THE CENTERLINE OF THE STRIPE. THE CENTERLINE OF DOUBLE YELLOW LINES IS 5-1/2" FROM THE OUTSIDE EDGE. SEE DETAIL B SHOWN HEREON.
2. REMOVE ALL EXISTING CONFLICTING STRIPING PRIOR TO INSTALLING NEW STRIPING.

LEGEND

TYPE IV ARROW
TYPE VII ARROW
TYPE G ONE-WAY CLEAR RETROREFLECTIVE





AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/5/14
CONTRACT # ER09342

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER BRANDON ARAUJO 75996 Exp. 6/30/2014 CIVIL STATE OF CALIFORNIA
BRANDON ARAUJO DATE 1/24/2013

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE$
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

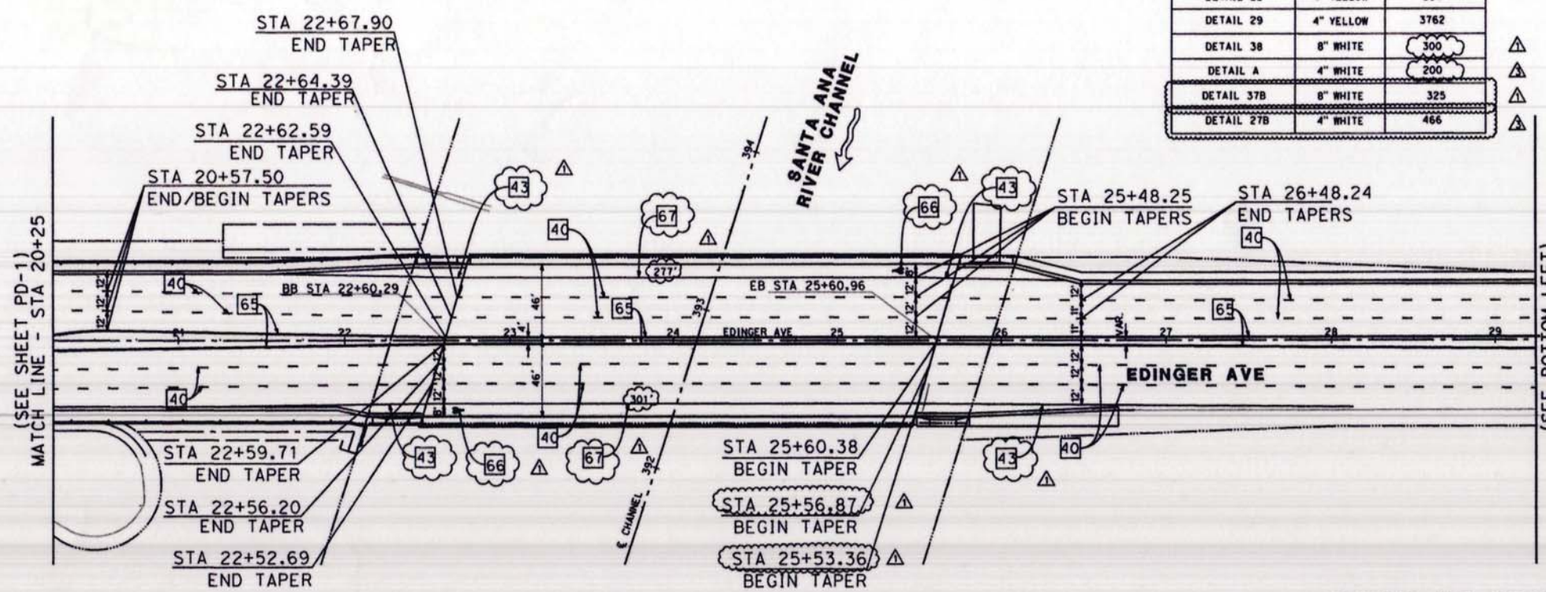
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

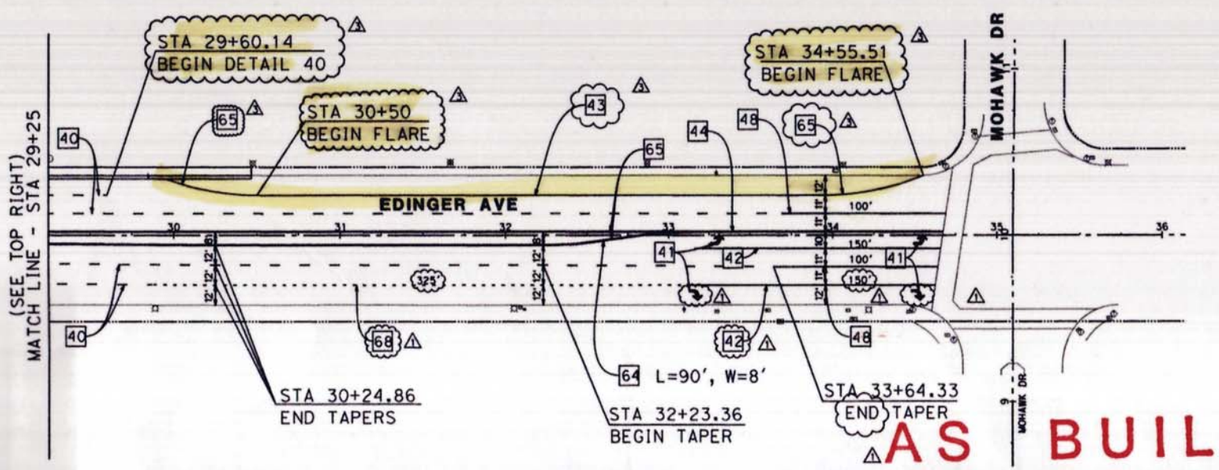
PAVEMENT DELINEATION

STA 10+00 TO STA 20+25

Sheet Reference Number
PD-1

FILE NAME :$REQUEST





AS BUILT

NO CORRECTIONS THIS SHEET

BY Tyny Sosa

DATE COMPLETED 9/9/14

CONTRACT # ERO9342

THERMOPLASTIC STRIPING

STRIPING DETAIL	TYPE	QUANTITY (LF)
DETAIL 9	4" WHITE	3380
DETAIL 22	4" YELLOW	504
DETAIL 29	4" YELLOW	3762
DETAIL 38	8" WHITE	300
DETAIL A	4" WHITE	200
DETAIL 37B	8" WHITE	325
DETAIL 27B	4" WHITE	466

PAINTED STRIPING

STRIPING DETAIL	TYPE	QUANTITY (LF)
DETAIL 9	4" WHITE	1203
DETAIL 27B	4" WHITE	610
DETAIL 29	(2)-4" YELLOW	601
DIAGONAL	8" WHITE	0
DETAIL 39	6" WHITE	578

PAVEMENT MARKINGS

DETAIL	QUANTITY (EA)	AREA (SF)
TYPE IV ARROW	4	60
BIKE LANE SYMBOL W/PERSON	2	14

LEGEND

TYPE IV ARROW

0 20 40 80

SCALE: 1" = 40'

SIGNING AND STRIPING NOTES

40 INSTALL DETAIL 9 PER CALTRANS STD. PLAN A20A

41 INSTALL PAVEMENT MARKING PER CALTRANS STD. PLAN A24A

42 INSTALL DETAIL 38 PER CALTRANS STD. PLAN A20D

43 INSTALL DETAIL 27B PER CALTRANS STD. PLAN A20B

44 INSTALL DETAIL 22 PER CALTRANS STD. PLAN A20A

47 INSTALL 8" SOLID WHITE AT 45 DEG. DIAGONAL AT 50' OC

48 INSTALL 4" WHITE LANELINE AND INSTALL RAISED PAVEMENT MARKERS PER DETAIL "A" SHOWN ON PD-1

59 REMOVE EXISTING CONFLICTING STRIPING.

64 INSTALL MEDIAN TAPER AS PER OCPW STANDARD PLAN 140-2

65 INSTALL DETAIL 29 PER CALTRANS STD. PLAN A20B

66 INSTALL BIKE LANE SYMBOL W/PERSON PER CALTRANS REV. STD. PLAN A24C

67 INSTALL DETAIL 39 PER CALTRANS STD. PLAN A20D

68 INSTALL DETAIL 37B PER CALTRANS STD. PLAN A20C

69 INSTALL MEDIAN FLARE AS PER OCPW STANDARD PLAN 141-2-OC, L=60', W=12'

NOTES:

1. LANE WIDTH DIMENSIONS ARE TO THE CENTERLINE OF THE STRIPE. THE CENTERLINE OF DOUBLE YELLOW LINES IS 5-1/2" FROM THE OUTSIDE EDGE. SEE DETAIL B ON PD-1.
2. REMOVE ALL EXISTING CONFLICTING STRIPING PRIOR TO INSTALLING NEW STRIPING.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
3	MINOR MOD. TO TRAFFIC ITEMS	7/16/2014	B.A.
2	MINOR MOD. TO TRAFFIC ITEMS	4/24/2013	B.A.
1	MINOR MOD. TO TRAFFIC ITEMS	10/03/2012	B.A.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: BRANDON ARAUJO, DATE 1/24/2013

COUNTY OF ORANGE
OC PUBLIC WORKS

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 4/24/13
SCALE: AS SHOWN

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
PAVEMENT DELINEATION AND SIGNS
STA 20+25 TO STA 36+00

Sheet Reference Number
PD-2

Sheet 33 of 76

FILE NAME : $REQUEST

RECEIVED
JUL 16 2014
BY:

THERMOPLASTIC STRIPING

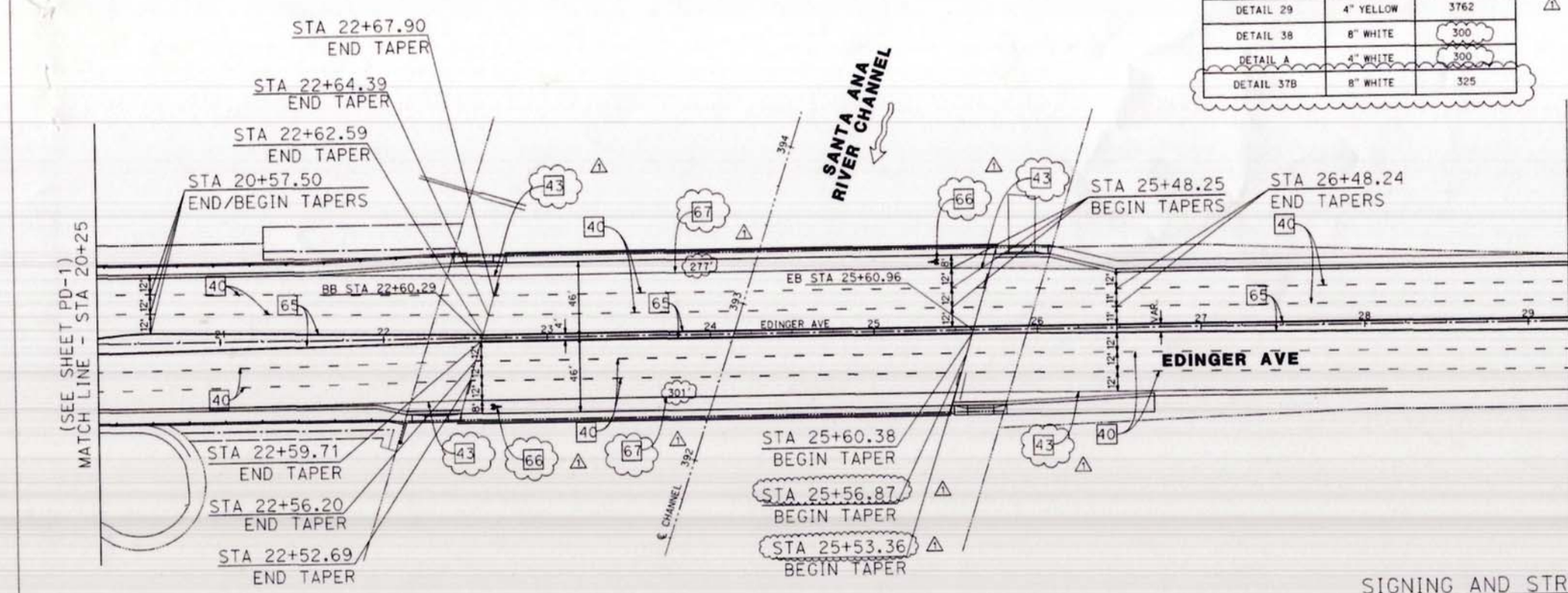
STRIPING DETAIL	TYPE	QUANTITY (LF)
DETAIL 9	4" WHITE	3790
DETAIL 22	4" YELLOW	504
DETAIL 29	4" YELLOW	3762
DETAIL 38	8" WHITE	300
DETAIL A	4" WHITE	300
DETAIL 37B	8" WHITE	325

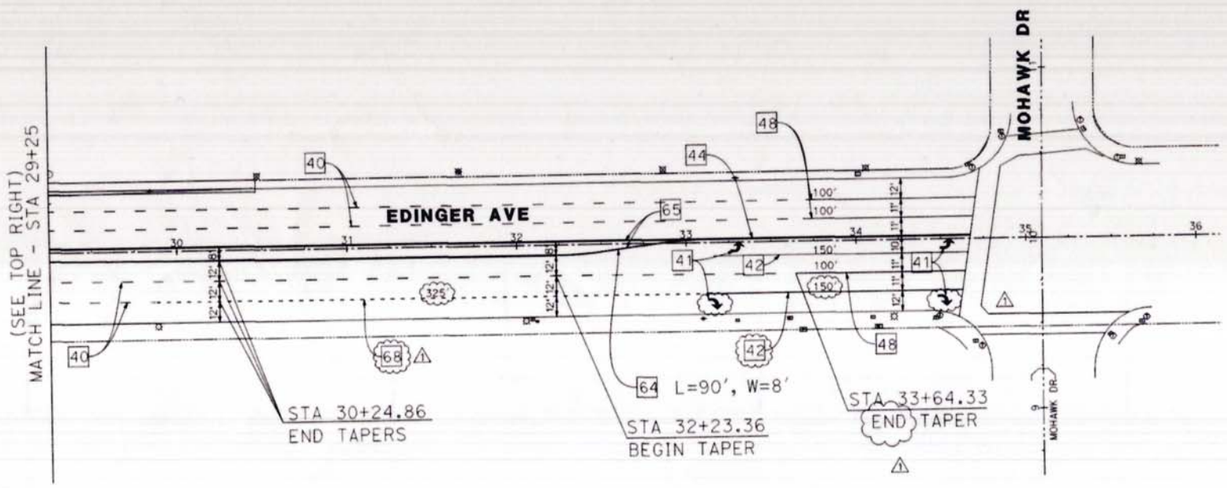
PAINTED STRIPING

STRIPING DETAIL	TYPE	QUANTITY (LF)
DETAIL 9	4" WHITE	1203
DETAIL 27B	4" WHITE	610
DETAIL 29	(2)-4" YELLOW	601
DIAGONAL	8" WHITE	0
DETAIL 39	6" WHITE	578

PAVEMENT MARKINGS

DETAIL	QUANTITY (EA)	AREA (SF)
TYPE IV ARROW	4	60
BIKE LANE SYMBOL W/PERSON	2	14





SIGNING AND STRIPING NOTES

- 40 INSTALL DETAIL 9 PER CALTRANS STD. PLAN A20A
- 41 INSTALL PAVEMENT MARKING PER CALTRANS STD. PLAN A24A
- 42 INSTALL DETAIL 38 PER CALTRANS STD. PLAN A20D
- 43 INSTALL DETAIL 27B PER CALTRANS STD. PLAN A20B
- 44 INSTALL DETAIL 22 PER CALTRANS STD. PLAN A20A
- 47 INSTALL 8" SOLID WHITE AT 45 DEG. DIAGONAL AT 50' OC
- 48 INSTALL 4" WHITE LANELINE AND INSTALL RAISED PAVEMENT MARKERS PER DETAIL "A" SHOWN ON PD-1
- 59 REMOVE EXISTING CONFLICTING STRIPING.
- 64 INSTALL MEDIAN TAPER AS PER OCPW STANDARD PLAN 140-2
- 65 INSTALL DETAIL 29 PER CALTRANS STD. PLAN A20B
- 66 INSTALL BIKE LANE SYMBOL W/PERSON PER CALTRANS REV. STD. PLAN A24C
- 67 INSTALL DETAIL 39 PER CALTRANS STD. PLAN A20D
- 68 INSTALL DETAIL 37B PER CALTRANS STD. PLAN A20C

NOTES:

1. LANE WIDTH DIMENSIONS ARE TO THE CENTERLINE OF THE STRIPE. THE CENTERLINE OF DOUBLE YELLOW LINES IS 5-1/2" FROM THE OUTSIDE EDGE. SEE DETAIL B ON PD-1.
2. REMOVE ALL EXISTING CONFLICTING STRIPING PRIOR TO INSTALLING NEW STRIPING.

LEGEND

TYPE IV ARROW

0 20 40 80
SCALE: 1" = 40'

RECEIVED
JUL 03 2014
BY:

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
1	MINOR MOD. TO TRAFFIC ITEMS	10/30/2013	B.A.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
PROFESSIONAL ENGINEER — BRANDON ARAUJO — 73596 — Exp. 6-30-2014 — CIVIL — STATE OF CALIFORNIA
1/24/2013 DATE
BRANDON ARAUJO

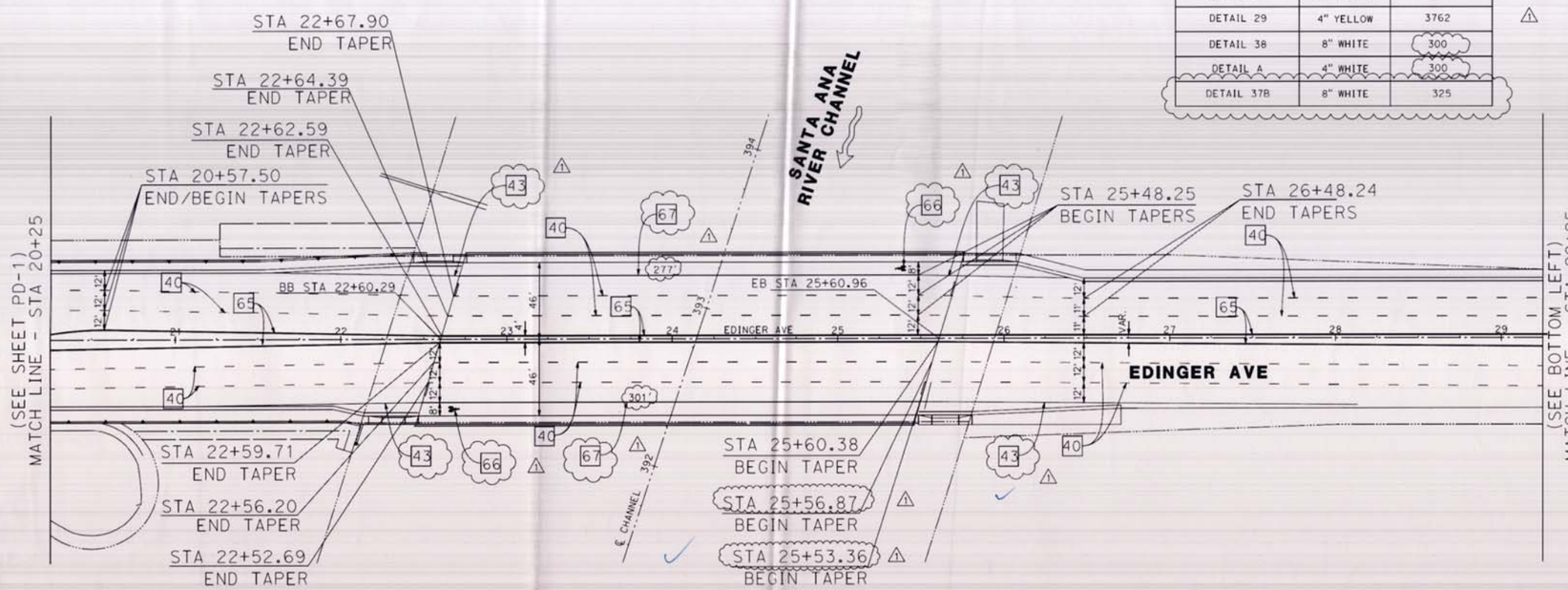
DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: #DATE#
SCALE: AS SHOWN

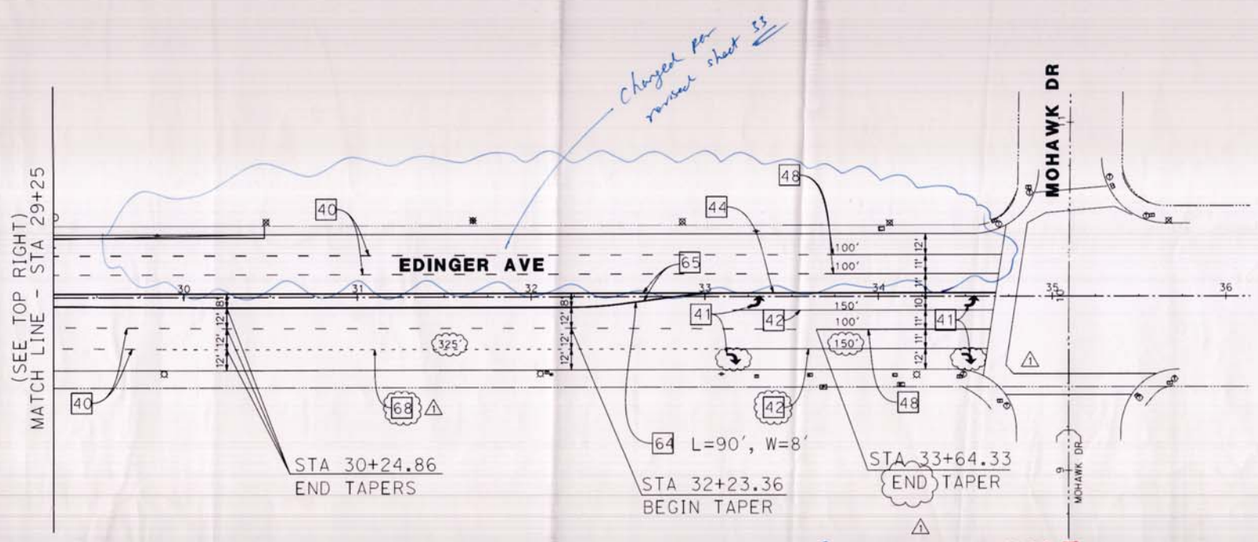
COUNTY OF ORANGE
OC PUBLIC WORKS

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
PAVEMENT DELINEATION AND SIGNS
STA 20+25 TO STA 36+00

Sheet Reference Number
PD-2
Sheet 33 of 76

FILE NAME : $REQUEST





AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 7/2/14
CONTRACT # 6R09542

THERMOPLASTIC STRIPING

STRIPING DETAIL	TYPE	QUANTITY (LF)
DETAIL 9	4" WHITE	3790
DETAIL 22	4" YELLOW	504
DETAIL 29	4" YELLOW	3762
DETAIL 38	8" WHITE	300
DETAIL A	4" WHITE	300
DETAIL 37B	8" WHITE	325

PAINTED STRIPING

STRIPING DETAIL	TYPE	QUANTITY (LF)
DETAIL 9	4" WHITE	1203
DETAIL 27B	4" WHITE	610
DETAIL 29	(2)-4" YELLOW	601
DIAGONAL	8" WHITE	0
DETAIL 39	6" WHITE	578

PAVEMENT MARKINGS

DETAIL	QUANTITY (EA)	AREA (SF)
TYPE IV ARROW	4	60
BIKE LANE SYMBOL W/PERSON	2	14

SIGNING AND STRIPING NOTES

- 40 INSTALL DETAIL 9 PER CALTRANS STD. PLAN A20A
- 41 INSTALL PAVEMENT MARKING PER CALTRANS STD. PLAN A24A
- 42 INSTALL DETAIL 38 PER CALTRANS STD. PLAN A20D
- 43 INSTALL DETAIL 27B PER CALTRANS STD. PLAN A20B
- 44 INSTALL DETAIL 22 PER CALTRANS STD. PLAN A20A
- 47 INSTALL 8" SOLID WHITE AT 45 DEG. DIAGONAL AT 50' OC
- 48 INSTALL 4" WHITE LANELINE AND INSTALL RAISED PAVEMENT MARKERS PER DETAIL "A" SHOWN ON PD-1
- 59 REMOVE EXISTING CONFLICTING STRIPING.
- 64 INSTALL MEDIAN TAPER AS PER OCPW STANDARD PLAN 140-2
- 65 INSTALL DETAIL 29 PER CALTRANS STD. PLAN A20B
- 66 INSTALL BIKE LANE SYMBOL W/PERSON PER CALTRANS REV. STD. PLAN A24C
- 67 INSTALL DETAIL 39 PER CALTRANS STD. PLAN A20D
- 68 INSTALL DETAIL 37B PER CALTRANS STD. PLAN A20C

NOTES:

1. LANE WIDTH DIMENSIONS ARE TO THE CENTERLINE OF THE STRIPE. THE CENTERLINE OF DOUBLE YELLOW LINES IS 5-1/2" FROM THE OUTSIDE EDGE. SEE DETAIL B ON PD-1.
2. REMOVE ALL EXISTING CONFLICTING STRIPING PRIOR TO INSTALLING NEW STRIPING.

LEGEND

TYPE IV ARROW

0 20 40 80
SCALE: 1" = 40'

See revised

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
1	MINOR MOD. TO TRAFFIC ITEMS	10/03/2013	B.A.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: BRANDON ARAUJO, REGISTERED PROFESSIONAL ENGINEER, No. 62094, CIVIL, STATE OF CALIFORNIA — 1/24/2013 DATE

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME:
MFILE
PLOT DATE: MDATE
SCALE: AS SHOWN

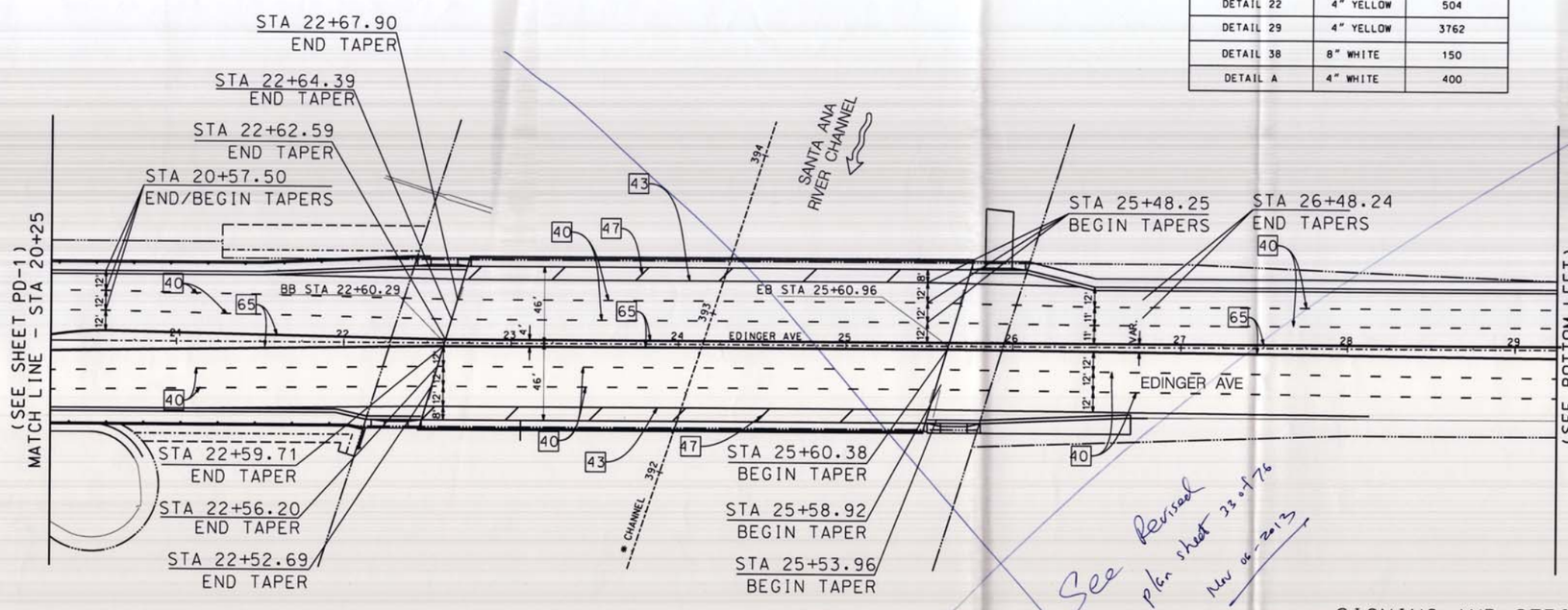
COUNTY OF ORANGE
OC PUBLIC WORKS

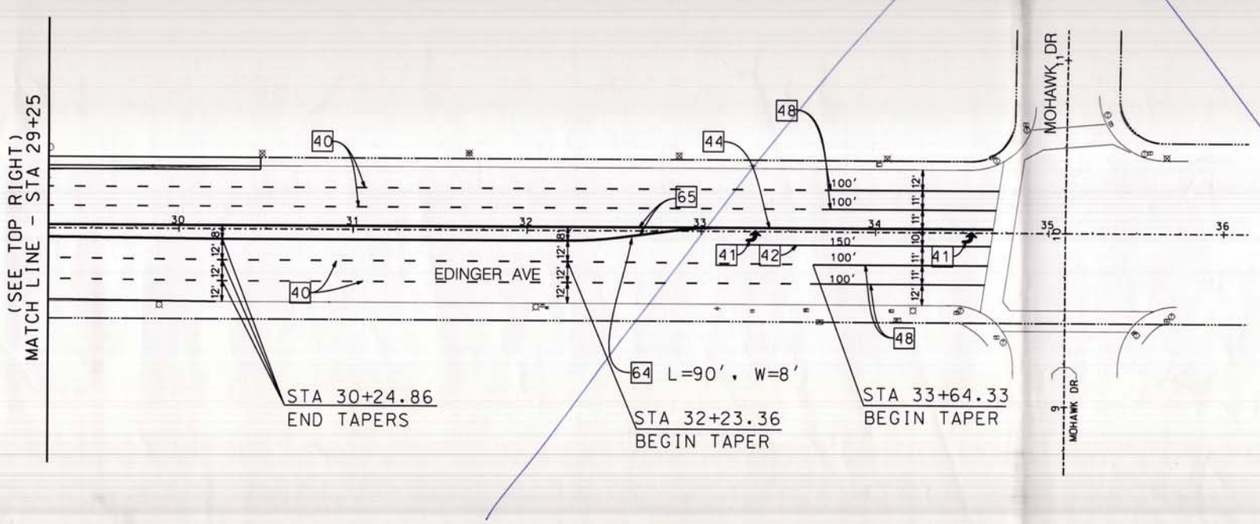
RECEIVED
NOV 05 2013
BY

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
PAVEMENT DELINEATION AND SIGNS
STA 20+25 TO STA 36+00

Sheet Reference Number
PD-2
Sheet 33 of 76

FILE NAME : $REQUEST





THERMOPLASTIC STRIPING

STRIPING DETAIL	TYPE	QUANTITY (LF)
DETAIL 9	4" WHITE	4165
DETAIL 22	4" YELLOW	504
DETAIL 29	4" YELLOW	3762
DETAIL 38	8" WHITE	150
DETAIL A	4" WHITE	400

PAINTED STRIPING

STRIPING DETAIL	TYPE	QUANTITY (LF)
DETAIL 9	4" WHITE	1203
DETAIL 27B	4" WHITE	1187
DETAIL 29	(2)-4" YELLOW	601
DIAGONAL	8" WHITE	136

PAVEMENT MARKINGS

DETAIL	QUANTITY (EA)	AREA (SF)
TYPE IV ARROW	2	30

SIGNING AND STRIPING NOTES

40 INSTALL DETAIL 9 PER CALTRANS STD. PLAN A20A

41 INSTALL PAVEMENT MARKING PER CALTRANS STD. PLAN A24A

42 INSTALL DETAIL 38 PER CALTRANS STD. PLAN A20D

43 INSTALL DETAIL 27B PER CALTRANS STD. PLAN A20B

44 INSTALL DETAIL 22 PER CALTRANS STD. PLAN A20A

47 INSTALL 8" SOLID WHITE AT 45 DEG. DIAGONAL AT 50' OC

48 INSTALL 4" WHITE LANELINE AND INSTALL RAISED PAVEMENT MARKERS PER DETAIL "A" SHOWN ON PD-1

59 REMOVE EXISTING CONFLICTING STRIPING.

64 INSTALL MEDIAN TAPER AS PER OCPW STANDARD PLAN 140-2

65 INSTALL DETAIL 29 PER CALTRANS STD. PLAN A20B

NOTES:

1. LANE WIDTH DIMENSIONS ARE TO THE CENTERLINE OF THE STRIPE. THE CENTERLINE OF DOUBLE YELLOW LINES IS 5-1/2" FROM THE OUTSIDE EDGE. SEE DETAIL B ON PD-1.
2. REMOVE ALL EXISTING CONFLICTING STRIPING PRIOR TO INSTALLING NEW STRIPING.

LEGEND

TYPE IV ARROW

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
	See Revised plan sheet 33 of 76		

PREPARED UNDER THE RESPONSIBLE CHARGE OF: BRANDON ARAUJO — DATE 1/24/2013

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE$
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
PAVEMENT DELINEATION AND SIGNS
STA 20+25 TO STA 36+00

Sheet Reference Number
PD-2
Sheet 33 of 76

FILE NAME :$REQUEST

TRAFFIC SIGN LEGEND

R1-1 | R2-1(45) | R3-2 | R3-7 | R8-3a | R9-11a(MOD) | R9-3(MOD) | R24(CA) | R26(CA) | R26(S)(CA) | R28(CA)(L) | R28(CA)(R)

R28(S)(CA) | R28C(CA)L | R28C(CA)R | R28C(CA)D | R30(CA) | R81A(CA) | W14-2 | NOTICE SIGN

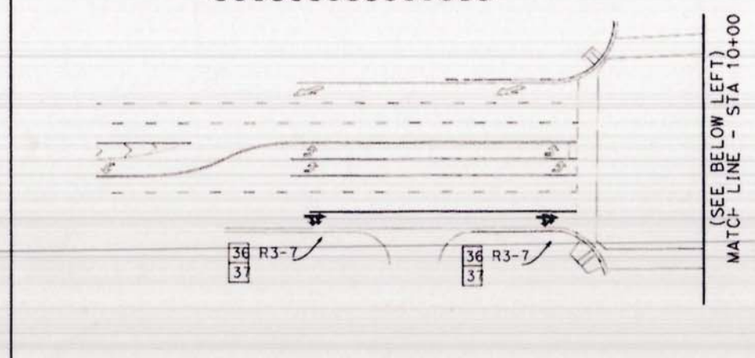
SIGNING AND STRIPING NOTES

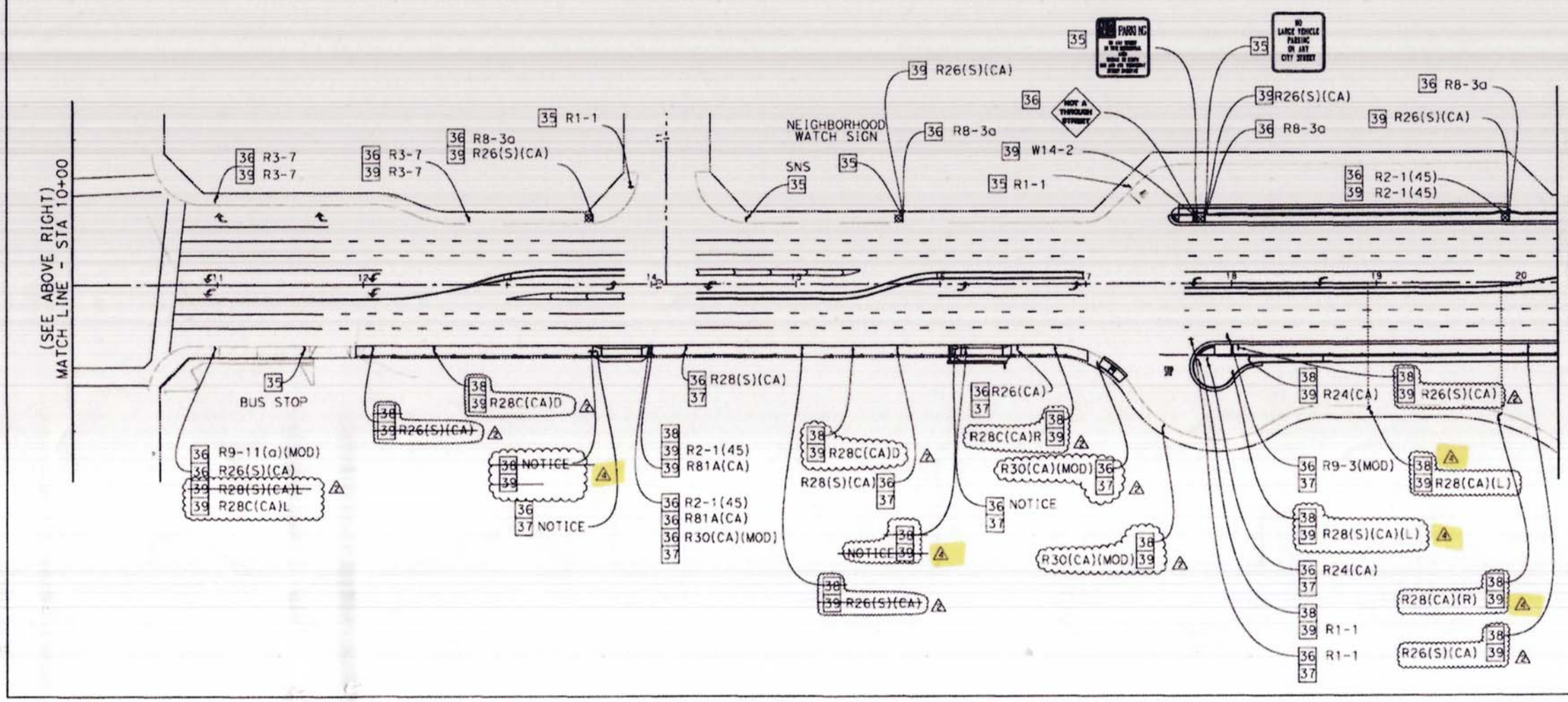
35 PROTECT EXISTING SIGN POST AND SIGN PANEL
36 REMOVE EXISTING SIGN PANEL
37 REMOVE EXISTING SIGN POST
38 INSTALL NEW ROADSIDE SIGN POST
39 INSTALL NEW ROADSIDE SIGN PANEL

LEGEND

SINGLE POST SIGN
SIGN ON LIGHT POLE
SNS STREET NAME SIGN
TYPE IV ARROW

AS BUILT
NO CORRECTIONS THIS SHEET
BY Vijay Sen
DATE COMPLETED 9/9/14
CONTRACT # ER09342





COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: 8/24/2018 BRANDON ARAUJO DATE

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: WHATEV
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
OC INFRASTRUCTURE
TRAFFIC ENGINEERING

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

SIGNING

STA 10+00 TO STA 20+25

Sheet Reference Number
S-1

FILE NAME : $REQUEST

TRAFFIC SIGN LEGEND

R1-1 · R2-1(45) · R3-2 · R3-7 · R8-3a · R9-11a(MOD) · R9-3(MOD) · R24(CA) · R26(CA) · R26(S)(CA) · R28(CA)(L) · R28(CA)(R)

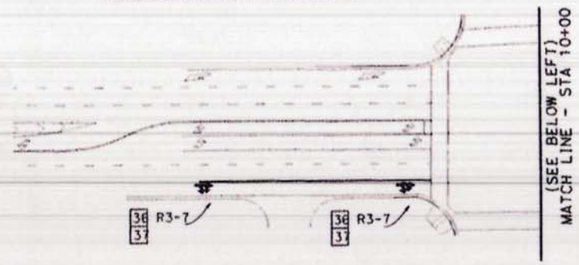
R28(S)(CA) · R28C(CA)L · R28C(CA)R · R28C(CA)D · R30(CA) · R81A(CA) · W14-2 · NOTICE SIGN

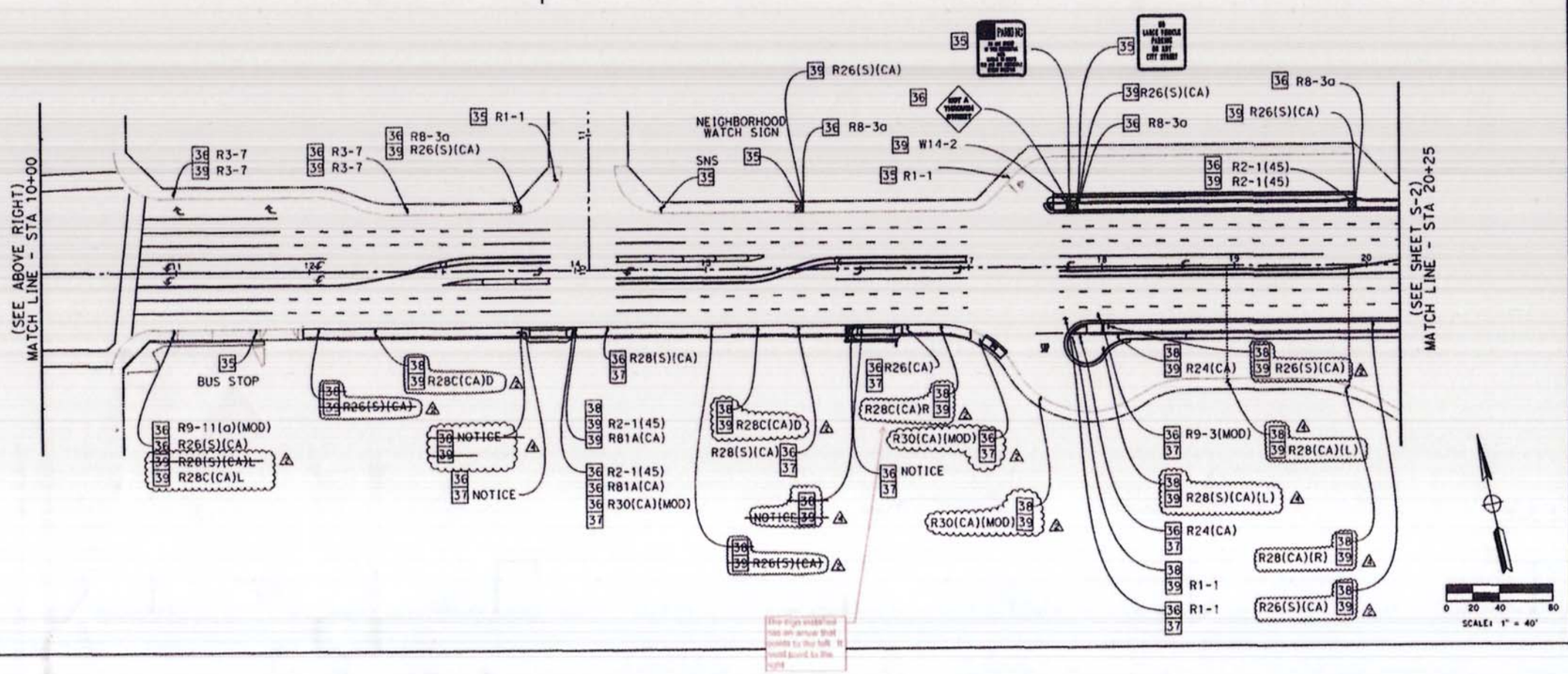
SIGNING AND STRIPING NOTES

35 PROTECT EXISTING SIGN POST AND SIGN PANEL
36 REMOVE EXISTING SIGN PANEL
37 REMOVE EXISTING SIGN POST
38 INSTALL NEW ROADSIDE SIGN POST
39 INSTALL NEW ROADSIDE SIGN PANEL

LEGEND

SINGLE POST SIGN
SIGN ON LIGHT POLE
SNS STREET NAME SIGN
TYPE IV ARROW





COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: BRANDON ARAUJO DATE 8/24/2018

DESIGNED BY: S. ARAUJO
DRAWN BY: S. ARAUJO
CHECKED BY: N. BIZSIA
DRAWING CODE:
FILE NAME: W FILE
PLOT DATE: 8/24/18
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
OC INFRASTRUCTURE
TRAFFIC ENGINEERING

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

SIGNING

STA 10+00 TO STA 20+25

Sheet Reference Number
S-1

Sheet 38 of 76

FILE NAME : SPEC0ES7

TRAFFIC SIGN LEGEND

R1-1 | R2-1(45) | R3-2 | R3-7 | R8-3a | R9-11a(MOD) | R9-3(MOD) | R24(CA) | R26(CA) | R26(S)(CA)

R28(S)(CA) | R28C(CA)L | R28C(CA)R | R28C(CA)D | R30(CA) | R81A(CA) | W14-2 | NOTICE SIGN

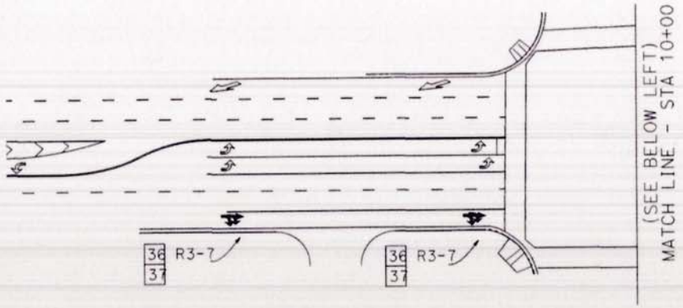
SIGNING AND STRIPING NOTES

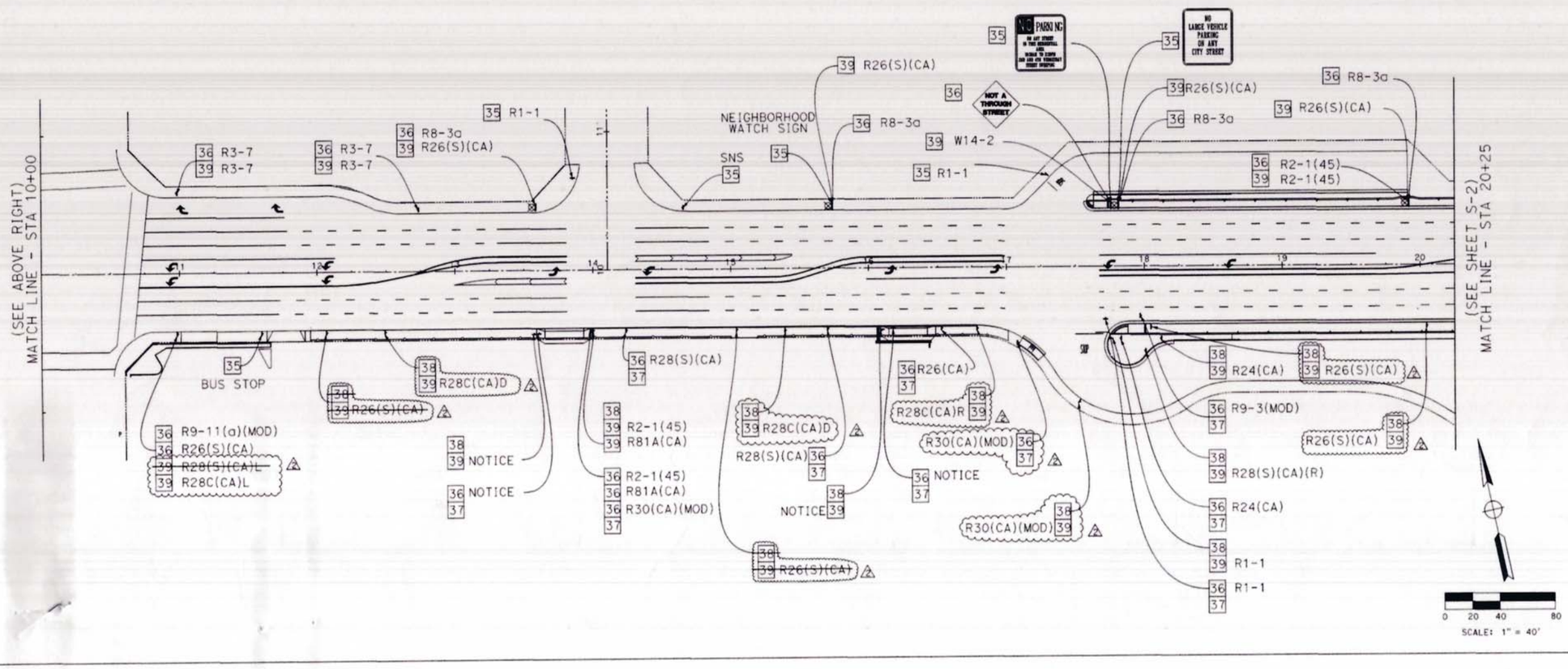
35 PROTECT EXISTING SIGN POST AND SIGN PANEL
36 REMOVE EXISTING SIGN PANEL
37 REMOVE EXISTING SIGN POST
38 INSTALL NEW ROADSIDE SIGN POST
39 INSTALL NEW ROADSIDE SIGN PANEL

LEGEND

SINGLE POST SIGN
SIGN ON LIGHT POLE
SNS STREET NAME SIGN
TYPE IV ARROW

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09362





COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
	MINOR MOD. TO TRAFFIC ITEMS	4/24/2013	B.A.
	MINOR MOD. TO TRAFFIC ITEMS	10/03/2013	B.A.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
BRANDON ARAUJO
4/24/2014
DATE

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BUSTA
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
OC INFRASTRUCTURE
TRAFFIC ENGINEERING

EDINGER AVENUE BRIDGE OVER
SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

SIGNING

STA 10+00 TO STA 20+25

Sheet Reference Number
S-1

FILE NAME : $REQUEST

TRAFFIC SIGN LEGEND

STOP R1-1 | SPEED LIMIT 45 R2-1 | R3-2 | RIGHT LANE MUST TURN RIGHT R3-7 | R8-3a | NO SIDEWALK ON BRIDGE AHEAD CROSS HERE R9-11a(MOD) | NO PEDESTRIAN BRIDGE CROSSING AHEAD USE CROSSWALK R9-3(MOD)

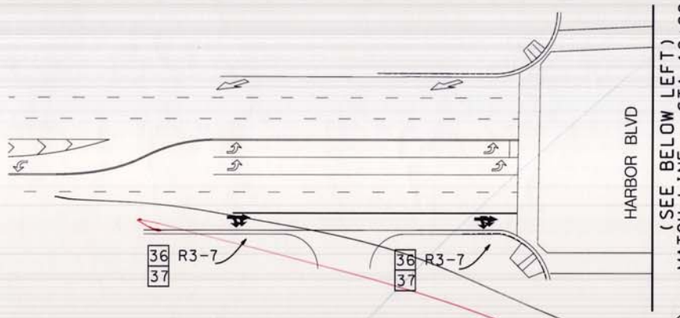
PARK PARALLEL R24(CA) | NO PARKING ANY TIME R26(CA) | NO STOPPING ANY TIME R26(S)(CA) | NO STOPPING ANY TIME R28(S)(CA) | NO PARKING THIS TRACT 11 A.M. TO 4 P.M. 2nd & 4th TUESDAY STREET SWEEPING R30(CA) | BEGIN R81A(CA) | NO OUTLET W14-2 | NOTICE ALL ROADS ARE FIRE LANES PARK IN MARKED STALLS ONLY VIOLATING VEHICLES WILL BE TOWED AWAY AT VEHICLE OWNER'S EXPENSE MUNICIPAL CODE 10.40.110 NOTICE SIGN

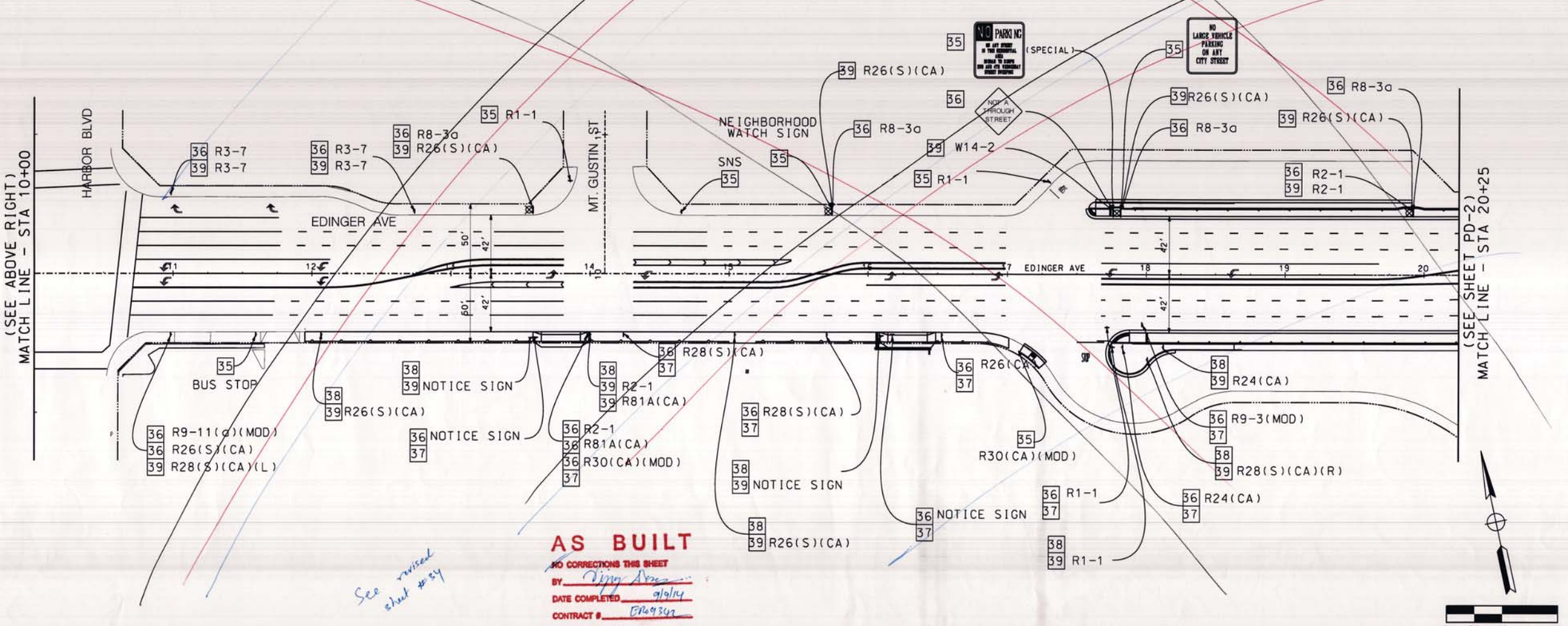
SIGNING AND STRIPING NOTES

35 PROTECT EXISTING SIGN POST AND SIGN PANEL
36 REMOVE EXISTING SIGN PANEL
37 REMOVE EXISTING SIGN POST
38 INSTALL NEW ROADSIDE SIGN POST
39 INSTALL NEW ROADSIDE SIGN PANEL

LEGEND

SINGLE POST SIGN
SIGN ON LIGHT POLE
SNS STREET NAME SIGN
TYPE IV ARROW





AS BUILT
NO CORRECTIONS THIS SHEET
BY Vijay Arora
DATE COMPLETED 9/9/14
CONTRACT # 6169342

See revised sheet #84

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
BRANDON ARAUJO
REGISTERED PROFESSIONAL ENGINEER 75996 CIVIL STATE OF CALIFORNIA
1/24/2013 DATE

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE$
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT
BR. NO. 55C-0154

SIGNING

STA 10+00 TO STA 20+25

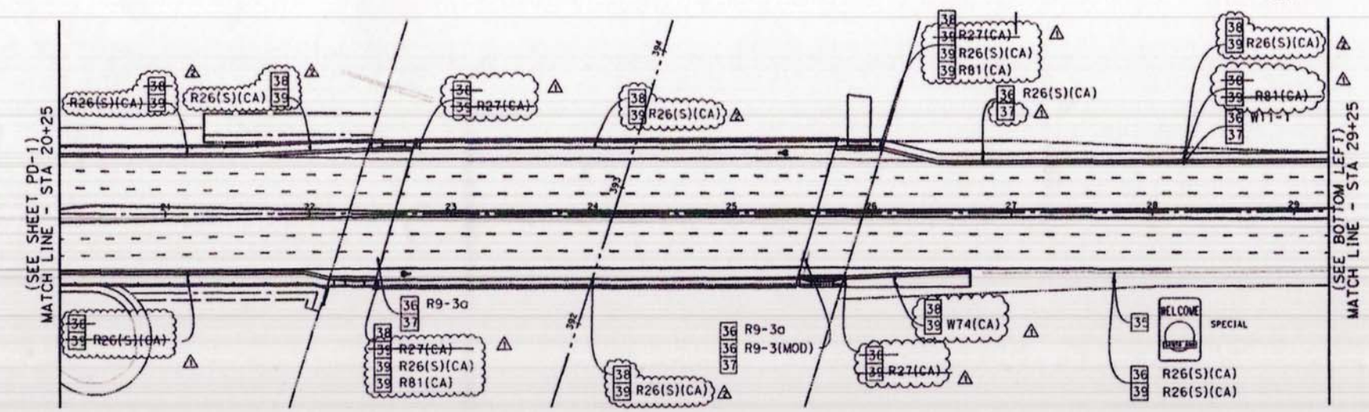
Sheet Reference Number
S-1

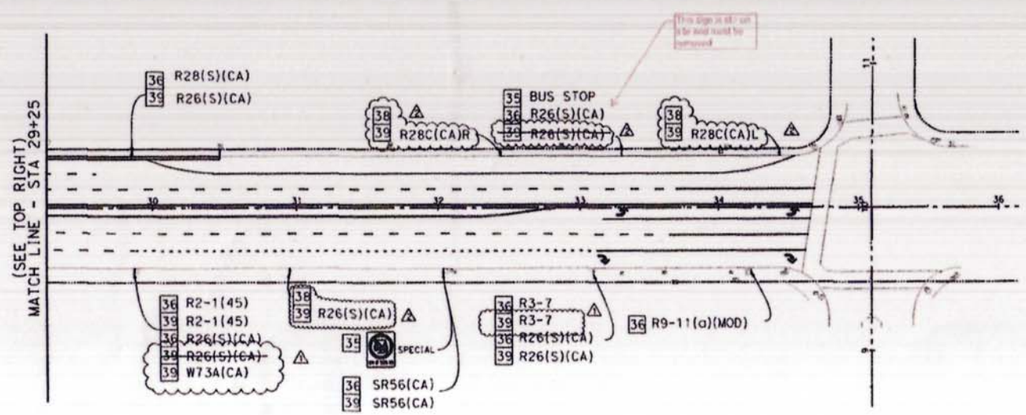
Sheet 34 of 76

FILE NAME :$REQUEST

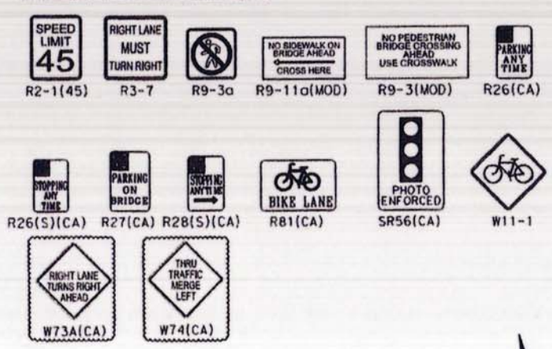
SIGNING AND STRIPING NOTES

- 35 PROTECT EXISTING SIGN POST AND SIGN PANEL
- 36 REMOVE EXISTING SIGN PANEL
- 37 REMOVE EXISTING SIGN POST
- 38 INSTALL NEW ROADSIDE SIGN POST
- 39 INSTALL NEW ROADSIDE SIGN PANEL





TRAFFIC SIGN LEGEND



LEGEND

- SINGLE POST SIGN
- SIGN ON LIGHT POLE
- TYPE IV ARROW

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
BRANDON ARAUJO — DATE

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BRISTA
DRAWING CODE:
FILE NAME:
PLOT DATE: 4/24/14
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
OC INFRASTRUCTURE
TRAFFIC ENGINEERING

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
BRIDGE NO. 55C-0154
BR. NO. 55C-0154

SIGNING

STA 20+25 TO STA 36+00

Sheet Reference Number
S-2

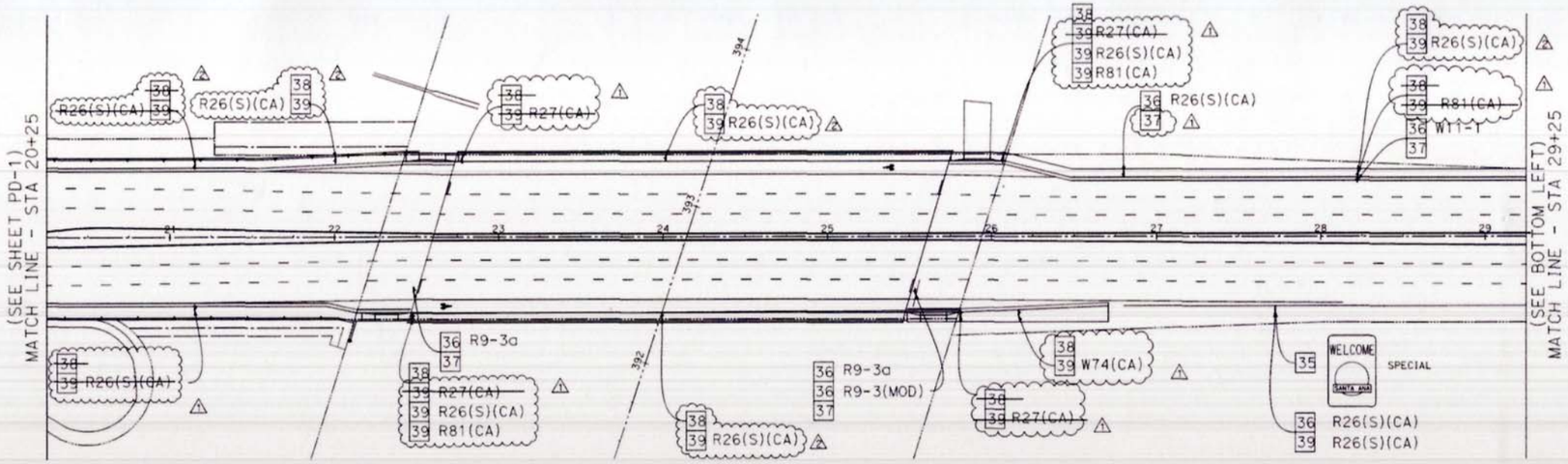
Sheet 35 of 76

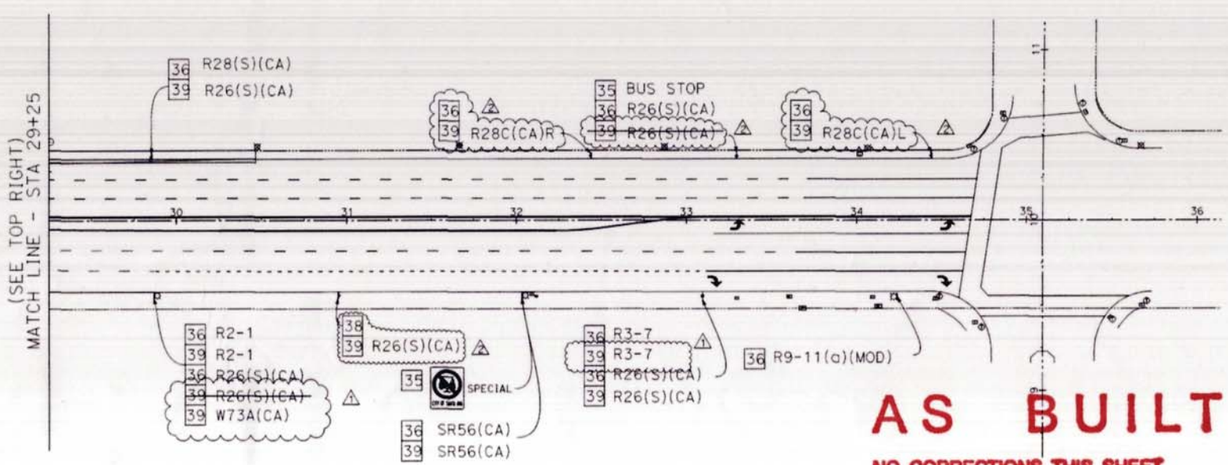
FILE NAME : BREQUEST

AS BUILT
NO CORRECTIONS THIS SHEET
BY Vijay Sen
DATE COMPLETED 9/9/14
CONTRACT # CR09542

SIGNING AND STRIPING NOTES

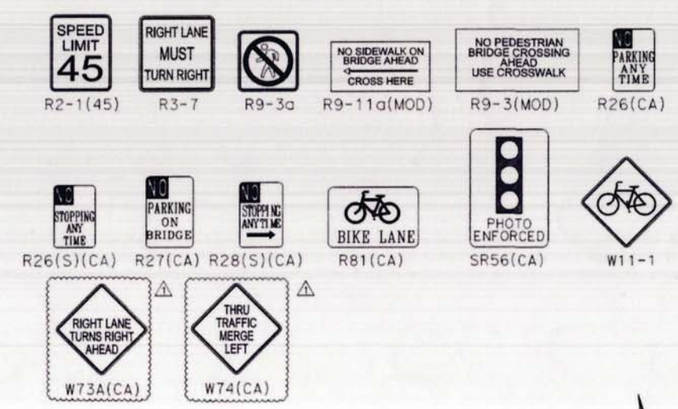
- 35 PROTECT EXISTING SIGN POST AND SIGN PANEL
- 36 REMOVE EXISTING SIGN PANEL
- 37 REMOVE EXISTING SIGN POST
- 38 INSTALL NEW ROADSIDE SIGN POST
- 39 INSTALL NEW ROADSIDE SIGN PANEL





AS BUILT
NO CORRECTIONS THIS SHEET
BY Vijay Sosa
DATE COMPLETED 9/9/14
CONTRACT # ER09342

TRAFFIC SIGN LEGEND



LEGEND

- SINGLE POST SIGN
- SIGN ON LIGHT POLE
- TYPE IV ARROW

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
A	MINOR MOD. TO TRAFFIC ITEMS	4-24-2013	B.A.
B	MINOR MOD. TO TRAFFIC ITEMS	10-03-2013	B.A.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
BRANDON ARAUJO
DATE 4/24/2013

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME: MFILE
PLOT DATE: MONTH
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
OC INFRASTRUCTURE
TRAFFIC ENGINEERING

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

SIGNING

STA 20+25 TO STA 36+00

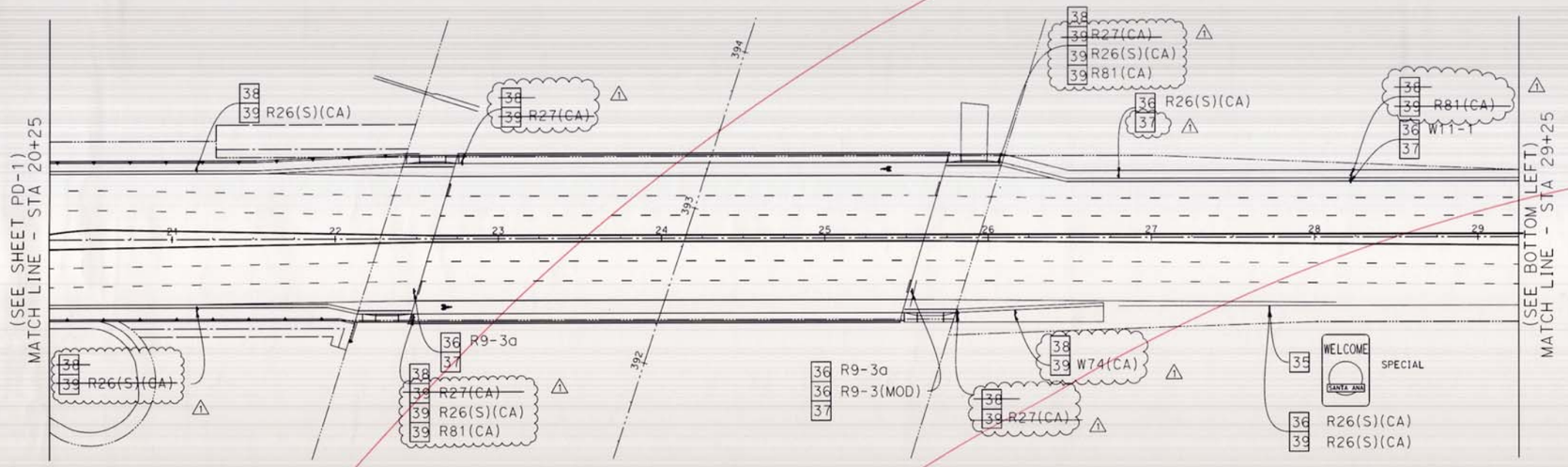
Sheet Reference Number
S-2

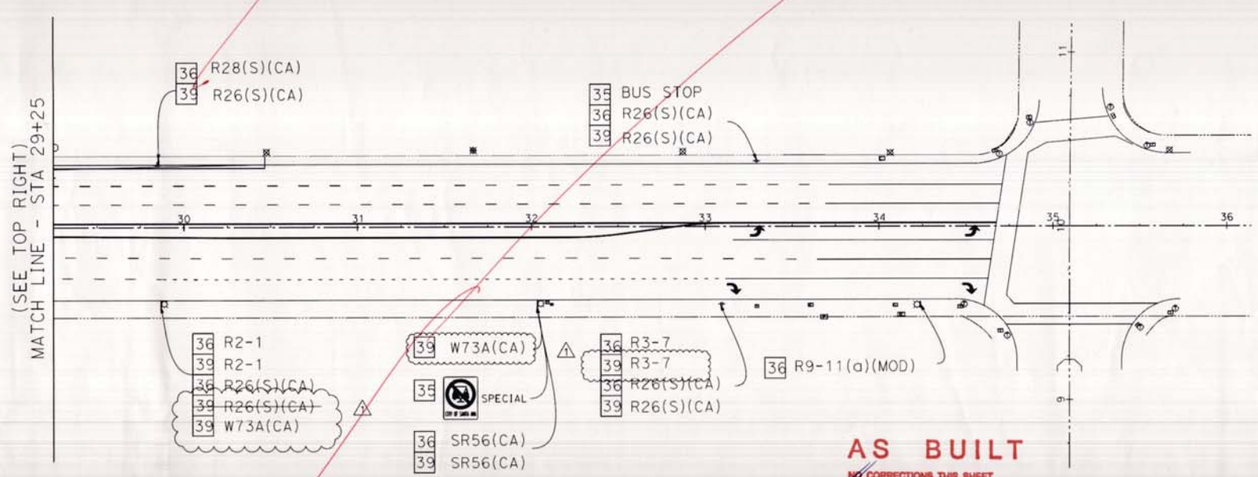
Sheet 35 of 76

FILE NAME : $REQUEST

SIGNING AND STRIPING NOTES

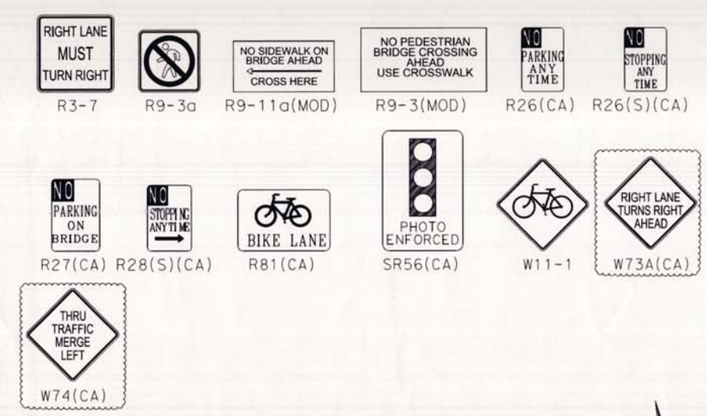
35 PROTECT EXISTING SIGN POST AND SIGN PANEL
36 REMOVE EXISTING SIGN PANEL
37 REMOVE EXISTING SIGN POST
38 INSTALL NEW ROADSIDE SIGN POST
39 INSTALL NEW ROADSIDE SIGN PANEL





AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # E109342

TRAFFIC SIGN LEGEND



LEGEND

SINGLE POST SIGN
SIGN ON LIGHT POLE
TYPE IV ARROW

0 20 40 80
SCALE: 1" = 40'

See Revised

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
1	MINOR MOD. TO TRAFFIC ITEMS	10/13/2015	B.A.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
BRANDON ARBALLO
DATE 1/28/2015

DESIGNED BY: B. ARBALLO
DRAWN BY: B. ARBALLO
CHECKED BY: W. BESTA
DRAWING CODE:
FILE NAME:
SFILE
PLOT DATE: SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

RECEIVED
NOV 05 2015
BY:

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT
BR. NO. 55C-0154

SIGNING

STA 20+25 TO STA 36+00

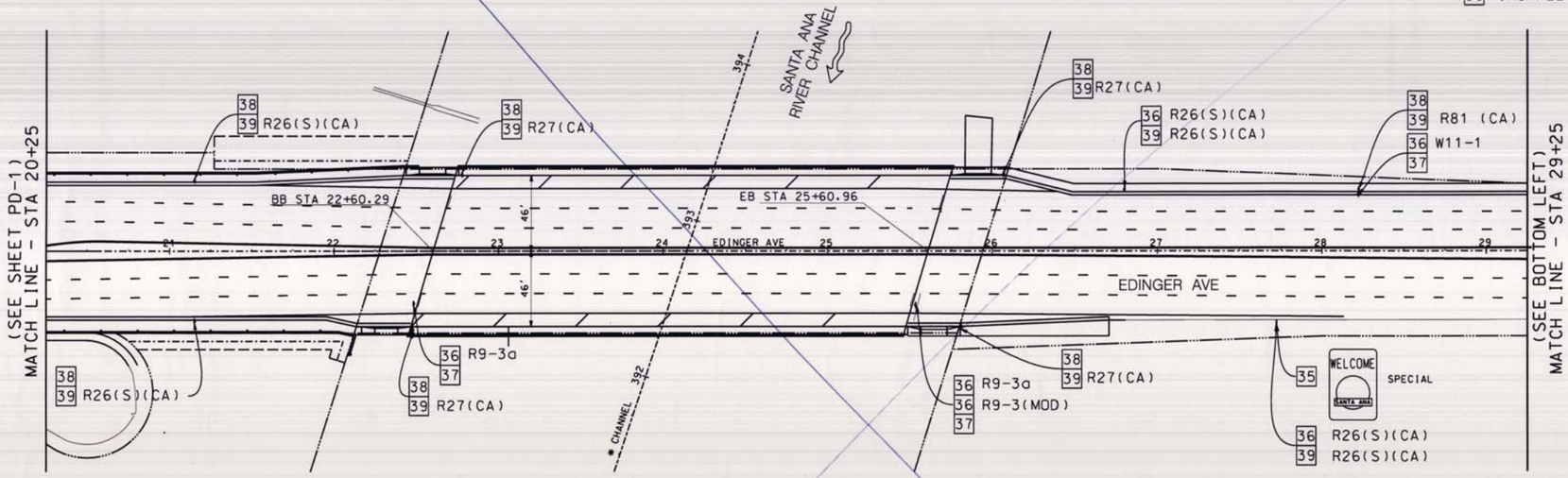
Sheet Reference Number
S-2

Sheet 35 of 76

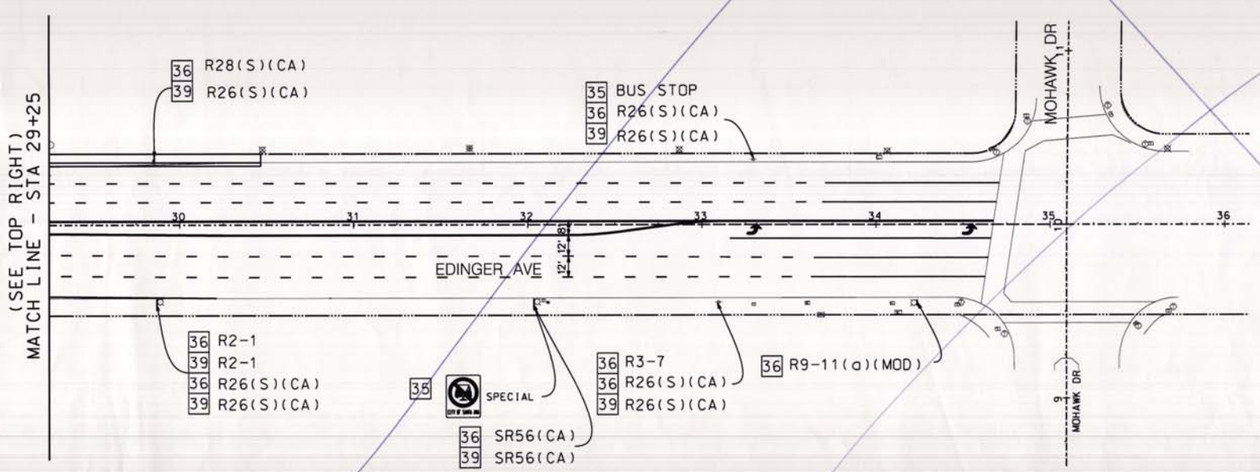
FILE NAME : $REQUEST

SIGNING AND STRIPING NOTES

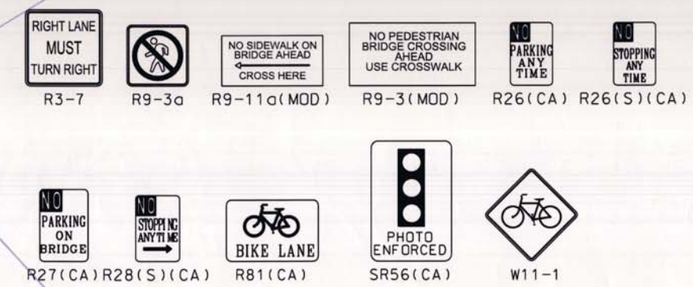
35 PROTECT EXISTING SIGN POST AND SIGN PANEL
36 REMOVE EXISTING SIGN PANEL
37 REMOVE EXISTING SIGN POST
38 INSTALL NEW ROADSIDE SIGN POST
39 INSTALL NEW ROADSIDE SIGN PANEL



See Revised sheet 35/72 Nov 15-2013



TRAFFIC SIGN LEGEND



LEGEND

SINGLE POST SIGN
SIGN ON LIGHT POLE
TYPE IV ARROW

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
	Revised as Nov 06-2013		

PREPARED UNDER THE RESPONSIBLE CHARGE OF: BRANDON ARAUJO 1/24/2013 DATE

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE$
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

SIGNING

STA 20+25 TO STA 36+00

Sheet Reference Number
S-2
Sheet 35 of 76

FILE NAME :$REQUEST

NEW ROADSIDE SIGN PANELS

NOTE:
ALL NEW SIGNS SHALL CONFORM TO THE 2012 EDITION OF THE CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

SHEET	DIRECTION	SIGN	SIGN TEXT	SIGN PANEL SIZE
S-1	EASTBOUND	R28(S)(CA)	NO STOPPING ANY TIME (WITH L. ARROW)	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		NOTICE SIGN	NOTICE ALL ROADS ARE FIRE LANES PARK IN MARKED STALLS ONLY VIOLATING VEHICLES WILL BE TOWED AWAY AT VEHICLE OWNER'S EXPENSE MUNICIPAL CODE 10. 40. 113 C.V.C. 22658(a)	18 x 24
		R2-1	SPEED LIMIT 45 MPH	30 x 36
		R81A(CA)	BEGIN	12 x 5
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		NOTICE SIGN	NOTICE ALL ROADS ARE FIRE LANES PARK IN MARKED STALLS ONLY VIOLATING VEHICLES WILL BE TOWED AWAY AT VEHICLE OWNER'S EXPENSE MUNICIPAL CODE 10. 40. 113 C.V.C. 22658(a)	18 x 24
		R1-1	STOP	30 x 30
		R28(S)(CA)	NO STOPPING ANY TIME (WITH R. ARROW)	12 x 18
		R24(CA)	PARK PARALLEL	12 x 18
	WESTBOUND	R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R2-1	SPEED LIMIT 45 MPH	30 x 36
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		W14-2	NO OUTLET	30 x 30
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R3-7	RIGHT LANE MUST TURN RIGHT	36 x 36
		R3-7	RIGHT LANE MUST TURN RIGHT	36 x 36
S-2	EASTBOUND	R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R81(CA)	BIKE LANE	12 x 5
		W74(CA)	THRU TRAFFIC MERGE RIGHT	36 X 36
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R2-1	SPEED LIMIT 45 MPH	30 x 36
		W73A(CA)	RIGHT LANE TURNS RIGHT AHEAD	36 X 36
		SR56(CA)	SIGNAL IS PHOTO ENFORCED	36 x 54
		R3-7R	RIGHT LANE MUST TURN RIGHT	36 x 36
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
	WESTBOUND	R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R81(CA)	BIKE LANE	12 x 5
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18

1

AS BUILT
NO CORRECTIONS THIS SHEET
BY Yujing Shao
DATE COMPLETED 9/9/14
CONTRACT # E2209342

RECEIVED
JUL 03 2014
BY:

COUNTY OF CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
1	MINOR MOD. TO TRAFFIC ITEMS	10/03/2013	B.A.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: BRANDON ARAUJO
PROFESSIONAL ENGINEER BRANDON ARAUJO 75996 Exp. 6-30-2014 CIVIL STATE OF CALIFORNIA
1/24/2013 DATE

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: #DATE#
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
SIGN QUANTITIES
STA 10+00 TO STA 36+00

Sheet Reference Number
SQ-1
Sheet 36 of 76

FILE NAME : $REQUEST

NEW ROADSIDE SIGN PANELS

NOTE:
ALL NEW SIGNS SHALL CONFORM TO THE 2012 EDITION OF THE CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

SHEET	DIRECTION	SIGN	SIGN TEXT	SIGN PANEL SIZE
S-1	EASTBOUND	R28(S)(CA)	NO STOPPING ANY TIME (WITH L. ARROW)	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		NOTICE SIGN	NOTICE ALL ROADS ARE FIRE LANES PARK IN MARKED STALLS ONLY VIOLATING VEHICLES WILL BE TOWED AWAY AT VEHICLE OWNER'S EXPENSE MUNICIPAL CODE 10. 40. 113 C.V.C. 22658(a)	18 x 24
		R2-1	SPEED LIMIT 45 MPH	30 x 36
		R81A(CA)	BEGIN	12 x 5
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		NOTICE SIGN	NOTICE ALL ROADS ARE FIRE LANES PARK IN MARKED STALLS ONLY VIOLATING VEHICLES WILL BE TOWED AWAY AT VEHICLE OWNER'S EXPENSE MUNICIPAL CODE 10. 40. 113 C.V.C. 22658(a)	18 x 24
		R1-1	STOP	30 x 30
		R28(S)(CA)	NO STOPPING ANY TIME (WITH R. ARROW)	12 x 18
		R24(CA)	PARK PARALLEL	12 x 18
	WESTBOUND	R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R2-1	SPEED LIMIT 45 MPH	30 x 36
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		W14-2	NO OUTLET	30 x 30
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R3-7	RIGHT LANE MUST TURN RIGHT	36 x 36
		R3-7	RIGHT LANE MUST TURN RIGHT	36 x 36
S-2	EASTBOUND	R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R81(CA)	BIKE LANE	12 x 5
		W74(CA)	THRU TRAFFIC MERGE RIGHT	36 X 36
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R2-1	SPEED LIMIT 45 MPH	30 x 36
		W73A(CA)	RIGHT LANE TURNS RIGHT AHEAD	36 X 36
		SR56(CA)	SIGNAL IS PHOTO ENFORCED	36 x 54
		R3-7R	RIGHT LANE MUST TURN RIGHT	36 x 36
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
	WESTBOUND	R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R81(CA)	BIKE LANE	12 x 5
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18

1

See Delta 1 with revision

AS BUILT
NO CORRECTIONS TO THIS SHEET
BY Yuy Lozo
DATE COMPLETED 9/9/14
CONTRACT # CR09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
1	MINOR MOD. TO TRAFFIC ITEMS	10/03/2013	B.A.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
BRANDON ARAUJO — DATE 1/24/2013

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME:
PLOT DATE: ROUTE#
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

RECEIVED NOV 05 2013 BY:

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

SIGN QUANTITIES
STA 10+00 TO STA 36+00

Sheet Reference Number
SQ-1

FILE NAME : $REQUEST

NEW ROAD SIDE SIGN PANELS

NOTE:
ALL NEW SIGNS SHALL CONFORM TO THE 2012 EDITION OF THE CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

SHEET	DIRECTION	SIGN	SIGN MESSAGE	SIGN PANEL SIZE
PD-1	EASTBOUND	NOTICE SIGN	NOTICE ALL ROADS ARE FIRE LANES PARK IN MARKED STALLS ONLY VIOLATING VEHICLES WILL BE TOWED AWAY AT VEHICLE OWNER'S EXPENSE MUNICIPAL CODE 10. 40. 113 C.V.C. 22658(a)	18 x 24
		R2-1	SPEED LIMIT 45 MPH	30 x 36
		R81A(CA)	BEGIN	12 x 5
		NOTICE SIGN	NOTICE ALL ROADS ARE FIRE LANES PARK IN MARKED STALLS ONLY VIOLATING VEHICLES WILL BE TOWED AWAY AT VEHICLE OWNER'S EXPENSE MUNICIPAL CODE 10. 40. 113 C.V.C. 22658(a)	18 x 24
		R1-1	STOP	30 x 30
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R28(S)(CA)(R)	NO STOPPING ANY TIME W/ARROW	12 x 18
		R28(S)(CA)(L)	NO STOPPING ANY TIME W/ARROW	12 x 18
		R24(CA)	PARK PARALLEL	12 x 18
	WESTBOUND	R2-1	SPEED LIMIT 45 MPH	30 X 36
		R3-7	RIGHT LANE MUST TURN RIGHT	36 X 36
		R3-7	RIGHT LANE MUST TURN RIGHT	36 X 36
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		W14-2	NO OUTLET	30 x 30
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
PD-2	EASTBOUND	R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R2-1	SPEED LIMIT	30 x 36
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		SR56(CA)	SIGNAL IS PHOTO ENFORCED	36 x 54
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R27(CA)	NO PARKING ON BRIDGE	12 x 18
		R27(CA)	NO PARKING ON BRIDGE	12 x 18
	WESTBOUND	R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R27(CA)	NO PARKING ON BRIDGE	12 x 18
		R27(CA)	NO PARKING ON BRIDGE	12 x 18
		R26(S)(CA)	NO STOPPING ANY TIME	12 x 18
		R81(CA)	BIKE LANE	12 x 8

See Revised sheet 36 of 76 Nov. 06 - 2013

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 6R09242

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
A	See Revision	Nov 2013	

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER BRANDON ARAUJO No. 73586 CIVIL STATE OF CALIFORNIA
BRANDON ARAUJO — DATE 1/24/2013

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME:
PLOT DATE: $DATE$
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
SIGN QUANTITIES
STA 10+00 TO STA 36+00

Sheet Reference Number
SQ-1

FILE NAME :$REQUEST

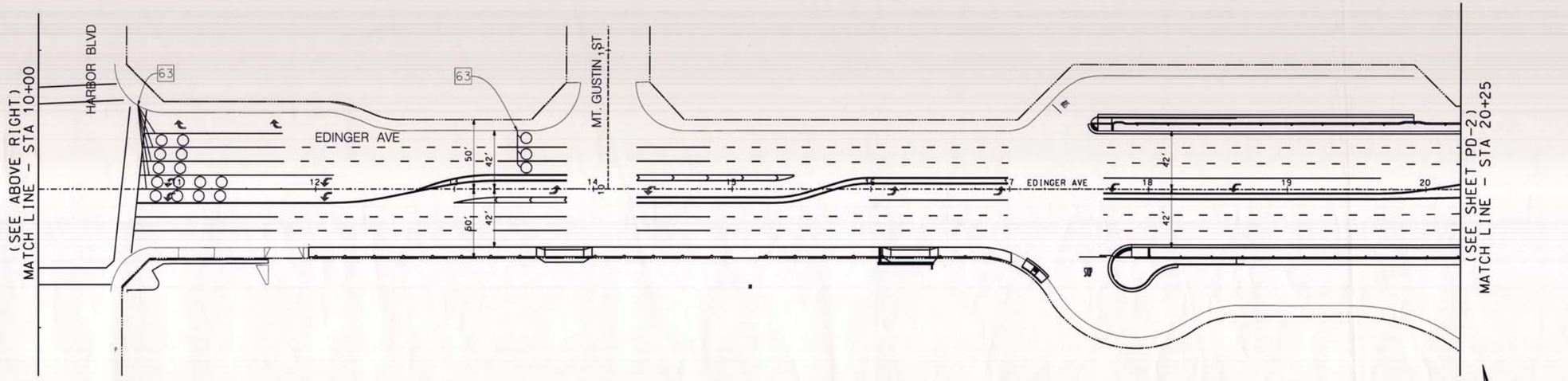
MISCELLANEOUS NOTES

63 REMOVE EXISTING LOOP DETECTORS AND REPLACE WITH TYPE E AS PER CALTRANS STANDARD PLAN ES-5B

LEGEND

TYPE IV ARROW

EXISTING LOOP DETECTOR



AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 01/9/14
CONTRACT # 07-09342

0 20 40 80
SCALE: 1" = 40'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER BRANDON ARAUJO No. 75996 Exp. 6/30/2014 STATE OF CALIFORNIA
1/24/2013
BRANDON ARAUJO DATE

DESIGNED BY: B. ARAUJO
DRAWN BY: B. ARAUJO
CHECKED BY: M. BISTA
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE$
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

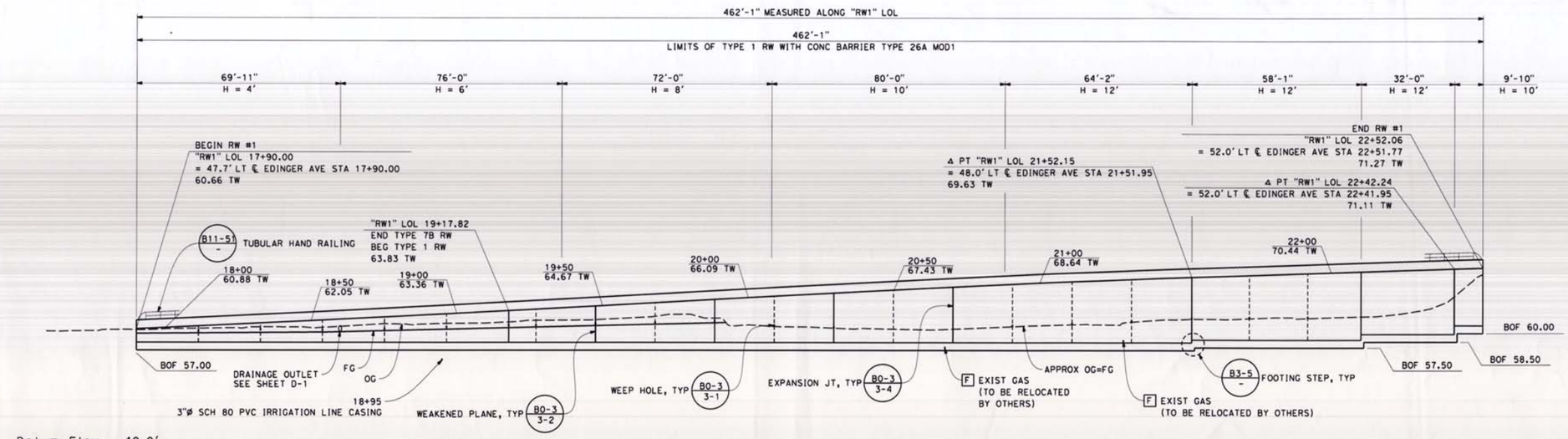
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

ELECTRICAL

STA 10+00 TO STA 20+25

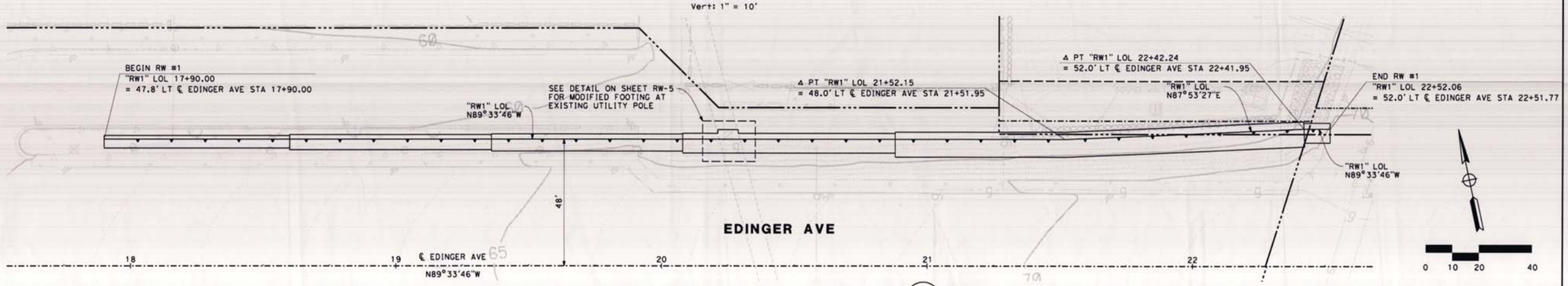
Sheet Reference Number
E-1

FILE NAME :$REQUEST

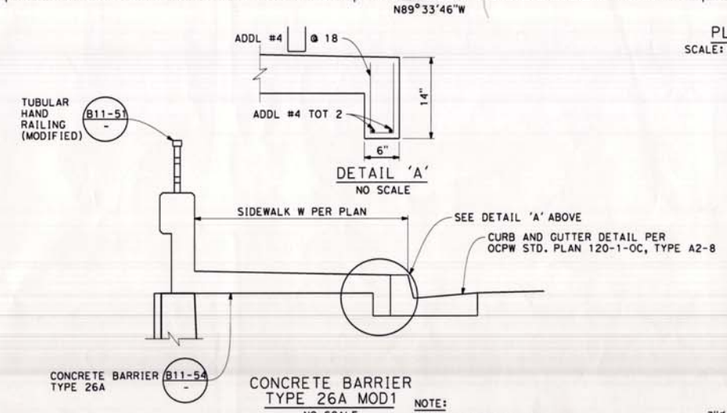


DEVELOPED ELEVATION (MIRRORED)

Horiz: 1" = 20'
Vert: 1" = 10'



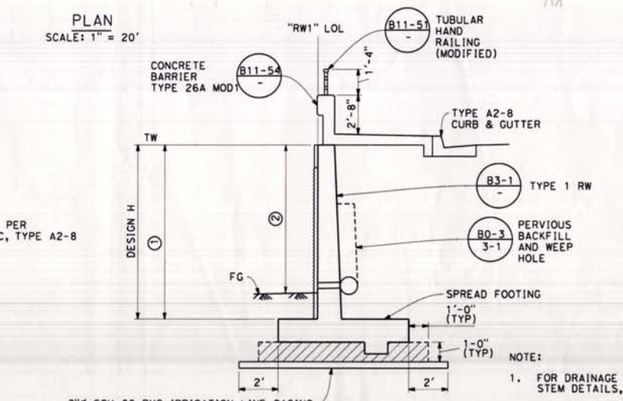
PLAN
SCALE: 1" = 20'



DETAIL 'A'
NO SCALE

CONCRETE BARRIER TYPE 26A MOD1
NO SCALE

NOTE:
1. FOR DETAILS AND REINFORCEMENT NOT SHOWN SEE CALTRANS STD PLAN B11-54



TYPICAL SECTION
NO SCALE

NOTE:
1. FOR DRAINAGE OUTLET THROUGH RETAINING WALL STEM DETAILS, SEE SHEET D-1
2. FOR LIMITS OF PAYMENT FOR RETAINING WALL STRUCTURE EXCAVATION AND BACKFILL, SEE CALTRANS STD PLAN A62B.
3. FOR TUBULAR HAND RAILING (MODIFIED) DETAIL, SEE SHEET ST-16.

AS BUILT
NO CORRECTIONS THIS SHEET
BY Yung Shao
DATE COMPLETED 9/9/14
CONTRACT # FR09342

LEGEND

BOF	BOTTOM OF FOOTING
TW	TOP OF WALL
	RIGHT-OF-WAY
	RETAINING WALL
	TEMPORARY CONSTRUCTION EASEMENT
	PERMANENT RETAINING WALL EASEMENT
	STANDARD PLAN SHEET NO.
	DETAIL NO.
	LIMITS OF OVEREXCAVATION
1	LIMITS OF SPLIT-FACE ARCHITECTURAL TREATMENT
2	LIMTS OF ANTI-GRAFFITI COATING

UTILITIES

- A AT&T
- B CITY OF FOUNTAIN VALLEY
- C ORANGE COUNTY SANITATION DISTRICT
- D ORANGE COUNTY WATER DISTRICT
- E SOUTHERN CALIFORNIA EDISON
- F SOUTHERN CALIFORNIA GAS
- G TIME WARNER CABLE

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: EDWARD NG — DATE 12/1/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: #DATE#
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

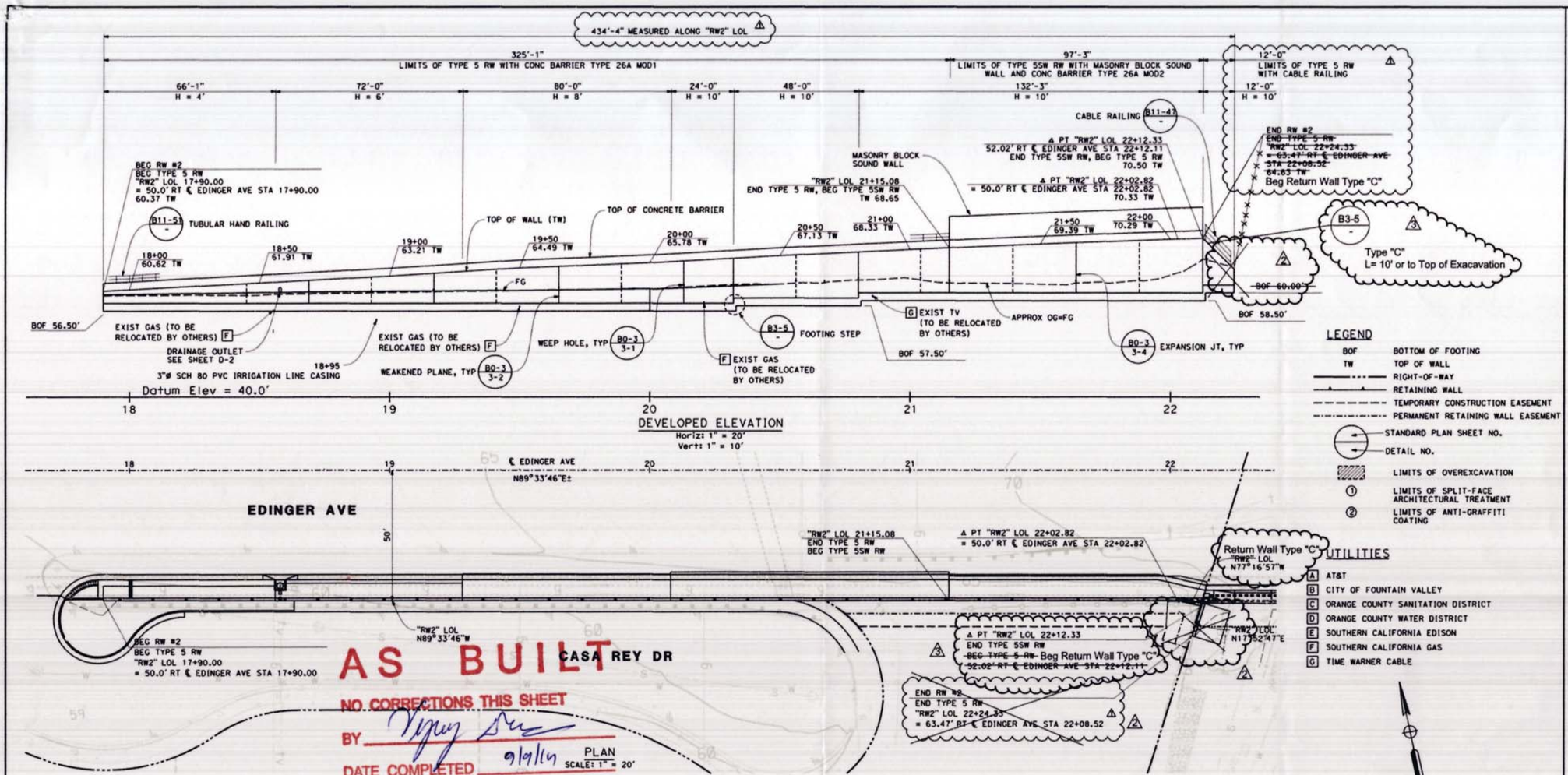
PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

RETAINING WALL NO. 1 LAYOUT

Sheet Reference Number
RW-1

FILE NAME : $REQUEST



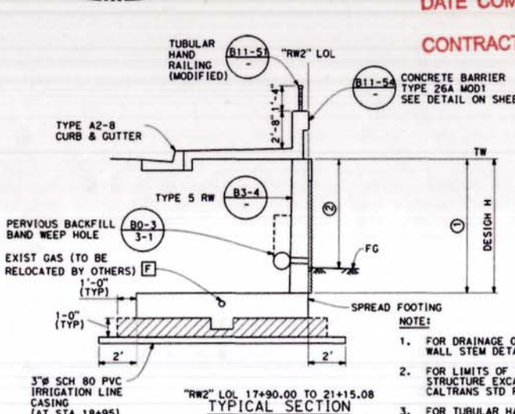
AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # EFC09342

LEGEND

BOF	BOTTOM OF FOOTING
TW	TOP OF WALL
	RIGHT-OF-WAY
	RETAINING WALL
	TEMPORARY CONSTRUCTION EASEMENT
	PERMANENT RETAINING WALL EASEMENT
	STANDARD PLAN SHEET NO.
	DETAIL NO.
	LIMITS OF OVEREXCAVATION
1	LIMITS OF SPLIT-FACE ARCHITECTURAL TREATMENT
2	LIMITS OF ANTI-GRAFFITI COATING

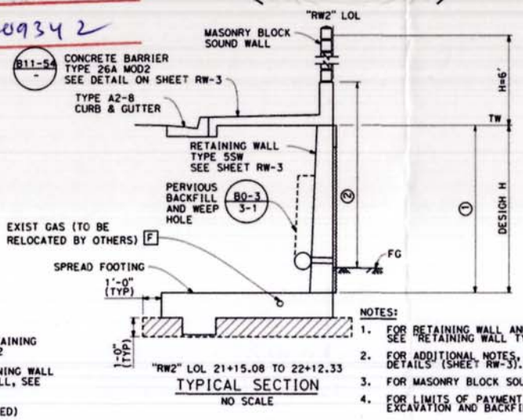
UTILITIES

- A AT&T
- B CITY OF FOUNTAIN VALLEY
- C ORANGE COUNTY SANITATION DISTRICT
- D ORANGE COUNTY WATER DISTRICT
- E SOUTHERN CALIFORNIA EDISON
- F SOUTHERN CALIFORNIA GAS
- G TIME WARNER CABLE



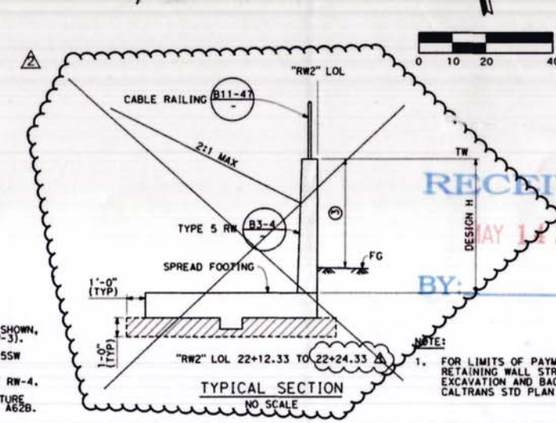
"RW2" LOL 17+90.00 TO 21+15.08
TYPICAL SECTION
NO SCALE

NOTE:
1. FOR DRAINAGE OUTLET THROUGH RETAINING WALL STEM DETAILS, SEE SHEET D-2
2. FOR LIMITS OF PAYMENT FOR RETAINING WALL STRUCTURE EXCAVATION AND BACKFILL, SEE CALTRANS STD PLAN A62B.
3. FOR TUBULAR HAND RAILING (MODIFIED) DETAIL, SEE SHEET ST-16.



"RW2" LOL 21+15.08 TO 22+12.33
TYPICAL SECTION
NO SCALE

NOTES:
1. FOR RETAINING WALL AND SOUND WALL DETAILS NOT SHOWN, SEE "RETAINING WALL TYPE 5SW DETAILS" (SHEET RW-3).
2. FOR ADDITIONAL NOTES, SEE "RETAINING WALL TYPE 5SW DETAILS" (SHEET RW-3).
3. FOR MASONRY BLOCK SOUNDWALL DETAILS, SEE SHEET RW-4.
4. FOR LIMITS OF PAYMENT FOR RETAINING WALL STRUCTURE EXCAVATION AND BACKFILL, SEE CALTRANS STD PLAN A62B.



"RW2" LOL 22+12.33 TO 22+24.33
TYPICAL SECTION
NO SCALE

NOTE:
1. FOR LIMITS OF PAYMENT FOR RETAINING WALL STRUCTURE EXCAVATION AND BACKFILL, SEE CALTRANS STD PLAN A62B.

RECEIVED
MAY 1 2014
BY:

COUNTY OF ORANGE CALIFORNIA

MARK	REVISED "RW2" CALLOUT	5/23/13	APPR.
	Delete Wall Portion	4/14/14	
	Add Return Wall	5/13/14	

PREPARED UNDER THE RESPONSIBLE CHARGE OF: EDWARD NG 1/24/13 DATE

DESIGNED BY: J. TAP, P. LAU
DRAWN BY: J. TAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: RFILE
PLOT DATE: 10/17/13
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

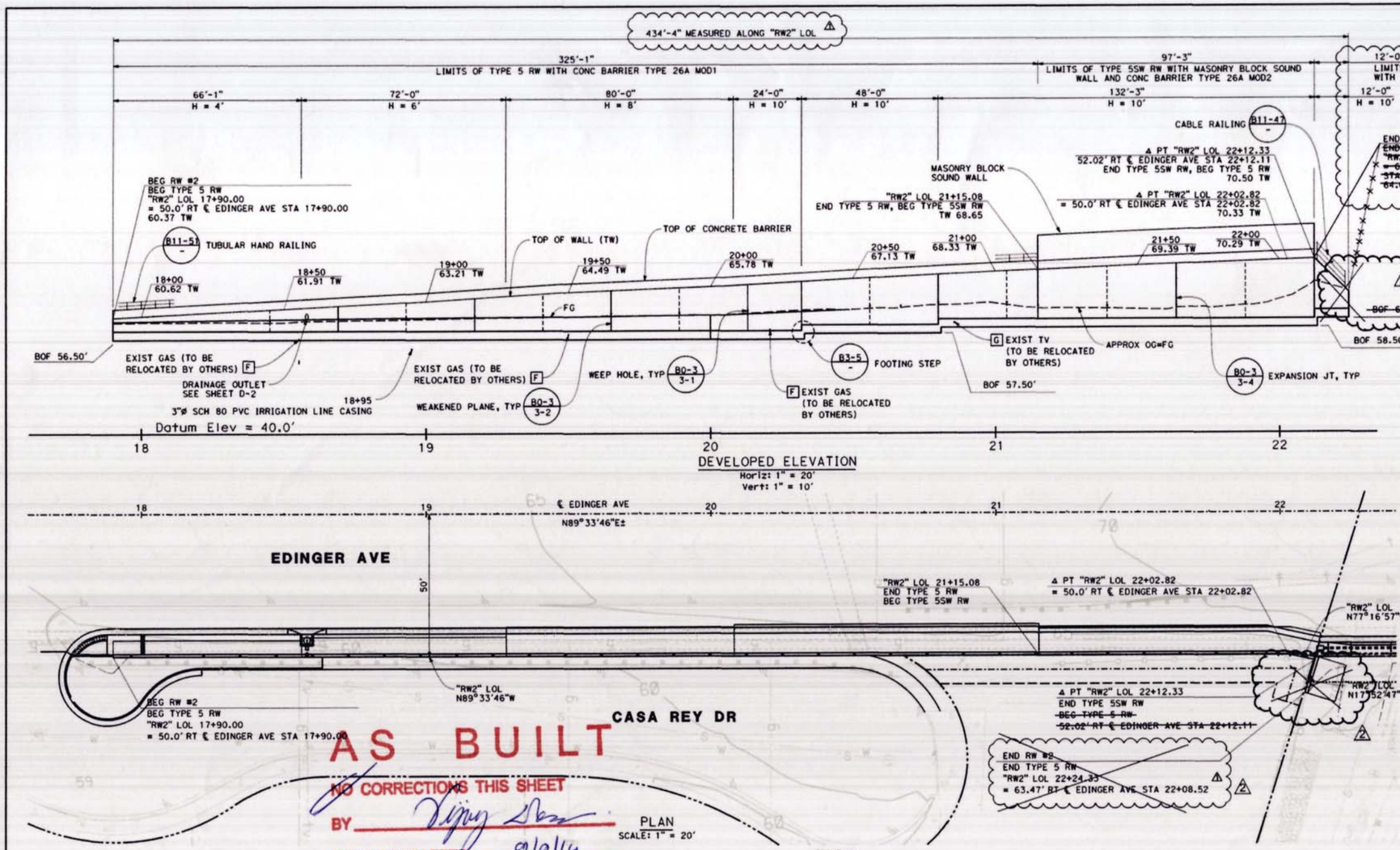
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT
BR. NO. 55C-0154

RETAINING WALL NO. 2 LAYOUT

Sheet Reference Number
RW-2

Sheet 39R2 of 76

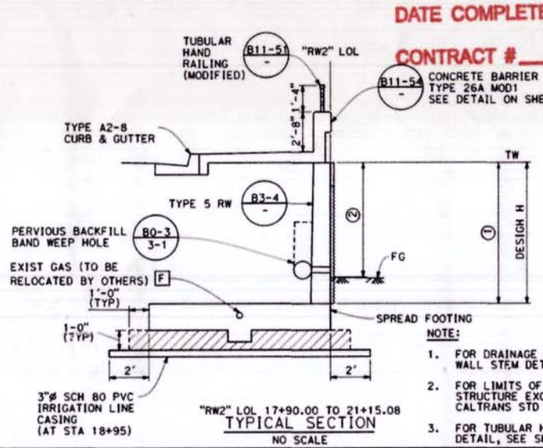
FILE NAME: REQUEST



DEVELOPED ELEVATION
Horiz: 1" = 20'
Vert: 1" = 10'

AS BUILT
NO CORRECTIONS THIS SHEET
BY Vijay Sharma
DATE COMPLETED 9/9/14
CONTRACT # 5R09242

PLAN
SCALE: 1" = 20'



"RW2" LOL 17+90.00 TO 21+15.08
TYPICAL SECTION
NO SCALE

NOTE:
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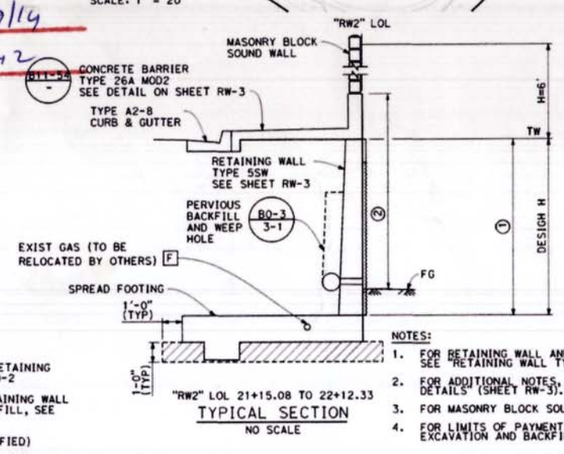
2. FOR LIMITS OF PAYMENT FOR RETAINING WALL STRUCTURE EXCAVATION AND BACKFILL, SEE CALTRANS STD PLAN A62B.
3. FOR TUBULAR HAND RAILING (MODIFIED) DETAIL, SEE SHEET ST-16.



"RW2" LOL 21+15.08 TO 22+12.33
TYPICAL SECTION
NO SCALE

NOTES:
1. FOR RETAINING WALL AND SOUND WALL DETAILS NOT SHOWN, SEE "RETAINING WALL TYPE 5SW DETAILS" (SHEET RW-3).
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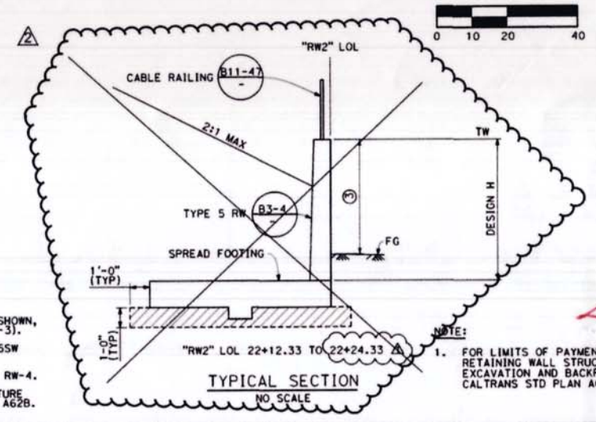


"RW2" LOL 22+12.33 TO 22+24.33
TYPICAL SECTION
NO SCALE

NOTE:
1. FOR LIMITS OF PAYMENT FOR RETAINING WALL STRUCTURE EXCAVATION AND BACKFILL, SEE CALTRANS STD PLAN A62B.

LEGEND

BOF	BOTTOM OF FOOTING
TW	TOP OF WALL
	RIGHT-OF-WAY
	RETAINING WALL
	TEMPORARY CONSTRUCTION EASEMENT
	PERMANENT RETAINING WALL EASEMENT
	STANDARD PLAN SHEET NO.
	DETAIL NO.
	LIMITS OF OVEREXCAVATION
1	LIMITS OF SPLIT-FACE ARCHITECTURAL TREATMENT
2	LIMITS OF ANTI-GRAFFITI COATING

UTILITIES

A	AT&T
B	CITY OF FOUNTAIN VALLEY
C	ORANGE COUNTY SANITATION DISTRICT
D	ORANGE COUNTY WATER DISTRICT
E	SOUTHERN CALIFORNIA EDISON
F	SOUTHERN CALIFORNIA GAS
G	TIME WARNER CABLE

RECEIVED
APR 15 2014
BY:

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.
2	Delete Wall Portion	4/14/14	
1	REVISED "RW2" CALLOUT	5/23/13	

PREPARED UNDER THE RESPONSIBLE CHARGE OF: EDWARD NG DATE 1/21/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME:
FILE
PLOT DATE: 10/17/13
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

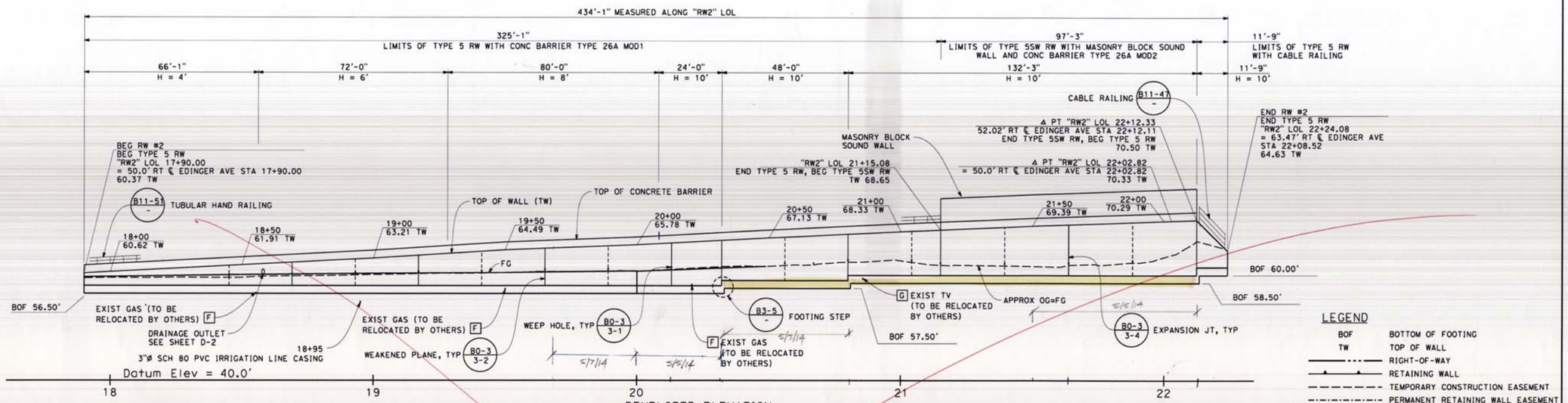
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT
BR. NO. 55C-0154

RETAINING WALL NO. 2 LAYOUT

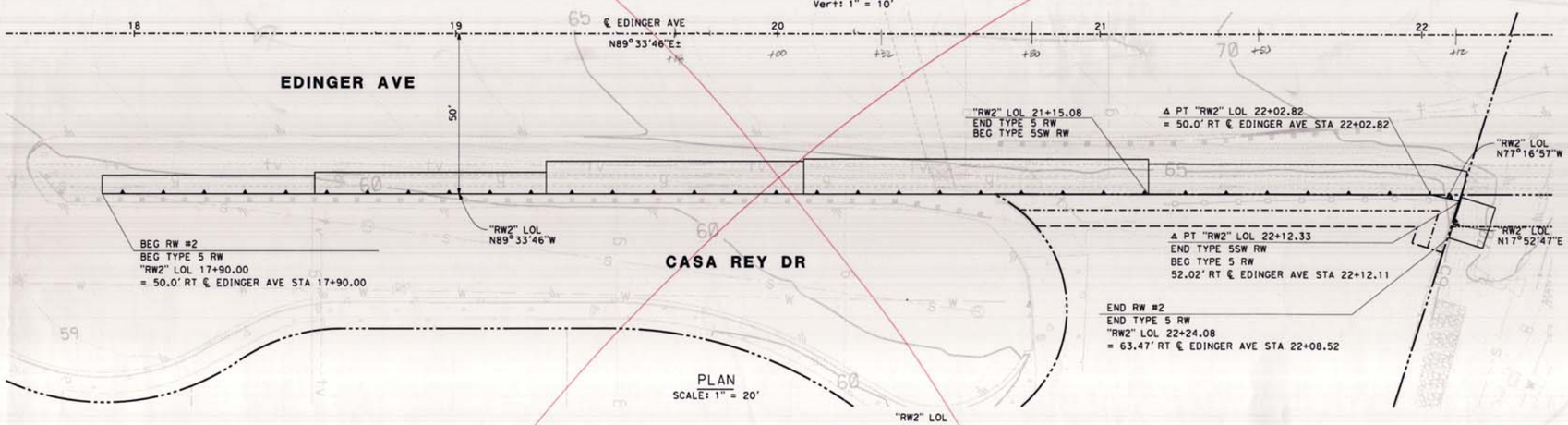
Sheet Reference Number
RW-2

Sheet 39R2 of 76

FILE NAME : $REQUEST



DEVELOPED ELEVATION
Horiz: 1" = 20'
Vert: 1" = 10'



PLAN
SCALE: 1" = 20'

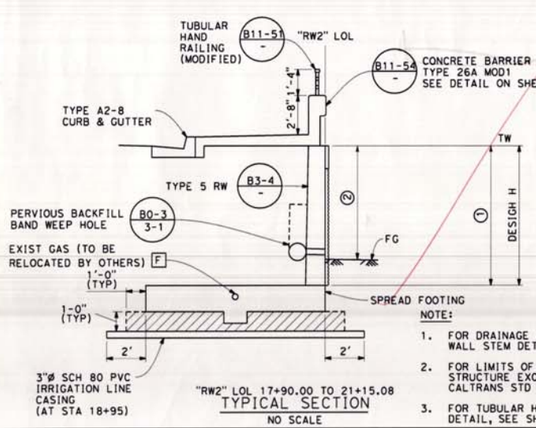
LEGEND

BOF	BOTTOM OF FOOTING
TW	TOP OF WALL
	RIGHT-OF-WAY
	RETAINING WALL
	TEMPORARY CONSTRUCTION EASEMENT
	PERMANENT RETAINING WALL EASEMENT
	STANDARD PLAN SHEET NO.
	DETAIL NO.
	LIMITS OF OVEREXCAVATION
1	LIMITS OF SPLIT-FACE ARCHITECTURAL TREATMENT
2	LIMITS OF ANTI-GRAFFITI COATING

UTILITIES

- A AT&T
- B CITY OF FOUNTAIN VALLEY
- C ORANGE COUNTY SANITATION DISTRICT
- D ORANGE COUNTY WATER DISTRICT
- E SOUTHERN CALIFORNIA EDISON
- F SOUTHERN CALIFORNIA GAS
- G TIME WARNER CABLE

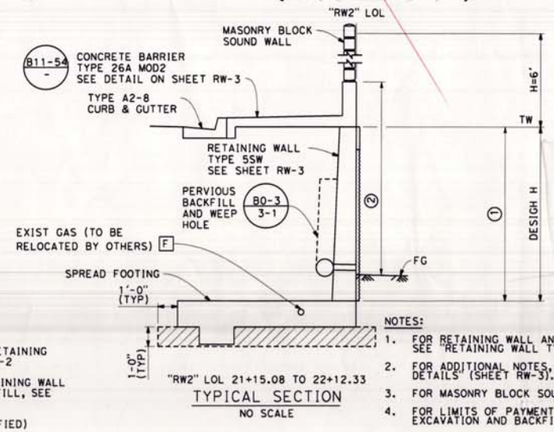
0 10 20 40



"RW2" LOL 17+90.00 TO 21+15.08
TYPICAL SECTION
NO SCALE

NOTE:

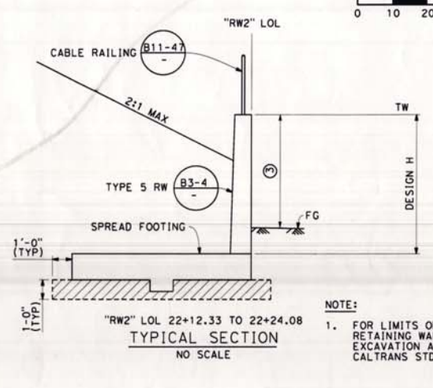
1. FOR DRAINAGE OUTLET THROUGH RETAINING WALL STEM DETAILS, SEE SHEET D-2
2. FOR LIMITS OF PAYMENT FOR RETAINING WALL STRUCTURE EXCAVATION AND BACKFILL, SEE CALTRANS STD PLAN A62B.
3. FOR TUBULAR HAND RAILING (MODIFIED) DETAIL, SEE SHEET ST-16.



"RW2" LOL 21+15.08 TO 22+12.33
TYPICAL SECTION
NO SCALE

NOTES:

1. FOR RETAINING WALL AND SOUND WALL DETAILS NOT SHOWN, SEE "RETAINING WALL TYPE 5SW DETAILS" (SHEET RW-3).
2. FOR ADDITIONAL NOTES, SEE "RETAINING WALL TYPE 5SW DETAILS" (SHEET RW-3).
3. FOR MASONRY BLOCK SOUNDWALL DETAILS, SEE SHEET RW-4.
4. FOR LIMITS OF PAYMENT FOR RETAINING WALL STRUCTURE EXCAVATION AND BACKFILL, SEE CALTRANS STD PLAN A62B.



"RW2" LOL 22+12.33 TO 22+24.08
TYPICAL SECTION
NO SCALE

NOTE:

1. FOR LIMITS OF PAYMENT FOR RETAINING WALL STRUCTURE EXCAVATION AND BACKFILL, SEE CALTRANS STD PLAN A62B.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: REGISTERED PROFESSIONAL ENGINEER EDWARD NG No. 61481 Exp. 6/30/15 CIVIL STATE OF CALIFORNIA
DATE 12/21/13
EDWARD NG

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: $FILE
PLOT DATE: $DATE
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
KEYLON
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

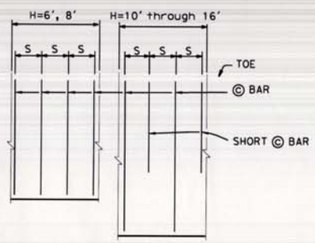
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

RETAINING WALL NO. 2 LAYOUT

Sheet Reference Number

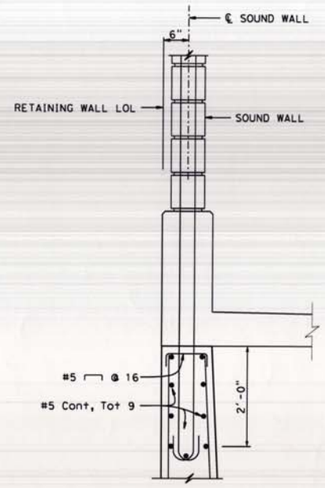
RW-2

FILE NAME : $REQUEST



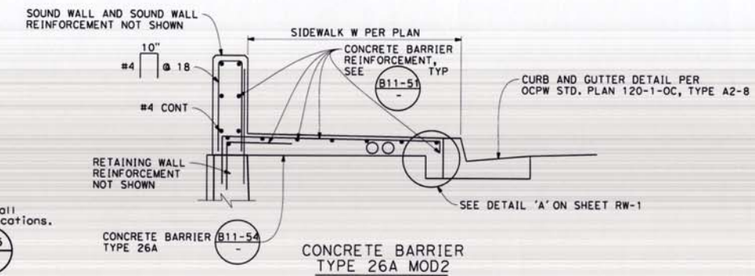
PLAN
NO SCALE

NOTES:
Only © bars shown
"S" is © bar spacing, see table
ℭ: 2 bar bundle



DETAIL A
No Scale

NOTES:
1. For retaining wall architectural finish or texture see details on Sheet RW-2. For sound wall architectural finish or texture see Project Specifications.
2. For details not shown and drainage notes, see B3-5
3. Footing cover, 1'-6" minimum
4. For sound wall reinforcement, see Sheet RW-4



CONCRETE BARRIER
TYPE 26A MOD2
NO SCALE

NOTE:
1. FOR DETAILS AND REINFORCEMENT NOT SHOWN SEE CALTRANS STD PLAN B11-51

DESIGN DATA

Design: AASHTO LRFD Bridge Design Specifications 4th edition with California Amendments

WS: 33 psf on sound wall

LS: Varied surcharge on level ground surface

EQE: Mononabe-Okabe Method
$K_h = 0.3$
$K_v = 0.0$

Soil: $\phi = 34°$
$\gamma = 120$ pcf

Reinforced Concrete: $f'c = 3600$ psi
$fy = 60{,}000$ psi

Load Combinations and Limit States

Service I $Q=1.00DC+1.00EV+1.00EH+1.00LS+0.30WS$

Service II $Q=1.00DC+1.00EV+1.00EH+1.00WS$

Strength I $Q=\alpha DC+\beta EV+1.50EH+1.75LS$

Strength III $Q=\alpha DC+\beta EV+1.50EH+1.40WS$

Strength V $Q=\alpha DC+\beta EV+1.50EH+1.35LS+0.40WS$

Extreme I $Q=1.00DC+1.00EV+1.00EH+1.00EQD+1.00EQE$

Where:

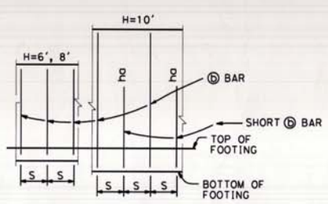
Q: Force Effects
α: 1.25 or 0.90, Which ever Controls Design
β: 1.35 or 1.00, which ever Controls Design
DC: Dead Load of Structure Components
EV: Vertical Earth Fill Pressure
LS: Live Load Surcharge
EQE: Seismic Earth Pressure
EQD: Soil and Structure Components Inertia. Soil inertia ignored for stem design
WS: Wind Load on Sound Wall and Barrier

TABLE OF REINFORCING STEEL DIMENSIONS AND DATA			
DESIGN H	6'	8'	10'
W	9'-0"	9'-0"	9'-6"
F SPREAD FOOTING	1'-3"	1'-3"	1'-3"
BATTER	0	½:12	½:12
ⓐ BARS			
ⓑ BARS	#8 @ 12	#8 @ 12	#7 @ 6
ha			5'-0"
hb			
© BARS	#7 @ 12	#8 @ 12	#7 @ 6
hz			3'-6"
SER I: B'(ft), q_a'(ksf)	7.5, 1.5	7.1, 1.9	7.2, 2.2
STR, Ia: B'(ft), q_a(ksf)	7.9, 2.9	7.4, 3.3	7.4, 3.7
STR, Ib: B'(ft), q_a(ksf)	6.0, 2.0	5.5, 2.5	5.6, 2.9
STR, IIIa: B'(ft), q_a(ksf)	6.0, 2.7	6.0, 3.0	6.4, 3.4
STR, IIIb: B'(ft), q_a(ksf)	5.3, 2.5	5.2, 2.8	5.5, 3.1
STR, Va: B'(ft), q_a(ksf)	7.5, 2.8	7.1, 3.2	7.2, 3.5
STR, Vb: B'(ft), q_a(ksf)	5.7, 2.2	5.3, 2.6	5.4, 3.0
Ext I: B'(ft), q_a(ksf)	4.0, 3.4	3.0, 4.7	2.5, 6.5

LEGEND:

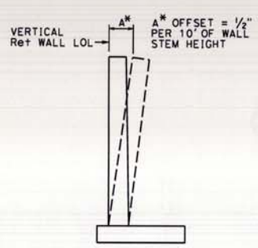
SER: service limit state
STR: strength limit state
EXT: extreme event limit state
B': effective footing width (ft)
q_a': net bearing stress (ksf)
q_a: gross uniform bearing stress (ksf)

ℭ: 2 bar bundle



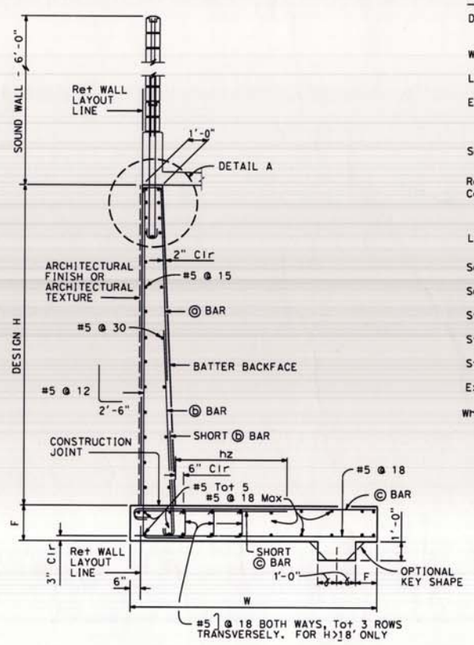
ELEVATION
NO SCALE

NOTES:
"ha" and "hb" above ⓑ bars indicate distance from top of footing to upper end of ⓑ bars, see table.
"S" is © bar spacing, see table.
ℭ: 2 bar bundle



WALL OFFSET

Values for offsetting forms to be determined by the engineer



SPREAD FOOTING SECTION
No Scale

AS BUILT
NO CORRECTIONS THIS SHEET
BY Vipin Arora
DATE COMPLETED 9/9/14
CONTRACT # E7R0934 2

NOTE: DETAILS BASED ON CALTRANS STANDARD DETAIL SHEET XS14-340-1 AND XS14-340-2 DATED JULY 2011.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: EDWARD NG — DATE 12/1/13

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/25/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

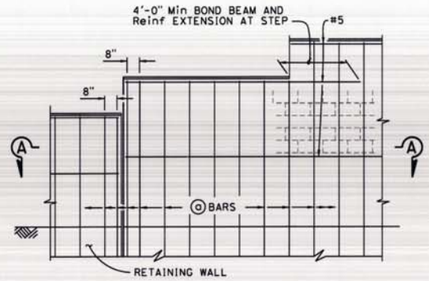
PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

RETAINING WALL
TYPE 5SW
DETAILS

Sheet Reference Number
RW-3

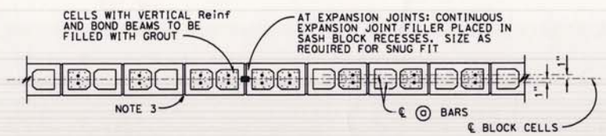
FILE NAME : \\usont1fs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\40_RW-3.dgn



H=6'-0" THRU H=10'-0"

PART ELEVATION

No scale



SECTION A-A

No scale

SOUND WALL REINFORCEMENT TABLE						
MAXIMUM "H"	⓪ BARS @ 1'-4" Max	ⓑ BARS @ 1'-4" Max	"Y"	f'm (psi)	COMPRESSIVE STRENGTH OF CMU (psi)	MAXIMUM "H"
6'-0"	#4	——	——	1500	1900	6'-0"
8'-0"	#4	——	——	1500	1900	8'-0"
10'-0"	#4	——	——	1500	1900	10'-0"

DESIGN NOTES

DESIGN

Uniform Building Code, 1997 Edition and the Bridge Design Specifications

DESIGN WIND LOAD

33 psf

DESIGN SEISMIC LOAD

0.57 Dead load

REINFORCED CONCRETE

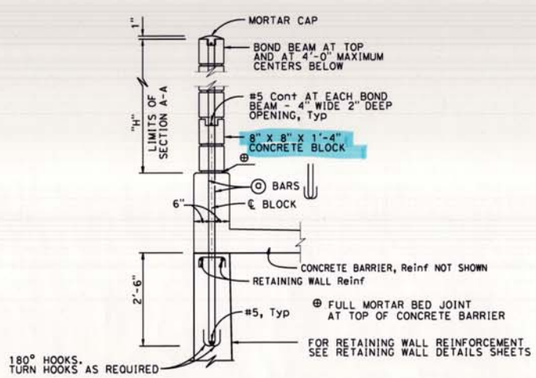
f'c = 3600 psi
fy = 60 ksi

CONCRETE MASONRY

REGULAR STRENGTH	HIGH STRENGTH	
f'm = 1500 psi	f'm = 2000 psi	f'm = 2500 psi
fb = 495 psi	fb = 660 psi	fb = 830 psi
fs = 24,000 psi	fs = 24,000 psi	fs = 24,000 psi
n = 25.8	n = 19.3	n = 15.5

NOTES:

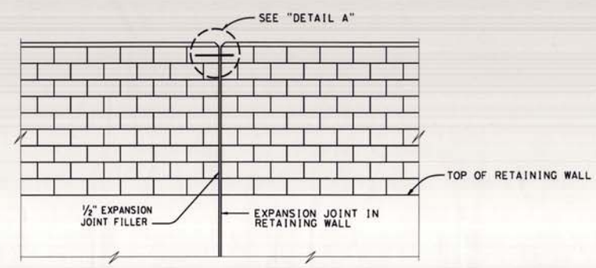
1. For type of block and joint finish, see Project Specifications.
2. When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 2 - 9 gauge wires continuous at 4'-0" maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond beams
3. Horizontal joints shall be tooled concave or may be weathered
   Vertical joints shall be tooled concave or may be raked
4. For intermediate wall heights that are between the "H's" given, use the tabular information for the next higher "H"
5. See STANDARD PLANS B15-9 for other details



H=6'-0" THRU H=10'-0"

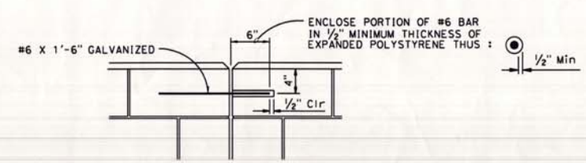
TYPICAL SECTION

No scale



ALIGNMENT KEY DETAIL

No scale



DETAIL A

No scale

AS BUILT
NO CORRECTIONS TO THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # E2R9342

NOTE: DETAILS BASED ON CALTRANS STANDARD DETAIL SHEET XS15-120-1 AND XS15-120-2 DATED JULY 2011.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER EDWARD NG No. 46167 Exp. 6/30/13 CIVIL STATE OF CALIFORNIA
12/21/13
EDWARD NG DATE

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: MFILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

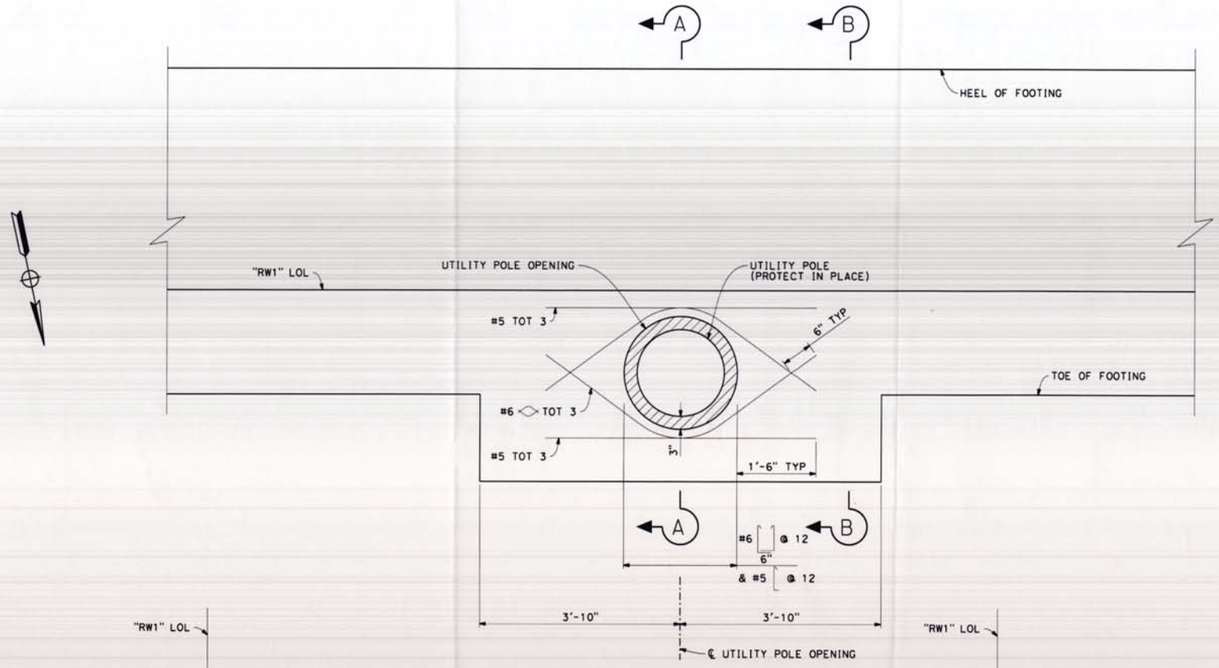
PREPARED BY:
KEYLON
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER
SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
MASONRY BLOCK
SOUND WALL
ON RETAINING WALL
DETAILS

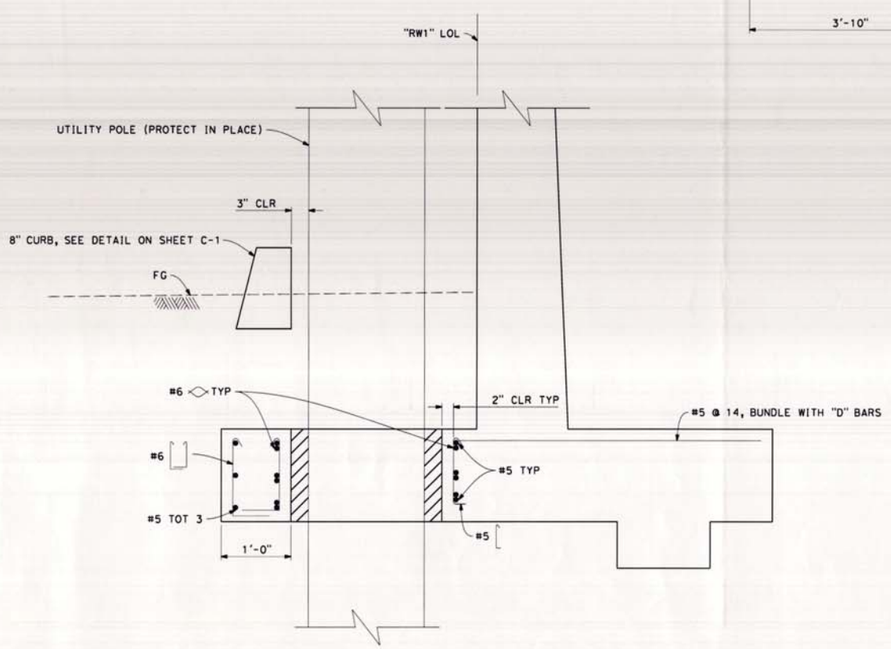
Sheet Reference Number

RW-4

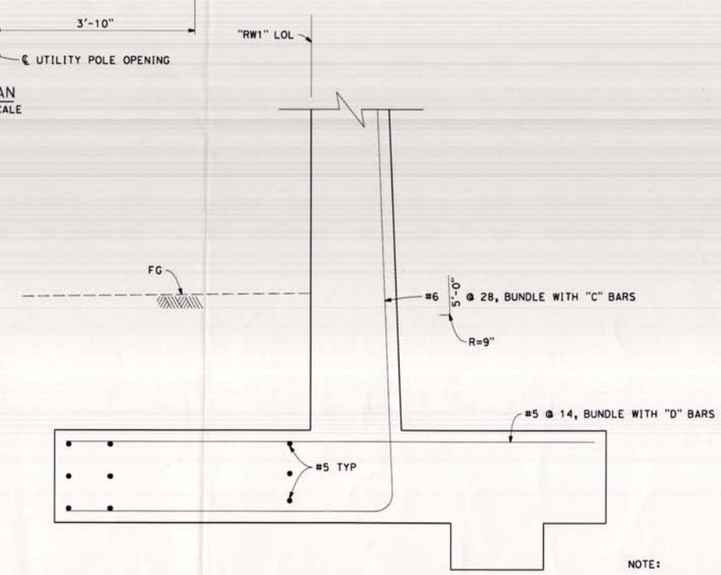
FILE NAME : \\usontlfs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\41_RW-4.dgn



PLAN
NO SCALE



SECTION A-A
NO SCALE



SECTION B-B
NO SCALE

NOTE:

1. REINFORCEMENT SHOWN SHALL BE PLACED IN ADDITION TO REQUIREMENTS OF CALTRANS STD PLAN B3-1.
2. TRIM CONFLICTING CALTRANS STANDARD PLAN B3-1 REINFORCEMENT 2" CEAR OF UTILITY POLE OPENING AS APPLICABLE.
3. CONTRACTOR TO COORDINATE WITH SCE TO PROTECT-IN-PLACE THE UTILITY POLE DURING CONSTRUCTION OF THE RETAINING WALL FOOTING.

LEGEND

3" EXPANDED POLYSTYRENE

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09342

MODIFIED RETAINING WALL FOOTING AT UTILITY POLE

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER
EDWARD NG
No. 46767
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA
1/21/13
DATE
EDWARD NG

DESIGNED BY: J. YAP, P. LAU
DRAWN BY: J. YAP
CHECKED BY: E. NG
DRAWING CODE:
FILE NAME: #FILE
PLOT DATE: 1/21/2013
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

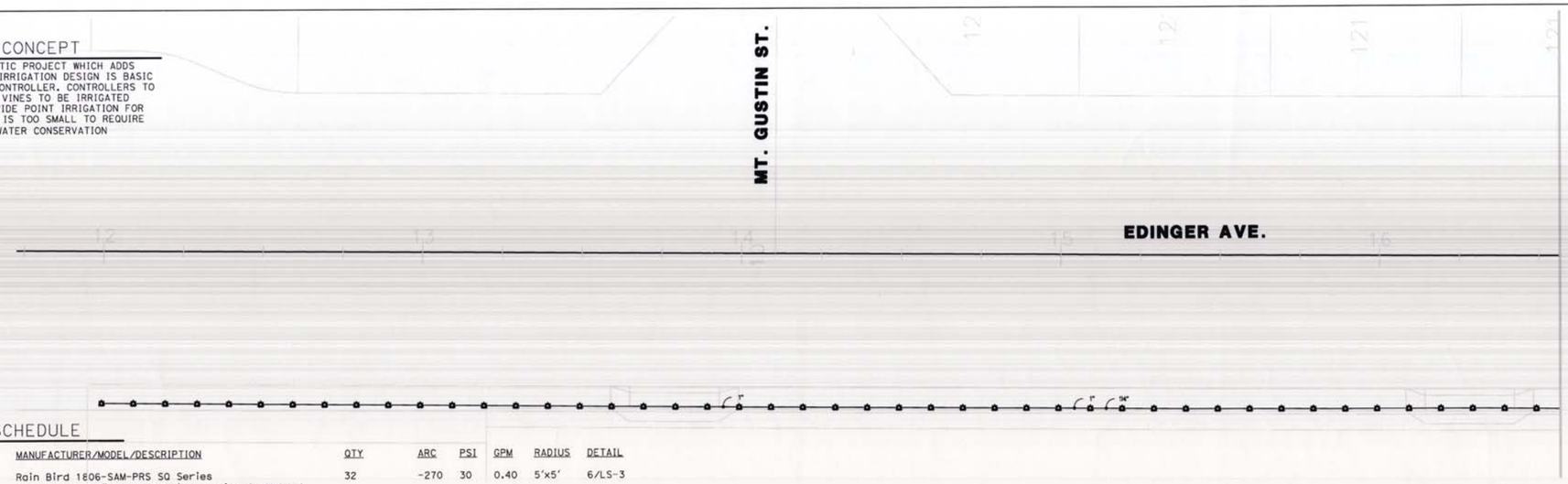
RETAINING WALL DETAILS

Sheet Reference Number
RW-5

FILE NAME : \\usont1fs001\tran_prod\projects\60241193 Edinger-Santa Ana\000_CAD\006_Civil\Sheets\42_RW-5.dgn

WATER CONSERVATION CONCEPT

THIS PROJECT IS A LANDSCAPE AESTHETIC PROJECT WHICH ADDS VINES TO EXISTING RETAINING WALLS. IRRIGATION DESIGN IS BASIC CONSISTING OF ONLY ONE VALVE PER CONTROLLER. CONTROLLERS TO BE BATTERY OPERATED. IRRIGATION OF VINES TO BE IRRIGATED USING POP-UP BUBBLER HEADS TO PROVIDE POINT IRRIGATION FOR IRRIGATION EFFICIENCY. PROJECT SIZE IS TOO SMALL TO REQUIRE "SMART CONTROLLERS" OR ADDITIONAL WATER CONSERVATION IRRIGATION CONTROL DEVICES.



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	PSI	GPM	RADIUS	DETAIL
	Rain Bird 1806-SAM-PRS SQ Series Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	32	-270	30	0.40	5'x5'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	3	360	30	1.05	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	3	180	30	0.52	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	1	90	30	0.26	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series VAN Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	9	Adj	30		8'	6/LS-3
	Rain Bird 1806-PRS-1400 Flood Flood Bubbler 6.0" popup with pressure regulating device.	108	360	30	0.25	1'	2/LS-3

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	DETAIL
	Rain Bird PESB 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Scrubber Technology for Reliable Performance in Dirty Water Irrigation Applications.	4	3/LS-3
	Rain Bird 44-LRC 1" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Thermoplastic Rubber Cover, and 2-Piece Body.	2	
	Nibco T-580-S6-R-66-LL Stainless steel ball valve shut off valve	2	4/LS-3
BF	Febco 825YA Reduced Pressure Backflow Preventer 1" In vandal resistant enclosure	1	5/LS-3
CA	Rain Bird TBOS-4CMUS and TBOS-FTUS Battery-Operated Controller, 4 station, with TBOS-FTUS field transmitter	1	
	Irrigation Lateral Line: PVC Schedule 40 PVC Schedule 40 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size.	1,606 l.f.	1/LS-4
	Irrigation Mainline: PVC Schedule 40	205.9 l.f.	1/LS-4
	Pipe Sleeve: PVC Schedule 40 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.	229.1 l.f.	2/LS-4

Valve Callout
- Valve Number
- Valve Flow
- Valve Size

IRRIGATION NOTES

1. This is a public works project and shall be installed per latest edition of 'Green Book' construction specifications.
2. Irrigation plans are diagrammatic. Irrigation mainline and valves to be installed in planter areas as possible.
3. Contractor to verify irrigation static pressure and available GPMs prior to construction to make sure existing conditions meet design requirements.
4. Contractor to verify all existing field conditions prior to construction. Contractor to immediately notify in writing project engineer and landscape architect of any discrepancy between existing site conditions and approved plans.
5. Contractor to install irrigation sleeving for all irrigation lines installed under concrete paving as specified.
6. Contractor to install all irrigation spray heads a minimum of 6 inches away from all paving or hardscape to ensure no irrigation overspray.
7. Contractor to review irrigation installation and adjust irrigation coverage to ensure no irrigation overspray onto hardscape, walkways and walls.
8. Contractor to install anti-drain check valves on all irrigation heads as needed to prevent low-head drainage of sprinkler systems.
9. Contractor to install an inline pressure regulator if existing static pressure is above recommended operating pressure.
10. Contractor to program irrigation valves to water within 8 hour window as designated per City of Fountain Valley guidelines. Contractor may program more than one to operate at once as long as require operating pressure is available for both valves during operation.
11. All irrigation equipment shall be installed per manufacturer's specifications.
12. Contractor shall maintain a clean and safe working environment. Day and night barricades must be provided for all open trenches.
13. See sheet LS-6 & LS-7 for irrigation details.
14. Landscape Architect of record shall conduct a final inspection of the project and certify that the project is installed by approved construction documents and in compliance with city and state AB-1881 Water Efficient Landscape Requirements.
15. Final Landscape maintenance responsibility once completed will be City of Fountain Valley.
16. Water efficient compliance/enforcemtnt shall be the responsibility of the City of Fountain Valley designated representative.
17. Water meter hook-up (By Others).
18. See sheet RW-1 & RW-2 for casing details at retaining wall footing.

AS BUILT
NO CORRECTIONS THIS SHEET
BY Vijay Nair
DATE COMPLETED 9/9/14
CONTRACT # ER09347

0 10 20 40
SCALE: 1" = 20'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: HARRY CLARKE DATE

DESIGNED BY: H. CLARKE
DRAWN BY: J. MCANINCH
CHECKED BY: H. CLARKE
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

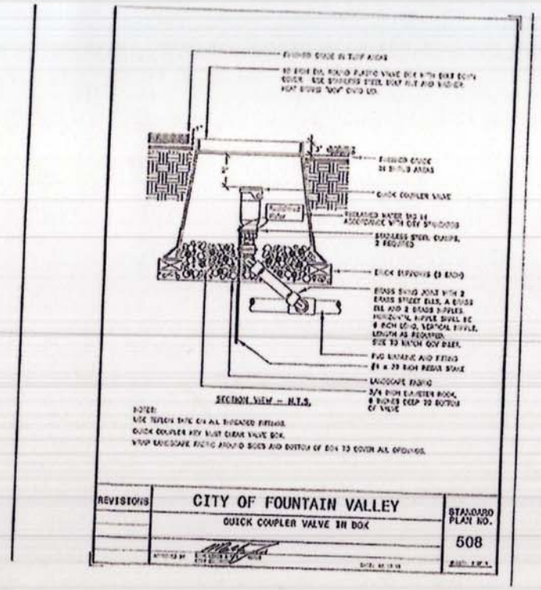
COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

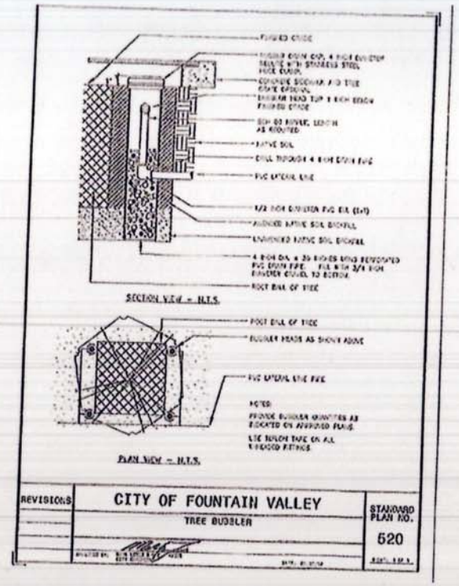
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

IRRIGATION PLAN

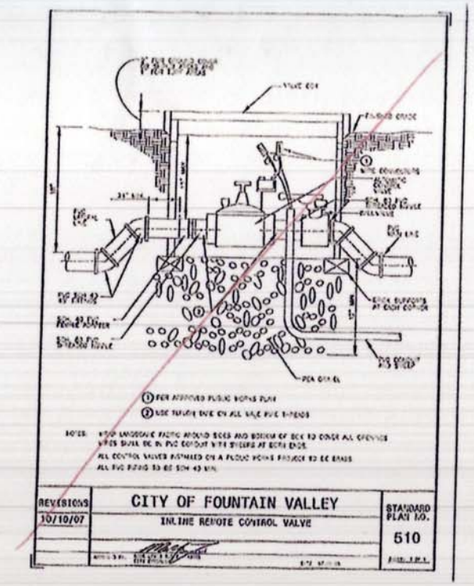
Sheet Reference Number
LS-1



1 QUICK COUPLER VALVE IN BOX
1" = 1'-0"
CFV-03

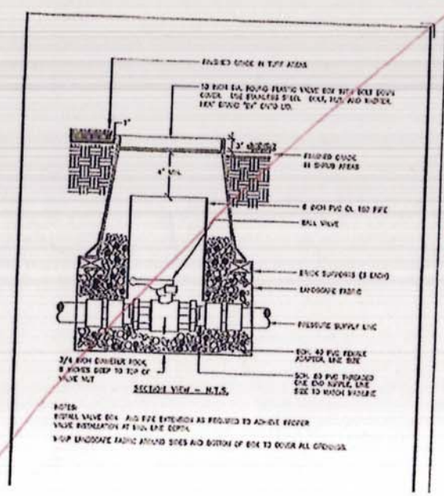


2 TREE BUBBLER
1" = 1'-0"
CFV-10

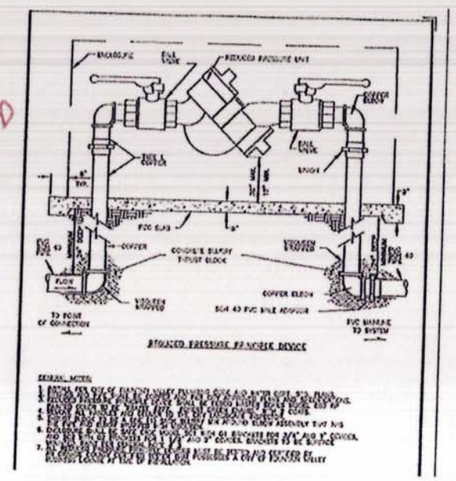


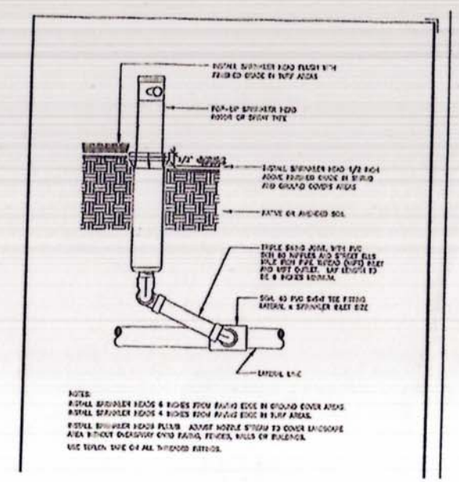
REVISE W/ New

3 REMOTE CONTROL VALVE
1" = 1'-0"
CFV-02



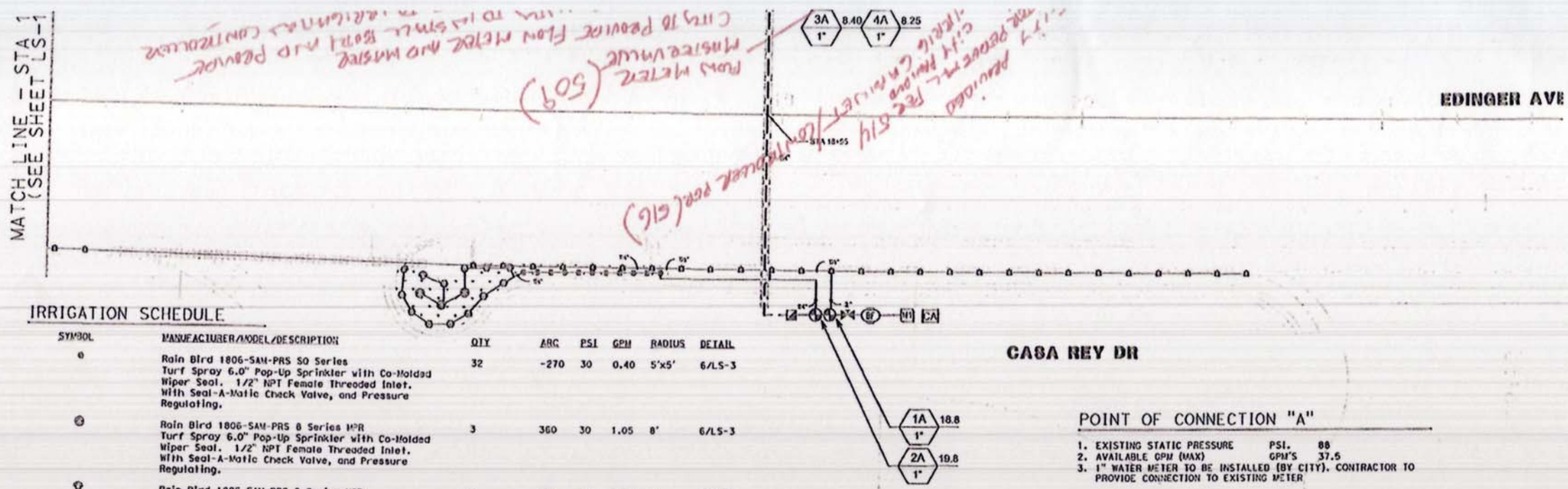
NEW FVSD 506





AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # CR09342

CCO # 3



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	PSI	GPM	RADIUS	DETAIL
	Rain Bird 1806-SAM-PRS SQ Series Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	32	-270	30	0.40	5'x5'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	3	360	30	1.05	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	3	180	30	0.52	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	1	90	30	0.26	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series VAN Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	9	Adj	30		8'	6/LS-3
A	Rain Bird 1806-PRS-1400 Flood Flood Bubbler 6.0" popup with pressure regulating device.	108	360	30	0.25	1'	2/LS-3

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	DETAIL
	Rain Bird PESB 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Scrubber Technology for Reliable Performance in Dirty Water Irrigation Applications.	4	3/LS-3
	Rain Bird 44-LRC 1" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Thermoplastic Rubber Cover, and 2-Piece Body.	2	
	Nibco T-580-S6-R-66-LL Stainless steel ball valve shut off valve	2	4/LS-3
BF	Febco 825YA Reduced Pressure Backflow Preventer 1" in vandal resistant enclosure	1	5/LS-3
CA	Rain Bird TBOS-4CMUS and TBOS-FTUS Battery-Operated Controller, 4 station, with TBOS-FTUS field transmitter	1	
	Irrigation Lateral Line: PVC Schedule 40 PVC Schedule 40 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size.	1,606 l.f.	1/LS-4

POINT OF CONNECTION "A"

1. EXISTING STATIC PRESSURE PSI. 88
2. AVAILABLE GPM (MAX) GPM'S 37.5
3. 1" WATER METER TO BE INSTALLED (BY CITY). CONTRACTOR TO PROVIDE CONNECTION TO EXISTING METER

CONTROLLER POINT OF CONNECTION

CONTRACTOR TO PROVIDE RAINBIRD BATTERY OPERATED IRRIGATION CONTROLLER INSTALLED BELOW GRADE INSIDE A CARSEN CONCRETE VALVE BOX.

IRRIGATION NOTES

1. This is a public works project and shall be installed per latest edition of 'Green Book' construction specifications.
2. Irrigation plans are diagrammatic. Irrigation mainline and valves to be installed in planter areas as possible.
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13. See sheet LS-6 & LS-7 for irrigation details.
14. Landscape Architect of record shall conduct a final inspection of the project and certify that the project is installed by approve documents and in compliance with city and state AB-1881 Water Efficient Landscape Requirements.
15. Final Landscape maintenance responsibility once completed will be City of Fountain Valley.
16. Water efficient compliance/enforcemint shall be the responsibility of the City of Fountain Valley designated representative.
17. Water meter hook-up (By Others).
18. See sheet RW-1 & RW-2 for casing details at retaining wall footing.

SMART CONTROLLERS OR ADDITIONAL WATER CONSERVATION IRRIGATION CONTROL DEVICES.

MT. GU

EDINGER AVE.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	PSI	GPM	RADIUS	DETAIL
	Rain Bird 1806-SAM-PRS 50 Series Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	32	-270	30	0.40	5'x5'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	3	360	30	1.05	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	3	180	30	0.52	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	1	90	30	0.26	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series VAN Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	9	Adj	30		8'	6/LS-3
A	Rain Bird 1806-PRS-1400 Flood Flood Bubbler 6.0" popup with pressure regulating device.	108	360	30	0.25	1'	2/LS-3

ALL CONTINUOUSLY PRESSURIZED IRRIGATION PIPE TO BE SCHED 40 COUNTS TO PROVIDE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	DETAIL
	Rain Bird PESB 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Scrubber Technology for Reliable Performance in Dirty Water Irrigation Applications.	4	3/LS-3
	Rain Bird 44-LRC 1" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Thermoplastic Rubber Cover, and 2-Piece Body.	2	
X	Nibco T-580-S6-R-66-LL Stainless steel ball valve shut off valve	2	4/LS-3
BF	Febco 825YA Reduced Pressure Backflow Preventer 1" in vandal resistant enclosure	1	5/LS-3
SA	Rain Bird TBOS-4CVUS and TBOS-FTUS Battery-Operated Controller, 4 station, with TBOS-FTUS field transmitter	1	
——	Irrigation Lateral Line: PVC Schedule 40 PVC Schedule 40 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size.	1,606 l.f.	1/LS-4

(EV STD. 510) WEATHERMATIC 8200 CITY WILL PROVIDE.

FORD VALVE (BRASS) CITY WILL PROVIDE (WSTD 506)

I.S. METER ENCLOSE AND 2D CONTROL CABINET

IRRIGATION NOTES

1. This is a public works project and shall be installed per latest edition of 'Green Book' construction specifications.
2. Irrigation plans are diagrammatic. Irrigation mainline and valves to be installed in planter areas as possible.
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4. Contractor to verify all existing field conditions prior to construction. Contractor to immediately notify in writing project enginee architect of any discrepancy between existing site conditions and approved plans.
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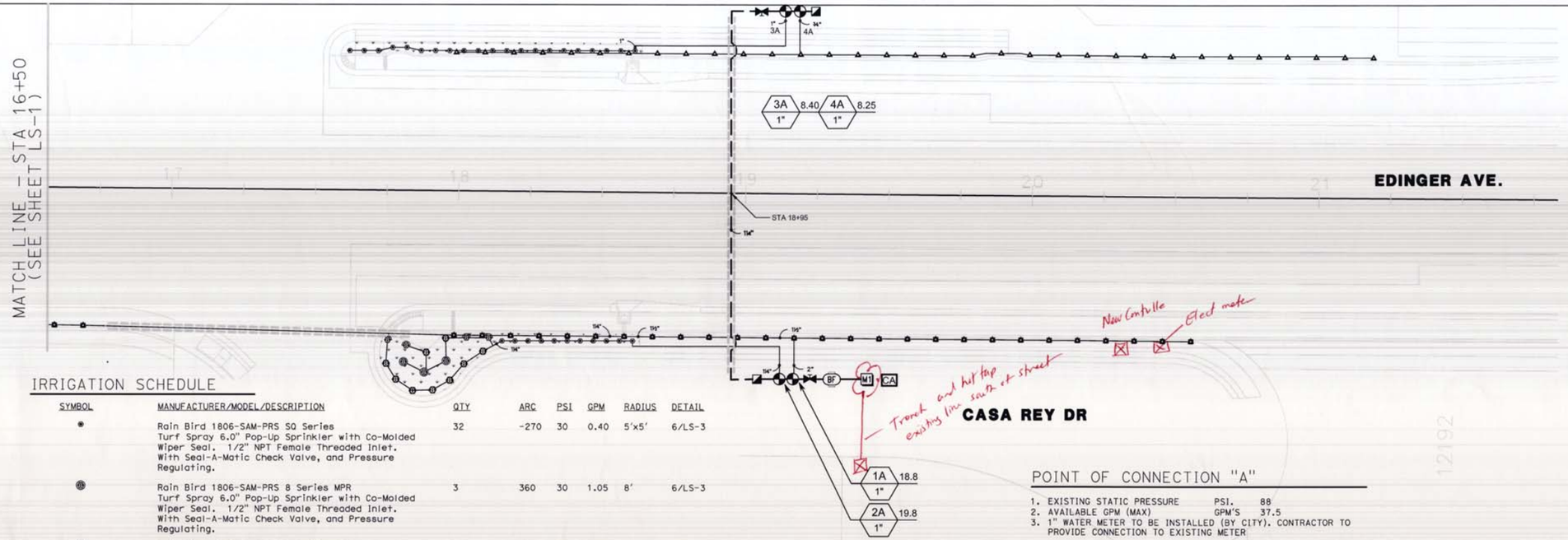
6. Contractor to install all irrigation spray heads a minimum of 6 inches away from all paving or hardscape to ensure no irrigation ove
7. Contractor to review irrigation installation and adjust irrigation coverage to ensure no irrigation overspray onto hardscape, walkway
8. Contractor to install anti-drain check valves on all irrigation heads as needed to prevent low-head drainage of sprinkler systems.
9. Contractor to install an inline pressure regulator if existing static pressure is above recommended operating pressure.
10. Contractor to program irrigation valves to water within 8 hour window as designated per City of Fountain Valley guidelines. Contract more than one to operate at once as long as require operating pressure is available for both valves during operation.
11. All irrigation equipment shall be installed per manufacturer's specifications.
12. Contractor shall maintain a clean and safe working environment. Day and night barricades must be provided for all open trenches.
13. See sheet LS-6 & LS-7 for irrigation details.
14. Landscape Architect of record shall conduct a final inspection of the project and certify that the project is installed by approved documents and in compliance with city and state AB-1881 Water Efficient Landscape Requirements.
15. Final Landscape maintenance responsibility once completed will be City of Fountain Valley.
16. Water efficient compliance/enforcement shall be the responsibility of the City of Fountain Valley designated representative.
17. Water meter hook-up (By Others).
18. See sheet RW-1 & RW-2 for casing details at retaining wall footing.



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	PSI	GPM	RADIUS	DETAIL
	Rain Bird 1806-SAM-PRS SQ Series Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	32	-270	30	0.40	5'x5'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	3	360	30	1.05	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	3	180	30	0.52	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	1	90	30	0.26	8'	6/LS-3
	Rain Bird 1806-SAM-PRS 8 Series VAN Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	9	Adj	30		8'	6/LS-3
	Rain Bird 1806-PRS-1400 Flood Flood Bubbler 6.0" popup with pressure regulating device.	108	360	30	0.25	1'	2/LS-3

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	DETAIL
	Rain Bird PESB 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Scrubber Technology for Reliable Performance in Dirty Water Irrigation Applications.	4	3/LS-3
	Rain Bird 44-LRC 1" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Thermoplastic Rubber Cover, and 2-Piece Body.	2	
	Nibco T-580-S6-R-66-LL Stainless steel ball valve shut off valve	2	4/LS-3
BF	Febco 825YA Reduced Pressure Backflow Preventer 1" In vandal resistant enclosure	1	5/LS-3
CA	Rain Bird TBOS-4CMUS and TBOS-FTUS Battery-Operated Controller, 4 station, with TBOS-FTUS field transmitter	1	
	Irrigation Lateral Line: PVC Schedule 40 PVC Schedule 40 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size.	1,606 l.f.	1/LS-4
	Irrigation Mainline: PVC Schedule 40	205.9 l.f.	1/LS-4
	Pipe Sleeve: PVC Schedule 40 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.	229.1 l.f.	2/LS-4

Valve Callout
- Valve Number
- Valve Flow
- Valve Size

POINT OF CONNECTION "A"

1. EXISTING STATIC PRESSURE PSI. 88
2. AVAILABLE GPM (MAX) GPM'S 37.5
3. 1" WATER METER TO BE INSTALLED (BY CITY). CONTRACTOR TO PROVIDE CONNECTION TO EXISTING METER

CONTROLLER POINT OF CONNECTION

CONTRACTOR TO PROVIDE RAINBIRD BATTERY OPERATED IRRIGATION CONTROLLER INSTALLED BELOW GRADE INSIDE A CARSEN CONCRETE VALVE BOX.

IRRIGATION NOTES

1. This is a public works project and shall be installed per latest edition of 'Green Book' construction specifications.
2. Irrigation plans are diagrammatic. Irrigation mainline and valves to be installed in planter areas as possible.
3. Contractor to verify irrigation static pressure and available GPMs prior to construction to make sure existing conditions meet design requirements.
4. Contractor to verify all existing field conditions prior to construction. Contractor to immediately notify in writing project engineer and landscape architect of any discrepancy between existing site conditions and approved plans.
5. Contractor to install irrigation sleeving for all irrigation lines installed under concrete paving as specified.
6. Contractor to install all irrigation spray heads a minimum of 6 inches away from all paving or hardscape to ensure no irrigation overspray.
7. Contractor to review irrigation installation and adjust irrigation coverage to ensure no irrigation overspray onto hardscape, walkways and walls.
8. Contractor to install anti-drain check valves on all irrigation heads as needed to prevent low-head drainage of sprinkler systems.
9. Contractor to install an inline pressure regulator if existing static pressure is above recommended operating pressure.
10. Contractor to program irrigation valves to water within 8 hour window as designated per City of Fountain Valley guidelines. Contractor may program more than one to operate at once as long as require operating pressure is available for both valves during operation.
11. All irrigation equipment shall be installed per manufacturer's specifications.
12. Contractor shall maintain a clean and safe working environment. Day and night barricades must be provided for all open trenches.
13. See sheet LS-6 & LS-7 for irrigation details.
14. Landscape Architect of record shall conduct a final inspection of the project and certify that the project is installed by approved construction documents and in compliance with city and state AB-1881 Water Efficient Landscape Requirements.
15. Final Landscape maintenance responsibility once completed will be City of Fountain Valley.
16. Water efficient compliance/enforcemtnt shall be the responsibility of the City of Fountain Valley designated representative.
17. Water meter hook-up (By Others).
18. See sheet RW-1 & RW-2 for casing details at retaining wall footing.

IRRIGATION SYSTEM DESIGN PRESSURE

SYSTEM REQUIRES A MINIMUM OF 20 GPM'S AND 60 PSI. TO OPERATE AS DESIGNED.

CCO #3 for more details

AS BUILT
NO CORRECTIONS THIS SHEET
BY Tony Deza
DATE COMPLETED 9/9/14
CONTRACT # 15-09-342

0 10 20 40
SCALE: 1" = 20'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: HARRY CLARKE DATE

DESIGNED BY: H. CLARKE
DRAWN BY: J. MCANINCH
CHECKED BY: H. CLARKE
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

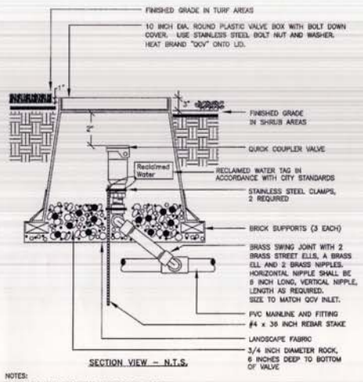
COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT
BR. NO. 55C-0154

IRRIGATION PLAN

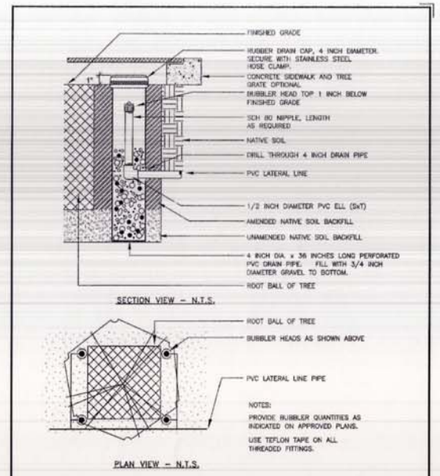
Sheet Reference Number
LS-2



NOTES:
USE TEFLON TAPE ON ALL THREADED FITTINGS.
QUICK COUPLER KEY MUST CLEAR VALVE BOX.
WRAP LANDSCAPE FABRIC AROUND SIDES AND BOTTOM OF BOX TO COVER ALL OPENINGS.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	QUICK COUPLER VALVE IN BOX	508
	APPROVED BY: MARK LEACH P.E. CITY ENGINEER 74056 DATE: 08/03/08	SHEET: 1 OF 1

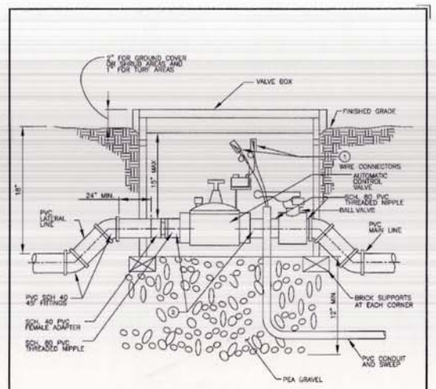
1 QUICK COUPLER VALVE IN BOX
1" = 1'-0" CFV-08



NOTES:
PROVIDE BUBBLER QUANTITIES AS INDICATED ON APPROVED PLANS.
USE TEFLON TAPE ON ALL THREADED FITTINGS.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	TREE BUBBLER	520
	APPROVED BY: MARK LEACH P.E. CITY ENGINEER 74056 DATE: 08/03/08	SHEET: 1 OF 1

2 TREE BUBBLER
1" = 1'-0" CFV-10

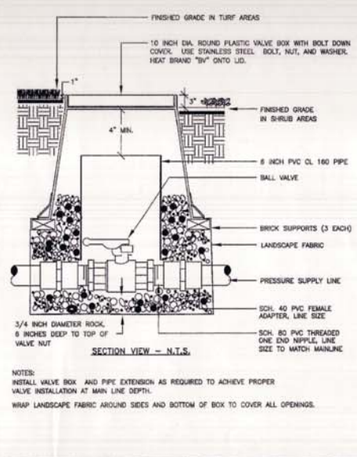


1 PER APPROVED PUBLIC WORKS PLAN
2 USE TEFLON TAPE ON ALL MALE PIPE THREADS

NOTES: WRAP LANDSCAPE FABRIC AROUND SIDES AND BOTTOM OF BOX TO COVER ALL OPENINGS
WIRES SHALL BE IN PVC CONDUIT WITH SWEEPS AT BOTH ENDS.
ALL CONTROL VALVES INSTALLED ON A PUBLIC WORKS PROJECT TO BE BRASS.
ALL PVC PIPING TO BE SCH 40 MIN.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
10/10/07	INLINE REMOTE CONTROL VALVE	510
	APPROVED BY: MARK LEACH P.E. CITY ENGINEER 74056 DATE: 08/03/08	SHEET: 1 OF 1

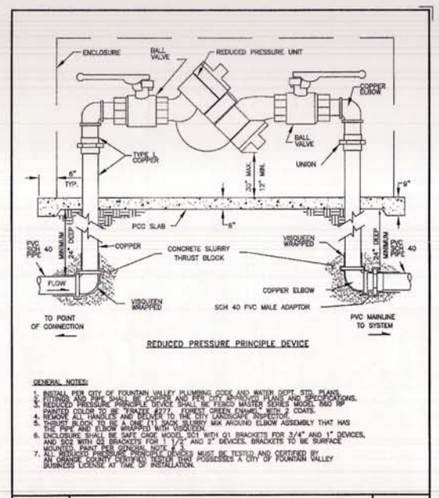
3 REMOTE CONTROL VALVE
1" = 1'-0" CFV-02



NOTES:
INSTALL VALVE BOX AND PIPE EXTENSION AS REQUIRED TO ACHIEVE PROPER VALVE INSTALLATION AT MAIN LINE DEPTH.
WRAP LANDSCAPE FABRIC AROUND SIDES AND BOTTOM OF BOX TO COVER ALL OPENINGS.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	BALL VALVE 2 INCHES AND SMALLER	506
	APPROVED BY: MARK LEACH P.E. CITY ENGINEER 74056 DATE: 08/03/08	SHEET: 1 OF 1

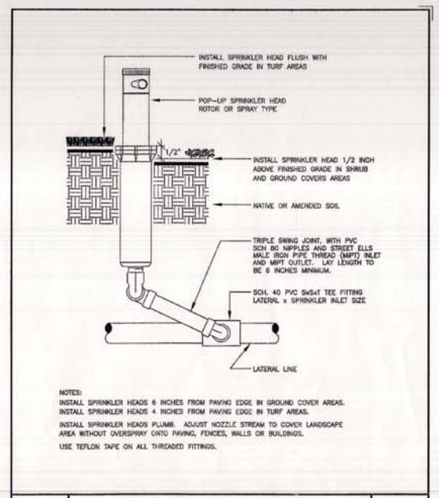
4 BALL VALVE
1" = 1'-0" CFV-01



GENERAL NOTES:
1. INSTALL PER CITY OF FOUNTAIN VALLEY PLUMBING CODE AND WATER DEPT. STD. PLANS.
2. FITTINGS AND PIPE SHALL BE COPPER AND PER CITY APPROVED PLANS AND SPECIFICATIONS.
3. REDUCED PRESSURE PRINCIPLE DEVICE SHALL BE FEBCO MASTER SERIES MODEL 880 BP
4. PAINTED COLOR TO BE "SPARTA KOTE" FOREST GREEN ENAMEL WITH 2 COATS.
5. REMOVE ALL HANDLES AND DELIVER TO THE CITY LANDSCAPE INSPECTOR.
6. THE RPP DOT FLUSH ASSEMBLY SHALL HAVE MIX AROUND ELBOW ASSEMBLY THAT HAS A 3/4" BRASS ELBOW WITH NOZZLE.
7. ENCLOSURE SHALL BE SAFE CAGE MODEL 2-4, WITH Q1 BRACKETS FOR 3/4" AND 1" DEVICES, AND WITH Q3 BRACKETS FOR MODEL 1-1/2 AND 2" DEVICES. BRACKETS TO BE SURFACE MOUNTED. PAINT RED SPHERICAL NUTS.
8. ALL REDUCED PRESSURE PRINCIPLE DEVICES MUST BE TESTED AND CERTIFIED BY AN ORANGE COUNTY CERTIFIED TESTER THAT POSSESSES A CITY OF FOUNTAIN VALLEY BUSINESS LICENSE AT TIME OF INSTALLATION.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	REDUCED PRESSURE PRINCIPAL DEVICE (CITY OWNED AND MAINTAINED DEVICES)	523
	APPROVED BY: MARK LEACH P.E. CITY ENGINEER 74056 DATE: 08/03/08	SHEET: 1 OF 1

5 REDUCED PRESSURE BACKFLOW
1" = 1'-0" CFV-04



NOTES:
INSTALL SPRINKLER HEADS 6 INCHES FROM PAVING EDGE IN GROUND COVER AREAS.
INSTALL SPRINKLER HEADS 4 INCHES FROM PAVING EDGE IN TURF AREAS.
INSTALL SPRINKLER HEADS PLUMB. ADJUST NOZZLE STREAM TO COVER LANDSCAPE AREA WITHOUT OVERSPRAY ONTO PAVING, FENCES, WALLS OR BUILDINGS.
USE TEFLON TAPE ON ALL THREADED FITTINGS.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	POP-UP SPRINKLER (6 INCH)	522-2
	APPROVED BY: MARK LEACH P.E. CITY ENGINEER 74056 DATE: 08/03/08	SHEET: 2 OF 2

6 POP-UP SPRINKLER (6 INCH)
1" = 1'-0" CFV-03

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # E2209242

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: HARRY CLARKE DATE

DESIGNED BY: H. CLARKE
DRAWN BY: J. MCANINCH
CHECKED BY: H. CLARKE
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

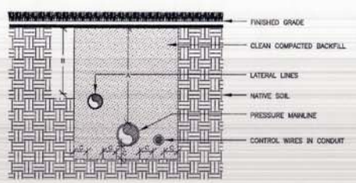
COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL WIDENING PROJECT
BR. NO. 55C-0154

IRRIGATION DETAILS

Sheet Reference Number
LS-3



DIMENSION	A	B	C
1/2" TO 2 1/2" IN SIZE	18"	12"	4"
3" TO 6" IN SIZE	24"		4"

SECTION VIEW – N.T.S.

NOTES:

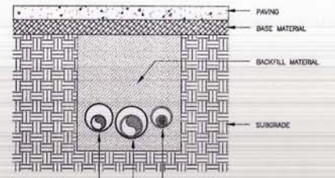
ALL PLASTIC PIPING SHALL BE SNAKED WITHIN TRENCH.

ALL WIRES SHALL BE IN PLASTIC CONDUIT.

ALL MAINLINE PIPING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' INSTALLATION SPECIFICATIONS.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	PIPE AND WIRE TRENCHING	500
	APPROVED BY: MARK LEWIS, P.E. CITY ENGINEER — DATE: 06/08/09	SHEET: 1 OF 1

1 PIPE AND WIRE TRENCHING
1" = 1'-0"
CFV-06



NOTES:

ALL PIPING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' INSTALLATION SPECIFICATIONS.

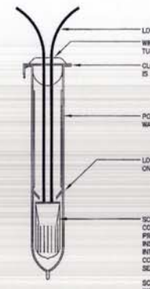
ALL MAINLINE AND LATERAL LINES SHALL BE SLEEVED BELOW ALL HARDSCAPE ELEMENTS WITH SCH 40 PVC, 2 TIMES THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.

DEPTH OF SLEEVES, BACKFILL, AND COMPACTION OF TRENCH SHALL BE IN ACCORDANCE WITH STANDARD PLAN NO. 527 FOR CROSSINGS OF STREETS AND SHALL BE IN ACCORDANCE WITH STANDARD PLAN NO. 500 FOR CROSSINGS OF PARKING LOTS, SIDEWALKS, OR OTHER HARDSCAPE ELEMENTS.

HORIZONTAL DIMENSION BETWEEN SLEEVES SHALL BE A MINIMUM OF 4 INCHES.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	SLEEVE TRENCHING	501
	APPROVED BY: MARK LEWIS, P.E. CITY ENGINEER — DATE: 06/08/09	SHEET: 1 OF 1

2 SLEEVE TRENCHING
1" = 1'-0"
CFV-07



NOTES:

WIRE CONNECTOR SHALL BE A 3M DBY DIRECT BURY SPLICE KIT.

KIT SHALL INCLUDE A SCOTCHLOK Y SPRING CONNECTOR, A POLYPROPYLENE TUBE, AND A WATERPROOF SEALING GEL. TUBE SHALL BE SUPPLIED PREFILLED WITH GEL.

SPLICE KIT SHALL BE USED TO ELECTRICALLY CONNECT 2 – 3 #14 OR 2#12 PRE-STRIPPED COPPER WIRES. LARGER WIRES OR GREATER QUANTITIES OF WIRES SHALL REQUIRE A LARGER APPROVED WIRE CONNECTION.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	WIRE CONNECTOR	517
	APPROVED BY: MARK LEWIS, P.E. CITY ENGINEER — DATE: 06/08/09	SHEET: 1 OF 1

3 WIRE CONNECTOR
1" = 1'-0"
CFV-09

WATER USE CALCULATIONS "A"

MAWA = Maximum Applied Water Allowance

ETO X ETAF X LA X Const = MAWA (Basic)

Where: ETO = Reference Evapotranspiration (CIMIS)
ETFA = ET Adjustment Factor (70% for MAWA calculation)
LA = Landscape Area
Const = Constant to convert to gallons per year (GYP)
GPY = Gallons Per Year

Basic MAWA 36.6 X 0.7 X 112 X 0.62 = 1779 GPY .0053 AC.FT/YR.

ETWU = ESTIMATED TOTAL WATER USAGE

Eto x Ks x LA x Const = MAWA
IEA

Where: ETO = Reference Evapotranspiration (CIMIS)
Ks = Species Factor or, Crop Coefficient (Percent for ETo)
IEA = Irrigation Efficency**
LA = Landscape Area
Const = Constant to convert to gallons per year (GYP)
GPY = Gallons Per Year

*Species factor-Defined as a range of

		L	M	H
Very Low	=	0.05	0.07	0.09
Low	=	0.1	0.2	0.3
Med	=	0.4	0.5	0.6
High	=	0.7	0.8	0.9

**Efficiency factor-Defined as a range of

		L	M	H
Drip	=	0.80	0.85	0.90
Rotor	=	0.75	0.80	0.85
Rotator	=	0.70	0.75	0.80
Spray	=	0.50	0.63	0.70

ETWU CALCULATIONS BY HYDROZONE

SUN Exposure with Microclimate Factor = 1

SHRUB/GC 36.6 x 0.40 x 112 x 0.62 = 1,270 GPY .0038 AC.FT/YR.
BUBBLER 0.80

Total ETWU

Summary = ETWU = 83.11% MAWA

*Shrub/Ground cover areas are completely mulched with actual planting limited to approximately less than 50% of the total area.

CRITICAL ANALYSIS "A"

Generated:	2013-01-22 06:54
P.O.C. NUMBER:01	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available:	37.50 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	68.00 psi
Elevation Change:	5.00 ft
Service Line Size:	1 1/2"
Length of Service Line:	20.00 ft
Pressure Available:	65.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	19.77 gpm
Flow Available at POC:	37.50 gpm
Residual Flow Available:	17.74 gpm
Critical Station:	1A
Design Pressure:	30.00 psi
Loss Elev. high head to valve:	0.00 psi
Pipe Loss Critical Head:	5.80 psi
Loss Fitting Factor:	0.58 psi
Loss through Valve:	2.76 psi
Pressure Req. at Critical Station:	39.14 psi
Loss for Fittings:	0.05 psi
Loss for Main Line:	0.52 psi
Loss for POC to Valve Elevation:	0.00 psi
Loss for Backflow:	11.03 psi
Loss for Water Meter:	1.95 psi
Critical Station Pressure at POC:	52.69 psi
Pressure Available:	65.00 psi
Residual Pressure Available:	12.31 psi

New Controller
Time set by City of FV
Contact Alex Salazar
Arm Franklin

AS BUILT
NO CORRECTIONS THIS SHEET
BY Kirby Shaw
DATE COMPLETED 9/9/19
CONTRACT # EK09542

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: HARRY CLARKE DATE

DESIGNED BY: H. CLARKE
DRAWN BY: J. MCANNICH
CHECKED BY: H. CLARKE
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

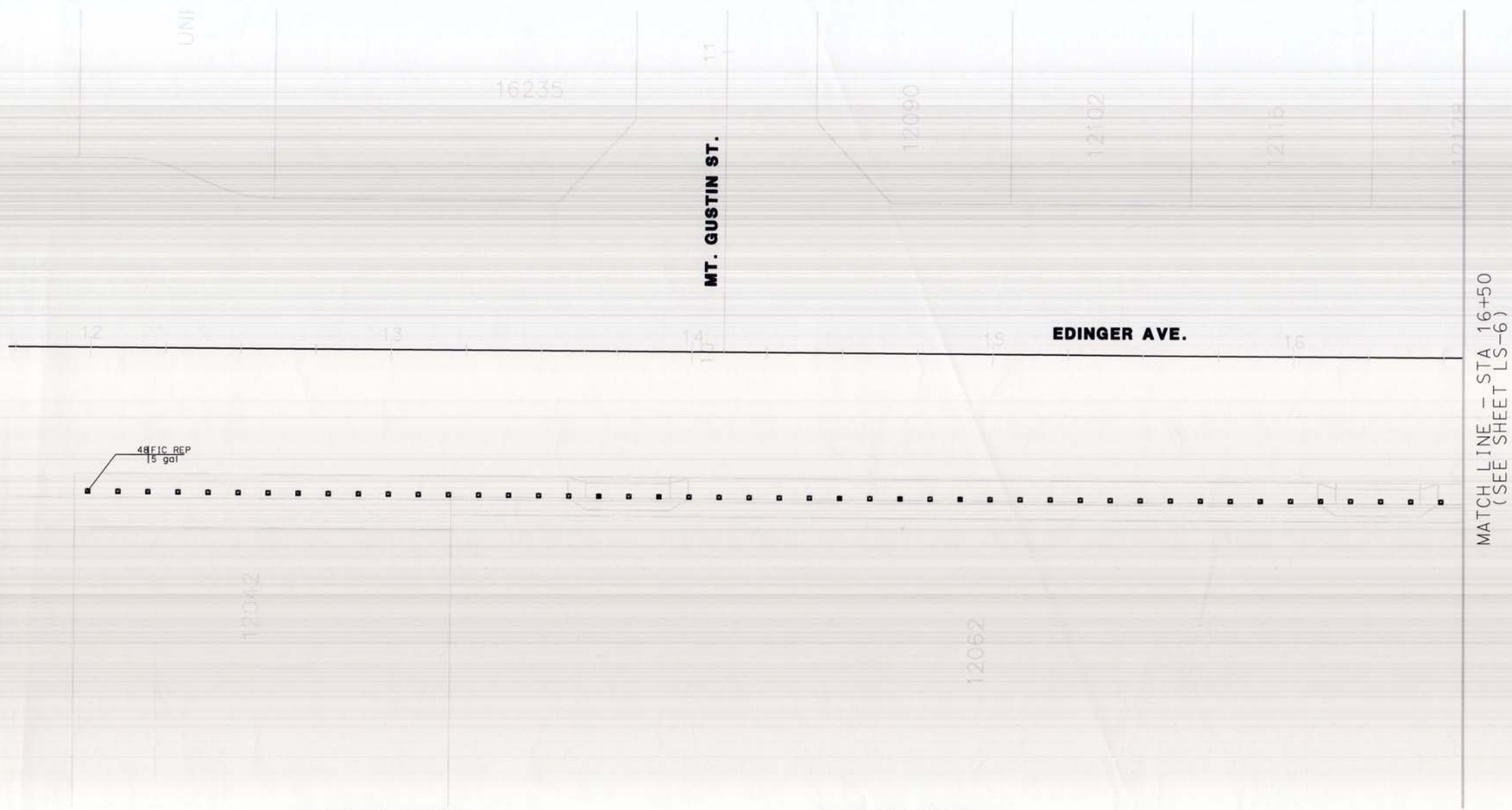
COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

IRRIGATION DETAILS

Sheet Reference Number
LS-4



PLANT SCHEDULE

TREES	BOTANICAL NAME / COMMON NAME	CONT	QTY	DETAIL
	Pinus eldarica / Afghan Pine	24"box	3	3/LS-7
VINE/ESPALIER	**BOTANICAL NAME / COMMON NAME**	**SIZE**	**QTY**	**DETAIL**
	Ficus repens / Creeping Fig	5 gal	108	
GROUND COVERS	**BOTANICAL NAME / COMMON NAME**	**CONT**	**QTY**	**DETAIL**
	2" Thick Forest Floor Mulch	mulch	1,412 sf	1/LS-7
	Native Grass / "Native mow free blend"	sod	1,246 sf	1/LS-7

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # E-09342

PLANTING NOTES

1. This project is a Public Works Project and shall be installed per the latest edition of the "Green Book" construction specifications.
2. Contractor to secure all plant material at notice to proceed and notify in writing the landscape architect if specified material is not available. All substitutions must be approved prior to planting.
3. All trees and plant material shall meet ISA Industry standards. Landscape Architect shall approve all plant material prior to installation.
4. Landscape Architect to flag all tree locations prior to planting.
5. All trees planted within 4 feet of hardscape to be installed with root barrier panels.
6. Plant quantities, if any discrepancy between the plant call outs in the legend and symbols shown on the plans, then the symbol quantities on the plans shall prevail.
7. All Landscape installation shall be performed by a Landscape Contractor with a valid C-27 License or greater.
8. Native turf sod to be used as bio-swale filtration system for this project.
9. Contractor shall take a minimum of 5 soil samples from various planter areas on the site and have an Agronomic soil test completed after all site grading is completed at contractor's expense. Agronomic soil test report shall give soil amendments and backfill recommendations. Results shall be reviewed and approved by Landscape Architect and shall take precedence over initial test results.
10. Trees to be planted 5' from sidewalk. Contractor shall flag location and have Landscape Architect approve prior to installation.
11. Contractor to install Pinus Eldarica tree and make the plant basin twice as deep as rootball and three times the width.
12. Contractor shall provide two pvc tree bubbler devices per tree without irrigation. Provide supplemental hand watering as necessary.
13. Contractor shall provide one year plant establishment period and supplemental hand watering of pine trees until established.

0 10 20 40
SCALE: 1" = 20'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
HARRY CLARKE DATE

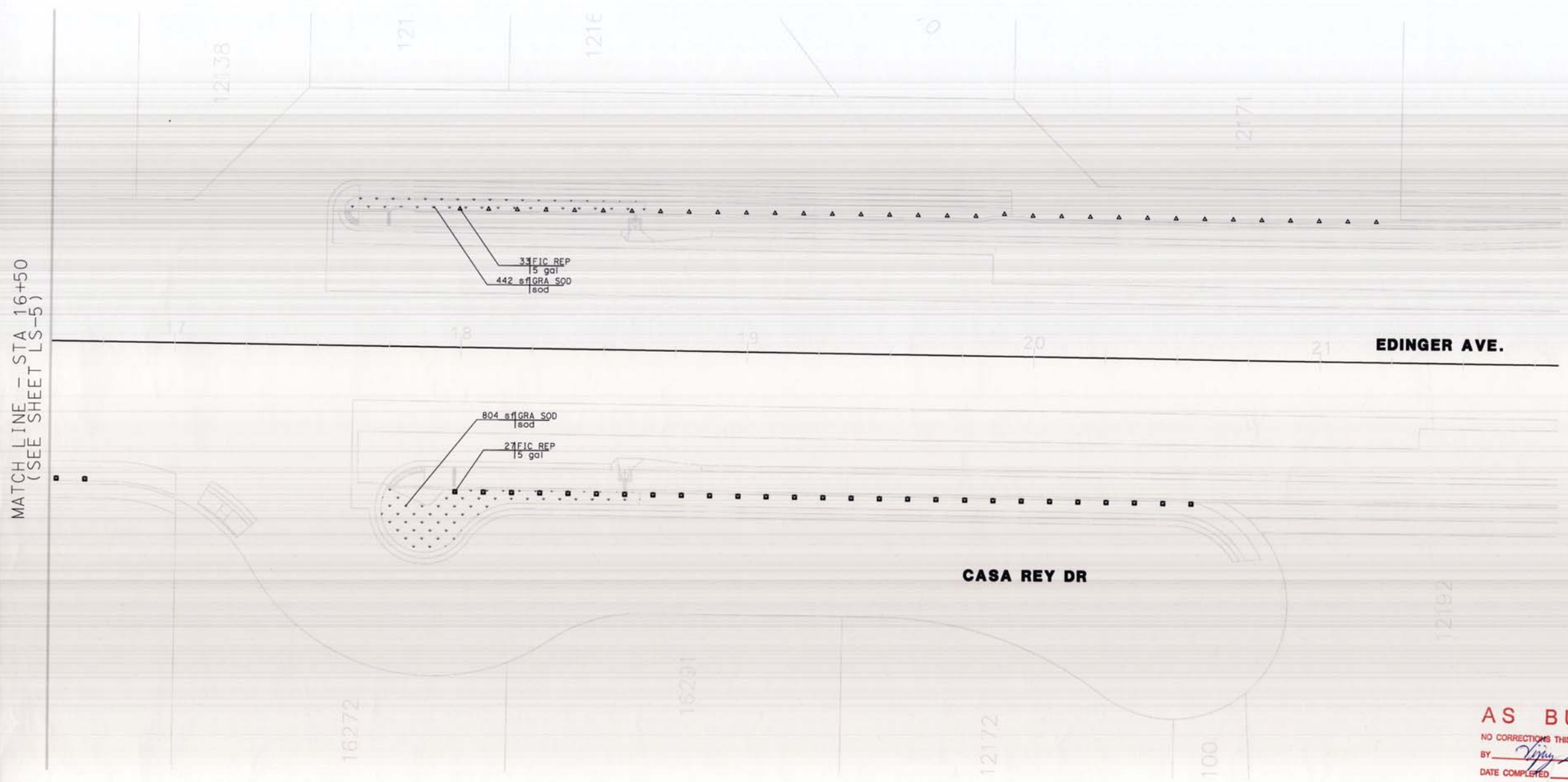
DESIGNED BY: H. CLARKE
DRAWN BY: J. MCANINCH
CHECKED BY: H. CLARKE
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154
PLANTING PLAN

Sheet Reference Number
LS-5



AS BUILT
NO CORRECTIONS THIS SHEET
BY Vijay Rozen
DATE COMPLETED 9/9/14
CONTRACT # ERC9242

PLANT SCHEDULE

TREES	BOTANICAL NAME / COMMON NAME	CONT	QTY	DETAIL
	Pinus eldarica / Afghan Pine	24"box	3	3/LS-7

VINE/ESPALIER	BOTANICAL NAME / COMMON NAME	SIZE	QTY	DETAIL
	Ficus repens / Creeping Fig	5 gal	108	

GROUND COVERS	BOTANICAL NAME / COMMON NAME	CONT	QTY	DETAIL
	2" Thick Forest Floor Mulch	mulch	1,412 sf	1/LS-7
	Native Grass / "Native mow free blend"	sod	1,246 sf	1/LS-7

PLANTING NOTES

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12. Contractor shall provide two pvc tree bubbler devices per tree without irrigation. Provide supplemental hand watering as necessary.
13. Contractor shall provide one year plant establishment period and supplemental hand watering of pine trees until established.

0 10 20 40
SCALE: 1" = 20'

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
HARRY CLARKE DATE

DESIGNED BY: H. CLARKE
DRAWN BY: J. MCANNICH
CHECKED BY: H. CLARKE
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

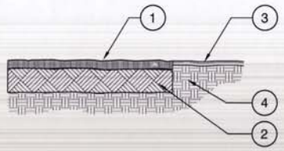
COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

PLANTING PLAN

Sheet Reference Number
LS-6

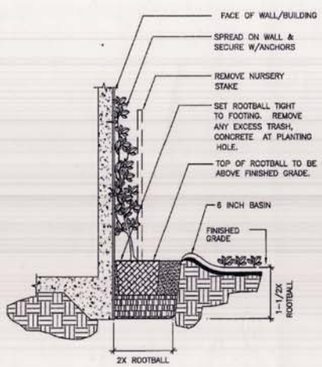


1. 2" min. forrest floor mulch install prior to groundcover planting typ.
2. 6"-8" amemded soil throughout planting area
3. Finish grade
4. Undisturbed subgrade

Note:
1. All planters shall receive forest floor mulch.
2. Provide 2" forest floor mulch when drip irrigation is used.

1 FOREST FLOOR MULCH

3/4" = 1'-0" AE-MU-01

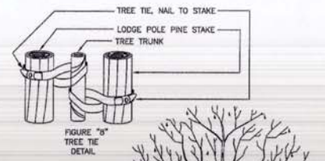


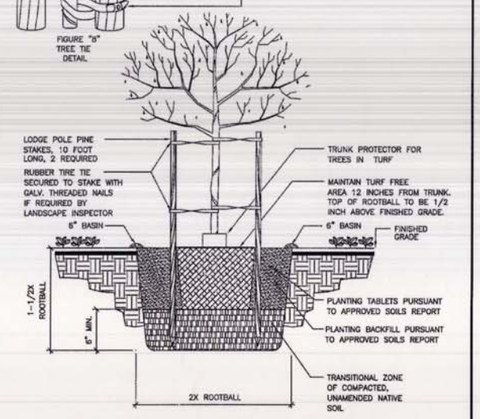
NOTE: ALL PLANT BASINS SHALL RECEIVE A 2 INCH LAYER OF APPROVED MULCH. MULCH TO BE 6 INCHES AWAY FROM THE VINE STEM.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	VINE PLANTING	602
	APPROVED BY: MARK LEWIS R.C.E. 60555 CITY ENGINEER DATE: 03/03/09	SHEET: 1 OF 1

2 VINE PLANTING

1" = 1'-0" CFV-05





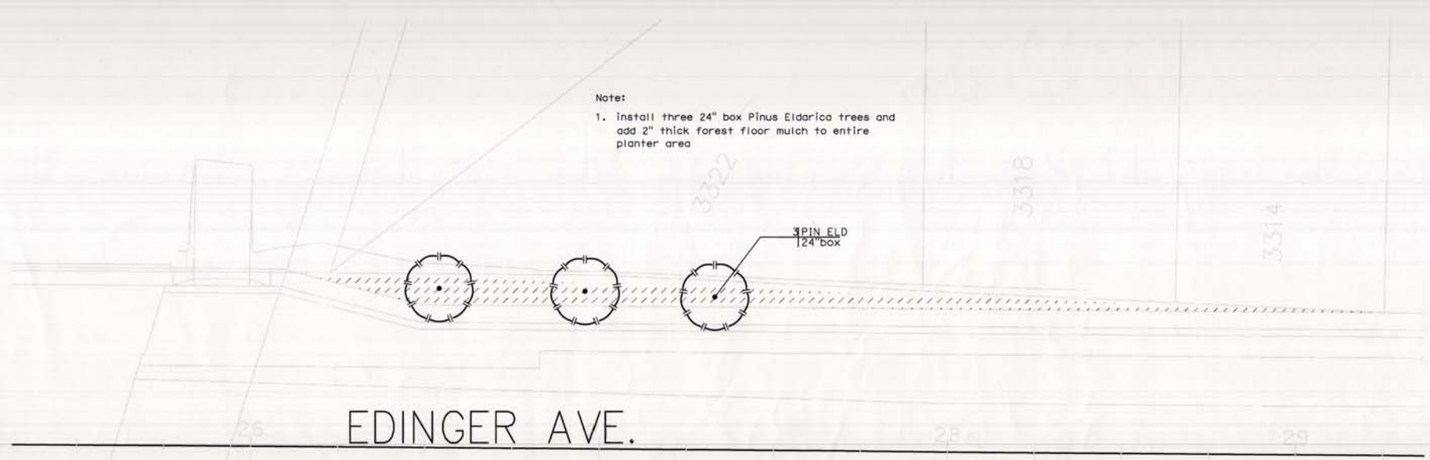
NOTE: ALL PLANT BASINS SHALL RECEIVE A 2 INCH LAYER OF APPROVED MULCH. MULCH TO BE 6 INCHES AWAY FROM THE TREE TRUNK.

REVISIONS	CITY OF FOUNTAIN VALLEY	STANDARD PLAN NO.
	DOUBLE STAKE TREE 15 GALLON AND 24 INCH BOX	605
	APPROVED BY: MARK LEWIS R.C.E. 60555 CITY ENGINEER DATE: 08/08/08	SHEET: 1 OF 1

3 DOUBLE STAKE TREE DETAIL

1" = 1'-0" CFV-11

Note:
1. Install three 24" box Pinus Eldarica trees and add 2" thick forest floor mulch to entire planter area



PLANTER AREA (NORTH EAST PLANTER)

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 6R09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: HARRY CLARKE DATE

DESIGNED BY: H. CLARKE
DRAWN BY: J. MCANINCH
CHECKED BY: H. CLARKE
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

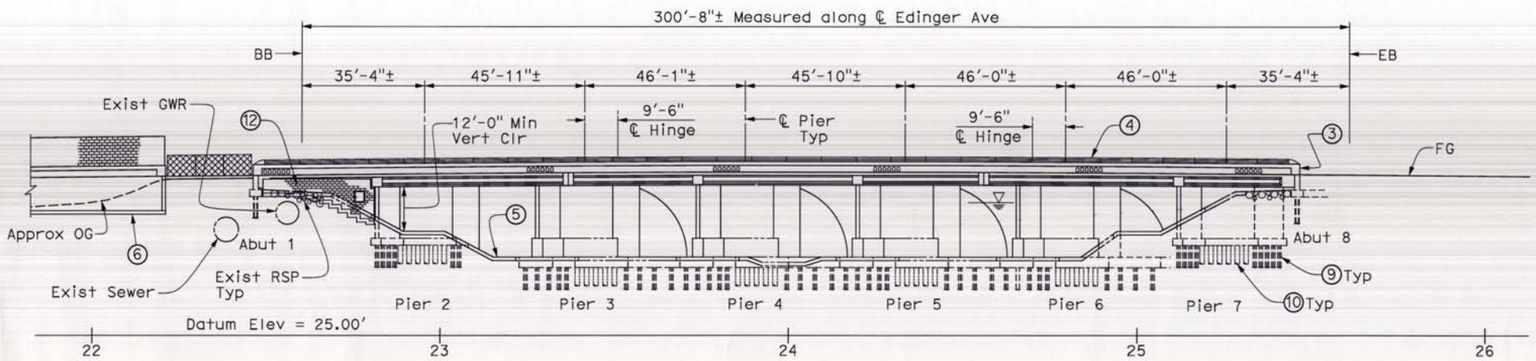
COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER CHANNEL
WIDENING PROJECT
BR. NO. 55C-0154

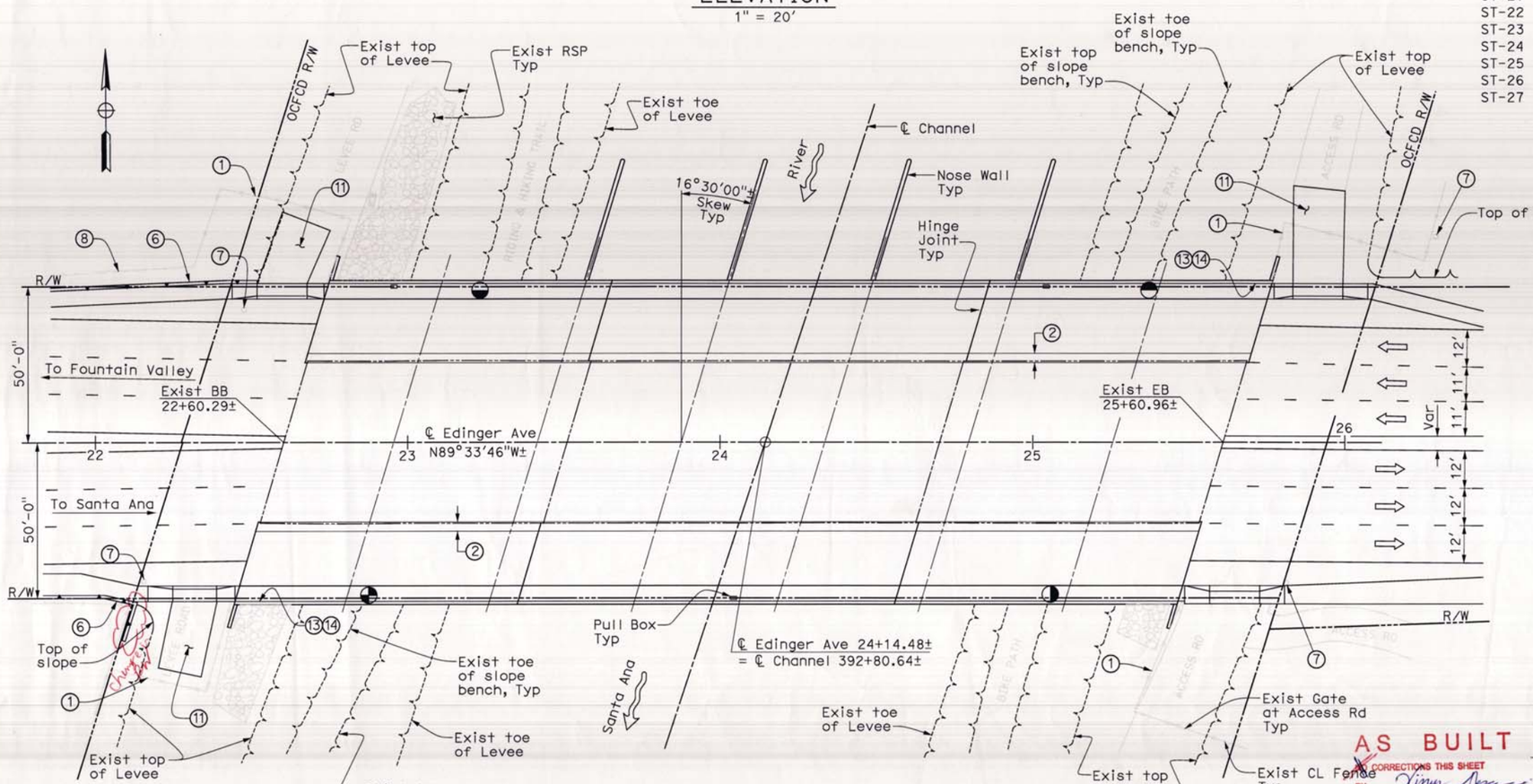
PLANTING DETAILS

Sheet Reference Number
LS-7



ELEVATION

1" = 20'



PLAN

1" = 20'

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
NO CORRECTIONS THIS SHEET
BY Vijay Abeyasekera
DATE COMPLETED 9/9/14
CONTRACT # EK09342

INDEX TO PLANS (STRUCTURE)

LEGEND:

1. Exist Chain Link Fence, see "Road Plans"
2. Deck Closure Pour
3. Conc Barrier, Type 26 (Modified)
4. Tubular Hand Railing (Modified)
5. Existing Conc Channel Lining
6. Retaining Wall, See "Road Plans"
7. Existing Utility Pole
8. Existing Soundwall
9. Proposed Steel Pile
10. Existing Concrete Pile
11. Reconstruct Access Rd, See "Road Plans"
12. Enclosure Wall
13. Paint "Bridge No 55C-0154"
14. Paint "Edinger Avenue Bridge Over Santa Ana River"

- Minimum Vertical Clearance
- 13'-5" Vertical Clearance
- 13'-2" Vertical Clearance
- 13'-10" Vertical Clearance
- Indicates existing
- Indicates Direction of Travel
- Indicates High Water Line Elevation, See "Hydrologic & Hydraulic Data Summary Table" On "Foundation Plan" sheet

Note:
For "Typical Section", see "General Plan No. 2" sheet.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR 57884 Exp. 6/30/14 CIVIL STATE OF CALIFORNIA
DATE 1-2-13
MOHAN S. CHAR

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

GENERAL PLAN NO. 1

Sheet Reference Number

ST-01

FILE NAME : 01_Edinger_GP-1.dgn

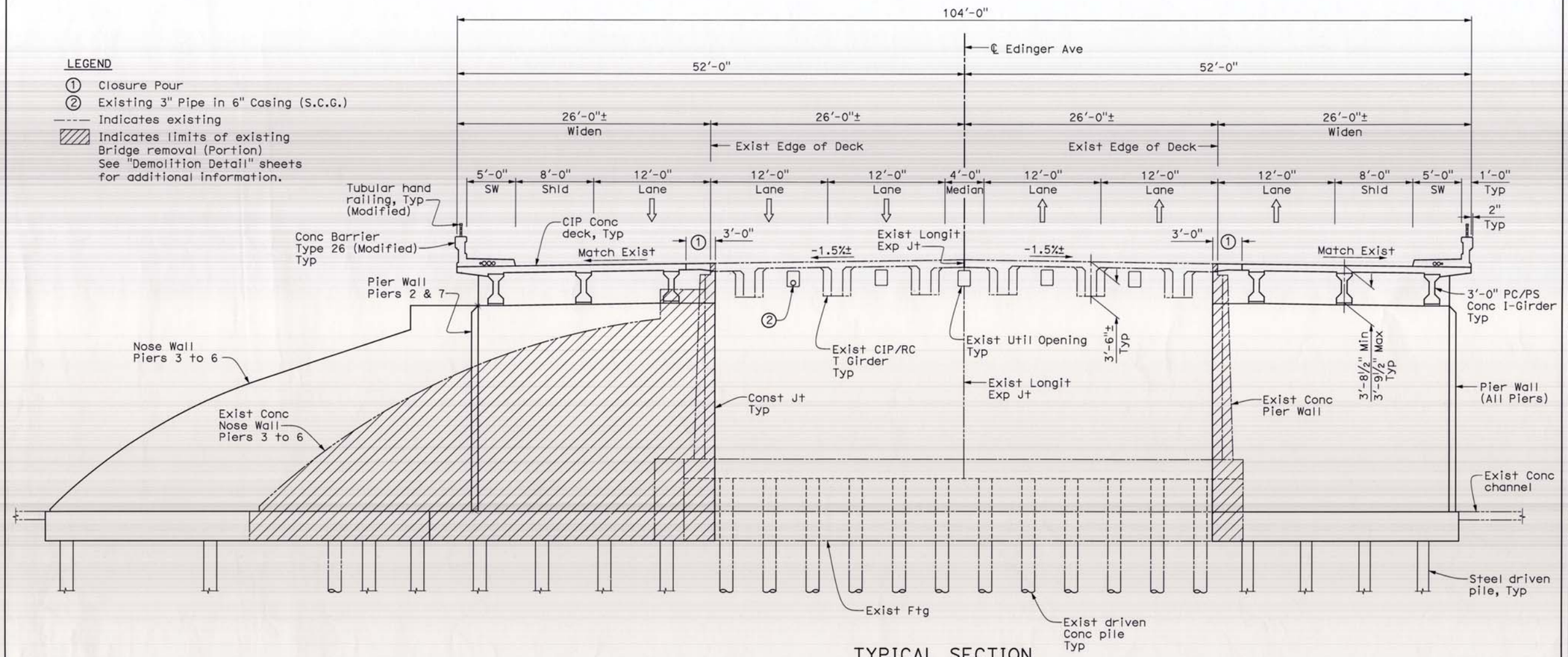
LEGEND

① Closure Pour

② Existing 3" Pipe in 6" Casing (S.C.G.)

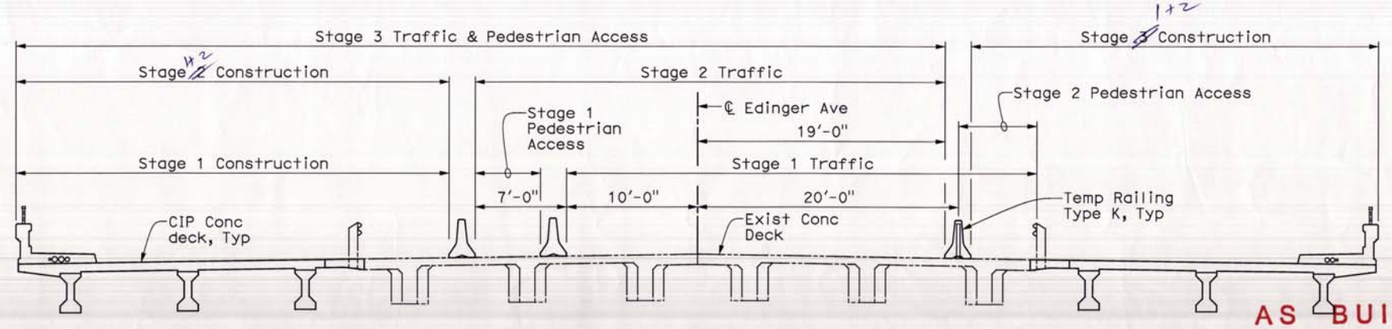
---- Indicates existing

▨ Indicates limits of existing Bridge removal (Portion) See "Demolition Detail" sheets for additional information.



TYPICAL SECTION

3/16" = 1'-0"



CONSTRUCTION STAGING SECTION

3/16" = 1'-0"

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
~~NO~~ CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: MOHAN S. CHAR — DATE 1-2-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

GENERAL PLAN NO. 2

Sheet Reference Number

ST-02

Sheet 51 of 76

FILE NAME : 02_Edinger_GP-2.dgn

LOAD AND RESISTANCE FACTOR DESIGN GENERAL NOTES:

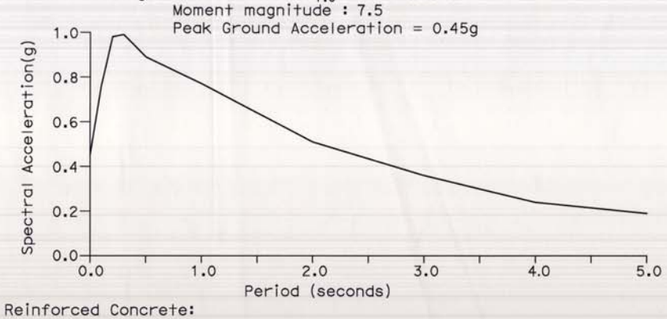
Design: AASHTO LRFD Bridge Design Specifications, 4th Edition and the Caltrans Amendments dated November 2011.

Seismic Design: Caltrans Seismic Design Criteria (SDC), Version 1.6 dated November 2010

Dead Load: Includes 35 psf for future wearing surface & 10% increase of deck dead load between girders for stay-in-place deck forms.

Live Loading: HL-93 w/ Low-Boy and Permit Design Load
75 psf Pedestrian Load

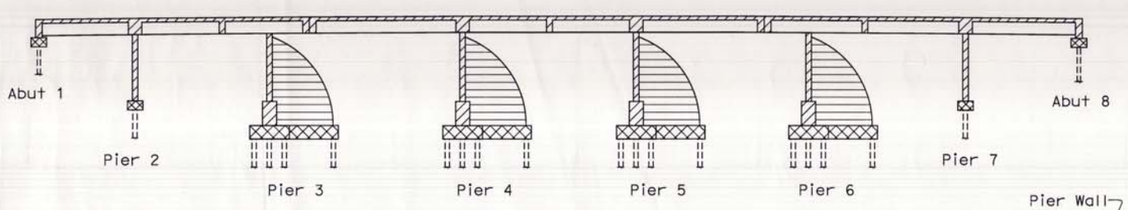
Seismic Loading: Soil Profile : $Z_{1.0}$> 400 meters
Moment magnitude : 7.5
Peak Ground Acceleration = 0.45g



Reinforced Concrete:
fy = 60,000 psi
f'c = 3,600 psi, Unless otherwise noted
n = 8

Prestressed Concrete:
See "Prestressing Notes" on "Girder Details No. 1" sheet.

Structural Steel: fy = ASTM A36



CONCRETE STRENGTH AND TYPE LIMITS

No Scale

- PC/PS Prestressed Concrete Girders, see "Girder Details No. 1" sheet
- Structural Concrete, Bridge (4,000 psi @ 28 days)
- Structural Concrete, Bridge
- Structural Concrete, Bridge Footing

STANDARD PLANS DATED 2006

THE FOLLOWING STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS ARE PART OF THESE CONTRACT DRAWINGS

	A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
	A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
	A10C	SYMBOLS (SHEET 1 OF 2)
	A10D	SYMBOLS (SHEET 2 OF 2)
	A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE SURCHARGE AND WALL
	A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE
	B0-3	BRIDGE DETAILS
	B0-5	BRIDGE DETAILS
	B0-13	BRIDGE DETAILS
	B6-21	JOINT SEALS (MAXIMUM MOVMENT RATING = 2")
	B7-1	BOX GIRDER DETAILS
	B11-51	TUBULAR HAND RAILING
	B11-54	CONCRETE BARRIER TYPE 26
	B15-1	SOUND WALL MASONRY BLOCK ON FOOTING DETAILS (1)
	B15-2	SOUND WALL MASONRY BLOCK ON FOOTING DETAILS (2)
NSP	ES-8A	ELECTRICAL SYSTEMS (PULL BOX)

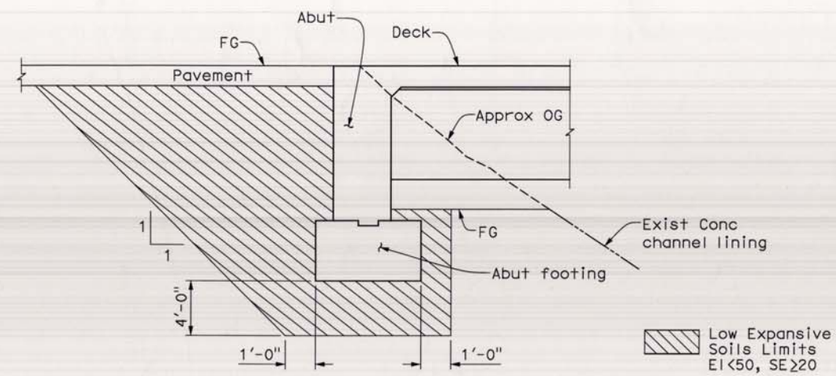
STANDARD PLAN SHEET NO.

DETAIL NO.

SECTION DESIGNATION

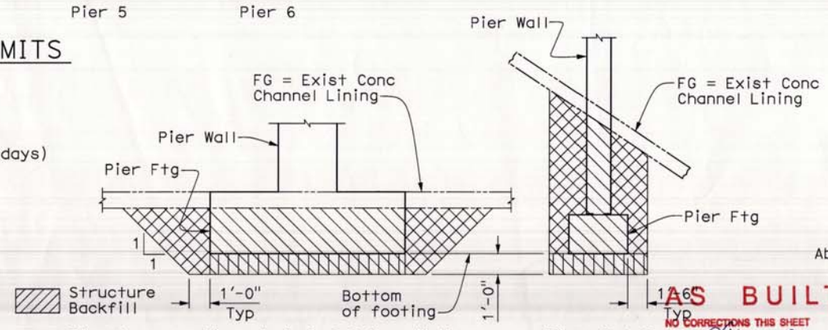
DESIGN ASSUMED CONSTRUCTION SEQUENCE:

1. Construct foundations & pier walls.
2. Construct abutment seats and temporary girder supports @ piers.
3. Place girders.
4. Construct diaphragms, pier caps & abutment stems & cure for 14 days minimum before casting deck.
5. Construct deck.
6. Construct barriers.
7. Place closure pour.



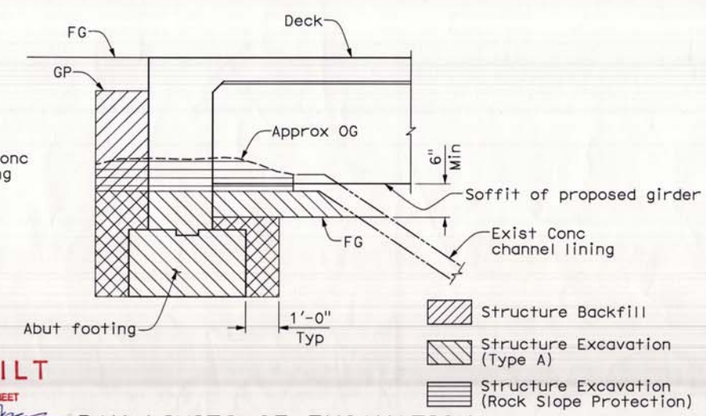
LOW EXPANSIVE EMBANKMENT MATERIAL

No Scale



PAY LIMITS OF EXCAVATION AND BACKFILL AT PIERS

No Scale



PAY LIMITS OF EXCAVATION AND BACKFILL AT ABUTMENTS

No Scale
See "Abutment Details" sheet

AS BUILT
NO CORRECTIONS THIS SHEET
BY Tony Arce
DATE COMPLETED 01/9/14
CONTRACT # ER 09342

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: MOHAN S. CHAR, REGISTERED PROFESSIONAL ENGINEER, STATE OF CALIFORNIA, CIVIL, No. 52804, DATE 1-2-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE OC PUBLIC WORKS

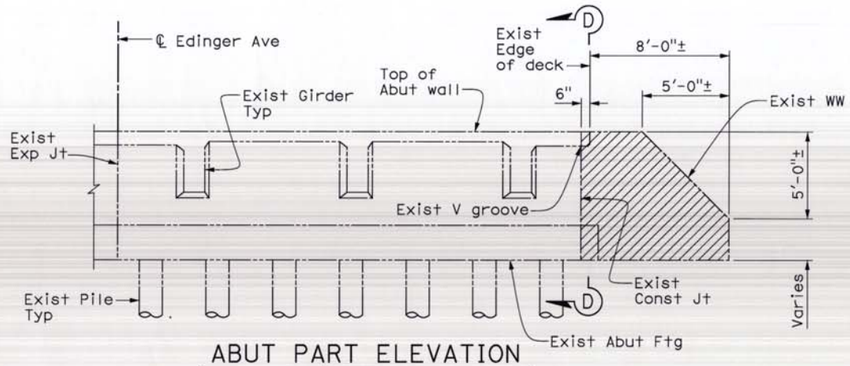
PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN) BR. NO. 55C-0154

GENERAL NOTES

Sheet Reference Number
ST-03

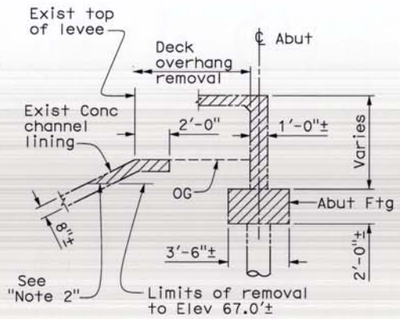
FILE NAME : 03_Edinger_GN.dgn



ABUT PART ELEVATION

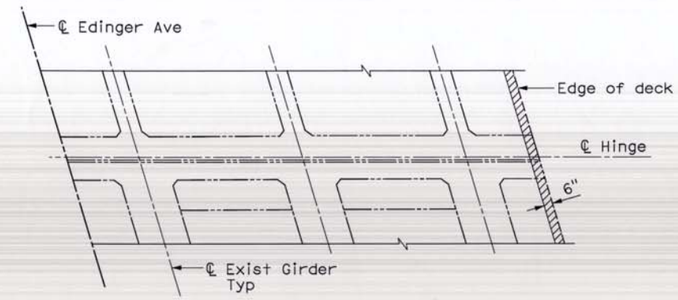
1/4" = 1'-0"

(Removal similar about ℄ Edinger Ave)
Abut 1 shown, Abut 8 similar



SECTION D-D

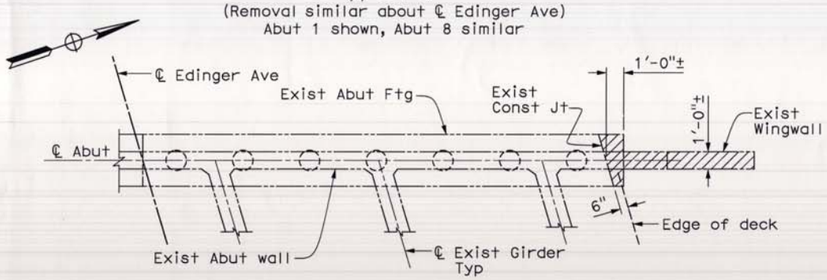
1/4" = 1'-0"



HINGE PLAN

1/4" = 1'-0"

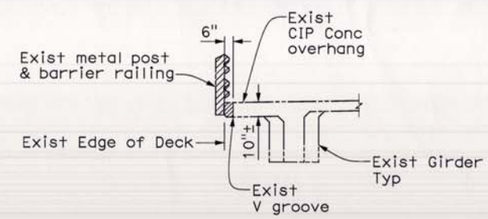
(Removal similar about ℄ Edinger Ave)



ABUT PART PLAN

1/4" = 1'-0"

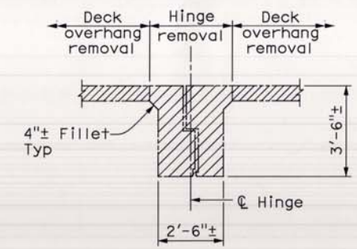
(Removal similar about ℄ Edinger Ave)



PART TYPICAL SECTION

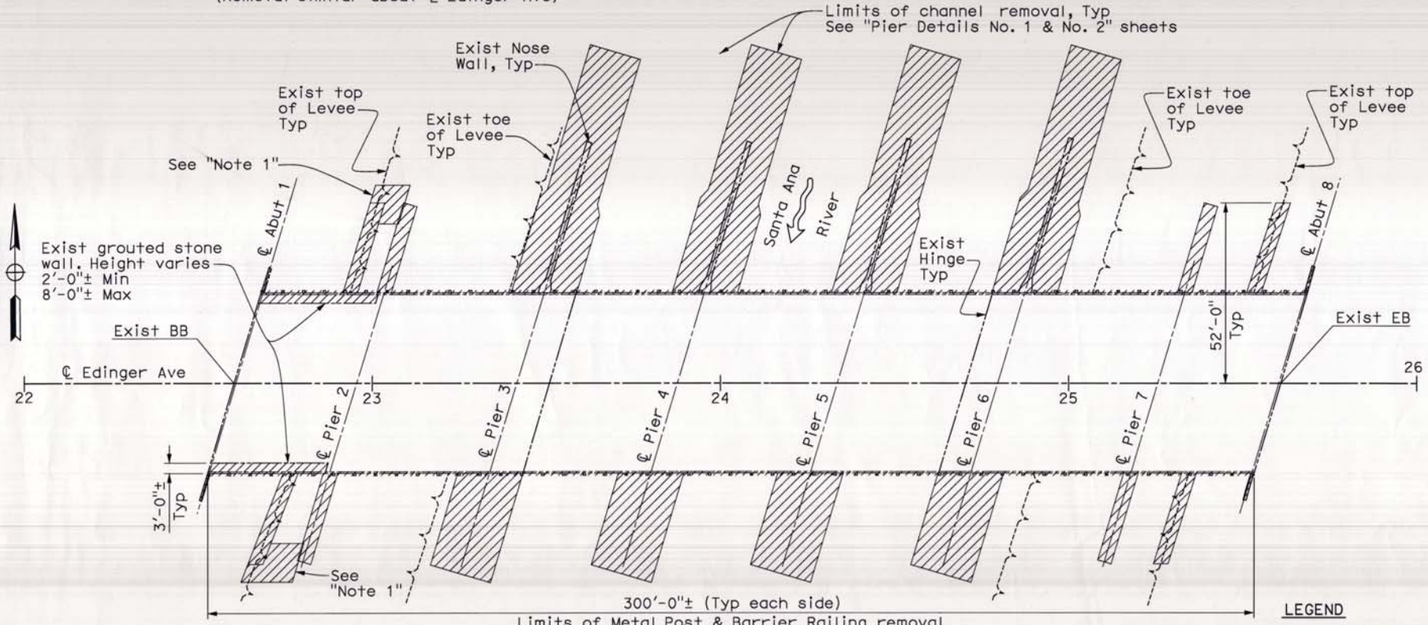
1/4" = 1'-0"

(Removal similar about ℄ Edinger Ave)



HINGE END ELEVATION

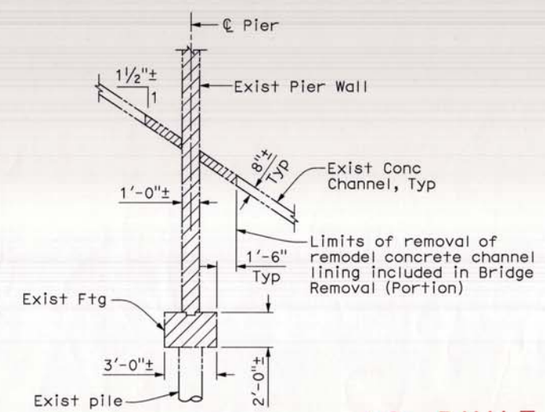
3/8" = 1'-0"



PLAN

1" = 20'

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.



SECTION @ PIER

3/16" = 1'-0"

Piers 2 & 7

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09342

Notes:

1. For Additional limits of removal at enclosure wall, see "Enclosure Wall Details" sheet.
2. Apply Sikagard 62 Protective Coating or approved equal to exposed face of existing concrete channel lining at limit of removal.

LEGEND

Indicates Limits of Bridge Removal (Portion)

---- Existing Structure

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: MOHAN S. CHAR — DATE 1-2-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

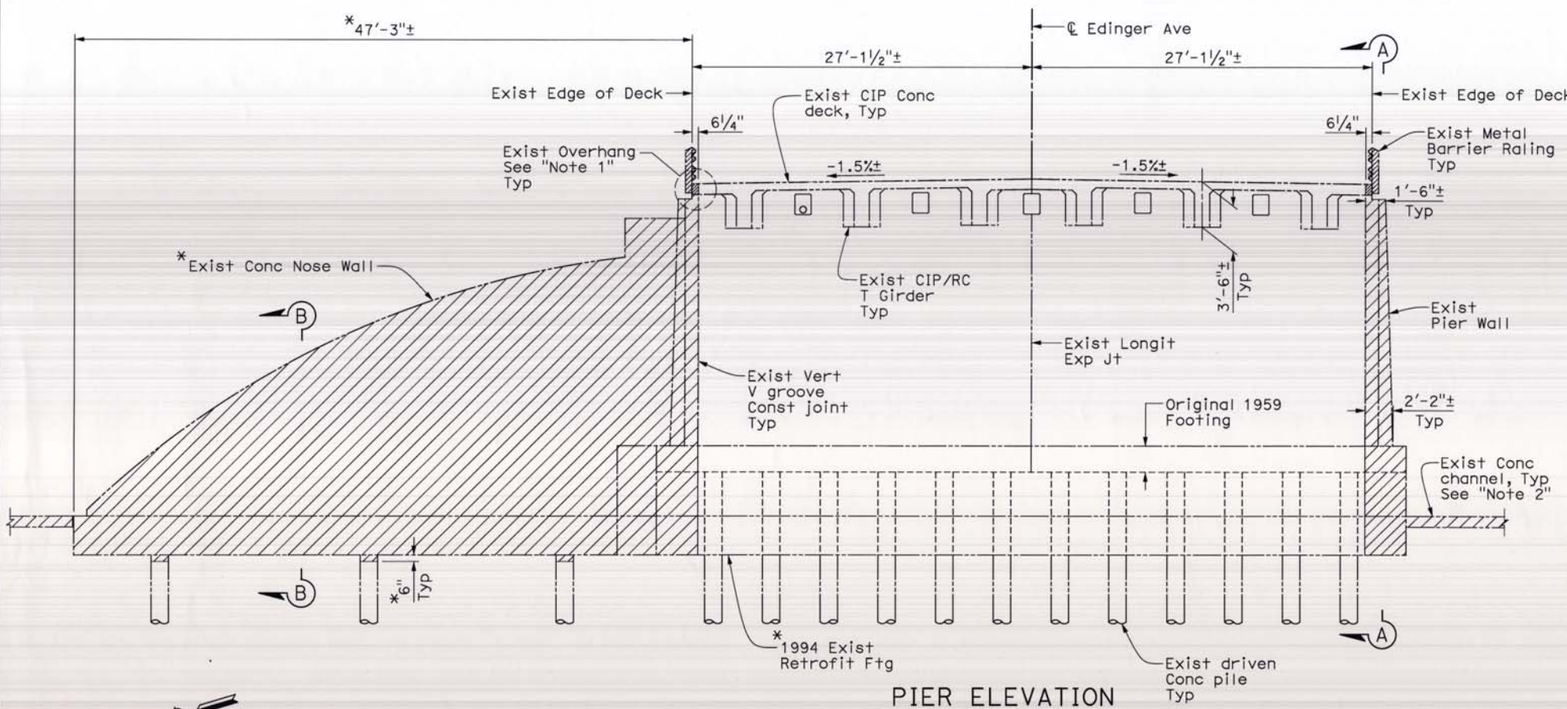
PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

DEMOLITION DETAILS NO. 1

Sheet Reference Number
ST-04

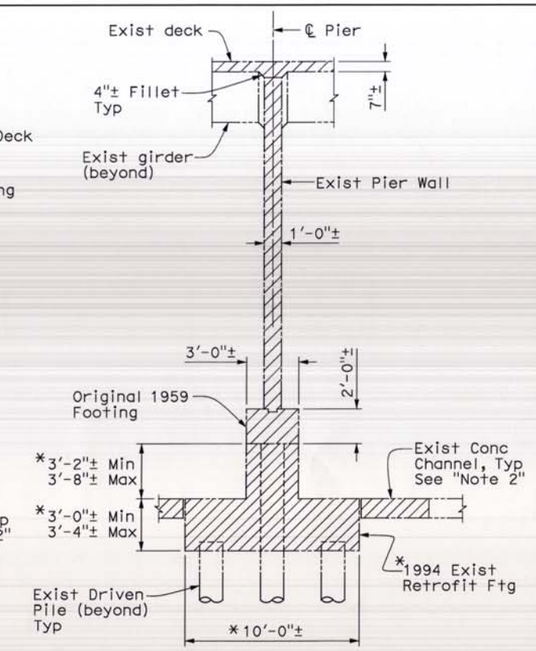
FILE NAME : 04_Edinger_Demo_1.dgn



PIER ELEVATION

3/16" = 1'-0"

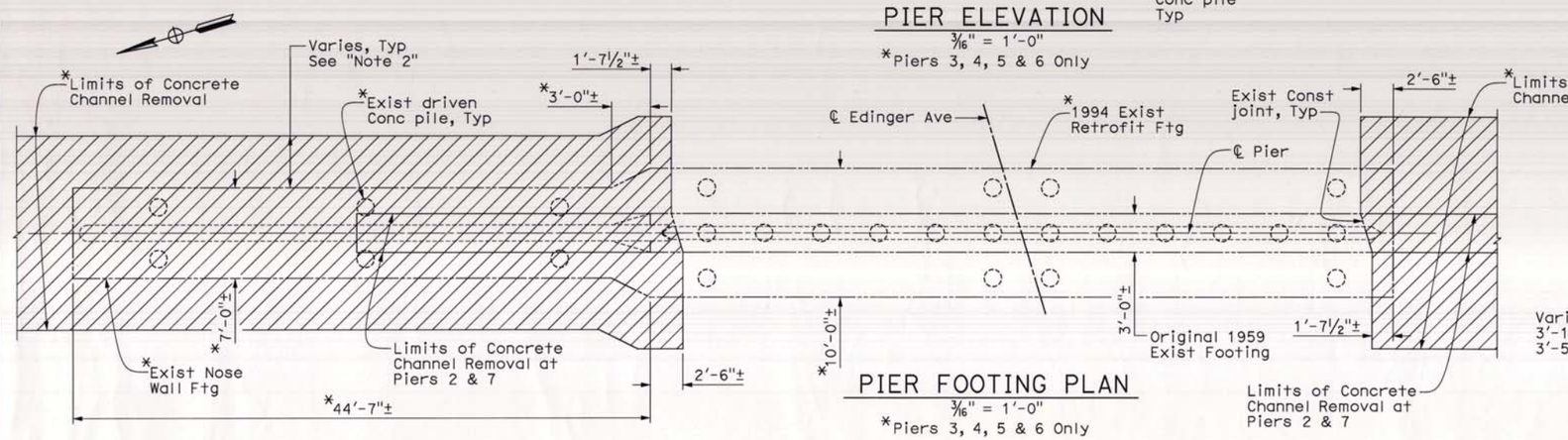
*Piers 3, 4, 5 & 6 Only



SECTION A-A

¼" = 1'-0"

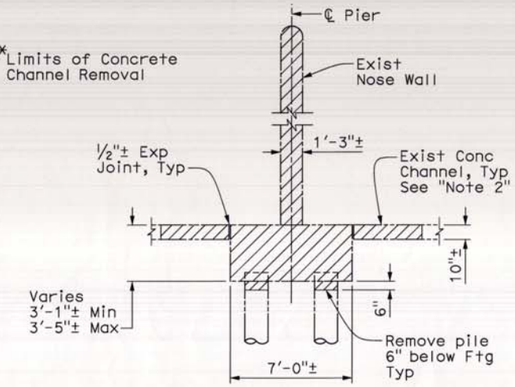
*Piers 3, 4, 5 & 6 Only



PIER FOOTING PLAN

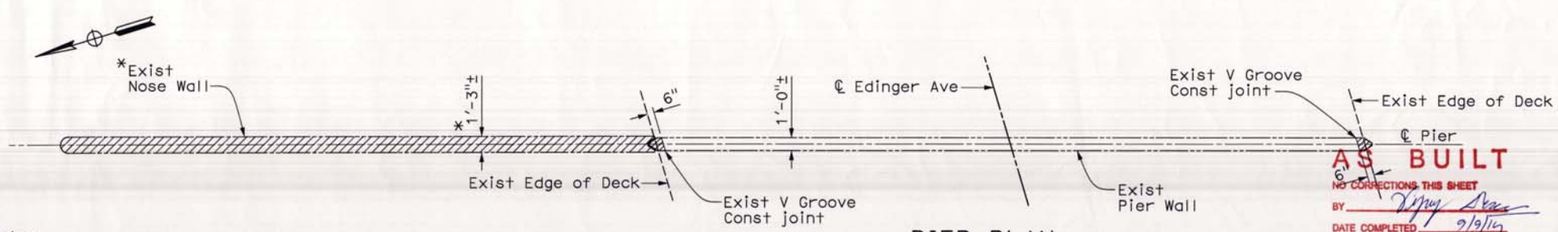
3/16" = 1'-0"

*Piers 3, 4, 5 & 6 Only



SECTION B-B

¼" = 1'-0"



PIER PLAN

3/16" = 1'-0"

*Piers 3, 4, 5 & 6 Only

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
NO CORRECTIONS TO THIS SHEET
BY
DATE COMPLETED 2/9/14
CONTRACT # E6097-47

Notes:

1. For existing deck overhang removal limits, see "Demolition Details 1" sheet.
2. Existing concrete channel shall be protected in place outside of removal limits shown for Piers 3, 4, 5 & 6. See "Pier Details No. 1 & No. 2" sheets.

LEGEND

Indicates Limits of Bridge Removal (Portion)

---- Existing Structure

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR No. 52804 CIVIL STATE OF CALIFORNIA — DATE 1-2-13

MOHAN S. CHAR

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

DEMOLITION DETAILS NO. 2

Sheet Reference Number

ST-05

Sheet 54 of 76

FILE NAME : 05_Edinger_Demo_2.dgn

PILE DATA TABLE						
Location	Pile Type	Nominal Resistance (Kips)		Design Tip Elevation (ft MSL)	Specified Tip Elevation (ft MSL)	Nominal Driving Resistance (kips)
		Compression	Tension			
Abut 1 & 8	HP 14x89	130	N/A	-4.5 (a), 40.5 (c), 35.5 (d)	-4.5	330
Piers 2 & 7	HP 14x89	300	N/A	-23.5 (a), -18.5 (c), 26.5 (d)	-23.5	300
Piers 3 & 6	HP 14x89	290	N/A	-24.9 (a), -9.9 (c), 20.1 (d)	-24.9	300
Piers 4 & 5	HP 14x89	280	N/A	-25.2 (a), -10.2 (c), 19.8 (d)	-25.2	300

All Abutment 1 piles are to be predrilled, see "Pay Limits-Abutment 1" detail.
Design tip elevations are controlled by: (a) Compression, (c) Settlement, and (d) Lateral Load.
The specified tip elevation shall not be raised above the design tip elevations for lateral load and tolerable settlement.
Unsuitable soil layers (liquefiable) that do not contribute to the design nominal resistance exist at the site extending to elevation 20 feet mean sea level (MSL).

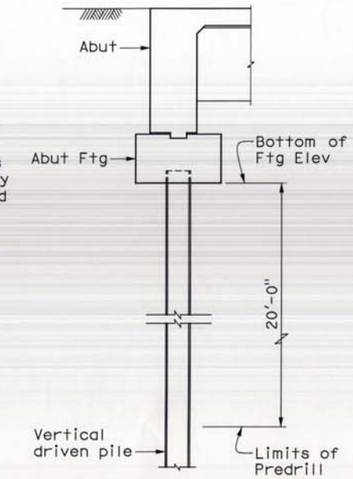
Hydrologic & Hydraulic Data Summary			
Description	Base Flood	Design Flood	Overtopping/ Record Flood
Frequency (Years)	N/A	N/A	N/A
Discharge (cfs)	N/A	46,000	N/A
W.S. Elevation (ft)	N/A	64.86	N/A

Floodplain data are based upon information available when the plans were prepared. The accuracy of said information is not warranted by the County of Orange or the Engineering Consultants. Any interested or affected parties should make their own investigations.

BENCHMARKS

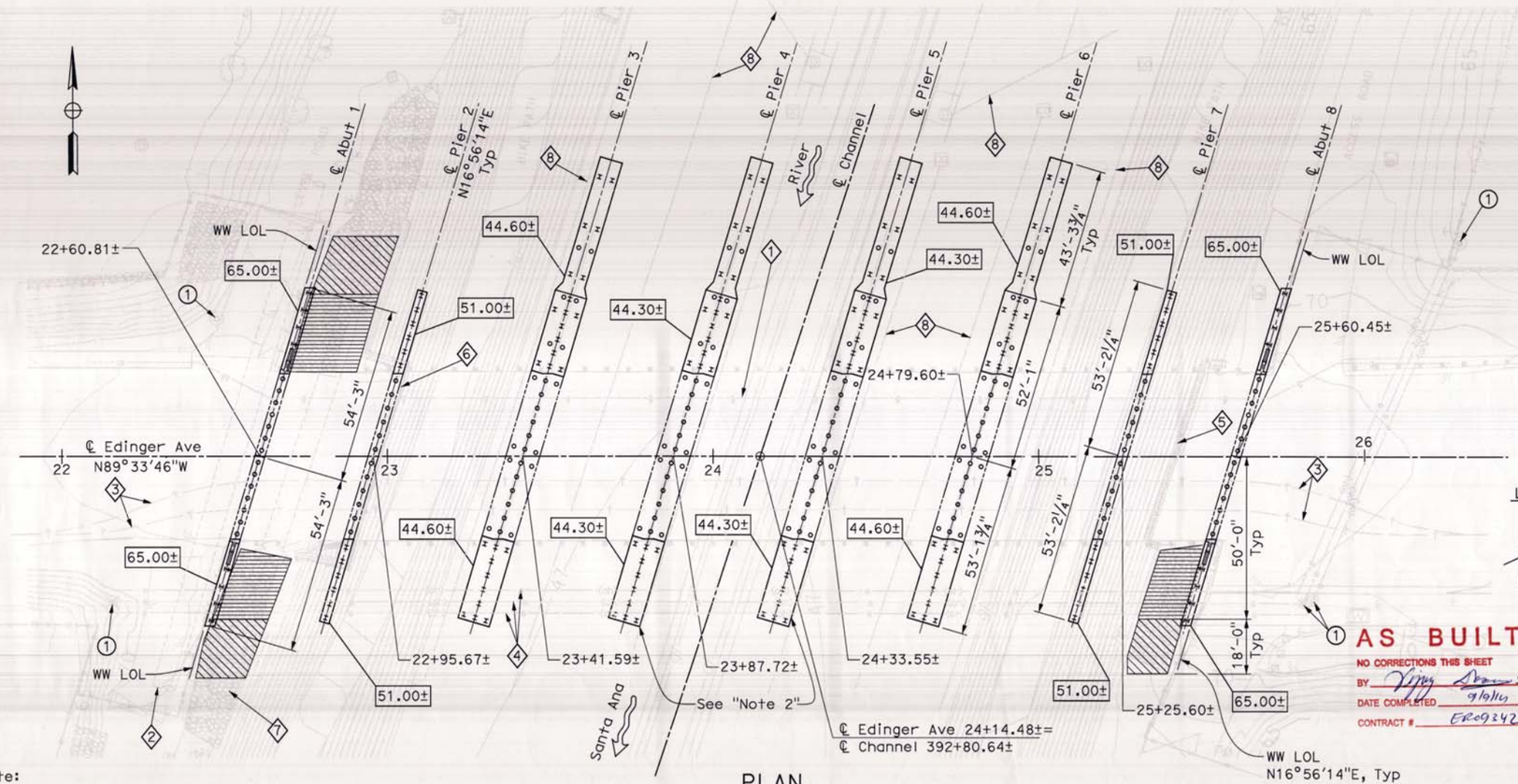
Designation: 1F-176-04
NAVD88 Elevation: 58.939 (2010)
Description: DESCRIBED BY OCS 2005 - FOUND 3¾" OCS ALUMINUM BENCHMARK DISK STAMPED "1F-176-04", SET IN THE NORTHEASTERLY CORNER OF A 4 FT. BY 11 FT. CONCRETE CATCH BASIN. MONUMENT IS LOCATED IN THE NORTHEASTERLY CORNER OF THE INTERSECTION OF HARBOR BOULEVRAD AND EDINGER AVENUE, 121 FT. NORTHERLY OF THE CENTERLINE OF EDINGER AND 56 FT. EASTERLY OF THE CENTERLINE OF HARBOR BOULEVARD. MONUMENT IS SET LEVEL WITH THE SIDEWALK.

Designation: 1L-104-09
NAVD88 Elevation: 74.036 (2010)
Description: DESCRIBED BY OCS 2009 - FOUND 3¾" OCS ALUMINUM BENCHMARK DISK STAMPED "1L-104-09", SET IN THE SOUTHEAST CORNER OF THE INTERSECTION OF EDINGER AVENUE AND THE SANTA ANA RIVER. MONUMENT IS LOCATED IN THE SOUTHEAST BRIDGE ABUTMENT, 29.5FT. SOUTHERLY OF THE CENTERLINE OF EDINGER AVENUE. MONUMENT IS SET LEVEL WITH BRIDGE DECK.



PAY LIMITS-ABUTMENT 1

No Scale



PLAN

1" = 20'

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

UTILITY LEGEND

1. Exist 3" Gas in 6" Casing (SCG)
2. Exist 84"ø RCP Sewer (OCSD)
3. Exist Telephone (AT&T)
4. Exist Electric (SCE)
5. Exist Water & Electric (OC Parks)
6. Exist Water & Electric Encased in Concrete (OC Parks)
7. Exist 78"/72" GWR Pipeline (OCWD)
8. Exist 6"ø Subdrain Collector Pipe (USACE)

NOTES:

1. Utilities are shown for illustrative purposes only, see "Road Plans".
2. Where existing 6"ø subdrain collector pipe is found to conflict with footing, relocate per "Subdrain Relocation Detail" on "Deck Reinforcement" sheet.

LEGEND

- (1) Existing timber pole, see "Road Plans"
- Indicates bottom of footing elevation
- Reconstruct rock slope protection & Structure Excavation (Rock Slope Protection)
- Structure Excavation (Rock Slope Protection)
- Indicates existing structure
- Indicates existing Subdrain utility
- Existing driven concrete pile
- Driven steel pile
- Driven Battered steel pile

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR No. 57784 Exp. 6/30/14 CIVIL STATE OF CALIFORNIA
MOHAN S. CHAR — DATE 1-2-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

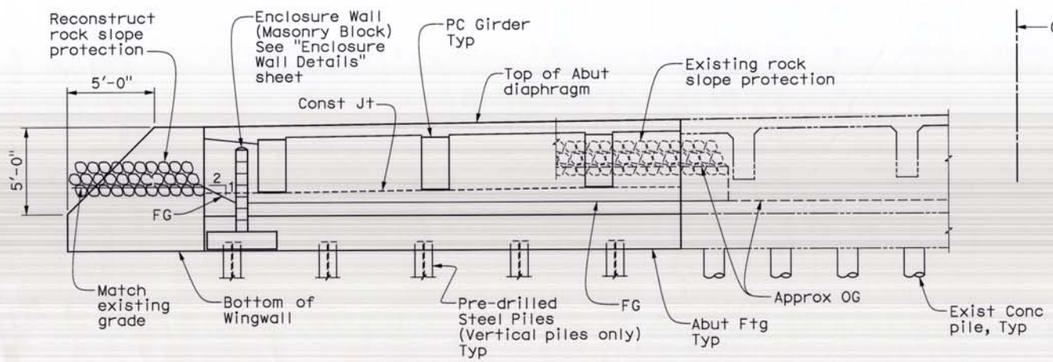
PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2500

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

FOUNDATION PLAN

Sheet Reference Number
ST-06

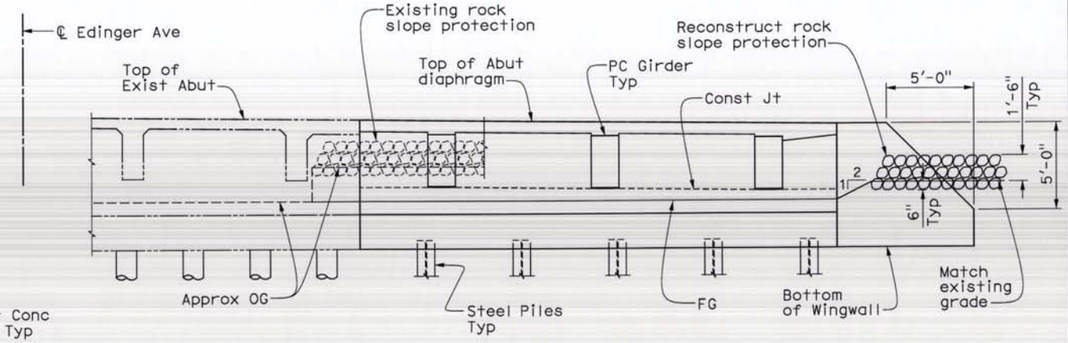
FILE NAME : 06_Edinger_FP.dgn



ELEVATION

1/4" = 1'-0"

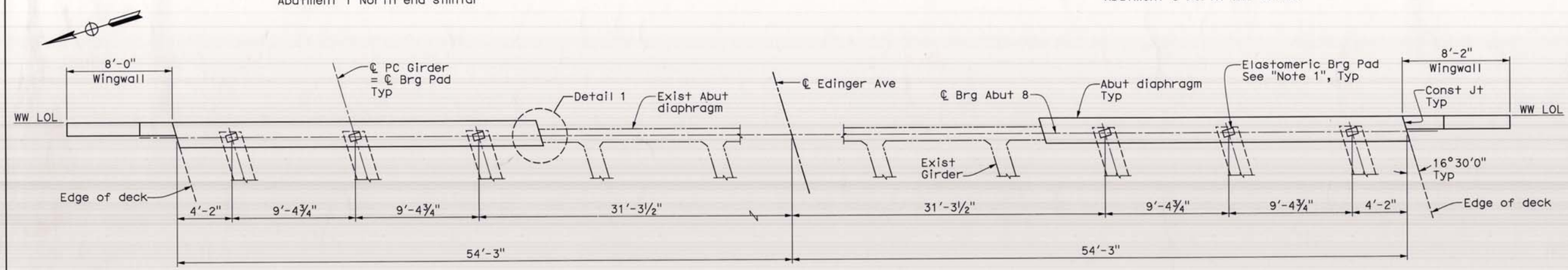
Abutment 1 South end shown
Abutment 1 North end similar



ELEVATION

1/4" = 1'-0"

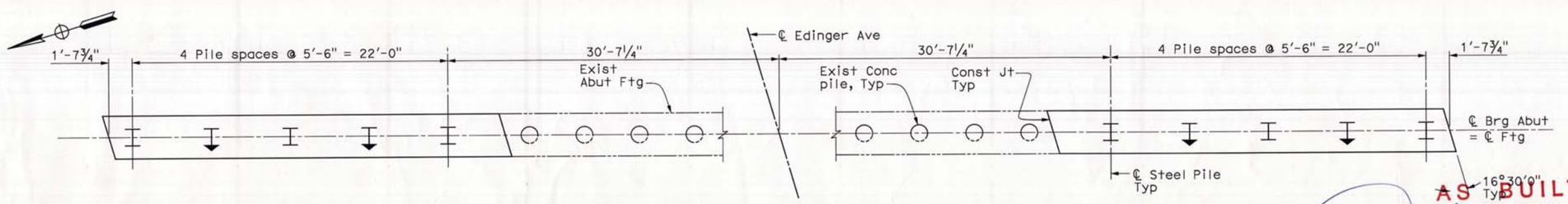
Abutment 8 South end shown
Abutment 8 North end similar



PLAN

1/4" = 1'-0"

Abutment 8 shown, Abutment 1 similar



PILE LAYOUT

1/4" = 1'-0"

Abutment 8 shown, Abutment 1 similar

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # E209242

Legend

- ○ Existing driven concrete pile
- I Driven steel pile
- I Driven battered steel pile

RFI #9/#10 AECOM allowed to use 5:1 rake for Abut-1 footing

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

Note:

1. For "Detail 1" & bearing pad layout, see "Abutment Details" sheet. Provide level area at bearing pad seat extending 3" beyond each side of bearing pad.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR No. 57594 CIVIL STATE OF CALIFORNIA
MOHAN S. CHAR
1-2-13
DATE

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

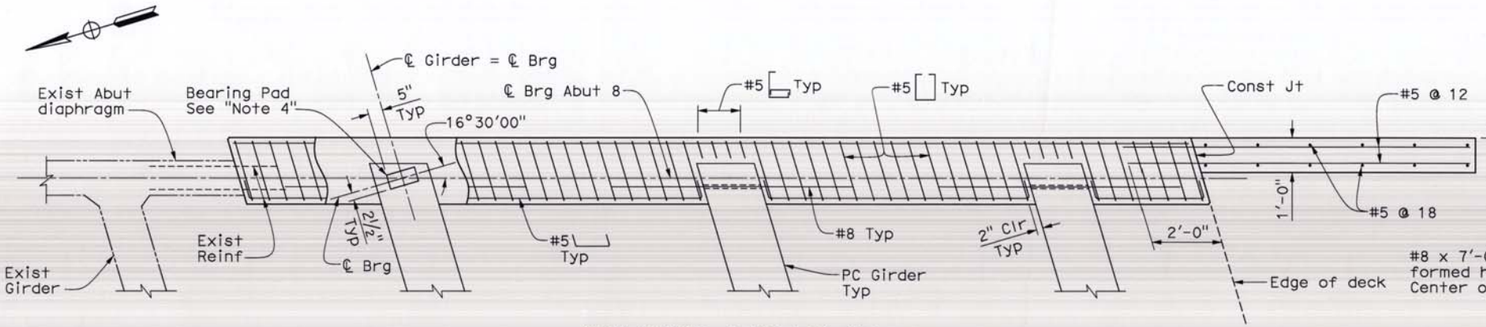
ABUTMENT LAYOUT

Sheet Reference Number

ST-07

Sheet 56 of 76

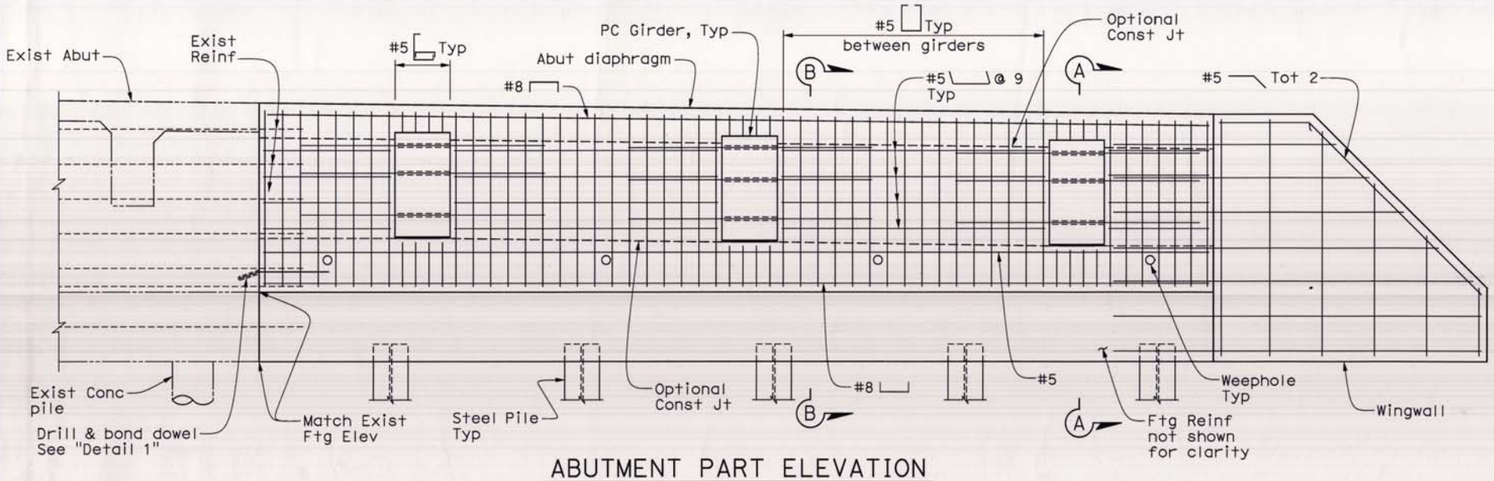
FILE NAME : 07_Edinger_AB_Layout.dgn



ABUTMENT PART PLAN

½" = 1'-0"

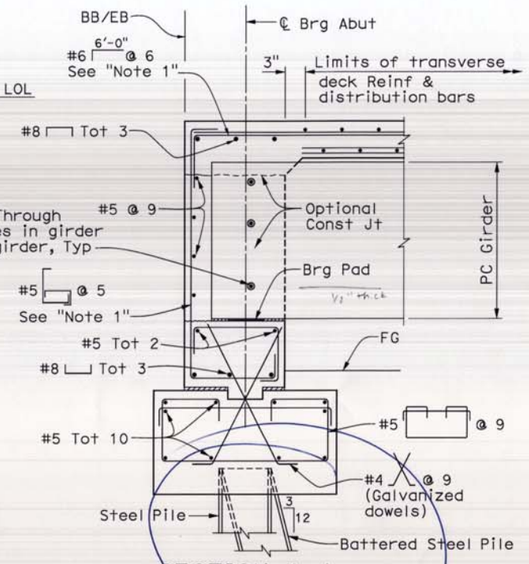
Abut 8 South shown, Abut 8 North & Abut 1 similar



ABUTMENT PART ELEVATION

½" = 1'-0"

Abut 8 South shown, Abut 8 North & Abut 1 similar

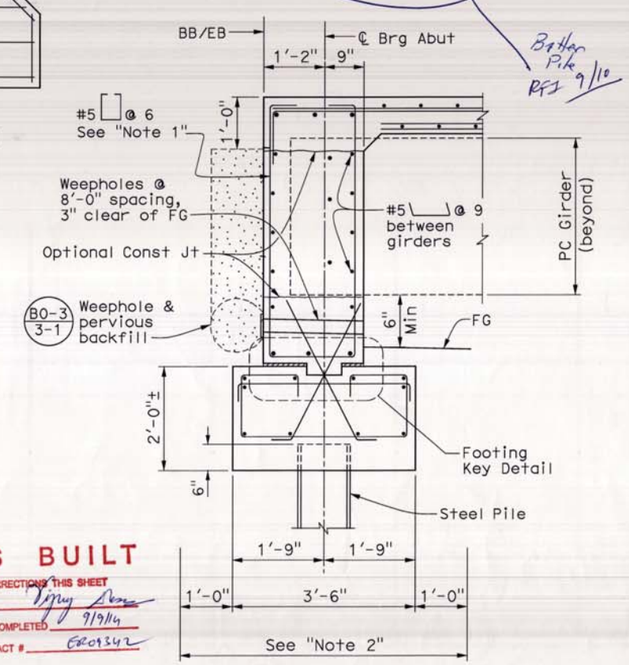


SECTION A-A

¾" = 1'-0"

Note: For information not shown see "Section B-B".

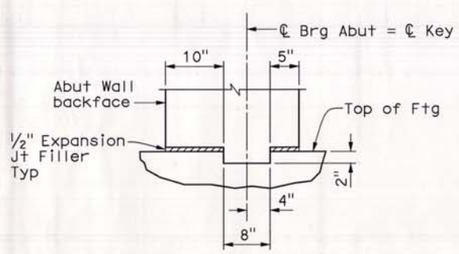
Batter Pile RFI 9/10



SECTION B-B

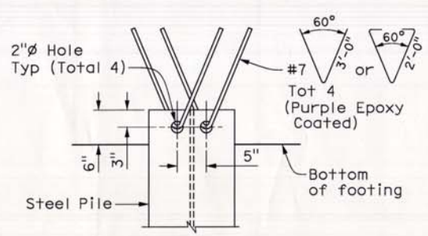
¾" = 1'-0"

Note: For Reinf not shown see "Section A-A".



FOOTING KEY DETAIL

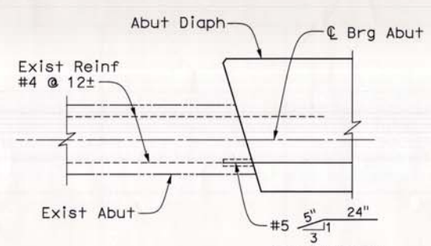
1" = 1'-0"



STEEL PILE ANCHOR

1" = 1'-0"

Note: All Piles shall be anchored.



DETAIL 1

1" = 1'-0"

Notes:

1. Place reinforcement parallel to girders and space normal to ℄ Brg Abutment.
2. Limits of excavation & backfill.
3. For any existing reinforcement damaged during concrete removal, missing, or with less than 15" of extension beyond the limits of removal, place additional #5 drill & bond dowels adjacent to these locations.
4. Elastomeric bearing pad 10"W x 5" L x ½" thick. Bond to level surface on abutment construction joint.

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # 8C09342

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: MOHAN S. CHAR, REGISTERED PROFESSIONAL ENGINEER, No. 55C-0154, CIVIL, STATE OF CALIFORNIA — DATE 1-2-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

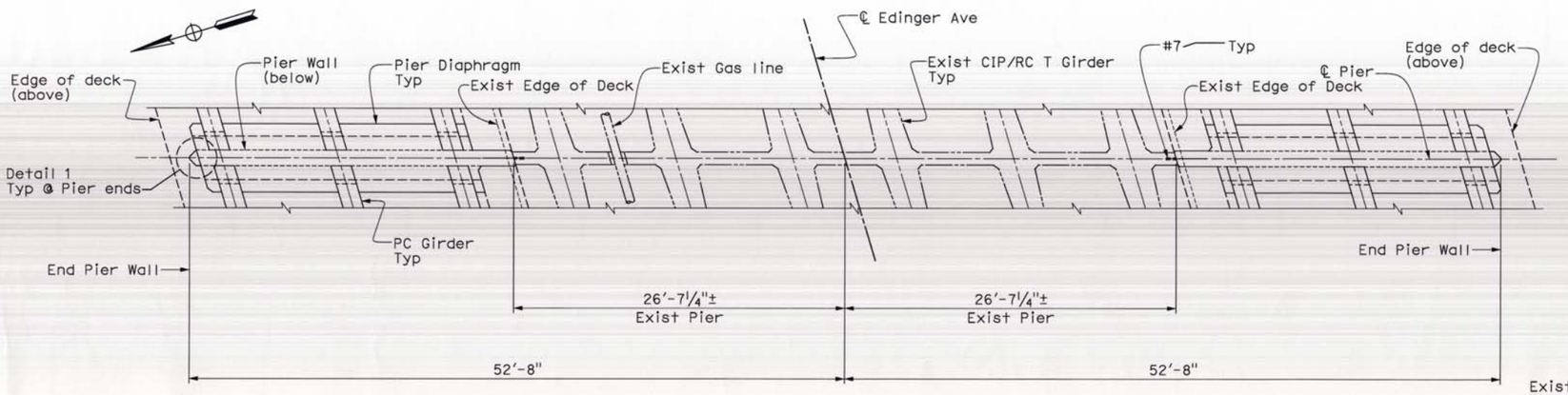
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

ABUTMENT DETAILS

Sheet Reference Number
ST-08

Sheet 57 of 76

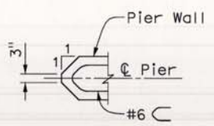
FILE NAME : 08_Edinger_AB_Det_1.dgn



PLAN

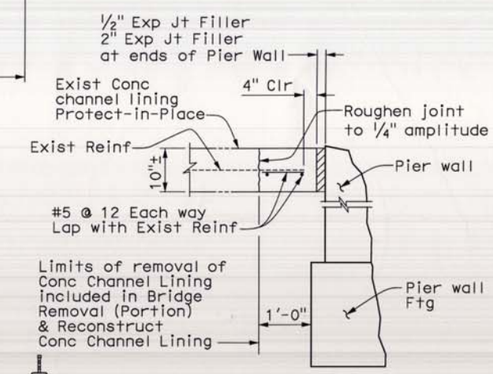
3/16" = 1'-0"
Pier 2 Shown,
Pier 7 Similar

Note: All dimensions measured along ℄ Pier.



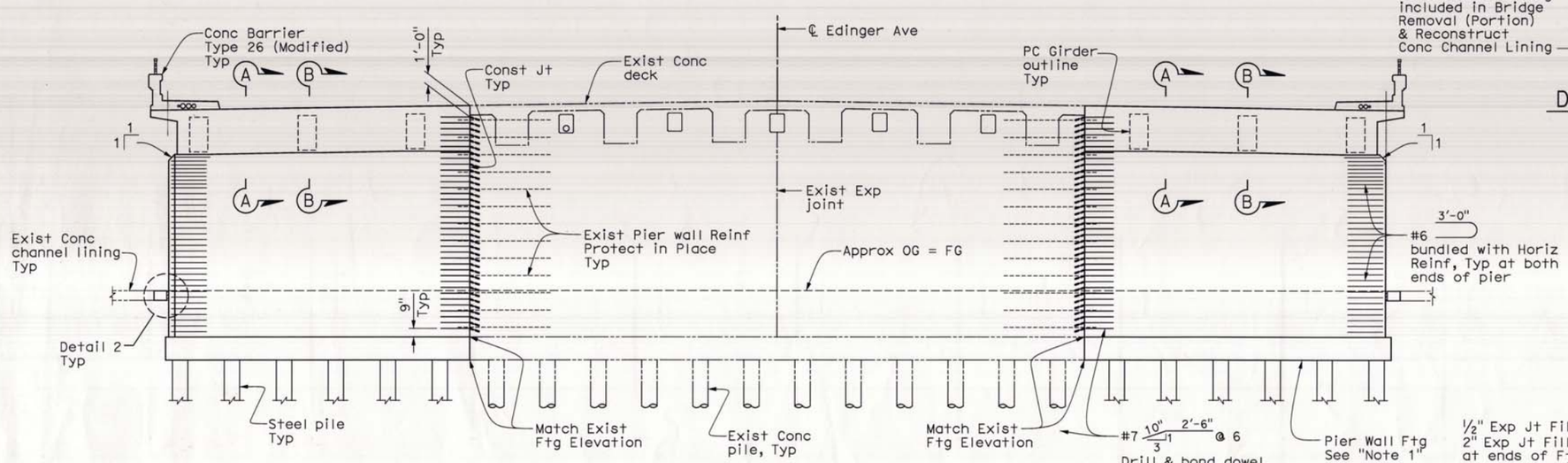
DETAIL 1

No Scale



DETAIL 2

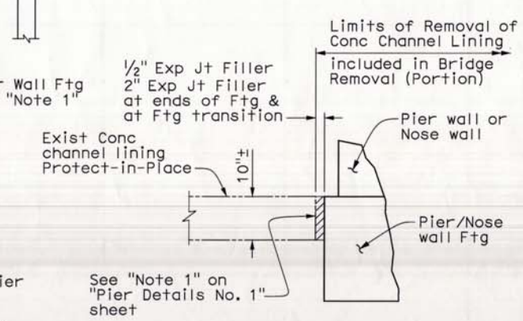
¾" = 1'-0"



ELEVATION

3/16" = 1'-0"
Pier 2 Shown,
Pier 7 Similar

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # E209742



DETAIL 3

¾" = 1'-0"

Notes:

1. For pier wall footing & pile layout, see "Pier Footing Layouts" sheet.
2. For "Section A-A", "Section B-B" and Typical Sections, see "Pier Details No. 1" sheet.

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: MOHAN CHAR, No. E-9014, CIVIL, STATE OF CALIFORNIA, REGISTERED PROFESSIONAL ENGINEER — DATE 1-21-13
MOHAN S. CHAR

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

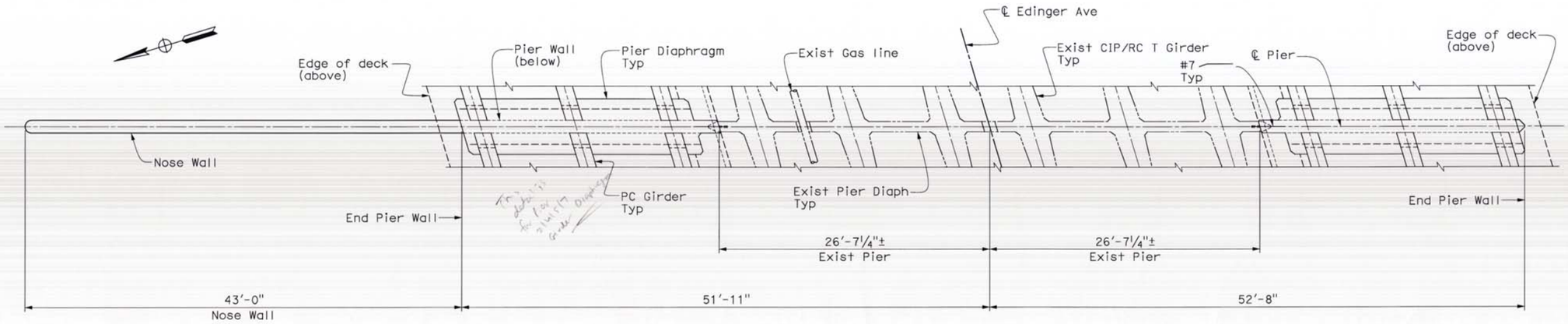
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

PIER LAYOUT NO. 1

Sheet Reference Number
ST-09

Sheet 58 of 76

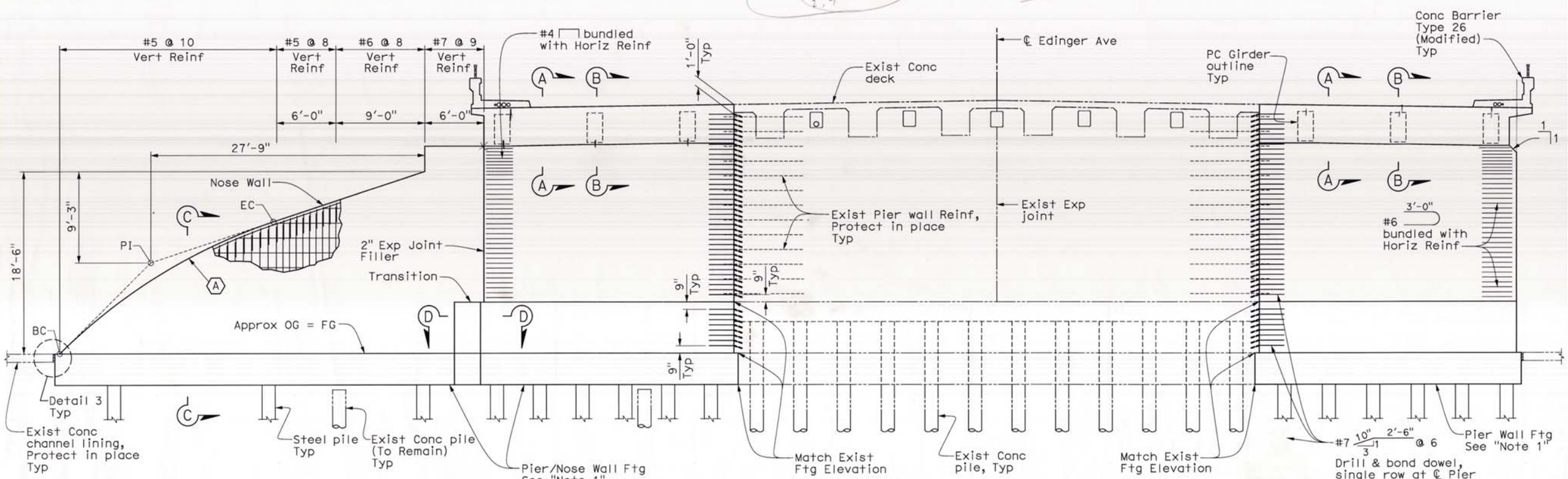
FILE NAME : 09_Edinger_Pier_Layout_1.dgn



PLAN

3/16" = 1'-0"
Pier 3 shown
Piers 4, 5 & 6 similar

Note: All dimensions measured along ℄ Pier.



ELEVATION

3/16" = 1'-0"
Pier 3 shown
Piers 4, 5 & 6 similar

CURVE DATA

(A)

R = 55.41'
Δ = 26°33'54"
T = 13.08'
L = 25.69'

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # EP09342

Notes:

1. For pier/nose wall footing & pile layout, see "Pier Footing Layouts" sheet.
2. For "Section A-A", "Section B-B" & Typical Section, see "Pier Details No. 1" sheet.
3. For "Detail 3", see "Pier Layout No. 1" sheet.
4. For "Section D-D", see "Pier Details No. 2" sheet.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: MOHAN S. CHAR — DATE 1-2-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY: KEYSTONE
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

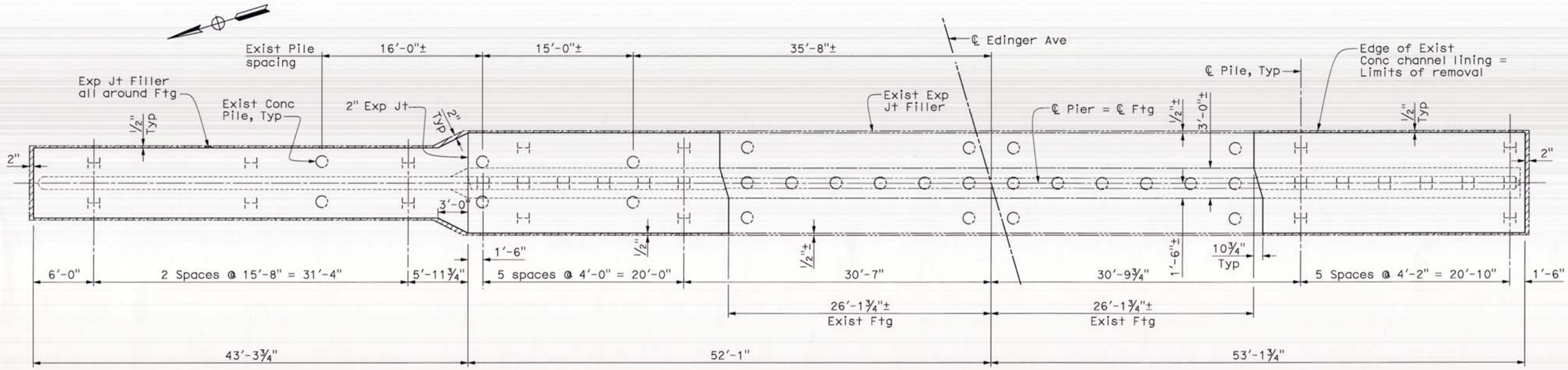
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

PIER LAYOUT NO. 2

Sheet Reference Number
ST-10

Sheet 59 of 76

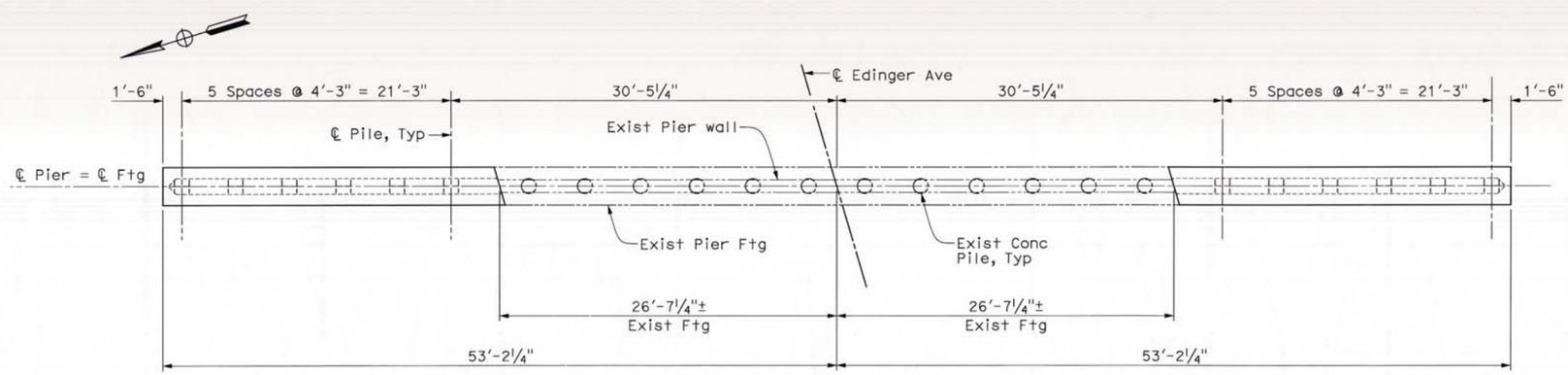
FILE NAME : 10_Edinger_Pier_Layout_2.dgn



PILE LAYOUT

3/16" = 1'-0"

Pier 3 shown, Piers 4, 5 & 6 similar



PILE LAYOUT

3/16" = 1'-0"

Pier 2 shown, Pier 7 similar

Legend

○ Existing driven concrete pile

⊢⊣ Driven steel pile

AS BUILT
NO CORRECTIONS THIS SHEET
BY Ryan Stone
DATE COMPLETED 9/9/14
CONTRACT # 120934-2

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR No. 51784 Exp. 6/30/14 CIVIL State of California
MOHAN S. CHAR
1-2-13 DATE

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
KEECHAN
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

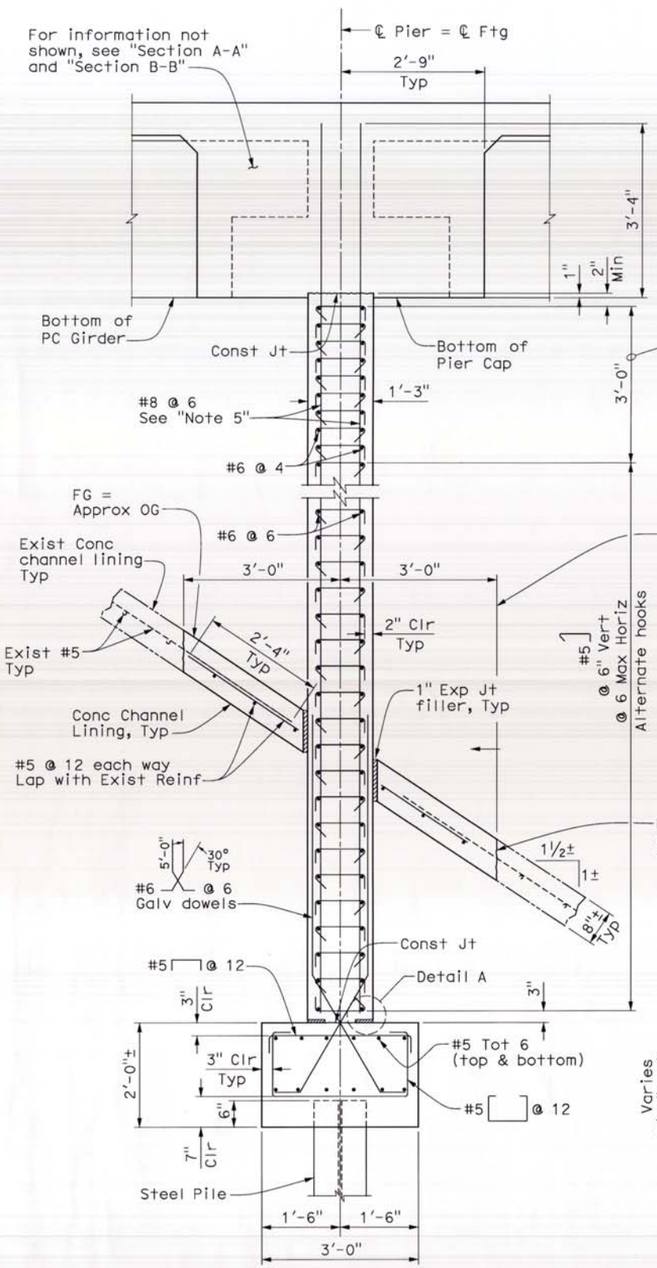
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

PIER FOOTING LAYOUTS

Sheet Reference Number

ST-11

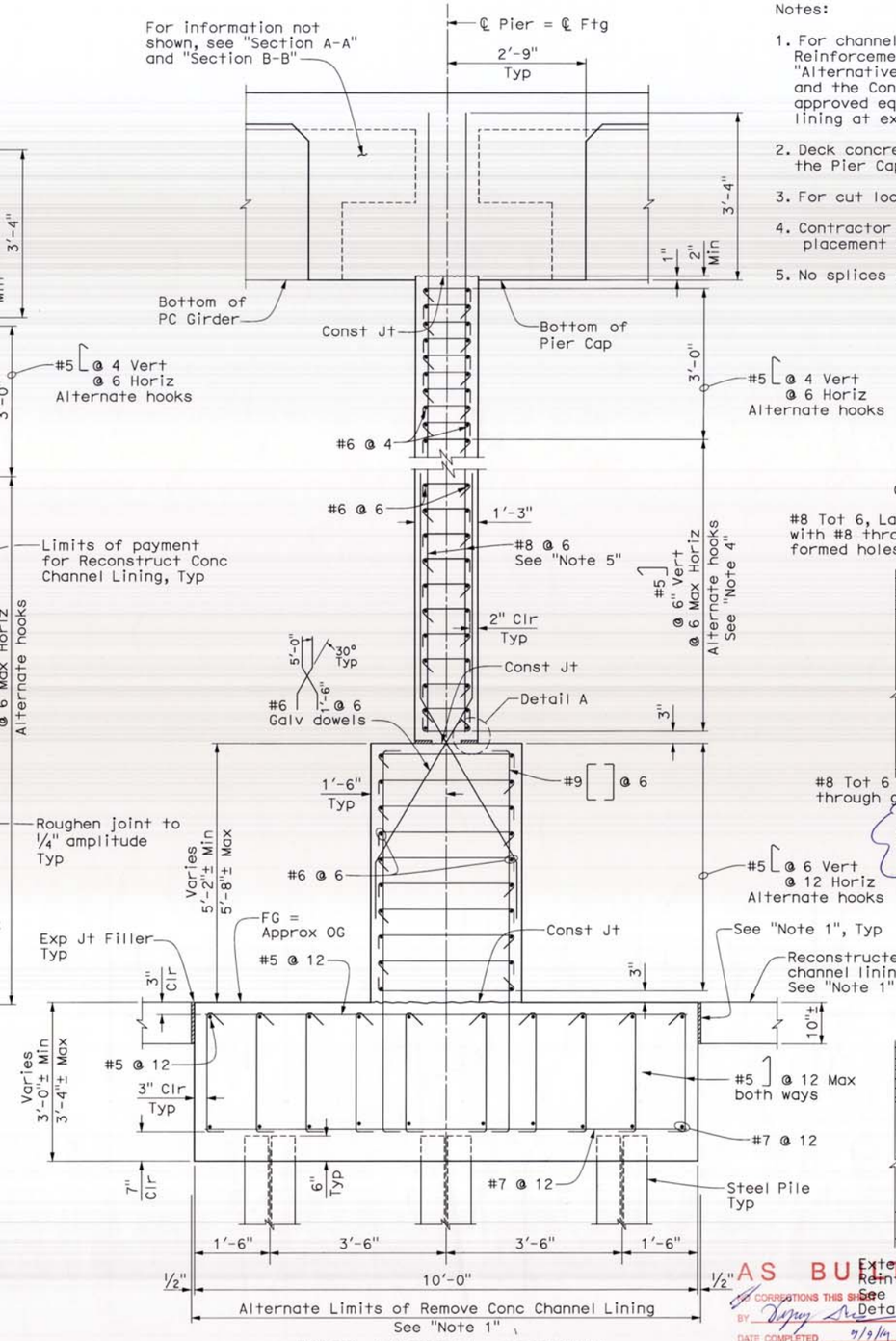
FILE NAME : 11_Edinger_Pier_Ftg_1.dgn



PIER TYPICAL SECTION

3/4" = 1'-0"
(Piers 2 & 7)

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.



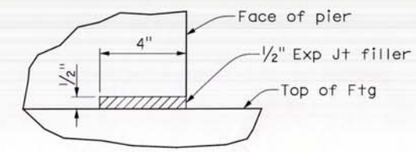
PIER TYPICAL SECTION

3/4" = 1'-0"

Note:
Piers 4 & 5 shown, Piers 3 & 6 similar, except top Pier section at Girders, see "Pier Details No. 2" sheet.

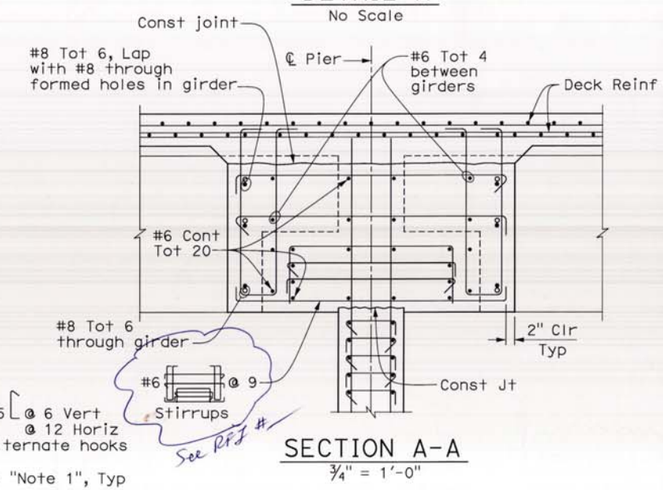
Notes:

1. For channel invert removal & repair details, see "Deck Reinforcement" sheet. At the Contractor's option, a sawcut at the "Alternative Limits of Remove Conc Channel Lining" may be made and the Contractor shall apply Sikargard 62 protective coating or approved equal to exposed perimeter of existing concrete channel lining at expansion joint.
2. Deck concrete shall not be placed until 14 days after the Pier Caps have been poured.
3. For cut locations of Sections A-A, & B-B, see "Pier Layout" sheets.
4. Contractor may bundle reinforcement at specific locations for placement of concrete, as approved by the Engineer.
5. No splices allowed in vertical pier wall reinforcement.



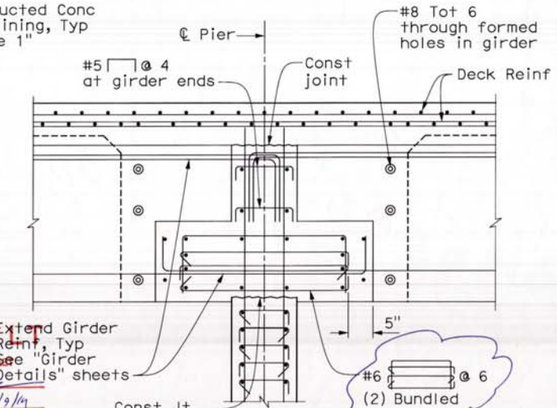
DETAIL A

No Scale



SECTION A-A

3/4" = 1'-0"



SECTION B-B

3/4" = 1'-0"

AS BUILT
CORRECTIONS THIS SHEET
BY
DATE COMPLETED 11/9/11
CONTRACT # E209342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: MOHAN S. CHAR — DATE 1-21-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

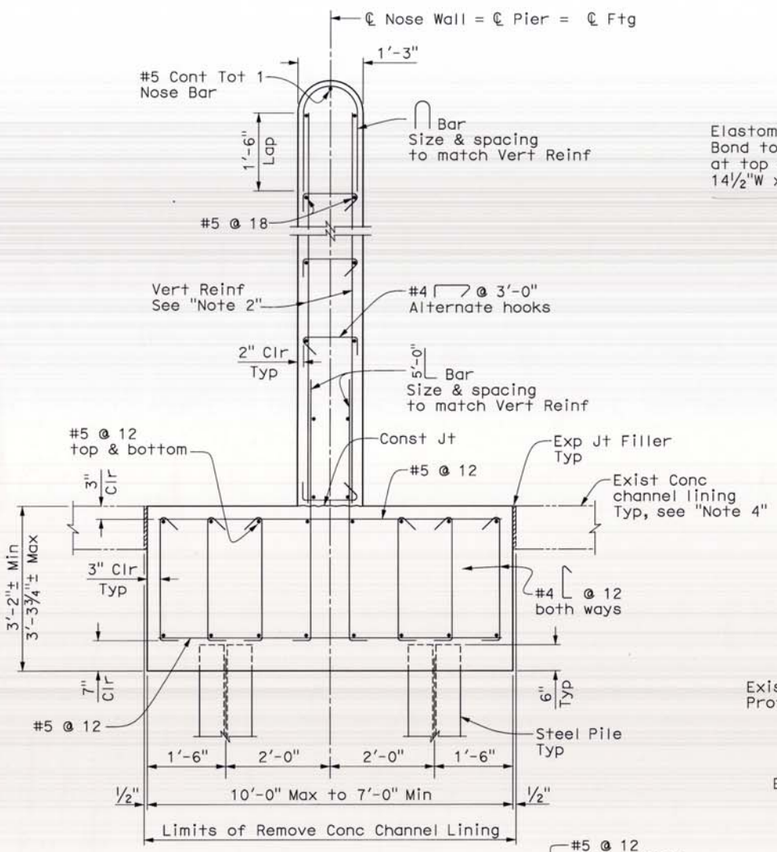
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

PIER DETAILS NO. 1

Sheet Reference Number
ST-12

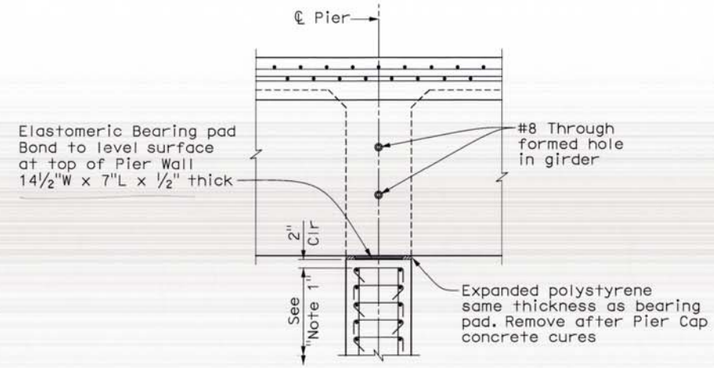
Sheet 61 of 76

FILE NAME : 12_Edinger_Pier_Det_1.dgn



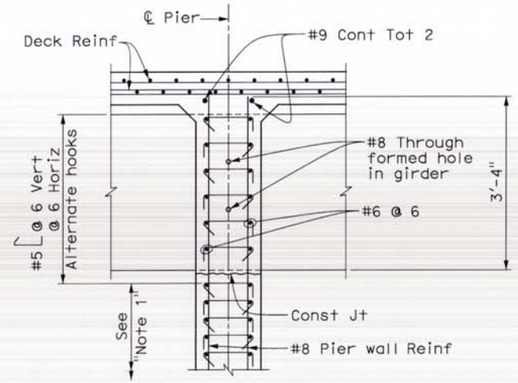
SECTION C-C

¾" = 1'-0"



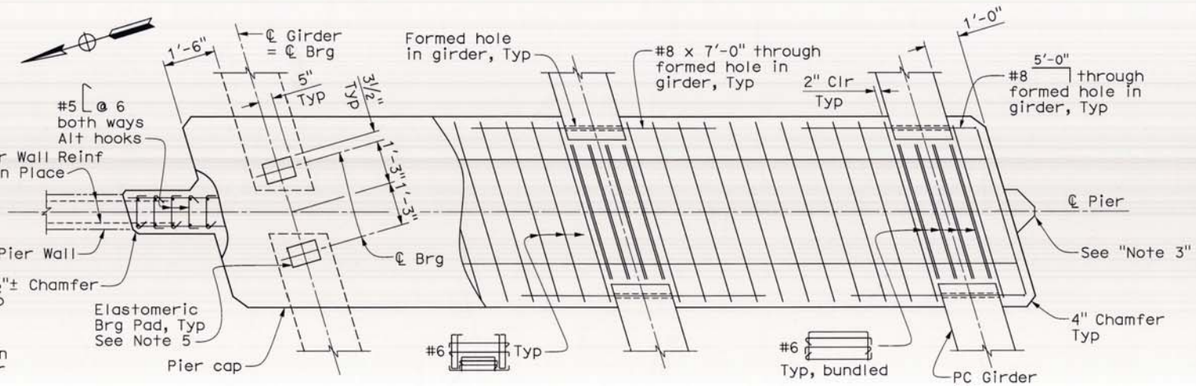
TOP PIER SECTION AT GIRDER

¾" = 1'-0"
(Piers 3 & 6)



TOP PIER SECTION BETWEEN GIRDERS

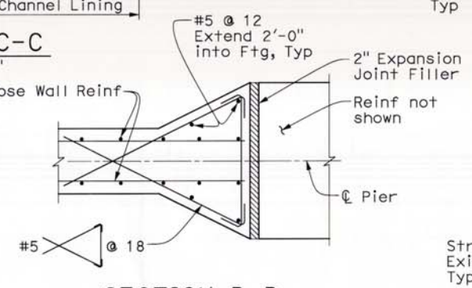
¾" = 1'-0"
(Piers 3 & 6)



PART PLAN VIEW (PIERS 2, 4, 5, 7)

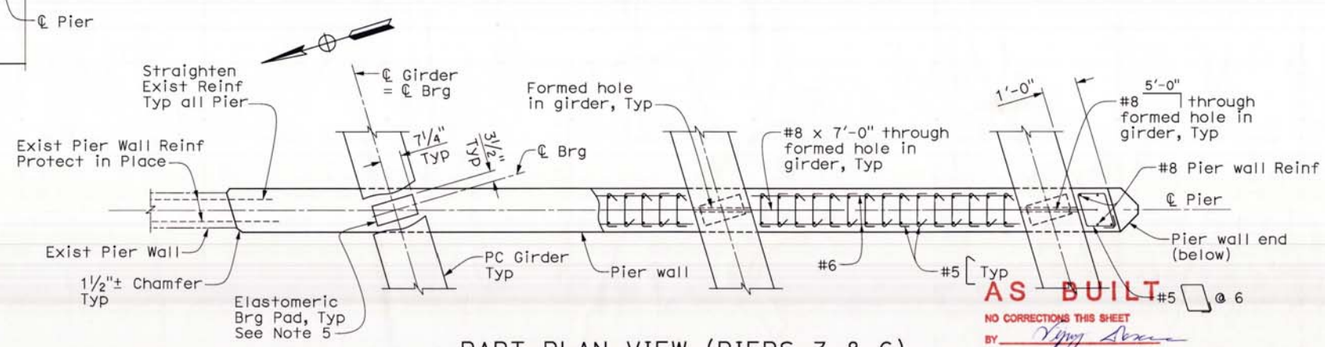
½" = 1'-0"

Note: Not all Reinf shown.



SECTION D-D

¾" = 1'-0"



PART PLAN VIEW (PIERS 3 & 6)

½" = 1'-0"

Notes:

1. For geometry & reinforcement, see "Pier Typical Section (Piers 4 & 5)" details on "Pier Details No. 1" sheet.
2. For size & spacing of vertical reinforcing, see "Elevation" on "Pier Layout No. 2" sheet.
3. For Pier wall end detail, see "Detail 1" on "Pier Layout No. 1" sheet.
4. Any existing channel reinforcing exposed at the limits of channel removal shall be drilled 1" back and patched.
5. Provide level area at bearing pad seat extending 3" beyond each side of bearing pad.

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09347

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR 57894 Exp. 6/30/14 CIVIL STATE OF CALIFORNIA
MOHAN S. CHAR — DATE 1-2-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

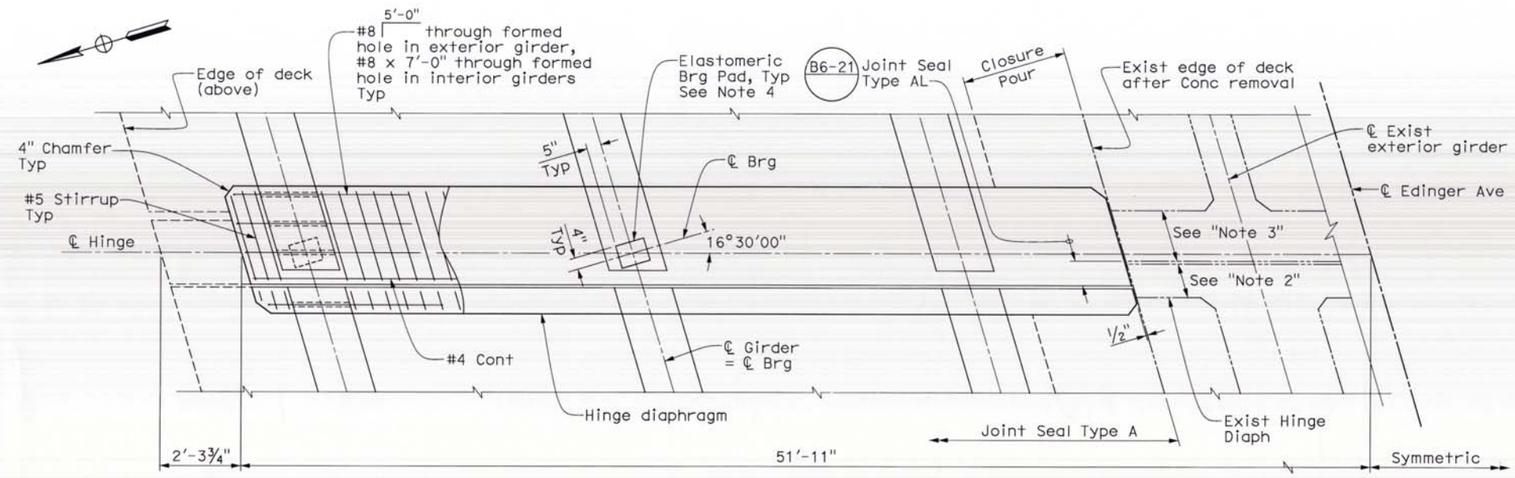
EDINGER AVENUE BRIDGE OVER
SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

PIER DETAILS NO. 2

Sheet Reference Number

ST-13

FILE NAME : 13_Edinger_Pier_Det_2.dgn

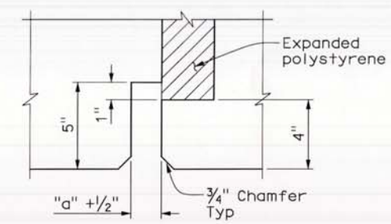


HINGE PART PLAN

½" = 1'-0"

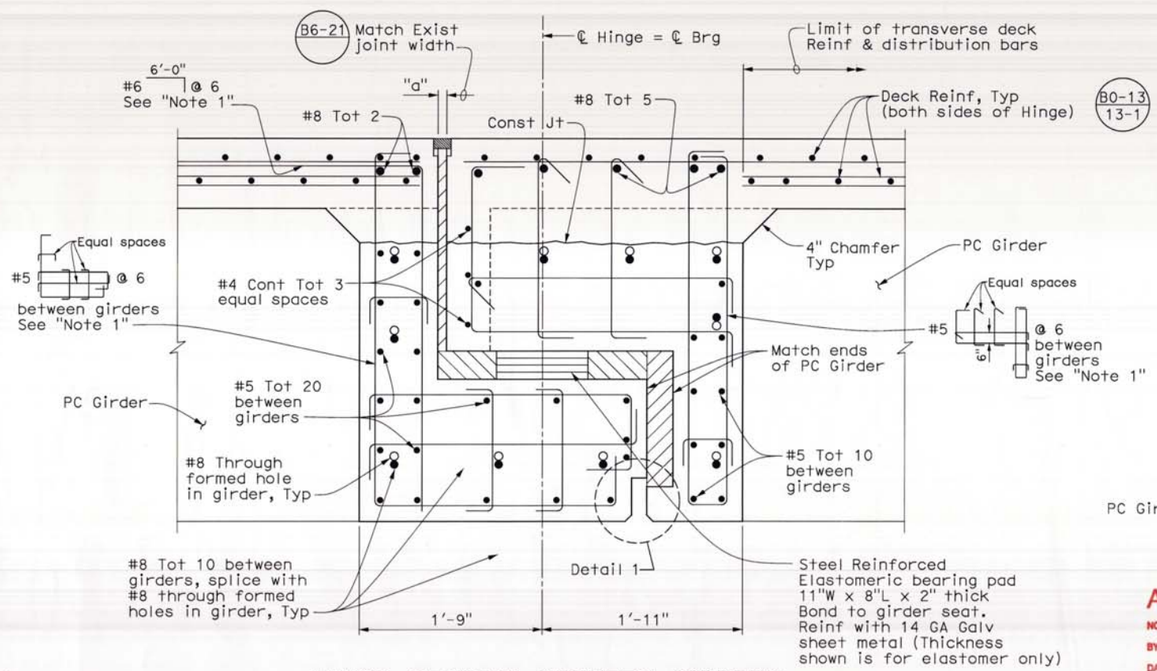
Notes:

1. Place parallel to girders and space along ℄ Hinge.
2. Remove all existing deck & hinge diaphragm reinforcing and cut back 1" back from exposed concrete surface and patch with grout.
3. Remove all existing hinge diaphragm reinforcing and cut back 1" back from exposed concrete surface and patch with grout.
4. Provide level area at bearing pad seat extending 3" beyond each side of bearing pad.



DETAIL 1

No Scale

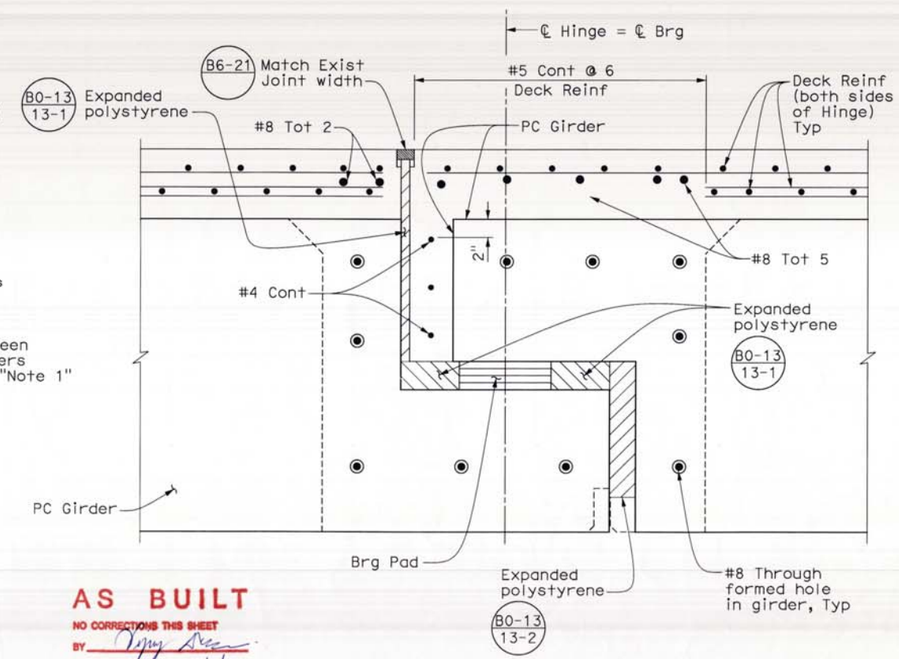


HINGE SECTION BETWEEN GIRDERS

1½" = 1'-0"

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09342



HINGE SECTION AT GIRDER

1½" = 1'-0"

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR No. ST 984 Exp. 6/30/14 CIVIL STATE OF CALIFORNIA
MOHAN S. CHAR
DATE 1-2-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

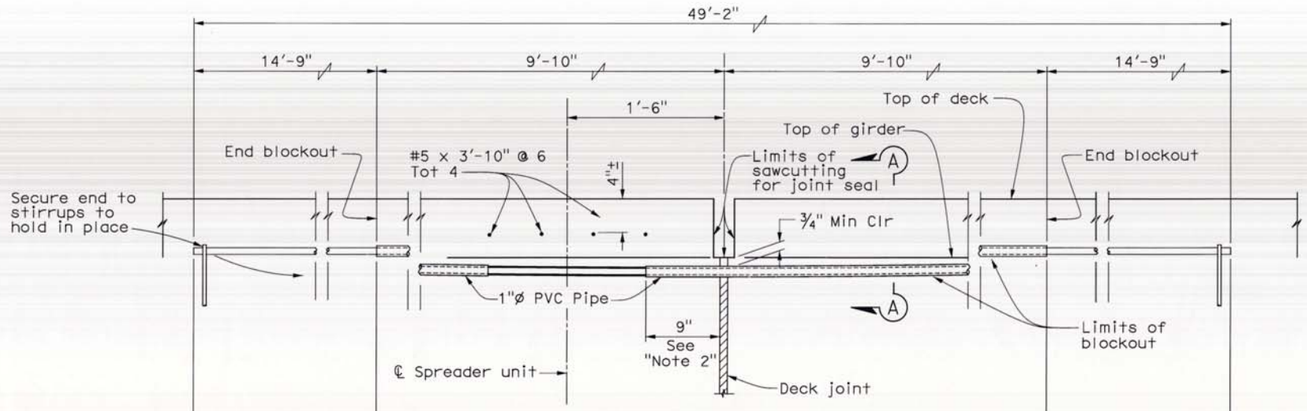
HINGE LAYOUT

Sheet Reference Number

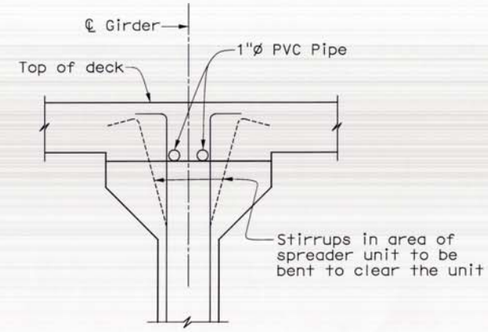
ST-14

Sheet 63 of 76

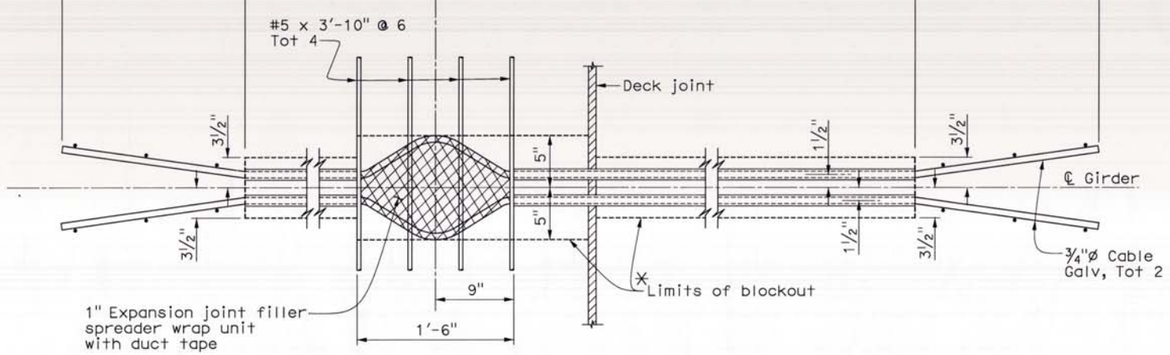
FILE NAME : 14_Edinger_Hinge_Layout.dgn



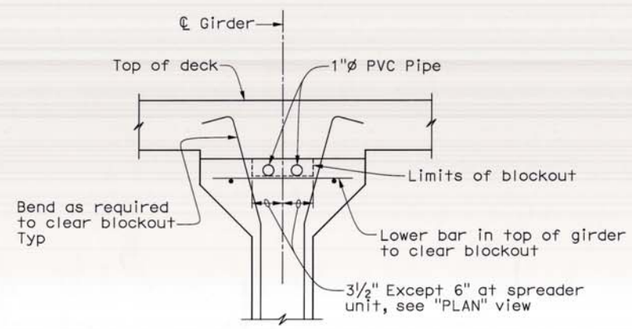
ELEVATION
(Blockout condition shown)
No Scale



SECTION A-A
(Without Blockout)
No Scale



PLAN
(Blockout condition shown)
No Scale



SECTION A-A
(With Blockout)
No Scale

Notes:

1. Seal ends of PVC pipe
2. Grease outer surface of PVC

✳ Blockout required if placing restrainer units on top of precast girder interferes with sawcutting for joint seal

AS BUILT
NO CORRECTIONS THIS SHEET
BY Yang Nguyen
DATE COMPLETED 9/9/14
CONTRACT # 6120342

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

Note:
Details based on Caltrans Standard Detail sheet xs7-060.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR 57184 6/30/14 CIVIL STATE OF CALIFORNIA
MOHAN S. CHAR
DATE 1-2-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

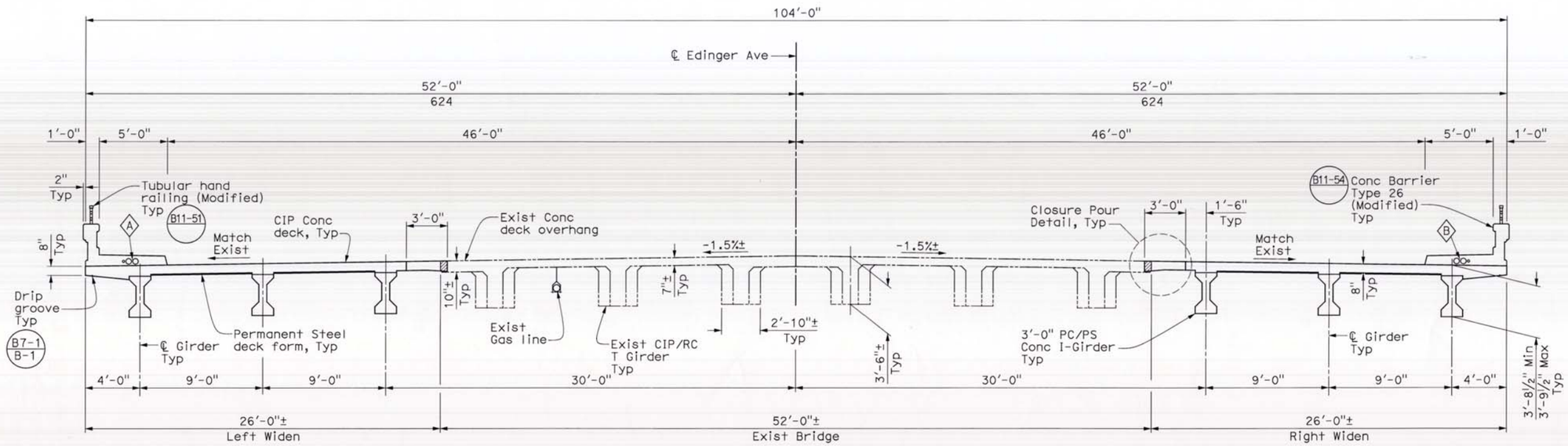
PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER
SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

HINGE DETAILS

Sheet Reference Number
ST-15

FILE NAME : 15_Edinger_Hinge_Det.dgn



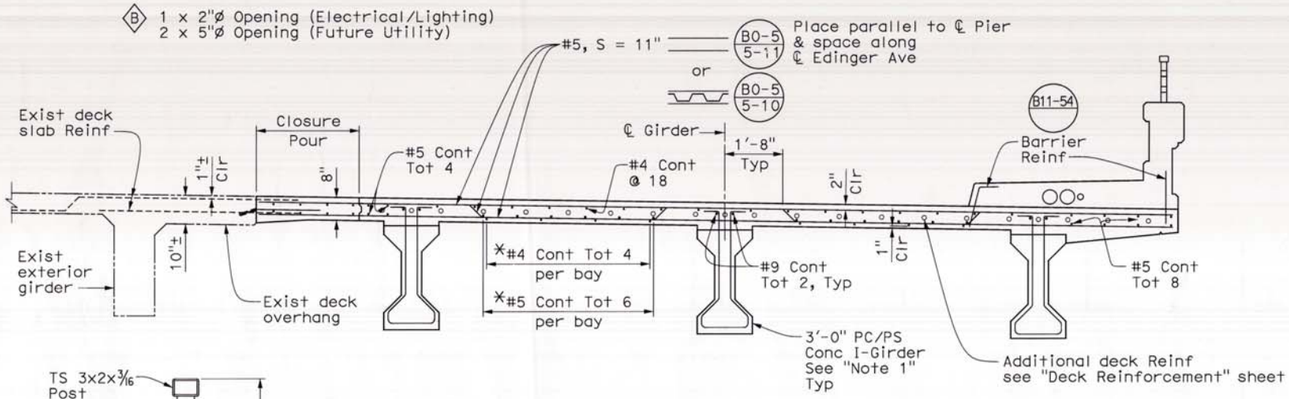
TYPICAL SECTION

¼" = 1'-0"

SIDEWALK OPENING LEGEND

(A) 1 x 2"ø Opening (Electrical/Lighting)
2 x 5"ø Opening (Future Utility)

(B) 1 x 2"ø Opening (Electrical/Lighting)
2 x 5"ø Opening (Future Utility)

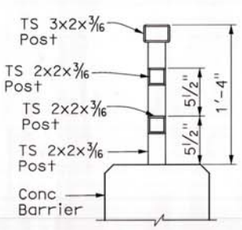


PART TYPICAL SECTION

½" = 1'-0"

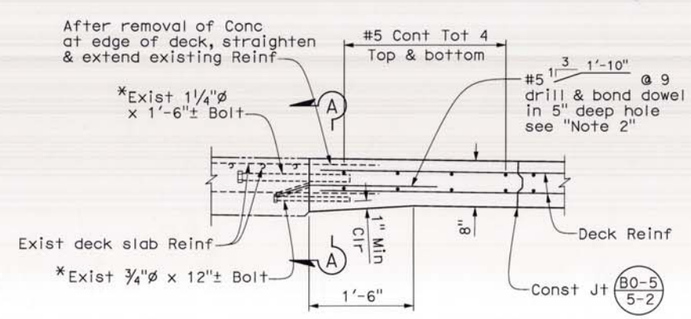
(Right Widen shown, Left Widen similar)

*Distribution bars, equally spaced



TUBULAR HAND RAILING (MODIFIED)

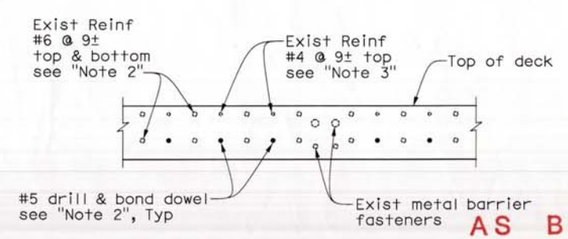
No Scale



CLOSURE POUR DETAIL

1" = 1'-0"

*From Exist Metal barrier



SECTION A-A

1" = 1'-0"

LEGEND

---- Indicates existing

▨ Indicates limits of existing Bridge removal (Portion) See "Demolition Details" sheets

Notes:

1. For PC girder details, see "Girder Details" sheets.
2. For any existing deck reinforcement damaged during concrete removal, missing, or with less than 15" of extension beyond the limits of removal, place additional #5 drill & bond dowels adjacent to these locations.
3. Closure pour concrete shall not be placed until 15 days after the deck has been poured.
4. For Concrete Barrier Type 26 (Modified) details, see "Girder Layout No. 1" sheet.

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
NO CORRECTIONS THIS SHEET
BY Vijay Rao
DATE COMPLETED 9/9/14
CONTRACT # 5209342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR 57304 Exp. 6/30/14 CIVIL STATE OF CALIFORNIA
DATE 1-2-13
MOHAN S. CHAR

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
SCALE: AS SHOWN
PLOT DATE:

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

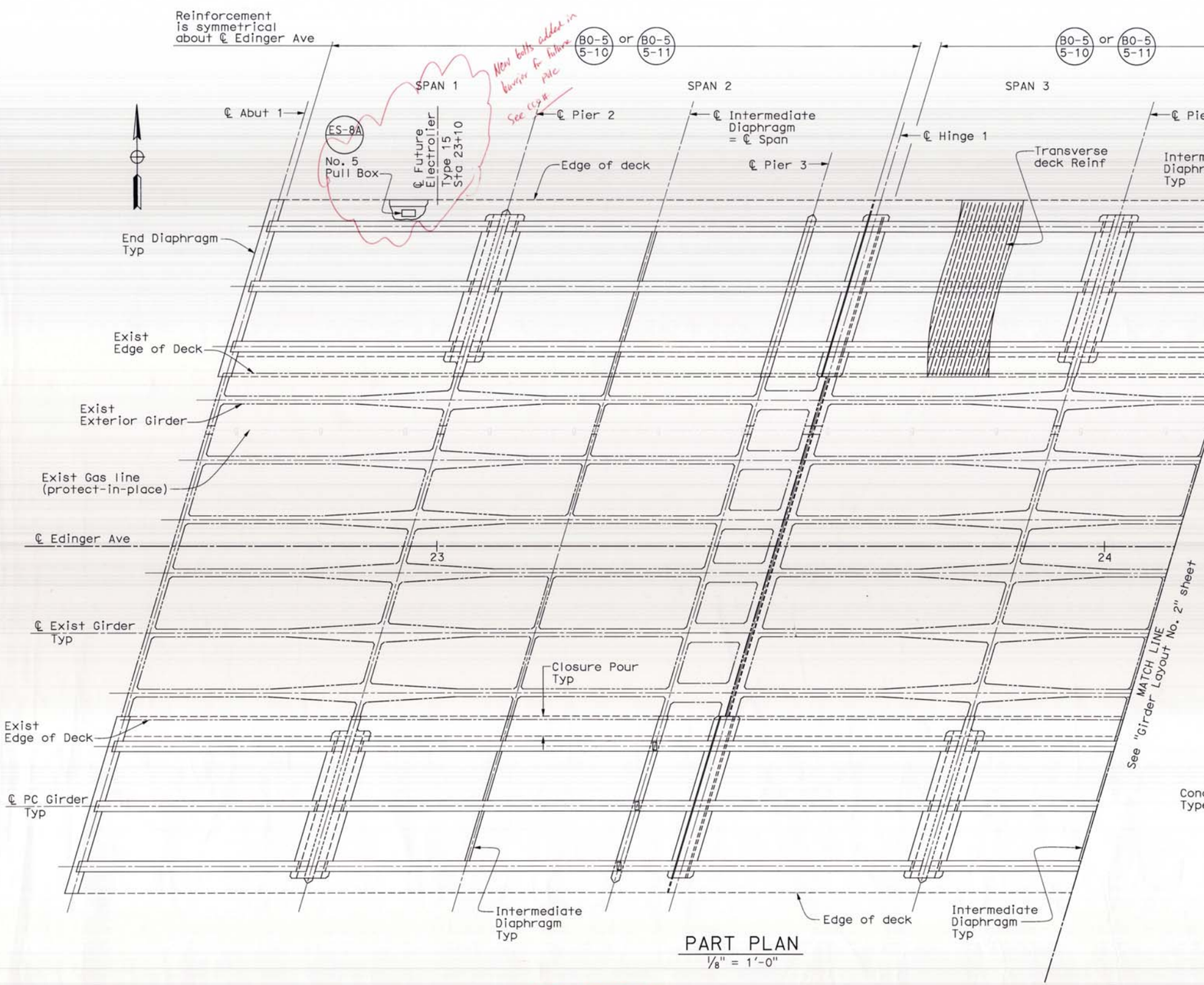
TYPICAL SECTION

Sheet Reference Number

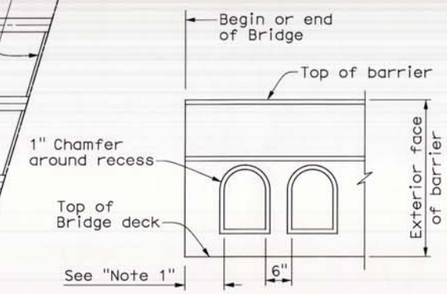
ST-16

Sheet 65 of 76

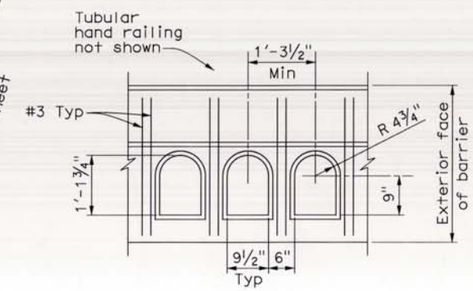
FILE NAME : 16_Edinger_TYPSEC.dgn



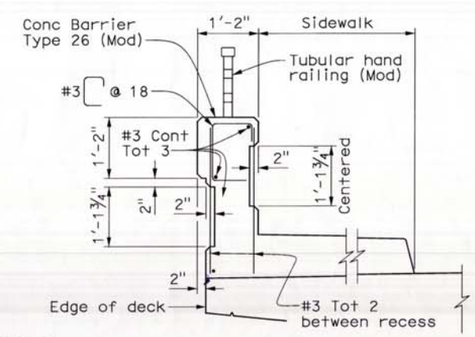
PART PLAN
1/8" = 1'-0"



CONCRETE BARRIER END ELEVATION
3/4" = 1'-0"



CONCRETE BARRIER ELEVATION
3/4" = 1'-0"



Note:
For Reinf not shown, see B11-54

CONCRETE BARRIER ADDITIONAL REINFORCEMENT
3/4" = 1'-0"

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 7/9/14
CONTRACT # ER09342

Barrier Notes:

1. Maintain a minimum of 6" spacing between the end of barrier and recessed pane. Spacing at both ends shall be equal.
2. All corners shall have a 1" chamfer.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: REGISTERED PROFESSIONAL ENGINEER MOHAN SHAH No. 51784 Exp. 6/30/14 CIVIL STATE OF CALIFORNIA
DATE 1-2-13
MOHAN S. CHAR

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

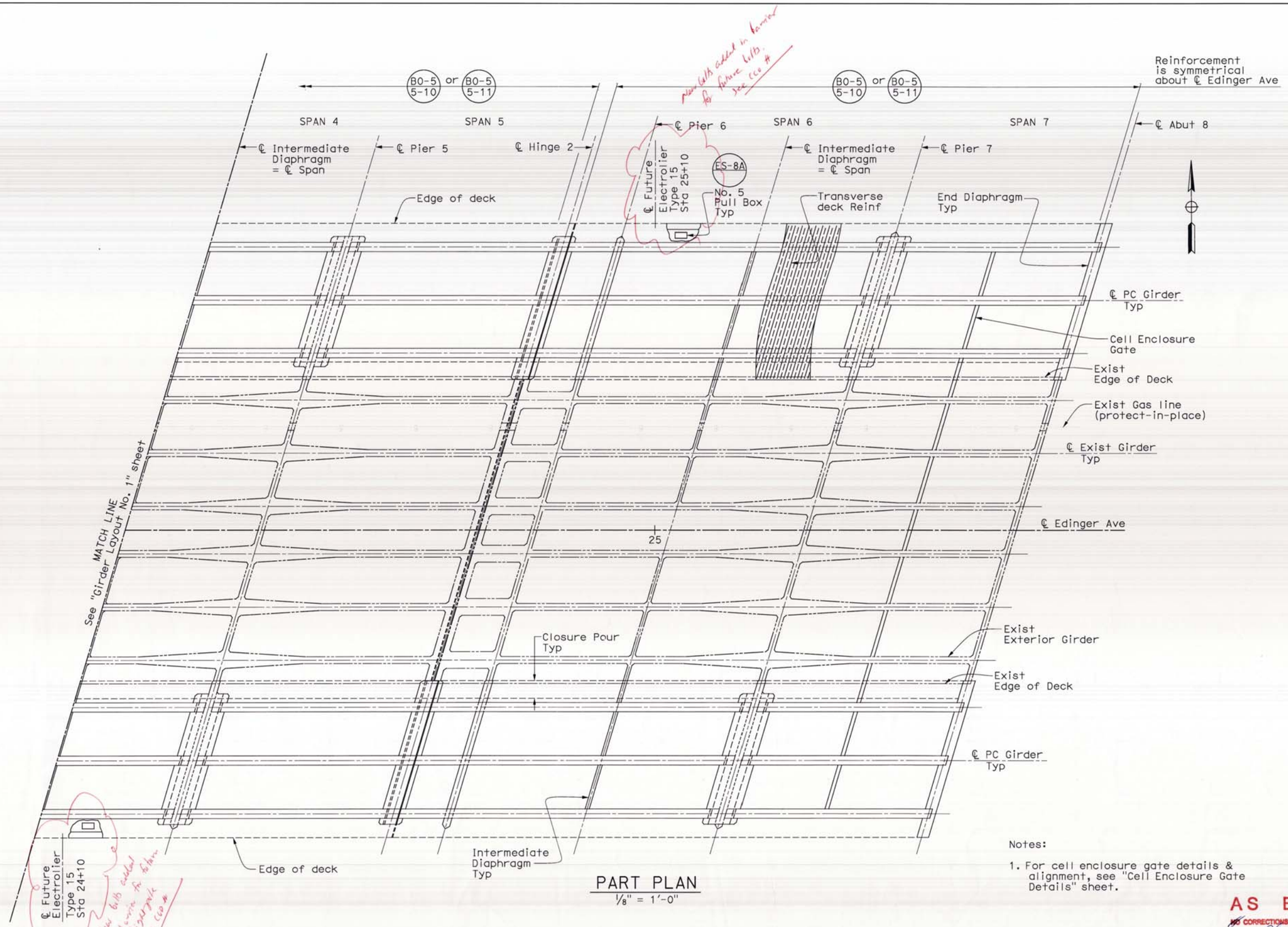
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

GIRDER LAYTOUT NO. 1

Sheet Reference Number
ST-17

Sheet 66 of 76

FILE NAME : 17_Edinger_GL_1.dgn



PART PLAN
1/8" = 1'-0"

Notes:

1. For cell enclosure gate details & alignment, see "Cell Enclosure Gate Details" sheet.

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # CR-9342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR No. 61801 CIVIL STATE OF CALIFORNIA
1-2-13
DATE
MOHAN S. CHAR

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

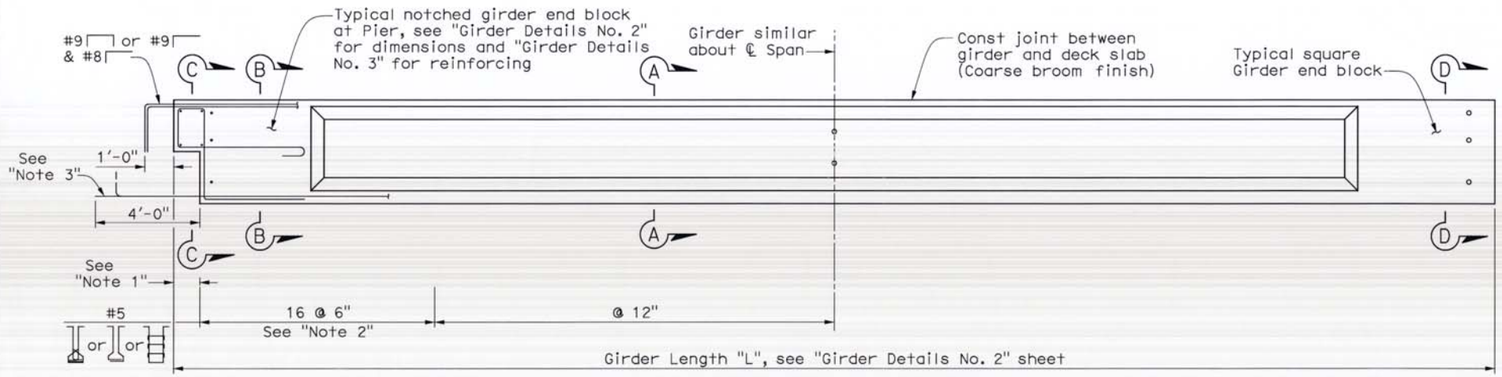
PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

GIRDER LAYOUT NO. 2

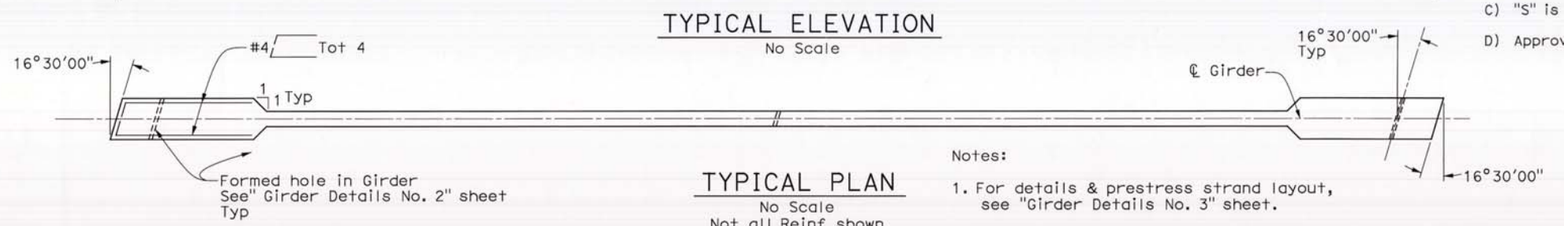
Sheet Reference Number
ST-18

FILE NAME : 18_Edinger_GL_2.dgn



TYPICAL ELEVATION

No Scale

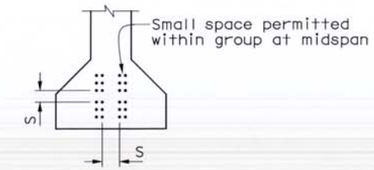


TYPICAL PLAN

No Scale
Not all Reinf shown

Notes:

1. For details & prestress strand layout, see "Girder Details No. 3" sheet.
2. Typical stirrup pattern shown. For span 2 & span 6 girder stirrup pattern, see "Girder Details No. 2" sheet.
3. Extend prestressing strands (total 6) at girder ends terminating at Piers.



CLEARANCES FOR PRETENSIONED STRANDS

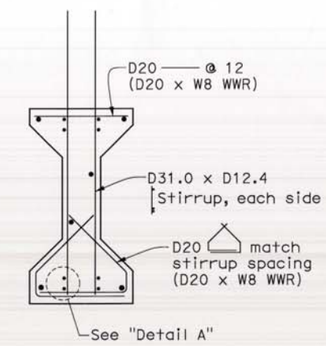
No Scale

A) Strands may be bundled in groups consisting of 3 vertically, 2 horizontally and separated at the ends.

B) The Min distance "S" between groups or individual strands is 1½" for ⅜" ø strands, 1¾" for ½" ø strands, 2" for 0.6" ø strands.

C) "S" is measured between centers of adjacent strands.

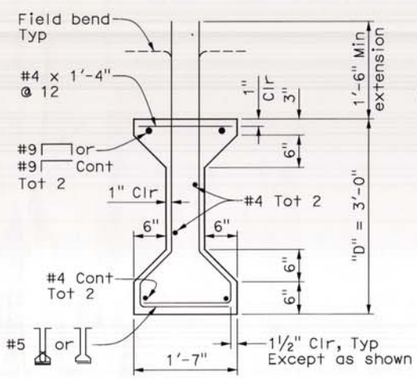
D) Approval by the Engineer is required for deviation.



OPTIONAL WELDED WIRE REINFORCEMENT (WWR) DETAIL

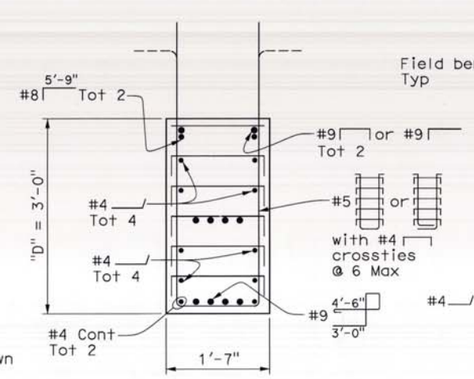
No Scale

Note:
For details not shown, see "Section A-A" & "Section B-B"



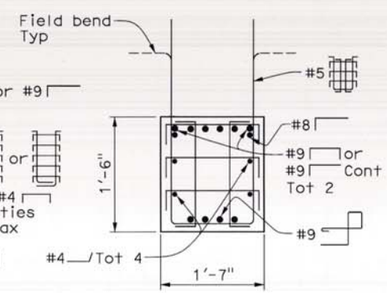
SECTION A-A

No Scale



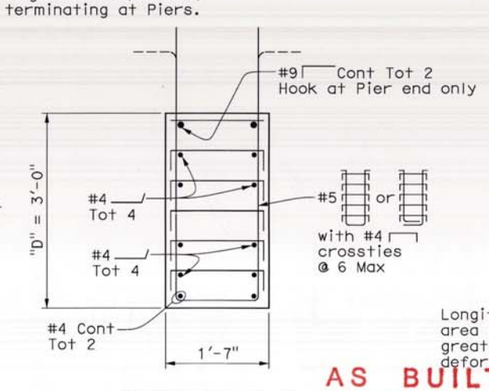
SECTION B-B

No Scale



SECTION C-C

No Scale

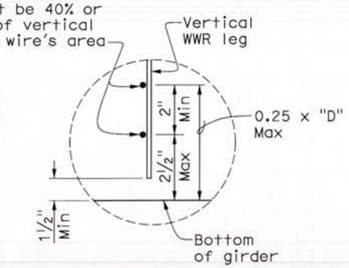


SECTION D-D

No Scale

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09342

Longitudinal wire area must be 40% or greater of vertical deformed wire's area



DETAIL A

No Scale

WWR Note:
Manufacturer's shop drawings shall conform to reinforcement shown on this sheet as noted & the Special Provisions.

PRESTRESSED NOTES

JACKING FORCE (P): The jacking force required at the point of control along the span. The jacking force does not include any fabrication specific losses.
The maximum temporary tensile stress shall not exceed 80% of the specified minimum ultimate tensile strength of the prestressing steel.

CONCRETE STRENGTH: f'ci is at time of initial stressing
f'c is at 28 days

DEFLECTION COMPONENTS: Informational - to be used in setting screed line elevations.

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

Girder location or designation and length	Jacking Force (P) (kips per girder)	Concrete Strength (ksi)		Midspan Dead Load Deflection (inches)		Hinge Dead Load Deflection (inches)	
		f'ci	f'c	Deck	Rail	Deck	Rail
Span 1 & 7	352 (44 kips/strand)	4.5	6.0	0.19	0.11	-	-
Span 2 & 6	440 (44 kips/strand)	4.5	6.0	0.20	0.14	0.05	0.03
Span 3 & 5	352 (44 kips/strand)	4.5	6.0	*0.16	*0.15	-	-
Span 4	440 (44 kips/strand)	4.5	6.0	0.31	0.23	-	-

* Includes Movement at Hinge

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR No. 57884 Exp. 6/30/14 CIVIL STATE OF CALIFORNIA
MOHAN S. CHAR — DATE 1-21-13

DESIGNED BY: M. STILLER
CHECKED BY: T. DUDLEY
DRAWN BY: R. ANDRASEK
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

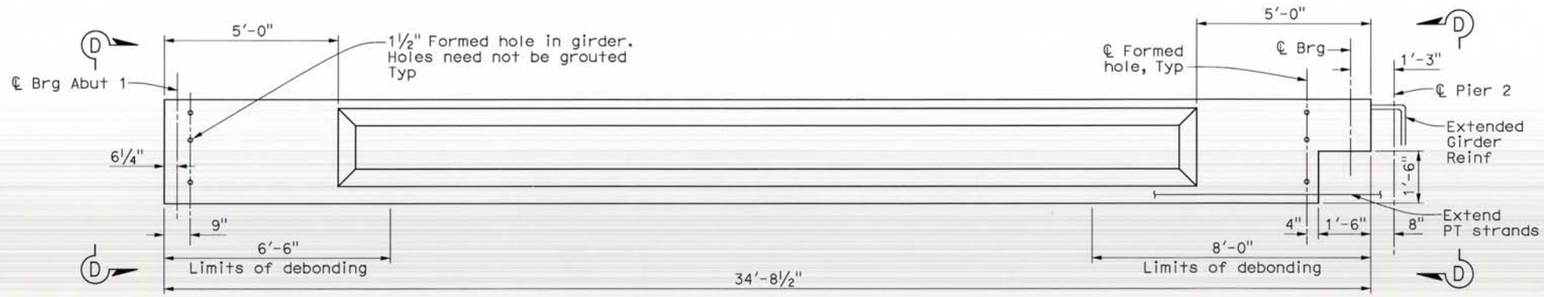
PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

GIRDER DETAILS NO. 1

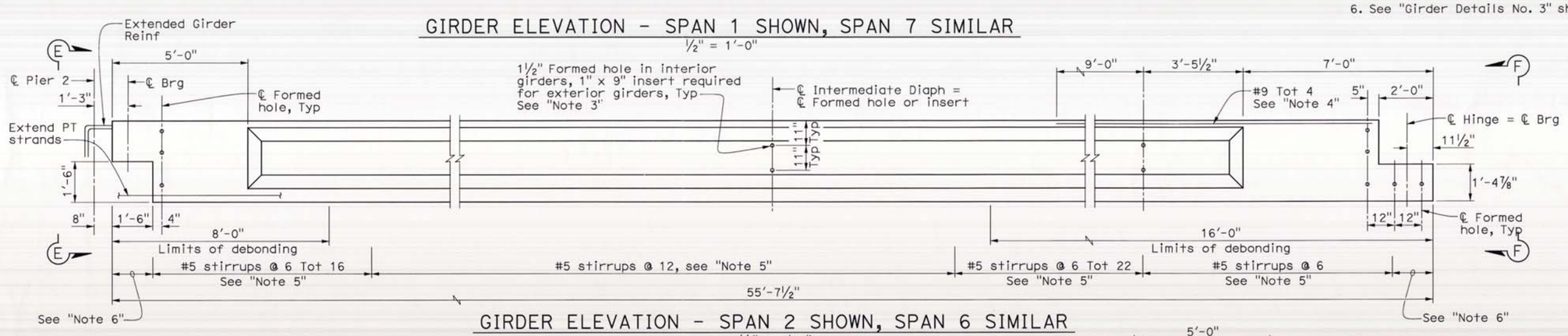
Sheet Reference Number
ST-19

FILE NAME : 19_Edinger_GDET_1.dgn



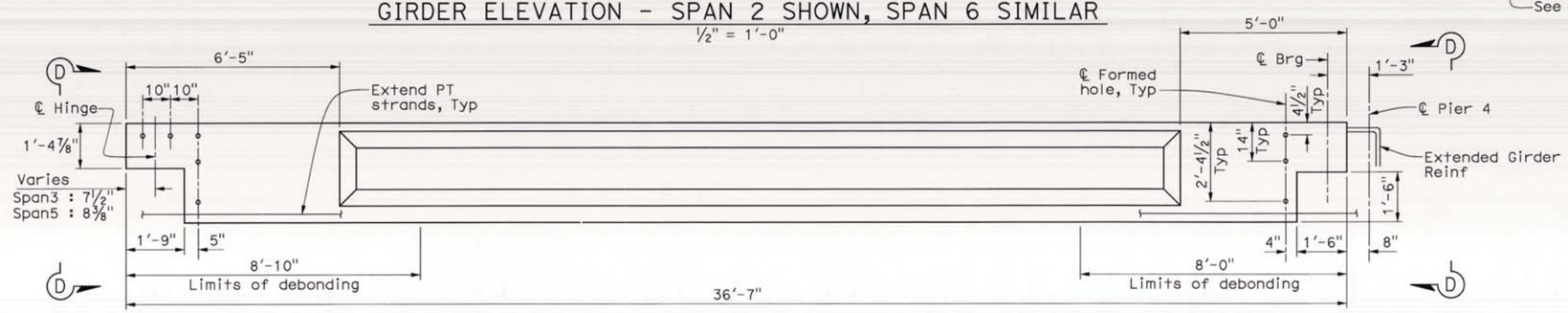
GIRDER ELEVATION - SPAN 1 SHOWN, SPAN 7 SIMILAR

½" = 1'-0"



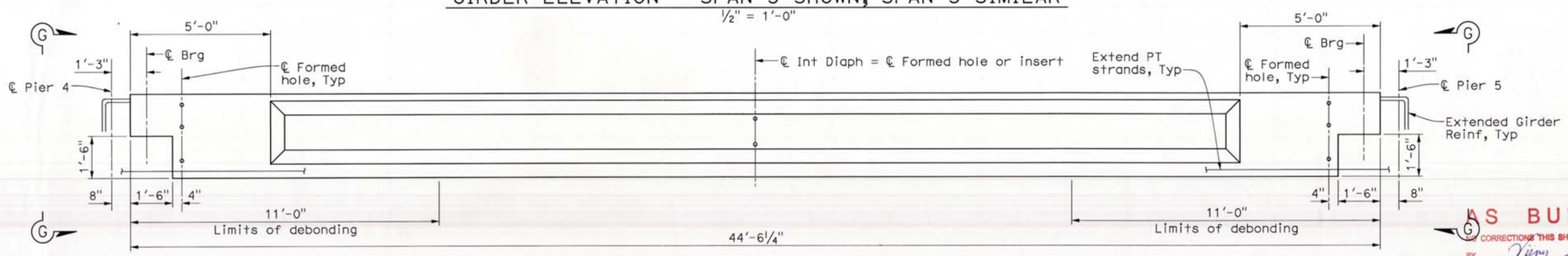
GIRDER ELEVATION - SPAN 2 SHOWN, SPAN 6 SIMILAR

½" = 1'-0"



GIRDER ELEVATION - SPAN 3 SHOWN, SPAN 5 SIMILAR

½" = 1'-0"



GIRDER ELEVATION - SPAN 4

½" = 1'-0"

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

Notes:

1. For Views D-D, E-E, F-F, & G-G, see "Girder Details No. 3" sheet.
2. Girder layouts symmetric about ℄ Span 4.
3. See "Insert Assembly Detail" on "Girder Details No. 3" sheet.
4. Additional top flange reinforcing. Space with typical #9 continuous reinforcing.
5. For stirrup information, see "Girder Details No. 1" sheet.
6. See "Girder Details No. 3" sheet.

AS BUILT
NO CORRECTIONS TO THIS SHEET
BY Vijay Sosa
DATE COMPLETED 9/10/14
CONTRACT # 15-19342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER MOHAN S. CHAR No. 57984 CIVIL STATE OF CALIFORNIA
1-2-13 DATE
MOHAN S. CHAR

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

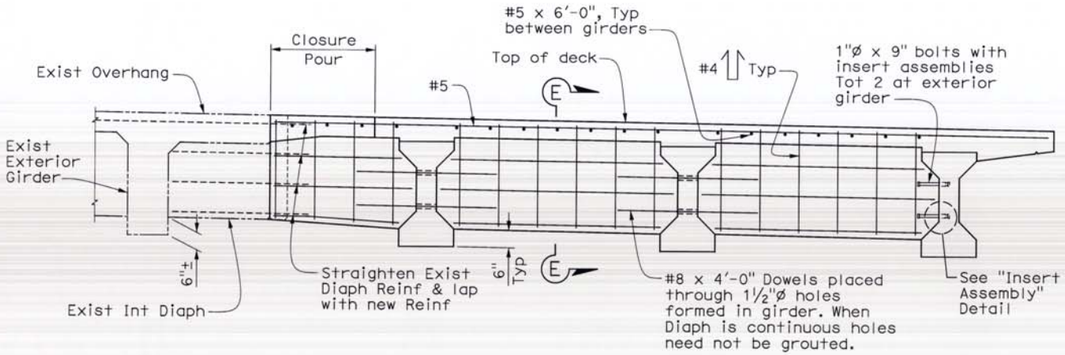
PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

GIRDER DETAILS NO. 2

Sheet Reference Number
ST-20

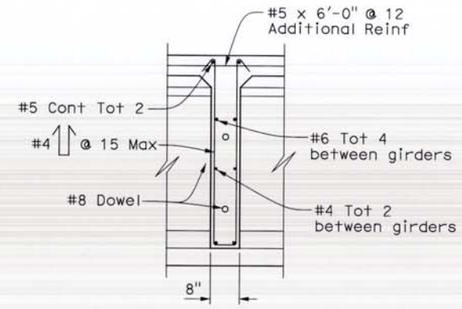
FILE NAME : 20_Edinger_GDET_2.dgn



INTERMEDIATE DIAPHRAGM

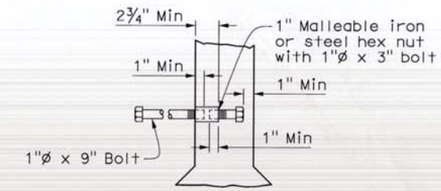
½" = 1'-0"

(South Widen shown, North Widen similar)



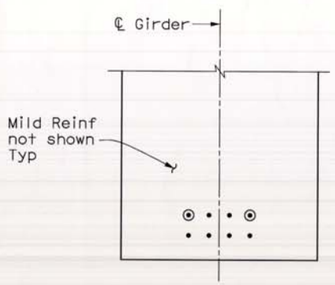
SECTION E-E

No Scale



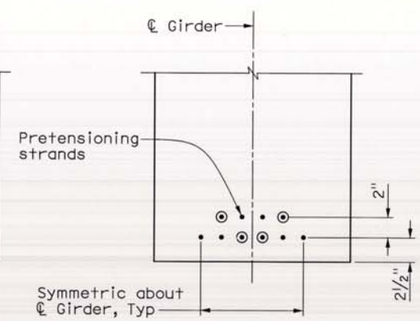
INSERT ASSEMBLY

No Scale



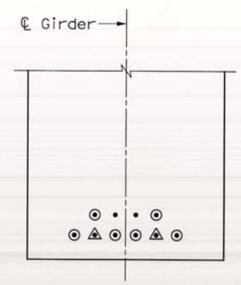
VIEW D-D

No Scale



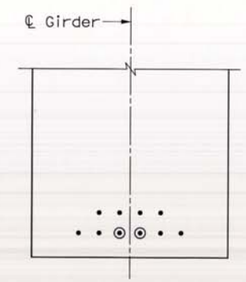
VIEW E-E

No Scale



VIEW F-F

No Scale

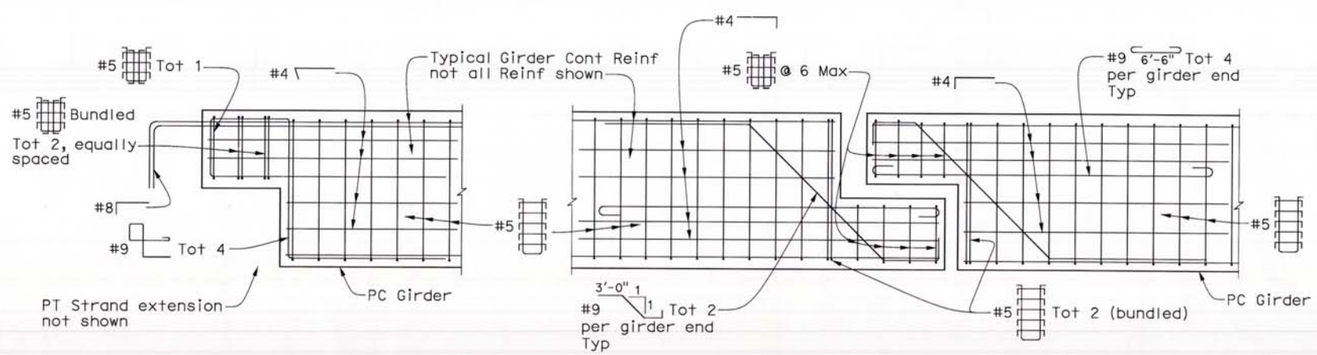


VIEW G-G

No Scale

LEGEND

- • Indicates 0.6"ø 270 ksi low relaxation strand, fully bonded
- ⊙ Indicates 0.6"ø 270 ksi low relaxation strand, debonded per limits shown on "Girder Details No. 2" sheet
- ▲ Indicates 0.6"ø 270 ksi low relaxation strand, debond 2'-0" from girder end



TYPICAL GIRDER END BLOCK REINFORCEMENT AT PIER

¾" = 1'-0"

TYPICAL GIRDER END BLOCK REINFORCEMENT AT HINGE

¾" = 1'-0"

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/07/14
CONTRACT # EP09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: MOHAN S. CHAR — DATE 1-2-13

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

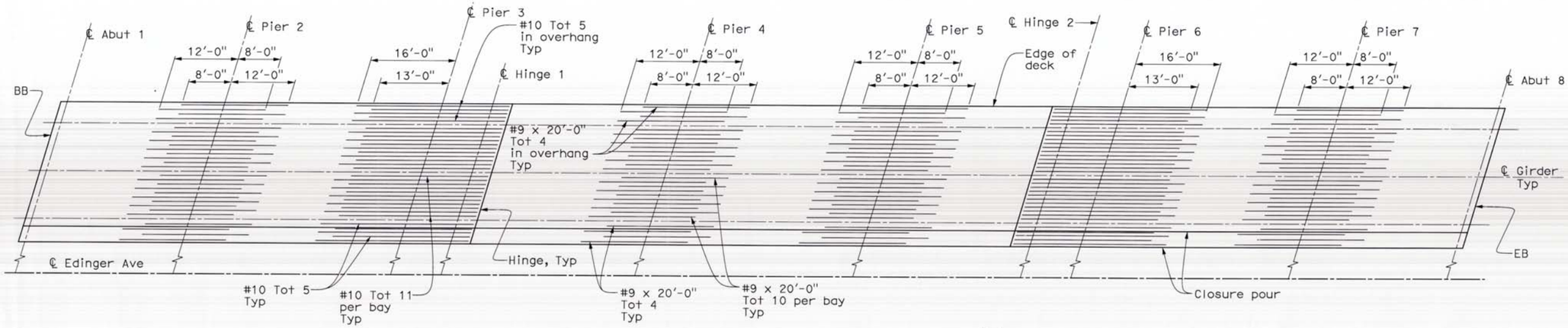
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

GIRDER DETAILS NO. 3

Sheet Reference Number
ST-21

Sheet 70 of 76

FILE NAME : 21_Edinger_GDET_3.dgn



TYP - PIERS 3 & 6 TYP - PIERS 2, 4, 5 & 7

ADDITIONAL DECK REINFORCEMENT

No Scale
North Widening shown, South Widening similar

Note:
1. No Splices Allowed in Additional Deck Reinforcement.

CHANNEL PROTECTION & REPAIR NOTES

1. No heavy truck or equipment wheel shall be placed closer than 24" from concrete invert joint. To cross joint, 1" steel plates (8'-0" wide) placed 4'-0" each side of joint shall be used to spread concentrated wheel load. Or 2'-0" fill shall be placed over the invert slab on which traffic is to be allowed.

2. Contractor shall identify the haul travel lanes and place trucks in the middle between longitudinal joints. No truck wheel shall be placed closer than 4'-0" to longitudinal expansion joints. All transverse expansion joints along the haul route shall be protected as mentioned above.

3. Where freshly mixed portland cement concrete is to be bonded to existing or hardened concrete the surfaces to be bonded shall be coated with an epoxy resin conforming to ASTM C881, Type V, Class as appropriate.

4. Reinforcing steel conform to ASTM A615, Grade 60.

CHANNEL PROTECTION & REPAIR NOTES (Cont)

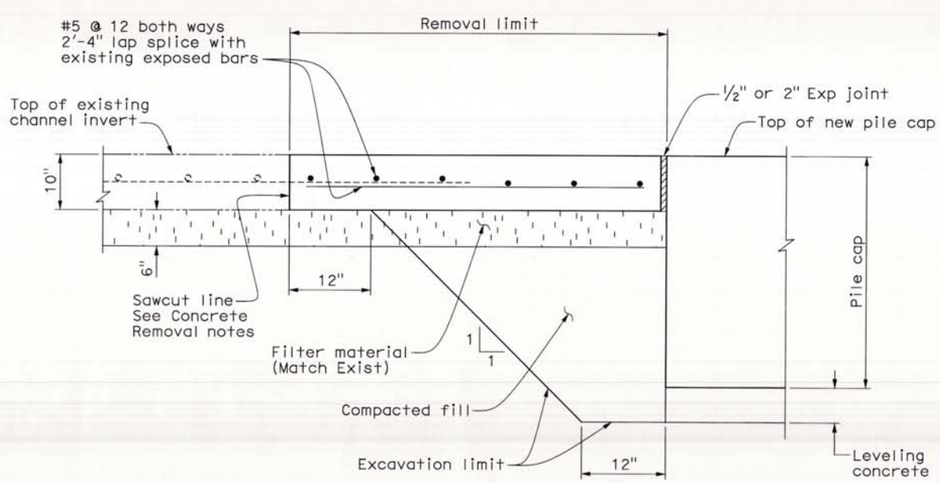
5. Concrete shall be removed in the following sequence.

   A. A saw cut of 2" deep shall be made at the removal limits. care shall be exercised in sawing at the removal limits so as not to cut the reinforcing steel to be retained in the new construction.

   B. Using hand held equipment the concrete shall be carefully removed for the full depth of the invert slab and for a minimum distance from the saw cut equal to the longest extension of the existing bars to be extended into new construction. this extension shall be 30 bar diameter unless shown otherwise.

   C. Existing reinforcement shall be cut to the required bar extension.

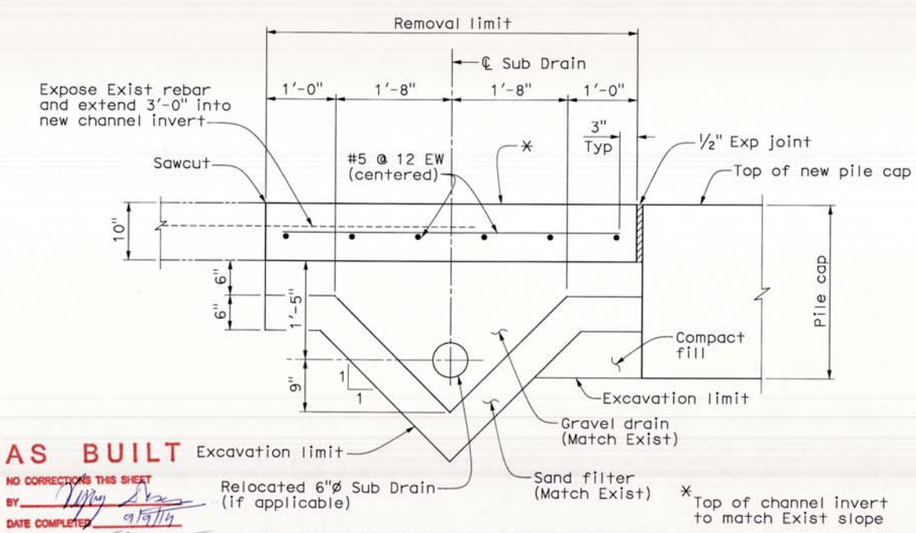
   D. The remaining concrete invert slab may be removed by any suitable method upon approval of the contracting officer, who shall be sole judge of the use of any concrete removal equipment.



Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

CHANNEL INVERT REMOVAL & REPAIR DETAIL

No Scale



AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 09/09/14
CONTRACT # EA09342

SUB DRAIN RELOCATION DETAIL

1" = 1'-0"

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: MOHAN CHAR, No. 51084, REGISTERED PROFESSIONAL ENGINEER, CIVIL, STATE OF CALIFORNIA
DATE 1-2-13
MOHAN S. CHAR

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

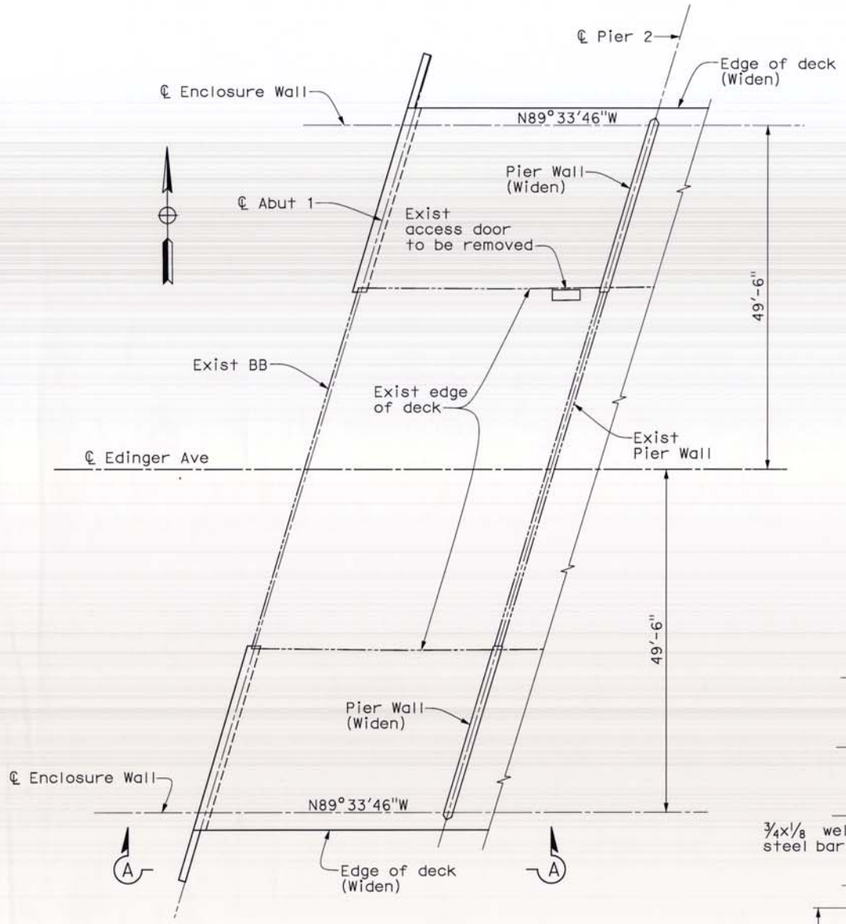
PREPARED BY: AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

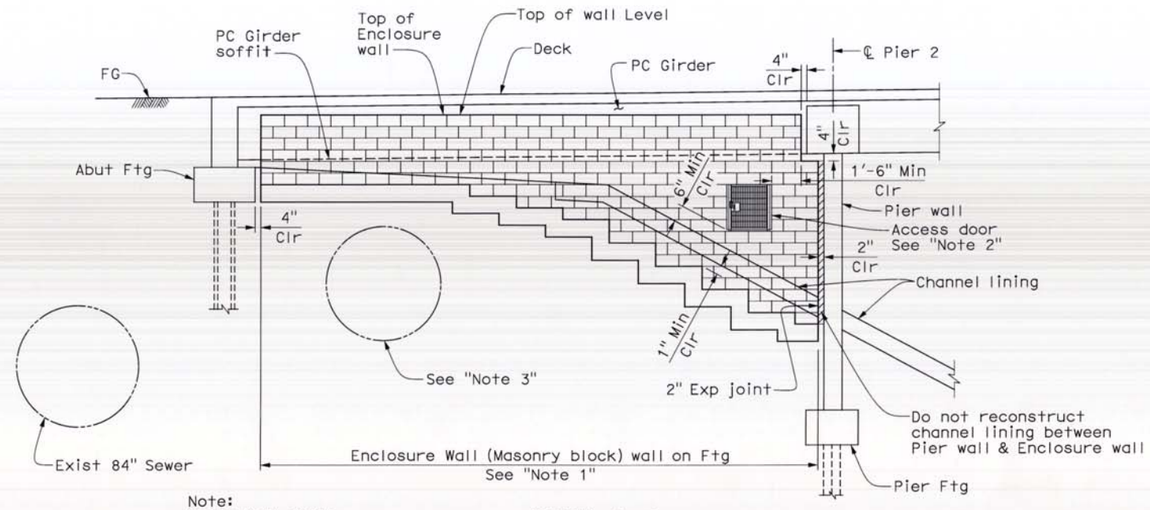
DECK REINFORCEMENT

Sheet Reference Number
ST-22

FILE NAME : 22_Edinger_Deck_Reinf.dgn

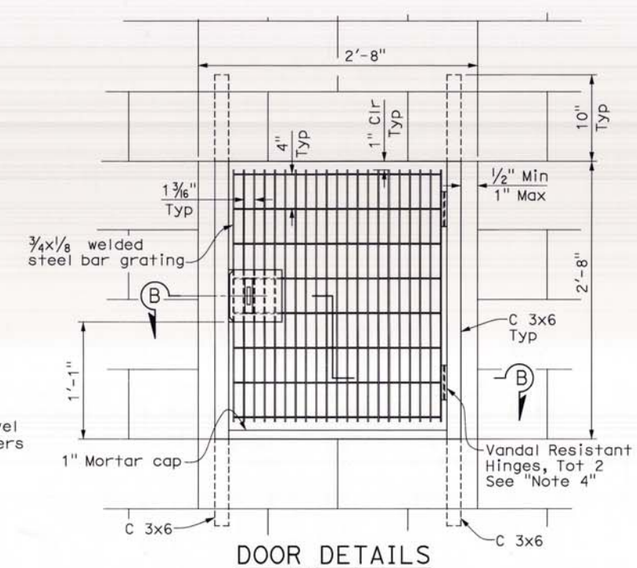


PLAN
1" = 10'

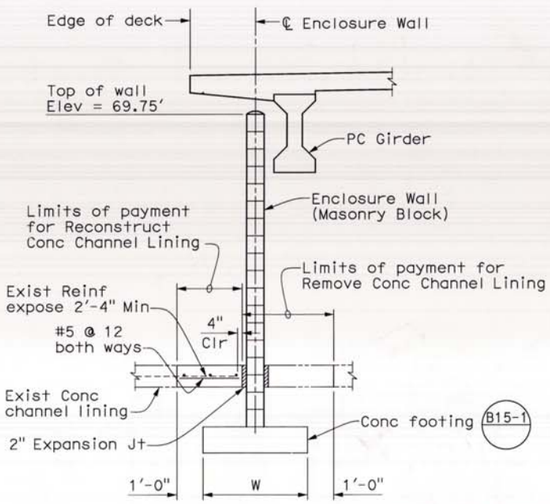


Note:
South Wall shown,
North wall similar (no Access door)
Utility locations are approximate.

VIEW A-A
1/4" = 1'-0"



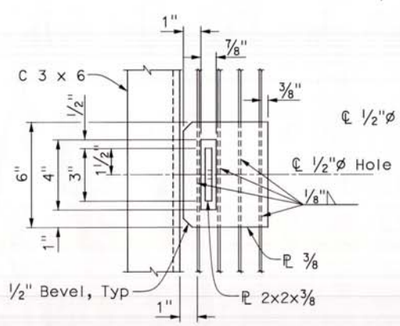
DOOR DETAILS
1 1/2" = 1'-0"



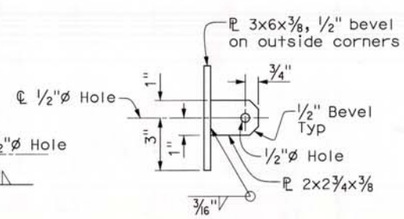
TYPICAL SECTION
3/8" = 1'-0"

See B15-1 and B15-2

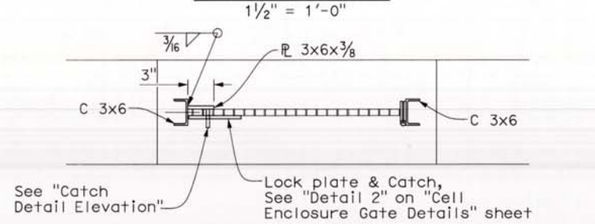
AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # CR-9342



CATCH PLATE DETAIL
3" = 1'-0"



CATCH DETAIL ELEVATION
3" = 1'-0"



SECTION B-B
1 1/2" = 1'-0"

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

Notes:

1. Construct masonry split-face block soundwall on spread footing (Case 1) per Caltrans Standard Plans B15-1 & B15-2, H = 8'.
2. Fully grout 2 adjacent cells on East & West sides of door frame.
3. Groundwater replenishment utility pipeline. Maintain minimum 12" clearance between spread footing and pipe/casing.
4. Hinges to be affixed to welded steel bar grating (Door) and C3x6 per Manufacturers recommendations. Hinges to be located 2" clear of top & bottom of welded steel bar grating (Door).

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER MOHAN CHAR ST394 Exp. 6/30/14 CIVIL STATE OF CALIFORNIA
MOHAN S. CHAR — DATE 1-21-13

DESIGNED BY: M. STILLER
CHECKED BY: T. DUDLEY
DRAWN BY: R. ANDRASEK
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
OC PUBLIC WORKS
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

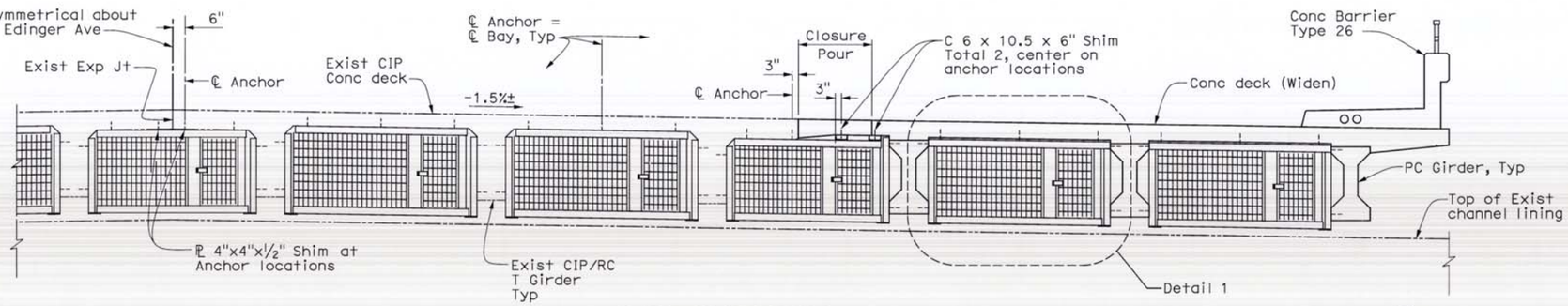
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

ENCLOSURE WALL DETAILS

Sheet Reference Number
ST-23

Sheet 72 of 76

FILE NAME : 23_Edinger_Wall.dgn

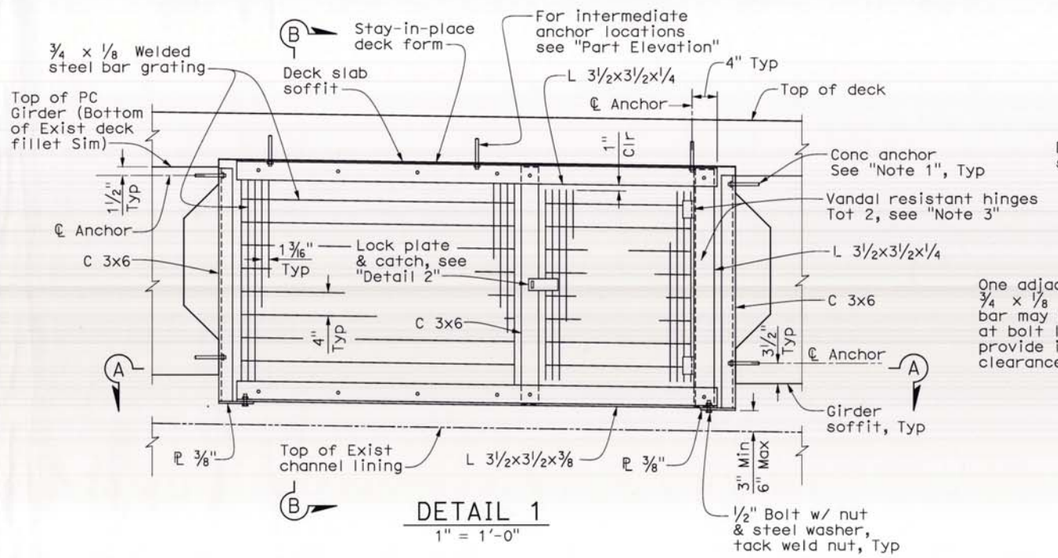


PART ELEVATION

⅜" = 1'-0"

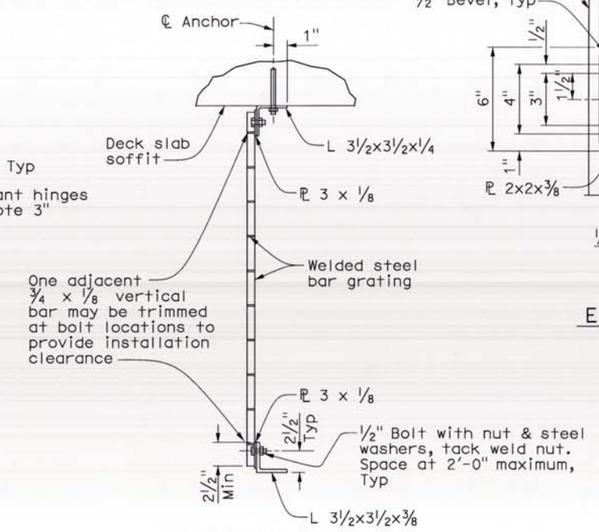
MECHANICAL EXPANSION AND CAST-IN-PLACE ANCHOR BOLT DESIGN DATA

Shear Demand	Tension Demand
770 lbs each	510 lbs each



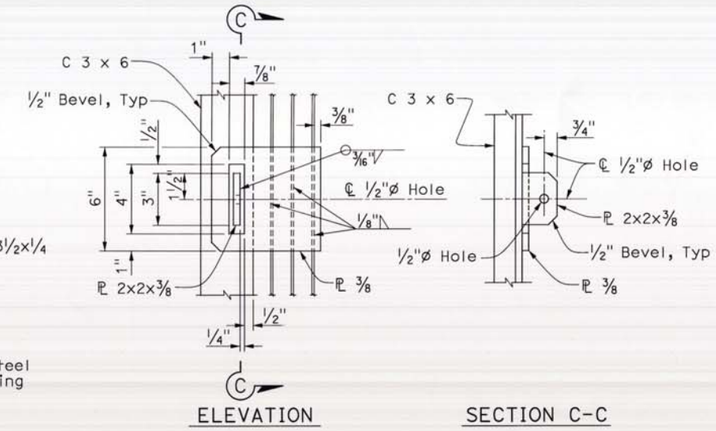
DETAIL 1

1" = 1'-0"



SECTION B-B

1½" = 1'-0"

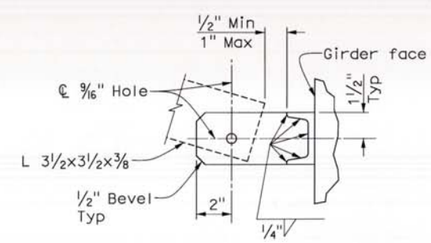


ELEVATION

SECTION C-C

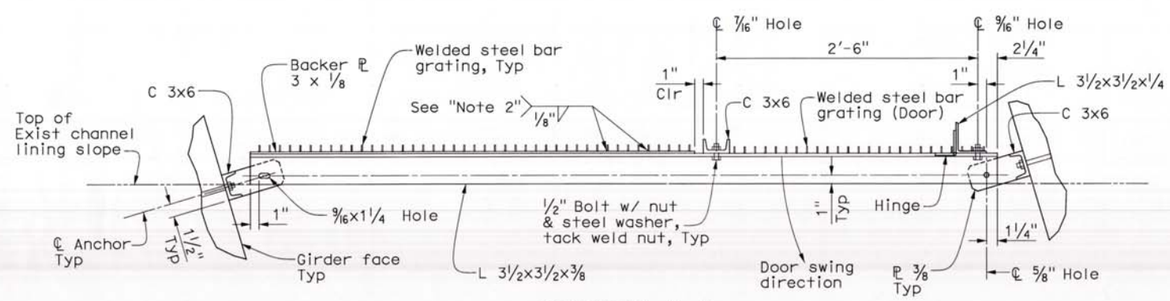
DETAIL 2

3" = 1'-0"



BASE PLATE DETAIL

3" = 1'-0"



SECTION A-A

1½" = 1'-0"

Notes:

1. Mechanical expansion anchors for connections to existing structure & CIP anchors for connection to widening components. Minimum factor of safety = 6.
2. Weld ℞ 3 x ⅛ to welded steel bar grating at every other vertical bar, top and bottom.
3. Hinges to be affixed to welded steel bar grating (Door) and L 3½x3½x¼ per Manufacturer's recommendations. Hinges to be located 2" clear of top & bottom of welded steel bar grating (Door).
4. Cell enclosure gates installed on Span 7 only.

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ERC9342

See revised cell enclosure Gate details / RFI #

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER
MOHAN CHAR
No. 57884
Exp. 6/30/15
CIVIL
STATE OF CALIFORNIA
DATE 1-21-13
MOHAN S. CHAR

DESIGNED BY: M. STILLER
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

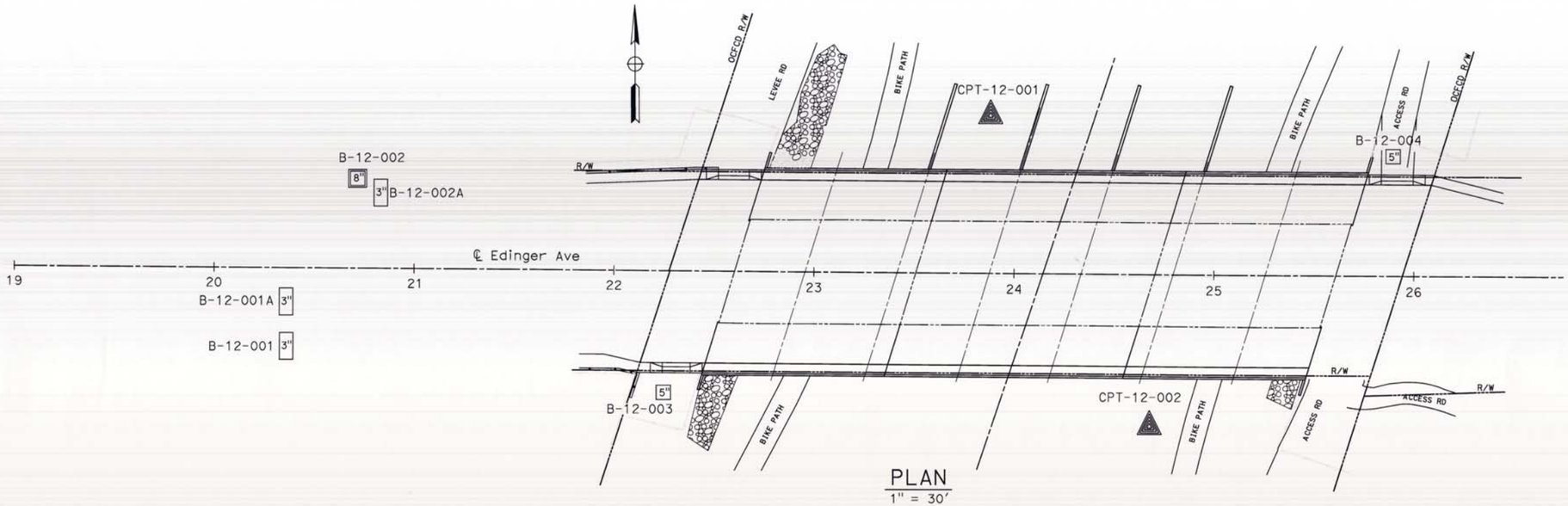
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

CELL ENCLOSURE GATE DETAILS

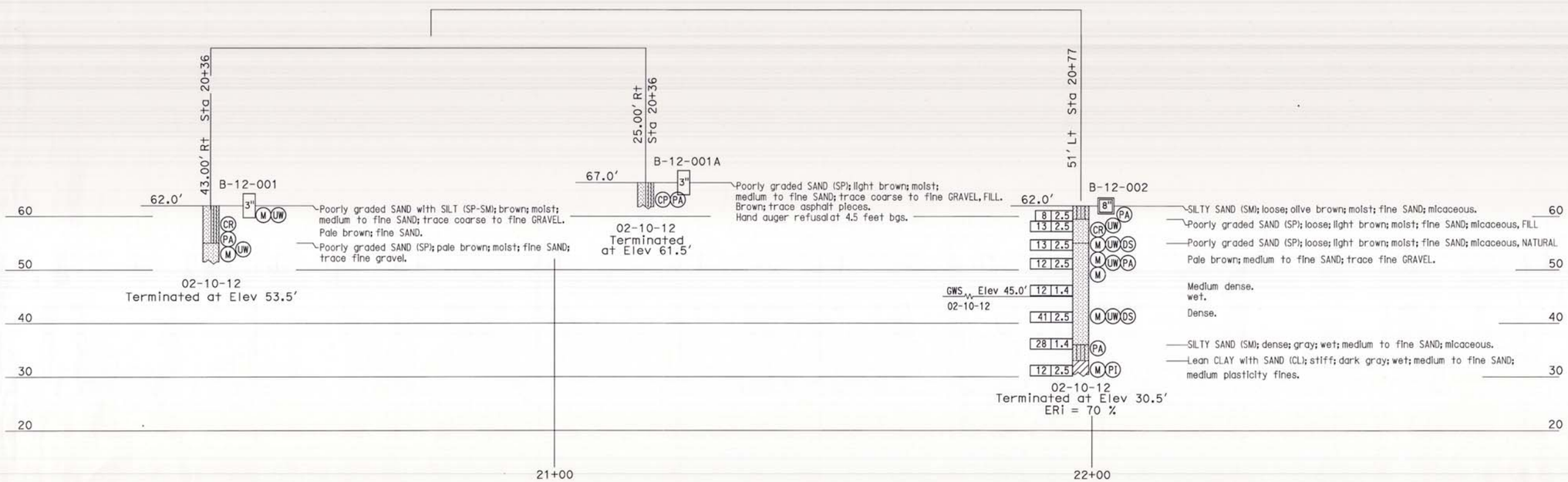
Sheet Reference Number
ST-24

Sheet 73 of 76

FILE NAME : 24_Edinger_Steel_Diagn.dgn



PLAN
1" = 30'



PROFILE
1" = 10'

This LOTB was developed in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2010).

AS BUILT
NO CORRECTIONS THIS SHEET
BY [illegible]
DATE COMPLETED 9/9/14
CONTRACT # E7E09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER JIM STARICK TITLE No. 67301 CIVIL STATE OF CALIFORNIA
JIM STARICK
DATE 1-21-13

DESIGN OVERSIGHT: V. MADESWARAN
FIELD INVESTIGATION BY: S. SATHISKUMAR
DRAWN BY: J. STARICK
CHECKED BY: P. KASHIGHANDI
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
DIAZ-YOURMAN & ASSOCIATES
695 S. Anita Street, Suite E
Santa Ana, CA 92705
(714) 245-2920

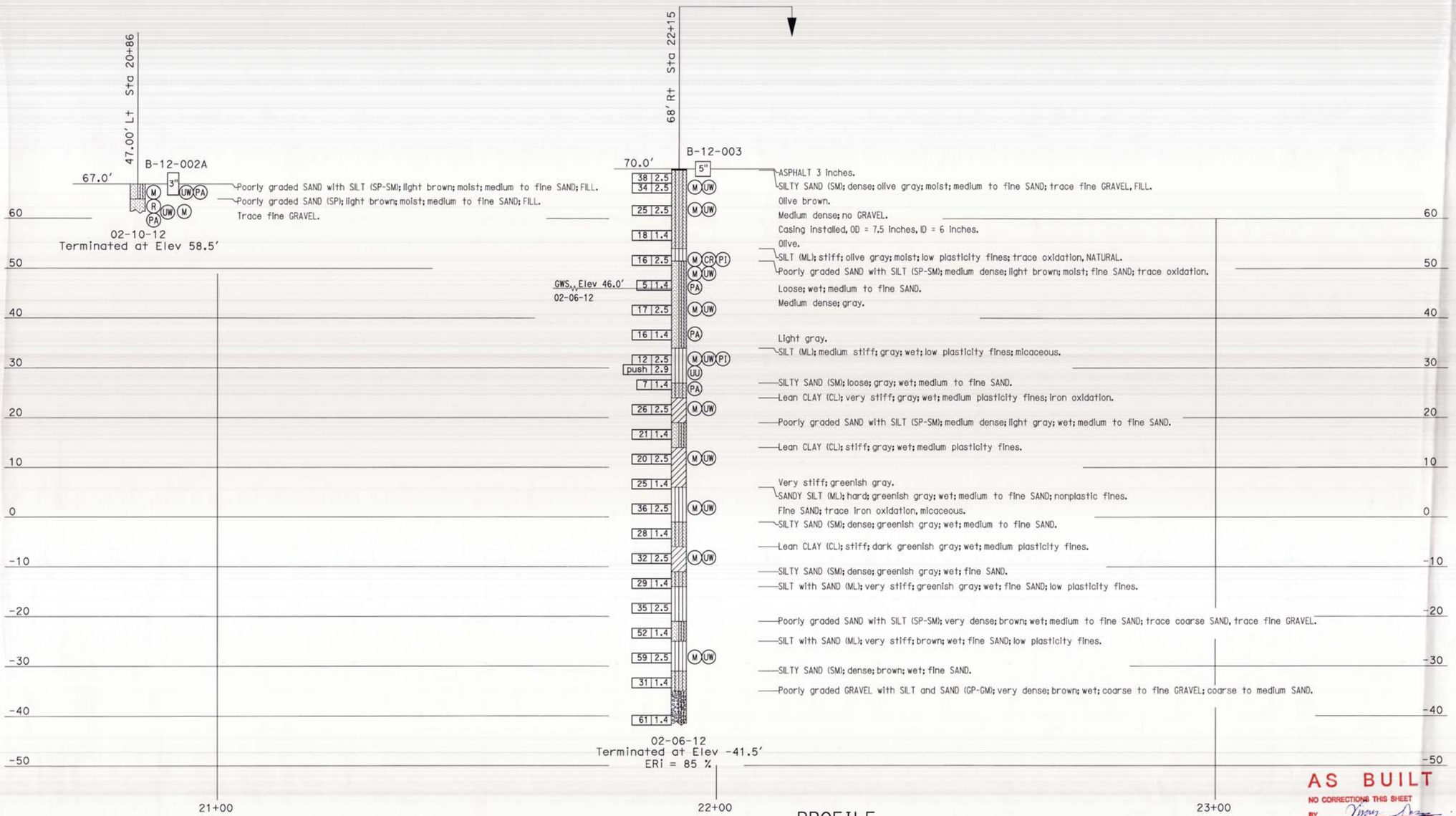
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

LOG OF TEST BORINGS NO. 1

Sheet Reference Number
ST-25

FILE NAME : 25_Edinger_LOTB_1.dgn

FOR PLAN VIEW, SEE LOG OF TEST BORINGS SHEET 1



PROFILE
1" = 10'

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # TR09342

This LOTB was developed in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2010).

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER JIM STARICK No. 57759 CIVIL STATE OF CALIFORNIA
1-2-13
DATE
JIM STARICK

DESIGN OVERSIGHT: V. NAGESWARAN
FIELD INVESTIGATION BY: S. SATHISHKUMAR
DRAWN BY: J. STARICK
CHECKED BY: P. KASHIGHANDI
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
DIAZ-YOURMAN & ASSOCIATES
626 E. 17th Street
Santa Ana, CA 92705
(714) 245-2920

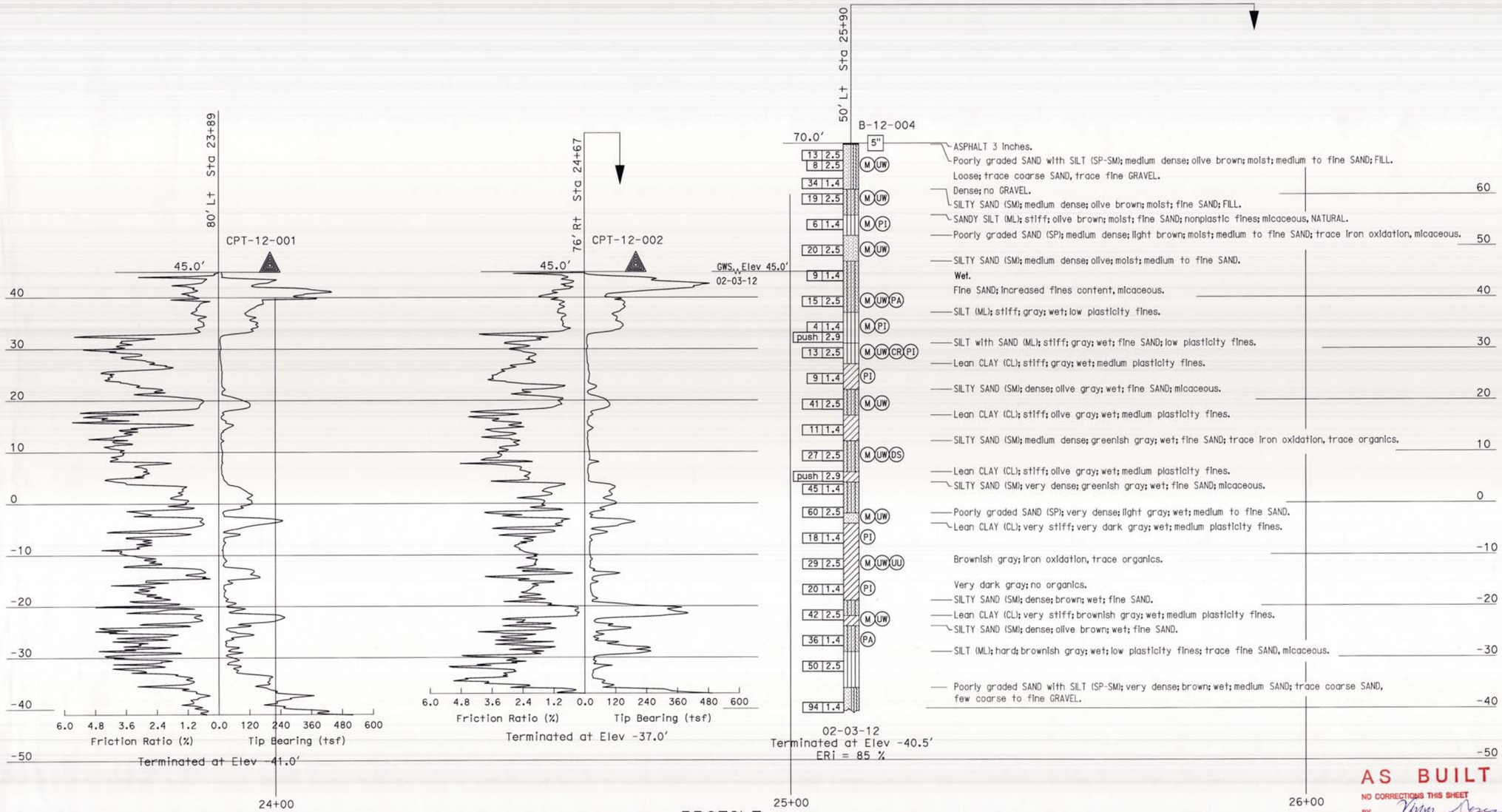
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

LOG OF TEST BORINGS NO. 2

Sheet Reference Number
ST-26

FILE NAME : 26_Edinger_LOTB_2.dgn

FOR PLAN VIEW, SEE LOG OF TEST BORINGS SHEET 1



PROFILE
1" = 10'

This LOTB was developed in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2010).

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/19
CONTRACT # EP09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: JIM STARICK, REGISTERED PROFESSIONAL ENGINEER, JIM STARICK, 77704, 8/30/13, CIVIL, STATE OF CALIFORNIA — DATE 1-2-13

DESIGN OVERSIGHT: J. NADESWARAN
FIELD INVESTIGATION BY: S. SATYISWARAN
DRAWN BY: J. STARICK
CHECKED BY: P. KASHIGANDI
DRAWING CODE:
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
DIAZ-YOURMAN & ASSOCIATES
666 E. 17TH Street
Santa Ana, CA 92705
(714) 245-2320

EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER (WIDEN)
BR. NO. 55C-0154

LOG OF TEST BORINGS NO. 3

Sheet Reference Number
ST-27

FILE NAME : 27_Edinger_LOTB_3.dgn

ORANGE COUNTY PUBLIC WORKS

SANTA ANA, CALIFORNIA

JESS A. CARBAJAL, DIRECTOR

PLANS FOR CONSTRUCTION OF

MAINTENANCE OF VARIOUS BRIDGES IN ORANGE COUNTY

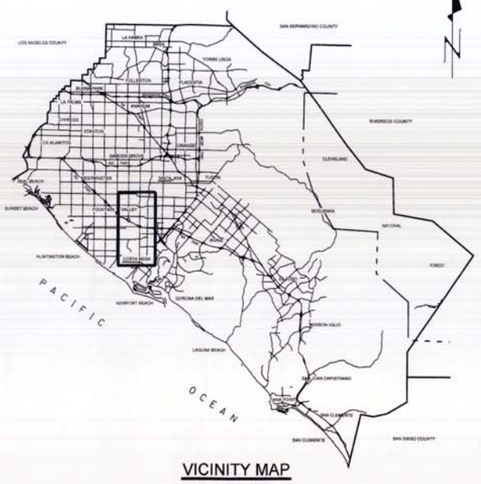
PHASE 1 – PROJECT No. 3, LOWER SANTA ANA RIVER AREA

W.O. NO. ER20260

MAY 2011

FUNDED BY: COUNTY OF ORANGE AND PROPOSITION 1B

MAINTAINED BY: COUNTY OF ORANGE AND CITY OF COSTA MESA FOR BR. NO. 55C–0103 AND BR. NO. 55C–0344

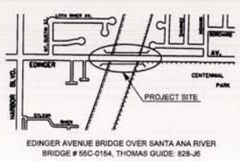


VICINITY MAP
(NO SCALE)

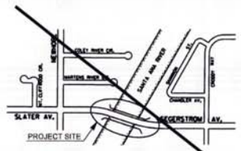
INDICATES AREA SHOWN ON LOCATION MAP

T.G. 828-J6 & J7, 858-H1 & H2 & F6, 888-E2

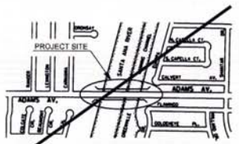
HARBOR BLVD. BRIDGE OVER SANTA ANA RIVER
BRIDGE # 55C-0631, THOMAS GUIDE: 828-J7



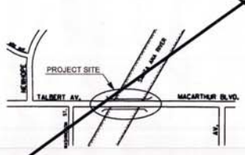
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER
BRIDGE # 55C-0154, THOMAS GUIDE: 828-J6



SLATER AVE/SEGERSTROM AVE OVER SANTA ANA RIVER
BRIDGE # 55C-0371, THOMAS GUIDE: 858-H1



ADAMS AVENUE BRIDGE OVER SANTA ANA RIVER
BRIDGE # 55C-0344, THOMAS GUIDE: 858-F6



TALBERT AVE/MACARTHUR BLVD OVER SANTA ANA RIVER
BRIDGE # 55C-0097, THOMAS GUIDE: 858-H2

HAMILTON AVE./VICTORIA ST. OVER SANTA ANA RIVER
BRIDGE # 55C-0103, THOMAS GUIDE: 888-E2

LOCATION MAP
(NO SCALE)

INDEX OF SHEETS

SHEET		DESCRIPTION
1	TITLE SHEET	
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3	BR. 55C-0097	MISCELLANEOUS DETAILS
4	BR. 55C-0103	GENERAL PLAN
5-6	BR. 55C-0103	MISCELLANEOUS DETAILS NO. 1 – 2
7	BR. 55C-0154	GENERAL PLAN
8-9	BR. 55C-0154	MISCELLANEOUS DETAILS NO. 1 – 2
10	BR. 55C-0154	STRIPING PLAN
11	BR. 55C-0154	CHAIN LINK RAILING
12	BR. 55C-0344	GENERAL PLAN
13	BR. 55C-0344	MISCELLANEOUS DETAILS
14	BR. 55C-0371	GENERAL PLAN
15	BR. 55C-0371	MISCELLANEOUS DETAILS
16	BR. 55C-0631	GENERAL PLAN
2		GENERAL PLAN
3		MISC. DETAILS NO. 1
4-7		TRAFFIC CONTROL PLAN

UTILITY OWNER	CONTACT	PHONE NO.
AT&T	ERNEST ESTACIO	714-237-6019
CABLE ENGINEERING SERVICE FOR VERIZON WIRELESS	GREGG LAKE	818-898-2352
COX	ROB HAMERS	714-923-2727
MCI COMMUNICATIONS (VERIZON BUSINESS)	CHUCK TRIMBLE	909-421-3339
MESA CONSOLIDATED	MARK BELKA	949-631-1291
ORANGE COUNTY SANITATION DISTRICT	LYNN ELLIOTT	714-962-2411
ORANGE COUNTY WATER DISTRICT	DAVID YOUNGBLOOD	714-378-8245
SOUTHERN CALIFORNIA EDISON	KIM GURULE	714-796-9932
THE GAS COMPANY	STUART HAFER	714-634-3039
UNDERGROUND SERVICE ALERT	FRED ADJARIAN	800-422-4133

QA/QC CERTIFICATION

QA/QC CERTIFICATION OF PEER REVIEW

THE UNDERSIGNED HEREBY CERTIFIES THAT A THOROUGH PROFESSIONAL QA/QC OF THESE PLANS AND THE REQUIRED DESIGNS WERE CONDUCTED BY ME, A PROFESSIONAL ENGINEER WITH EXPERTISE AND EXPERIENCE IN THE APPROPRIATE FIELDS OF ENGINEERING, AND THAT ALL APPROPRIATE CORRECTIONS HAVE BEEN MADE.

McLEAN & SCHULTZ REVIEWER

3/1/2011
DATE

OC PUBLIC WORKS

APPROVED FOR CONTRACT ADMINISTRATION PURPOSES:

SUBMITTED: JAVIER SOTO, P.E. MANAGER, ROAD / CAPITAL PROJECTS — 3/3/11 DATE

RECOMMENDED: TED NIGONI, P.E., P.M.P. MANAGER, ROAD SECTION — 3/3/11 DATE

APPROVED: IGNACIO G. OCHOA, P.E. DIRECTOR / OC ENGINEERING /CHIEF ENGINEER — 3/9/11 DATE

PREPARED BY

McLEAN & SCHULTZ
3040 SATURN STREET, STE 105
BREA, CA 92821

APPROVED:

REGISTERED CIVIL ENGINEER

3-1-11
DATE

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # ER09342

UNDERGROUND SERVICE ALERT

CALL 1-800-422-4133 TWO (2) WORKING DAYS PRIOR TO EXCAVATION

NO.	DESCRIPTION	SHT.	APPROVED	DATE

REVISIONS

W. O. NO. ER20260
DWG. NO.

SHEET 1 OF 16
SHEET 77 of 83

FILE NAME: $FILEL$

DATE PLOTTED: $DATE$

LEGEND

Indicates existing.

Indicates direction of traffic.

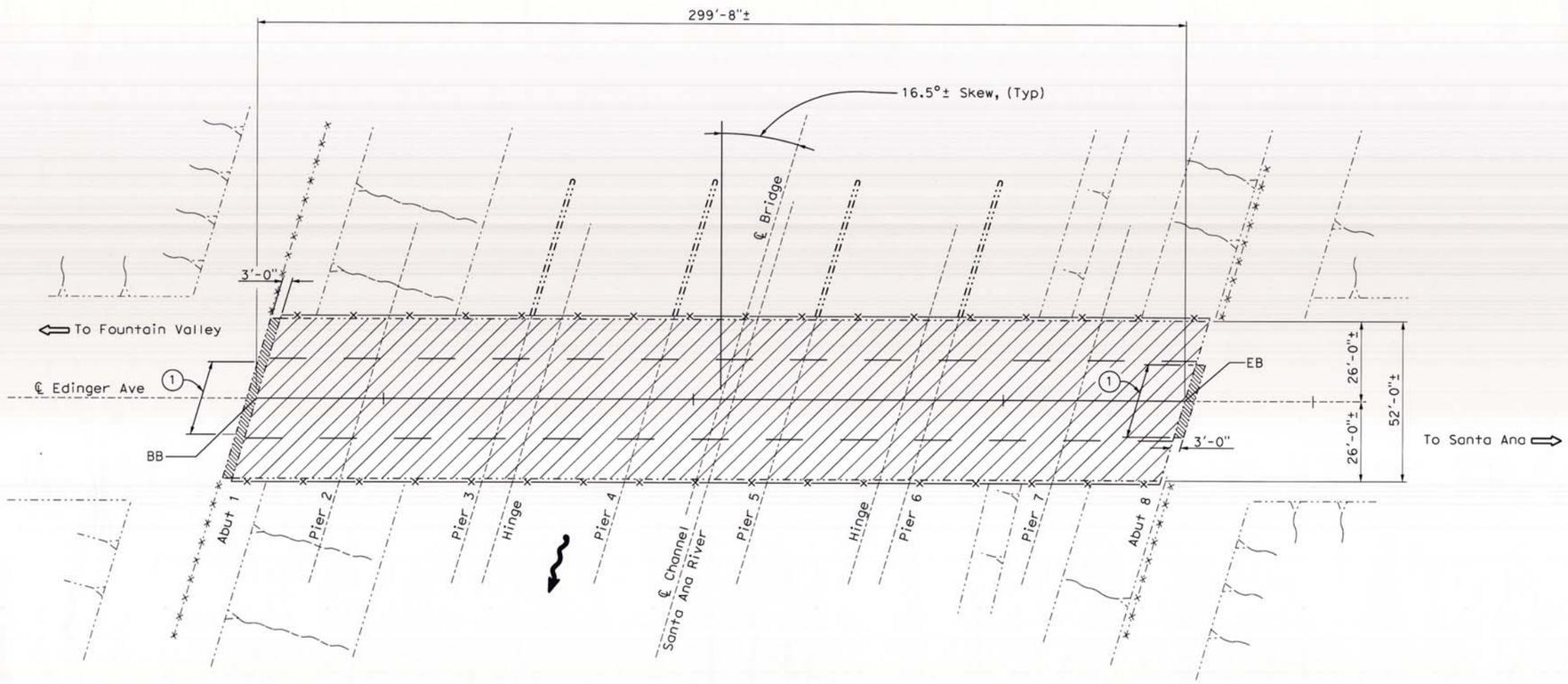
Indicates direction of flow.

~~Proposed Chainlink Fence~~

Indicates limits of clean and treat bridge deck with high molecular weight methacrylate.

~~Indicates limits of AC approach or departure leveling and repair, in kind.~~

(1) ~~Open trench behind abutment to expose utility openings and unbound backfill, cover unused utility openings, and backfill abutment per "Abutment Backfill Repair" plan and details on "Miscellaneous Details No. 2" sheet.~~



PLAN
1"=20'

N

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 01/01/14
CONTRACT # ER09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER OSCAR E. HERNIQUEZ NO. C36008 STATE OF CALIFORNIA
O. HERNIQUEZ — DATE 12/10/10

DESIGNED BY: O. HERNIQUEZ
DRAWN BY: HV / RE
CHECKED BY: M. MARTIN
DRAWING CODE:
FILE NAME:
PLOT DATE: 12/10/10
SCALE: AS NOTED

ORANGE COUNTY PUBLIC WORKS

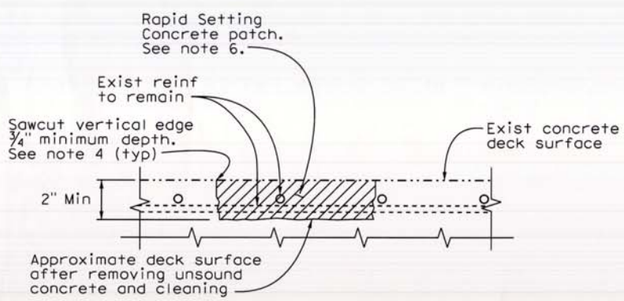
PREPARED BY: McLaren Software
3040 Saturn Street, Ste 105
Brea, CA 92821

MAINTENANCE OF VARIOUS BRIDGES IN ORANGE COUNTY
LOWER SANTA ANA RIVER AREA BRIDGES - PHASE I
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER
BR. NO. 55C-0154

SHEET REFERENCE NUMBER
GENERAL PLAN
SHEET 78 of 83
~~SHEET 1 OF 5~~

DECK REPAIR TABLE

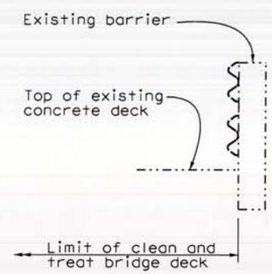
BRIDGE NAME	BRIDGE NUMBER	TOTAL DECK AREA (SQ FT)	APPROXIMATE AREA DAMAGED (%)	APPROXIMATE DEPTH (INCHES)	REMOVE UNSOUND CONCRETE (CF)	RAPID SETTING CONCRETE PATCH (CF)
Edinger Avenue Bridge Over Santa Ana River	55C-0154	15,583	2	2	52	52



DECK DAMAGE REPAIR DETAIL

NO SCALE

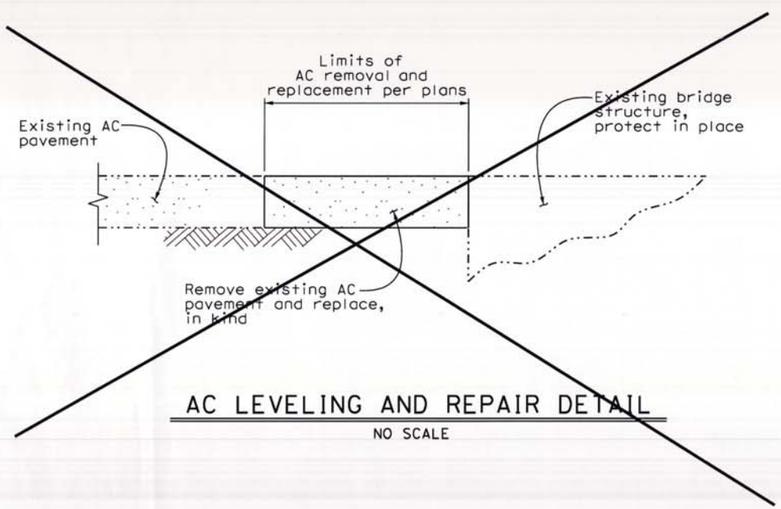
Location will be determined by the Engineer. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.



BARRIER

TYPICAL LIMITS OF DECK WORK

NO SCALE



AC LEVELING AND REPAIR DETAIL

NO SCALE

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DECK REPAIR NOTES:

1. Existing reinforcement shall be protected in place during unsound concrete removal and patching operations.
2. It is responsibility of the Contractor to repair any reinforcement that is accidentally cut by saw cutting operations.
3. When existing transverse reinforcement is exposed in the deck surface, saw cutting shall be waived with the approval of the Engineer.
4. The sawcut depth shall not exceed ¾" or the concrete cover over the top steel reinforcing bars, whichever is less.
5. Remove unsound Portland Cement concrete and unsound concrete patches to expose sound, hard concrete substrate. Replace original deck surface with rapid setting concrete patch.
6. Rapid setting concrete repairs shall conform to the sections entitled "Patches," "General Provisions Applicable to All Patches," and "Rapid Setting Concrete Patches in Deck Surfaces" of the special provisions.

AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 7/9/14
CONTRACT # CR09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
O. HENRIQUEZ
REGISTERED PROFESSIONAL ENGINEER OSCAR E. HENRIQUEZ NO. C38009 CIVIL STATE OF CALIFORNIA
DATE 12/10/10

DESIGNED BY: O. HENRIQUEZ
DRAWN BY: HV / RE
CHECKED BY: M. MARTIN
DRAWING CODE:
FILE NAME:
PLOT DATE: 12/10/10
SCALE: AS NOTED

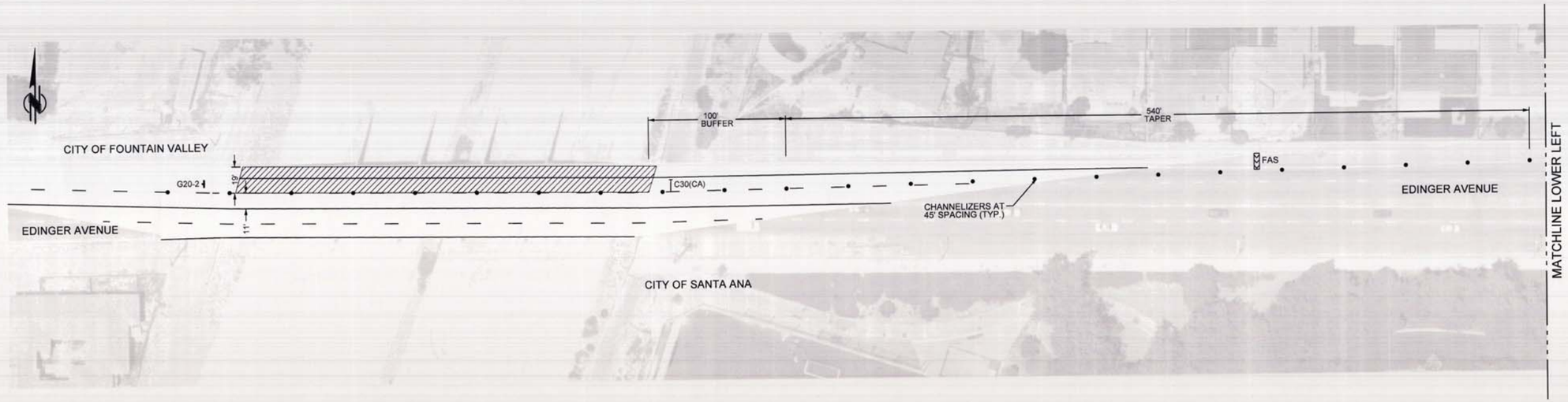
ORANGE COUNTY PUBLIC WORKS

PREPARED BY: MCE MAIN & CONLEY 3040 Saturn Street, Ste 105 Brea, CA 92821

MAINTENANCE OF VARIOUS BRIDGES IN ORANGE COUNTY
LOWER SANTA ANA RIVER AREA BRIDGES - PHASE I
EDINGER AVENUE BRIDGE OVER SANTA ANA RIVER BR. NO. 55C-0154

SHEET REFERENCE NUMBER
MISCELLANEOUS DETAILS NO. 1
SHEET 79 of 83
~~SHEET 2 OF 5~~

CONSTRUCTION PHASE 1



AS BUILT
NO CORRECTIONS THIS SHEET
BY Tony Diaz
DATE COMPLETED 9/9/14
CONTRACT # ER09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED CIVIL ENGINEER No. 57335 Exp. 06/30/12 STATE OF CALIFORNIA
DATE 9/30/2011
R. DIAZ

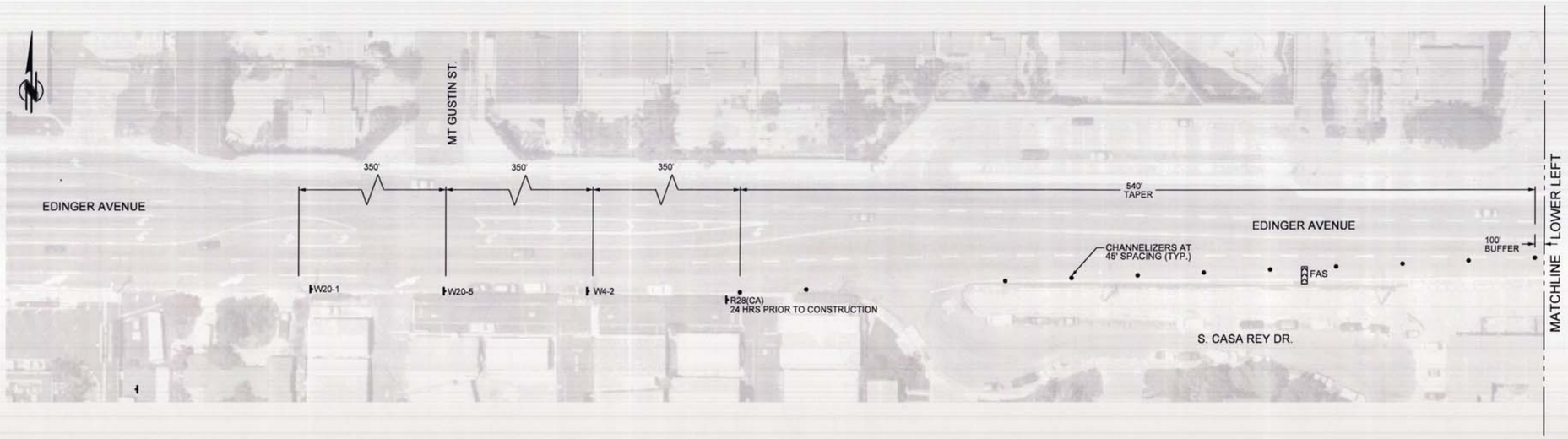
DESIGNED BY: T. SMALL
DRAWN BY: JI OH
CHECKED BY: R. DIAZ
DRAWING CODE:
FILE NAME:
PLOT DATE: 9/30/2011
SCALE: 1"=40'

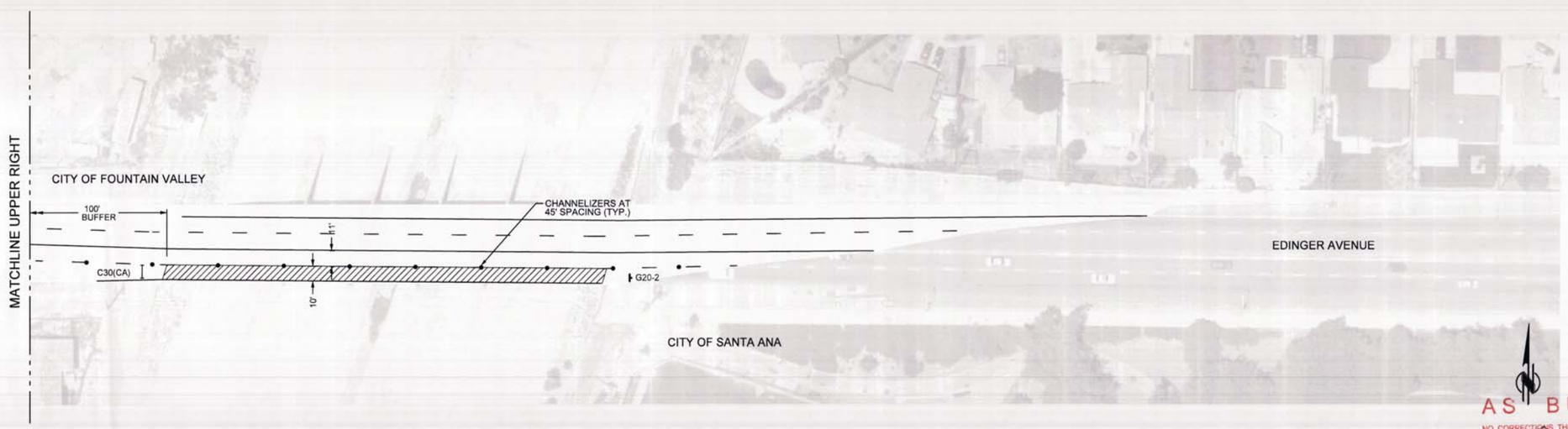
ORANGE COUNTY PUBLIC WORKS
PREPARED BY: BRIDGE DESIGN SECTION

MAINTENANCE OF VARIOUS BRIDGES IN ORANGE COUNTY
LOWER SANTA ANA RIVER AREA BRIDGES - PHASE 1
EDINGER AVENUE BRIDGE ACROSS SANTA ANA RIVER BR. NO. 55C-0154

SHEET REFERENCE NUMBER
TC-10

CONSTRUCTION PHASE 2





AS BUILT
NO CORRECTIONS THIS SHEET
BY Tony Sisco
DATE COMPLETED 9/9/14
CONTRACT # 15P09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR

PREPARED UNDER THE RESPONSIBLE CHARGE OF
REGISTERED CIVIL ENGINEER No. 57935 Exp. 12/31/12 STATE OF CALIFORNIA
R. DIAZ
9/30/2011
DATE

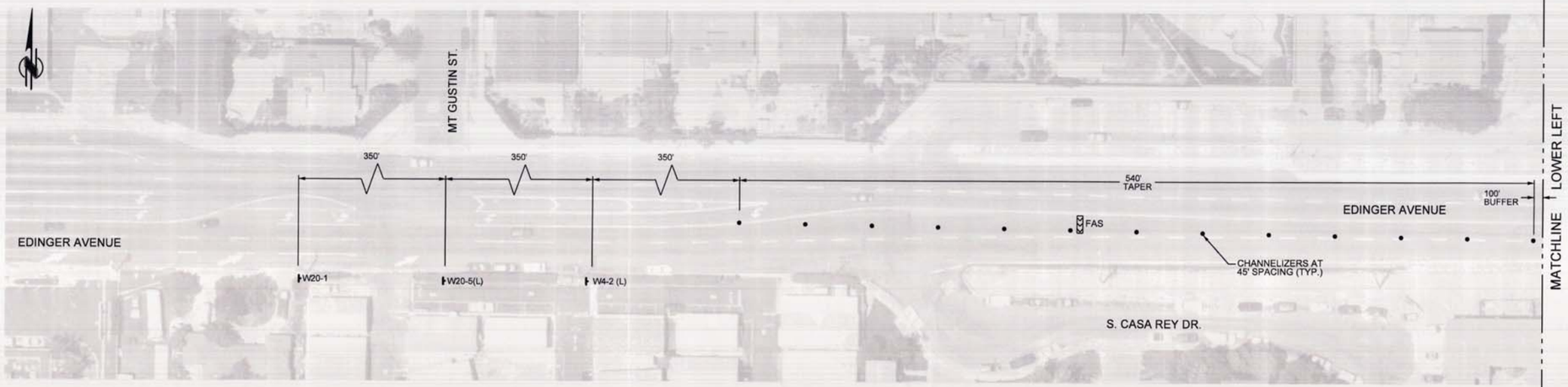
DESIGNED BY: T. SMALL
DRAWN BY: H.OH
CHECKED BY: R. DIAZ
DRAWING CODE:
FILE NAME:
PLOT DATE: 9/30/2011
SCALE: 1"=40'

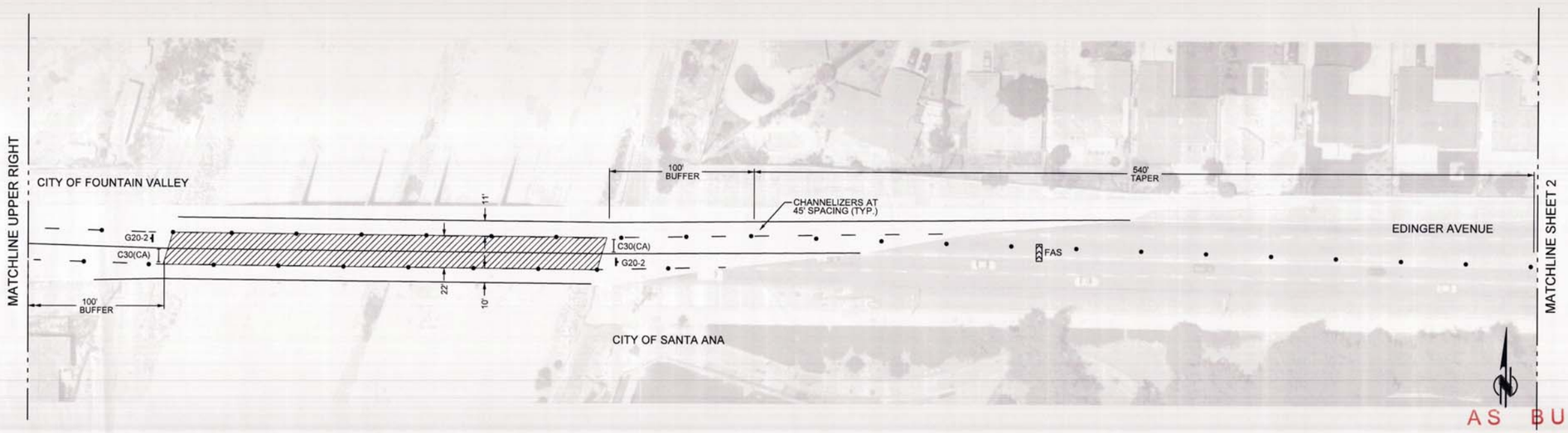
ORANGE COUNTY PUBLIC WORKS
PREPARED BY: BRIDGE DESIGN SECTION

MAINTENANCE OF VARIOUS BRIDGES IN ORANGE COUNTY
LOWER SANTA ANA RIVER AREA BRIDGES - PHASE 1
EDINGER AVENUE BRIDGE ACROSS SANTA ANA RIVER BR. NO. 55C-0154

SHEET REFERENCE NUMBER
TC-11

CONSTRUCTION PHASE 3





AS BUILT
NO CORRECTIONS THIS SHEET
BY Jimmy Sbaze
DATE COMPLETED 9/9/14
CONTRACT # ER09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR

PREPARED UNDER THE RESPONSIBLE CHARGE OF
REGISTERED CIVIL ENGINEER
No. 57935
Exp. 06/30/12
STATE OF CALIFORNIA
R. DIAZ
9/02/2011
DATE

DESIGNED BY: T. SMALL
DRAWN BY: H.OH
CHECKED BY: R. DIAZ
DRAWING CODE:
FILE NAME:
PLOT DATE: 9/02/2011
SCALE: 1"=40'

ORANGE COUNTY PUBLIC WORKS

PREPARED BY: BRIDGE DESIGN SECTION

MAINTENANCE OF VARIOUS BRIDGES IN ORANGE COUNTY

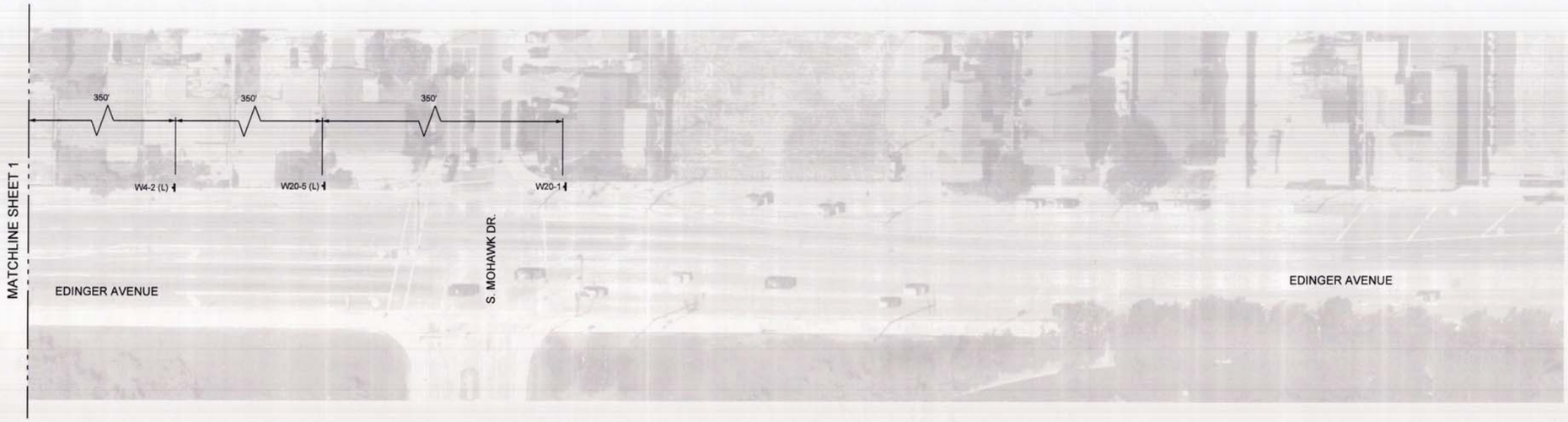
LOWER SANTA ANA RIVER AREA BRIDGES - PHASE 1

EDINGER AVENUE BRIDGE ACROSS SANTA ANA RIVER BR. NO. 55C-0154

SHEET REFERENCE NUMBER

TC-12

CONSTRUCTION PHASE 3



AS BUILT
NO CORRECTIONS THIS SHEET
BY
DATE COMPLETED 9/9/14
CONTRACT # EP09342

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED CIVIL ENGINEER
No. 57935
Exp. 06/30/12
STATE OF CALIFORNIA
R. DIAZ
9/30/2011
DATE

DESIGNED BY: T. SMALL
DRAWN BY: H.CH
CHECKED BY: R. DIAZ
DRAWING CODE:
FILE NAME:
PLOT DATE: 9/30/2011
SCALE: 1"=40'

ORANGE COUNTY
PUBLIC WORKS

PREPARED BY:
BRIDGE DESIGN SECTION

MAINTENANCE OF VARIOUS BRIDGES IN ORANGE COUNTY
LOWER SANTA ANA RIVER AREA BRIDGES - PHASE 1
EDINGER AVENUE BRIDGE ACROSS SANTA ANA RIVER BR. NO. 55C-0154

SHEET REFERENCE NUMBER
TC-13