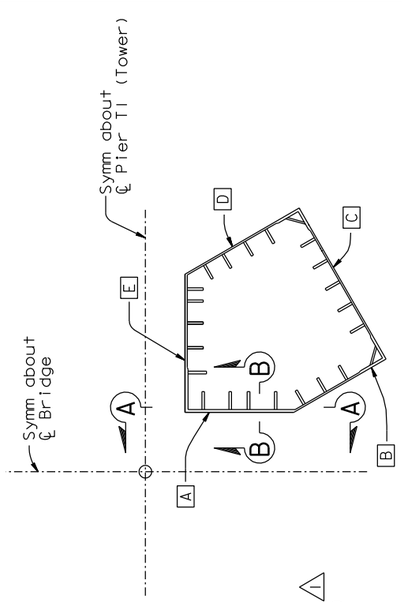
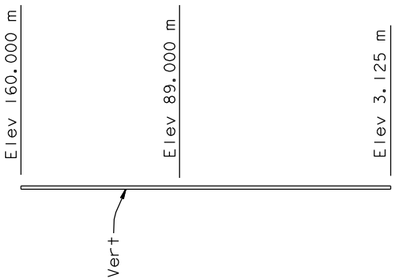


KEY PLAN



SECTION B-B
(Profile of Skin Plate "A")
(Longitudinal stiffener plates not shown for clarity)
Horiz=1:120
Vert =1:1200

Table 1

STIFFENER DESIGNATION	CUTOFF ELEVATION (m)
A1	144.000
A2	144.000
A3	144.000
A4	144.000

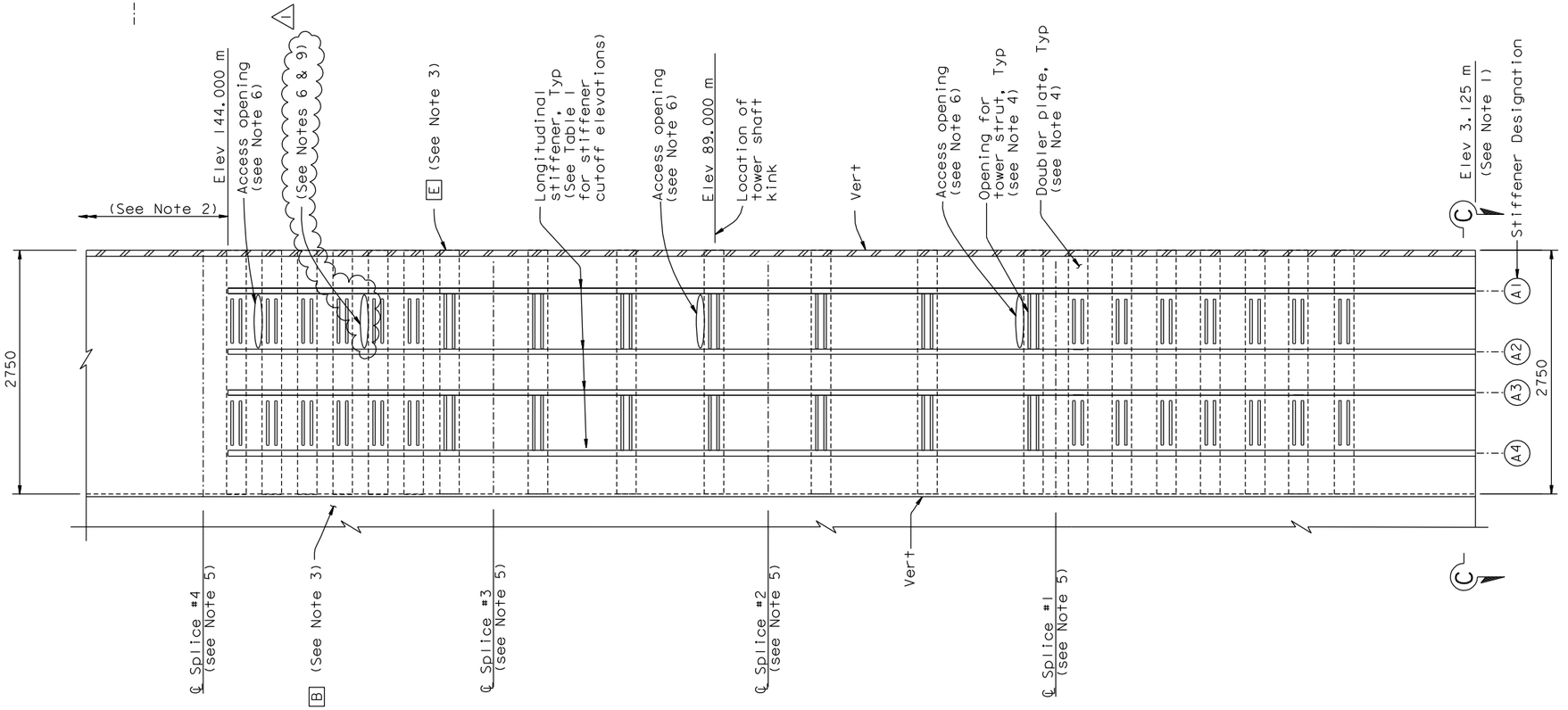
Table 2

ELEVATION (m)	SKIN PL THICKNESS (mm)
3.125-30.000	70
30.000-144.000	90

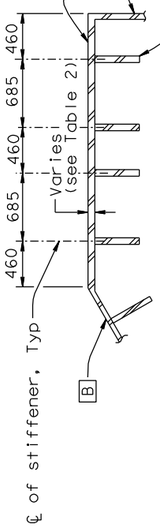
Table 3

ELEVATION (m)	TYPICAL STIFFENER SIZE (mm x mm)	STIFFENER A1 SIZE (mm x mm)
3.125-47.000	65x450	65x450
47.000-121.000	75x520	75x375
121.000-144.000	65x450	65x250

(See Note 7)



SECTION A-A
(Elevation of Skin Plate "A")
Horiz=1:30
Vert =1:300



SECTION C-C
(Partial plan of Skin Plate "A")
1:30
(See Note 8)

NOTES:

1. For tower anchorage details (not shown for clarity), see "Tower Anchorage Details" sheets.
2. For tower saddle grillage and tower head details (not shown for clarity), see "Tower Saddle Grillage Details" and "Tower Head Details" sheets.
3. Longitudinal stiffeners on tower skin PL B & E not shown for clarity.
4. For tower strut and doubler plate opening, see "Tower Shaft Details No.10" sheet.
5. For tower shaft splice details, see "Tower Splice Details" sheets.
6. For access openings details, see "Tower Access Details" sheets.
7. For longitudinal stiffener transition at tower splices, see sheets "Tower Splice Details No.7", "Tower Splice Details No.11", and "Tower Splice Details No.17".
8. Anchorage bearing stiffener plates are not shown for clarity. For details see "Tower Anchorage Details" sheets.
9. At the Contractor's option, additional access openings may be provided at locations shown.

100 % PS&E

DATE PLOTTED => 25 MAY 2011 TIME PLOTTED => 09:10:11
USERNAME => arivera

CONTRACT CHANGE ORDER NO. ____
SHEET ___ OF ___

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	531R1	1204

Caltrans Metric

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER * Marwan N. Nader * No. C 054426 Exp. 12/31/11 CIVIL STATE OF CALIFORNIA

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MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
1	05/25/11	MISCELLANEOUS ELEVATOR DETAILS	TH	MN	174

REVISIONS

	BY	CHECKED
DESIGN	M. Nader	M. Gulyas
DETAILS	L. Rus	M. Gulyas
QUANTITIES	L. Rus	Y. Zhang

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)

TOWER SHAFT DETAILS NO.3

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 05/25/11

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 04/08/02 07/01/02 12/19/02 11/13/05

SHEET 114R1 OF

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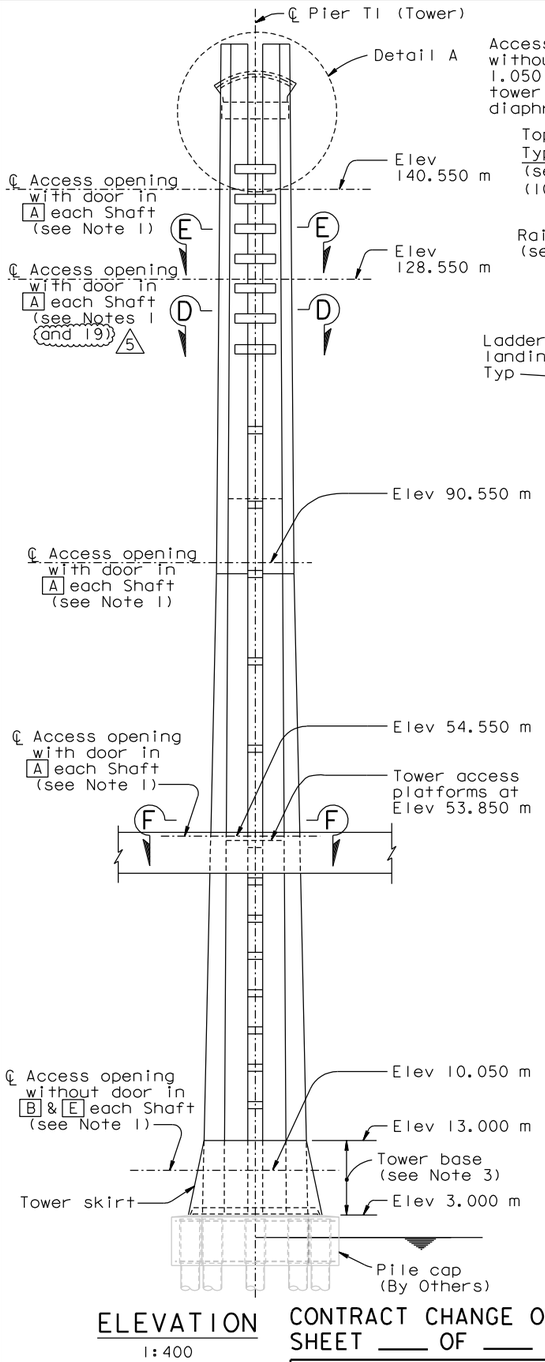
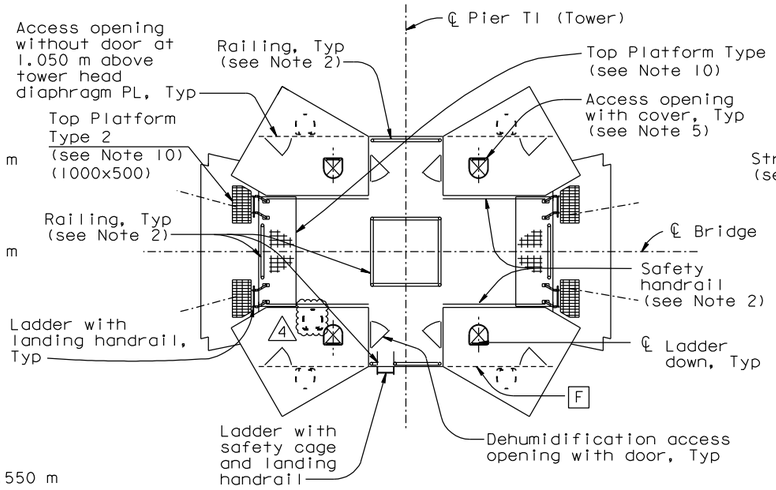


ELEVATION

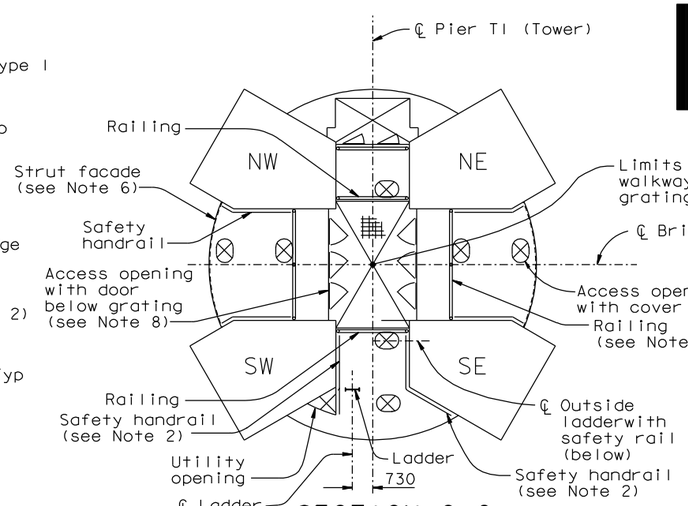
1:400

(Looking North)



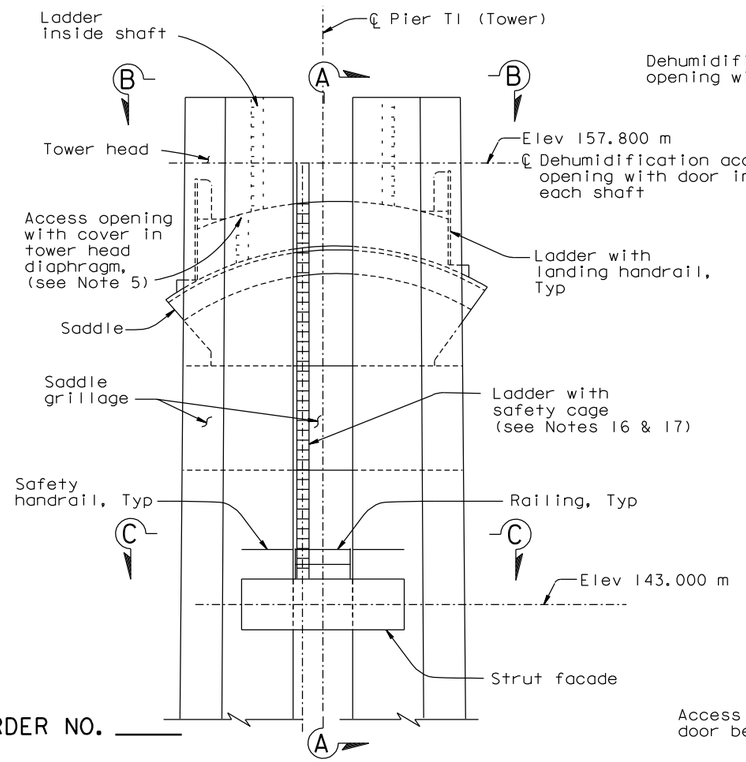
VIEW B-B (See Notes 7 & 18)

1:80



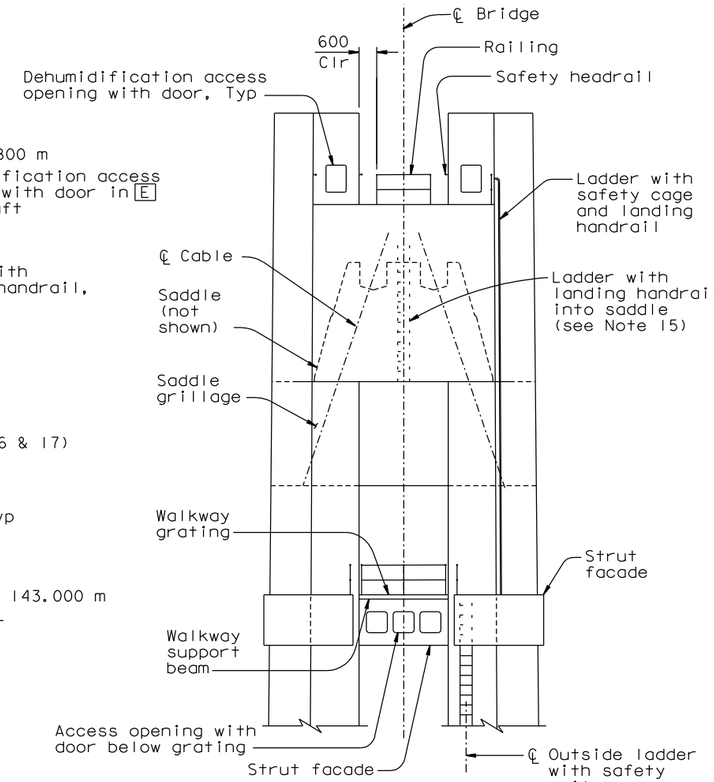
SECTION C-C

1:80



DETAIL A

1:100



SECTION A-A

1:100

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

LEGEND:

- Access opening (see Notes 1, 3, 8 & 14)
- A Tower shaft skin plate A

NOTES:

1. For location of access openings in tower shafts, see "Tower Shaft Details" sheets.
2. For railing and safety handrail details, see "Tower Access Details No. 8" sheet.
3. For additional access details in tower base, see "Tower Access Details No. 2" sheet.
4. For ladder details not shown, see "Tower Access Details No. 7" sheet.
5. For access opening details, see Detail E on "Tower Access Details No. 8" sheet. For cover details, see "Tower Access Details No. 9" sheet.
6. For strut facade, see "Tower Strut Facade Details" sheets.
7. For location of access openings in tower head, see "Tower Head Details" sheets.
8. For access opening and door details, see "Tower Access Detail No. 4" sheet. Access openings are without door unless noted otherwise.
9. For Section D-D and E-E, see "Tower Access Details No. 3" sheet.
10. For Top Platform Types 1 and 2, see "Tower Access Detail No. 9" sheet.
11. For Section F-F, see "Tower Access Details No. 10" sheet.
12. For walkway grating and support beam, see "Tower Access Details No. 3" sheet.
13. For access opening cover details, see "Tower Access Details No. 9" sheet.
14. For location of access openings in strut facade, see "Tower Strut Facade Details" sheets.
15. For location of saddle access opening and ladder, see "Tower Saddle Housing Details" sheets.
16. At locations where ladder lengths exceed 6.5 meters, contraction joints shall be provided. Ladder length is defined as the distance between the centerlines of the top and bottom end supports. Contraction joints shall be located below ladder supports unless noted otherwise. For contraction joint details, see "Tower Access Details No. 7" sheet.
17. Ladder supports shall be spaced at 6 meters maximum.
18. For ladder, railing and safety handrail, and top platform details not shown, see "Tower Access Details No. 1A" sheet.
19. 5 At the Contractor's option, additional access openings may be provided at these elevations.

CONTRACT CHANGE ORDER NO. ____
SHEET ___ OF ___

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
5	05/25/11	MISCELLANEOUS ELEVATOR DETAILS	NV	MN	174
4	10/29/10	DOORS AND LADDER CAGES	NV	MN	118
3	10/22/10	TOWER HEAD DETAILS	NV	MN	93
2	07/17/09	ELEVATOR DETAILS	TH	MN	85
1	07/18/08	TOWER ACCESS	NV	MN	65

REVISIONS

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 05/25/11

Rev. Date: 5-18-98

	BY	CHECKED
DESIGN	M. Nader	M. Gulyas
DETAILS	G. Baker	L. Rus
QUANTITIES	D. Turner	J. Leventini

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

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 →

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	917R5	1204

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

REGISTERED PROFESSIONAL ENGINEER
Marwan N. Nader
No. C 054426
Exp. 12/31/11
CIVIL
STATE OF CALIFORNIA

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

TOWER ACCESS DETAILS NO. 1

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

REVISION DATES (PRELIMINARY STAGE ONLY): 05/15/99 | 08/02/99 | 05/31/01 | 04/08/02 | 07/01/02 | 12/19/02 | 10/12/04

SHEET 500R5 OF

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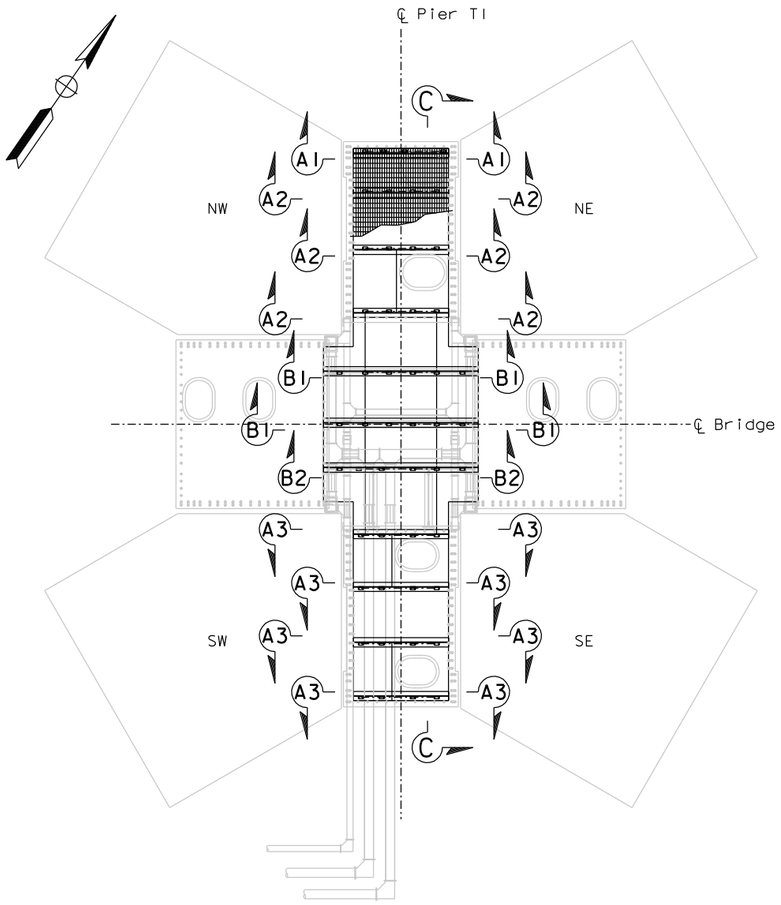
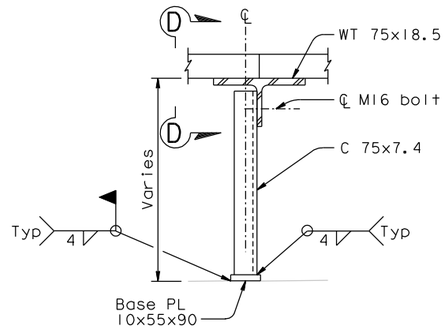
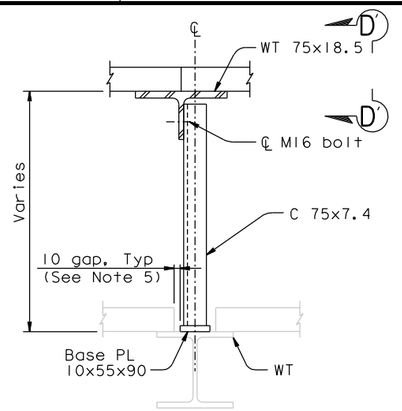


GRATING SUPPORT
KEY PLAN ABOVE EL 53.85 (See Note 3)
1:50



DETAIL A
1:5



DETAIL B
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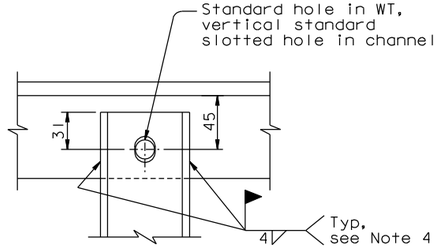
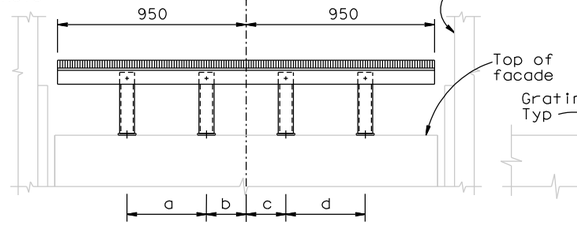


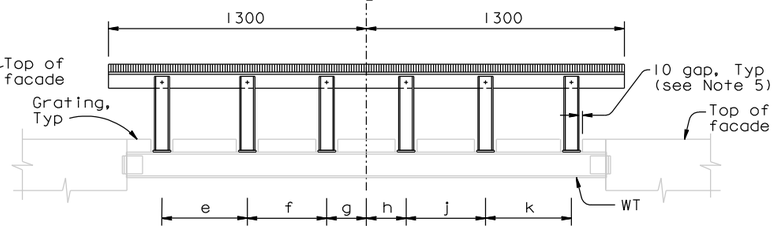
SECTION D-D (D'-D' SIMILAR)
1:2.5

	a	b	c	d
A1	650	60	300	300
A2	400	200	200	400
A3	400	200	325	350

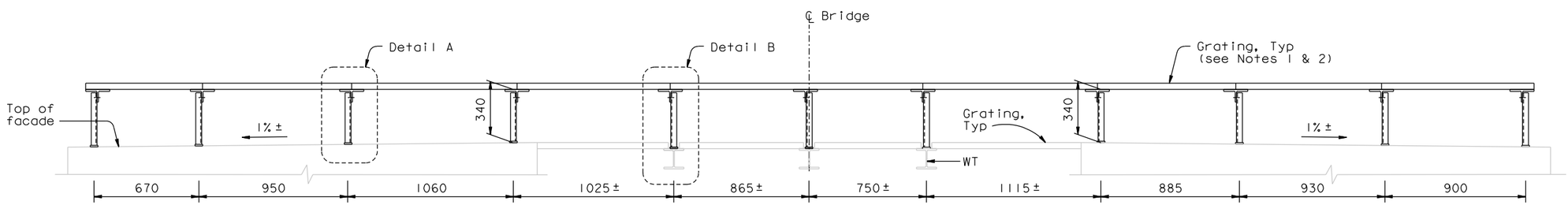


SECTION A-A
1:15

	e	f	g	h	j	k
B1	430	400	200	200	400	430
B2	320	385	325	200	400	430



SECTION B-B
1:15



SECTION C-C
1:15

NOTES:

1. The Contractor shall provide fiberglass grating with fasteners. The grating shall be rated to support 5 kN/m2 loading with deflection not greater than 1 mm.
2. The top of the grating shall be level.
3. For Removable Gratings Plan, see "Tower Access Details No.26" and "Tower Access Details No.27" sheets.
4. Welding of channel to WT shall be performed after top of WT is level.
5. Cut grating to provide clearance for grating support posts.

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	938S3	1204

REGISTERED ENGINEER - CIVIL
Tien Hung Ho
No. C 43990
Exp. 06/30/11
CIVIL
STATE OF CALIFORNIA
03-25-11
PLANS APPROVAL DATE

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R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 03/29/11

MARK	DATE	REVISIONS DESCRIPTIONS	BY	CH'D	CCO#
0	03/25/11	MISCELLANEOUS ELEVATOR DETAILS	TH	NV	174

	BY	CHECKED
DESIGN	T. Ho	N. Vo
DETAILS	C. Neff	A. Baumberger
QUANTITIES	C. Neff	A. Baumberger

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)

TOWER ACCESS DETAILS NO. 25

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): 03/25/11

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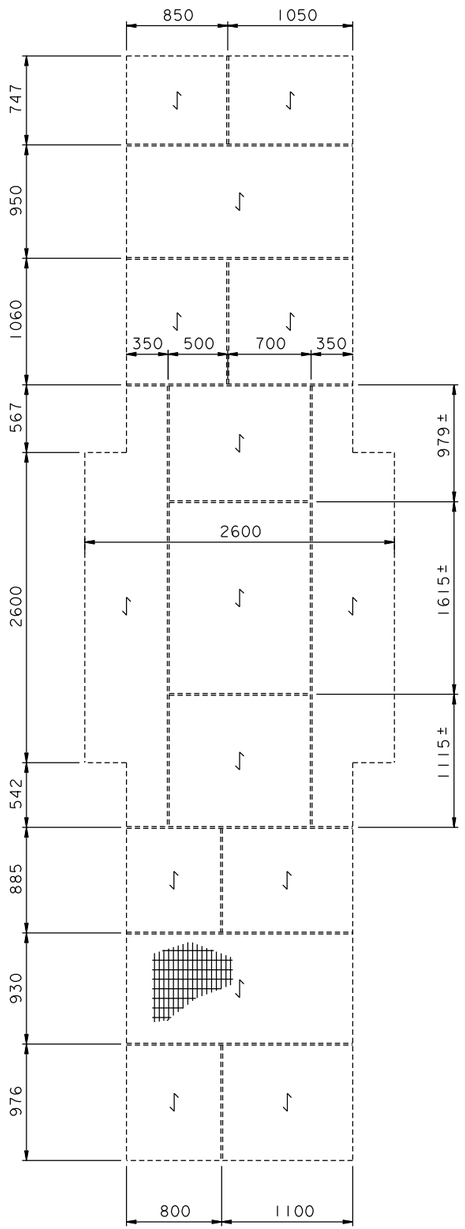
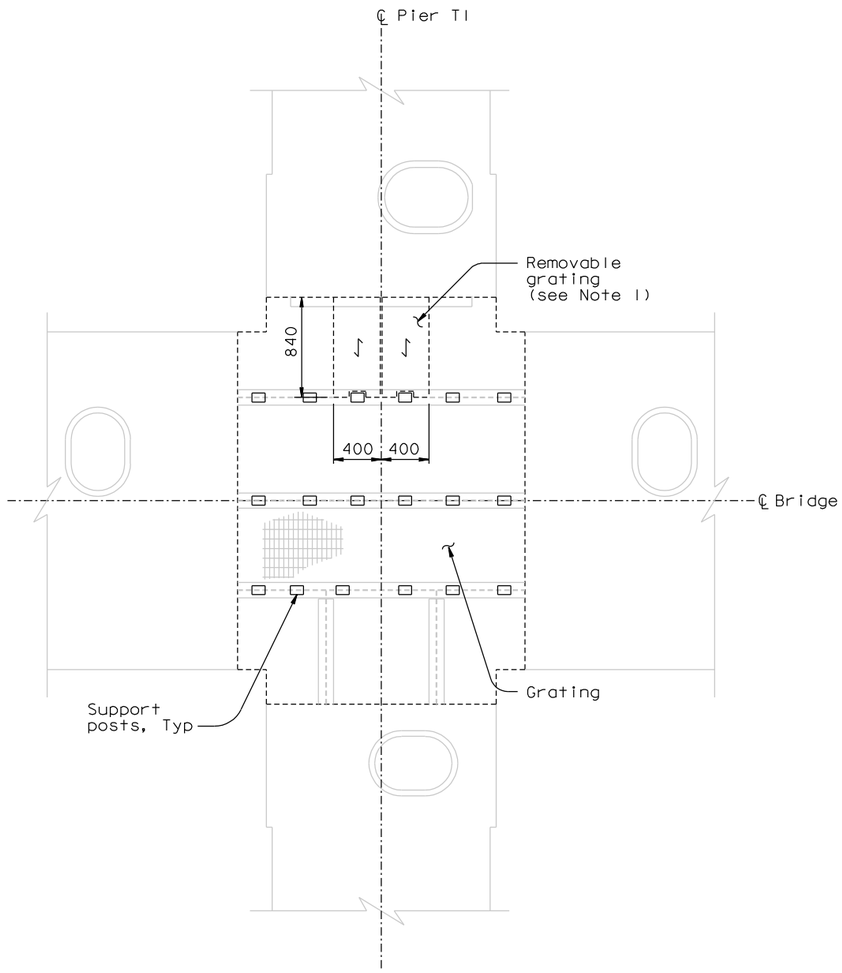


REMOVABLE GRATING
PLAN ABOVE EL 53.85
1:25



REMOVABLE GRATING
PLAN @ EL 53.85
1:25

LEGEND:

Direction of bearing bars

or Grating edges

NOTES:

1. Modify the grating to create a removable panel at indicated location.

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

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

Tien Hung Ho
No. C 43990
Exp. 06/30/11
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

03-25-11
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MARK	DATE	REVISIONS	BY	CH'D	CCO#
0	03/25/11	MISCELLANEOUS ELEVATOR DETAILS	TH	NV	174

DESIGN	BY T. Ho	CHECKED N. Vo	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY C. Neff	CHECKED A. Baumberger	
QUANTITIES	BY C. Neff	CHECKED A. Baumberger	

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 03/24/11

R. Manzanarez
PROJECT ENGINEER

CU 04
EA 0120F1

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

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 03/25/11

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

TOWER ACCESS DETAILS NO. 26

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 521S4 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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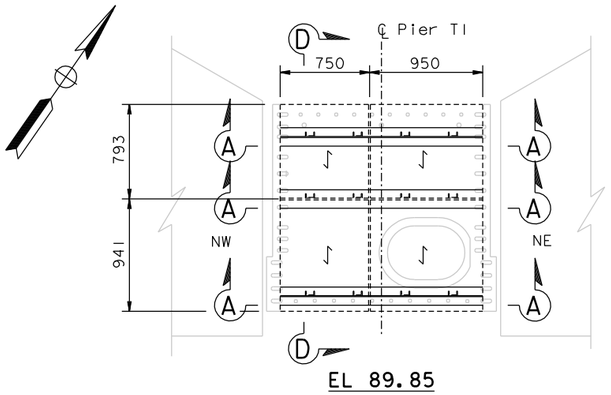
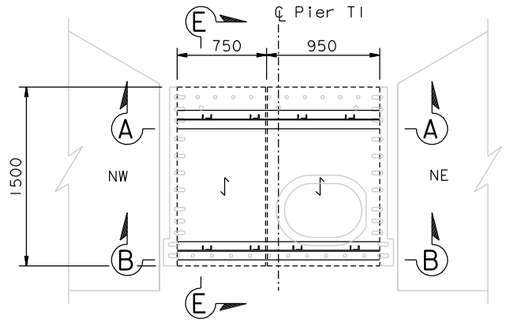


EL 89.85



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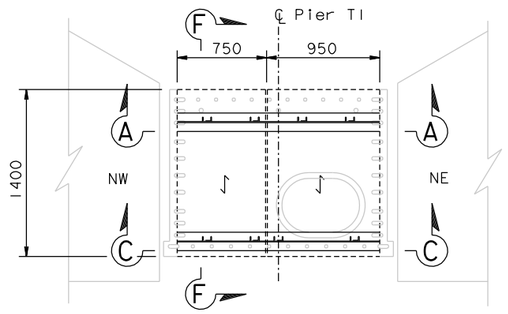
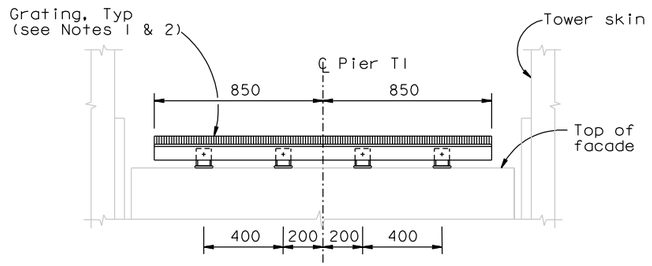


EL 139.85

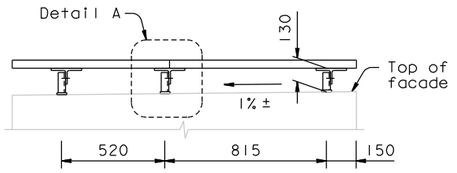
PLAN AT TOP OF REMOVABLE GRATING

1:25



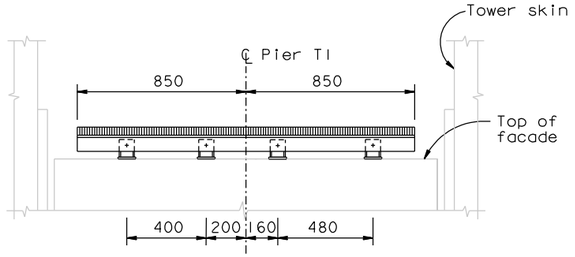
SECTION A-A

1:15



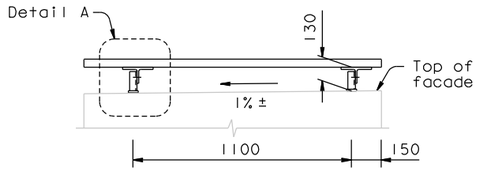
SECTION D-D

1:15



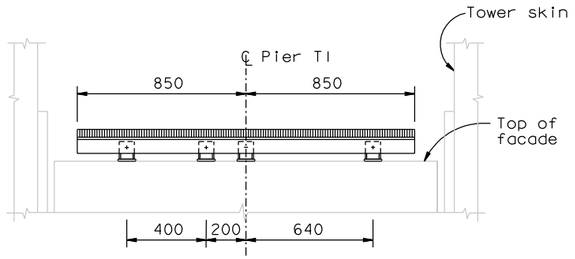
SECTION B-B

1:15



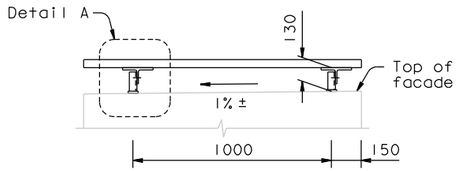
SECTION E-E

1:15



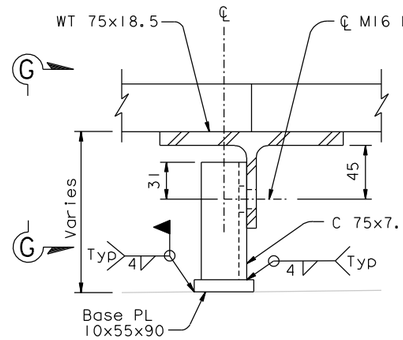
SECTION C-C

1:15



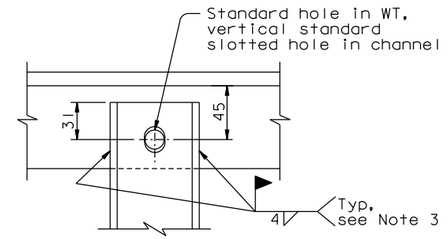
SECTION F-F

1:15



DETAIL A

1:2.5



SECTION G-G

1:2.5

LEGEND:

Direction of bearing bars

or Grating edges

NOTES:

1. The Contractor shall provide fiberglass grating with fasteners. The grating shall be rated to support 5 kN/m2 loading with deflection not greater than 1 mm.
2. The top of the grating shall be level.
3. Welding of channel to WT shall be performed after top of WT is level.

CONTRACT CHANGE ORDER NO. ____
SHEET ___ OF ___

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	938S5	1204

Caltrans Metric

REGISTERED ENGINEER - CIVIL

Tien Hung Ho No. C 43990 Exp. 06/30/11 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

03-25-11
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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

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

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
0	03/25/11	MISCELLANEOUS ELEVATOR DETAILS	TH	NV	174

REVISIONS

	BY		CHECKED
DESIGN	T. Ho		N. Vo
DETAILS	C. Neff		A. Baumberger
QUANTITIES	C. Neff		A. Baumberger

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 03/25/11

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)

TOWER ACCESS DETAILS NO. 27

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): 03/25/11

SHEET 521S5 OF

FILE => I:\bb\04-012001\sas\contract plans and cco\cco\cco#174\2-revision 03-25-11\dgn\akacc22e.dgn

100% PS&E
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TIME PLOTTED => 12:10:26
USERNAME => PTom