| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 432R2 | 1204 |

Caltrans Metric

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Tien Hung Ho No. C 43990 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

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825 BATTERY STREET
SAN FRANCISCO, CA 94111

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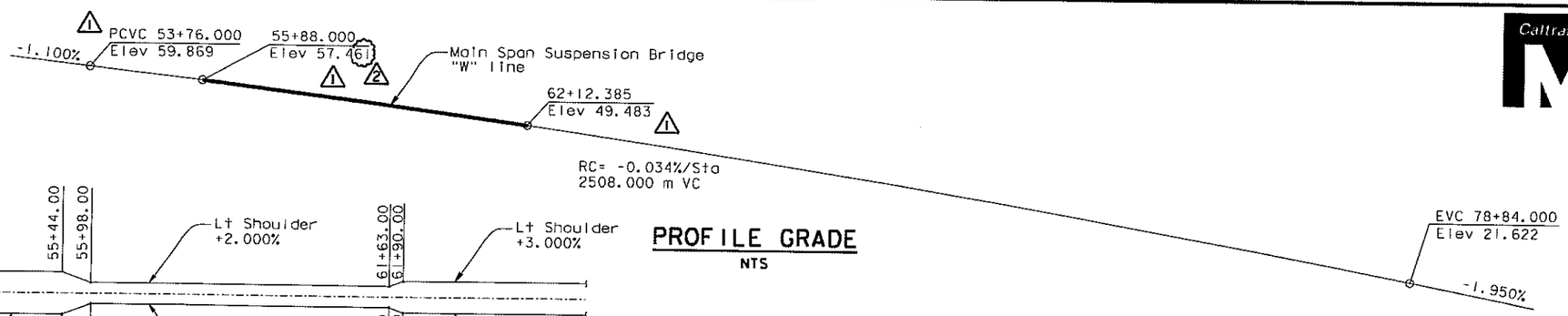
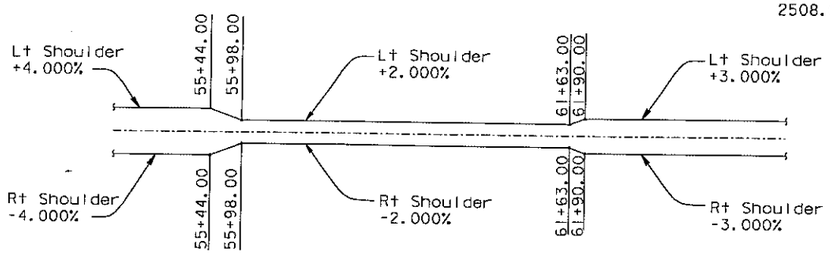



## PROFILE GRADE
NTS

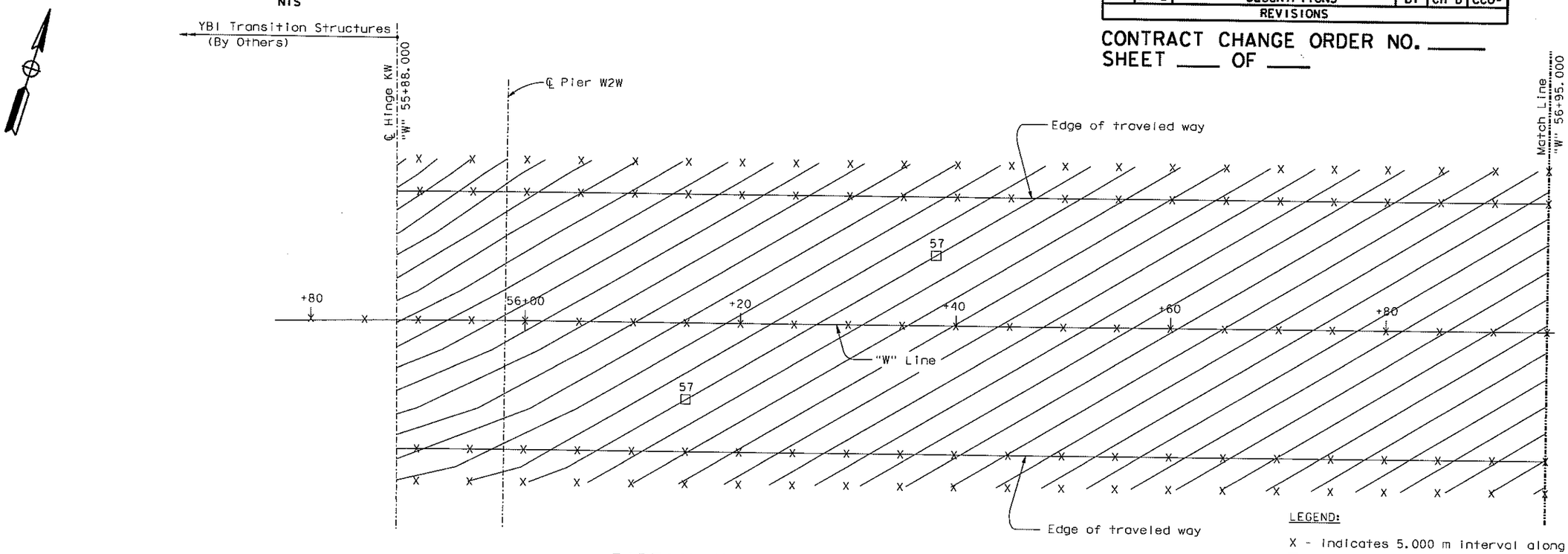



## SUPERELEVATION DIAGRAM
NTS

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 2 | 02/28/07 | W2 CAP BEAM ISD | JD | AS | 23 |
| 1 | 07/21/06 | W2 CAP BEAM ISD | TH | NV | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____




## PARTIAL PLAN
1:200

LEGEND:

X - Indicates 5.000 m interval along station line
☐ - Indicates even meter contour

NOTES:

1. Contour interval at 0.050 meter.
2. Contours are for top roadway surface.
3. Contours do not include camber.

100 % PS&E

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Roger Valizadeh / Vong Toan / Y. Liu
SIGN OFF DATE 02/28/07
Rev. Date: 5-18-98

| | BY | CHECKED |
|---|---|---|
| DESIGN | T. Ho | M. Nader |
| DETAILS | V. Ignatovsky | M. Nader |
| QUANTITIES | D. Harrison | N. Vo |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 01/15/99 05/15/99 08/02/99 05/31/01 04/08/02 07/01/02 12/19/02 05/16/03

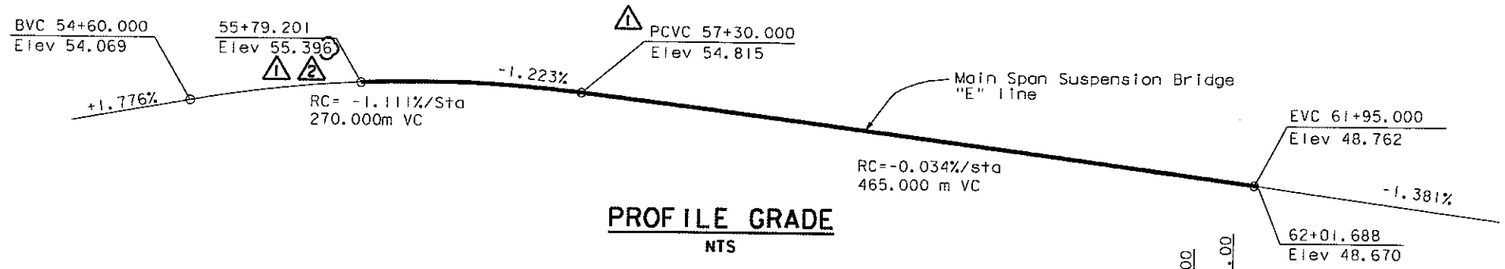
SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# DECK CONTOURS NO. 1

SHEET 015R2 OF

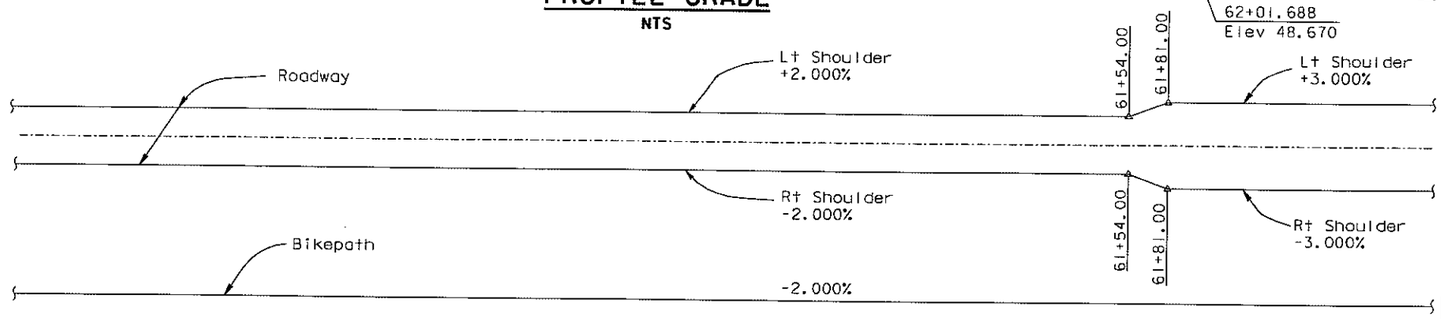
FILE => I:\bb\04-012001\sas\contract plans and cco\cco\cco#23\updates\abdkc01.dgn

USERNAME => bkwok DATE PLOTTED => 16 MAR 2007 TIME PLOTTED => 13:18:39



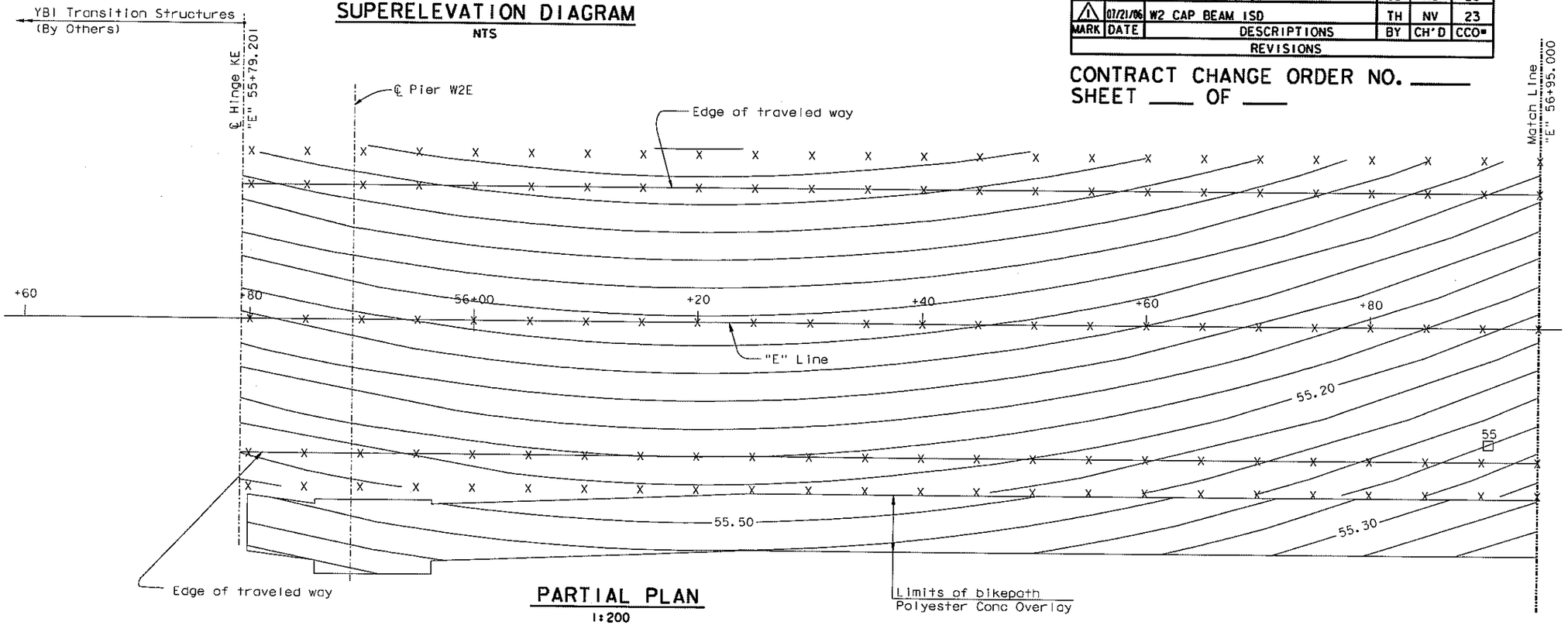

## PROFILE GRADE

NTS




## SUPERELEVATION DIAGRAM

NTS




## PARTIAL PLAN

1:200

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 437R2 | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Tien Hung Ho No. C 43990 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

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825 BATTERY STREET
SAN FRANCISCO, CA 94111

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LEGEND:

X - Indicates 5.000 m interval along station line
☐ - Indicates even meter contour

NOTES:

1. Contour interval at 0.050 meter.
2. Contours are for top roadway surface.
3. Contours do not include camber.

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 2 | 02/28/07 | W2 CAP BEAM ISD | JD | AS | 23 |
| 1 | 07/21/06 | W2 CAP BEAM ISD | TH | NV | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

R. Volizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 02/28/07
Rev. Date: 5-18-98

| | BY | CHECKED |
|---|---|---|
| DESIGN | T. Ho | M. Nader |
| DETAILS | V. Ignatovsky | M. Nader |
| QUANTITIES | D. Harrison | N. Vo |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

DECK CONTOURS No. 6

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 01/15/99 05/18/99 08/07/99 05/31/01 04/08/02 07/01/02 12/19/02

SHEET 20R2 OF

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100 % PS&E

USERNAME => bkwok DATE PLOTTED => 16 MAR 2007 TIME PLOTTED => 13:16:50

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 450R1 | 1204 |

Caltrans Metric

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER John Sun No. C 54648 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

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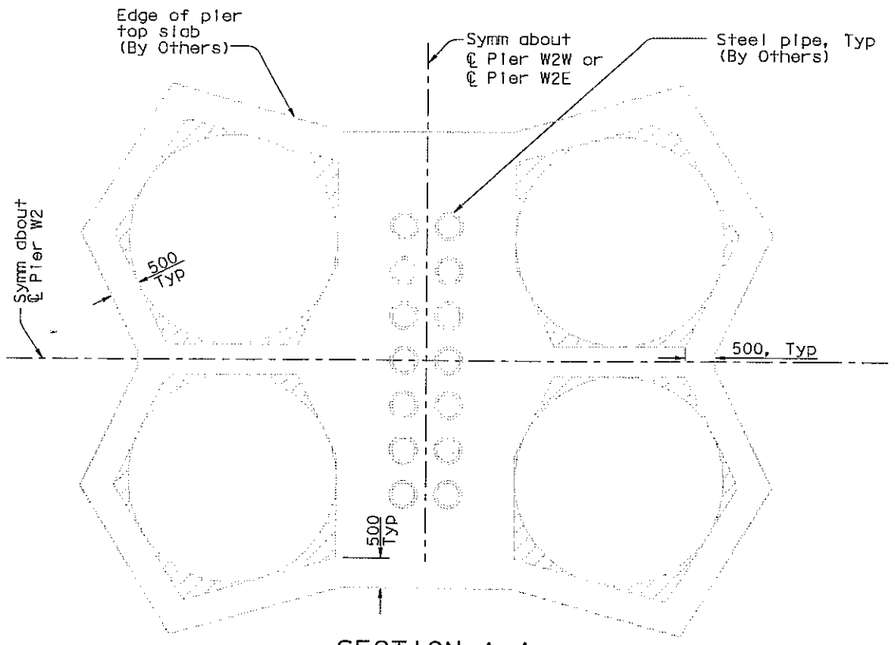
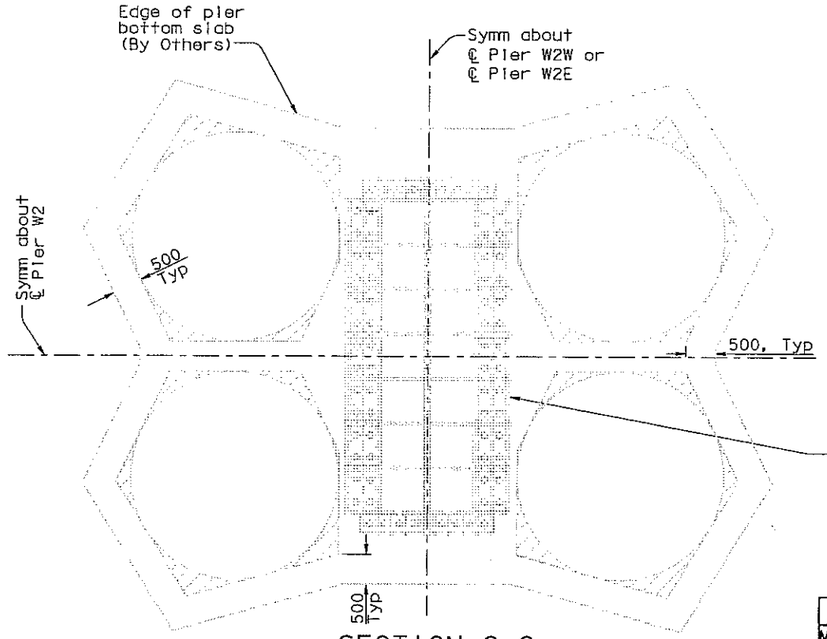



SECTION A-A
1:50




SECTION C-C
1:50

LEGEND:

Indicates 100 recess

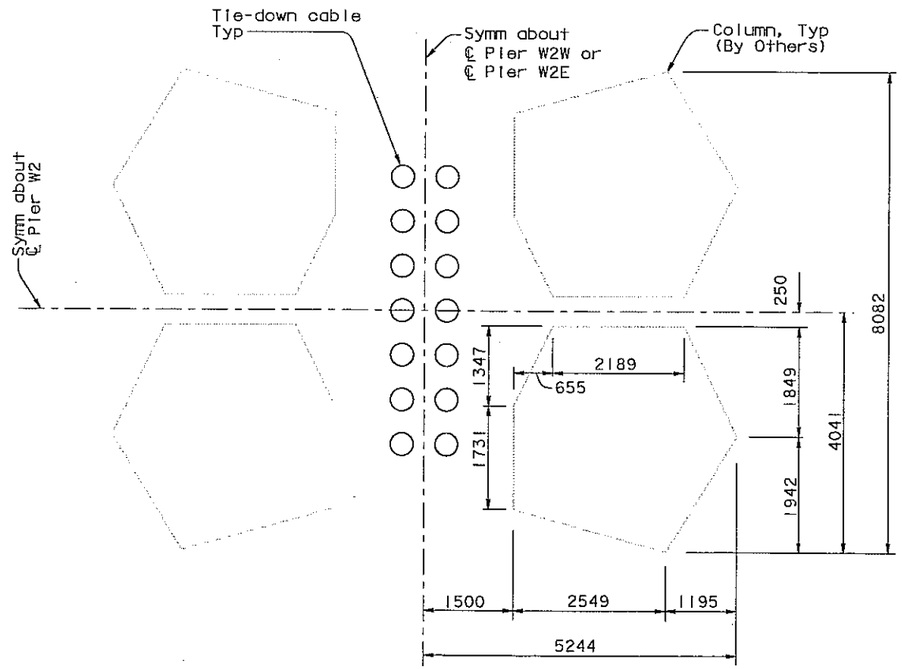
REGISTERED PROFESSIONAL ENGINEER James P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

FOR REVISIONS ONLY

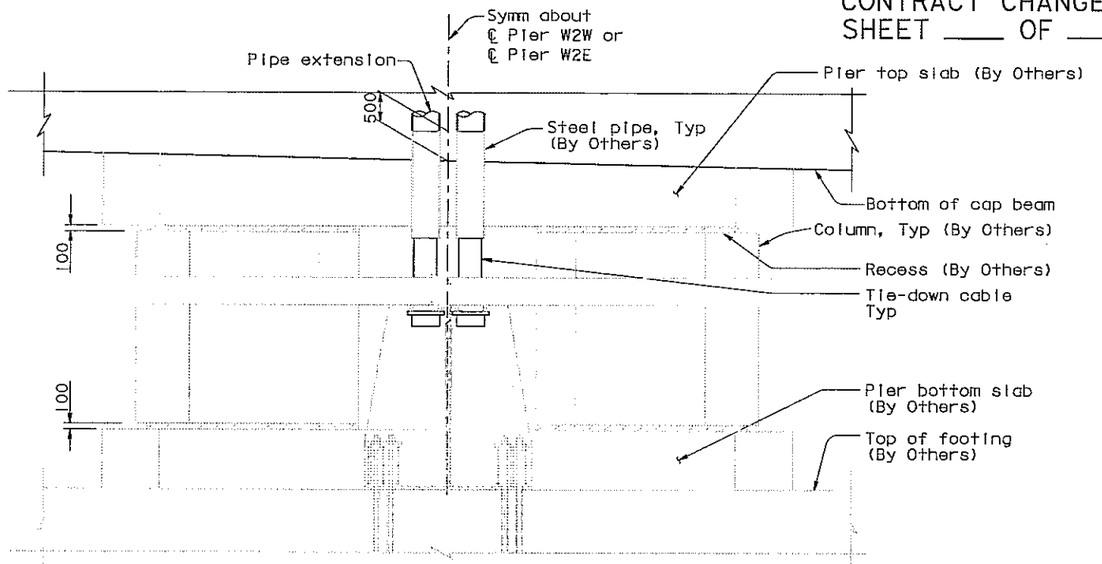
| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. _____
SHEET ____ OF ____




SECTION B-B
1:50




SECTION D-D
1:50

NOTES:

1. For cable tie-down, see "Cable Tie-Down Details No. 1" through "Cable Tie-Down Details No. 4" sheets. 1

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# PIER W2 DETAILS NO. 4

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Reza Valizadeh / Vong Toan / Y. Lin
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | J. Leventini |
| DETAILS | J. Duxbury | J. Leventini |
| QUANTITIES | J. Duxbury | S. Shi |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 01/15/99 05/15/99 04/02/99 05/31/01 04/08/02 07/01/02 12/15/02

SHEET 33R1 OF

100 % PS&E

USERNAME => visitor DATE PLOTTED => 23 MAR 2007 TIME PLOTTED => 08:24:45

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 451R1 | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

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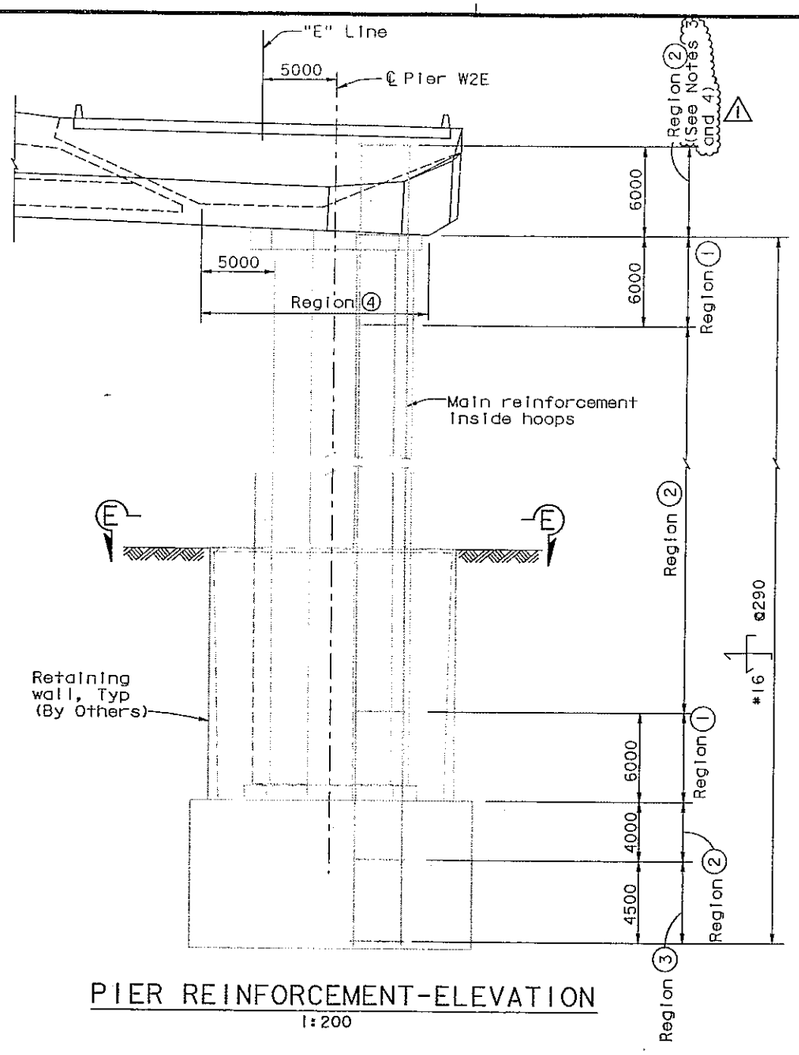
| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

FOR REVISIONS ONLY

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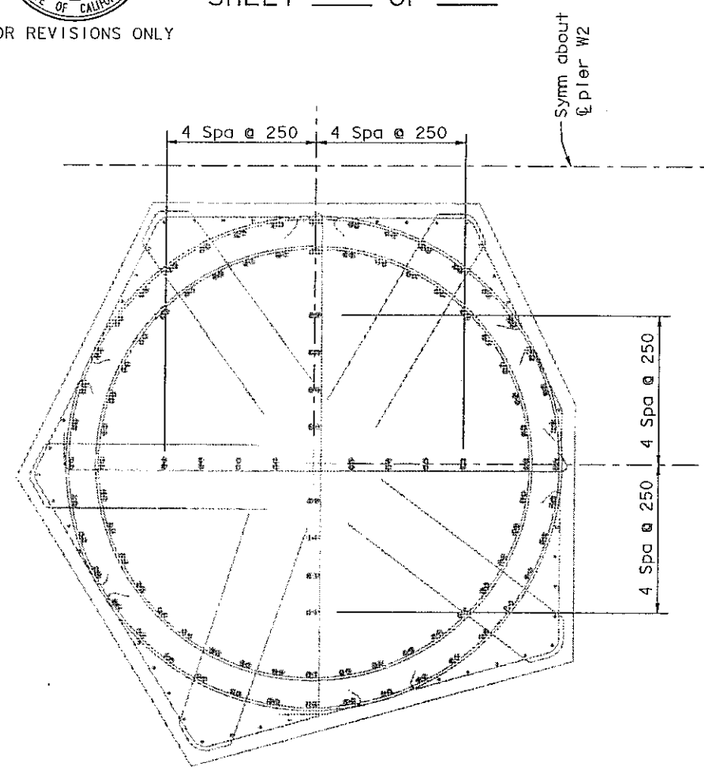
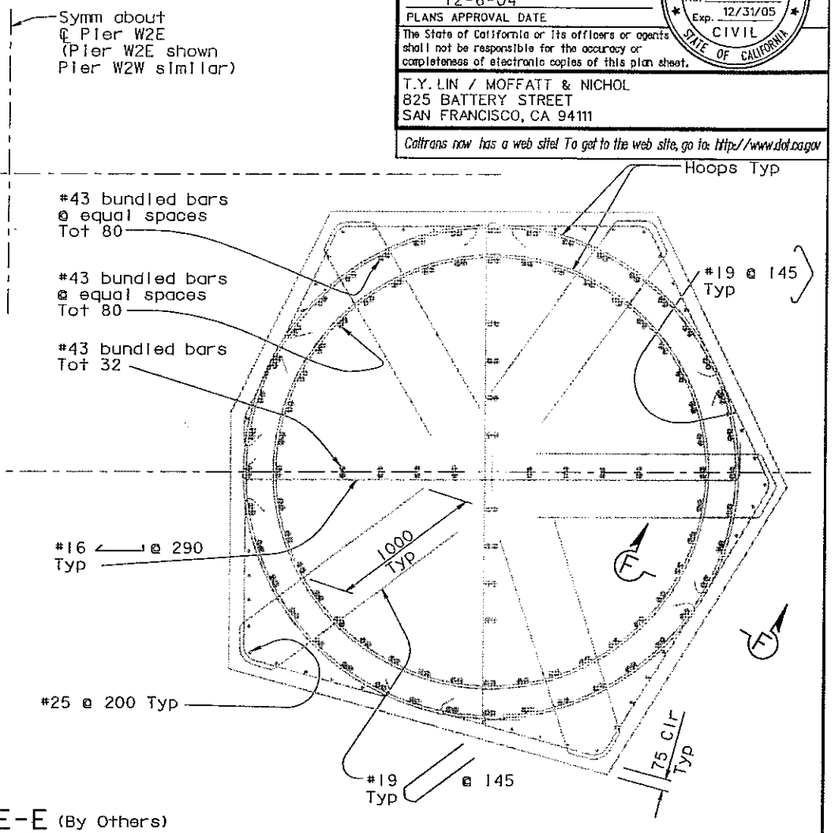
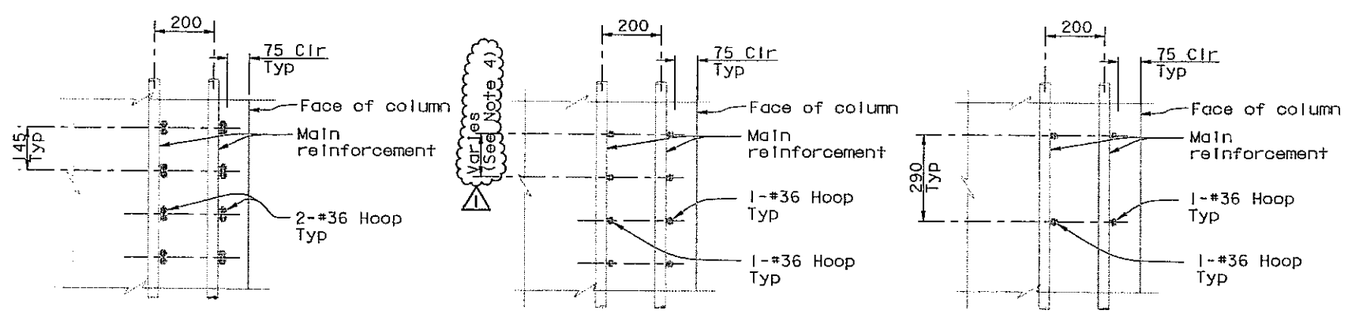
1:200




SECTION E-E (By Others)
1:20




At Region 1 (By Others)

At Region 2 (By Others)

At Region 3 (By Others)

SECTION F-F
1:10

NOTES:

1. Reinforcement is for information only, and by Others.
2. Main reinforcement and hoop reinforcement are "Ultimate" butt splices.
3. Contractor shall remove the corrosion protection from all reinforcing above the pier top slab and shall roughen the existing Pier W2 concrete surface to a minimum of 5 mm amplitude prior to pouring the W2 cap beam concrete.
4. Hoops shall be removed and replaced to facilitate placement of W2 cap beam reinforcement per "W2 Cap Beam Reinforcement Details" sheets.
5. No splices permitted in region 4.

100 % PS&E

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Roger Valizadeh / Vong Toan / Y. Lin
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | J. Leventini |
| DETAILS | J. Duxbury | J. Leventini |
| QUANTITIES | J. Duxbury | S. Shi |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

PIER W2 DETAILS NO. 5

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/15/99 08/02/99 05/31/01 04/06/02 07/01/02 12/19/02

SHEET 34R1 OF

FILE => I:\bb\04-012001\sas\contract plans and cco\coo\cco#23\aepir03.dgn

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 455RI | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — John Sun — No. C 54648 — Exp. 12/31/05 — CIVIL — STATE OF CALIFORNIA

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825 BATTERY STREET
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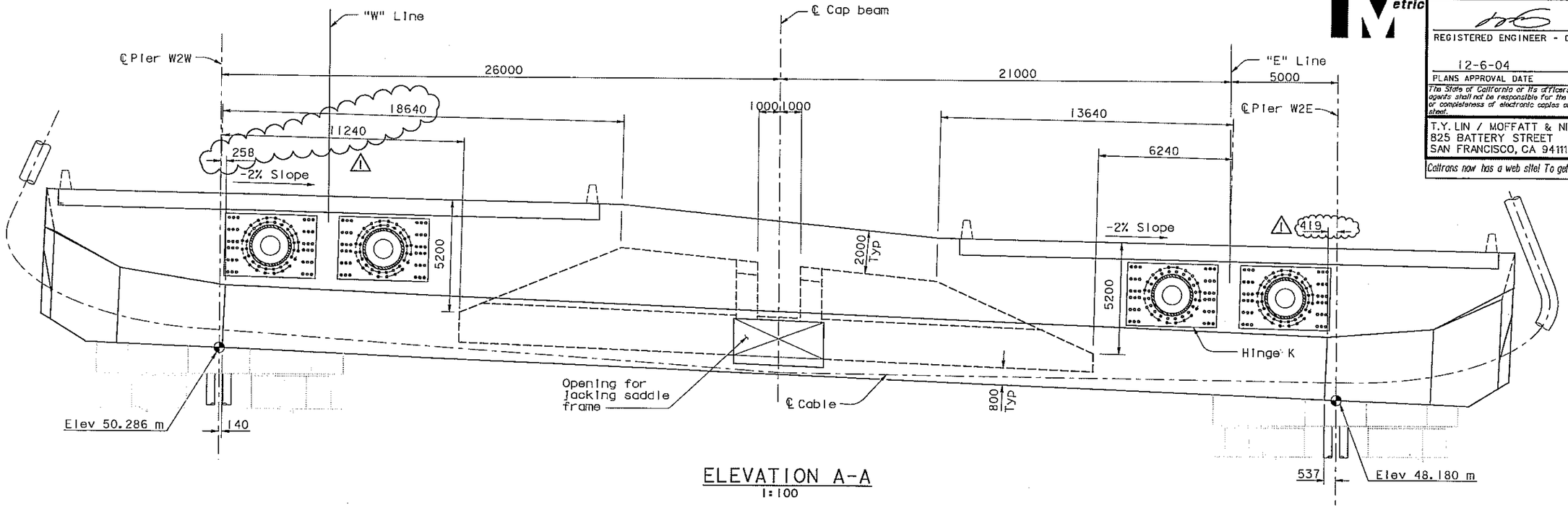
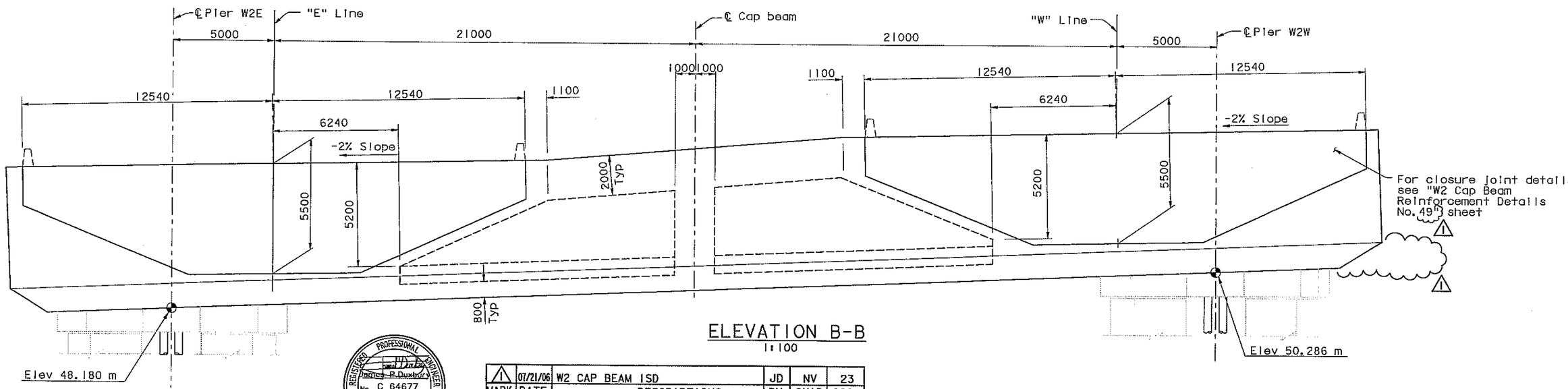



ELEVATION A-A
1:100




ELEVATION B-B
1:100

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| | | REVISIONS | | | |
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

REGISTERED PROFESSIONAL ENGINEER — James P. Duxbury — No. C 64677 — Exp. 06/30/07 — CIVIL — STATE OF CALIFORNIA

FOR REVISIONS ONLY

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

R. Vallzadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | S. Shi | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM DIMENSION DETAILS NO. 2

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 05/31/99 | 08/30/99 | 05/31/01 | 01/30/02 | 07/01/02 | 12/31/02 | 03/06/04

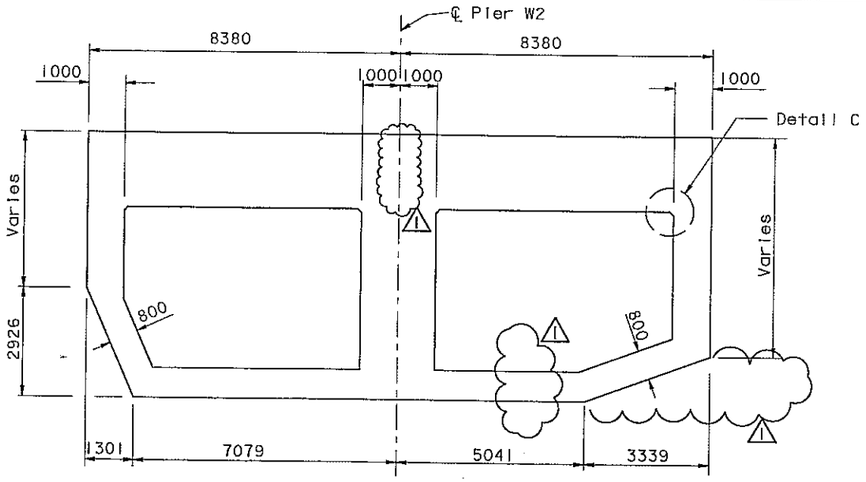
SHEET 038RI OF

Rev. Date 5-18-98

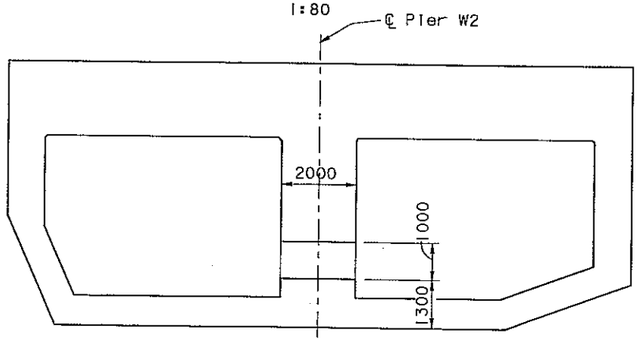
100% PS&E

DATE PLOTTED => 23 MAR 2007 TIME PLOTTED => 08:42:22

USERNAME => visitor




SECTION C-C
1:80




SECTION D-D
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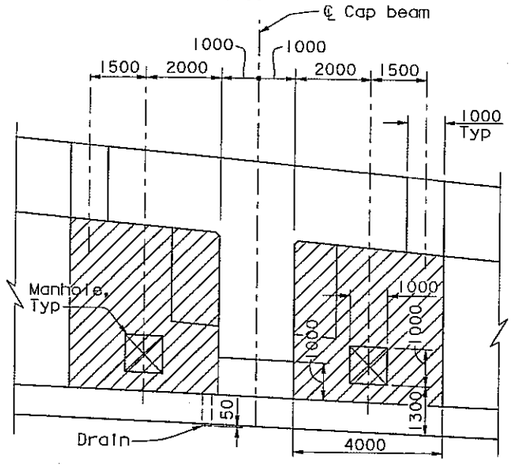
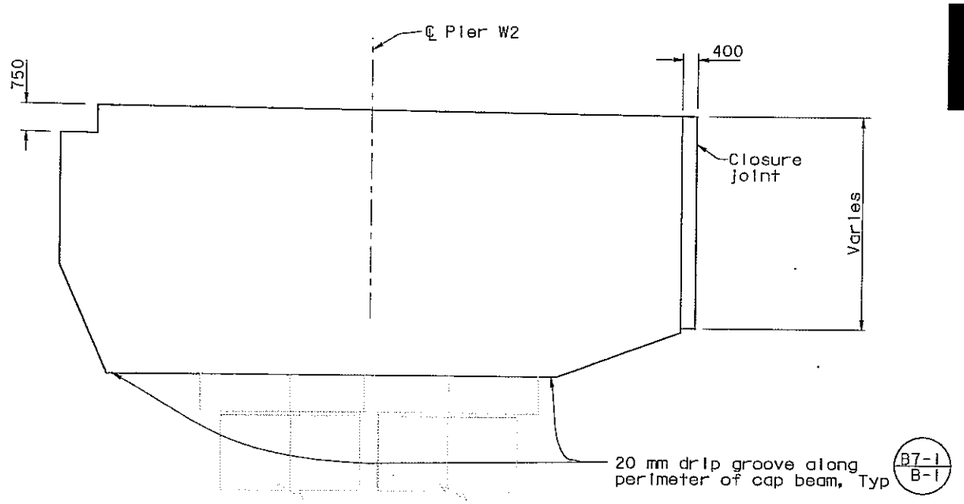
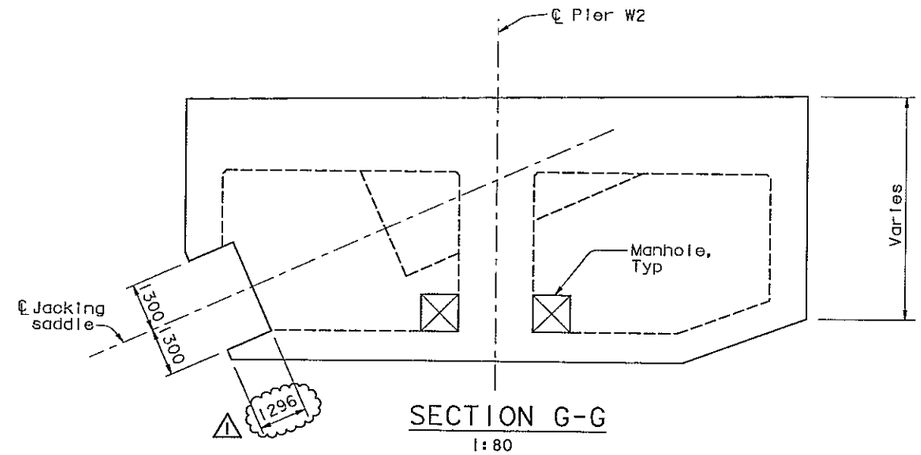


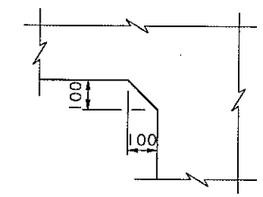

SECTION E-E
1:80




SECTION F-F
1:80




SECTION G-G
1:80




TYPICAL CHAMFER DETAIL

DETAIL C
1:10

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 456R1 | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
John Sun
No. C 54648
Exp. 12/31/05
CIVIL
STATE OF CALIFORNIA

T.Y. LIN / MOFFATT & NICHOL
825 BATTERY STREET
SAN FRANCISCO, CA 94111

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James P. Duxbury
No. C 64677
Exp. 06/30/07
CIVIL
STATE OF CALIFORNIA

FOR REVISIONS ONLY

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. _____
SHEET ____ OF ____

LEGEND:

All forms to be removed after construction of W2 cap beam deck.

NOTES:

1. For additional details, see "W2 Cap Beam Dimension Details No. 1" sheet.

100 % PS&E

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Reza Valizadeh / Vong Toan / Y. Lin
SIGN OFF DATE 07/21/06
Rev. Date: 5-18-98

| | | | |
|---|---|---|---|
| DESIGN | BY J. Sun | CHECKED M. Chen | |
| DETAILS | BY S. Shi | CHECKED M. Chen | |
| QUANTITIES | BY S. Shi | CHECKED D. Harrison | |

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM DIMENSION DETAILS NO. 3

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/15/99 08/02/99 05/31/01 04/08/02 07/01/02 12/19/02

SHEET 039R1 OF

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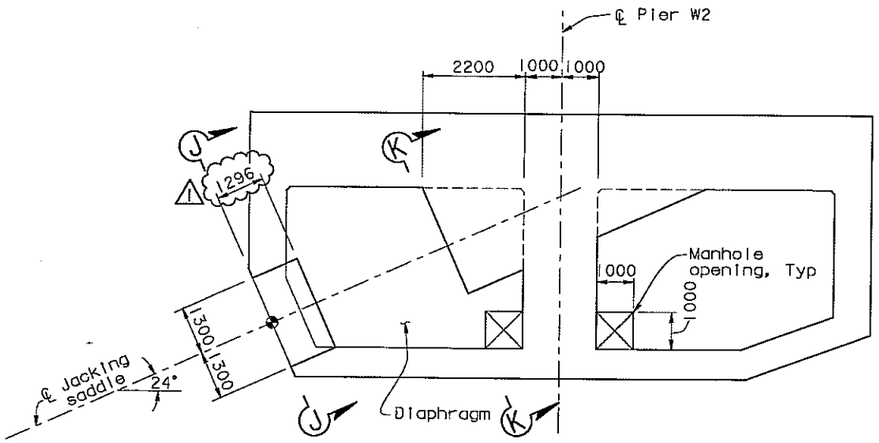
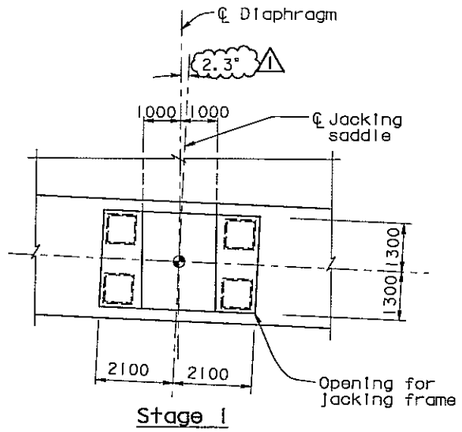



Stage 1

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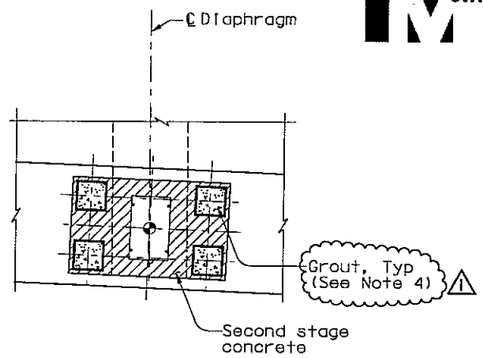
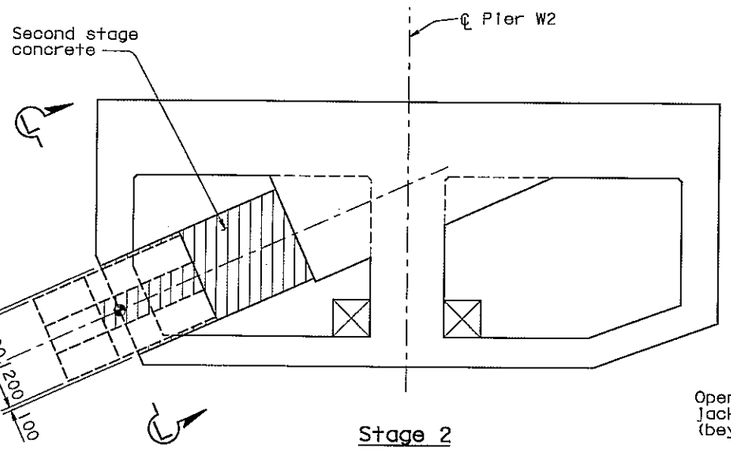


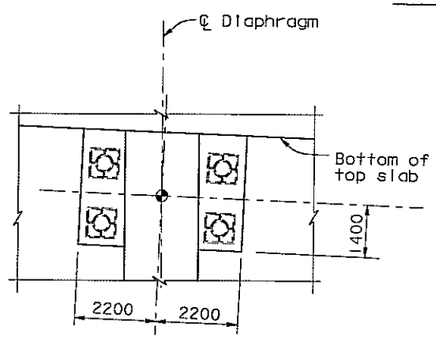

Stage 2

## SECTION J-J
1:80




Stage 2

## SECTION H-H
1:80




Stage 1

## SECTION K-K
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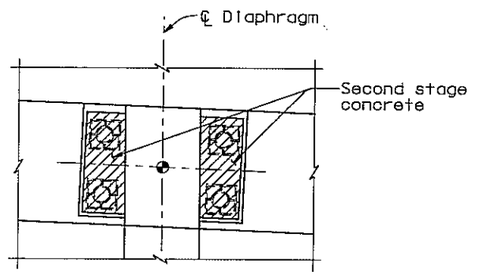
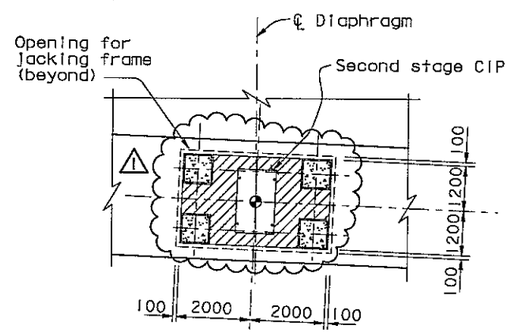



Stage 2




Stage 2

## SECTION L-L
1:80

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — John Sun — No. C 54648 — Exp. 12/31/05 — CIVIL — STATE OF CALIFORNIA

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FOR REVISIONS ONLY

| MARK | DATE | REVISIONS DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD, GROUT LEGS | JD | NV | 23 |

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

NOTES:

1. For additional details, see "W2 Cap Beam Dimension Details No.1" sheet.
2. Jacking saddle and Jacking frame not shown for clarity.
3. Stage 1: W2 Cap Beam construction is complete; main cable jacking has not started.

   Stage 2: Main cable jacking is complete and Stage 2 concrete poured.
4. (1) After all Jacking operations have been completed and before the Stage 2 concrete is poured, the Jacking Frame support legs shall be filled with high strength nonshrihk grout (f'c=60 MPa). Grouting details shall be submitted to the Engineer for review and approval.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

R. Valizadeh/V. Toan/Y. L./W. L./F. C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | S. Shi | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 05/31/01 | 09/28/01 | 07/31/02 | 12/15/02

SHEET 040R1 OF

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

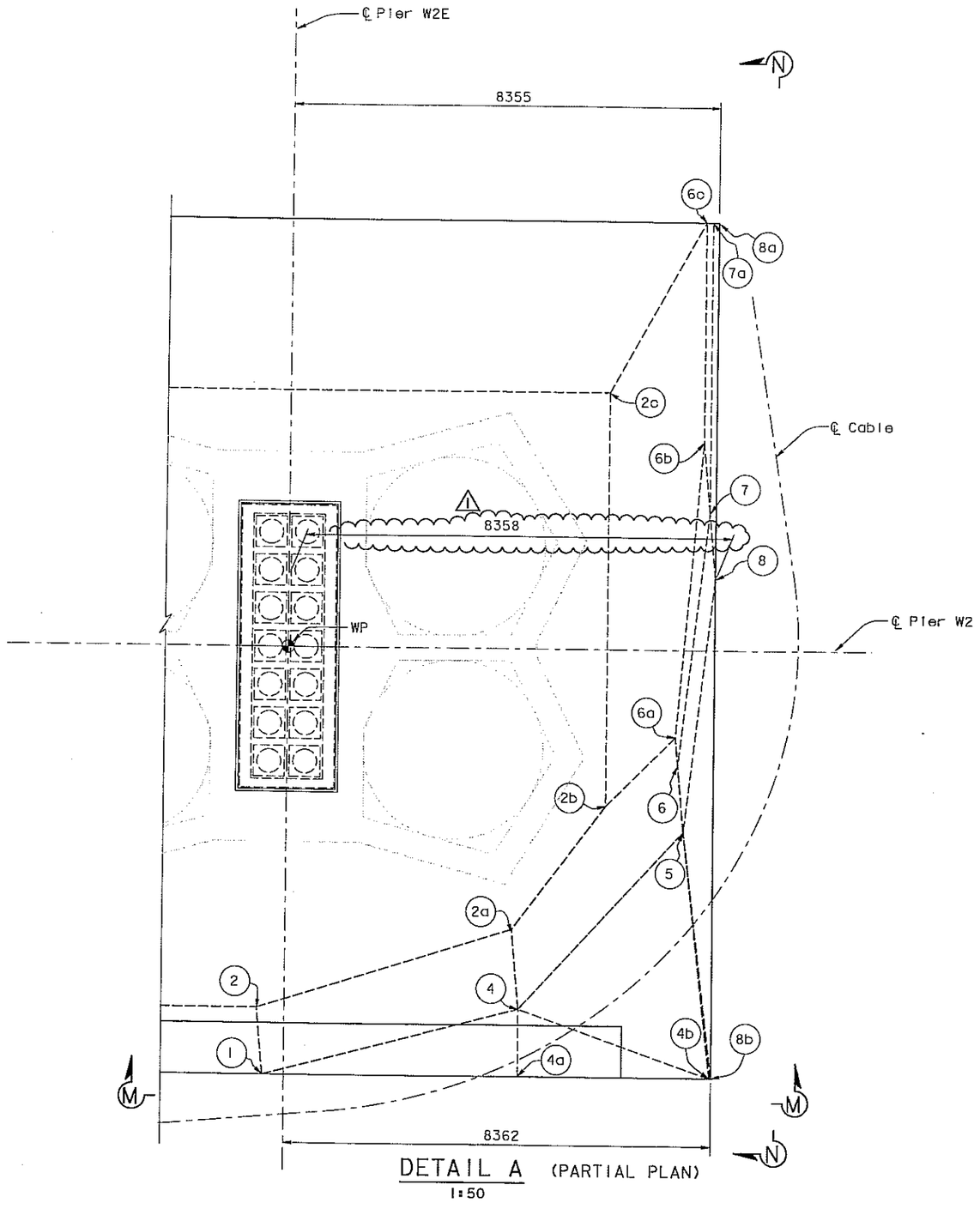
Rev. Date: 5-18-98

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM DIMENSION DETAILS NO. 4

FILE => I:\bb\04-012001\sas\contract plans and cco\cco\cco*23\deccap03a.dgn

DATE PLOTTED => 02 APR 2007 TIME PLOTTED => 10:27:01
USERNAME => visitor 100 % PS&E




DETAIL A (PARTIAL PLAN)
1:50

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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12-6-04
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FOR REVISIONS ONLY

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|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |
| | | REVISIONS | | | |

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

LEGEND:

(-) Indicates Cap Beam Dimension Control Point

NOTES:

1. For additional details, see "W2 Cap Beam Dimension Details No. 1" sheet.
2. For Sections M-M and N-N, see "W2 Cap Beam Dimension Details No. 6" sheet.

100 % PS&E

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R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Roger Valizadeh / Vong Toan / Y. Lin
SIGN OFF DATE 07/21/06
Rev. Date: 5-18-98

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | S. Shi | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM DIMENSION DETAILS NO. 5

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

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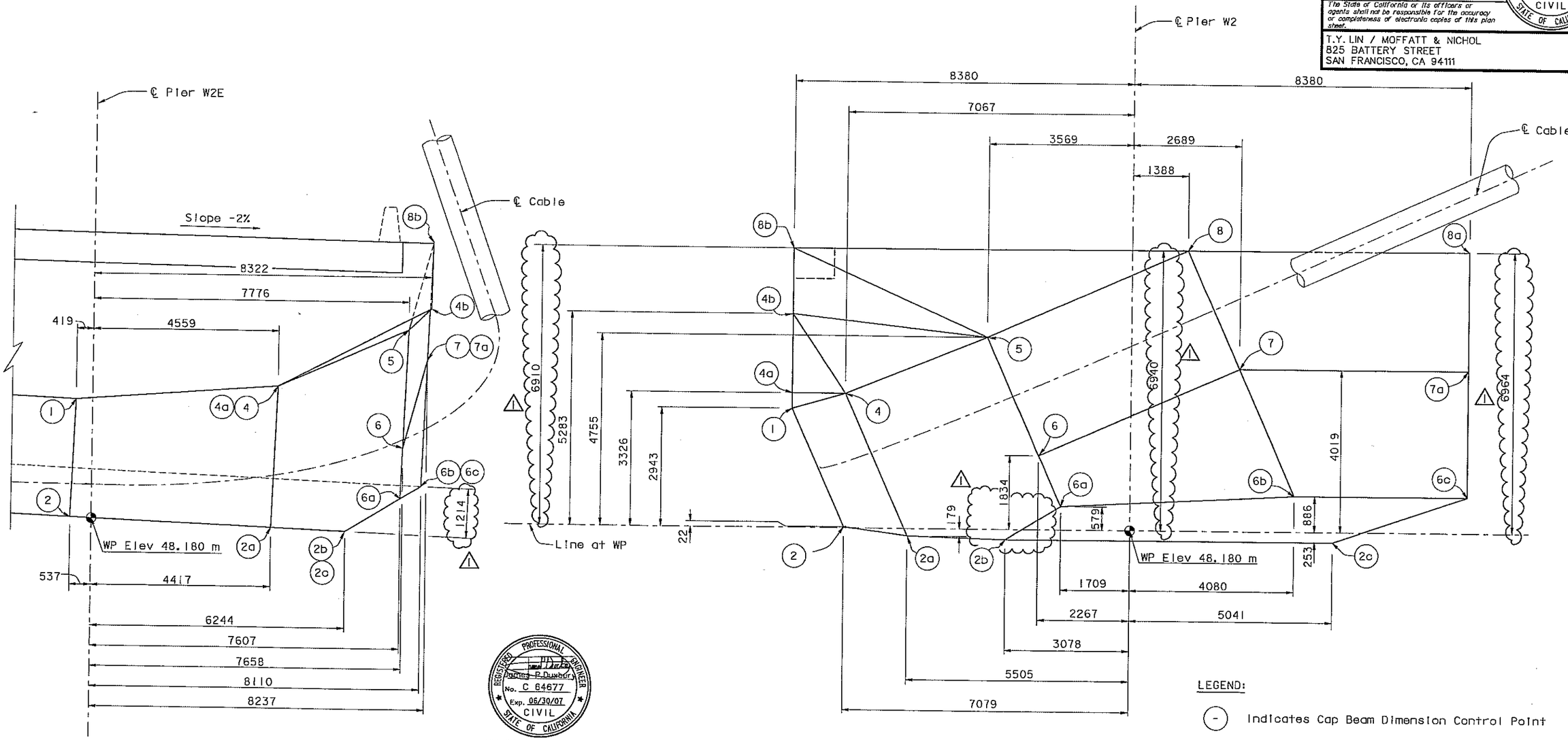


SECTION M-M
1:50

SECTION N-N
1:50

LEGEND:

(-) Indicates Cap Beam Dimension Control Point

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| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
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SIGN OFF DATE 07/21/06
Rev. Date: 5-18-98

| | | | |
|---|---|---|---|
| DESIGN | BY J. Sun | CHECKED M. Chen | |
| DETAILS | BY S. Shi | CHECKED M. Chen | |
| QUANTITIES | BY S. Shi | CHECKED D. Harrison | |

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R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM DIMENSION DETAILS NO. 6

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

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SHEET 042R1 OF

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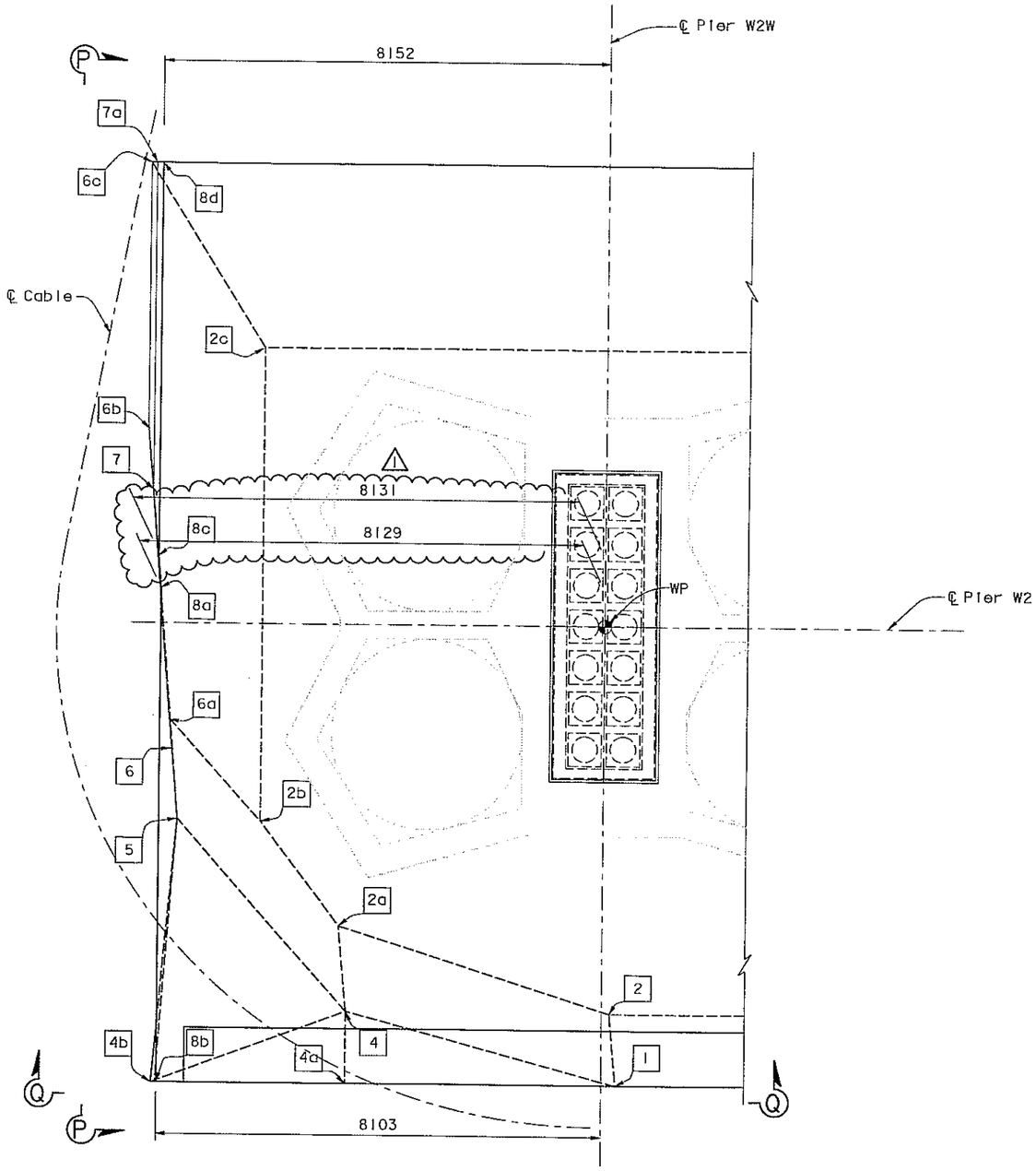


DETAIL B (PARTIAL PLAN)
1:50

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. _____
SHEET ____ OF ____

LEGEND:

[-] Indicates Cap Beam Dimensions Control Point

NOTES:

1. For additional details, see "W2 Cap Beam Dimension Details No. 1" sheet.
2. For Sections P-P and Q-Q, see "W2 Cap Beam Dimension Details No. 8" sheet.

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Roger Valizadeh / Vong Toan / Y Lin
SIGN OFF DATE 07/21/06
Rev. Date: 5-18-98

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|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | S. Shi | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

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R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM DIMENSION DETAILS NO. 7

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/13/99 08/02/99 05/31/01 04/08/02 01/01/02 12/19/02

SHEET 043R1 OF

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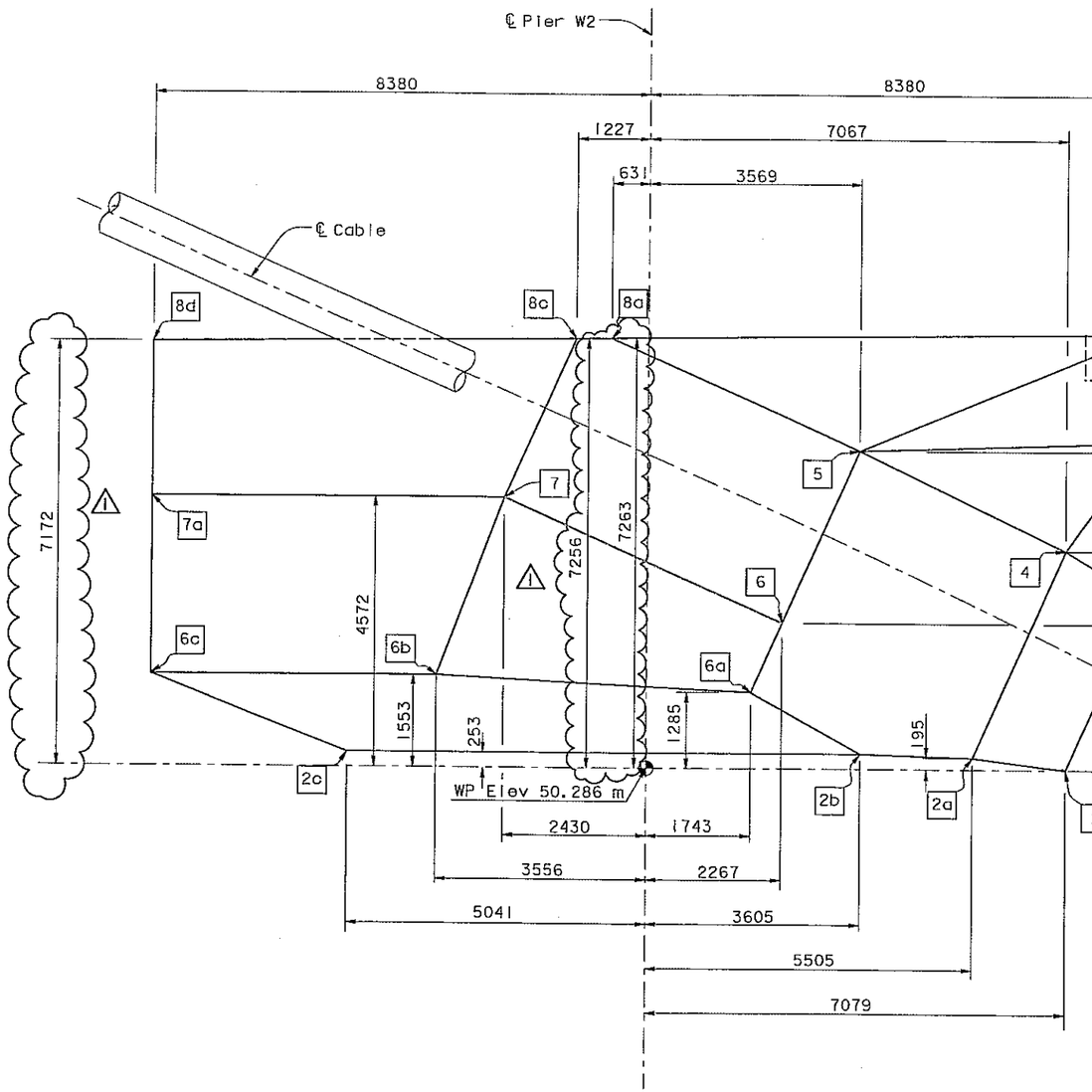
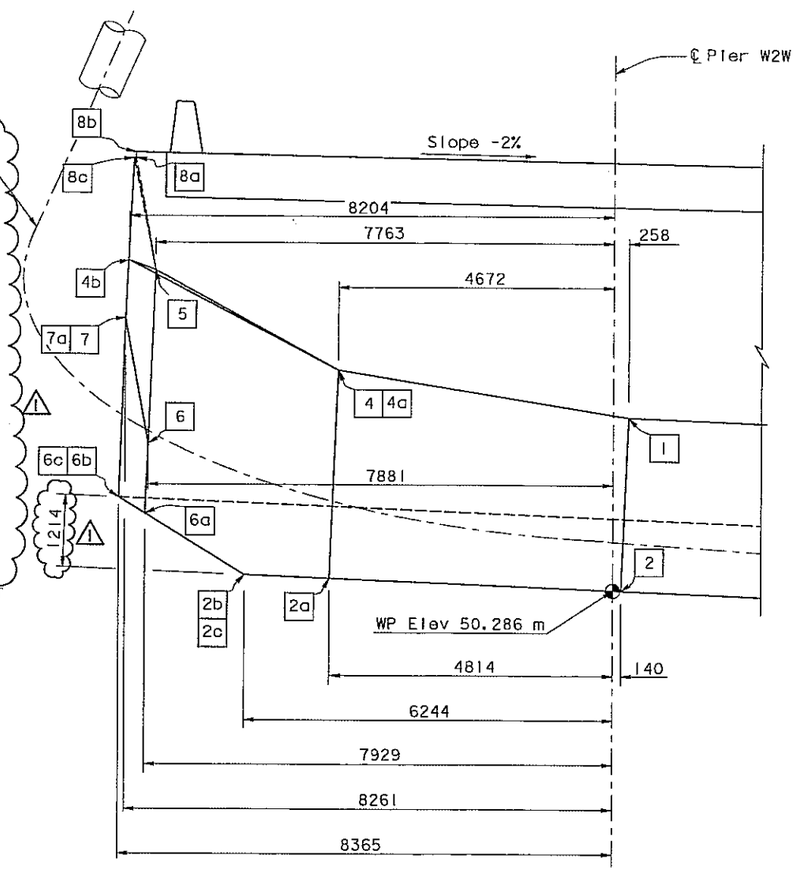



SECTION P-P
1:50




SECTION Q-Q
1:50

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| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

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CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

LEGEND:

- Indicates Cap Beam Dimensions Control Point

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SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM DIMENSION DETAILS NO. 8

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
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| DESIGN | J. Sun | M. Chen |
| DETAILS | S. Shi | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

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SHEET 044RI OF

100 % PS&E

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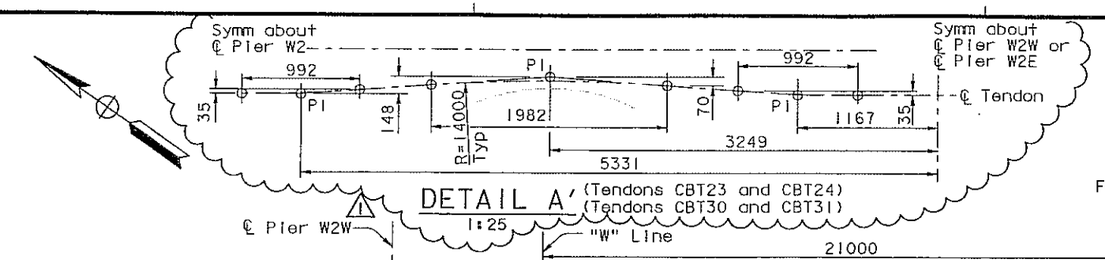


DETAIL A' (Tendons CBT23 and CBT24)
(Tendons CBT30 and CBT31)
1:25

REGISTERED PROFESSIONAL ENGINEER
Jaimes P Duxbury
No. C 64677
Exp. 06/30/07
CIVIL
STATE OF CALIFORNIA

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| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

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12-6-04
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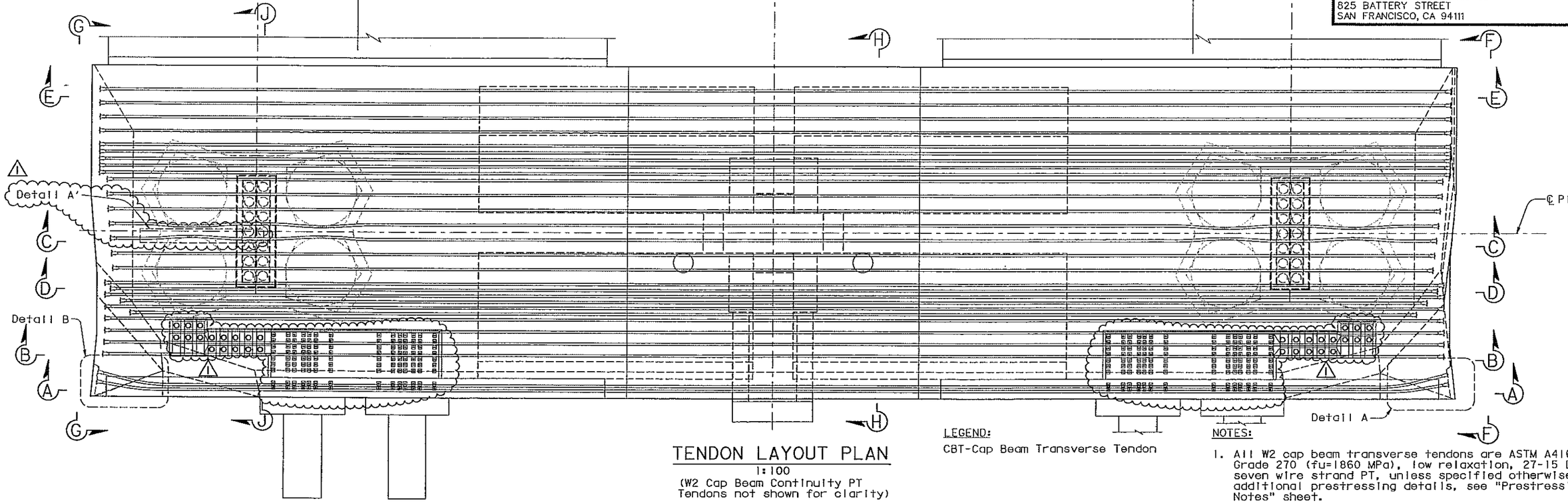
John Sun
No. C 54648
Exp. 12/31/05
CIVIL
STATE OF CALIFORNIA

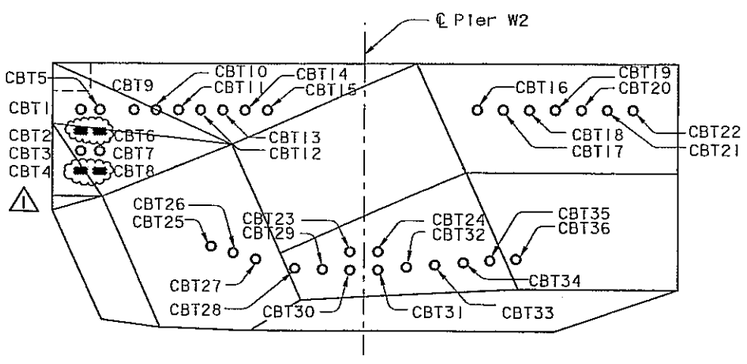
T.Y. LIN / MOFFATT & NICHOL
825 BATTERY STREET
SAN FRANCISCO, CA 94111




## TENDON LAYOUT PLAN

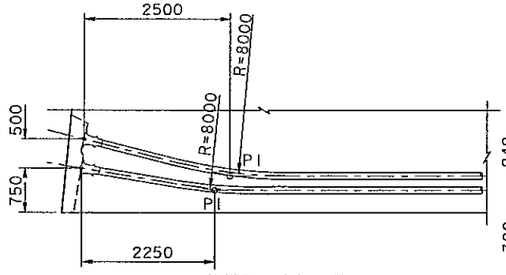
1:100
(W2 Cap Beam Continuity PT
Tendons not shown for clarity)

LEGEND:
CBT-Cap Beam Transverse Tendon



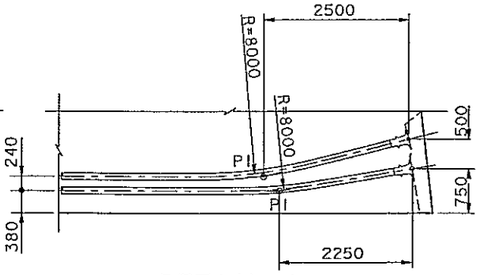

## TENDON DESIGNATION

1:80




## DETAIL B

1:50
(Tendons CBT1 and CBT5)
(Tendons CBT2 thru CBT8 similar)




## DETAIL A

1:50
(Tendons CBT1 and CBT5)
(Tendons CBT2 thru CBT8 similar)

NOTES:

1. All W2 cap beam transverse tendons are ASTM A416 Grade 270 (fu=1860 MPa), low relaxation, 27-15 Dia seven wire strand PT, unless specified otherwise. For additional prestressing details, see "Prestressing Notes" sheet.
2. For Section A-A, see "W2 Cap Beam Post-Tensioning Details No.2" sheet.
3. For Sections B-B through E-E, see "W2 Cap Beam Post-Tensioning Details No.3" sheet.
4. For Sections F-F through J-J, see "W2 Cap Beam Post-Tensioning Details No.4" sheet.
5. For bikepath details near cap beam, see "Bikepath Details" sheets.
6. For PT blockout dimensions, see "W2 Cap Beam Blockout Details" sheets.
7. Jacking force in the W2 cap beam transverse tendons (CBT1-CBT36) shall be 5265 kN typical.
8. For general stressing sequence, see "Pier W2 Construction Sequence" sheet.
9. For "W2 Cap Beam Post-Tensioning Details" sheets, the Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
10. W2 cap beam elevations are to top of finished concrete and do not include overlay thickness.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

100% PS&E

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | | | |
|---|---|---|---|
| DESIGN | BY J. Sun | CHECKED M. Chen |
| DETAILS | BY J. Duxbury | CHECKED M. Chen |
| QUANTITIES | BY S. Shi | CHECKED D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM POST-TENSIONING DETAILS NO.1

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 08/08/00 | 05/31/01 | 09/06/02 | 01/07/02 | 12/19/02

SHEET 045R1 OF

FILE => I:\bb\04-012001\eas\contract plans and cco\cco\cco#23\deopt01.dgn

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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| 04 | SF | 80 | 13.2/13.9 | 463R1 | 1204 |

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REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER John Sun No. C 54648 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER James P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

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| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

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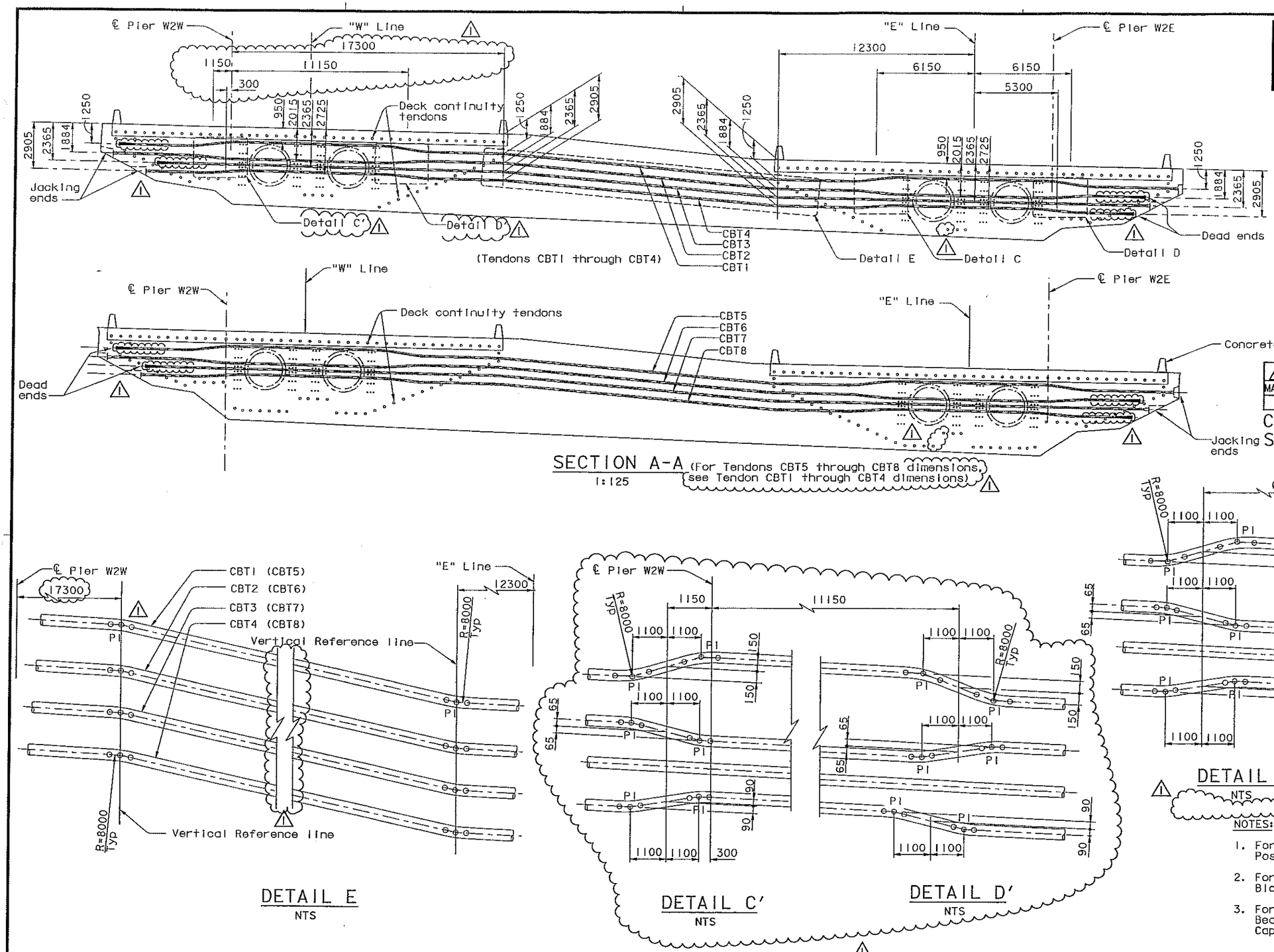



SECTION A-A (For Tendons CBT5 through CBT8 dimensions, see Tendon CBT1 through CBT4 dimensions)
1:125

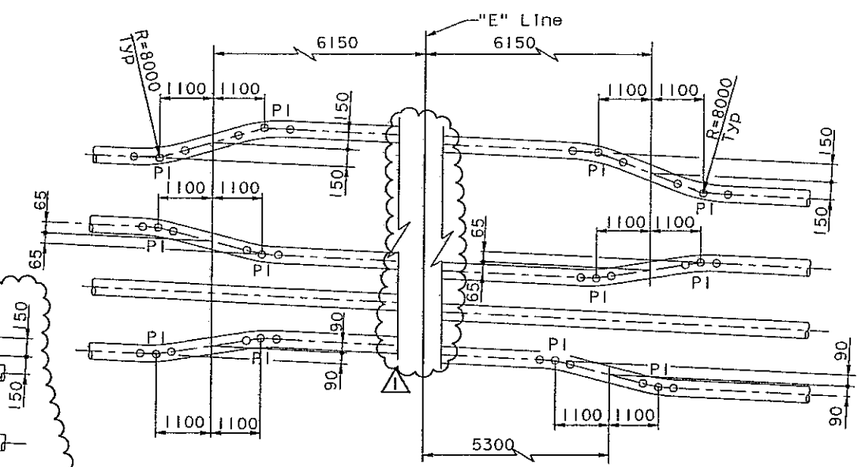



DETAIL E
NTS




DETAIL C'
NTS

DETAIL D'
NTS




DETAIL C
NTS

DETAIL D
NTS

NOTES:

1. For additional details, see "W2 Cap Beam Post-Tensioning Details No. 1" sheet.
2. For PT blockout details, see "W2 Cap Beam Blockout Details" sheets.
3. For deck continuity tendon details, see "W2 Cap Beam Post-Tensioning Details No. 5" through "W2 Cap Beam Post-Tensioning Details No. 12" sheets.

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R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Reza Valizadeh / Vong Toan / Y. Lin
SIGN OFF DATE 07/21/06

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| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

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R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM POST-TENSIONING DETAILS NO. 2

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

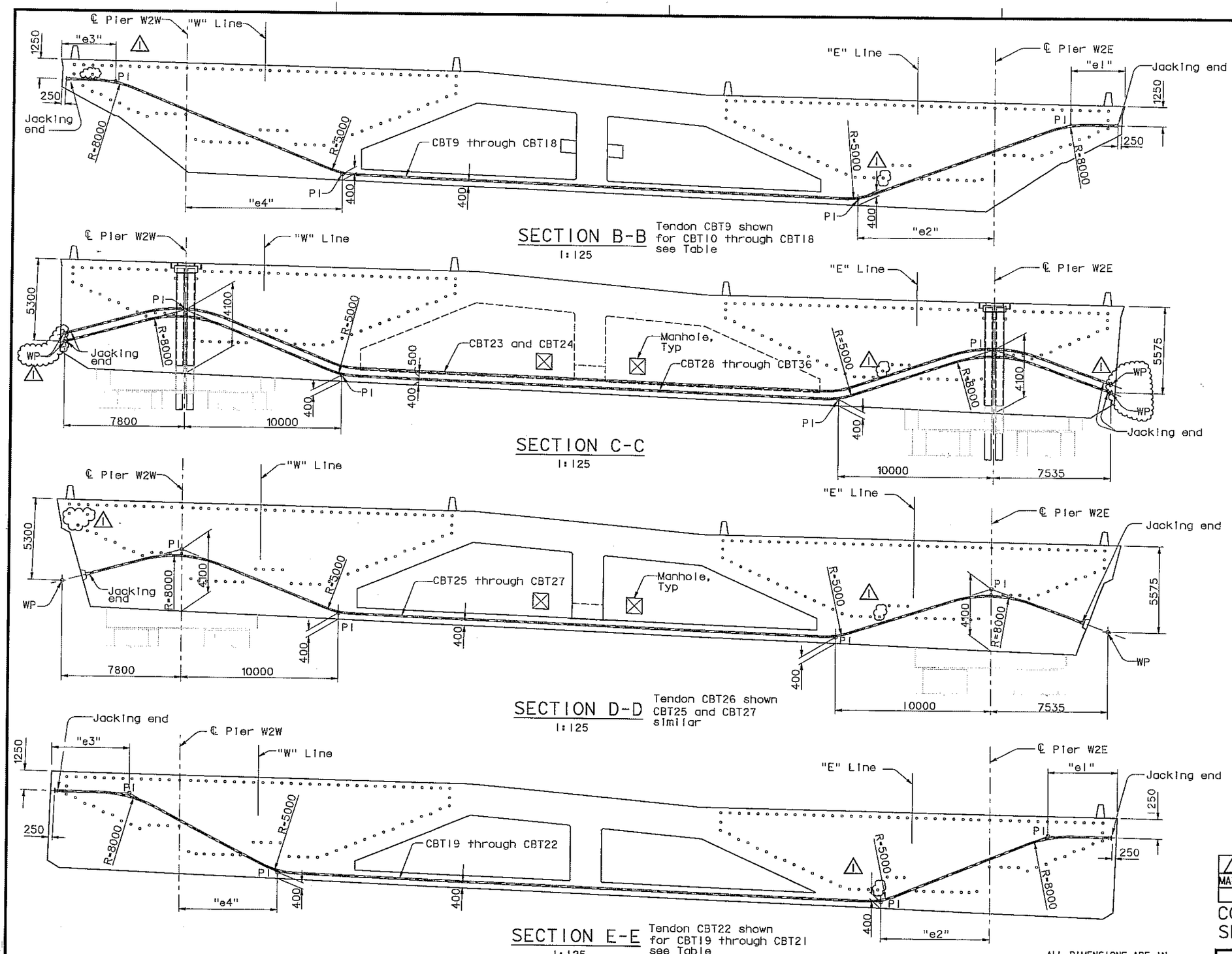
CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 08/02/99 05/31/01 04/01/02 07/01/02 12/15/02

SHEET 046R1 OF

FILE => I:\bb\04-012001\sas\contract plans and cco\cco\cco#23\aecpt02.dgn




SECTION B-B
1:125
Tendon CBT9 shown for CBT10 through CBT18 see Table



SECTION C-C
1:125



SECTION D-D
1:125
Tendon CBT26 shown CBT25 and CBT27 similar



SECTION E-E
1:125
Tendon CBT22 shown for CBT19 through CBT21 see Table

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REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

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| CBT | e1 | e2 | e3 | e4 |
|---|---|---|---|---|
| 9-12 | 3500 | 9250 | 3500 | 10000 |
| 13-18 | 3500 | 10000 | 3500 | 10000 |
| 19 | 3500 | 10000 | 3500 | 10000 |
| 20 | 3500 | 9000 | 3500 | 8750 |
| 21 | 3500 | 8000 | 3600 | 7500 |
| 22 | 4500 | 7000 | 5000 | 6250 |

NOTES:

1. For additional details, see "W2 Cap Beam Post-Tensioning Details No.1" sheet.
2. For PT blockout details, see "W2 Cap Beam Blockout Details" sheets.

REGISTERED PROFESSIONAL ENGINEER Jamie P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

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Rev. Date: 5-18-98

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| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

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PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM POST-TENSIONING DETAILS NO. 3

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 04/08/02 07/01/02 12/19/02

SHEET 047R1 OF

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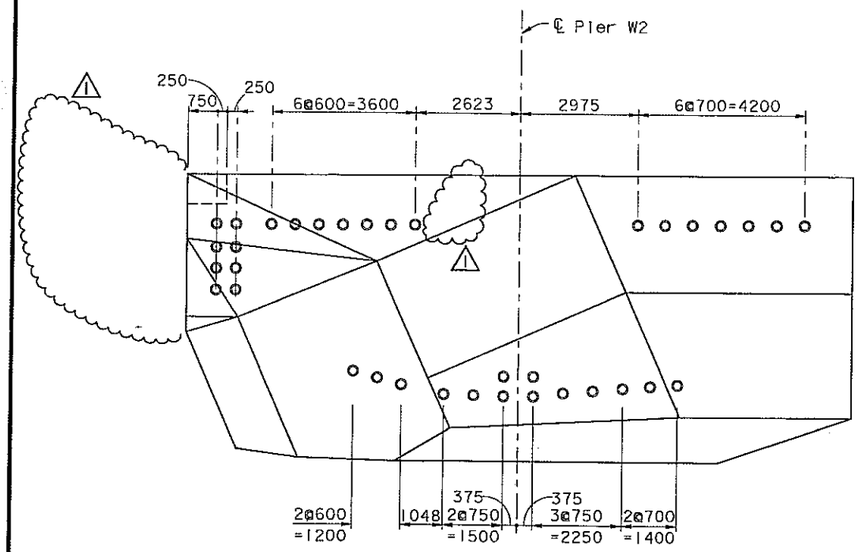
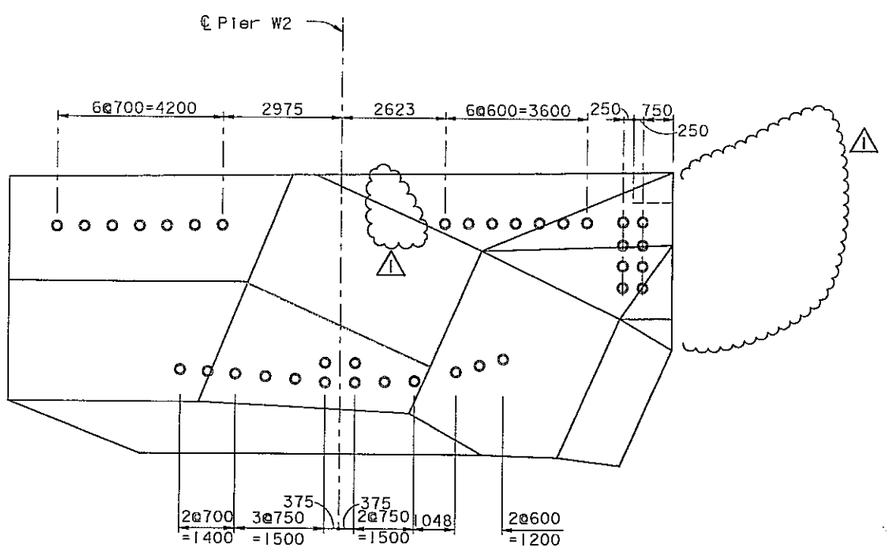
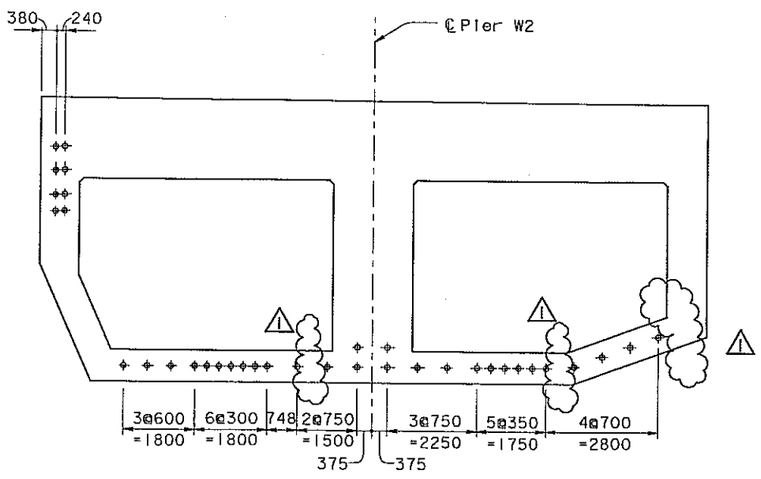


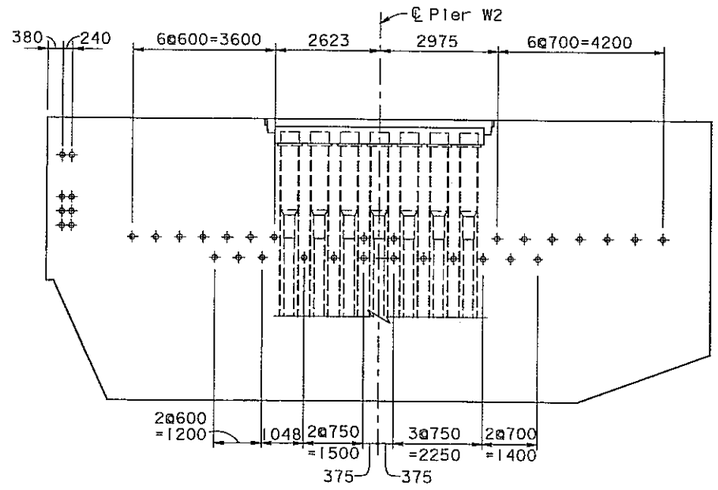

SECTION F-F
1:75




SECTION G-G
1:75




SECTION H-H
1:75




SECTION J-J
1:75

NOTES:

1. For additional details, see "W2 Cap Beam Post-Tensioning Details No.1" sheet.
2. For PT blockout details, see "W2 Cap Beam Blockout Details" sheets.

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REGISTERED ENGINEER - CIVIL
12-6-04
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| QUANTITIES | S. Shi | D. Harrison |

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SIGN OFF DATE 07/21/06

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

CU 04
EA 0120F1

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM POST-TENSIONING DETAILS NO. 4

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES

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SHEET 048R1 OF

Rev. Date: 5-18-98

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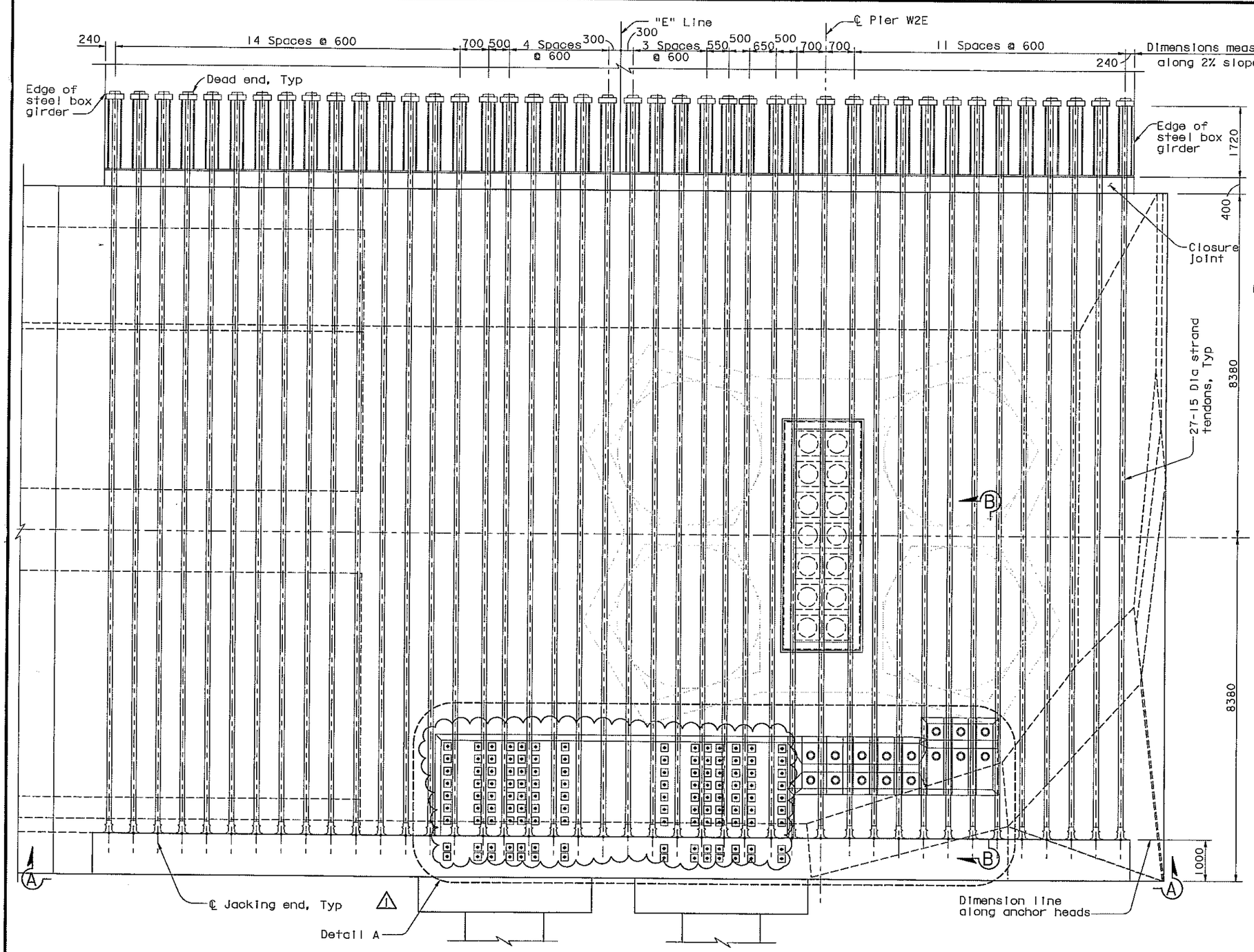
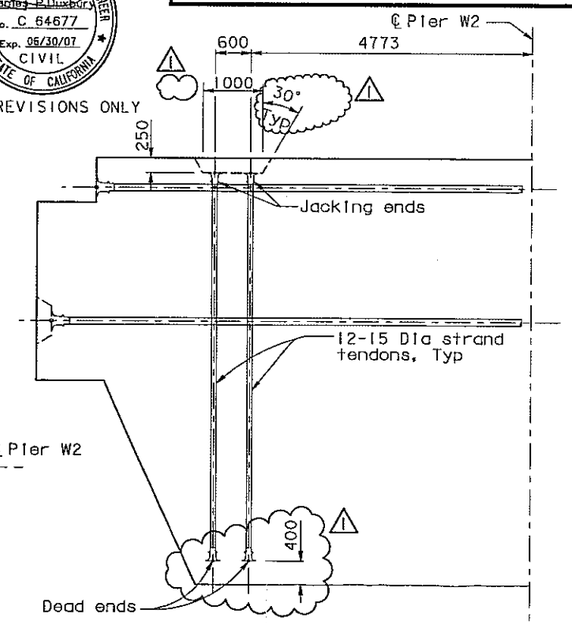



TOP TENDON LAYOUT PLAN ("E" Line)
1:50




SECTION B-B
1:50

NOTES:

1. For Section A-A, see "W2 Cap Beam Post-Tensioning Details No. 9" sheet.
2. For Detail A, see "W2 Cap Beam Post-Tensioning Details No. 10" sheet.
3. All W2 cap beam continuity tendons are ASTM A416 Grade 270 (fu=1860 MPa), low relaxation, 27-15 Dia seven wire strand PT, unless specified otherwise. For additional prestressing details, see "Prestressing Notes" sheet.
4. For blockout details, see "W2 Cap Beam Blockout Details" sheets.
5. For dead end anchor bearing steel grillage, see "Girder At Pier W2 No. 4" sheet.

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| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

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SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM POST-TENSIONING DETAILS NO. 5

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Reza Valizadeh / Vong Toan / Y. Liu
SIGN OFF DATE 07/21/06
Rev. Date: 5-18-98

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| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

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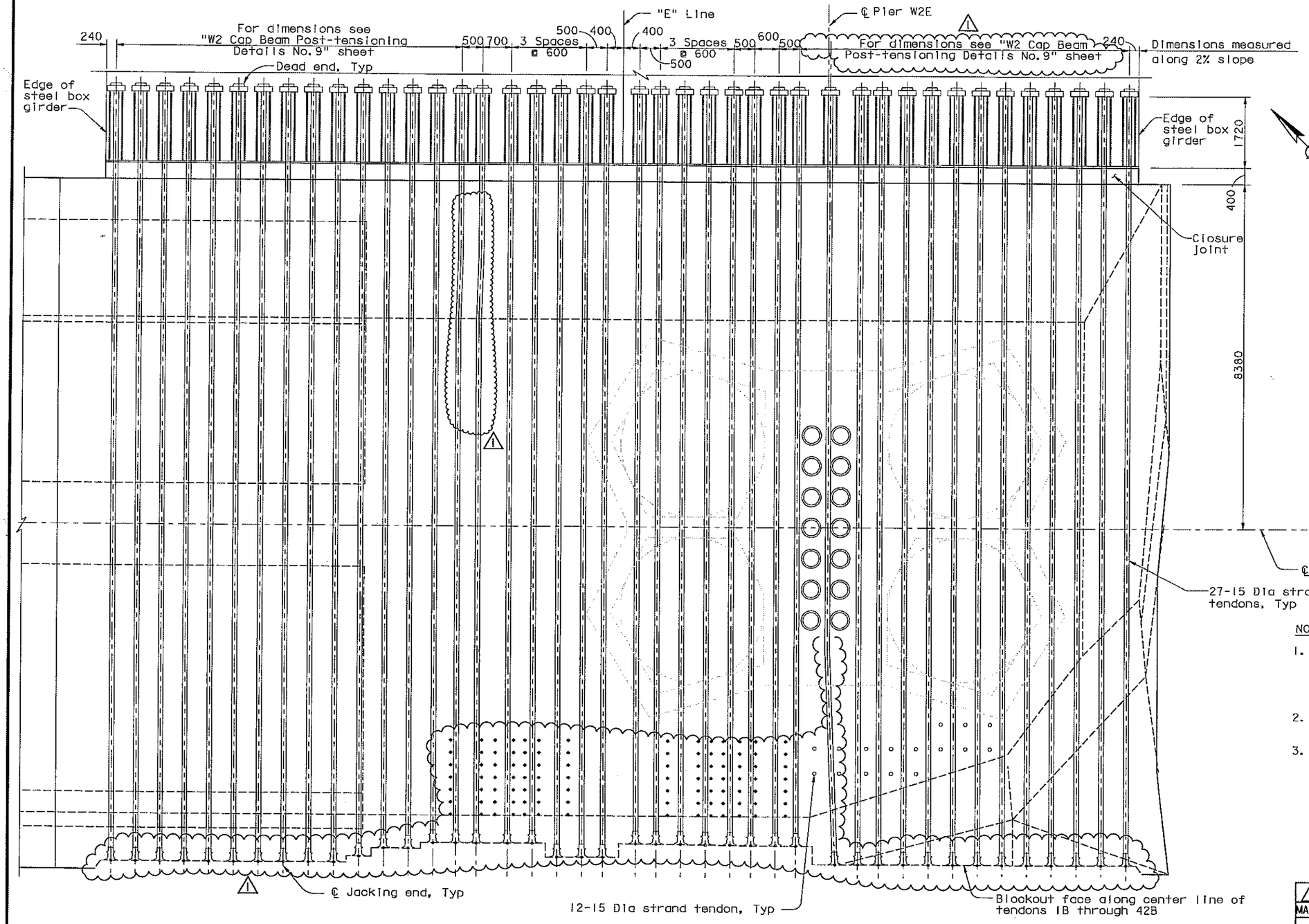


## BOTTOM TENDON LAYOUT PLAN ("E Line")

1:50

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NOTES:

1. All W2 cap beam continuity tendons are ASTM A416 Grade 270 (fu=1860 MPa), low relaxation, 27-15 Dia seven wire strand PT, unless specified otherwise. For additional prestressing details, see "Prestressing Notes" sheet.
2. For blockout details, see "W2 Cap Beam Blockout Details" sheets.
3. For dead end anchor bearing steel grillage, see "Girder At Pier W2 No. 4" sheet.

REGISTERED PROFESSIONAL ENGINEER James P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

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SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM POST-TENSIONING DETAILS NO. 6

R. Valizadeh/V. Toon/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Reza Valizadeh / Vong Toon / Y. Lin
SIGN OFF DATE 07/21/06

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| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

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EA 0120F1

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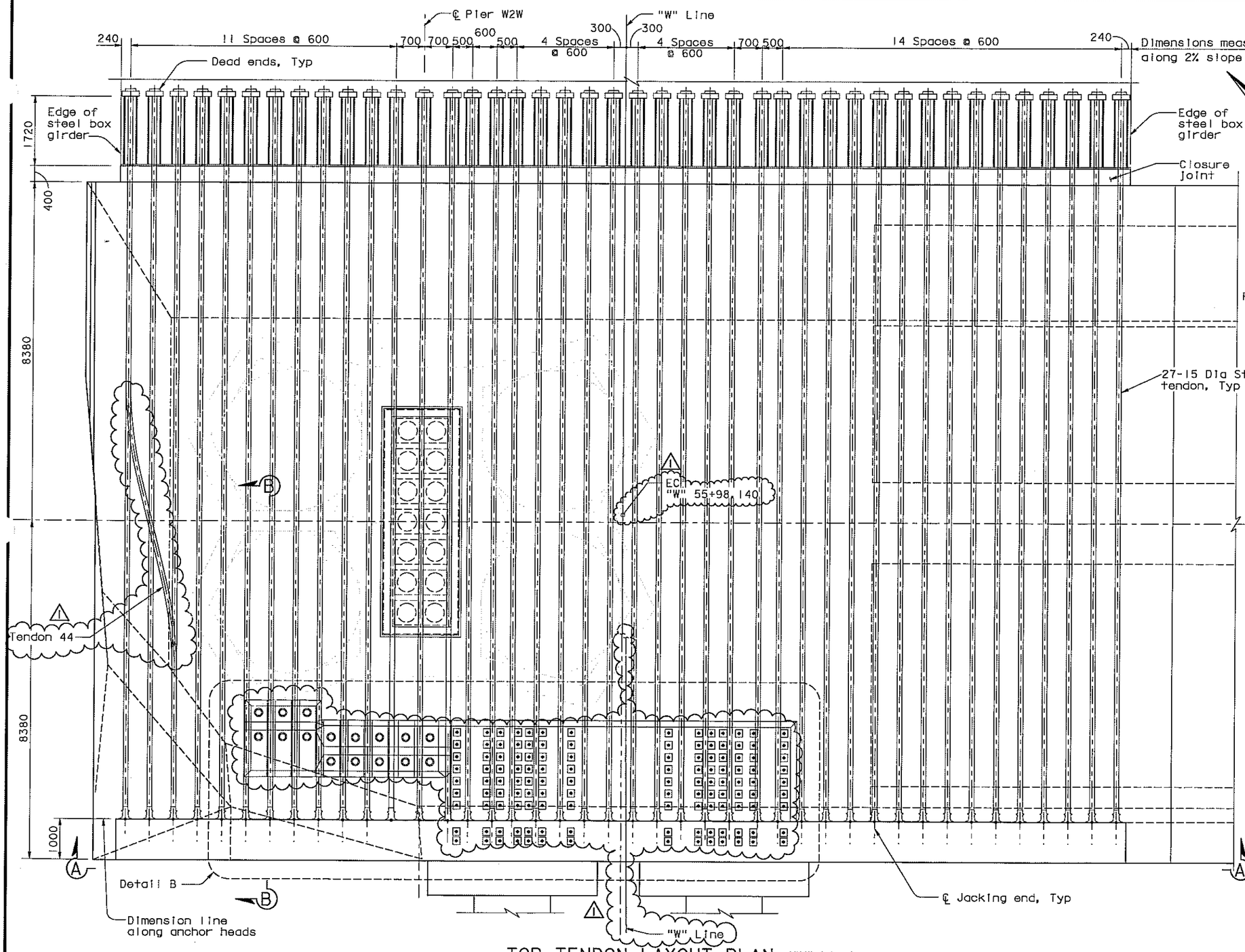
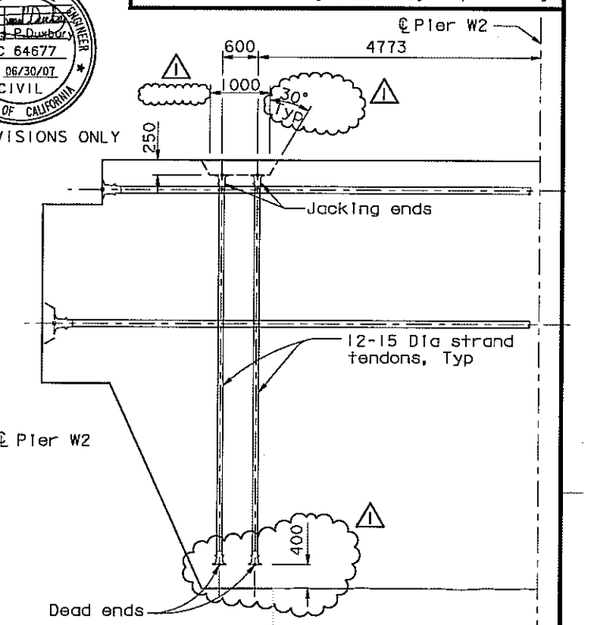



TOP TENDON LAYOUT PLAN ("W" Line)
1:50




SECTION B-B
1:50

NOTES:

1. For Section A-A, see "W2 Cap Beam Post-Tensioning Details No.9" sheet.
2. For Detail B, see "W2 Cap Beam Post-Tensioning Details No.10" sheet.
3. All W2 cap beam continuity tendons are ASTM A416 Grade 270 (fu=1860 MPa), low relaxation, 27-15 Dia seven wire strand PT, unless specified otherwise. For additional prestressing details, see "Prestressing Notes" sheet.
4. For blockout details, see "W2 Cap Beam Blockout Details" sheets.
5. For dead end anchor bearing steel grillage, see "Girder At Pier W2 No.4" sheet.

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SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM POST-TENSIONING DETAILS NO.7

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
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SIGN OFF DATE 07/21/06

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| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

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R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
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Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

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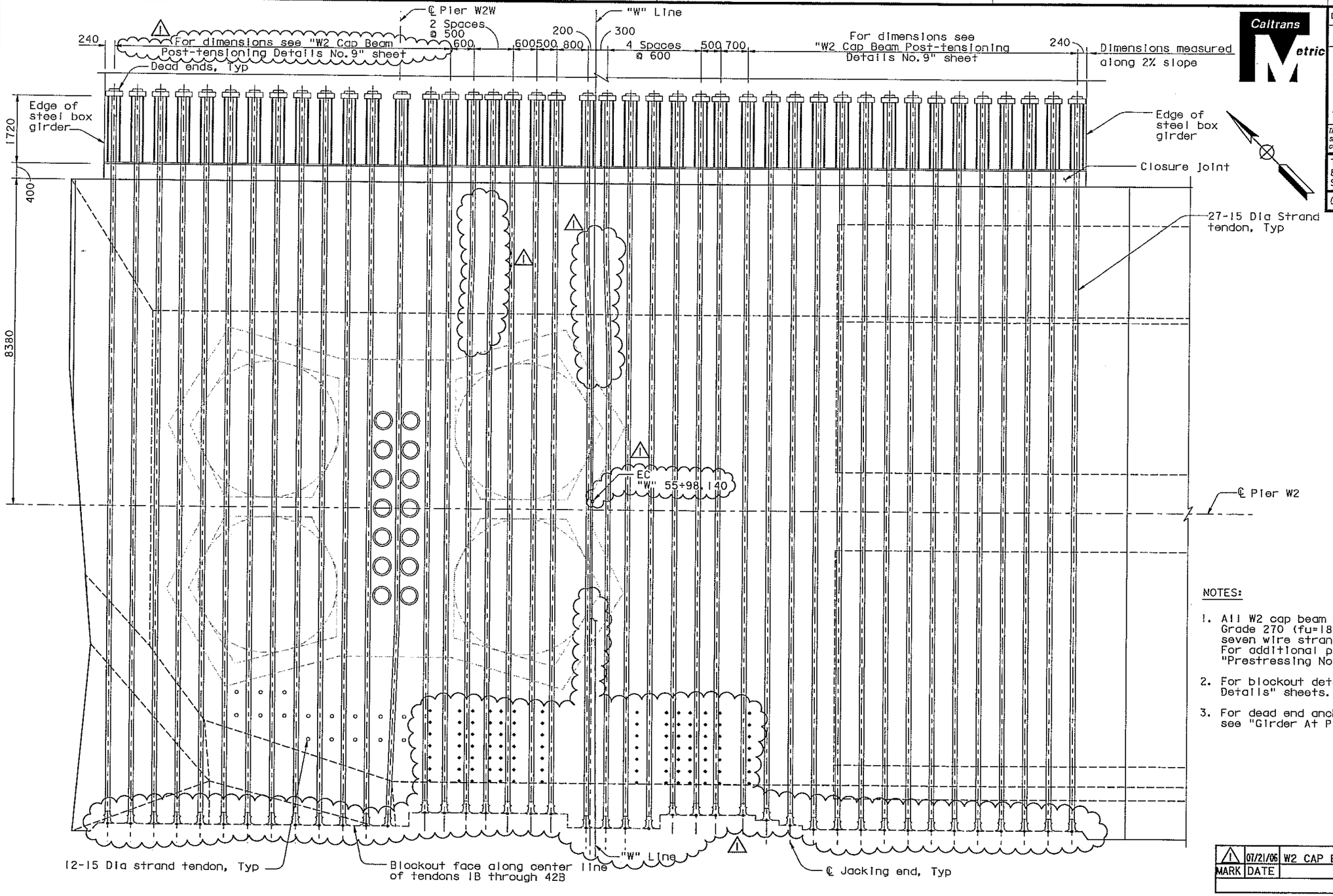


## BOTTOM TENDON LAYOUT PLAN ("W" Line)

1:50

NOTES:

1. All W2 cap beam continuity tendons are ASTM A416 Grade 270 (fu=1860 MPa), low relaxation, 27-15 Dia seven wire strand PT, unless specified otherwise. For additional prestressing details, see "Prestressing Notes" sheet.
2. For blockout details, see "W2 Cap Beam Blockout Details" sheets.
3. For dead end anchor bearing steel grillage, see "Girder At Pier W2 No.4" sheet.

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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REGISTERED ENGINEER - CIVIL

12-6-04
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CONTRACT CHANGE ORDER NO. ____
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R. Valizadeh/V. Toan/Y. L./W. L./F. C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

Rev. Date: 5-18-98

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| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

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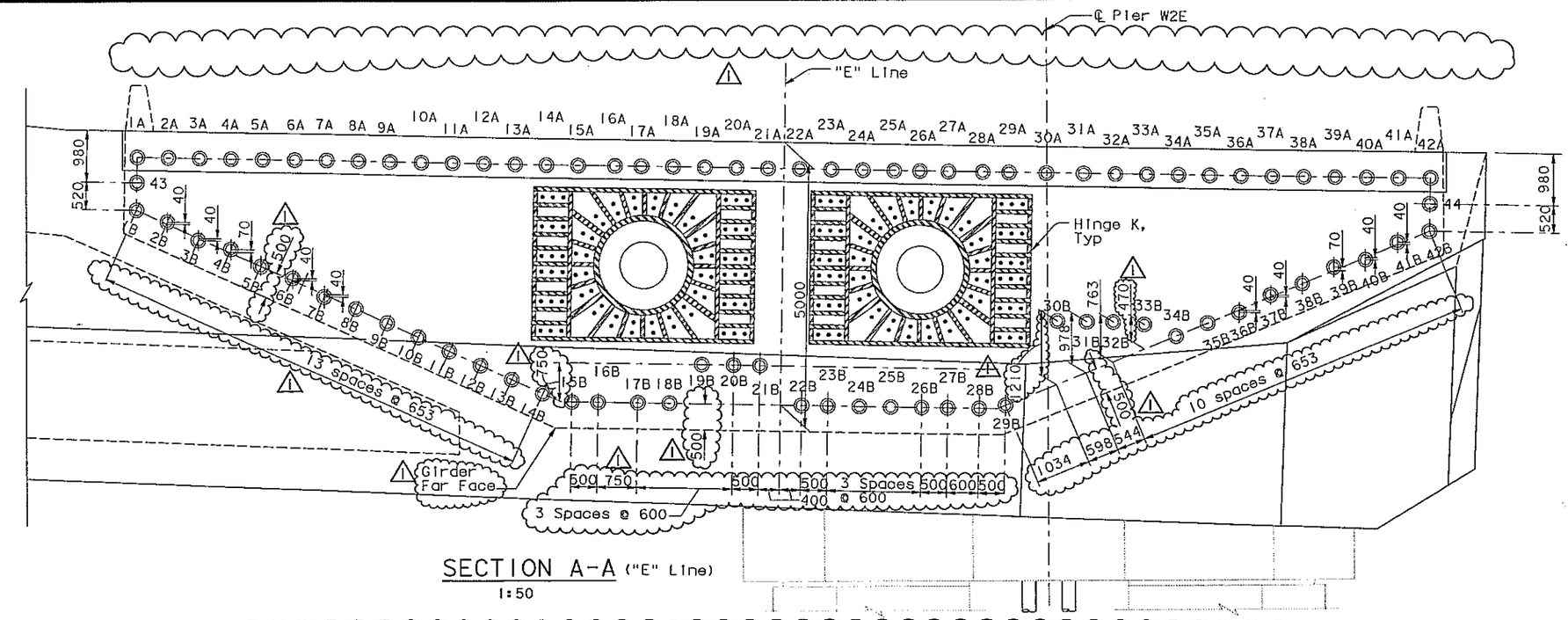
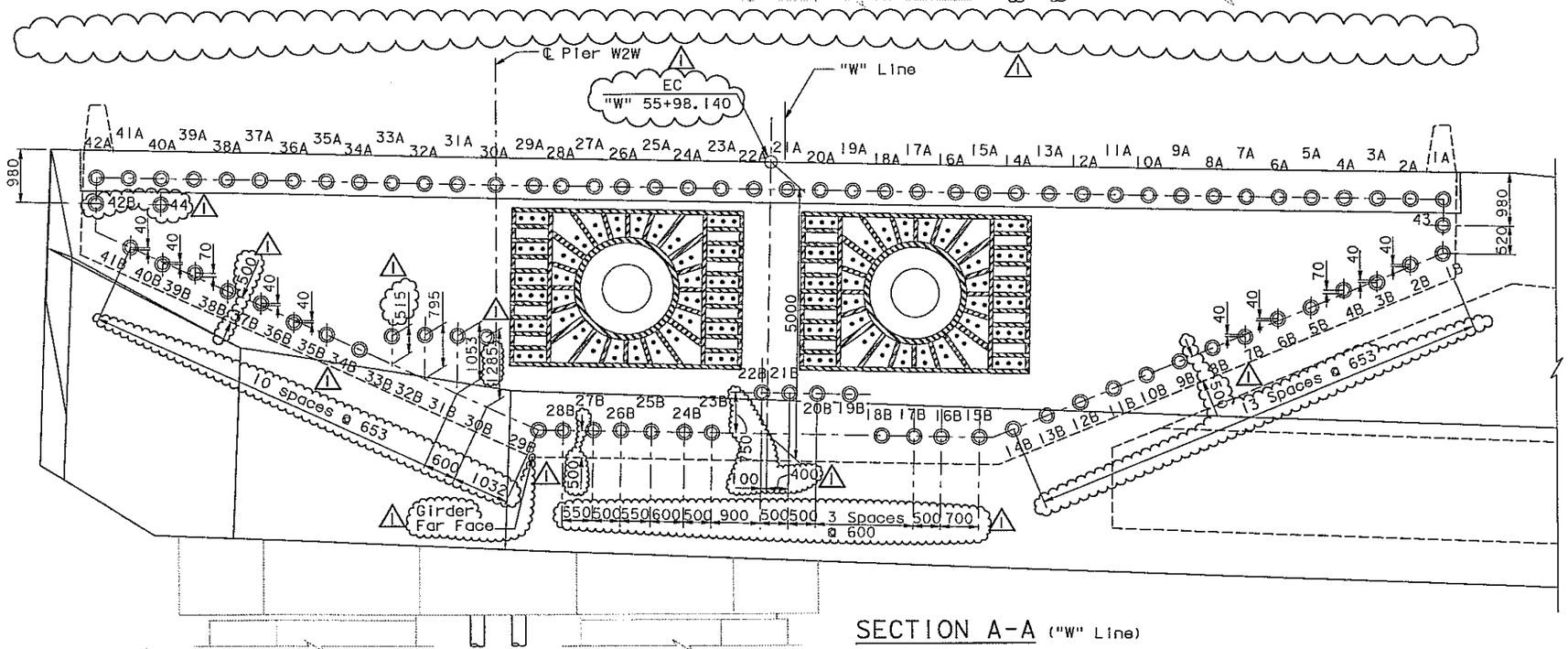
SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM POST-TENSIONING DETAILS NO.8




SECTION A-A ("E" Line)
1:50




SECTION A-A ("W" Line)
1:50

NOTES:

1. For additional details, see "W2 Cap Beam Post-Tensioning Details No.5" and "W2 Cap Beam Post-Tensioning Details No.7" sheets.
2. Jacking force in the W2 cap beam continuity tendons (1A-42A, 1B-42B, 43 & 44) shall be 5265 kN typical.

Caltrans Metric

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REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER John Sun No. C 54648 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

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| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

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CONTRACT CHANGE ORDER NO. _____
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SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM POST-TENSIONING DETAILS NO. 9

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

Rev. Date: 5-16-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 08/08/99 05/31/01 04/08/02 07/02/02 12/19/02

SHEET 053R1 OF

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REVISIONS

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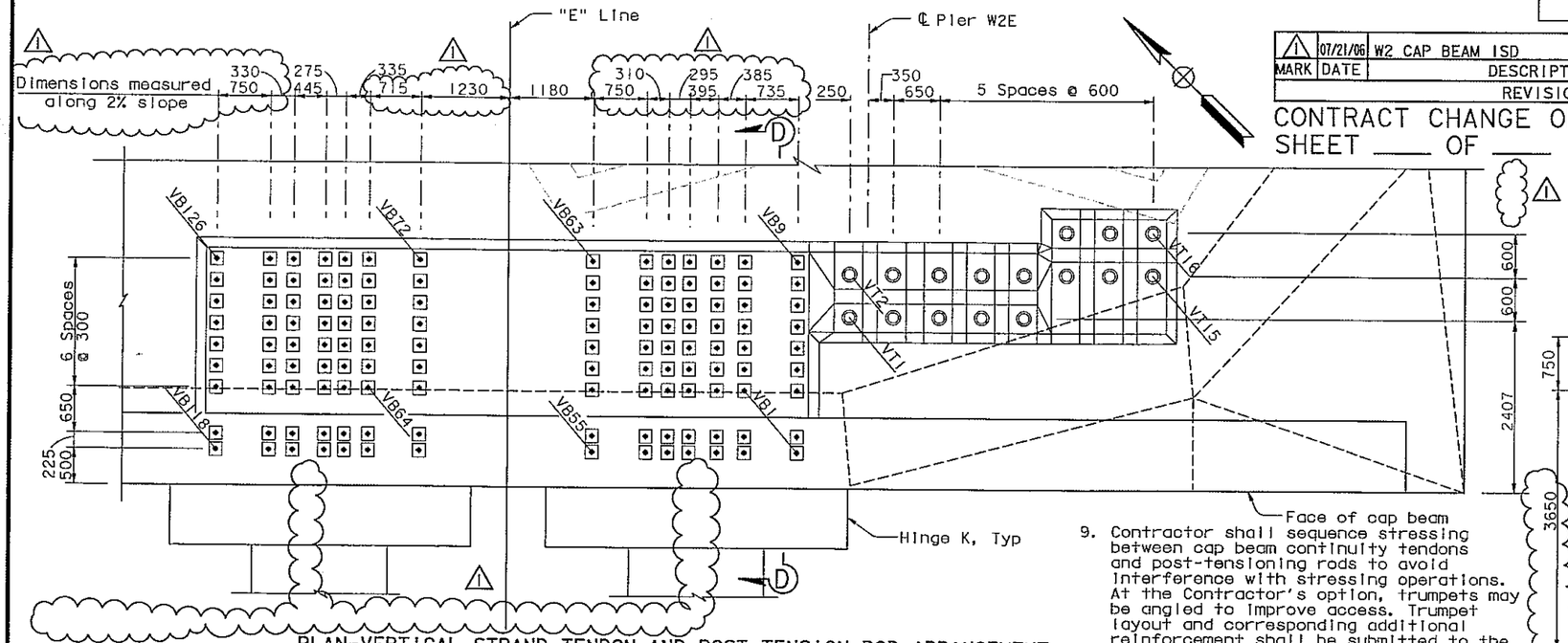
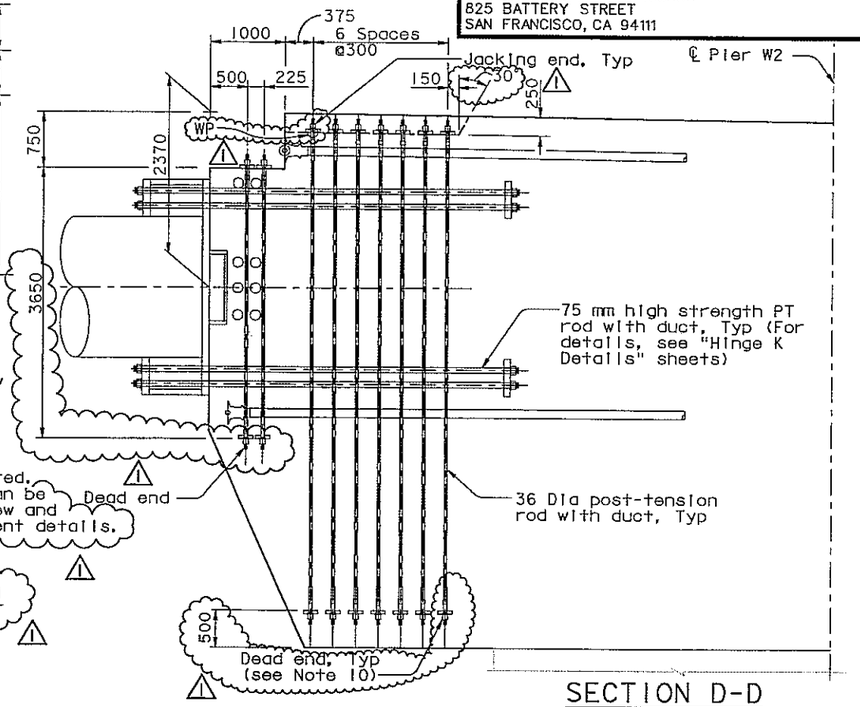


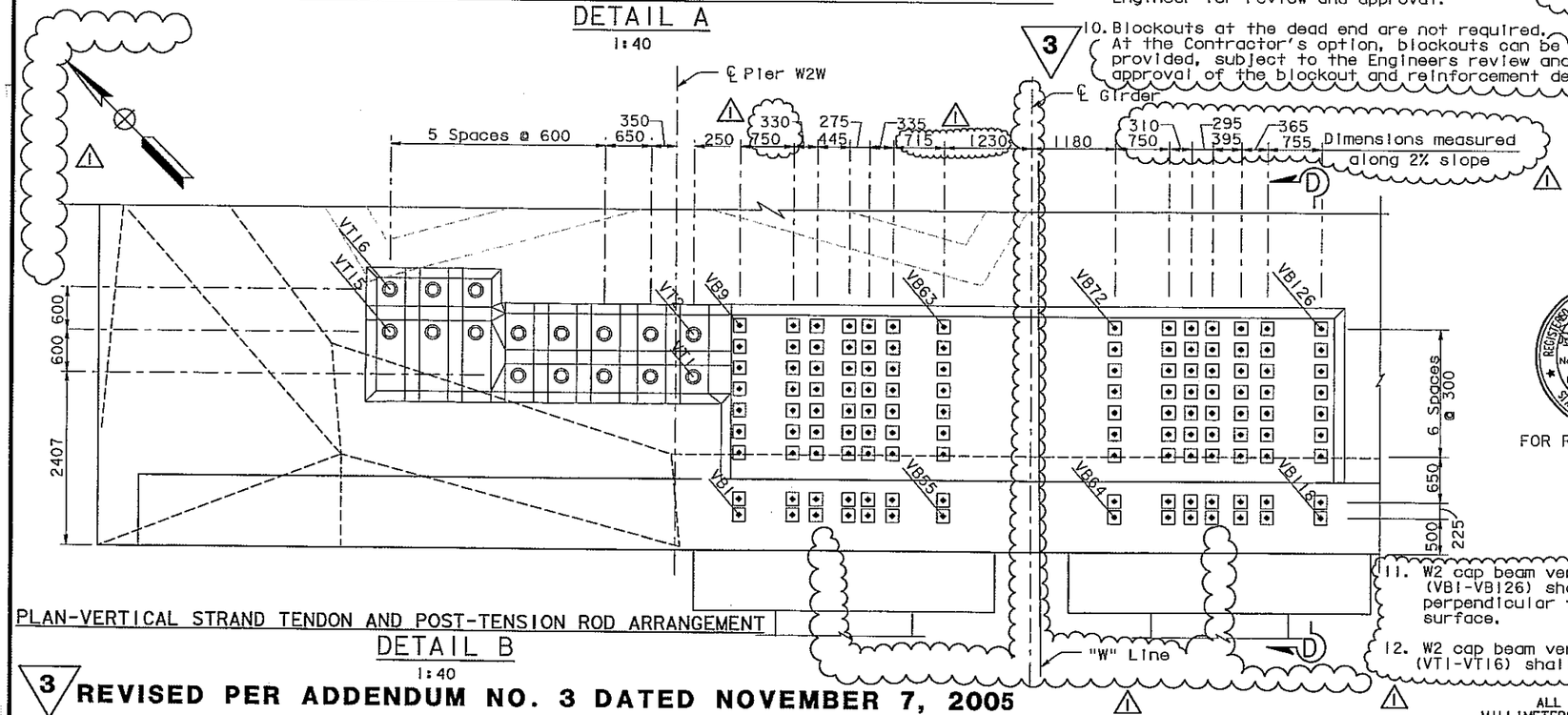

PLAN-VERTICAL STRAND TENDON AND POST-TENSION ROD ARRANGEMENT
DETAIL A
1:40

9. Contractor shall sequence stressing between cap beam continuity tendons and post-tensioning rods to avoid interference with stressing operations. At the Contractor's option, trumpets may be angled to improve access. Trumpet layout and corresponding additional reinforcement shall be submitted to the Engineer for review and approval.




SECTION D-D
1:20 (see Note 9)

3 10. Blockouts at the dead end are not required. At the Contractor's option, blockouts can be provided, subject to the Engineers review and approval of the blockout and reinforcement details.




PLAN-VERTICAL STRAND TENDON AND POST-TENSION ROD ARRANGEMENT
DETAIL B
1:40

11. W2 cap beam vertical PT rods (VB1-VB126) shall be placed perpendicular to the top concrete surface.

12. W2 cap beam vertical tendons (VT1-VT16) shall be placed vertical.

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NOTES:

1. For additional details, see "W2 Cap Beam Post-Tensioning Details No.5" and "W2 Cap Beam Post-Tensioning Details No.7" sheets.
2. Jacking force in the W2 cap beam vertical tendons (VT1-VT16) shall be 2350 kN typical.
3. Jacking force in the W2 cap beam vertical PT rods (VB1-VB126) shall be 734 kN typical.
4. For hinge K details, see "Hinge K Details" sheets.
5. W2 cap beam vertical PT rods are ASTM A722 high strength 36 Dia rods (fu=1030 MPa), with standard galvanized steel ducts, unless specified otherwise.
6. W2 cap beam vertical tendons are ASTM A416 Grade 270 (fu=1860 MPa), low relaxation, 12-15 Dia seven wire strand PT, unless specified otherwise.
7. For additional prestressing details, see "Prestressing Notes" sheet.
8. For general stressing sequence, see "Pier W2 Construction Sequence" sheet.

100 % PS&E

3 REVISED PER ADDENDUM NO. 3 DATED NOVEMBER 7, 2005

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SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM POST-TENSIONING DETAILS NO.10

R. Valizadeh/V. Toan/Y. L./W. L./F. C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

Rev. Date 5-18-88

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

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R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
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ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

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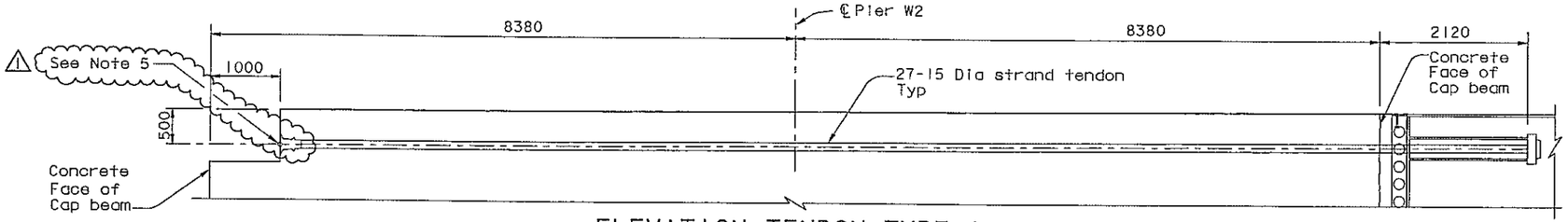
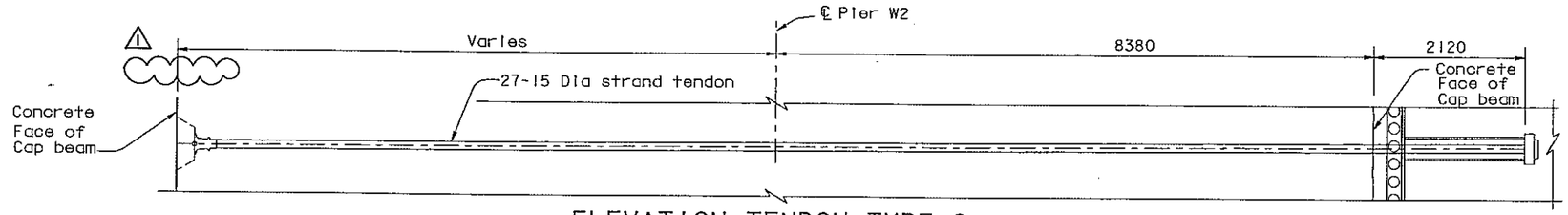
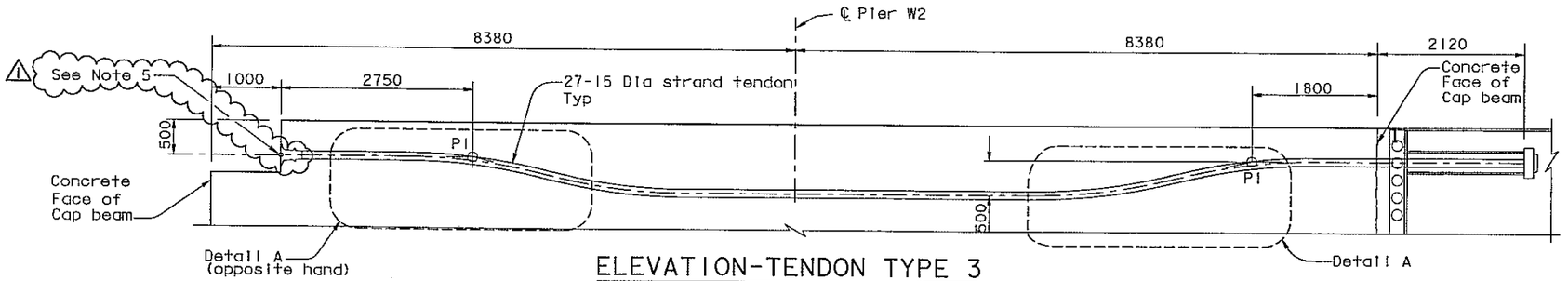


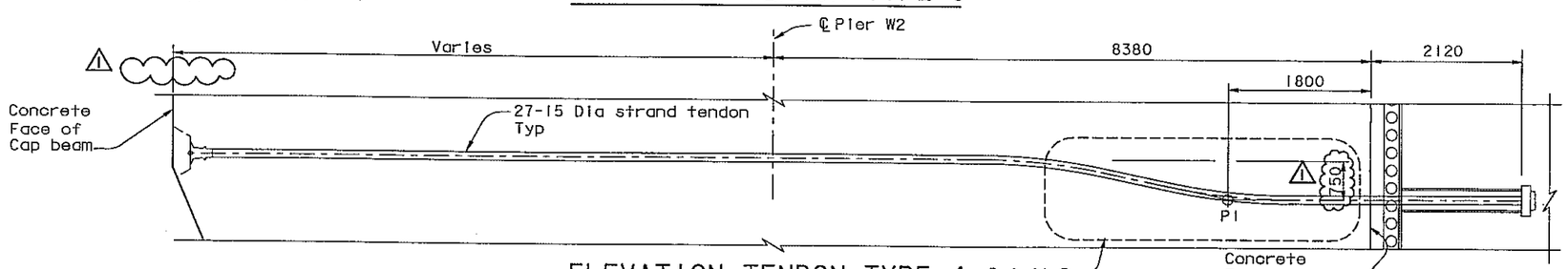

ELEVATION-TENDON TYPE 1



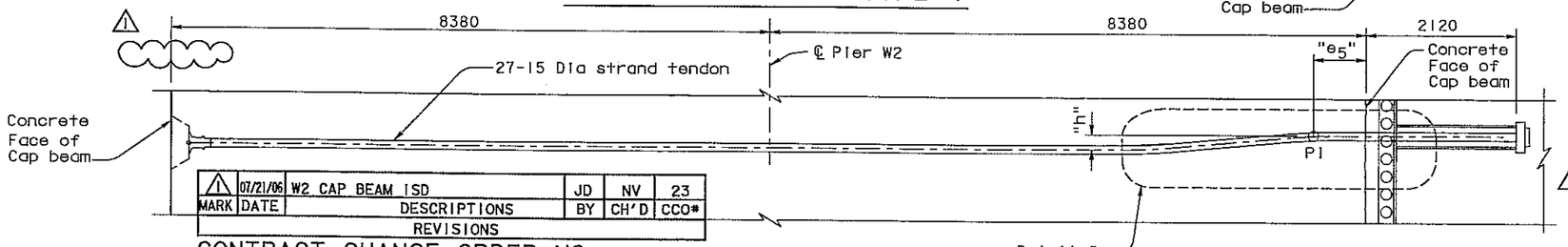

ELEVATION-TENDON TYPE 2




ELEVATION-TENDON TYPE 3




ELEVATION-TENDON TYPE 4




ELEVATION-TENDON TYPE 5

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
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| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | NV | 23 |

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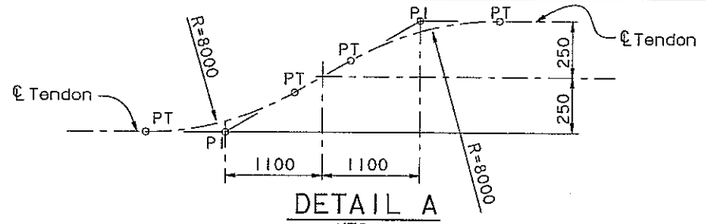
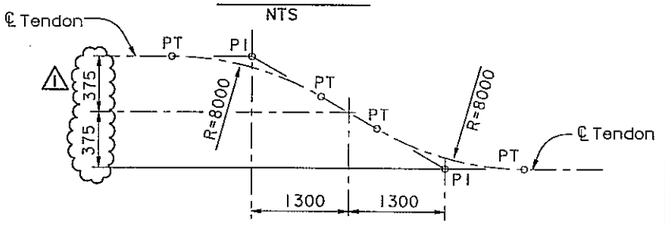
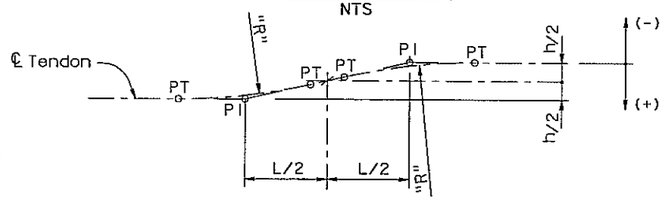



DETAIL A
NTS




DETAIL B
NTS




DETAIL C
NTS

NOTES:

1. For additional details, see "W2 Cap Beam Post-Tensioning Details No.5" through "W2 Cap Beam Post-Tensioning Details No.10" sheets.
2. For tendon type designation, see "W2 Cap Beam Post-Tensioning Details No.12" sheet.
3. For PT blockout dimensions, see "W2 Cap Beam Blockout Details" sheets.
4. For dimension "h","L","e5" and "R", see "W2 Cap Beam Post-Tensioning Details No.12" sheet.
5. Adjust vertical face to be normal to the axis of the tendon.
6. Jacking of continuity tendons shall not crush the ducts of the CBT transverse tendons. Where necessary, extra strong steel pipes (ASTM A53 Type S, Grade B, $f_y$=240 MPa) shall be provided together with necessary hardware connecting the steel pipes to galvanized corrugated steel duct.

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12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — John Sun — No. C 54648 — Exp. 12/31/05 — CIVIL — STATE OF CALIFORNIA

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R. Vallzadeh/V. Toan/Y. L./W. L./F. C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

Rev. Date: 5-18-98

| | | | |
|---|---|---|---|
| DESIGN | BY J. Sun | CHECKED M. Chen | |
| DETAILS | BY J. Duxbury | CHECKED M. Chen | |
| QUANTITIES | BY S. Shi | CHECKED D. Harrison | |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CHECKED R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

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ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

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REVISION DATES (PRELIMINARY STAGE ONLY): 08/08/99 05/31/01 01/08/02 03/01/02 12/19/02

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EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM POST-TENSIONING DETAILS NO. 11

SHEET 055RI OF

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## W2 CAP BEAM CONTINUITY TENDON TABLE-1 FOR "E" LINE

| Tendon No. | Type | Tendon No. | Type |
|---|---|---|---|
| 1A | 1 | 24A | 1 |
| 1B | 2 | 24B | 2 |
| 2A | 1 | 25A | 1 |
| 2B | 5 | 25B | 2 |
| 3A | 1 | 26A | 1 |
| 3B | 5 | 26B | 2 |
| 4A | 1 | 27A | 1 |
| 4B | 5 | 27B | 2 |
| 5A | 1 | 28A | 1 |
| 5B | 2 | 28B | 2 |
| 6A | 1 | 29A | 3 |
| 6B | 5 | 29B | 2 |
| 7A | 1 | 30A | 3 |
| ⚠1 7B | 5 | 30B | 5,9 |
| 8A | 1 | 31A | 3 |
| 8B | 2 | 31B | 5 |
| 9A | 1 | 32A | 1 |
| 9B | 2 | 32B | 5 |
| 10A | 1 | 33A | 1 |
| 10B | 2 | 33B | 5 |
| 11A | 1 | 34A | 1 |
| 11B | 2 | 34B | 2 |
| 12A | 1 | 35A | 1 |
| 12B | 2 | 35B | 2 |
| 13A | 1 | 36A | 1 |
| 13B | 2 | 36B | 5 |
| 14A | 1 | 37A | 1 |
| 14B | 2 | 37B | 5 |
| 15A | 1 | 38A | 1 |
| 15B | 8 ⚠1 | 38B | 2 |
| 16A | 1 | 39A | 1 |
| 16B | 8 ⚠1 | 39B | 5 |
| 17A | 1 | 40A | 1 |
| 17B | 2 | 40B | 5 |
| 18A | 1 | 41A | 1 |
| 18B | 10 ⚠1 | 41B | 5 |
| 19A | 1 | 42A | 1 |
| 19B | 4 | 42B | 2 |
| 20A | 1 | 43 | 2 |
| 20B | 4 | 44 | 2 |
| 21A | 1 | | |
| 21B | 4 | | |
| 22A | 1 | | |
| 22B | 2 | | |
| 23A | 1 | | |
| 23B | 2 | | |

## W2 CAP BEAM CONTINUITY TENDON TABLE-1 FOR "W" LINE

| Tendon No. | Type | Tendon No. | Type |
|---|---|---|---|
| 1A | 1 | 24A | 1 |
| 1B | 2 | 24B | 2 |
| 2A | 1 | 25A | 1 |
| 2B | 5 | 25B | 2 |
| 3A | 1 | 26A | 1 |
| ⚠1 3B | 5 | 26B | 8 |
| 4A | 1 | 27A | 1 |
| ⚠1 4B | 5 | 27B | 8 |
| 5A | 1 | 28A | 1 |
| 5B | 2 | 28B | 2 |
| 6A | 1 | 29A | 3 |
| 6B | 5 | 29B | 2 |
| 7A | 1 | 30A | 3 |
| ⚠1 7B | 5 | 30B | 5,9 |
| 8A | 1 | 31A | 3 |
| 8B | 2 | 31B | 5 |
| 9A | 1 | 32A | 1 |
| 9B | 2 | 32B | 5 |
| 10A | 1 | 33A | 1 |
| 10B | 2 | 33B | 5 |
| 11A | 1 | 34A | 1 |
| 11B | 2 | 34B | 2 |
| 12A | 1 | 35A | 1 |
| 12B | 2 | 35B | 2 |
| 13A | 1 | 36A | 1 |
| 13B | 2 | 36B | 5 |
| 14A | 1 | 37A | 1 |
| 14B | 2 | 37B | 5 |
| 15A | 1 | 38A | 1 |
| 15B | 2 | 38B | 2 |
| 16A | 1 | 39A | 1 |
| 16B | 2 | 39B | 5 |
| 17A | 1 | 40A | 1 |
| 17B | 2 | 40B | 5 |
| 18A | 1 | 41A | 1 |
| 18B | 2 | 41B | 5 |
| 19A | 1 | 42A | 1 |
| 19B | 4 | 42B | 6 ⚠1 |
| 20A | 1 | 43 | 2 |
| 20B | 4 | 44 | 7 ⚠1 |
| 21A | 1 | | |
| 21B | 4,8 ⚠1 | | |
| 22A | 1 | | |
| 22B | 4,8 ⚠1 | | |
| 23A | 1 | | |
| 23B | 2 | | |

## W2 CAP BEAM CONTINUITY TENDON TABLE-2 FOR "E" LINE

| Tendon No. | h | L | $e_5$ | R |
|---|---|---|---|---|
| 2B | -40 | 2200 | 500 | 8000 |
| 3B | +40 | 2200 | 500 | 8000 |
| 4B | -70 | 2200 | 500 | 8000 |
| 6B | -40 | 2200 | 500 | 8000 |
| 7B | +40 | 2200 | 500 | 8000 |
| ⚠1 30B | -1210 | 2400 | 1200 | 4000 |
| 31B | -978 | 2400 | 1200 | 5000 |
| 32B | -763 | 2400 | 1200 | 4000 |
| ⚠1 33B | -470 | 2400 | 1200 | 8000 |
| 36B | +40 | 2200 | 500 | 8000 |
| 37B | -40 | 2200 | 500 | 8000 |
| 39B | -70 | 2200 | 500 | 8000 |
| 40B | +40 | 2200 | 500 | 8000 |
| 41B | -40 | 2200 | 500 | 8000 |

⚠1

| Tendon No. | p |
|---|---|
| 15B | -50 |
| 16B | -50 |
| 30B | +200 |

## W2 CAP BEAM CONTINUITY TENDON TABLE-2 FOR "W" LINE

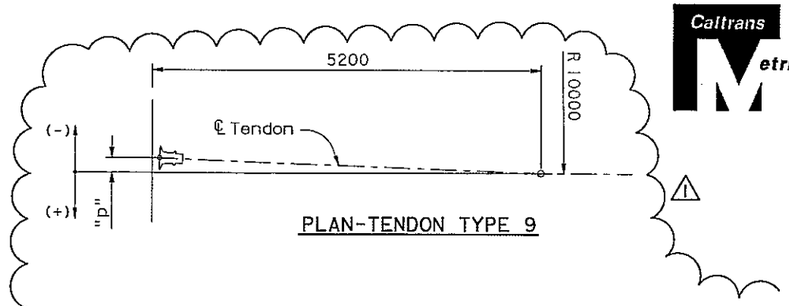
| Tendon No. | h | L | $e_5$ | R |
|---|---|---|---|---|
| 2B | -40 | 2200 | 500 | 8000 |
| 3B | +40 | 2200 | 500 | 8000 |
| 4B | -70 | 2200 | 500 | 8000 |
| 6B | -40 | 2200 | 500 | 8000 |
| 7B | +40 | 2200 | 500 | 8000 |
| ⚠1 30B | -1285 | -1285 | 1200 | 4000 |
| 31B | -1053 | 2400 | 1200 | 5000 |
| 32B | -795 | 2400 | 1200 | 5000 |
| ⚠1 33B | -515 | 2400 | 1200 | 8000 |
| 36B | +40 | 2200 | 500 | 8000 |
| 37B | -40 | 2200 | 500 | 8000 |
| 39B | -70 | 2200 | 500 | 8000 |
| 40B | +40 | 2200 | 500 | 8000 |
| 41B | -40 | 2200 | 500 | 8000 |

⚠1

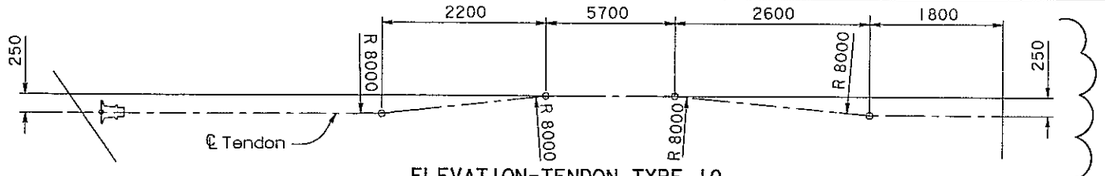
| Tendon No. | p |
|---|---|
| 21B | +100 |
| 22B | +100 |
| 26B | -50 |
| 27B | -50 |
| 30B | -200 |
| 44 | +1200 |

NOTES:

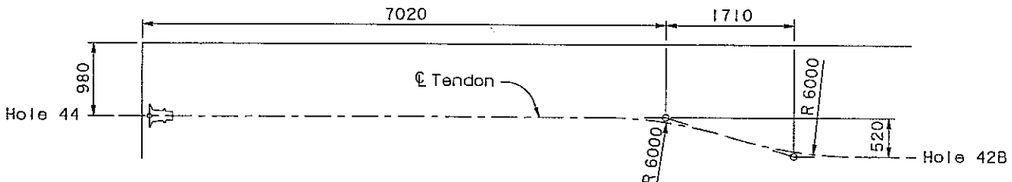
1. For Type 1 through Type 5 tendon geometry, see "W2 Cap Beam Post-Tensioning Details No. 11" sheet.
2. For general stressing sequence, see "Pier W2 Construction Sequence" sheet.
3. For additional prestressing details, see "Prestressing Notes" sheet.



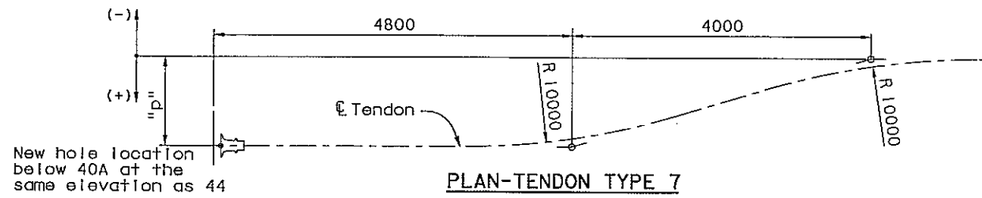

PLAN-TENDON TYPE 9



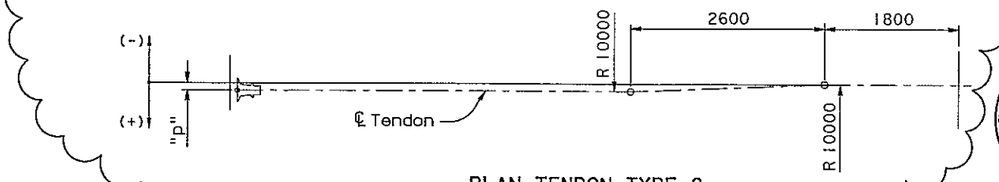

ELEVATION-TENDON TYPE 10




ELEVATION-TENDON TYPE 6




PLAN-TENDON TYPE 7




PLAN-TENDON TYPE 8

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REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

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R. Vallizadeh/V. Toan/Y. L./W. L./F. C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/27/05

Rev. Date: 5-18-98

| | | | |
|---|---|---|---|
| DESIGN | BY J. Sun | CHECKED M. Chen | |
| DETAILS | BY J. Duxbury | CHECKED M. Chen | |
| QUANTITIES | BY S. Shi | CHECKED D. Harrison | |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM POST-TENSIONING DETAILS NO. 12

| REVISION DATES (PRELIMINARY STAGE ONLY) | | | | | | | | SHEET | OF |
|---|---|---|---|---|---|---|---|---|---|
| 05/31/01 | 04/04/02 | 07/01/02 | 12/15/02 | | | | | 056R1 | |

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| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — John Sun — No. C 54648 — Exp. 12/31/05 — CIVIL — STATE OF CALIFORNIA

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T.Y. LIN / MOFFATT & NICHOL
825 BATTERY STREET
SAN FRANCISCO, CA 94111

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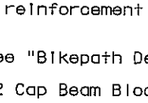
## GENERAL:

1. For "W2 Cap Beam Reinforcement Details" sheets, the Contractor shall verify all controlling field dimensions before ordering or fabricating any material. Reinforcement details reflect strict adherence to the location of pier column reinforcement defined on "Pier W2 Details No. 5" sheet.
2. Spacing dimensions are plumb unless noted otherwise.
3. Reinforcement spacing may be adjusted to avoid PT ducts if required.
4. Contractor shall adjust reinforcing to account for slope transitions, overhangs, and blockouts.
5. Contractor may adjust location of the drain inlets to avoid interference with reinforcing and/or PT ducts.
6. Post-Tensioning anchorage details reflect industry standard geometry. Actual dimensions may vary depending on supplier. It shall be the Contractor's responsibility to accommodate the actual system to the plan geometry.
7. Local confining spiral reinforcement for tendon anchors shall be provided by PT tendon hardware suppliers; not shown for clarity.
8. Contractor shall remove the corrosion protection from all reinforcing above the pier top slab prior to pouring the W2 cap beam concrete.
9. Adequate fabrication and placement of all permanently embedded items may require more stringent tolerances than ordinary industry standards. It shall be the Contractor's responsibility to ascertain the adequate fabrication and placement of all permanently embedded items within the geometric constraints of the plans.

## CROSS-REFERENCES:

1. For tie-down cable top access slab reinforcement details, see "Cable Tie-Down Details" sheets.
2. For bikepath connection details, see "Bikepath Details" sheets.
3. For blockout reinforcement, see "W2 Cap Beam Blockout Details" sheets.
4. For epoxy AC overlay limits, see "W2 Cap Beam Reinforcement Details No. 49" sheet.
5. For jacking frame blocking, see "West Jacking Frame Details" sheets.
6. For layer identification, see "W2 Cap Beam Reinforcement Details No. 6, No. 16, No. 22 and No. 25" sheets.

## DETAILS:

1. All reinforcing steel shall be ASTM A706, Grade 420.
2. Typical clear cover to skin reinforcement is 80 mm.
3. At locations where reinforcement is cut to clear embeds, PT and blockouts, the typical clearance is 80 mm.
4. Non-Contact Splice:
   a. Max non-contact lap splice=150 mm 

   b. Min lap length for #19 = 500 mm
   c. Min lap length for #25 = 1100 mm
   d. Min lap length for #29 = 1500 mm
5. Locations of bar lap splices and/or mechanical splices not shown for clarity; splices in adjacent reinforcement shall be staggered.
6. At the Contractor's option, lapped reinforcement shown on the plans may be substituted with continuous reinforcement.

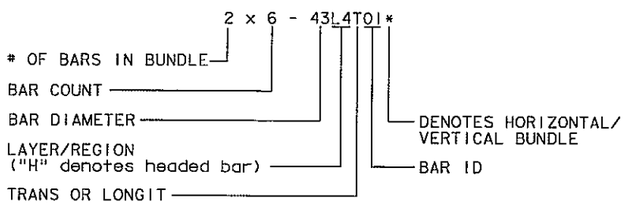
## REINFORCEMENT INDEX:

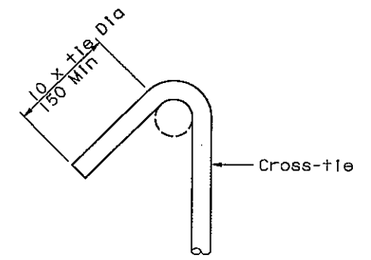
1. For top mat reinforcement, see "W2 Cap Beam Reinforcement Details No. 2 to No. 8" sheets.
2. For bottom mat reinforcement, see "W2 Cap Beam Reinforcement Details No. 9 to No. 18" sheets.
3. For transverse reinforcement, see "W2 Cap Beam Reinforcement Details No. 19 to No. 25" sheets.
4. For diaphragm reinforcement, see "W2 Cap Beam Reinforcement Details No. 26 to No. 29" sheets.
5. For jacking saddle reinforcement, see "W2 Cap Beam Reinforcement Details No. 30 to No. 33" sheets.
6. For skin reinforcement, see "W2 Cap Beam Reinforcement Details No. 34 to No. 39" sheets.
7. For horizontal and vertical stirrup reinforcement, see "W2 Cap Beam Reinforcement Details No. 40 to No. 43" sheets.
8. For column region reinforcement, see "W2 Cap Beam Reinforcement Details No. 44 to No. 47" sheets.
9. For miscellaneous reinforcement, see "W2 Cap Beam Reinforcement Details No. 48 to No. 49" sheets.
10. For barlist and schedules, see "W2 Cap Beam Reinforcement Details No. 50 to No. 52" sheets.

## BARLIST SCHEDULES:

Barlist schedules are provided for general guidance, and shall not be used as a basis for quantity estimates. Information provided in "W2 Cap Beam Reinforcement Details" sheets and "W2 Cap Beam Blockout Details" sheets shall govern the Barlist schedules. The Contractor shall reference these plans to develop barlist schedules for quantity estimation. Barlist schedules shall not be used for fabrication purposes. Final weights, lengths, and geometries shall be the responsibility of the Contractor.

KEY TO BAR NOMENCLATURE:




135° SEISMIC TIE HOOK
No scale

LEGEND:

- Denotes headed bar reinforcement
- ⊗ ⊠ Denotes opening
- Symmetric

ABBREVIATIONS

| | |
|---|---|
| ES | Each Side |
| Longit | Longitudinal |
| Nom | Nominal |
| Opp | Opposite |
| Spa | Spaces |
| Trans | Transverse |
| Var | Varies |
| UNO | Unless Noted Otherwise |

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Original Details Superseded

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DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

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|---|---|---|
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| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 1

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →
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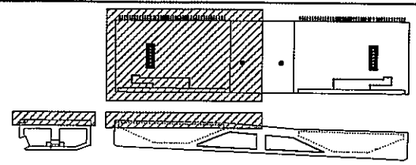
REGISTERED PROFESSIONAL ENGINEER James P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

NOTES:
1. For Section A-A and B-B, see "W2 Cap Beam Reinforcement Details No.6" sheet.
2. For Section C-C thru E-E, see "W2 Cap Beam Reinforcement Details No.7" sheet.
3. For Section F-F, see "W2 Cap Beam Reinforcement Details No.8" sheet.



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12-6-04
PLANS APPROVAL DATE

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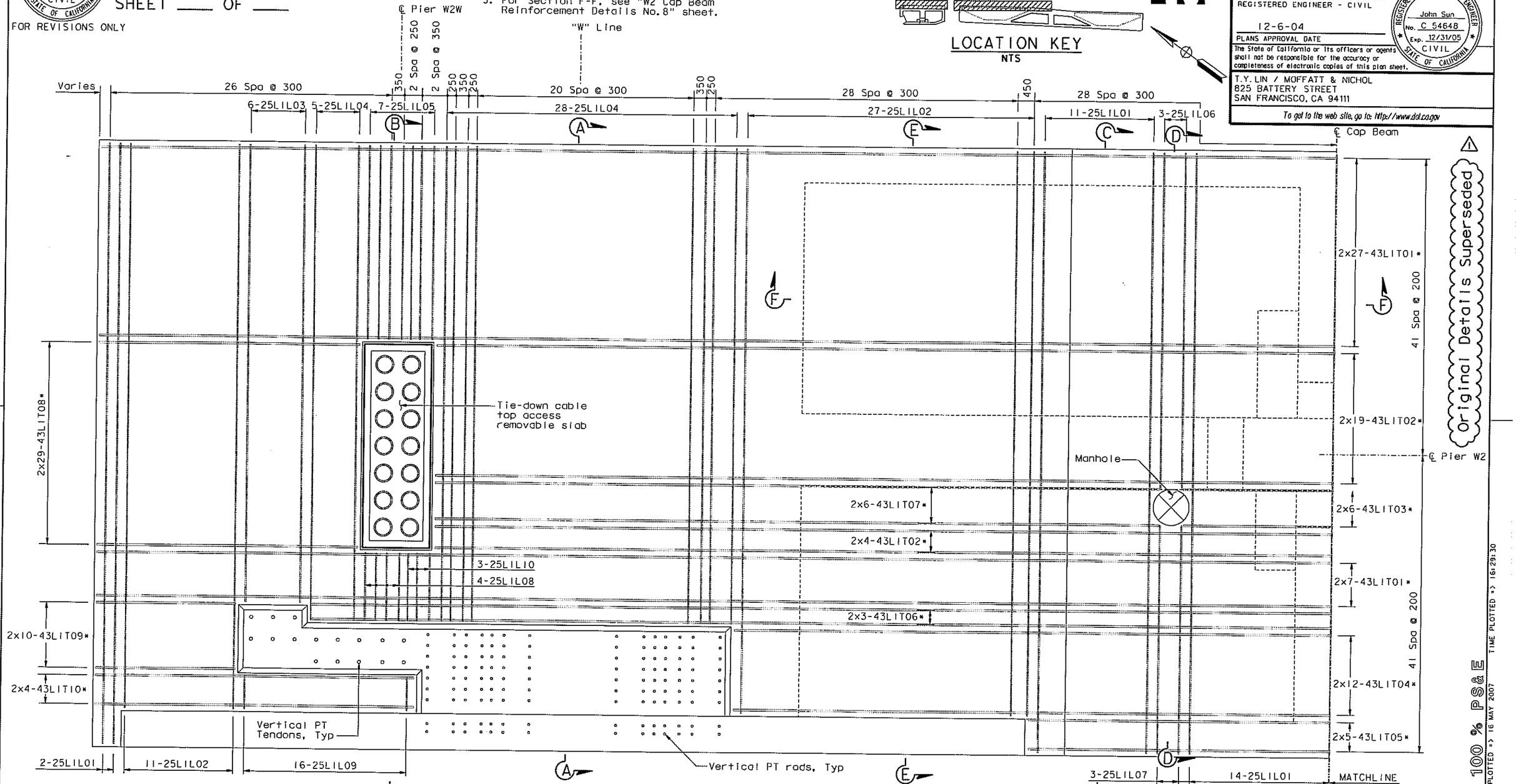


Original Details Superseded

* Denotes Bars Bundled Vertically

TOP MAT-LAYER 1 REINFORCEMENT PLAN (NORTH)
1:50

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100 % PS&E

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USERNAME => kio

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Roger Valizadeh / Vong Toan / Y. Liu
SIGN OFF DATE 07/21/06
Rev. Date: 5-18-98

| | | | |
|---|---|---|---|
| DESIGN | BY J. Sun | CHECKED M. Chen | |
| DETAILS | BY J. Duxbury | CHECKED M. Chen | |
| QUANTITIES | BY S. Shi | CHECKED D. Harrison | |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO.2

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 04/08/02 07/01/02 12/19/02

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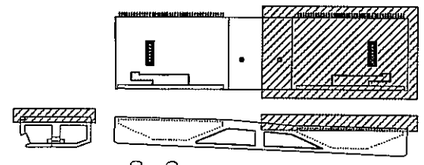
NOTES:

1. For Section G-G, see "W2 Cap Beam Reinforcement Details No.8" sheet.



LOCATION KEY
NTS
℄ Pier W2E

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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12-6-04
PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER — James P. Duxbury — No. C 64677 — Exp. 06/30/07 — CIVIL — STATE OF CALIFORNIA

℄ Cap Beam
"E" Line
℄ Pier W2
℄ Pier W2E
28 Spa @ 300
29 Spa @ 300
19 Spa @ 300
2 Spa @ 350
2 Spa @ 250
26 Spa @ 300
Varies
13-25LIL01
3-25LIL06
11-25LIL01
27-25LIL02
28-25LIL04
7-25LIL05
5-25LIL04
6-25LIL03
41 Spa @ 200
2x27-43LIT01*
2x19-43LIT02*
2x6-43LIT03*
2x6-43LIT07*
2x4-43LIT02*
2x3-43LIT06*
2x12-43LIT04*
2x5-43LIT05*
2x29-43LIT08*
2x7-43LIT01*
2x10-43LIT09*
2x4-43LIT10*
Manhole
Tie-down cable top access removable slab
4-25LIL08
3-25LIL10
Vertical PT Tendons, Typ
Vertical PT rods, Typ
MATCHLINE
3-25LIL07
16-25LIL09
11-25LIL02
2-25LIL01
* Denotes Bars Bundled Vertically

TOP MAT-LAYER 1 REINFORCEMENT PLAN (SOUTH)
1:50

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SIGN OFF DATE 07/21/06
Rev. Date: 5-18-98

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| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

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DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 3

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES →
REVISION DATES (PRELIMINARY STAGE ONLY): 05/31/01 | 04/30/02 | 07/29/02 | 12/19/02
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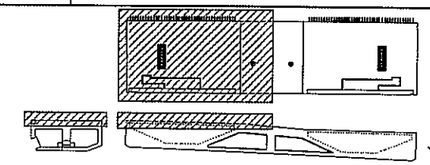
FOR REVISIONS ONLY

REGISTERED PROFESSIONAL ENGINEER
James P. Duxbury
No. C 64677
Exp. 06/30/07
CIVIL
STATE OF CALIFORNIA

NOTES:

1. For Section A-A and B-B, see "W2 Cap Beam Reinforcement Details No.6" sheet.
2. For Section C-C thru E-E, see "W2 Cap Beam Reinforcement Details No.7" sheet.
3. For Section F-F, see "W2 Cap Beam Reinforcement Details No.8" sheet.
4. High bar of vertical bundle is a thru bar. Low bar terminates at continuity tendon 42B.



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12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
John Sun
No. C 54648
Exp. 12/31/05
CIVIL
STATE OF CALIFORNIA

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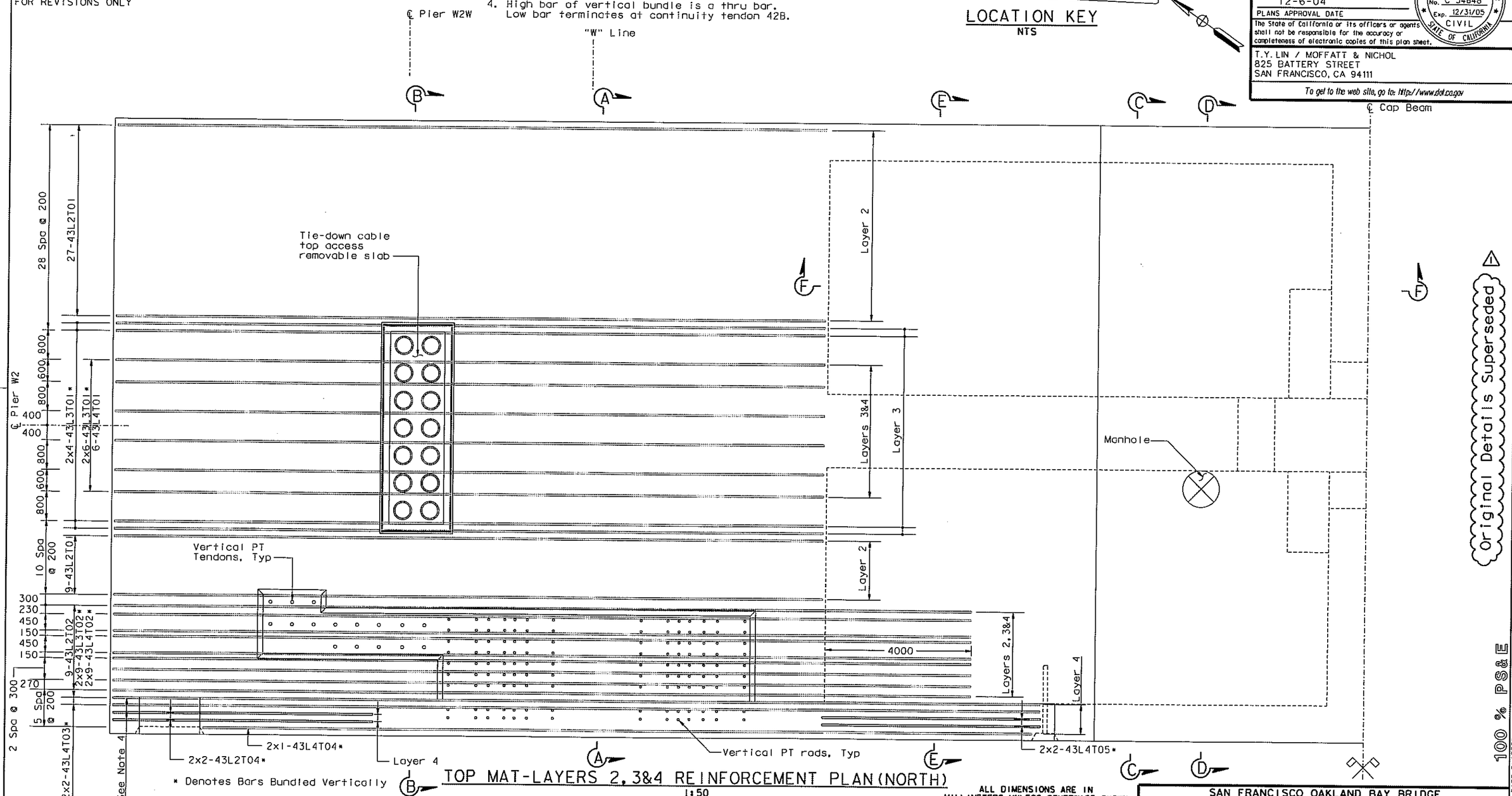


* Denotes Bars Bundled Vertically

TOP MAT-LAYERS 2,3&4 REINFORCEMENT PLAN (NORTH)
1:50

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Reza Valizadeh / Vong Toan / Y. Liu
SIGN OFF DATE 07/21/06

Rev. Date: 5-18-98

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 4

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 04/08/02 07/01/02 12/19/02

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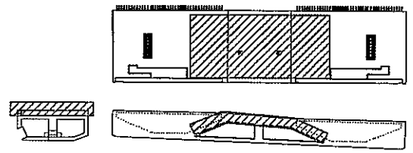
FOR REVISIONS ONLY

NOTES:
1. For Section C-C thru E-E, see "W2 Cap Beam Reinforcement Details No.7" sheet.
2. For Section F-F, see "W2 Cap Beam Reinforcement Details No.8" sheet.



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12-6-04
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SAN FRANCISCO, CA 94111

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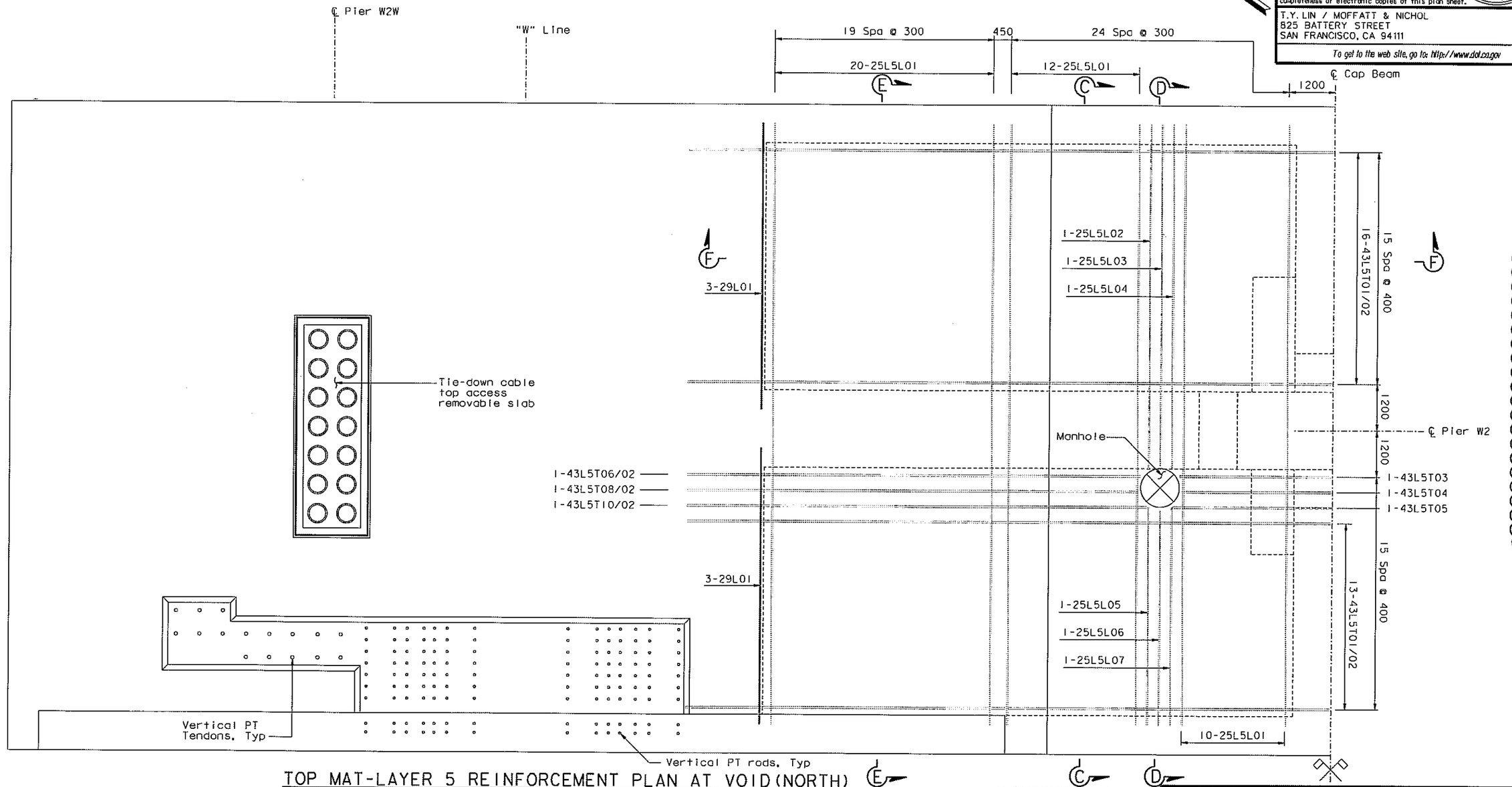


TOP MAT-LAYER 5 REINFORCEMENT PLAN AT VOID (NORTH)
1:50

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Original Details Superseded

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USERNAME => klo

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SIGN OFF DATE 07/21/06

| | BY | | CHECKED |
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| DETAILS | J. Duxbury | | M. Chen |
| QUANTITIES | S. Shi | | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO.5

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
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REGISTERED PROFESSIONAL ENGINEER James P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

NOTES:

1. East face and West face reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 19 to No. 25" sheets.
2. Vertical and horizontal stirrup reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 40 to No. 43" sheets.
3. Layer dimensions shown center-to-center of reinforcement.

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| 04 | SF | 80 | 13.2/13.9 | 479R1 | 1204 |

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12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER John Sun No. C 54648 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

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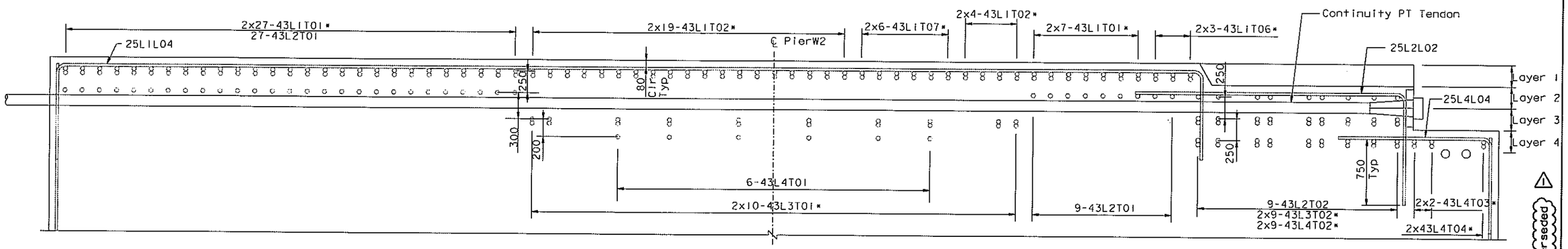
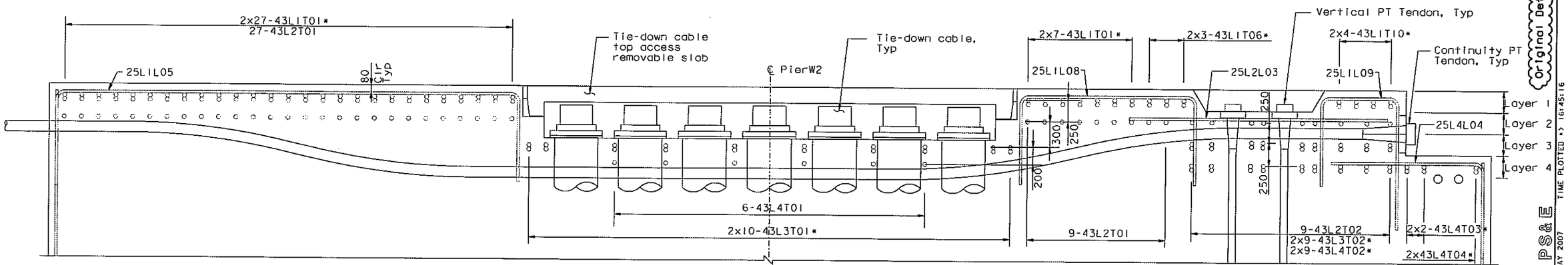



SECTION A-A




SECTION B-B

TOP MAT REINFORCEMENT
(North Side shown, South Side similar)
NTS

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Details Superseded

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DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 16:45:16 USERNAME => klo

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 6

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 04/08/02 07/01/02 12/19/02

SHEET 062R1 OF

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|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

FOR REVISIONS ONLY

REGISTERED PROFESSIONAL ENGINEER Thomas P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 480R1 | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER John Sun No. C 54648 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

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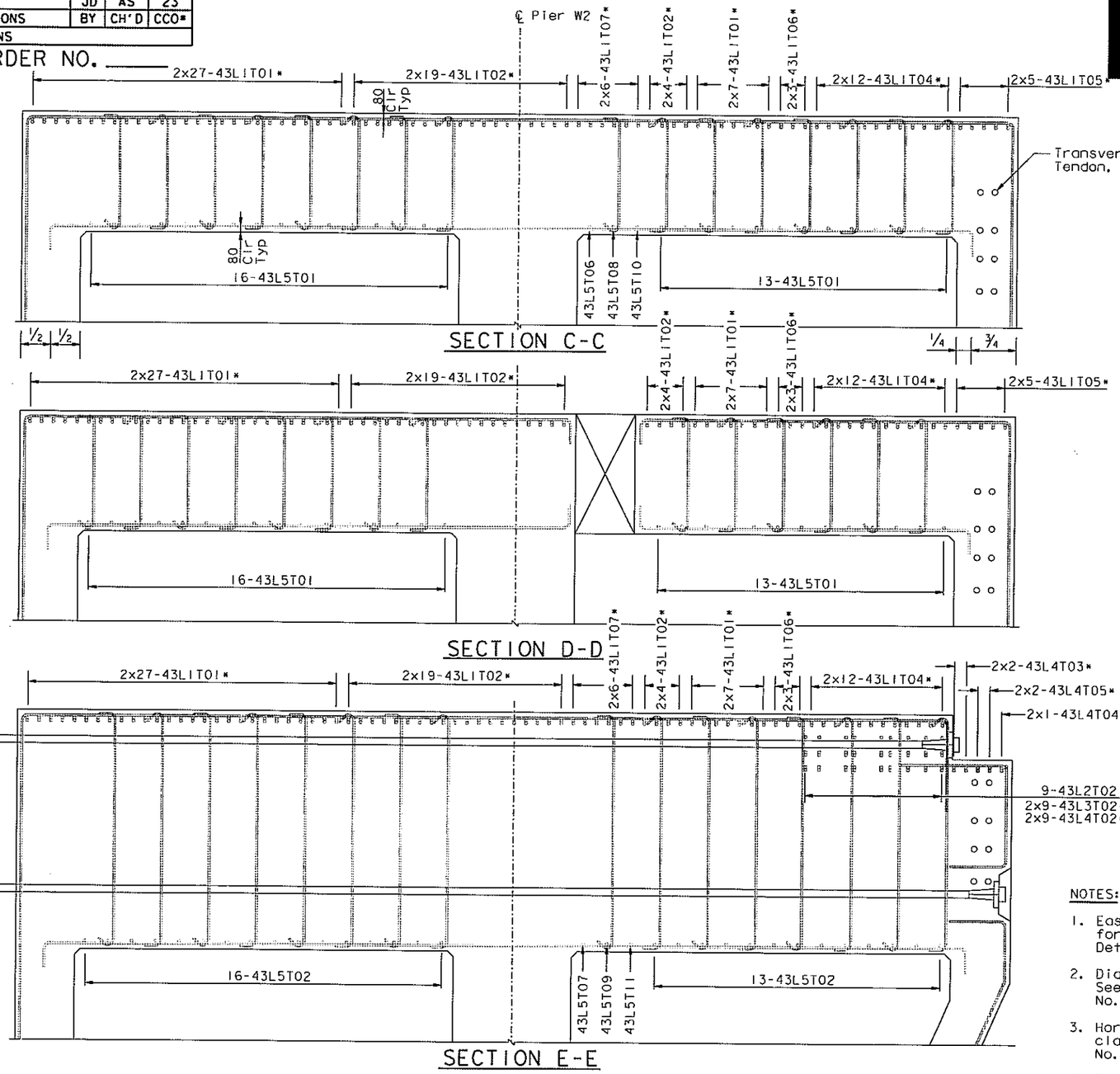


* Denotes Bars Bundled Vertically

## TOP MAT REINFORCEMENT
(North Side shown, South Side similar)
NTS

NOTES:

1. East face and West face reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 19 to No. 25" sheets.
2. Diaphragm reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 26 to No. 29" sheets.
3. Horizontal stirrup reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 40 to No. 43" sheets.
4. For Top Slab Stirrup Plan, see "W2 Cap Beam Reinforcement Details No. 8" sheet.

Original Details Superseded

100 % PS&E

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

R. Valizadeh/V. Toon/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 7

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 04/08/02 07/01/02 12/19/02

SHEET 063R1 OF

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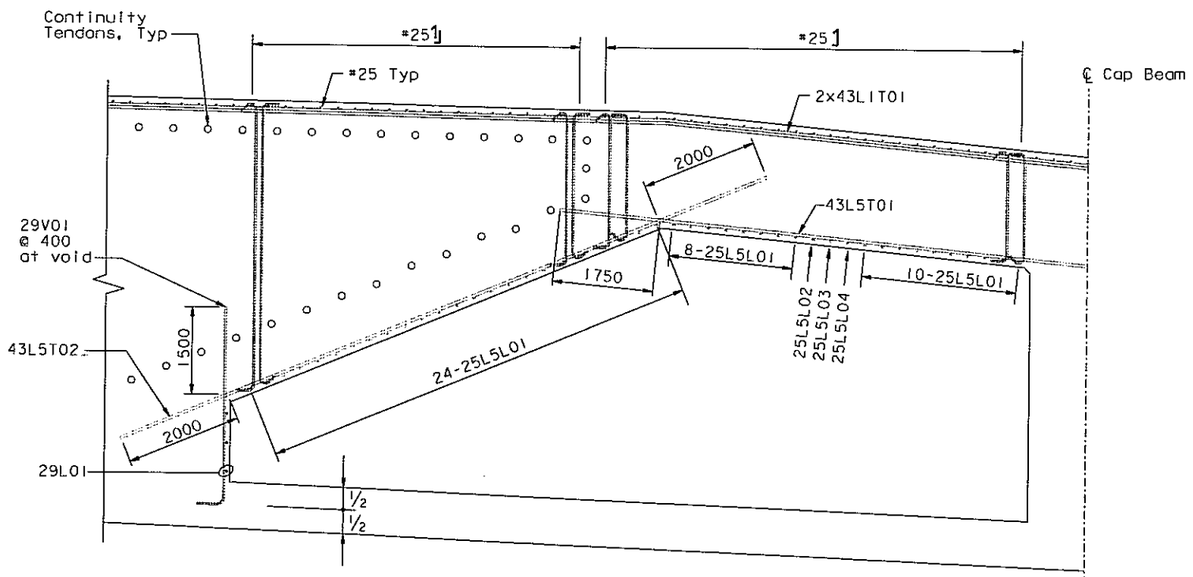
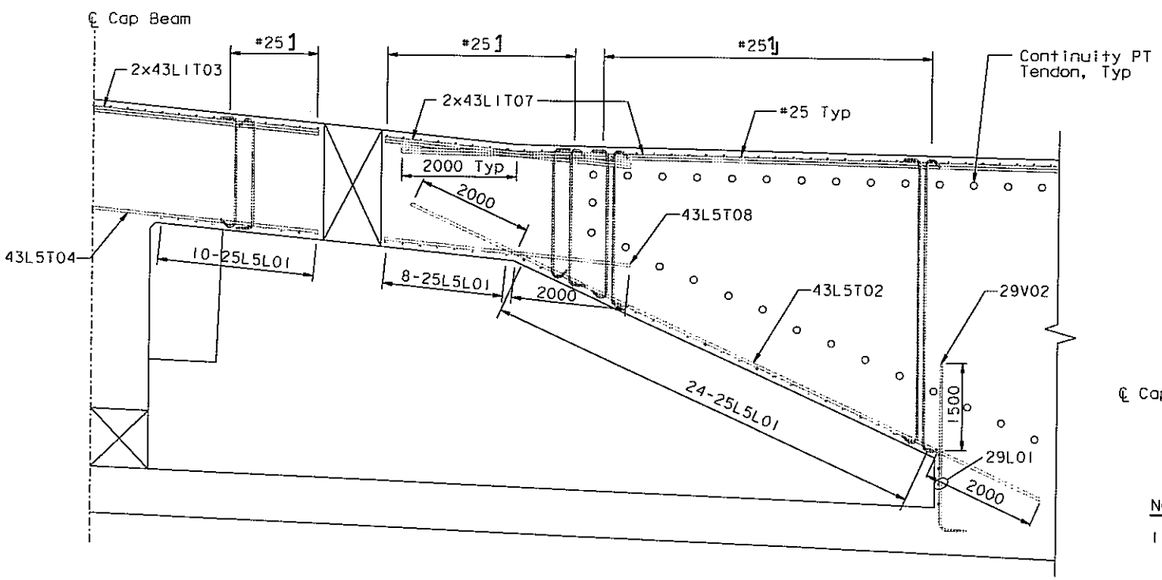
USERNAME => klo DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 16:48:11

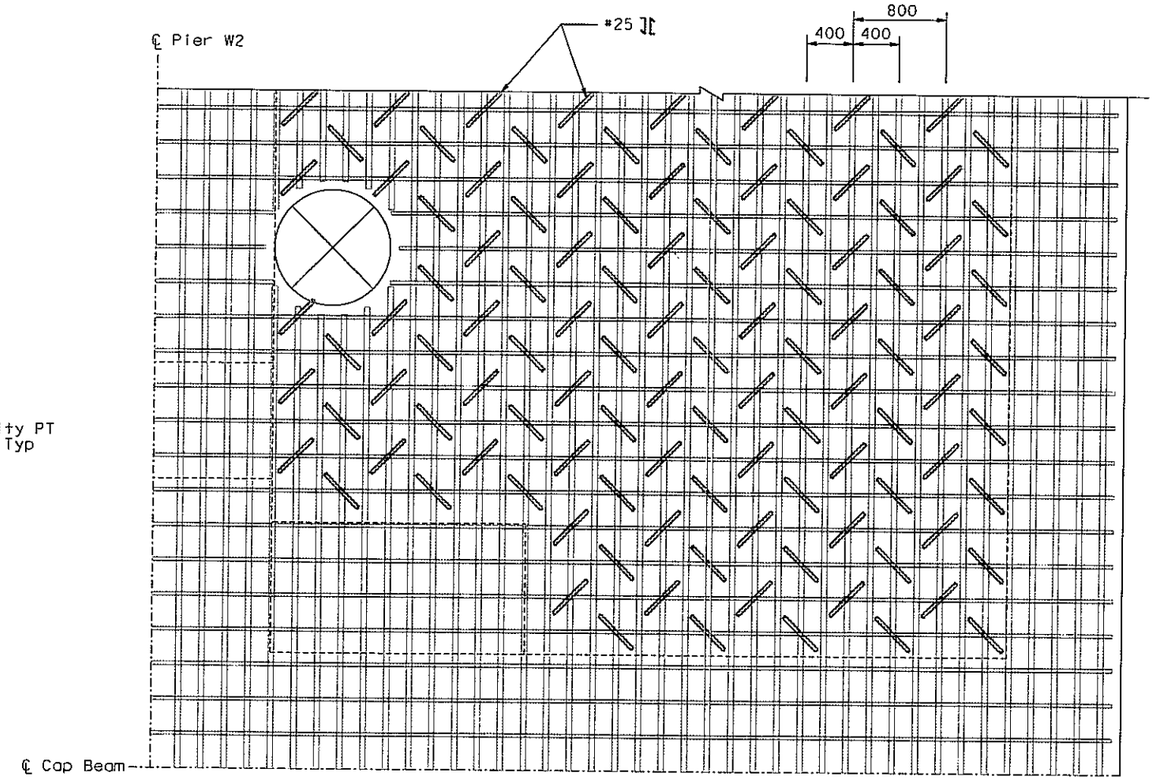



SECTION F-F




SECTION G-G

TOP MAT REINFORCEMENT
1:50




TOP SLAB STIRRUP PLAN (PARTIAL)
1:25

NOTES:

1. Bottom mat reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 9 to No. 17" sheets.
2. Diaphragm reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 26 to No. 29" sheets.
3. Jacking Saddle reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 30 to No. 33" sheets.
4. Horizontal and vertical stirrup reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 40 to No. 43" sheets.

Original Details Superseded

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 481R1 | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER Jamie P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

FOR REVISIONS ONLY

Caltrans Metric

REGISTERED PROFESSIONAL ENGINEER John Sun No. C 54648 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

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REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

R. Vaizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Roger Vaiz / Vong Toan / Y. Liu
SIGN OFF DATE 07/21/06
Rev. Date: 5-18-98

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 8

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 01/08/02 07/01/02 12/19/02

SHEET 064R1 OF

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USERNAME => klo

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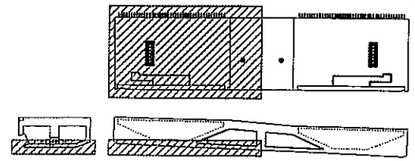
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

FOR REVISIONS ONLY

NOTES:
1. For Section A-A and B-B, see "W2 Cap Beam Reinforcement Details No.16" sheet.
2. For Section C-C and D-D, see "W2 Cap Beam Reinforcement Details No.17" sheet.
3. For Section E-E, see "W2 Cap Beam Reinforcement Details No.18" sheet.



LOCATION KEY
NTS

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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12-6-04
PLANS APPROVAL DATE

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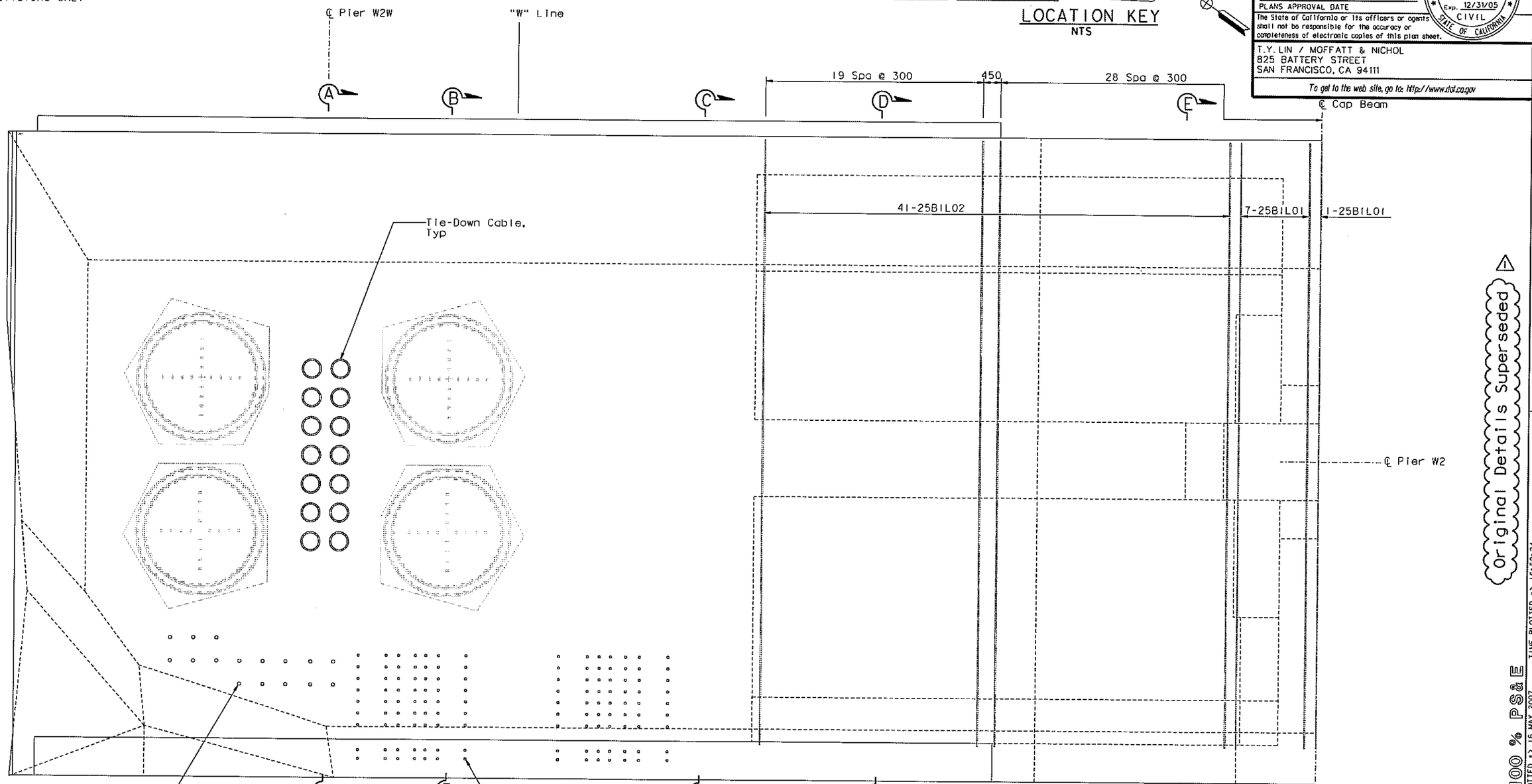


BOTTOM MAT-LAYER B1 REINFORCEMENT PLAN(NORTH) (LONGIT)
1:50

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Details Superseded

100 % PS&E

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 9

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 04/08/02 07/01/02 12/19/02

SHEET 065R1 OF

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| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

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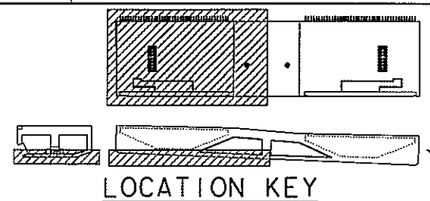
SHEET ____ OF ____

FOR REVISIONS ONLY

NOTES:

1. For Section A-A and B-B, see "W2 Cap Beam Reinforcement Details No.16" sheet.
2. For Section C-C and D-D, see "W2 Cap Beam Reinforcement Details No.17" sheet.
3. For Section E-E, see "W2 Cap Beam Reinforcement Details No.18" sheet.



LOCATION KEY
NTS

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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| 04 | SF | 80 | 13.2/13.9 | 483RI | 1204 |

REGISTERED ENGINEER - CIVIL
12-6-04
PLANS APPROVAL DATE
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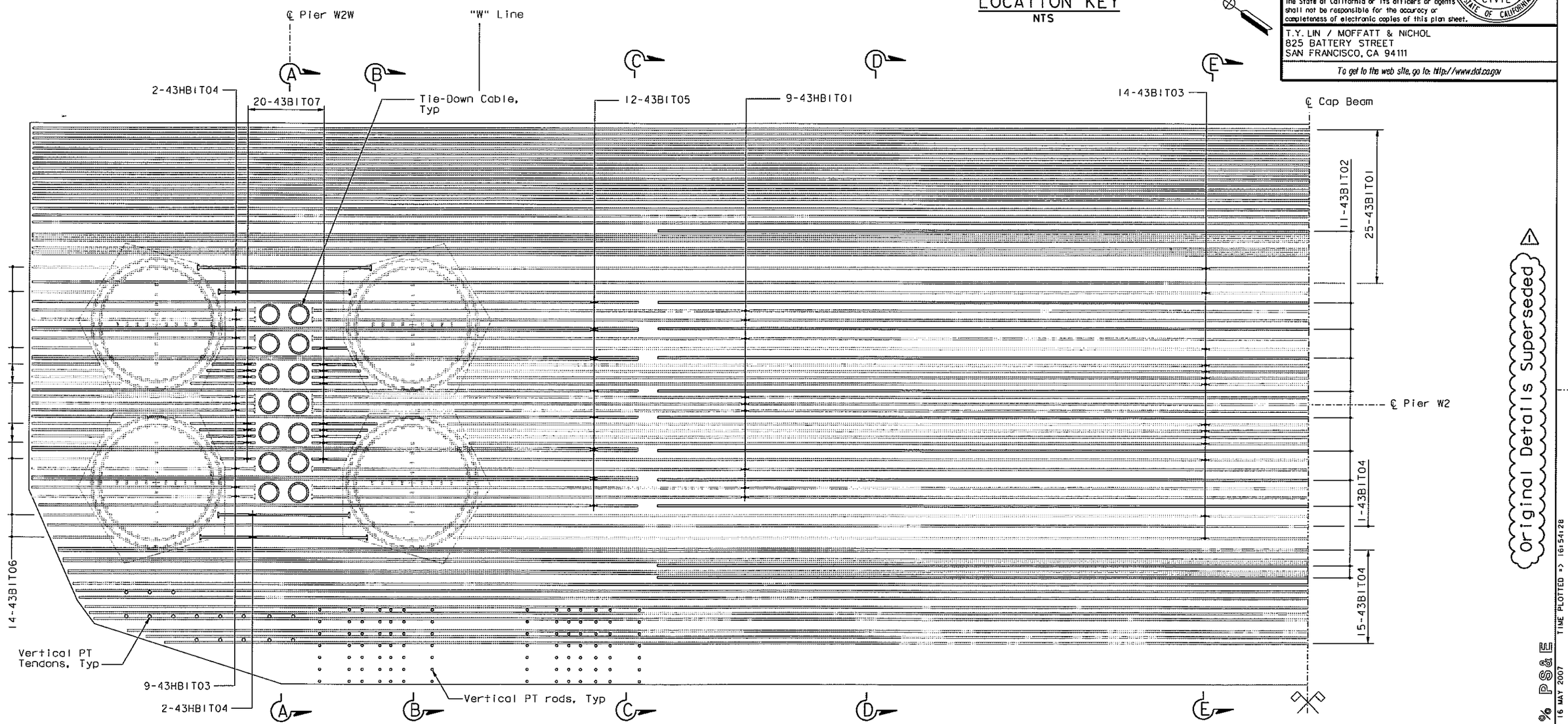


BOTTOM MAT-LAYER BI REINFORCEMENT PLAN(NORTH) (TRANSVERSE)

1:50

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Details Superseded 1

100 % PS&E

DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 16:54:28

USERNAME => klo

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Ryan Valiz /V. Toan/Y. Liu
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 10

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 05/31/01 | 01/08/02 | 07/01/02 | 12/11/02

SHEET 066RI OF

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| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

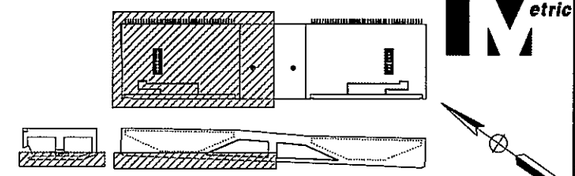
CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

FOR REVISIONS ONLY

REGISTERED PROFESSIONAL ENGINEER Dames P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

NOTES:

1. For Section A-A and B-B, see "W2 Cap Beam Reinforcement Details No. 16" sheet.
2. For Section C-C and D-D, see "W2 Cap Beam Reinforcement Details No. 17" sheet.
3. For Section E-E, see "W2 Cap Beam Reinforcement Details No. 18" sheet.



LOCATION KEY
NTS

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 484R1 | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER John Sun No. C 54648 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

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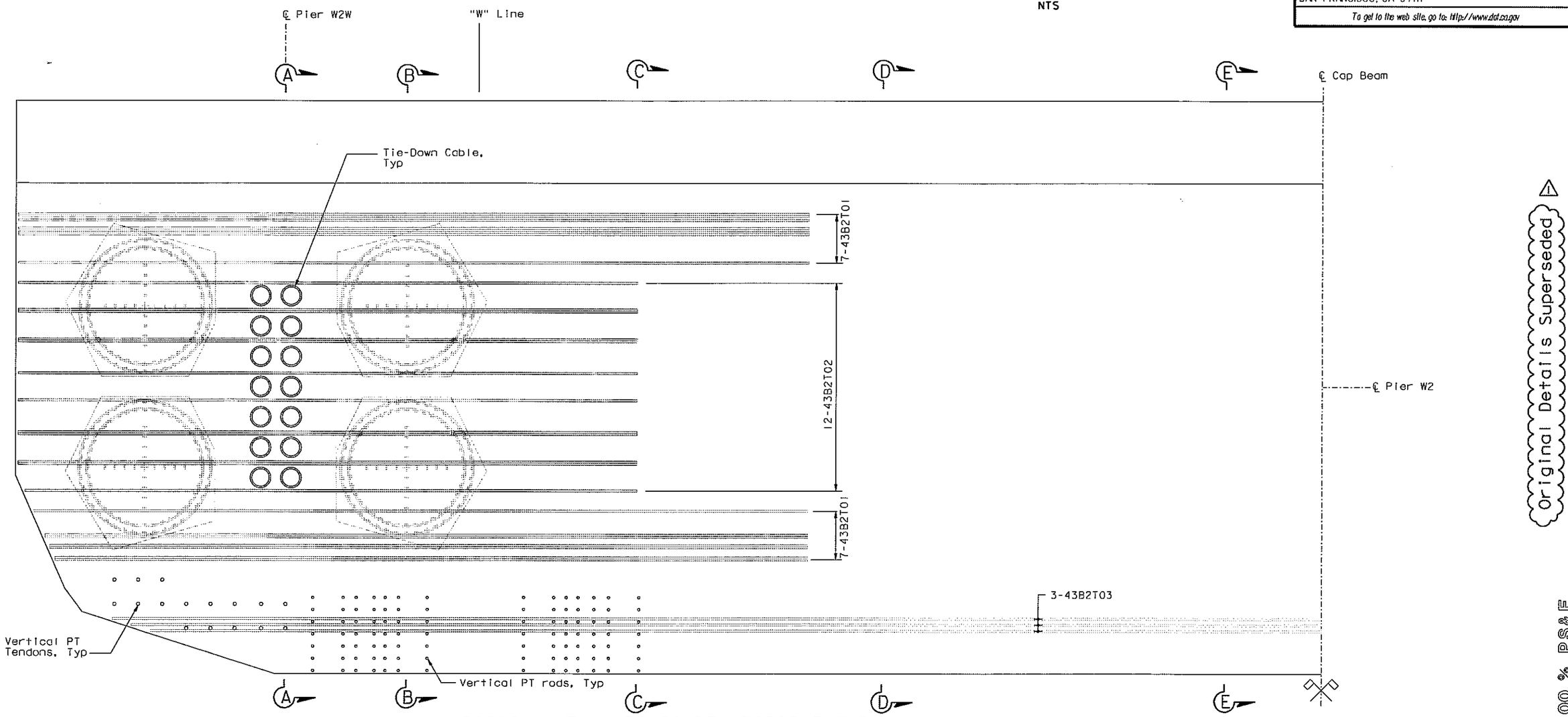


BOTTOM MAT-LAYER B2 REINFORCEMENT PLAN(NORTH) (TRANSVERSE)
1:50

Original Details Superseded

100 % PS&E

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 11

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Roger Valizadeh / Vong Toan / Y. Liu
SIGN OFF DATE 07/21/06

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|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 04/08/02 07/01/02 12/19/02

SHEET 067R1 OF

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USERNAME => klo DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 16:56:20

REGISTERED PROFESSIONAL ENGINEER
James P. Duxbury
No. C 64677
Exp. 06/30/07
CIVIL
STATE OF CALIFORNIA

FOR REVISIONS ONLY

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

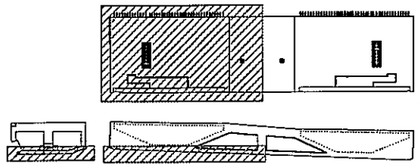
REVISIONS

CONTRACT CHANGE ORDER NO. ____

SHEET ____ OF ____

NOTES:

1. For Section A-A and B-B, see "W2 Cap Beam Reinforcement Details No.16" sheet.
2. For Section C-C and D-D, see "W2 Cap Beam Reinforcement Details No.17" sheet.
3. For Section E-E, see "W2 Cap Beam Reinforcement Details No.18" sheet.



LOCATION KEY
NTS

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 485RI | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
John Sun
No. C 54648
Exp. 12/31/05
CIVIL
STATE OF CALIFORNIA

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825 BATTERY STREET
SAN FRANCISCO, CA 94111

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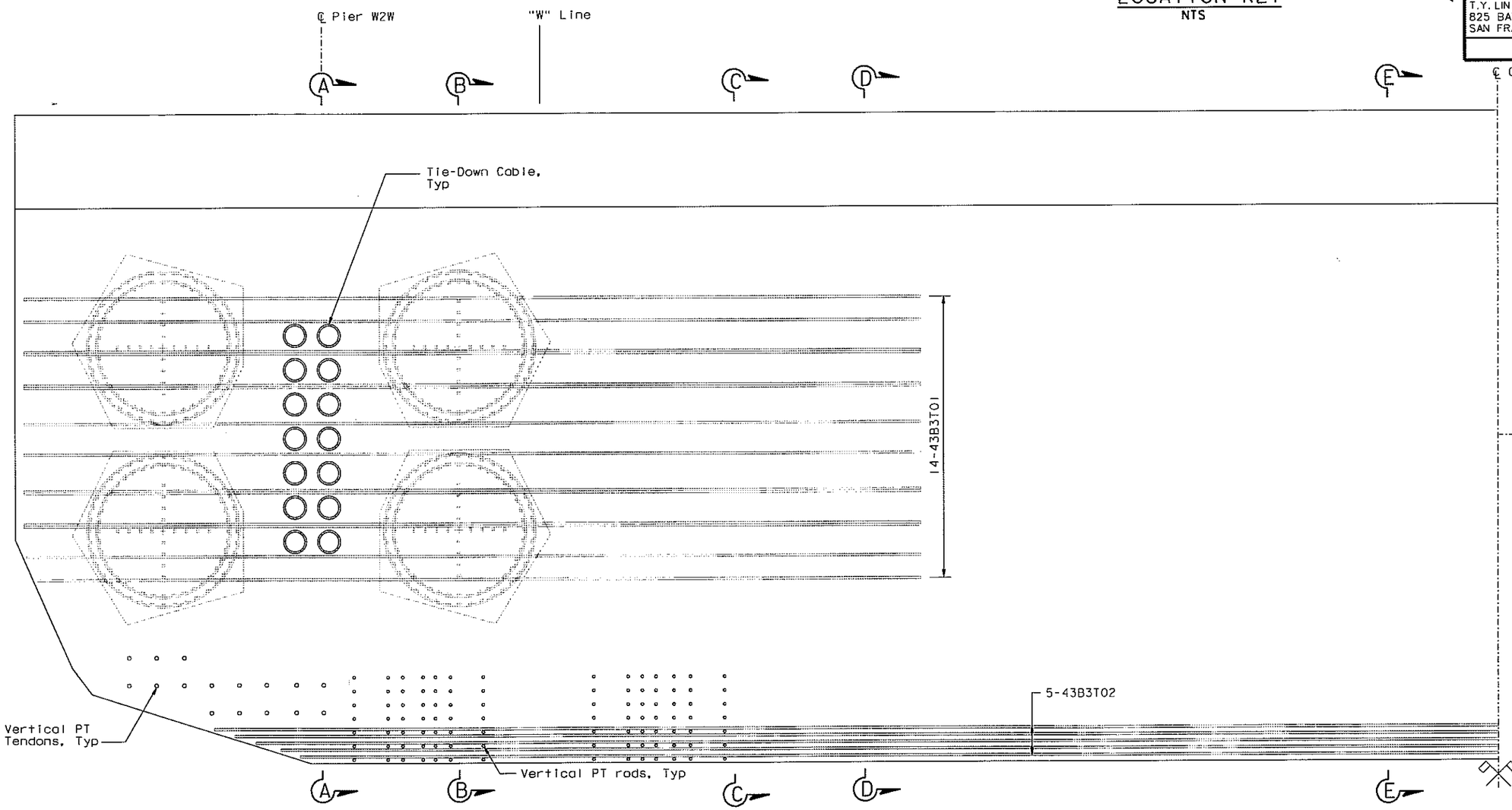


BOTTOM MAT-LAYER B3 REINFORCEMENT PLAN(NORTH) (TRANSVERSE)
1:50

100 % PS&E

DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 16:57:52

USERNAME => klo

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 12

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Ryan Valiz /V. Toan/ Y. Liu
SIGN OFF DATE 07/21/06

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| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 05/31/01 | 04/09/02 | 07/09/02 | 12/19/02

SHEET 068RI OF

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

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REGISTERED PROFESSIONAL ENGINEER — James P. Duxbury — No. C 64677 — Exp. 06/30/07 — CIVIL — STATE OF CALIFORNIA

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| 1 | 01/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

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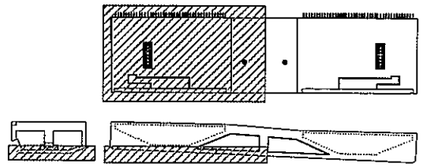
CONTRACT CHANGE ORDER NO. _____

SHEET ___ OF ___

NOTES:

1. For Section A-A and B-B, see "W2 Cap Beam Reinforcement Details No. 16" sheet.
2. For Section C-C and D-D, see "W2 Cap Beam Reinforcement Details No. 17" sheet.
3. For Section E-E, see "W2 Cap Beam Reinforcement Details No. 18" sheet.



LOCATION KEY

NTS

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 486R1 | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — John Sun — No. C 54648 — Exp. 12/31/05 — CIVIL — STATE OF CALIFORNIA

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825 BATTERY STREET
SAN FRANCISCO, CA 94111

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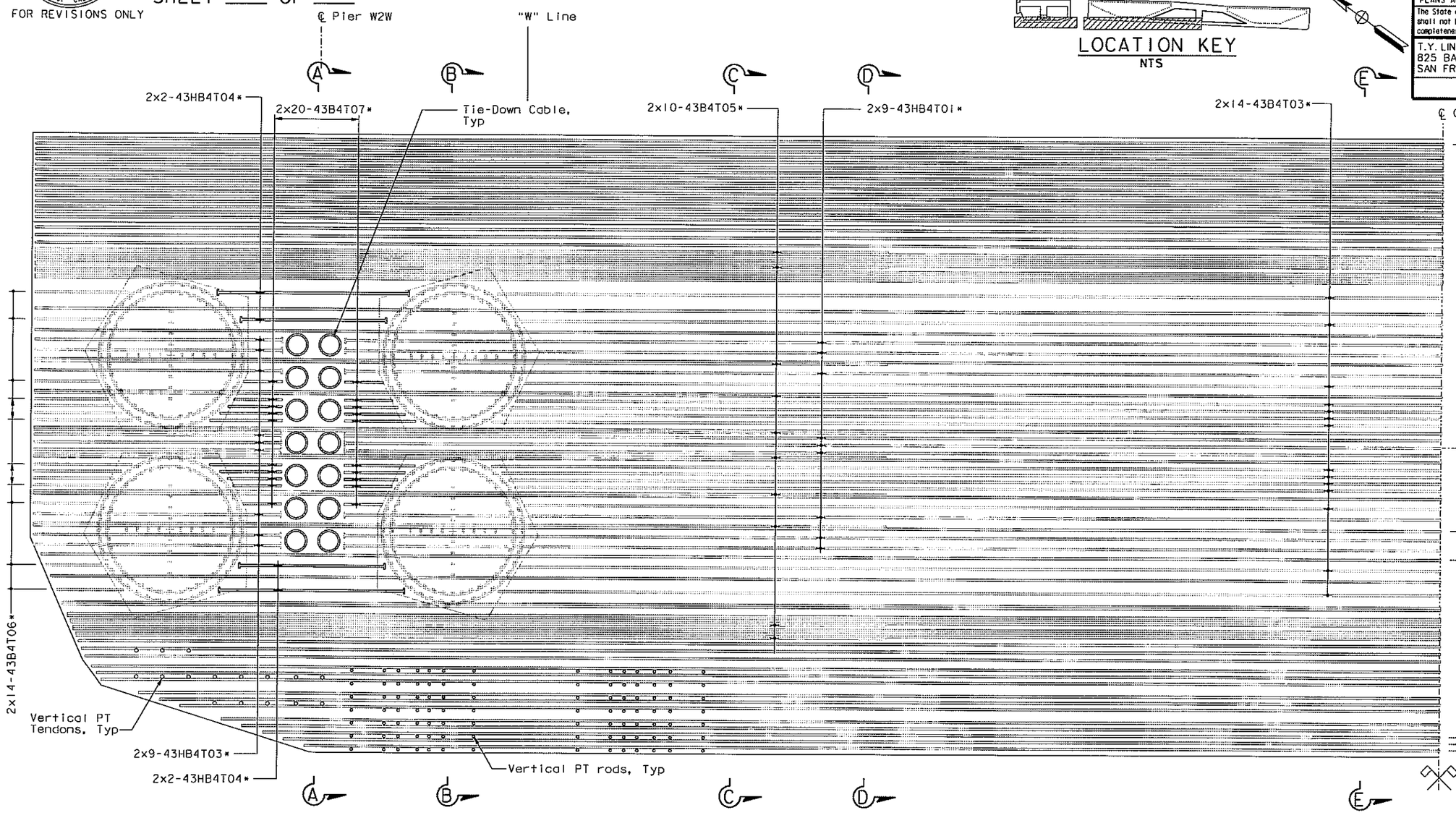


BOTTOM MAT-LAYER B4 REINFORCEMENT PLAN (NORTH) (TRANSVERSE)

1:50

* Denotes Bars Bundled Vertically

100% PS&E

Original Details Superseded

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

| | | | |
|---|---|---|---|
| DESIGN | BY J. Sun | CHECKED M. Chen | |
| DETAILS | BY J. Duxbury | CHECKED M. Chen | |
| QUANTITIES | BY S. Shi | CHECKED D. Harrison | |

R. Valizadeh/V. Toan/Y.L./W.L./F.C.

DESIGN OVERSIGHT

Reza Valizadeh /s/ Vang Toan / Y. Liu

SIGN OFF DATE 07/21/06

Rev. Date: 5-18-98

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R

KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 13

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 05/31/01 | 04/08/02 | 07/01/02 | 12/15/02

SHEET 069R1 OF

FILE => I:\bb\04-012001\sas\contract plans and cco\cco\cco#23\dgn\aecap12r-c.dgn

DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 16:59:09

USERNAME => k.lo

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

FOR REVISIONS ONLY

NOTES:

1. For Section A-A and B-B, see "W2 Cap Beam Reinforcement Details No.16" sheet.
2. For Section C-C and D-D, see "W2 Cap Beℓ Beam Reinforcement Details No.17" sheet.
3. For Section E-E, see "W2 Cap Beam Reinforcement Details No.18" sheet.

LOCATION KEY
NTS

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 487R1 | 1204 |

REGISTERED ENGINEER - CIVIL
12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — John Sun — No. C 54648 — Exp. 12/31/05 — CIVIL — STATE OF CALIFORNIA

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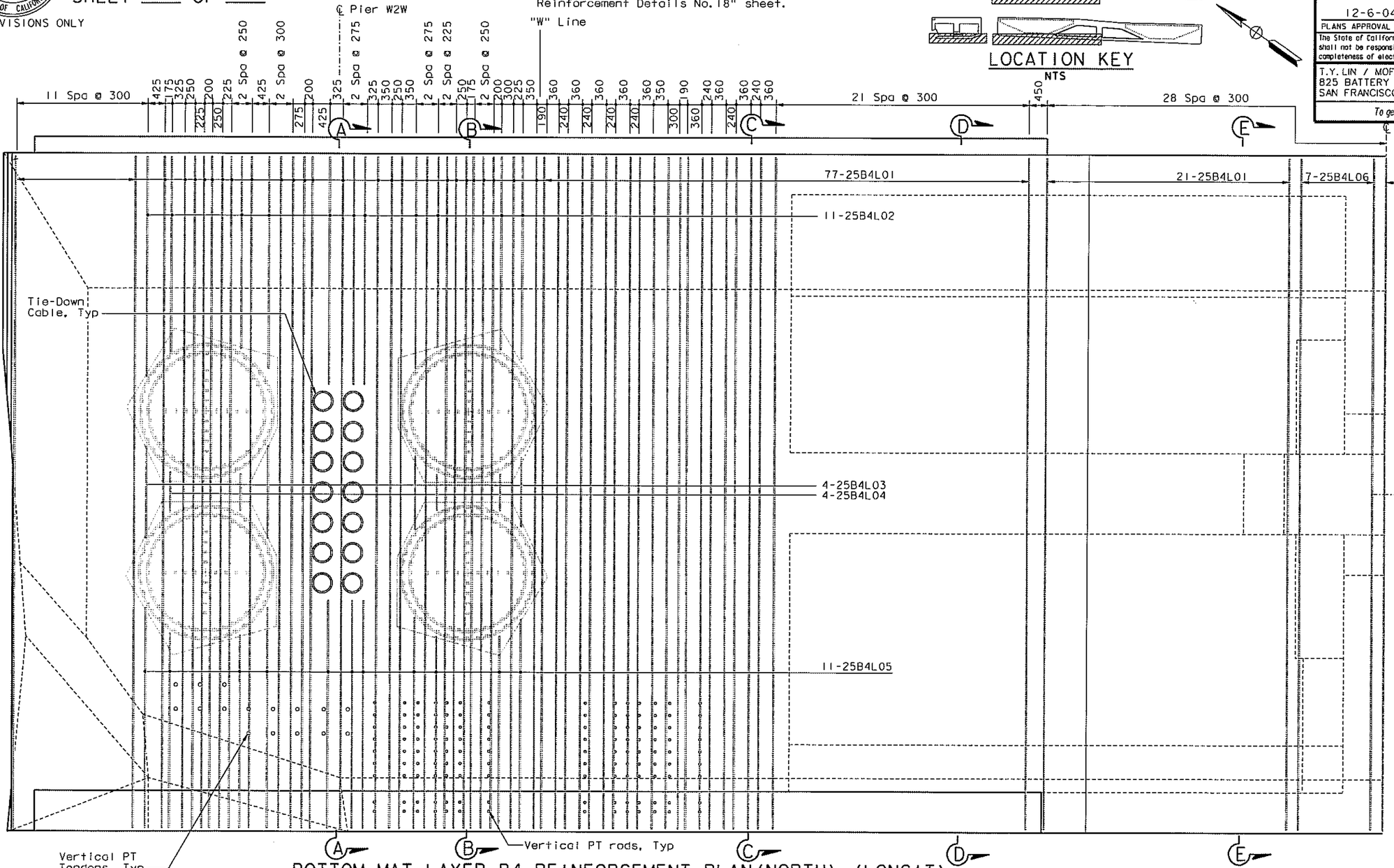


BOTTOM MAT-LAYER B4 REINFORCEMENT PLAN (NORTH) (LONGIT)
(South Side Similar)
1:50

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Details Superseded

100 % PS&E

DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 17:04:17

USERNAME => kto

R. Valizadeh/V. Toon/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Monzonarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 14

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES (PRELIMINARY STAGE ONLY) | | | | | | | | | | SHEET | OF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/07/01 | 01/04/02 | 01/07/02 | 12/15/02 | | | | | | | 070R1 | |

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| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

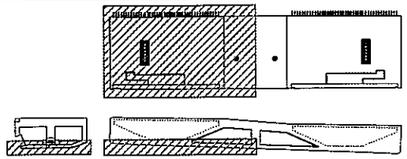
REVISIONS

CONTRACT CHANGE ORDER NO. ____

SHEET ____ OF ____

FOR REVISIONS ONLY

REGISTERED PROFESSIONAL ENGINEER — Daniel P. Duxbury — No. C 64677 — Exp. 06/30/07 — CIVIL — STATE OF CALIFORNIA



LOCATION KEY

NTS

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 488RI | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — John Sun — No. C 54648 — Exp. 12/31/05 — CIVIL — STATE OF CALIFORNIA

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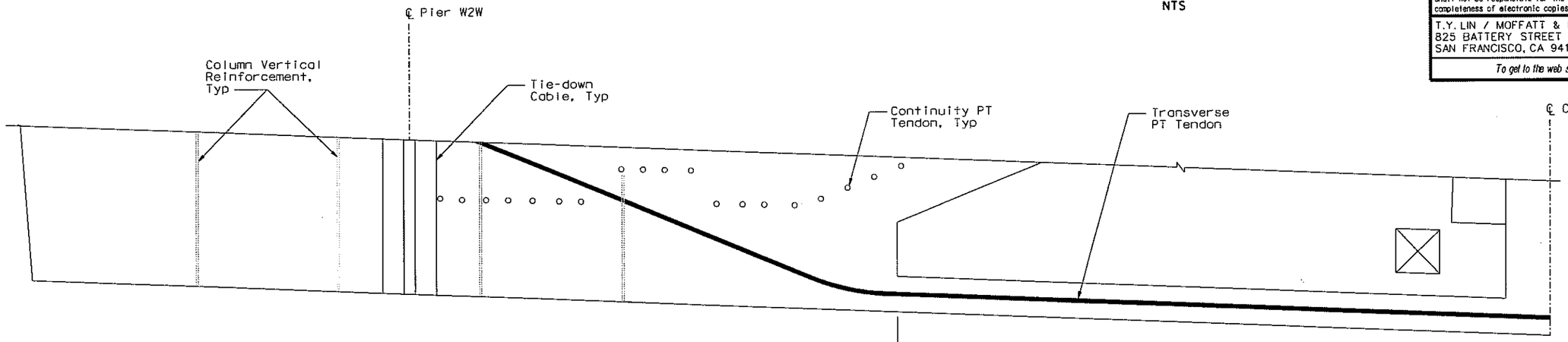
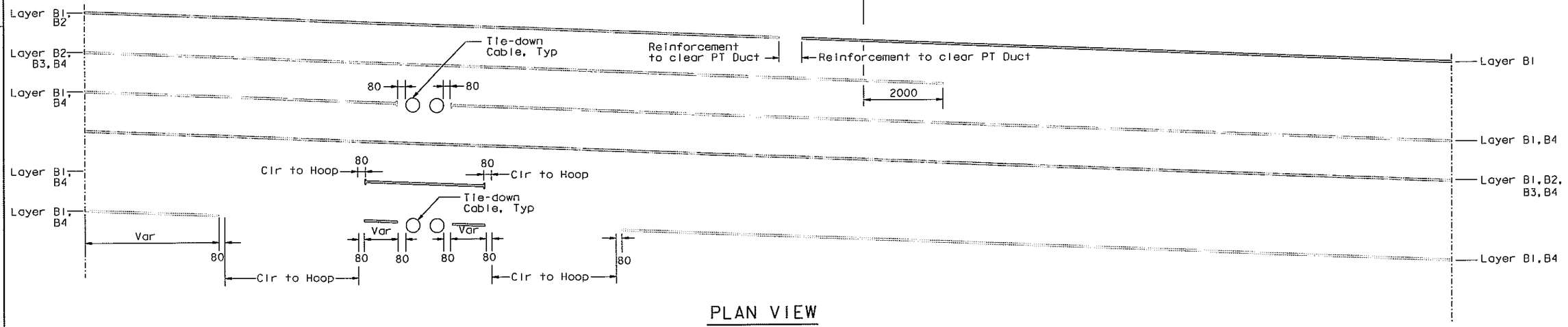



ELEVATION




PLAN VIEW

BOTTOM MAT REINFORCEMENT EXTENT PLAN

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 15

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 05/24/01 | 01/08/02 | 07/01/02 | 12/15/02

SHEET 071RI OF

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

Rev. Date: 5-18-98

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Original Details Superseded

100 % PS&E

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| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

FOR REVISIONS ONLY

NOTES:

1. East face and West face reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 19 to No. 25" sheets.
2. Vertical and horizontal stirrup reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 40 to No. 43" sheets.
3. For spacing, see "W2 Cap Beam Reinforcement Details No. 17" sheet.

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 489R1 | 1204 |

REGISTERED ENGINEER - CIVIL
12-6-04
PLANS APPROVAL DATE

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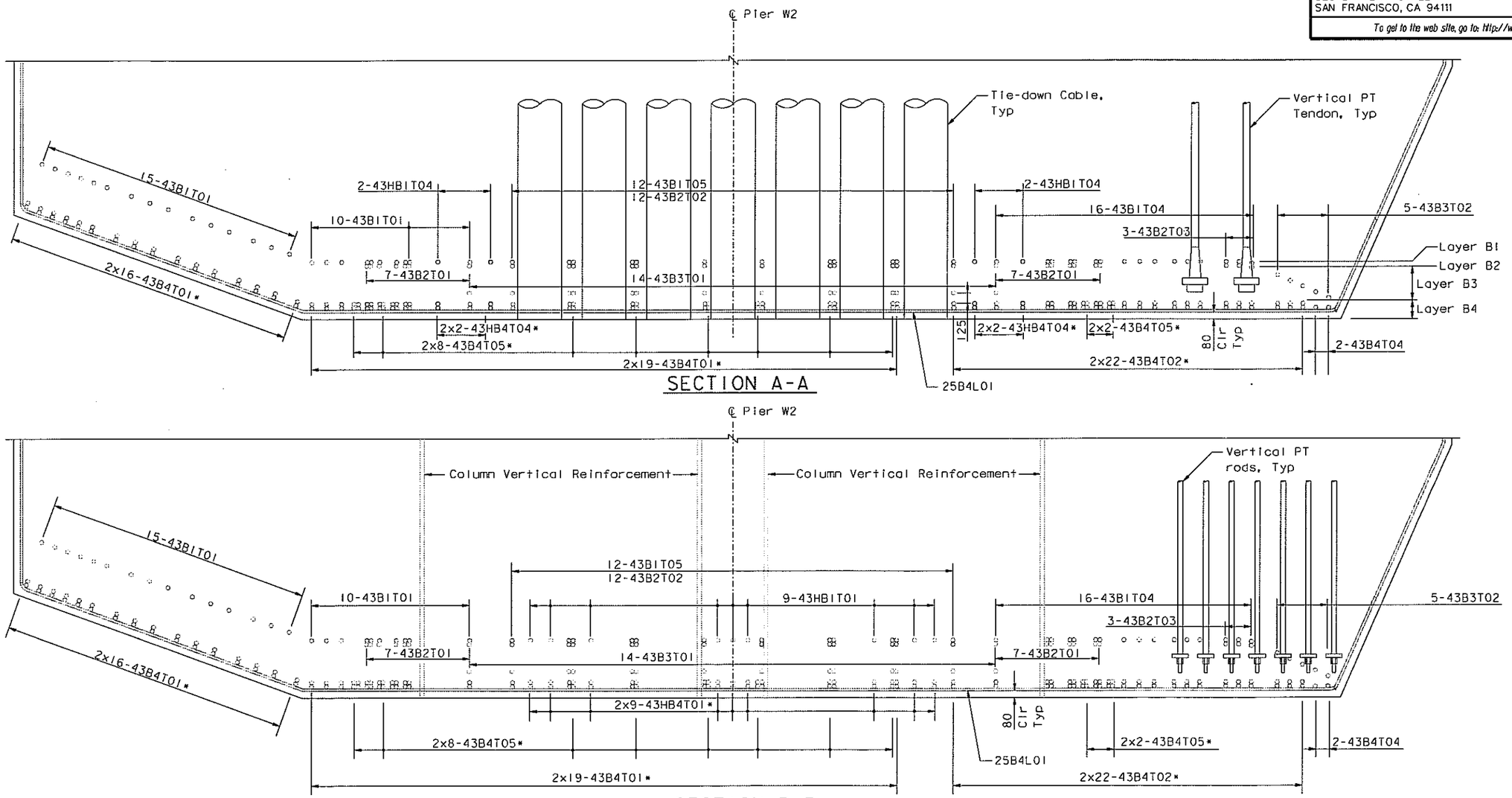


* Denotes Bars Bundled Vertically

BOTTOM MAT REINFORCEMENT
(North Side shown, South Side similar)
1:25

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Details Superseded

100 % PS&E

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 16

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 04/04/02 07/01/02 12/19/02

SHEET 072R1 OF

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USERNAME => klo DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 17:07:49

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|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. _____
SHEET ____ OF ____

FOR REVISIONS ONLY

REGISTERED PROFESSIONAL ENGINEER James P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

NOTES:

1. East face and West face reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 19 to No. 25" sheets.
2. Diaphragm reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 26 to No. 29" sheets.
3. Horizontal stirrup reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 40 to No. 43" sheets.

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 490R1 | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER John Sun No. C 54648 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

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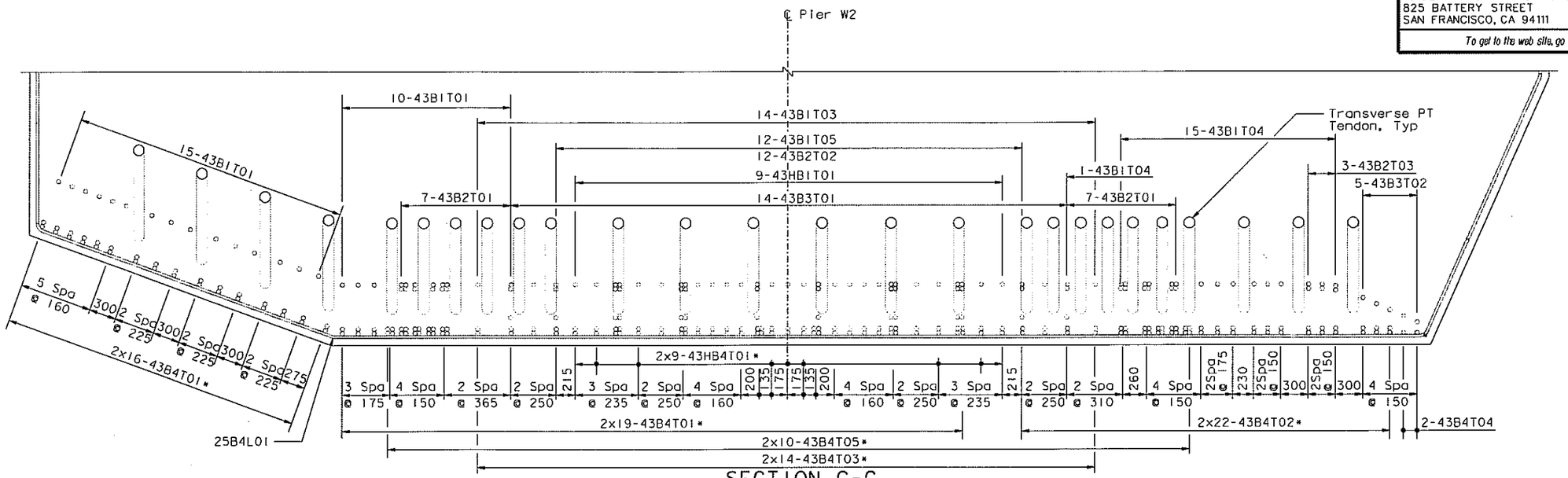
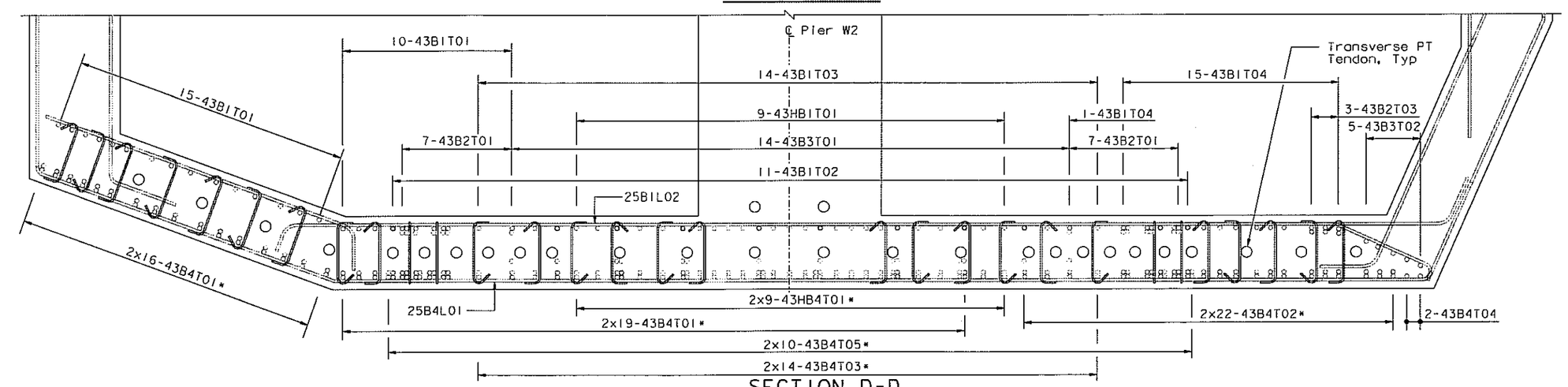



SECTION C-C




SECTION D-D

BOTTOM MAT REINFORCEMENT
(North Side shown, South Side similar)
1:25

* Denotes Bars Bundled Vertically

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Details Superseded

100 % PS&E

DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 17:09:11

USERNAME => klo

R. Valizadeh/V. Toon/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 17

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 04/08/02 07/01/02 12/19/02

SHEET 073R1 OF

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|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

FOR REVISIONS ONLY

NOTES:

1. East face and West face reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 19 to No. 25" sheets.
2. Diaphragm reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 26 to No. 29" sheets.
3. For spacing see "W2 Cap Beam Reinforcement Details No. 17" sheet.

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 491R1 | 1204 |

REGISTERED ENGINEER - CIVIL
12-6-04
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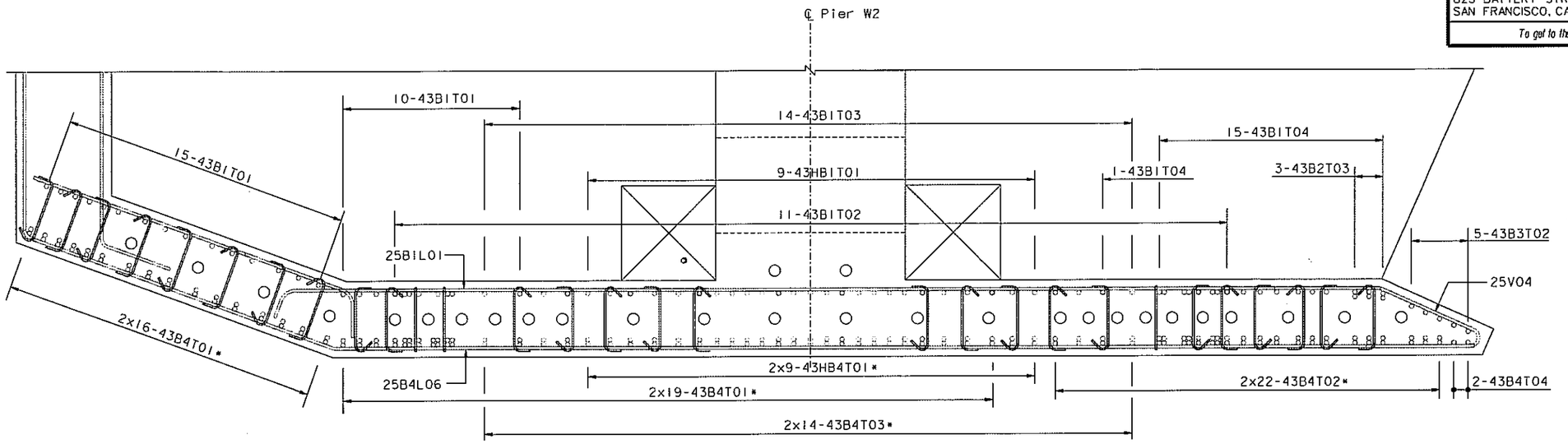
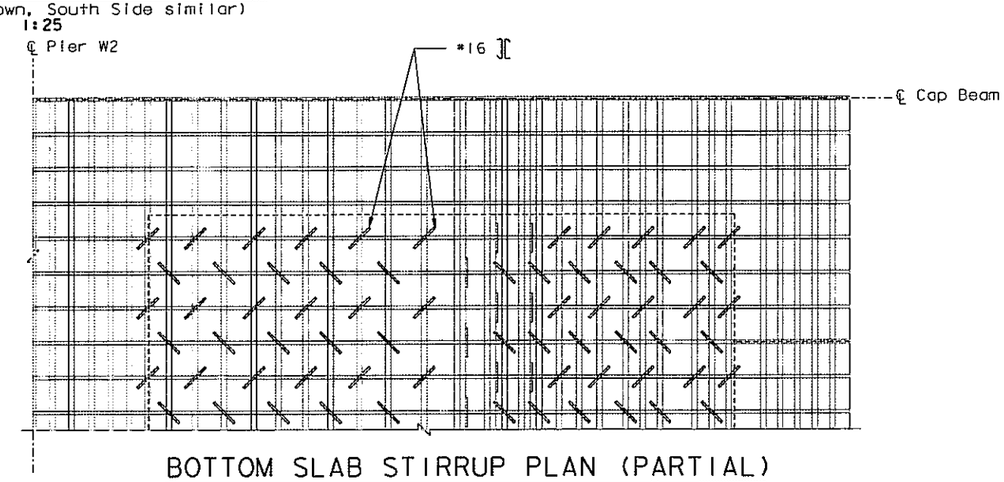



SECTION E-E
BOTTOM MAT REINFORCEMENT
(North Side shown, South Side similar)
1:25




BOTTOM SLAB STIRRUP PLAN (PARTIAL)
NTS

Original Details Superseded

100 % PS&E

* Denotes Bars Bundled Vertically

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 18

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 05/31/01 04/08/02 07/01/02 12/19/02

SHEET 074R1 OF

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REGISTERED PROFESSIONAL ENGINEER — John D. Duxbury — No. C 64677 — Exp. 06/30/07 — CIVIL — STATE OF CALIFORNIA

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|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

NOTES:

1. For Section A-A and B-B, see "W2 Cap Beam Reinforcement Details No. 22" sheet.
2. All reinforcement placed parallel to soffit.

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 492RI | 1204 |

REGISTERED ENGINEER - CIVIL — John Sun — No. C 54648 — Exp. 12/31/05 — CIVIL — STATE OF CALIFORNIA

12-6-04
PLANS APPROVAL DATE

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SAN FRANCISCO, CA 94111

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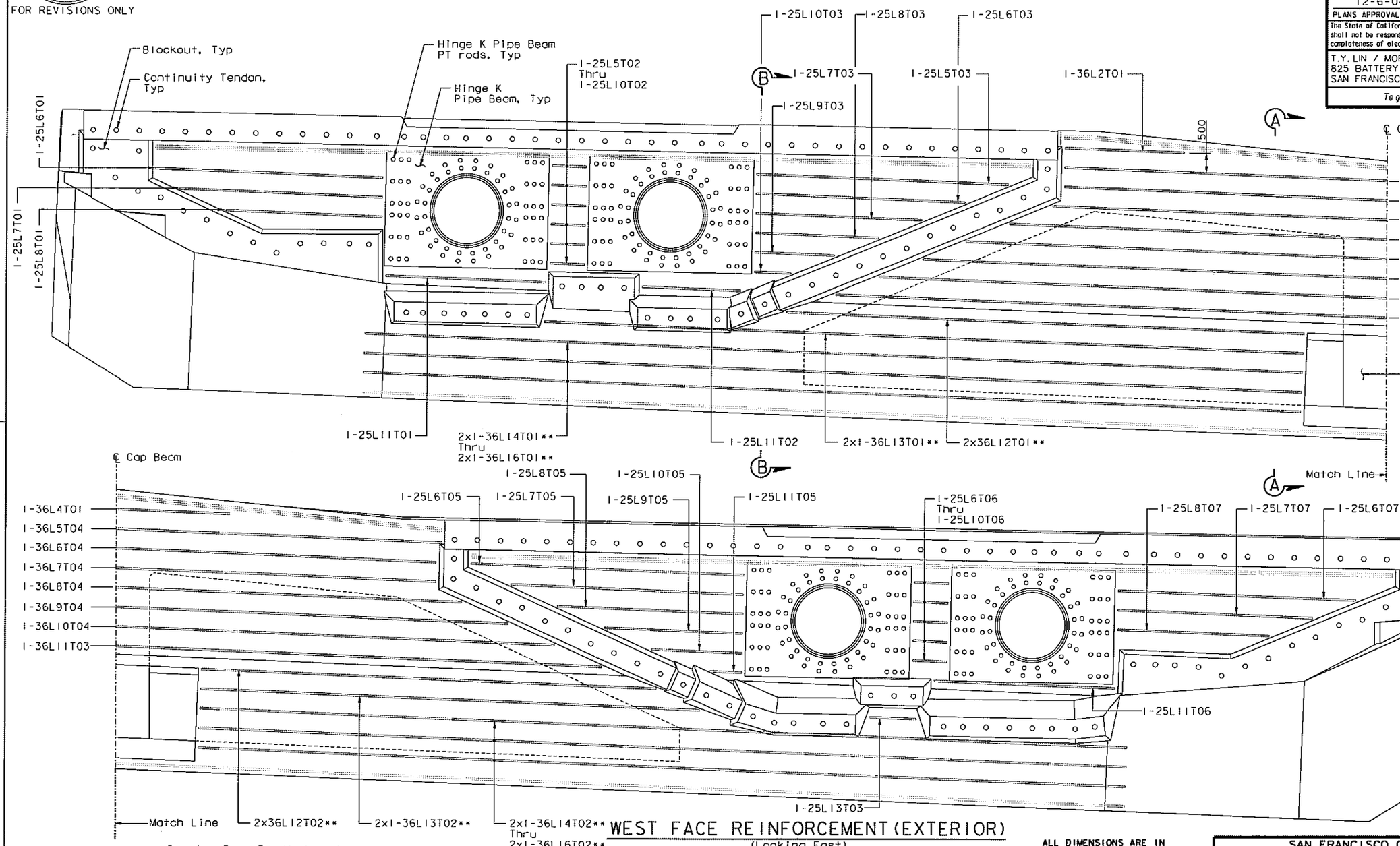


** Denotes Bars Bundled Horizontally

## WEST FACE REINFORCEMENT (EXTERIOR)

(Looking East)
1:50

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Details Superseded

100 % PS&E

DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 17:12:14
USERNAME => kio

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Sign Off Date 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 19

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 05/07/01 | 04/08/02 | 07/08/02 | 12/15/02

SHEET 075RI OF

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| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. _____
SHEET ____ OF ____

FOR REVISIONS ONLY

NOTES:

1. For Section A-A and B-B, see "W2 Cap Beam Reinforcement Details No.22" sheet.
2. Reinforcement labeled "T23" and "T25" placed parallel to deck; other placed parallel to soffit, as shown.

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 493RI | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

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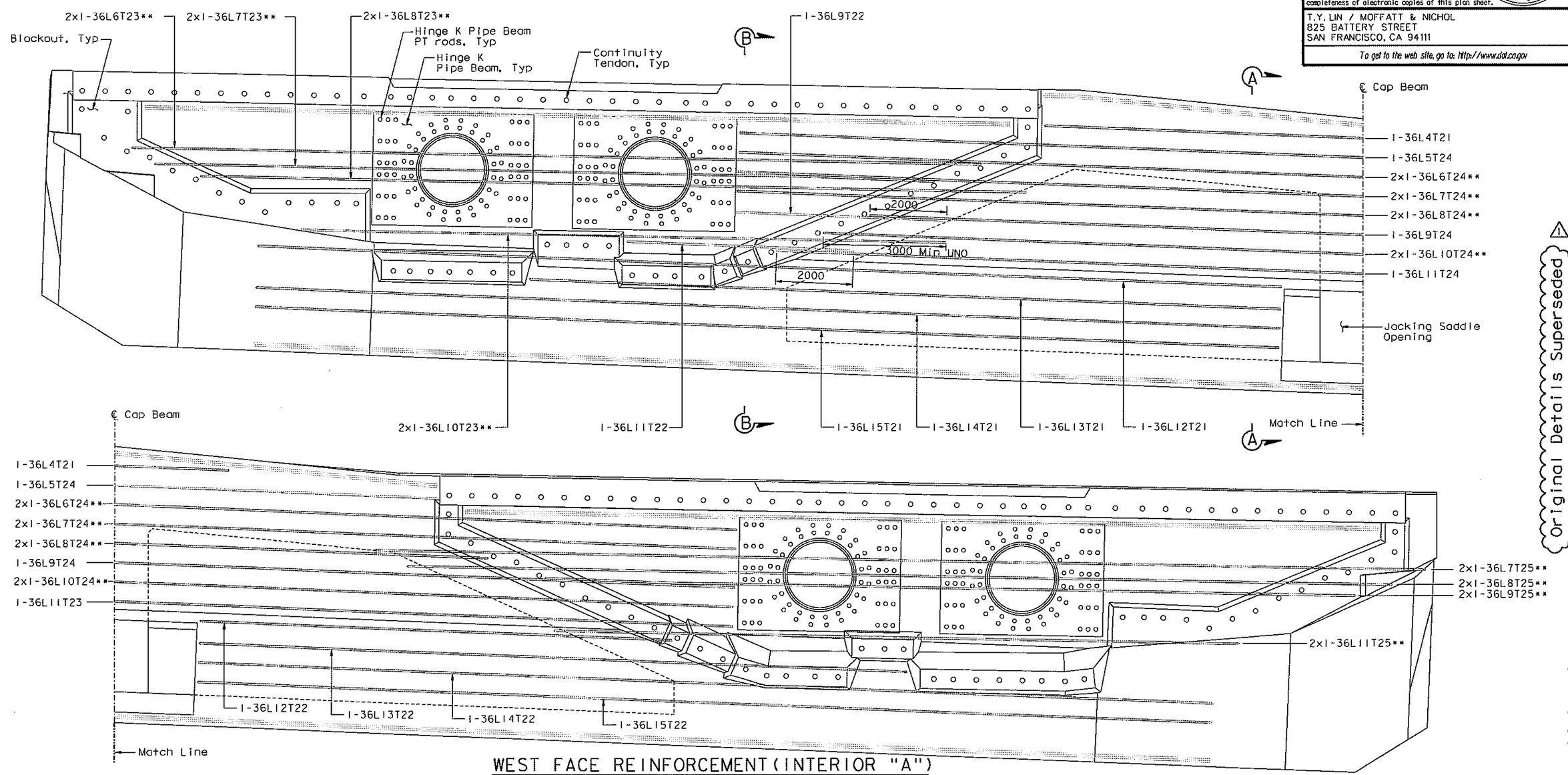
825 BATTERY STREET
SAN FRANCISCO, CA 94111

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




## WEST FACE REINFORCEMENT (INTERIOR "A")

(Looking East)
1:50

** Denotes Bars Bundled Horizontally

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Details Superseded

100 % PS&E

DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 17:17:16

USERNAME => KIO

| | | | |
|---|---|---|---|
| R. Valizadeh/V. Toan/Y.L./W.L./F.C. | DESIGN | BY J. Sun | CHECKED M. Chen |
| DESIGN OVERSIGHT | DETAILS | BY J. Duxbury | CHECKED M. Chen |
| STGN OFF DATE 07/21/06 | QUANTITIES | BY S. Shi | CHECKED D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 20

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 076RI OF

FILE => I:\bb\04-0120F1\sas\contract plans and cco\cco\cco#23\dgn\aecap19r-c.dgn

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. _____
SHEET ____ OF ____

FOR REVISIONS ONLY

NOTES:

1. For Section B-B, see "W2 Cap Beam Reinforcement Details No.22" sheet.
2. Reinforcement labeled "T33" and "T35" placed parallel to deck.

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 494RI | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

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T.Y. LIN / MOFFATT & NICHOL
825 BATTERY STREET
SAN FRANCISCO, CA 94111

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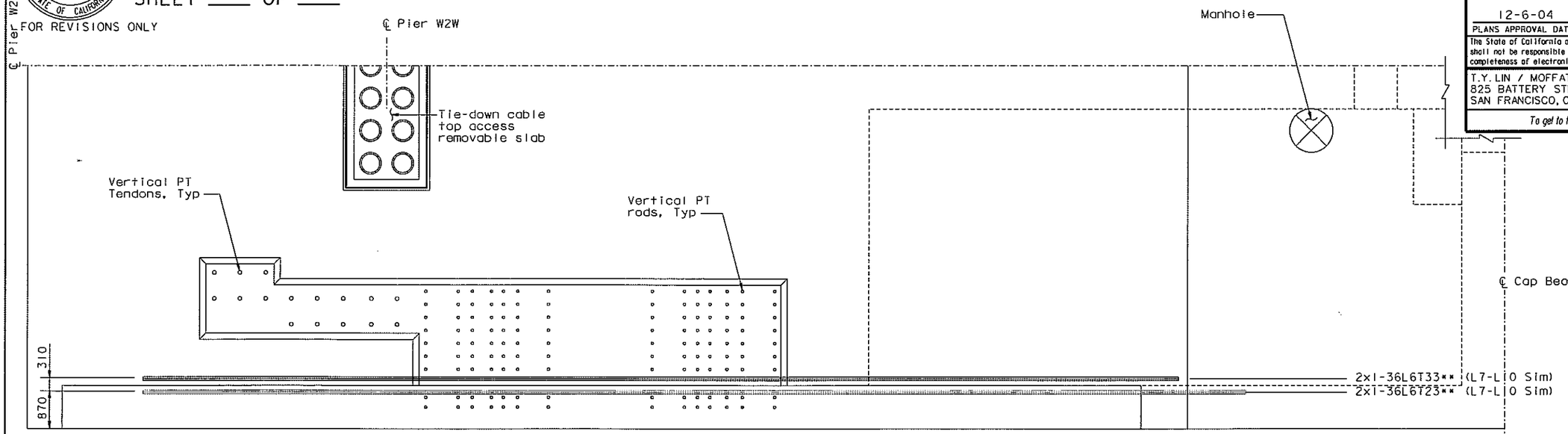
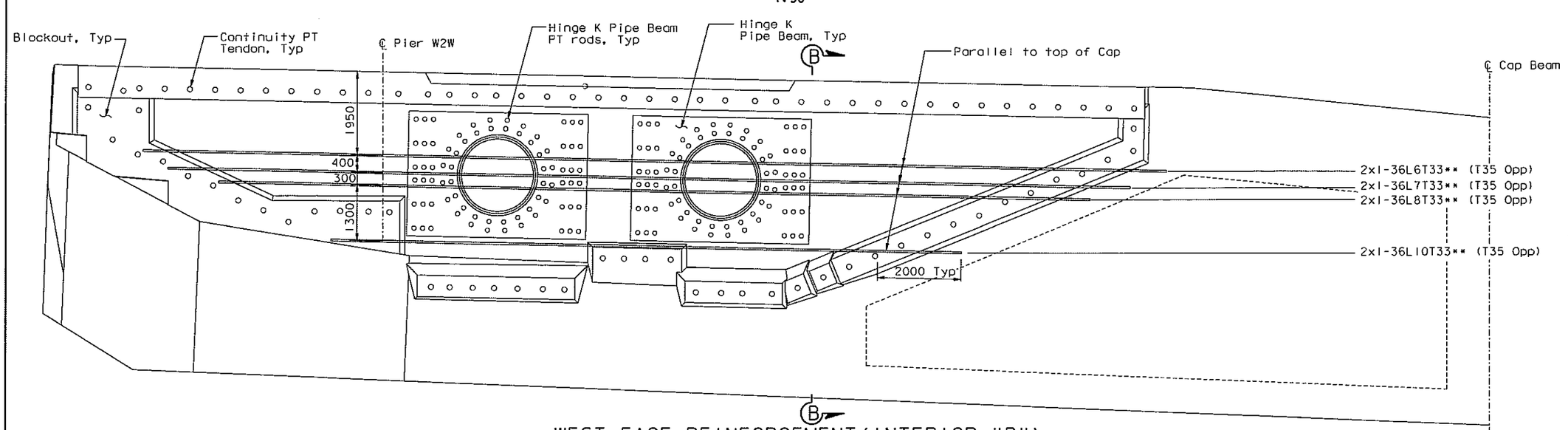



## WEST FACE REINFORCEMENT-INTERIOR "A" AND INTERIOR "B" PLAN(NORTH)

(Looking East)(South Side Similar)
1:50




## WEST FACE REINFORCEMENT(INTERIOR "B")

(Looking East)(South Side Similar)
1:50

** Denotes Bars Bundled Horizontally

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Details Superseded

100 % PS&E

DATE PLOTTED => 16 MAY 2007
TIME PLOTTED => 17:18:36
USERNAME => klo

R. Valizadeh/V. Tean/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO.21

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 05/31/01 | 01/08/02 | 07/05/02 | 12/13/02

SHEET 077RI OF

FILE => I:\bb\04-01200I\sas\contract plans and cco\cco*23\dgn\aecap20r-c.dgn

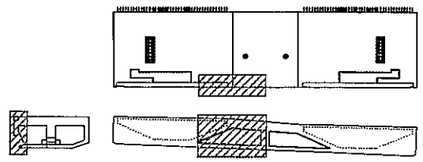
FOR REVISIONS ONLY

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |
| | | REVISIONS | | | |

CONTRACT CHANGE ORDER NO. _____
SHEET ___ OF ___

NOTES:

1. Top mat reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No.2 to No.8" sheets.
2. Bottom mat reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No.9 to No.18" sheets.
3. Horizontal and vertical stirrup reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No.40 to No.43" sheets.



LOCATION KEY
NTS

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 495R1 | 1204 |

REGISTERED ENGINEER - CIVIL
12-6-04
PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER John Sun No. C 54648 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

T.Y. LIN / MOFFATT & NICHOL
825 BATTERY STREET
SAN FRANCISCO, CA 94111

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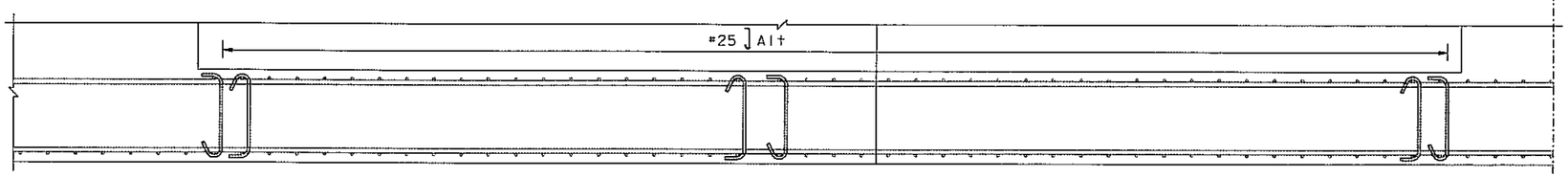
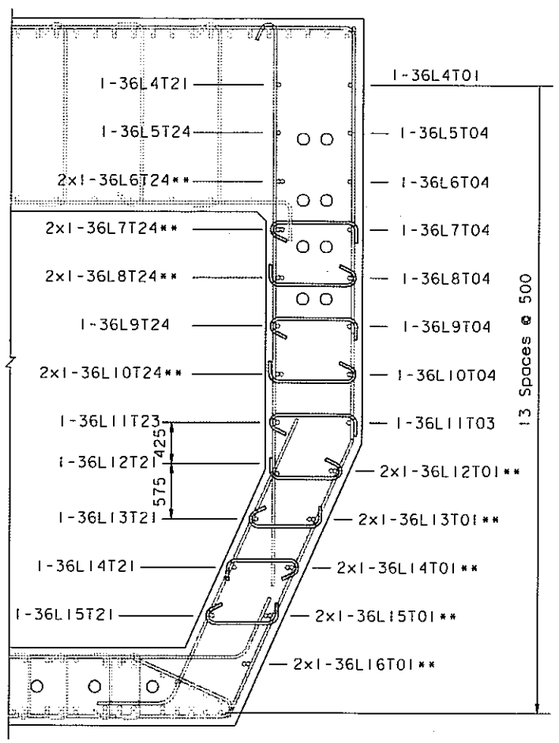
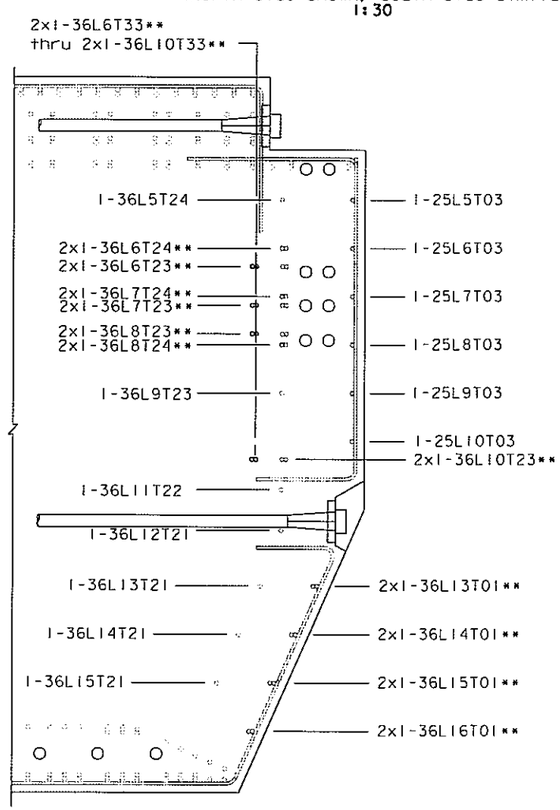



## WEST FACE REINFORCEMENT-EXTERIOR AND INTERIOR A PLAN(NORTH)

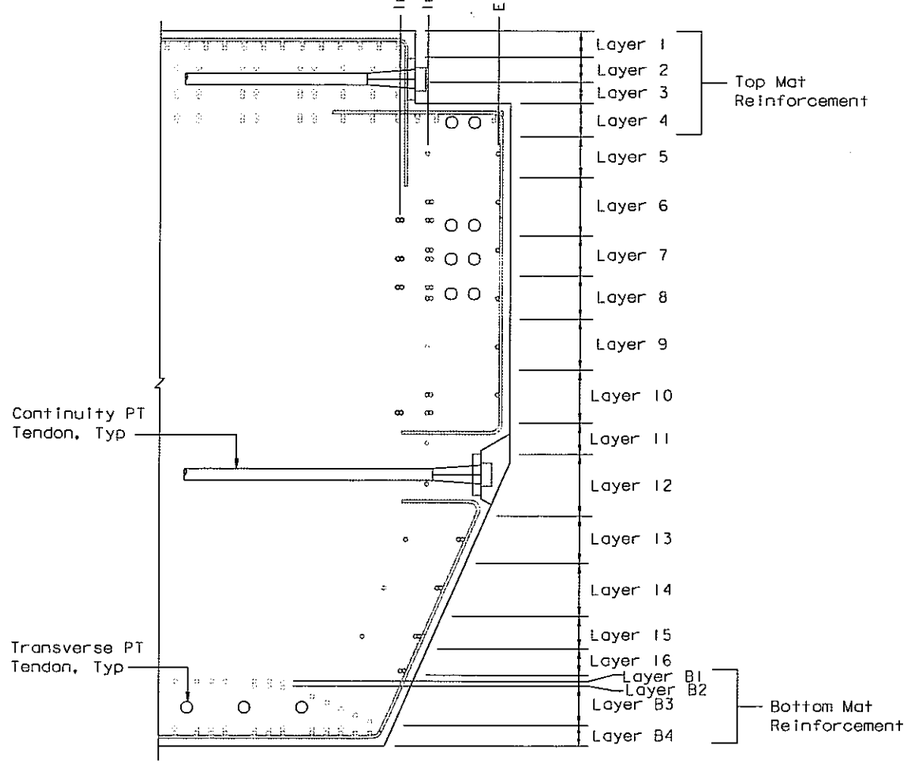
(North Side Shown, South Side Similar)
1:30




SECTION A-A




SECTION B-B




LAYER ID

## WEST FACE REINFORCEMENT

(North Side Shown, South Side Similar)
1:30

** Denotes Bars Bundled Horizontally

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Details Superseded

100 % PS&E

DATE PLOTTED => 16 MAY 2007
TIME PLOTTED => 17:22:10
USERNAME => klo

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Ryan Valiz /V. Toan/ Y. Liu
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 22

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES (PRELIMINARY STAGE ONLY) | | | | | | | | | | SHEET | OF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/31/00 | 01/30/02 | 07/31/02 | 12/19/02 | | | | | | | 078R1 | |

FILE => I:\bb\04-012001\sas\contract plans and cco\cco\cco*23\dgn\secap2ir-c.dgn

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |
| | | REVISIONS | | | |

CONTRACT CHANGE ORDER NO. _____
SHEET ____ OF ____

FOR REVISIONS ONLY

NOTES:

1. For Section C-C and D-D, see "W2 Cap Beam Reinforcement Details No.25" sheet.

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 496RI | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

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SAN FRANCISCO, CA 94111

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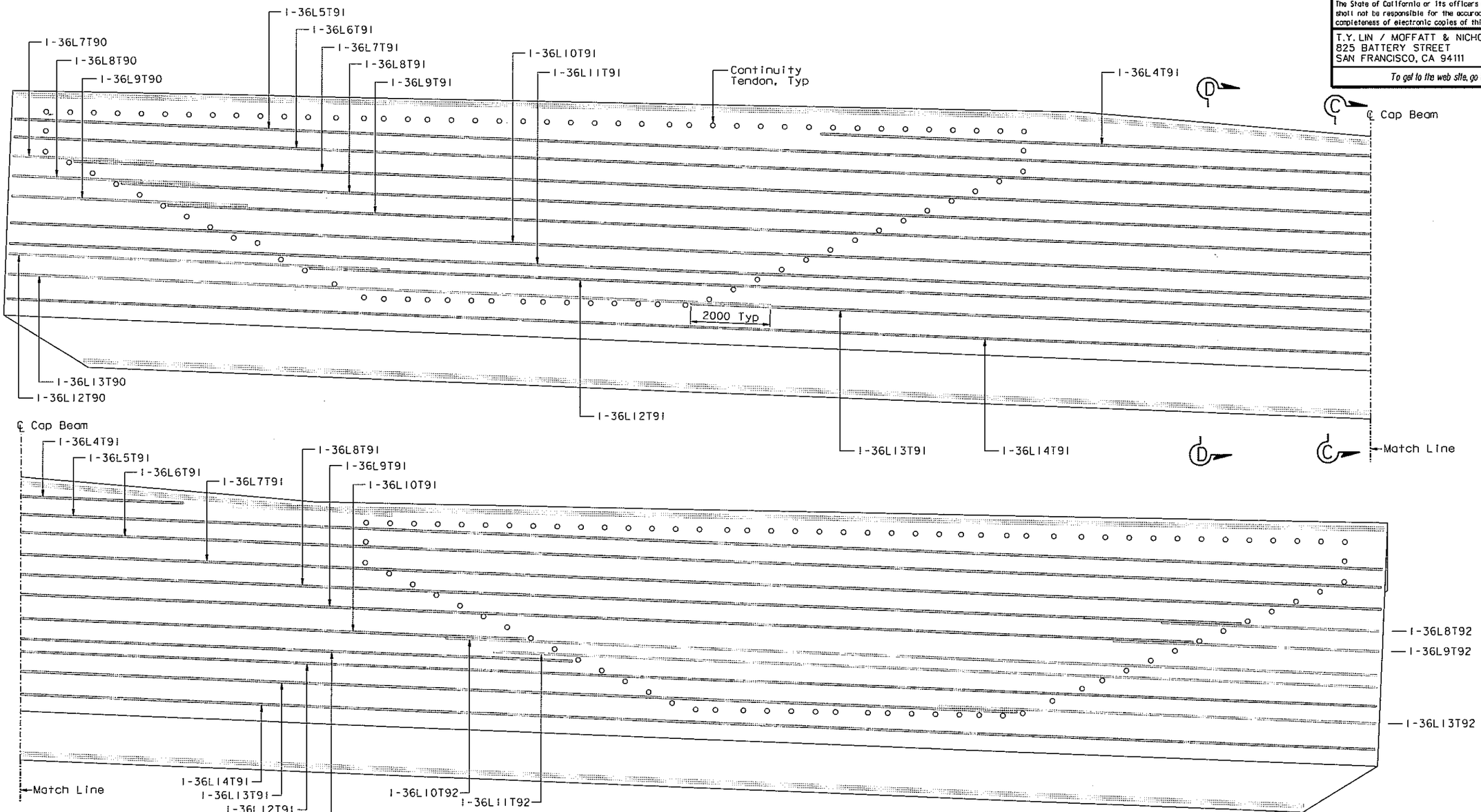


EAST FACE REINFORCEMENT (EXTERIOR)
(Looking East)
1:50

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Original Detail Superseded

100 % PS&E

DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 17:25:24

USERNAME => klo

| | | | |
|---|---|---|---|
| DESIGN | BY J. Sun | CHECKED M. Chen | |
| DETAILS | BY J. Duxbury | CHECKED M. Chen | |
| QUANTITIES | BY S. Shi | CHECKED D. Harrison | |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

R. Valizadeh/V. Toon/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

FILE => I:\bb\04-0120I\sas\contract plans and cco\cco\cco#23\dgn\aecap23r-c.dgn

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES (PRELIMINARY STAGE ONLY) | | | | | | | SHEET | OF |
|---|---|---|---|---|---|---|---|---|
| 05/31/01 | 01/09/02 | 01/09/02 | 12/19/02 | | | | 079RI | |

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 23

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 1 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |
| | | REVISIONS | | | |

CONTRACT CHANGE ORDER NO. _____
SHEET ____ OF ____

FOR REVISIONS ONLY

NOTES:

1. For Section C-C and D-D, see "W2 Cap Beam Reinforcement Details No.25" sheet.

Caltrans Metric

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 497R1 | 1204 |

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

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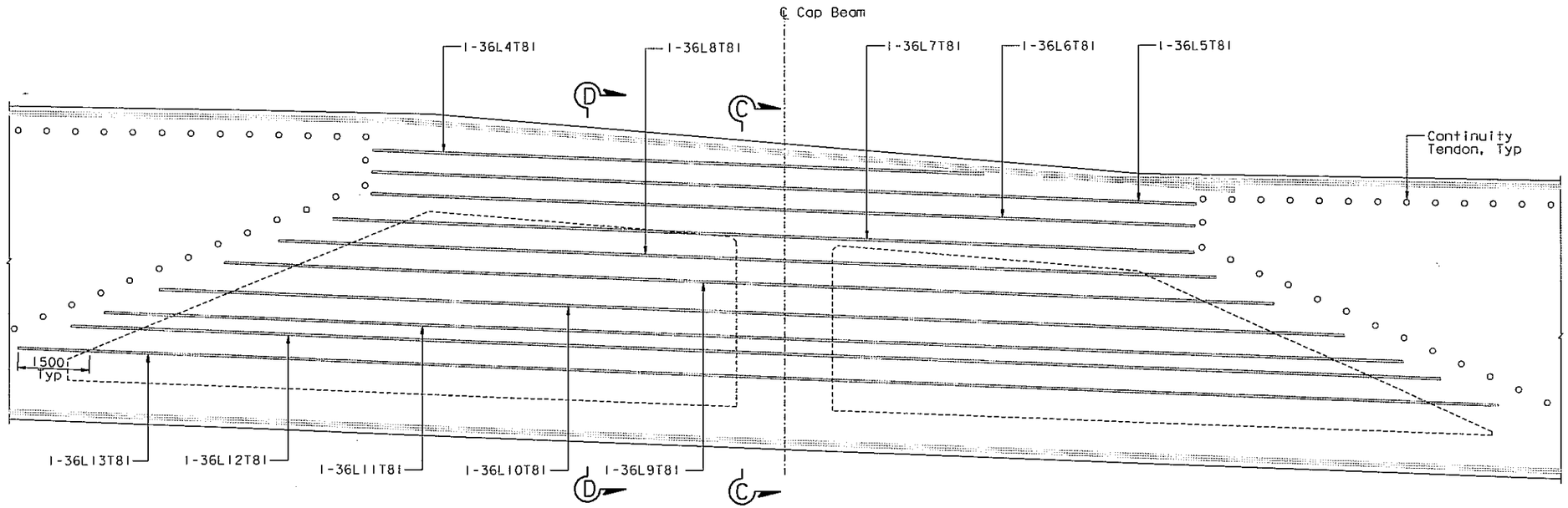
REGISTERED PROFESSIONAL ENGINEER — John Sun — No. C 54648 — Exp. 12/31/05 — CIVIL — STATE OF CALIFORNIA

T.Y. LIN / MOFFATT & NICHOL
825 BATTERY STREET
SAN FRANCISCO, CA 94111

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




EAST FACE REINFORCEMENT (INTERIOR)
(Looking East)
1:50

Superseded Original Details

100 % PS&E

DATE PLOTTED => 16 MAY 2007 TIME PLOTTED => 17:24:08
USERNAME => kio

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 24

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Sun | M. Chen |
| DETAILS | J. Duxbury | M. Chen |
| QUANTITIES | S. Shi | D. Harrison |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 05/31/01 | 01/08/02 | 07/01/02 | 12/15/02

SHEET 080R1 OF

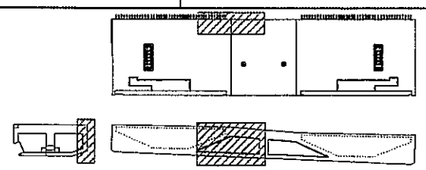
Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

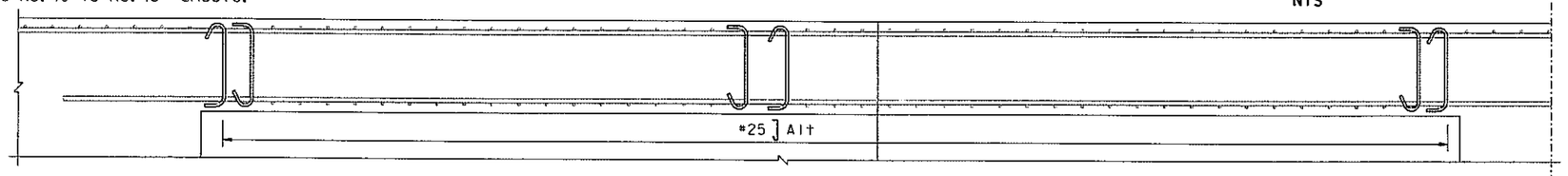
FILE => I:\bb\04-0120f1\sas\contract plans and cco\cco\cco#23\dgn\aecap22r-c.dgn

NOTES:

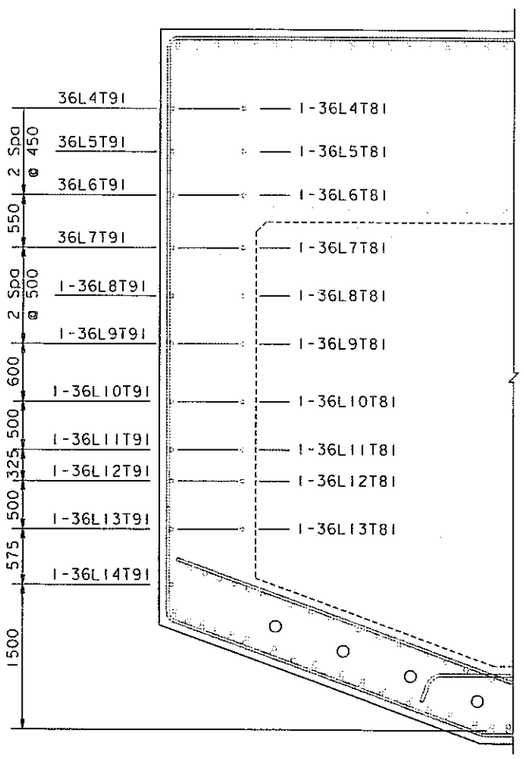
1. Top mat reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 2 to No. 8" sheets.
2. Bottom mat reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 9 to No. 18" sheets.
3. Horizontal and vertical stirrup reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 40 to No. 43" sheets.



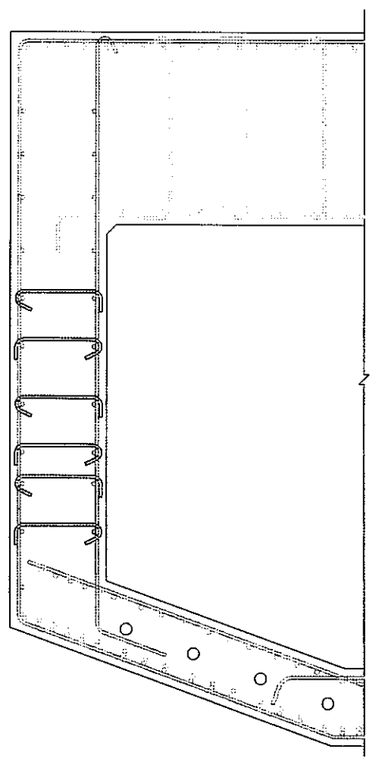
LOCATION KEY
NTS




EAST FACE REINFORCEMENT-EXTERIOR AND INTERIOR PLAN (NORTH)
(North Side Shown, South Side Similar)
1:30

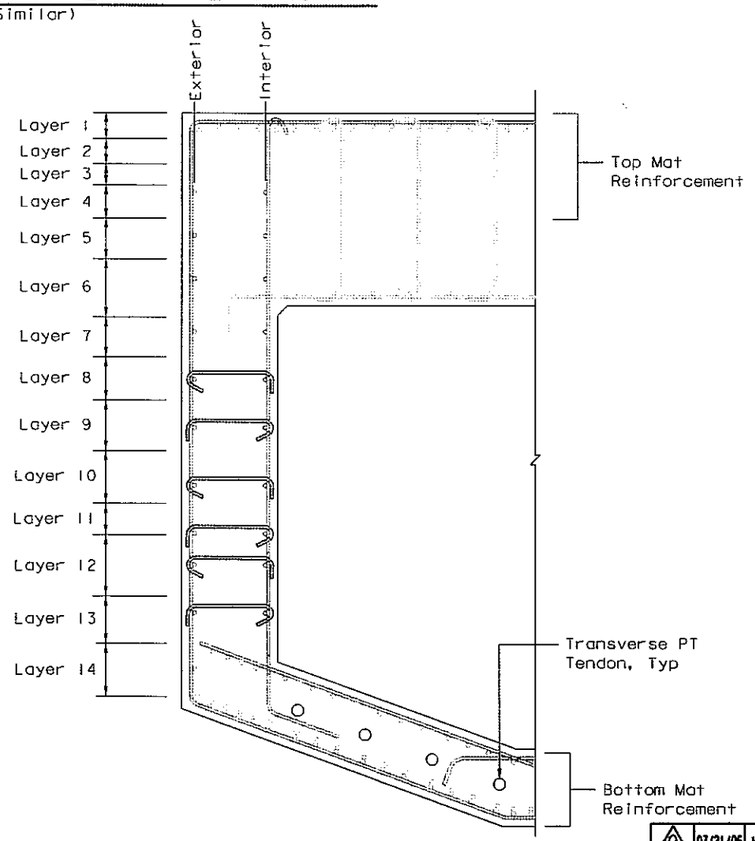



SECTION C-C



SECTION D-D

EAST FACE REINFORCEMENT
(North Side Shown, South Side Similar)
1:30




LAYER ID

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 497S1 | 1204 |

Caltrans Metric

REGISTERED ENGINEER - CIVIL
07-21-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
James P. Duxbury
No. C 64677
Exp. 06/30/07
CIVIL
STATE OF CALIFORNIA

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825 BATTERY STREET
SAN FRANCISCO, CA 94111

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| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 0 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

REVISIONS

CONTRACT CHANGE ORDER NO. _____
SHEET ____ OF ____

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

W2 CAP BEAM REINFORCEMENT DETAILS NO. 25

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Roger Valizadeh / Vong Toan / Y. Liu
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Duxbury | A. Sanjines |
| DETAILS | J. Duxbury | A. Sanjines |
| QUANTITIES | N. Vo | A. Sanjines |

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Monzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES 07/21/06

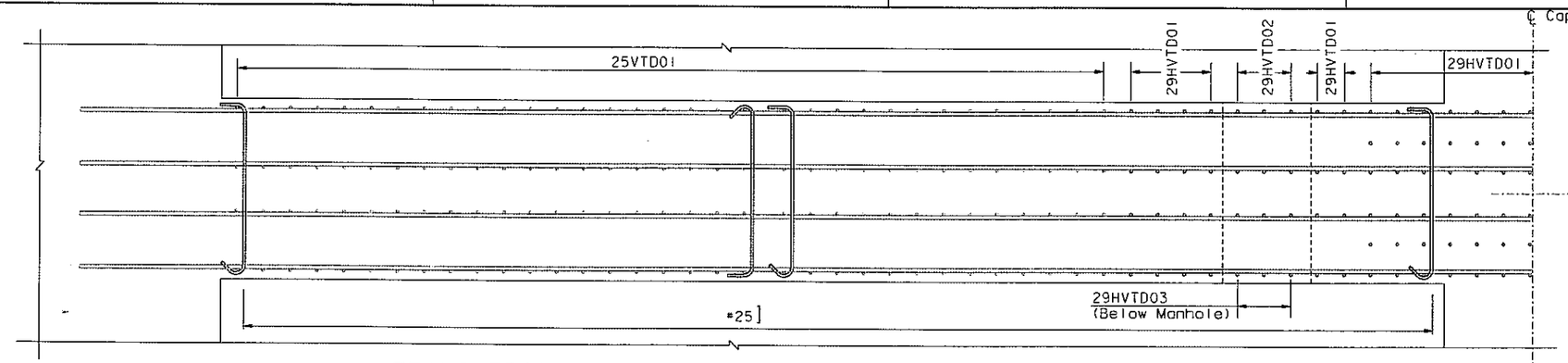
REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 080S1 OF

FILE => I:\bb\04-012001\sas\contract plans and cco\cco\cco#23\aecap24r-c.dgn

100 % PS&E

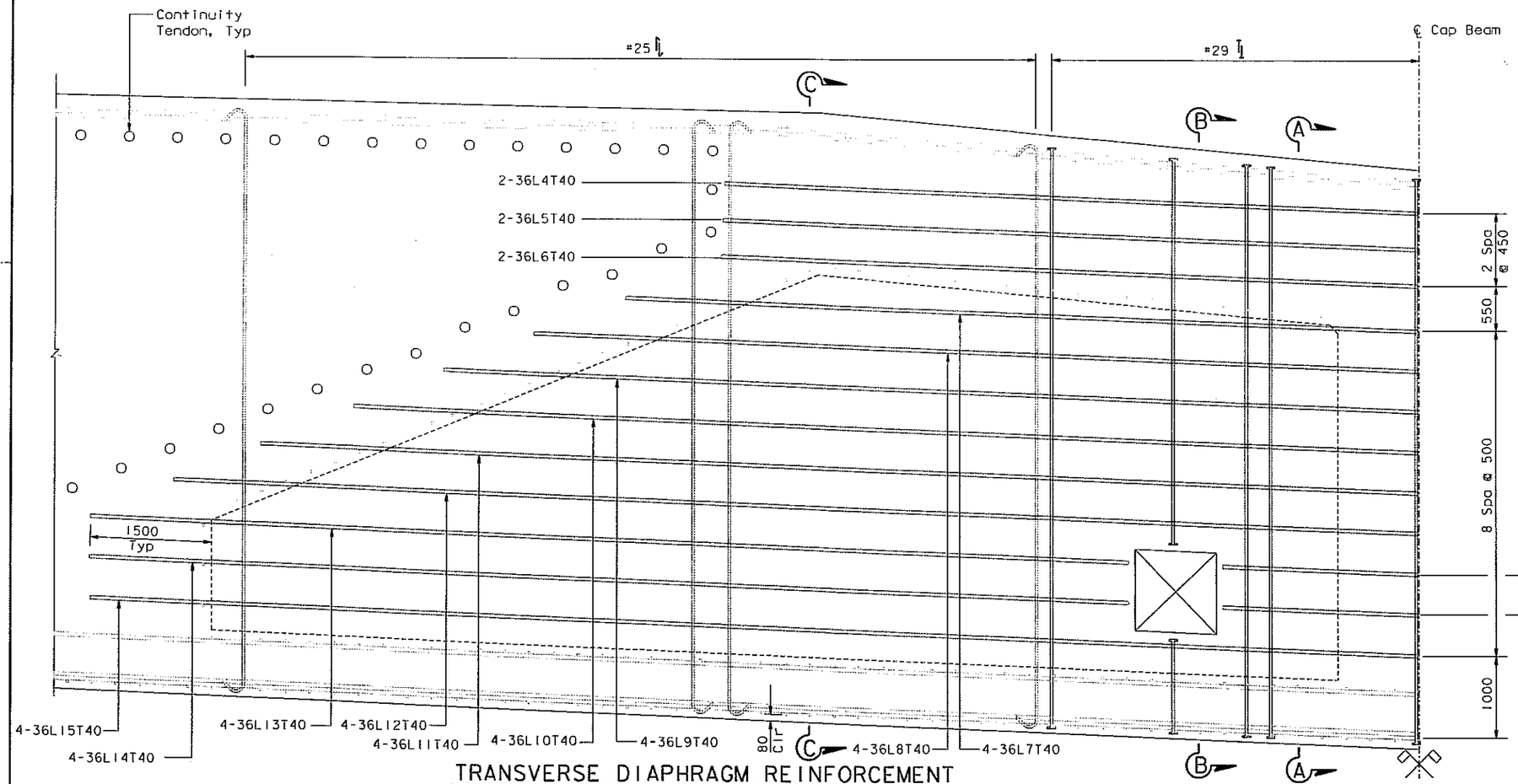
USERNAME => vignatovs DATE PLOTTED => 27 APR 2007 TIME PLOTTED => 13:46:52




## TRANSVERSE DIAPHRAGM REINFORCEMENT PLAN (NORTH)

(North Side Shown, South Side Similar)

1:30

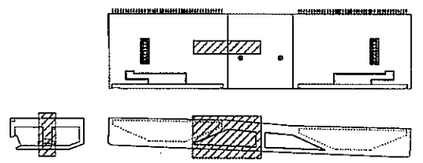



## TRANSVERSE DIAPHRAGM REINFORCEMENT

(North Side Shown, South Side Similar)

1:30

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



## LOCATION KEY

NTS

NOTES:

1. For Section A-A thru C-C, see "W2 Cap Beam Reinforcement Details No. 27" sheet.

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 497S2 | 1204 |

Caltrans Metric

REGISTERED ENGINEER - CIVIL

07-21-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — James P. Duxbury — No. C 64677 — Exp. 06/30/07 — CIVIL — STATE OF CALIFORNIA

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T.Y. LIN / MOFFATT & NICHOL
825 BATTERY STREET
SAN FRANCISCO, CA 94111

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

| MARK | DATE | REVISIONS — DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 0 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

100% PS&E

TIME PLOTTED => 10:01:55
DATE PLOTTED => 27 APR 2007
USERNAME => vigorova

R. Valizadeh/V. Toan/Y. L./W. L./F. C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Duxbury | A. Sanjines |
| DETAILS | J. Duxbury | A. Sanjines |
| QUANTITIES | N. Vo | A. Sanjines |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 26

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 07/21/06

SHEET 08052 OF

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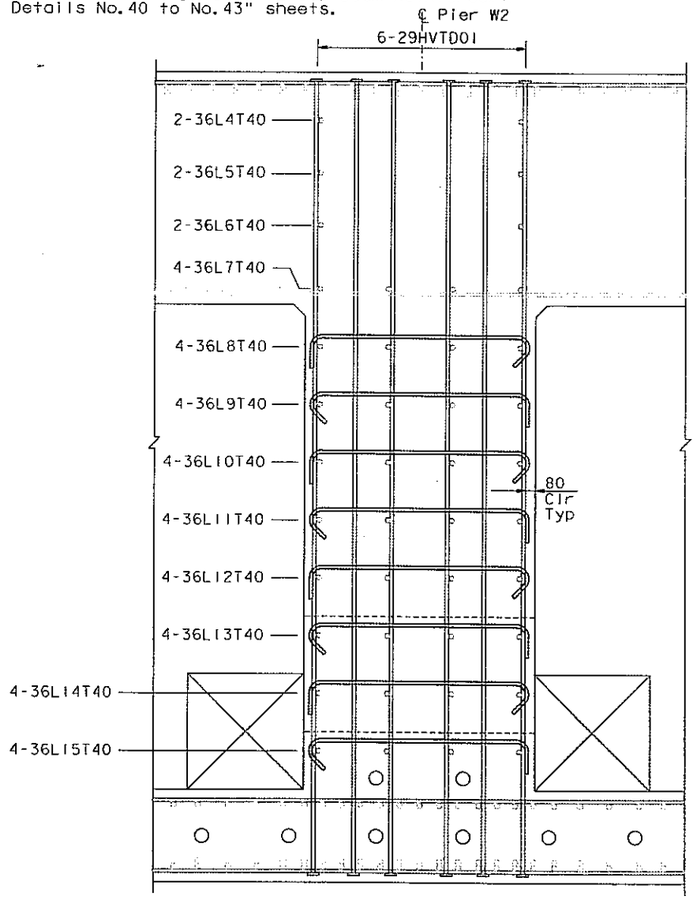
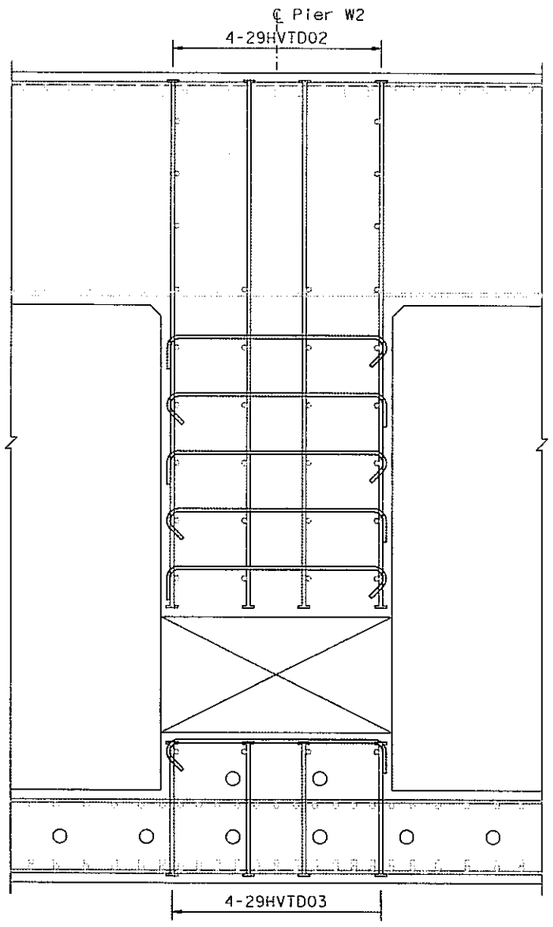
NOTES:

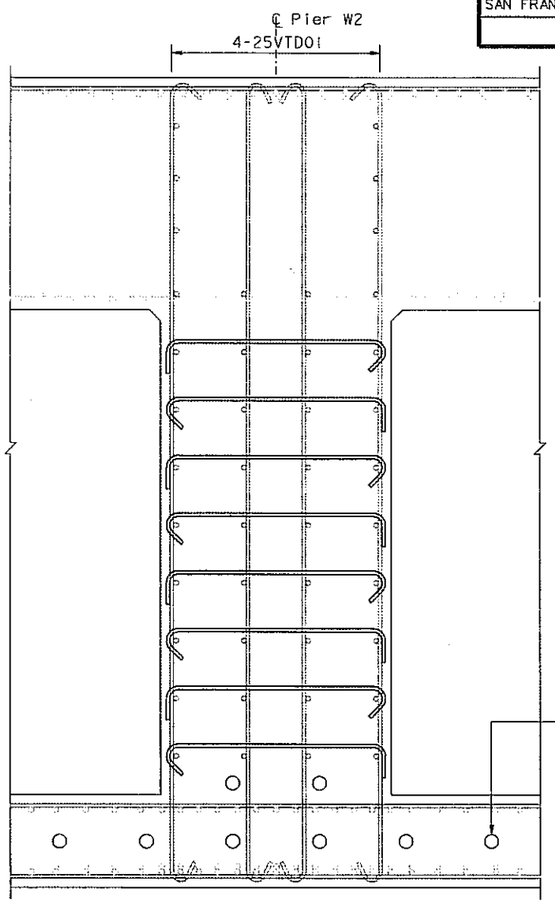
1. Top mat reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 2 to No. 8" sheets.
2. Bottom mat reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 9 to No. 18" sheets.
3. Jacking Saddle reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 30 to No. 33" sheets.
4. Horizontal and vertical stirrup reinforcement not shown for clarity. See "W2 Cap Beam Reinforcement Details No. 40 to No. 43" sheets.




SECTION A-A




SECTION B-B




SECTION C-C

## TRANSVERSE DIAPHRAGM REINFORCEMENT

(North Side Shown, South Side Similar)
1:30

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 497S3 | 1204 |

REGISTERED ENGINEER - CIVIL

07-21-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — James P Duxbury — No. C 64677 — Exp. 06/30/07 — CIVIL — STATE OF CALIFORNIA

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825 BATTERY STREET
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| MARK | DATE | REVISIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| 0 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

CONTRACT CHANGE ORDER NO. _____
SHEET ___ OF ___

100 % PS&E

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 27

R. Vaziadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Duxbury | A. Sanjines |
| DETAILS | J. Duxbury | A. Sanjines |
| QUANTITIES | N. Vo | A. Sanjines |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

CU 04
EA 0120F1

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

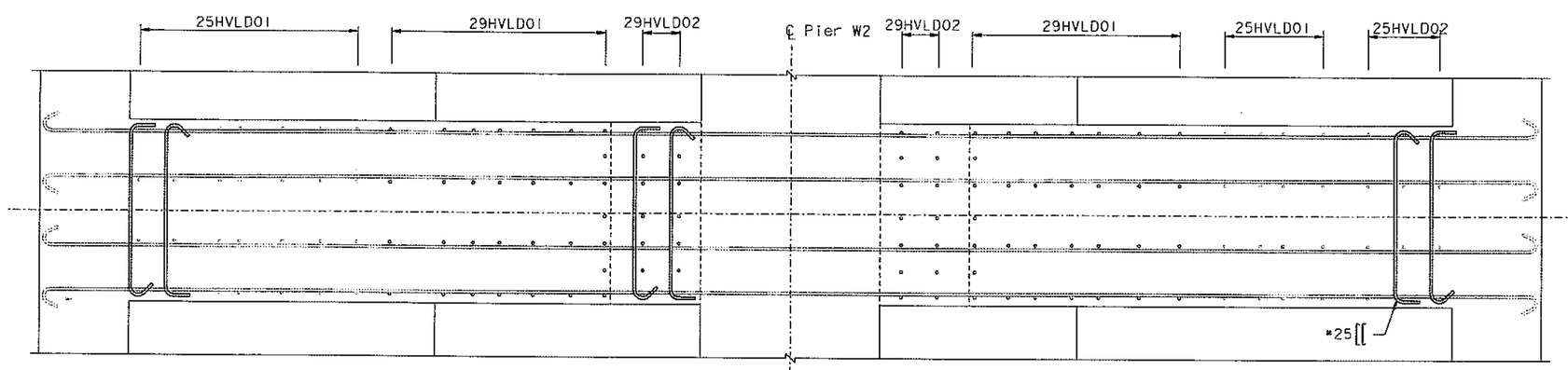
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 07/21/06

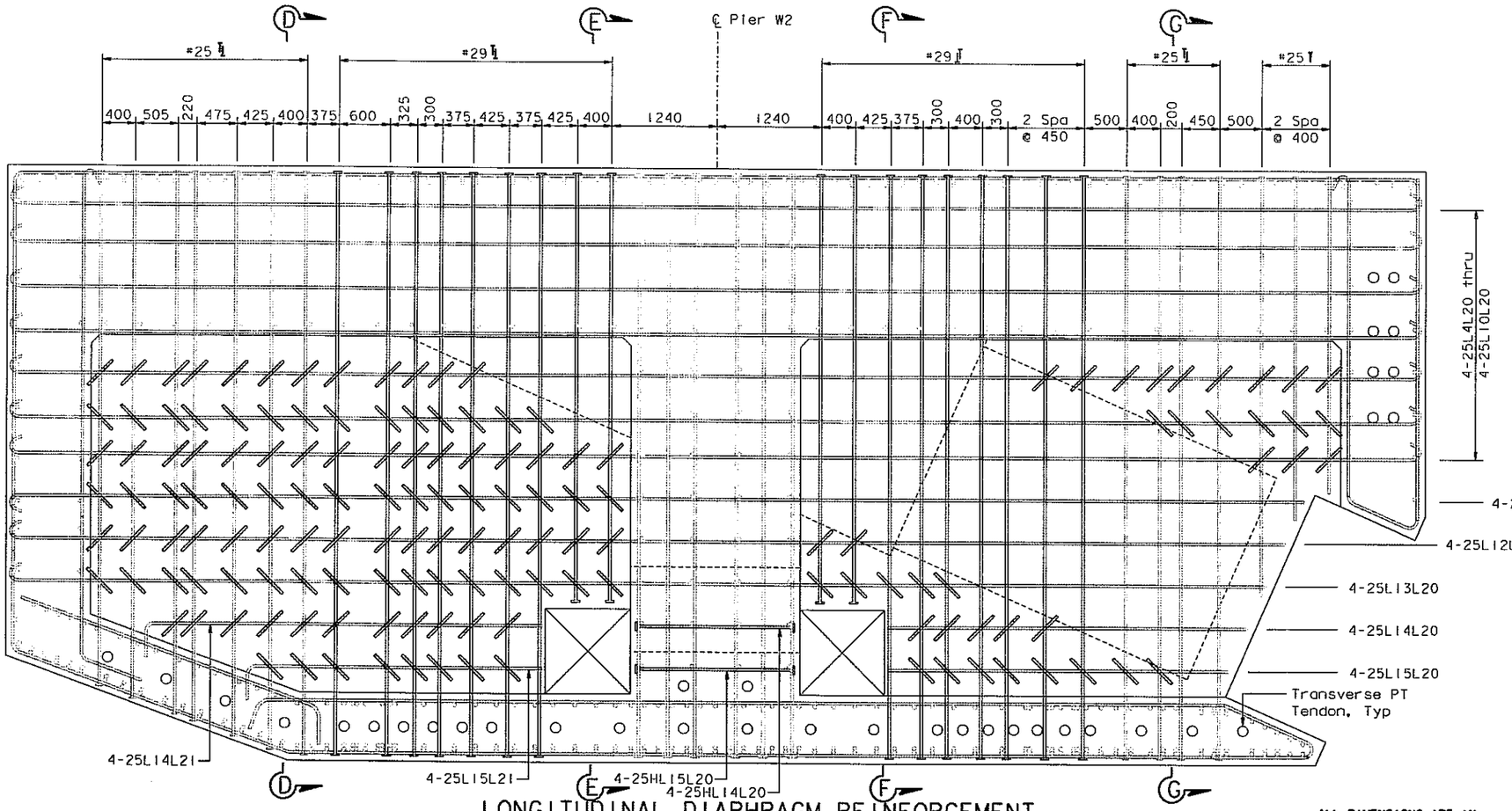
SHEET 08053 OF

FILE => I:\bb\04-012001\sas\contract plans and cco\cco\cco#23\oecap26r-s.dgn

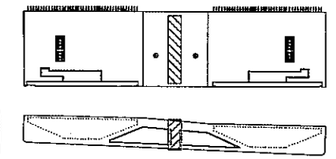
USERNAME => vlgnctova&DATE PLOTTED => 27 APR 2007 TIME PLOTTED => 10:07:16




LONGITUDINAL DIAPHRAGM REINFORCEMENT PLAN
1:30




LONGITUDINAL DIAPHRAGM REINFORCEMENT
1:30



LOCATION KEY
NTS

NOTES:

1. For Section D-D thru G-G, see "W2 Cap Beam Reinforcement Details No.29" sheet.

| MARK | DATE | DESCRIPTIONS | BY | CH'D | CCO# |
|---|---|---|---|---|---|
| | | REVISIONS | | | |
| 0 | 07/21/06 | W2 CAP BEAM ISD | JD | AS | 23 |

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

100 % PS&E

| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 04 | SF | 80 | 13.2/13.9 | 497S4 | 1204 |

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REGISTERED ENGINEER - CIVIL

07-21-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER James P. Duxbury No. C 64677 Exp. 06/30/07 CIVIL STATE OF CALIFORNIA

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R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 07/21/06

| | BY | CHECKED |
|---|---|---|
| DESIGN | J. Duxbury | A. Sanjines |
| DETAILS | J. Duxbury | A. Sanjines |
| QUANTITIES | N. Vo | J. Duxbury |

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

CU 04
EA 0120F1

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

# W2 CAP BEAM REINFORCEMENT DETAILS NO. 28

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES (PRELIMINARY STAGE ONLY) | | | | | | | | | | SHEET | OF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/21/06 | | | | | | | | | | 080S4 | |

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