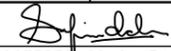




DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	86 S37	1204

 3/27/13
 REGISTERED CIVIL ENGINEER
 REGISTERED PROFESSIONAL ENGINEER
 No. 71894
 CIVIL
 STATE OF CALIFORNIA

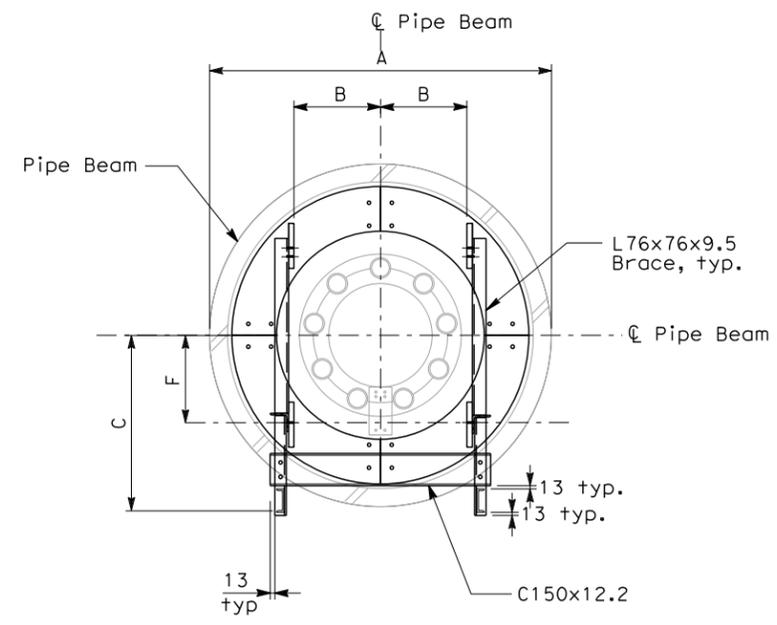
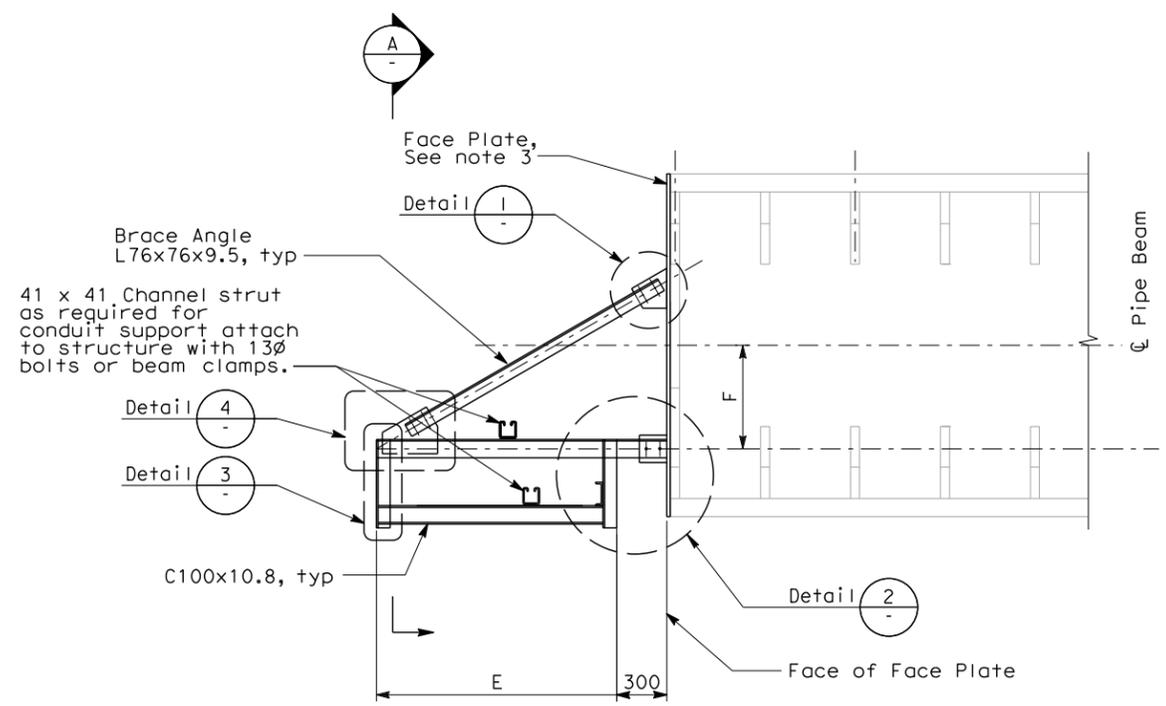
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TABLE CONDUIT SUPPORT DIMENSIONS

	Hinge A
A	1900
B	600
C	991
D	420
E	1335
F	574

NOTES:

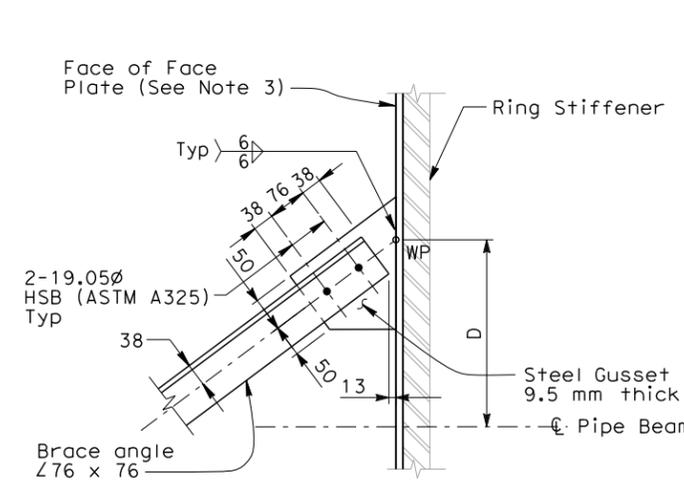
- For General Structural Notes, see AS-1.
- For other details not shown, see electrical plans.
- See sheet AS-35A for face plate.



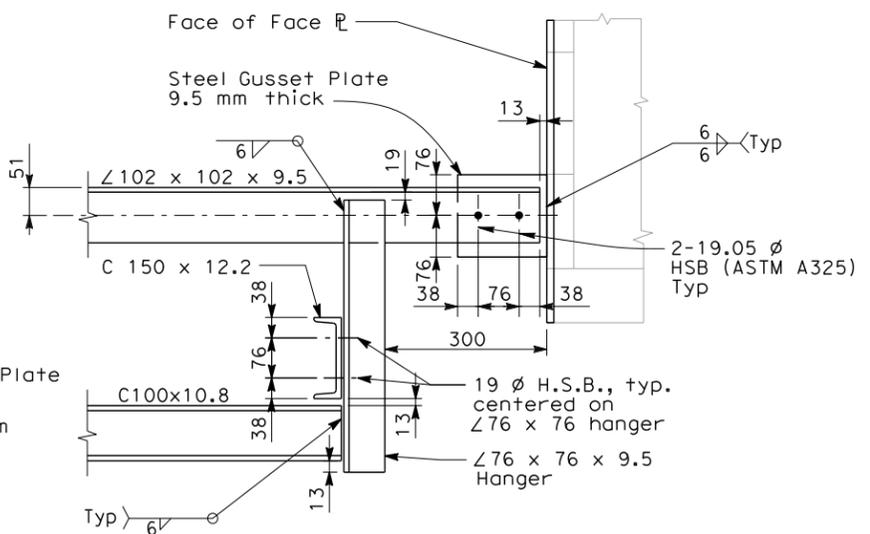
SECTION A-A
NO SCALE

CONDUIT SUPPORT AT PIPE BEAM

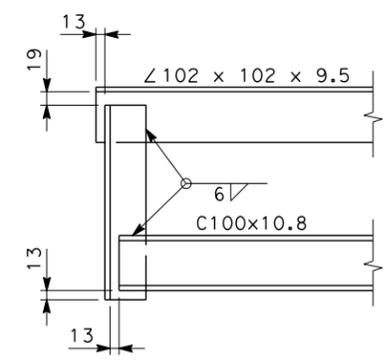
SEE TABLE FOR DIMENSIONS
SCALE: NO SCALE



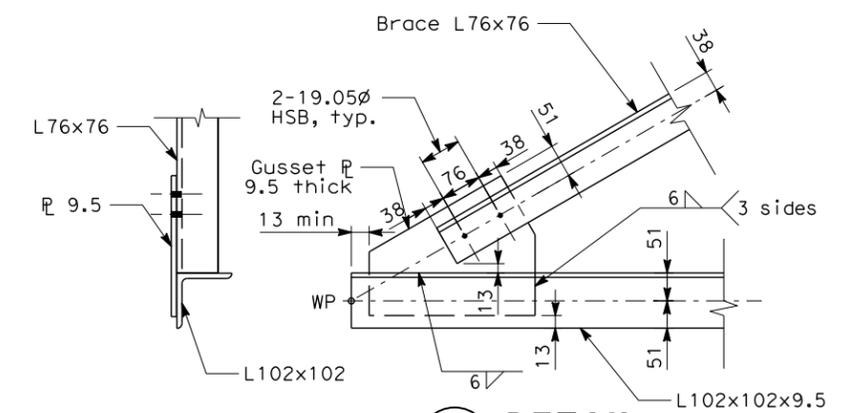
1 DETAIL
SEE TABLE FOR DIMENSIONS
NO SCALE



2 DETAIL
NO SCALE



3 DETAIL
NO SCALE
(Brace not shown for clarity)



4 DETAIL
NO SCALE
(Hanger L76x76 not shown for clarity)

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE				
03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	SAM	RG	191S2
MARK	DATE	DESCRIPTIONS	BY	CH'D CCO#
REVISIONS				

CONTRACT CHANGE ORDER NO. _____
 SHEET _____ OF _____

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN	BY S. Mohammed	CHECKED R. Garcia
DETAILS	BY E. Llorico	CHECKED R. Garcia
QUANTITIES	BY	CHECKED

PREPARED FOR THE STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 PROJECT ENGINEER Brady Nadell

BRIDGE NO.	34-0006
KILOMETER POST	13.2/13.9

SAS/SKYWAY SUPERSTRUCTURE
GIRDER CONDUIT/CABLE TRAY SUPPORT
DETAIL - SHEET 1 OF 4
AS-35

\$FREQUENT

DESIGN DETAIL SHEET (METRIC) (REV. 3/1/98)



CU 04251
EA 0120F1

FILE => 04-0120F1_086537.dgn

DISREGARD PRINTS BEARING EARLIER REVISION DATES

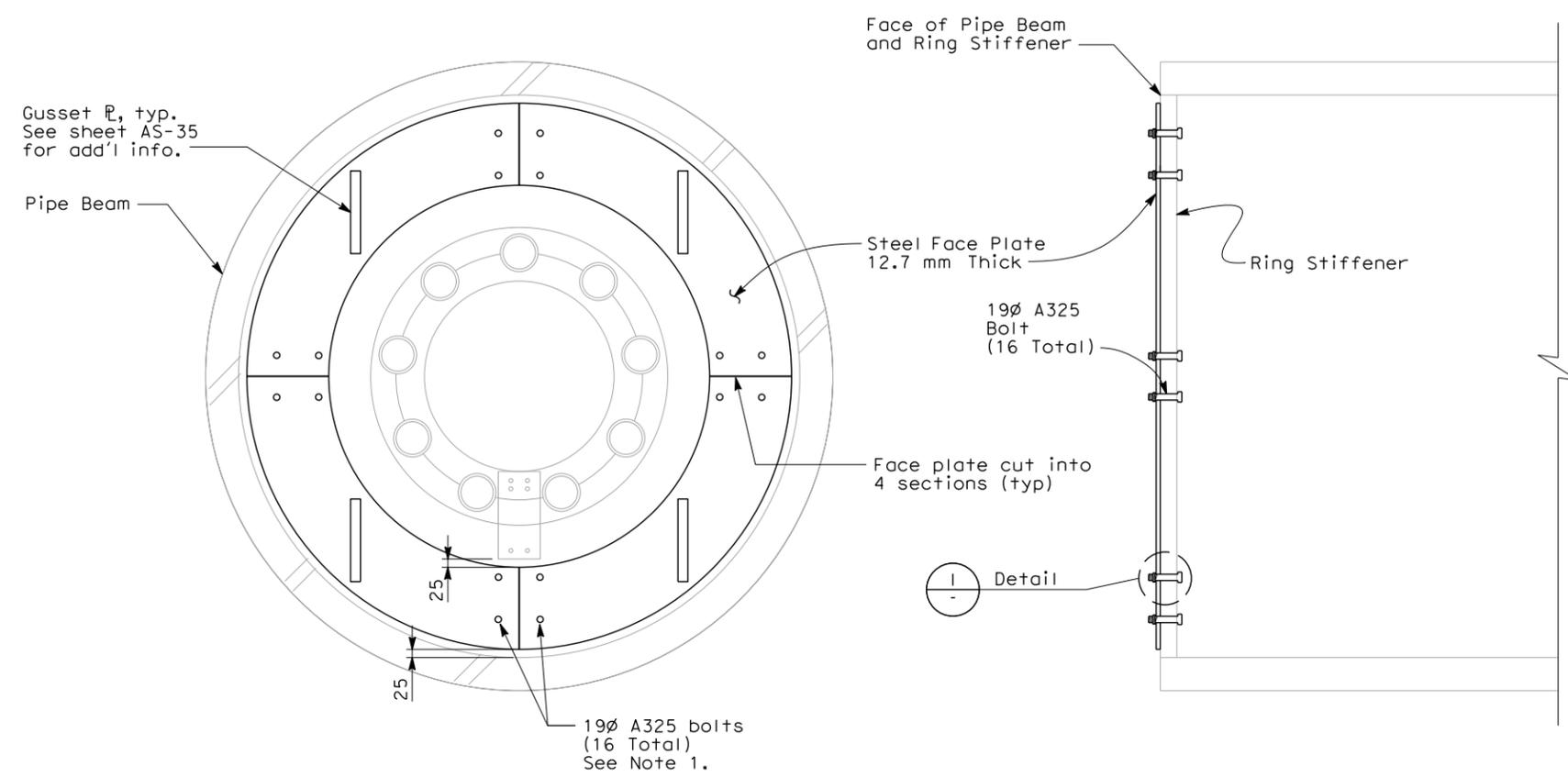
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SHEET OF

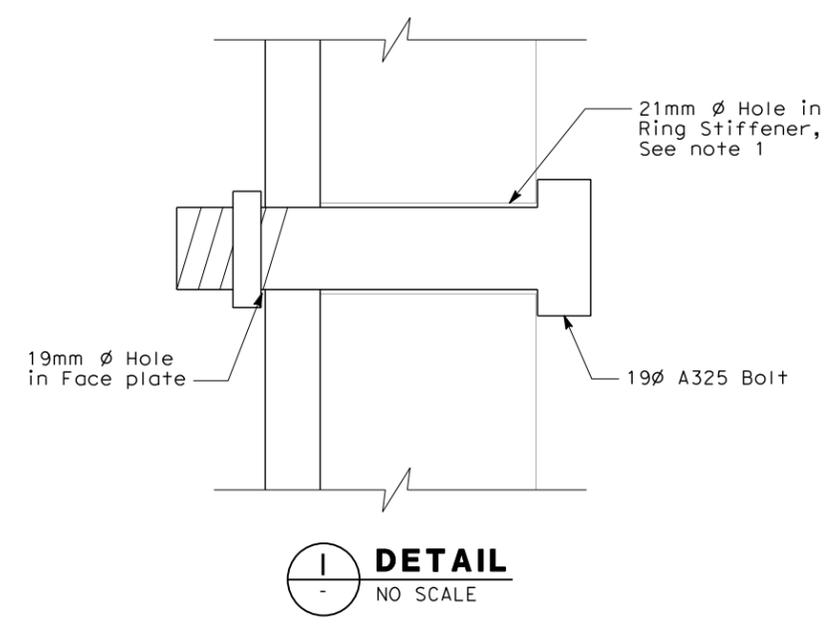
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REGISTERED CIVIL ENGINEER			3/27/13	REGISTERED PROFESSIONAL ENGINEER	
PLANS APPROVAL DATE				No. 71894	
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FACE PLATE AT PIPE BEAM
NO SCALE



DETAIL
NO SCALE

NOTES:

1. Bolt locations in face plate shall match existing bolt pattern in ring stiffener as shown. Verify existing bolt holes sizes in field.
2. Bolts shall be installed with lock washer.
3. All structural steel shall be hot-dipped galvanized.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
△	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	SAM	RG	191S2
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
REVISIONS					

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN DETAIL SHEET (METRIC) (REV. 3/1/98)	DESIGN	BY S. Mohammed	CHECKED R. Garcia	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	34-0006	SAS / SKYWAY SUPERSTRUCTURE GIRDER CONDUIT/CABLE TRAY SUPPORT DETAIL - SHEET 2 OF 4	AS-35A	
	DETAILS	BY E. Llorico	CHECKED R. Garcia		PROJECT ENGINEER	KILOMETER POST			13.2/13.9
	QUANTITIES	BY	CHECKED		Brady Nadell				
				CU 04251 EA 0120F 1	DISREGARD PRINTS BEARING EARLIER REVISION DATES			SHEET OF	

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

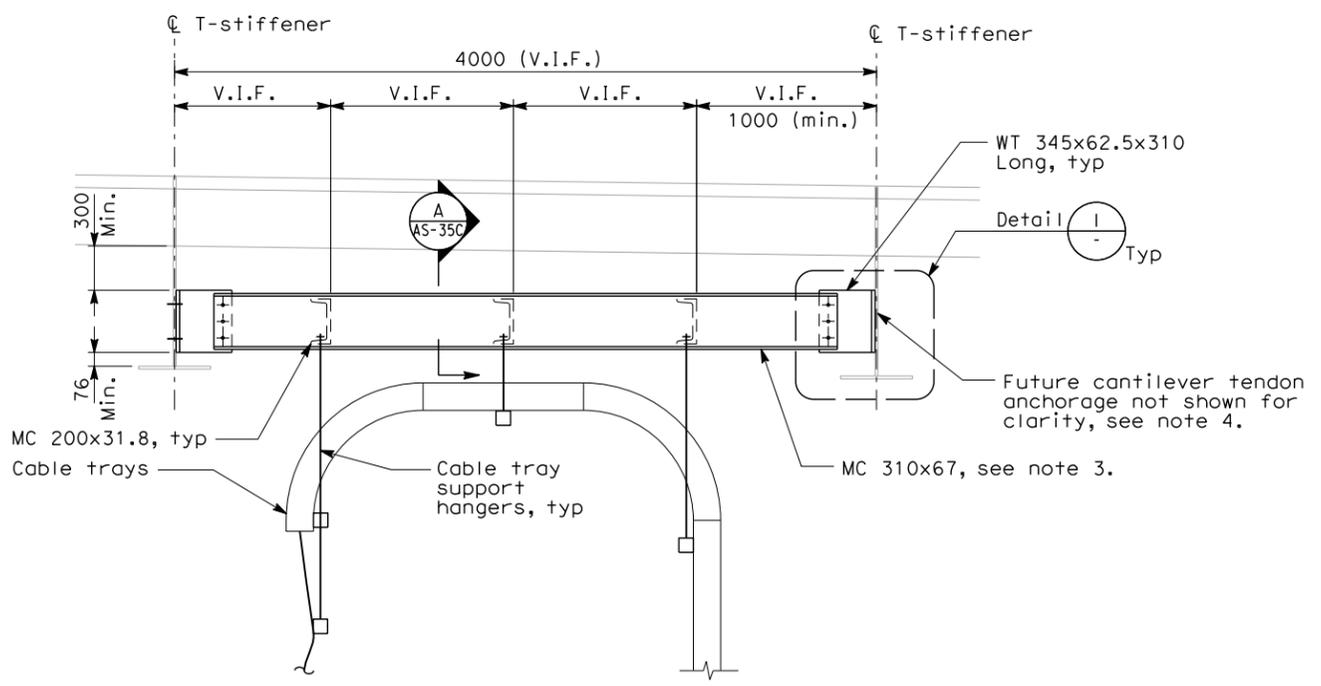
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			3/27/13	REGISTERED CIVIL ENGINEER	
			PLANS APPROVAL DATE		
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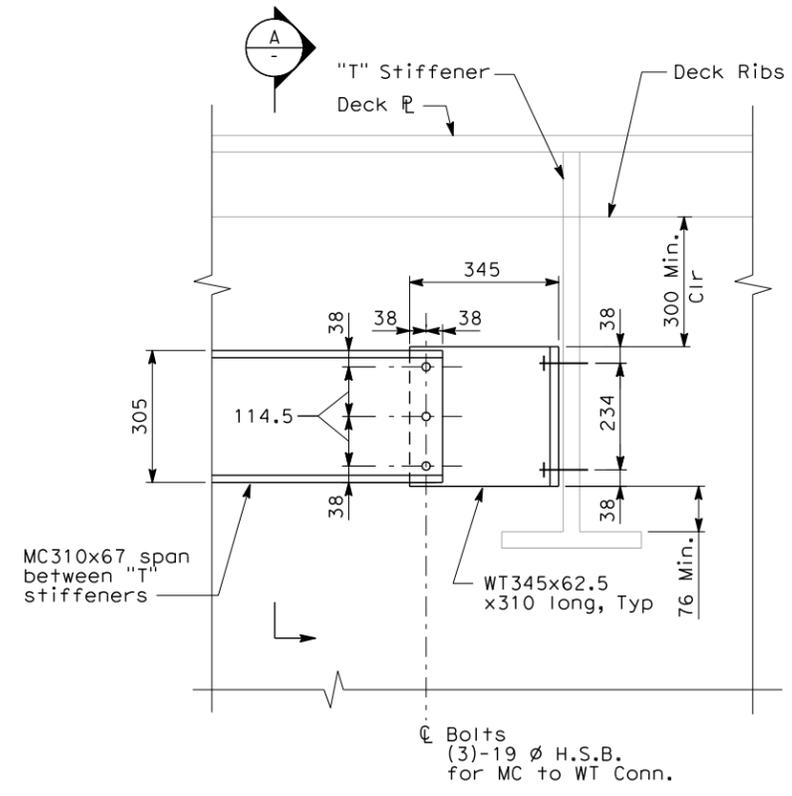


CONDUIT TRAY/CONDUIT SUPPORT AT CEILING

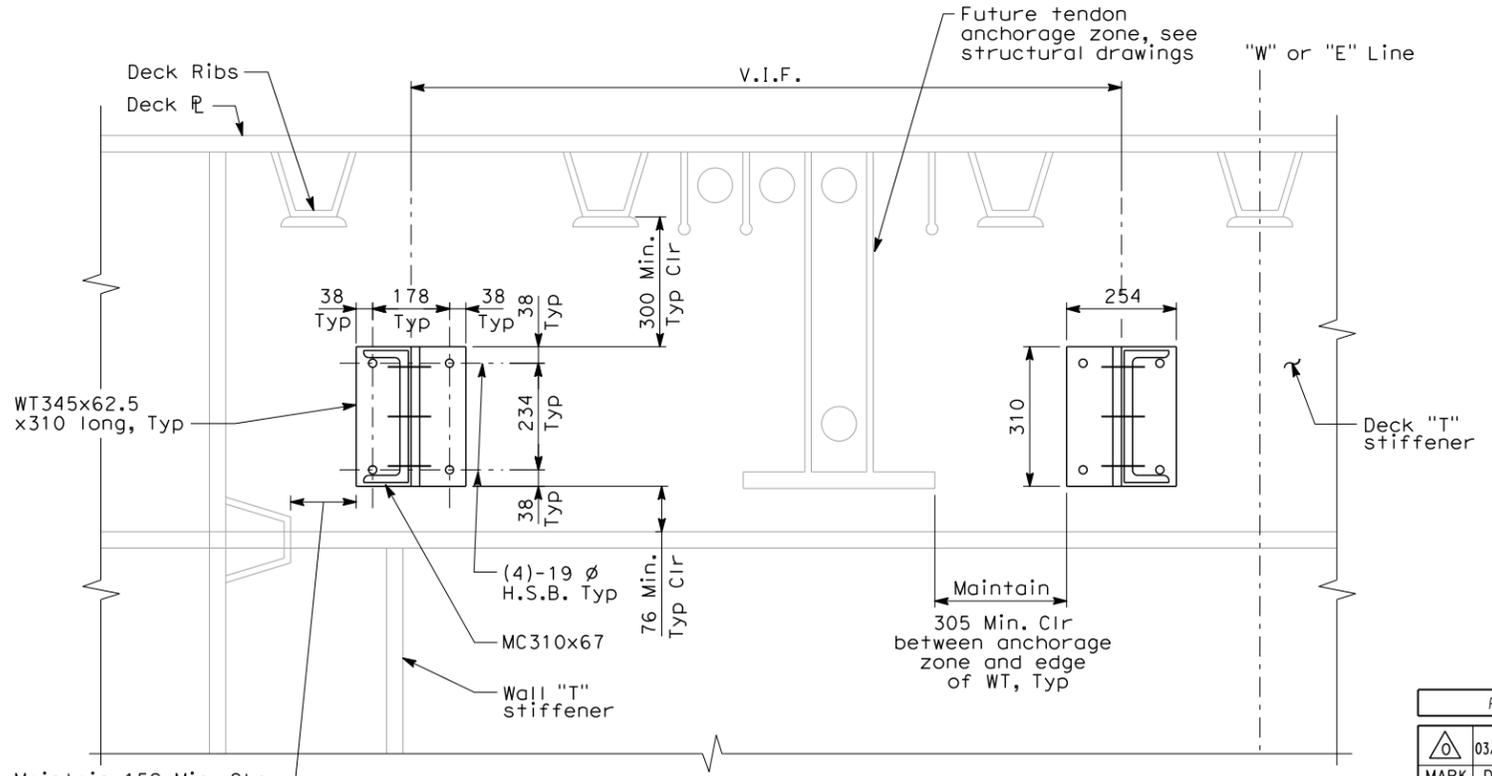
NO SCALE

NOTES:

1. For General Structural Notes, see AS-1.
2. For other details not shown, see electrical plans.
3. MC channel shall be installed in true horizontal position.
4. Contractor shall maintain 305 min. clr. in all directions around future tendon anchorage zone.



DETAIL 1
NTS



SECTION A-A

NO SCALE

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE				
03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	SAM	RG	191S2
MARK	DATE	DESCRIPTIONS	BY	CH'D CCO#
REVISIONS				

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

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DESIGN	BY S. Mohammed	CHECKED R. Garcia
DETAILS	BY J. Fusco	CHECKED R. Garcia
QUANTITIES	BY	CHECKED

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Brady Nadell
PROJECT ENGINEER

SAS/SKYWAY SUPERSTRUCTURE
GIRDER CONDUIT/CABLE TRAY SUPPORT
DETAIL - SHEET 3 OF 4 AS-35B

8FREQUENT



CU 04251
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

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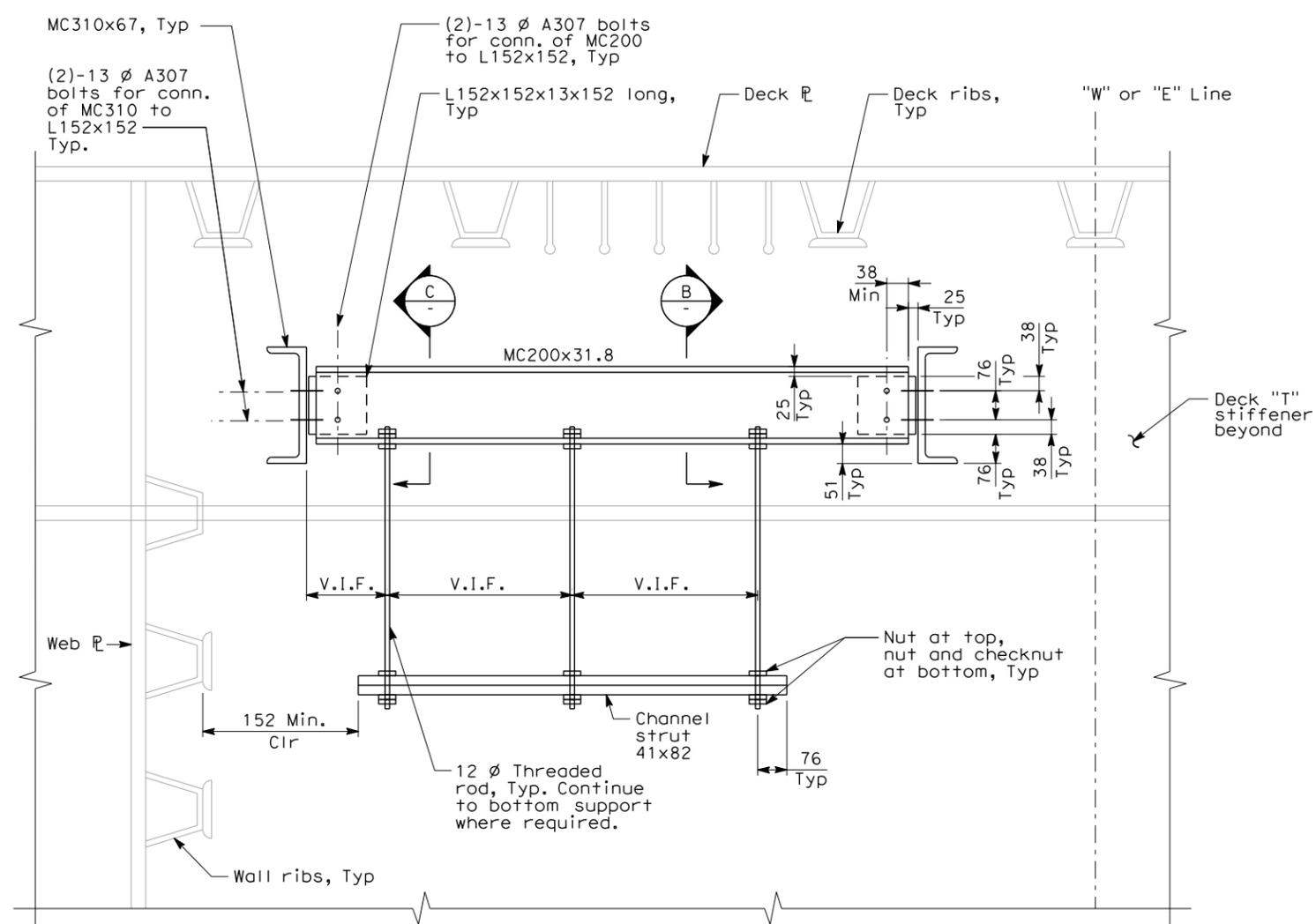
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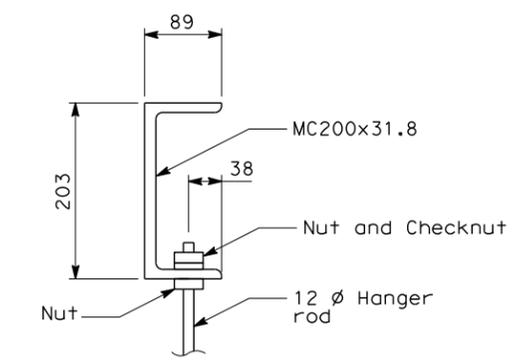
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	86 S40	1204

3/27/13
 REGISTERED CIVIL ENGINEER
 REGISTERED PROFESSIONAL ENGINEER
 SAFI UDDIN A. MOHAMMED
 No. 71894
 CIVIL
 STATE OF CALIFORNIA

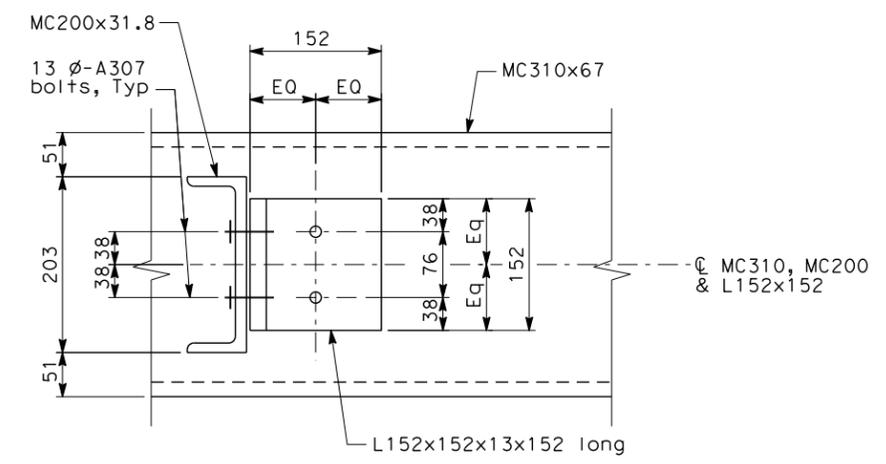
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SECTION A-A
NO SCALE



SECTION B-B
NO SCALE



SECTION C-C
NO SCALE

- NOTES:**
1. See Electrical Plans for additional information
 2. Cable trays/conduits not shown for clarity.
 3. Seismic horizontal bracing not shown for clarity. See Electrical Plans.
 4. Verify all dimensions in field.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE				
△	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	SAM	RG 191S2
MARK	DATE	DESCRIPTIONS	BY	CH'D CCO#
REVISIONS				

CONTRACT CHANGE ORDER NO. _____
 SHEET _____ OF _____

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN DETAIL SHEET (METRIC) (REV. 3/1/98)	DESIGN BY S. Mohammed	CHECKED R. Garcia	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER Brady Nadell	BRIDGE NO. 34-0006	SAS / SKYWAY SUPERSTRUCTURE GIRDER CONDUIT/CABLE TRAY SUPPORT DETAIL - SHEET 4 OF 4 AS-35C
	DETAILS BY J. Fusco	CHECKED R. Garcia		FILE => 04-0120F1_086S40.dgn	REVISION DATES (PRELIMINARY STAGE ONLY)	



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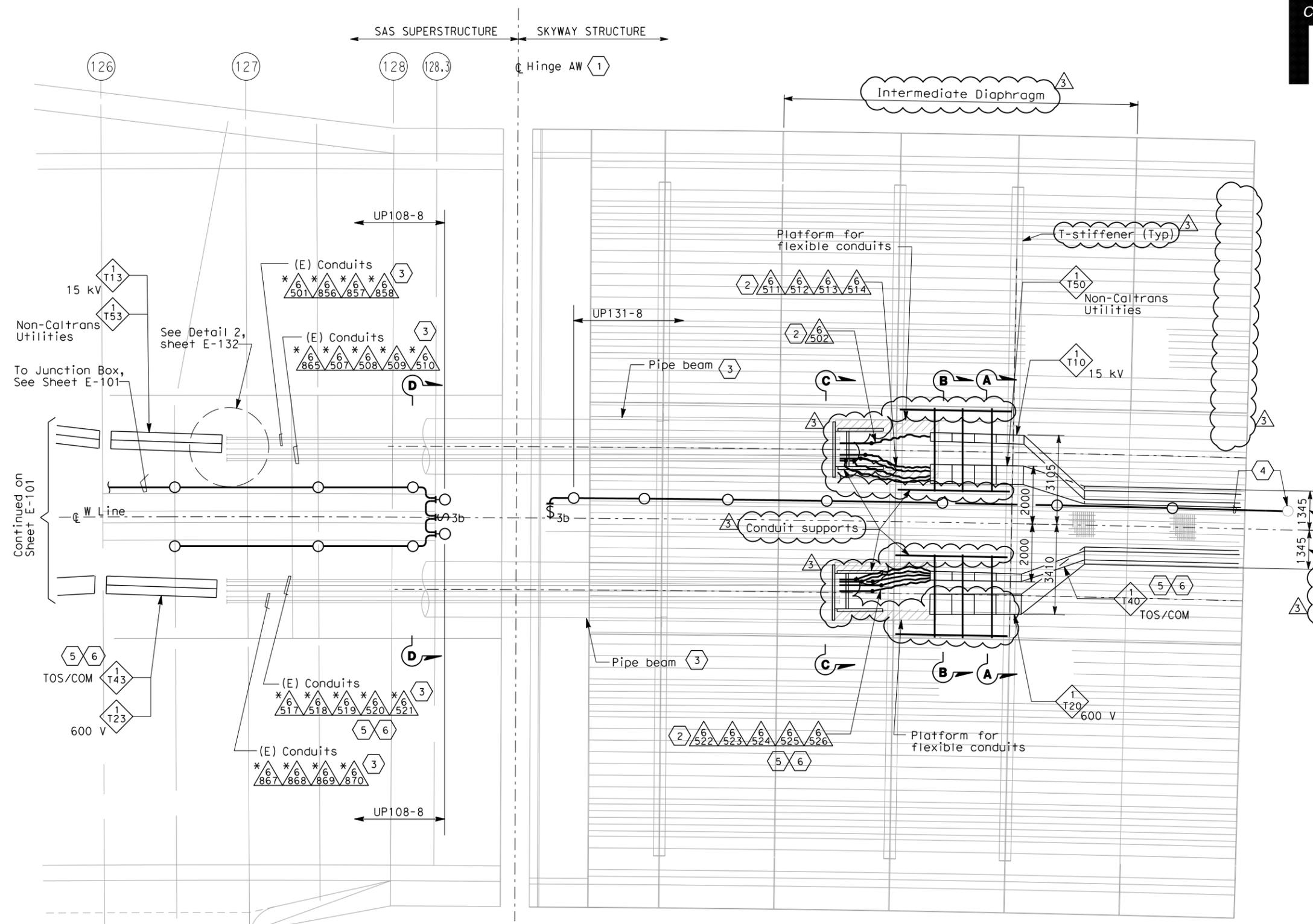
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 DATE 1/04
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 DATE 2/04



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		155 R3	1204

REGISTERED ELECTRICAL ENGINEER
 JENS ERLINGSSON
 No. 8249
 Exp. 9/30/06
 ELECTRICAL
 STATE OF CALIFORNIA
 2/6/04
 PLANS APPROVAL DATE
 PB POWER, Inc.
 A Parsons Brinckerhoff Company
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 San Francisco, CA 94107-1317
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SHEET NOTES:

- Hinge AW electrical design is based on the maximum expansion joint movement opening of 1243 mm.
- Arrange and group the flexible 103 mm conduits to maintain a minimum voltage level separation of 460 mm between systems.
- Existing conduits (*) inside pipe beam are supplied in Skyway contract.
- Terminate conduit to the next lighting fixture and splice wiring to circuit UP131-8 of Skyway Structure. Contractor to adjust as required.
- Furnish and install 4-25.4 mm innerducts inside TOS/COM conduits (#6520, 6525) and 1-25.4 mm innerduct per BASE fiber optic cable in TOS/COM cable tray.
- Furnish and install BASE fiber optic cable in innerduct inside TOS/COM conduit and cable tray. See sheet E-1100.

NOTES:

- Minimum radius of cable tray fittings shall be 610 mm.
- Minimum radius of 103 mm conduit bends shall be 610 mm.
- Cables/circuits passing through the hinge locations shall be provided with cable identification tag at both ends of Hinge.
- For additional work related not shown on this drawing, see Electrical Special Provisions.
- Section A-A and B-B see sheet E-132B.
- Section C-C and Section D-D, see sheet E-132C.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
3	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR RSB	RG	191S2
2	03/01/11	BASE INTEGRATION	RSB	WB	150
1	02/25/08	CABLE TRAY CHANGES	JD	RG SE	42S1

CONTRACT CHANGE ORDER NO. _____
 SHEET _____ OF _____

FOR REVISION ONLY

FOR REVISION ONLY

FOR REVISION ONLY

PLAN
 SCALE: 1:75

**SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE
 GIRDER INTERFACE WESTBOUND**
 AS NOTED

E-101A

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

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FOR REDUCED PLANS ORIGINAL SCALE 15 IN MILLIMETERS

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CU 04251 EA 0120F1

DATE PLOTTED => 3/29/2013
 TIME PLOTTED => 10:35:54 AM

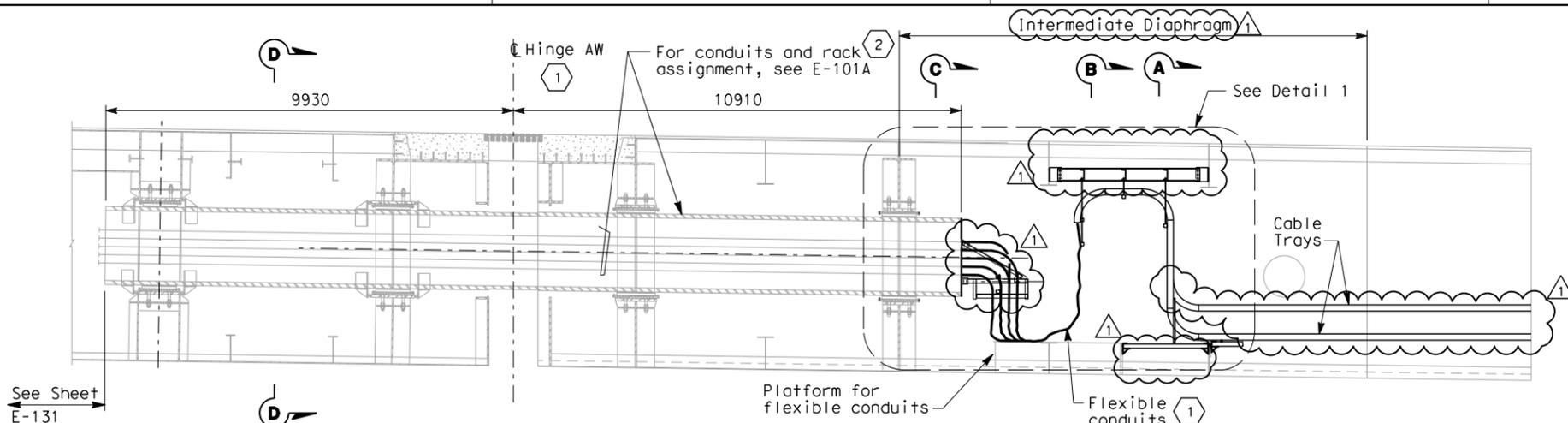
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN OVERSIGHT
 BEHZAD GOLEMOHAMMADI
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 CHECKED BY
 DATE 12/03
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 DATE REVISED 2/04
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DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		185 R1	1204

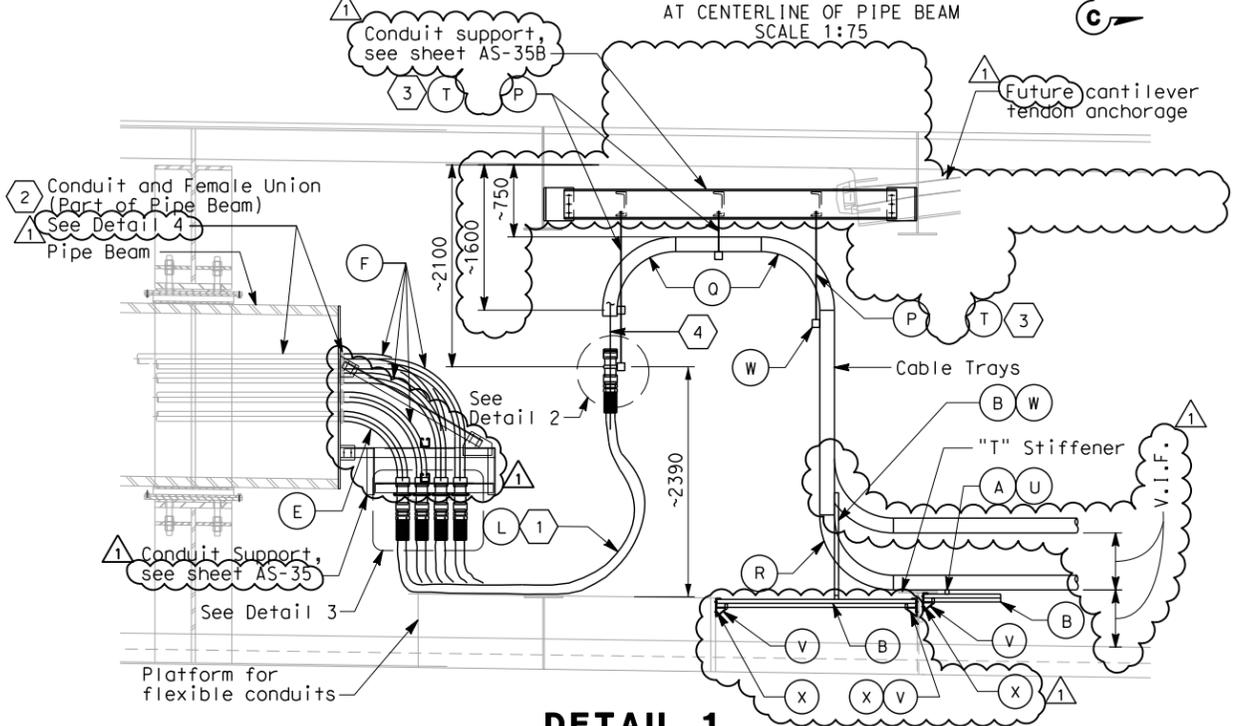
JENS ERLINGSSON 2/6/04
 REGISTERED ELECTRICAL ENGINEER DATE
 12-6-04
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 JENS ERLINGSSON
 No. 8249
 Exp. 9/30/06
 ELECTRICAL
 STATE OF CALIFORNIA

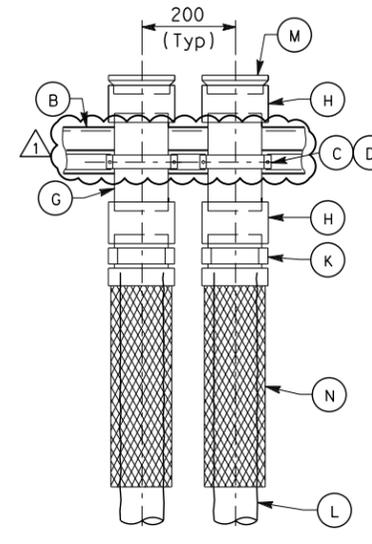


FOR REVISION ONLY

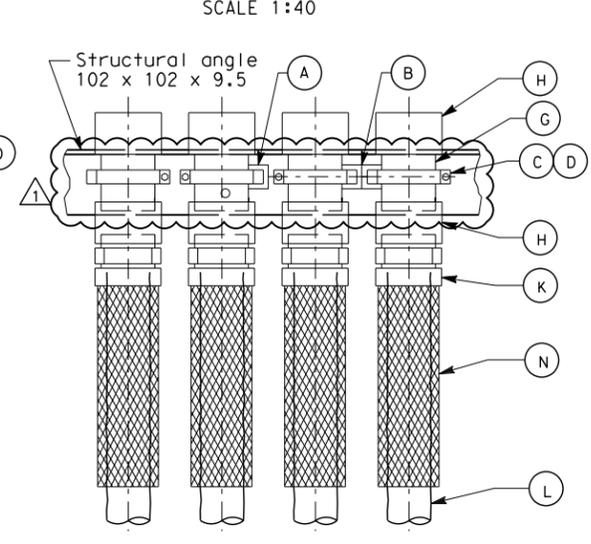
ELEVATION - HINGE AW
 AT CENTERLINE OF PIPE BEAM
 SCALE 1:75



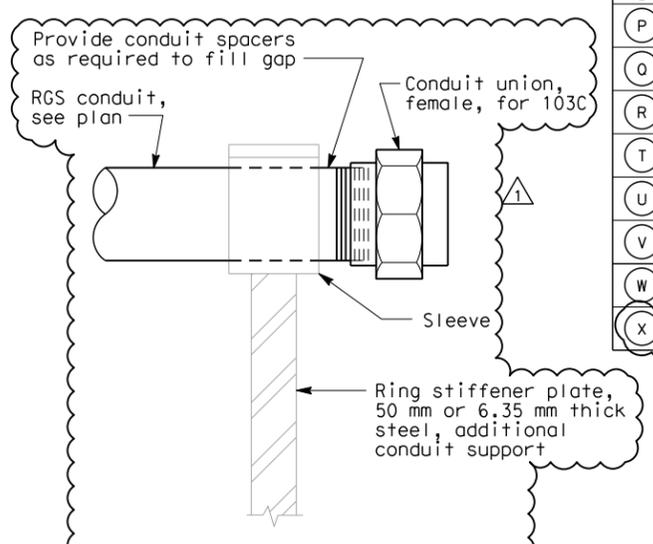
DETAIL 1
 SCALE 1:40



DETAIL 2
 NO SCALE



DETAIL 3
 NO SCALE



DETAIL 4
 NO SCALE

TYPICAL CONDUIT END SUPPORT AT PIPE BEAM

Item No.	Description
A	Strut channel 41 mm x 41 mm
B	Strut channel combination 41 mm x 82 mm
C	Strut channel spring nut, lockwasher and hex bolt
D	Strut channel conduit clamp for 103 mm
E	Conduit elbow for 103 mm (Radius= 610 mm)
F	Conduit elbow for 103 mm (Radius= 752 mm)
G	Conduit nipple, 103 mm
H	Conduit coupling, 103 mm
J	DELETED
K	Connector, straight liquidtight flexible conduit for 103 mm
L	Liquidtight flexible conduit, 103 mm
M	Insulated bushed nipple for 103 mm conduit
N	Strain relief grips or AMTEC conduit riser grip for flexible conduit, 103 mm
P	Threaded steel hanger rod, 12 mm diameter
Q	Cable tray vertical outside bend
R	Cable tray vertical inside bend
T	Strut channel spring nut, tee-head bolt
U	Strut channel cable tray clamp for ladder or solid bottom tray
V	Bracket for 82 mm X 82 mm Strut Channel
W	Vertical tray hanger with splice plate hardware (bolted to side rail)
X	130 Bolt thru 'T' stiffener web/platform support w/ nut and washer

SHEET NOTES:

- Hinge AW electrical design is based on the maximum expansion joint movement opening of 1243 mm.
- Conduits through pipe beam shall be part of the pipe beam assembly. Conduit shall be welded together to form a continuous conduit inside the pipe beam, length as specified. The weld shall be smooth on the outside and free of burrs inside the conduit. Conduit fittings, like coupling, etc. to form a continuous conduit shall not be permitted as alternative. Pipe beam supplied by Skyway Structure.
- Cable tray hangers shall be located to provide working space in front of Cantilever tendon anchorage. Field to adjust location accordingly, additional supports as required.
- All cable/cables entering the liquidtight conduits from the cable trays shall be provided with strain relief cable/cables grips or AMTEC conduit riser grip attached from the vertical cable tray hangers.

NOTES:

- Minimum radius of cable tray fittings shall be 610 mm.
- Minimum radius of 103 mm conduit bends shall be 610 mm.
- Cables/circuits passing through the hinge locations shall be provided with cable identification tag at both ends of Hinge.
- For additional work related not shown on this drawing, see Electrical Special Provisions.
- For Sections A-A and B-B, see sheet E-132B.
- Sections C-C and D-D, see sheet E-132C.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE			
MARK	DATE	DESCRIPTIONS REVISIONS	RR RSB BY CH'D CCO#
1	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR RSB 191S2

CONTRACT CHANGE ORDER NO. _____
 SHEET _____ OF _____

DETAILS
SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE
GIRDER INTERFACE WESTBOUND
HINGE AW
 SCALE AS NOTED

E-132A

FOR REDUCED PLANS ORIGINAL SCALE 15 IN MILLIMETERS

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DATE PLOTTED => 3/29/2013
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 LAST REVISION 03-27-13



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST PROJECT	SHEET No	TOTAL SHEETS
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<i>Jens Erlingsson</i> 2/6/04 REGISTERED ELECTRICAL ENGINEER DATE					REGISTERED PROFESSIONAL ENGINEER JENS ERLINGSSON No. 8249 Exp. 9/30/06 ELECTRICAL STATE OF CALIFORNIA	
12-6-04 PLANS APPROVAL DATE						
PB POWER, Inc. A Parsons Brinckerhoff Company 303 Second St., Suite 700N San Francisco, CA 94107-1317						
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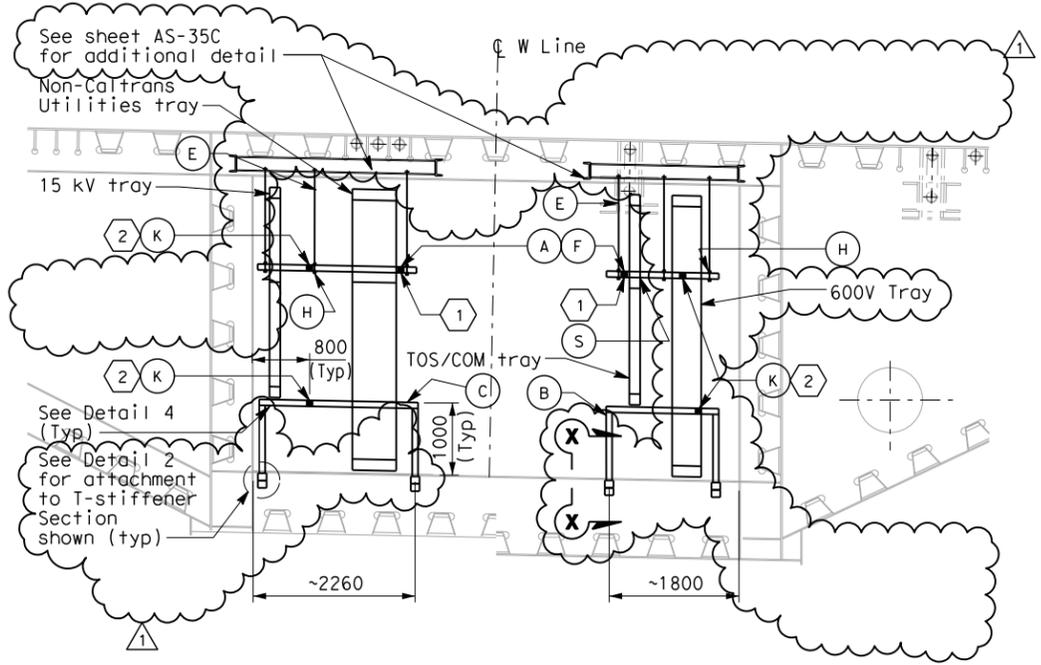
SHEET NOTES:

- ① For seismic bracing, use strut channel installed diagonally to connect horizontal member of one hanger to horizontal member of adjacent hanger. See Sections A-A and B-B for connecting points.
- ② For seismic bracing, use strut channel installed diagonally to connect horizontal member of tray support to adjacent support.

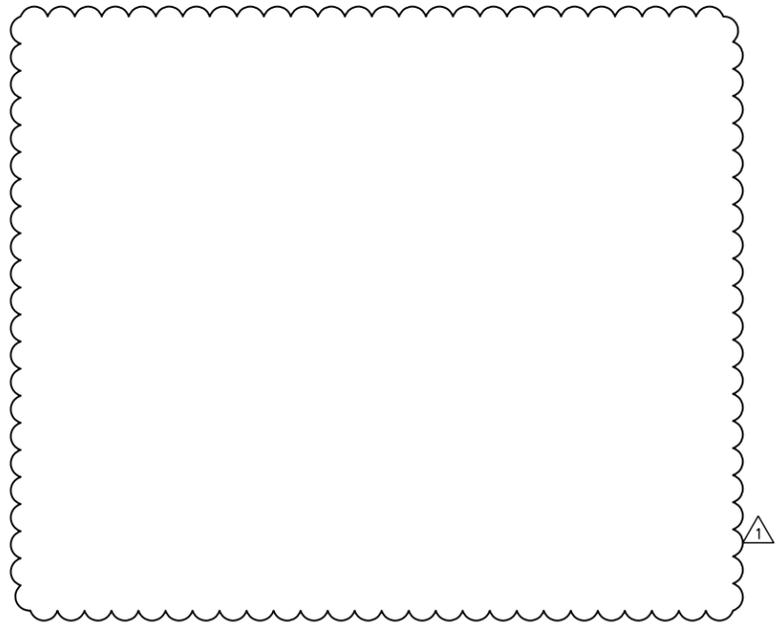
NOTES:

- 1. Materials, hardware and fittings shall be galvanized or stainless steel. For additional requirements, see Electrical Special Provisions.
- 2. References:
- For plans and sections, see sheets E-101A and E-132A.

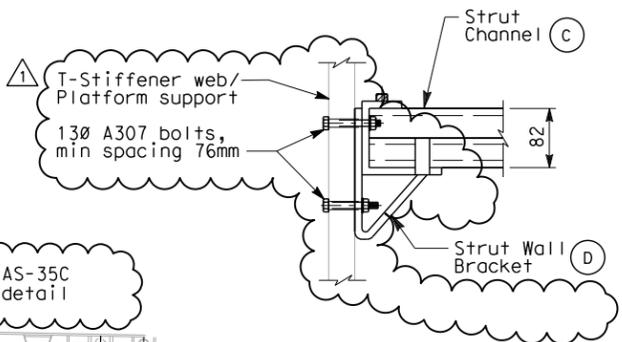
MATERIAL LIST		
Item No.	Description	Remarks
(A)	Strut channel, 41 mm x 41 mm	Length as required
(B)	Strut channel, 41 mm x 82 mm	Length as required
(C)	Strut channel combination, 41 mm x 82 mm	Length as required
(D)	Strut wall bracket	
(E)	Threaded steel hanger rod, 12 mm diameter	Length as required
(F)	Strut channel spring nut, lockwasher and hex bolt	
(H)	Strut channel hanger trapeze hardware kit	
(J)	DELETED	
(K)	Strut channel brace fittings for horizontal seismic support	Length as required
(M)	Strut channel wing shape fitting	
(R)	DELETED	
(S)	Vertical tray hanger with splice plate hardware (Bolted to side rail)	



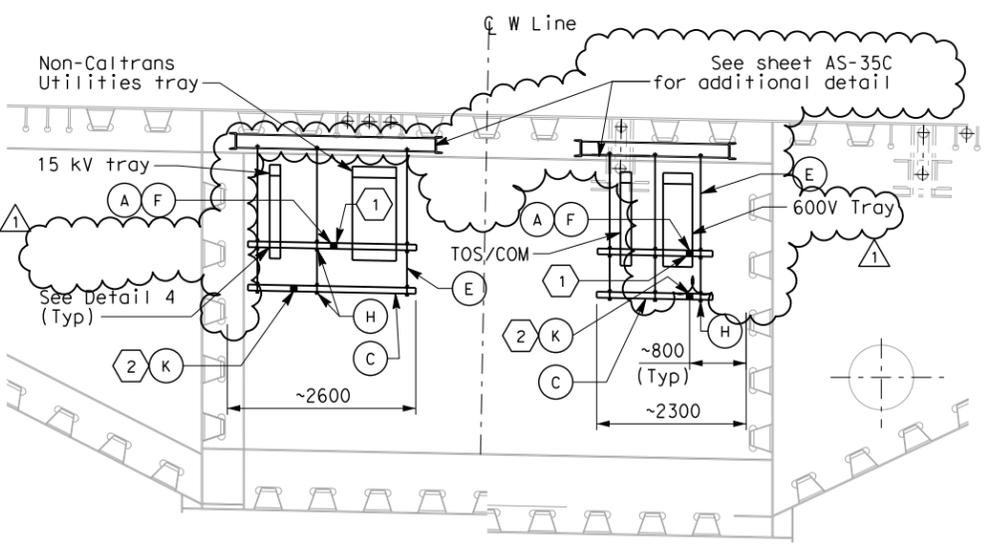
SECTION A-A
SCALE 1:50



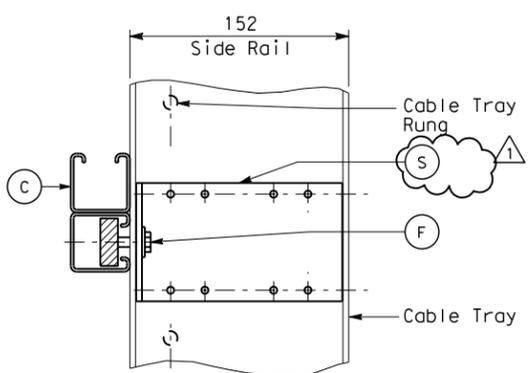
SECTION X-X
(TYPICAL BRACKET SUPPORT)
SCALE 1:5



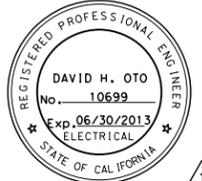
DETAIL 2
(TYPICAL BRACKET TRAY SUPPORT)
SCALE 1:5



SECTION B-B
SCALE 1:50



DETAIL 4
(TYPICAL VERTICAL CABLE TRAY SUPPORT)
SCALE 1:2.5



REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
△	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191S2
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
REVISIONS					

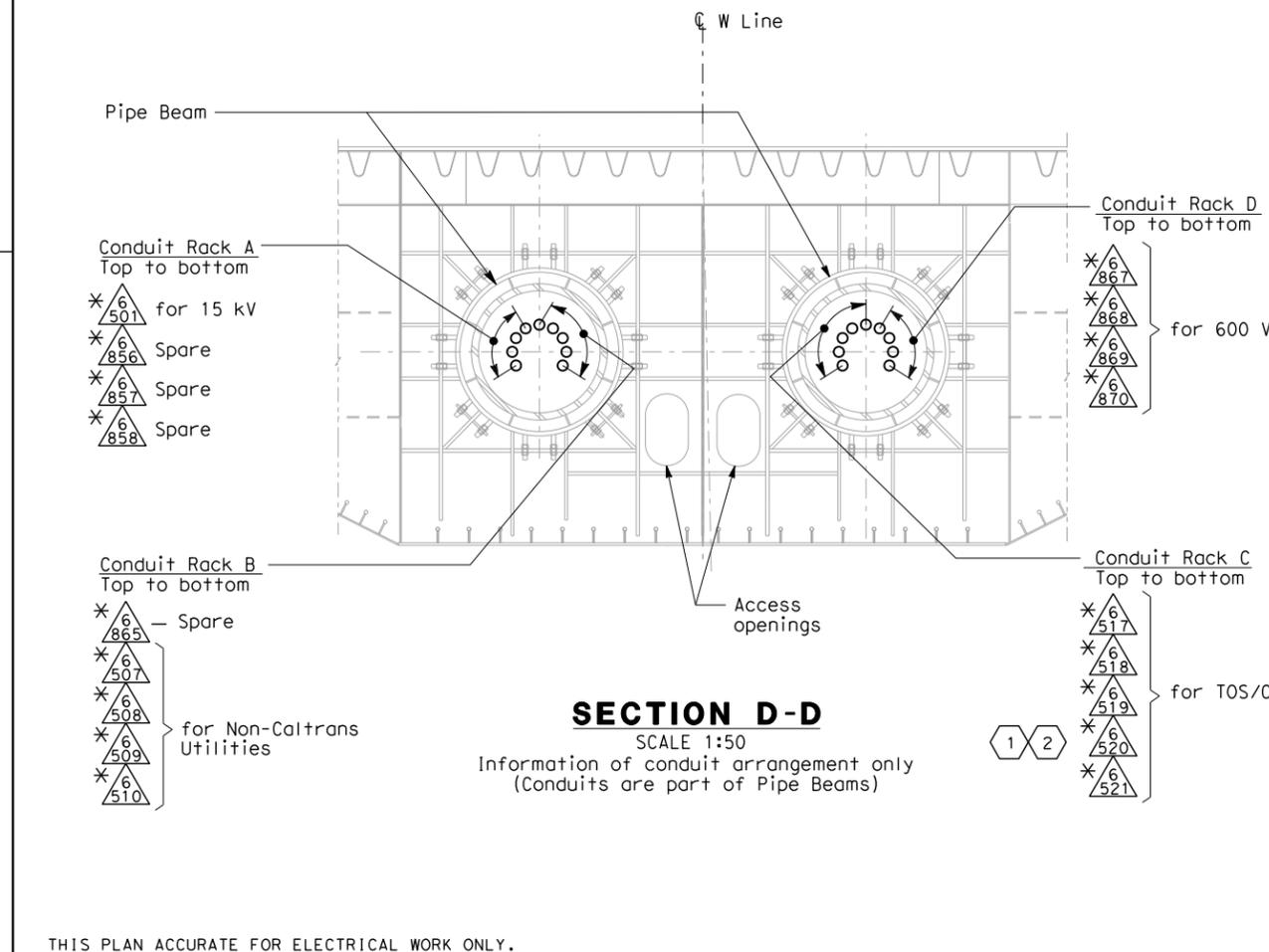
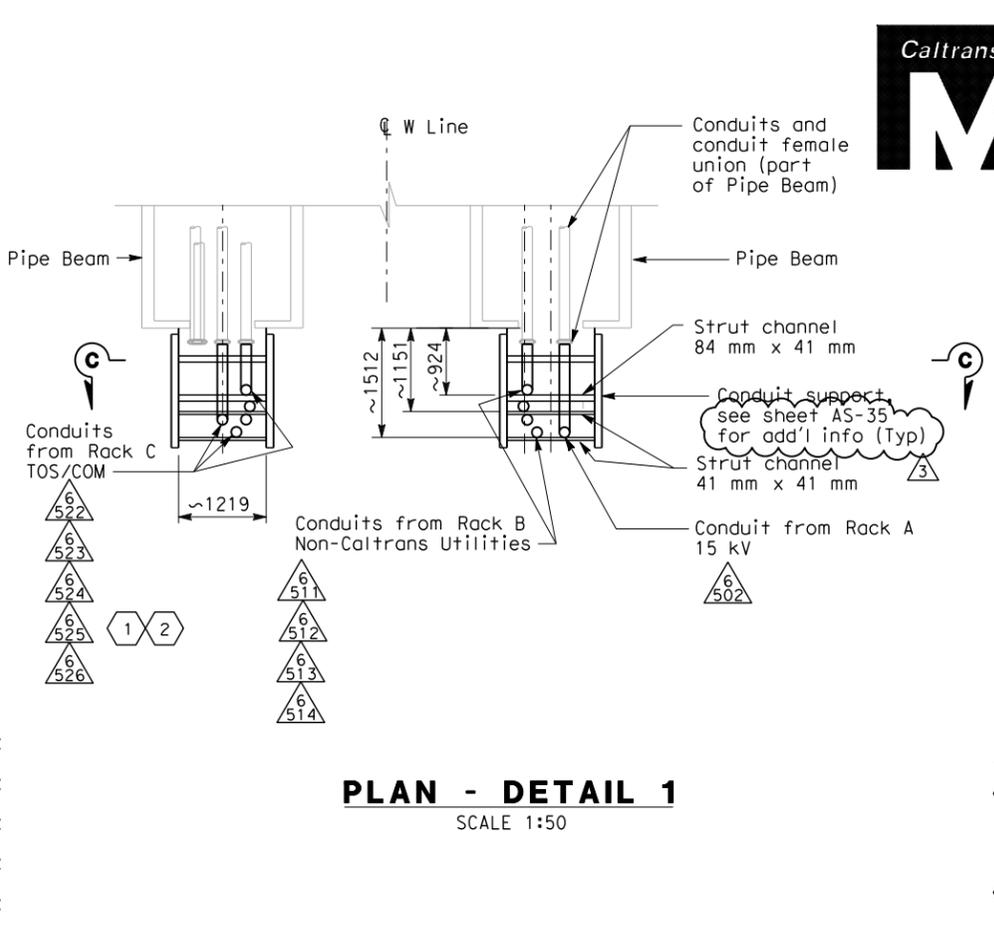
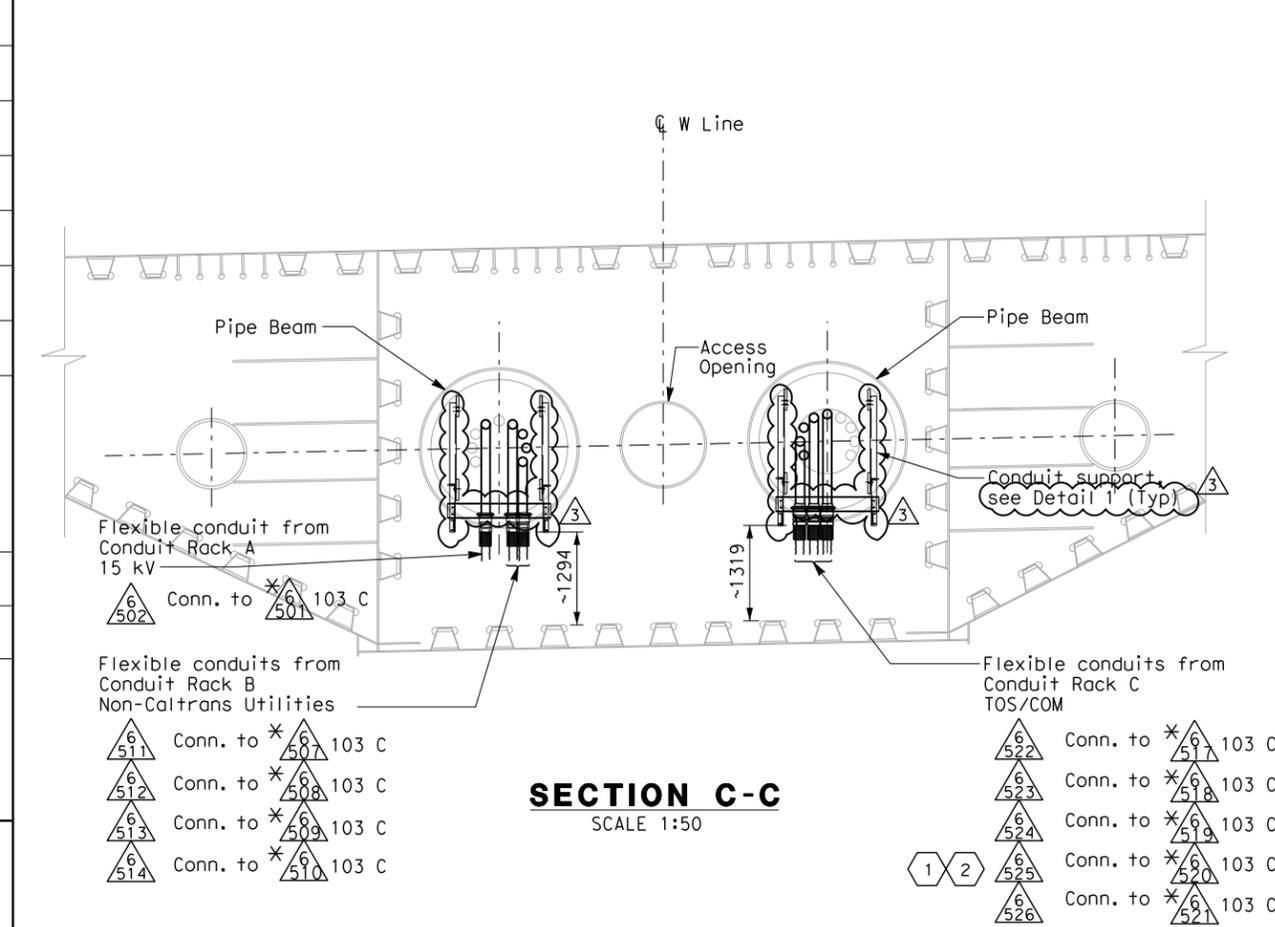
CONTRACT CHANGE ORDER NO. _____ SHEET _____ OF _____ FOR REVISION ONLY

DETAILS
SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE
GIRDER INTERFACE WESTBOUND
HINGE AW TRAY SUPPORTS
SCALE AS NOTED

E-132B

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
BEHZAD GOLEMOHAMMADI
DESIGNED BY
CHECKED BY
CALCULATED/DESIGNED BY
EUL
DATE 12/03
REVISED BY
DATE 1/04
REVISED BY
DATE 2/04

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN OVERSIGHT
 BEHZAD GOLEMOHAMMADI



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		187 R3	1204

REGISTERED ELECTRICAL ENGINEER
 JENS ERLINGSSON
 No. 8249
 Exp. 9/30/06
 ELECTRICAL
 STATE OF CALIFORNIA

12-6-04
 PLANS APPROVAL DATE

PB POWER, Inc.
 A Parsons Brinckerhoff Company
 303 Second St., Suite 700N
 San Francisco, CA 94107-1317

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- NOTES:**
- Materials, hardware and fittings shall be galvanized or stainless steel. For additional requirements, see Electrical Special Provisions.
 - References:
 - For Westbound plans and sections, see sheets E-101A and E-132A.
 - Existing conduits (*) inside pipe beam are supplied in Skyway contract.

- SHEET NOTES:**
- Furnish and install 4-25.4 mm innerducts inside TOS/COM conduits (*6520, 6525) and 1-25.4 mm innerduct per BASE fiber optic cable in TOS/COM cable tray.
 - Furnish and install BASE fiber optic cable in innerduct inside TOS/COM conduit and cable tray. See sheet E-1100.

 FOR REVISION ONLY 3	 FOR REVISION ONLY 2	 FOR REVISION ONLY 1
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REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
3	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR RSB	RG	191S2
2	03/01/11	BASE INTEGRATION	RSB	WB	150
1	02/25/08	CABLE TRAY CHANGES	JD	RG SE	42S1

CONTRACT CHANGE ORDER NO. _____
 SHEET _____ OF _____

DETAILS
SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE
GIRDER INTERFACE WESTBOUND
HINGE AW SUPPORTS
 SCALE AS NOTED

E-132C

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

FOR REDUCED PLANS ORIGINAL SCALE 15 IN MILLIMETERS

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CU 04251 EA 0120F1

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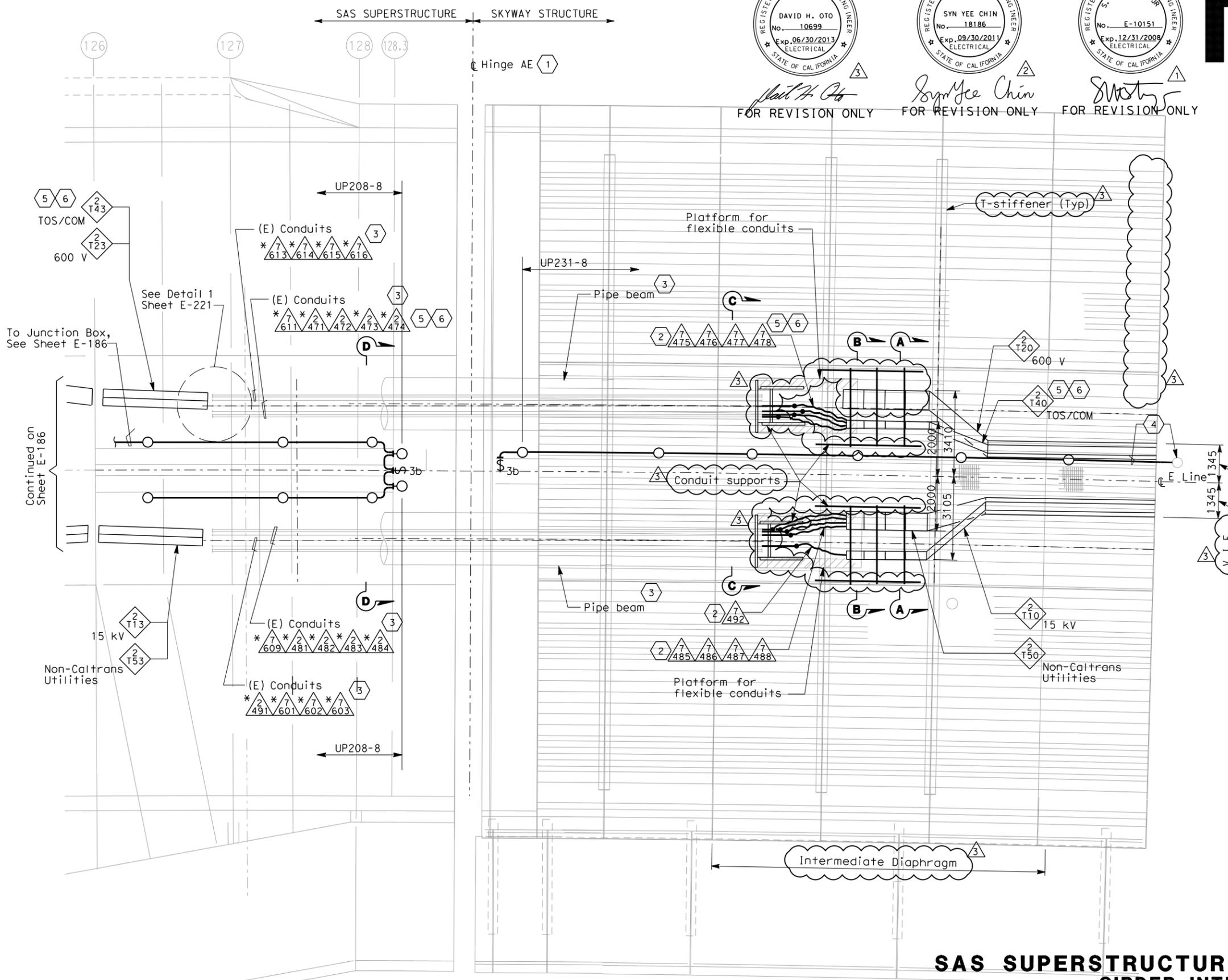
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04	SF	80	13.2/13.9	221	R3	1204

JENS ERLINGSSON 2/6/04
 REGISTERED ELECTRICAL ENGINEER DATE
 12-6-04
 PLANS APPROVAL DATE
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- SHEET NOTES:**
- Hinge AE electrical design is based on the maximum expansion joint movement opening of 1243 mm.
 - Arrange and group the flexible 103 mm conduits to maintain a minimum voltage level separation of 460 mm between systems.
 - Existing conduits(*) inside pipe beam are supplied in Skyway contract.
 - Terminate conduit to the next lighting fixture and splice wiring to circuit UP231-8 of Skyway Structure.
 - Furnish and install 4-25.4 mm innerducts inside TOS/COM conduits (*2474, 7478) and 1-25.4 mm innerduct per BASE fiber optic cable in TOS/COM cable tray.
 - Furnish and install BASE fiber optic cable in innerduct inside TOS/COM conduit and cable tray. See sheet E-1101.
- NOTES:**
- Minimum radius of cable tray fittings shall be 610 mm.
 - Minimum radius of 103 mm conduits bends shall be 610 mm.
 - Cables/circuits passing through the hinge locations shall be provided with cable identification tag at both ends of Hinge.
 - For additional work related not shown on this drawing, see Electrical Special Provisions.
 - Section A-A and B-B see sheet E-221B.
 - Section C-C and Section D-D, see sheet E-221C.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
3	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RSB	RG 191S2
2	03/01/11	BASE INTEGRATION	RSB	WB	150
1	02/25/08	CABLE TRAY CHANGES	JD	RG	SE 42S1

CONTRACT CHANGE ORDER NO. _____
 SHEET _____ OF _____

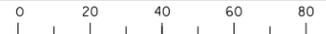
SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE GIRDER INTERFACE EASTBOUND
 AS NOTED

PLAN
 SCALE: 1:75

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FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS



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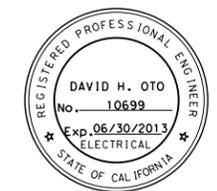
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 LAST REVISION 03-27-13

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 CALCULATED/DESIGNED BY
 CHECKED BY
 DATE 12/03
 REVISED BY
 DATE REVISED 2/04
 EUL
 2/04

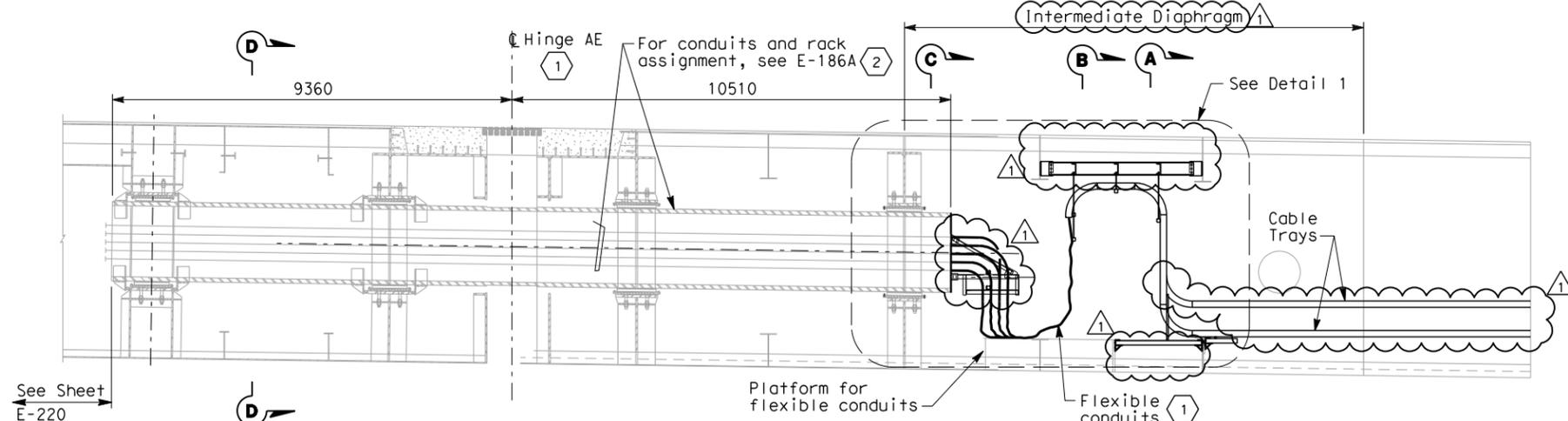


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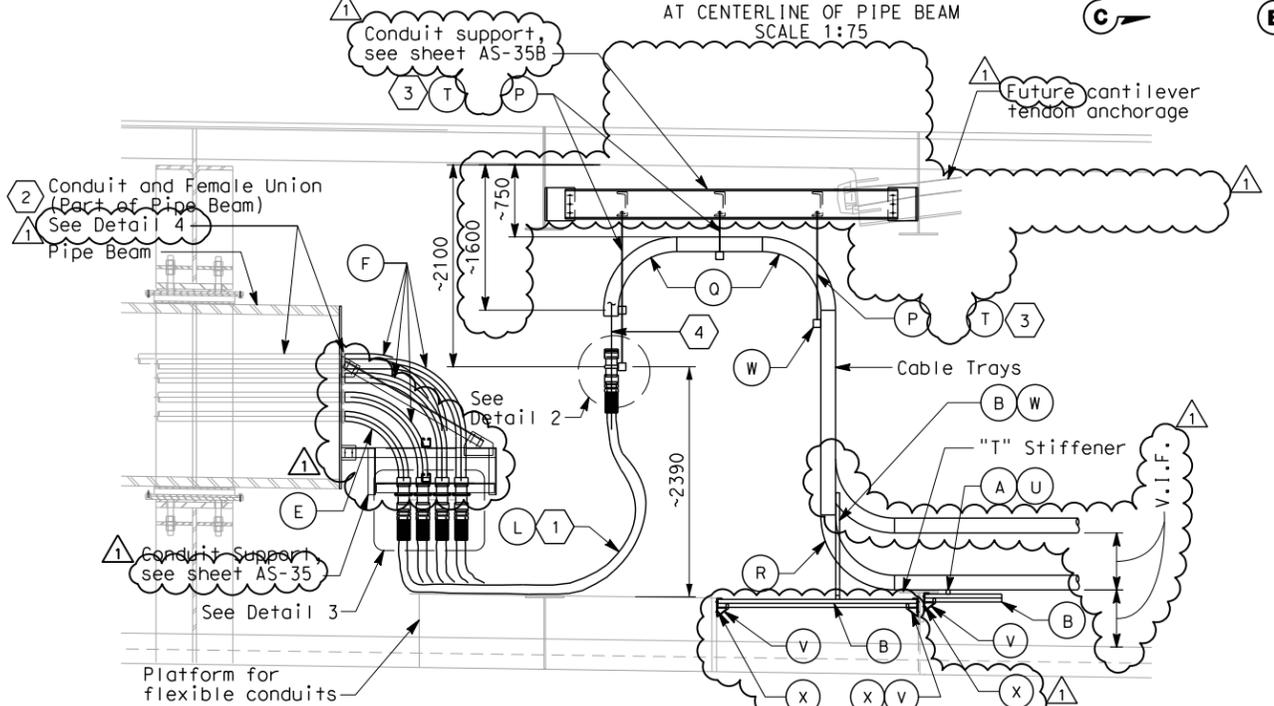
Jens Erlingsson 2/6/04
 REGISTERED ELECTRICAL ENGINEER DATE
 12-6-04
 PLANS APPROVAL DATE
PB POWER, Inc.
 A Parsons Brinckerhoff Company
 303 Second St., Suite 700N
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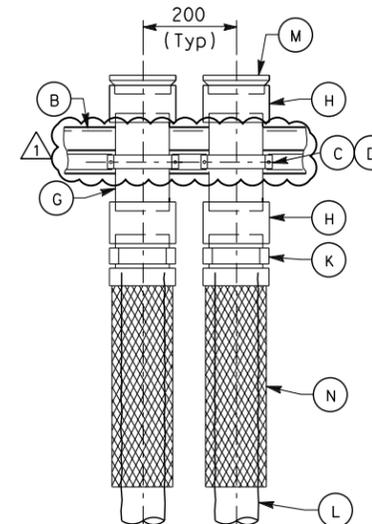
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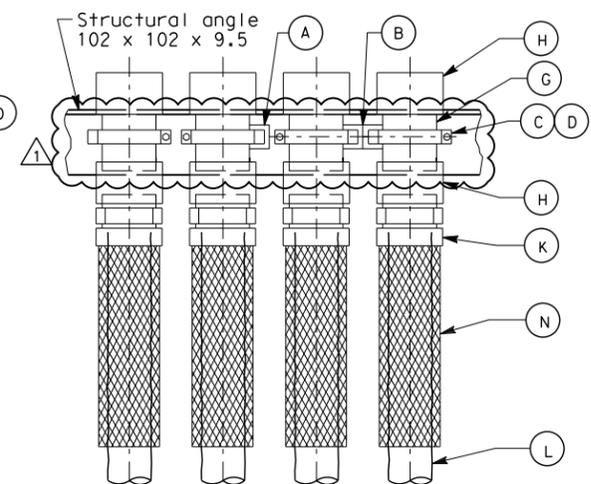
ELEVATION - HINGE AE
 AT CENTERLINE OF PIPE BEAM
 SCALE 1:75



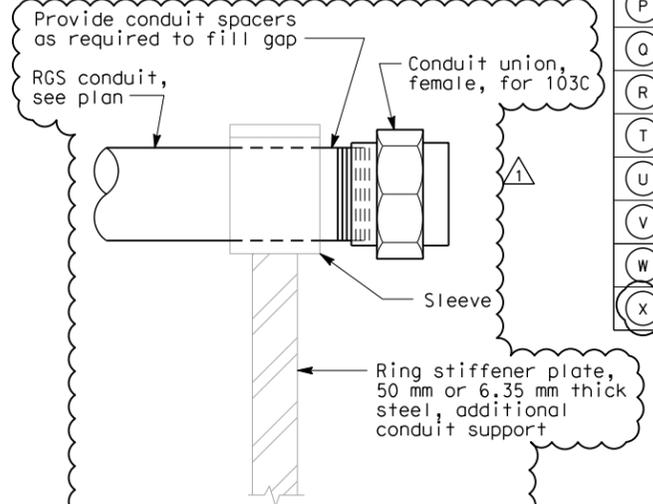
DETAIL 1
 SCALE 1:40



DETAIL 2
 NO SCALE



DETAIL 3
 NO SCALE



DETAIL 4
 NO SCALE

TYPICAL CONDUIT END SUPPORT AT PIPE BEAM

MATERIAL LIST	
Item No.	Description
(A)	Strut channel 41 mm x 41 mm
(B)	Strut channel combination 41 mm x 82 mm
(C)	Strut channel spring nut, lockwasher and hex bolt
(D)	Strut channel conduit clamp for 103 mm
(E)	Conduit elbow for 103 mm (Radius= 610 mm)
(F)	Conduit elbow for 103 mm (Radius= 752 mm)
(G)	Conduit nipple, 103 mm
(H)	Conduit coupling, 103 mm
(J)	DELETED
(K)	Connector, straight liquidtight flexible conduit for 103 mm
(L)	Liquidtight flexible conduit, 103 mm
(M)	Insulated bushed nipple for 103 mm conduit
(N)	Strain relief grips or AMTEC conduit riser grip for flexible conduit, 103 mm
(P)	Threaded steel hanger rod, 12 mm diameter
(Q)	Cable tray vertical outside bend
(R)	Cable tray vertical inside bend
(T)	Strut channel spring nut, tee-head bolt
(U)	Strut channel cable tray clamp for ladder or solid bottom tray
(V)	Bracket for 82 mm X 82 mm Strut Channel
(W)	Vertical tray hanger with splice plate hardware (bolted to side rail)
(X)	130 Bolt thru 'T' stiffener web/platform support w/ nut and washer

SHEET NOTES:

- 1 Hinge AE electrical design is based on the maximum expansion joint movement opening of 1243 mm.
- 2 Conduits through pipe beam shall be part of the pipe beam assembly. Conduit shall be welded together to form a continuous conduit inside the pipe beam, length as specified. The weld shall be smooth on the outside and free of burrs inside the conduit. Conduit fittings, like coupling, etc. to form a continuous conduit shall not be permitted as alternative. Pipe beam supplied by Skyway Structure.
- 3 Cable tray hangers shall be located to provide working space in front of cantilever tendon anchorage. Field to adjust location accordingly, additional supports as required.
- 4 All cable/cables entering the liquidtight conduits from the cable trays shall be provided with strain relief cable/cables grips or AMTEC conduit riser grip attached from the vertical cable tray rings.

NOTES:

- 1. Minimum radius of cable tray fittings shall be 610 mm.
- 2. Minimum radius of 103 mm conduit bends shall be 610 mm.
- 3. Cables/circuits passing through the hinge locations shall be provided with cable identification tag at both ends of Hinge.
- 4. For additional work related not shown on this drawing, see Electrical Special Provisions.
- 5. For Sections A-A and B-B, see sheet E-221B.
- 6. Sections C-C and D-D, see sheet E-221C.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE			
1	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR RSB RG 191S2
MARK	DATE	DESCRIPTIONS	BY CH'D CCO#
REVISIONS			

CONTRACT CHANGE ORDER NO. _____
 SHEET _____ OF _____

DETAILS
SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE
GIRDER INTERFACE EASTBOUND
HINGE AE
 SCALE: 1:200

E-221A

FOR REDUCED PLANS ORIGINAL SCALE 15 IN MILLIMETERS

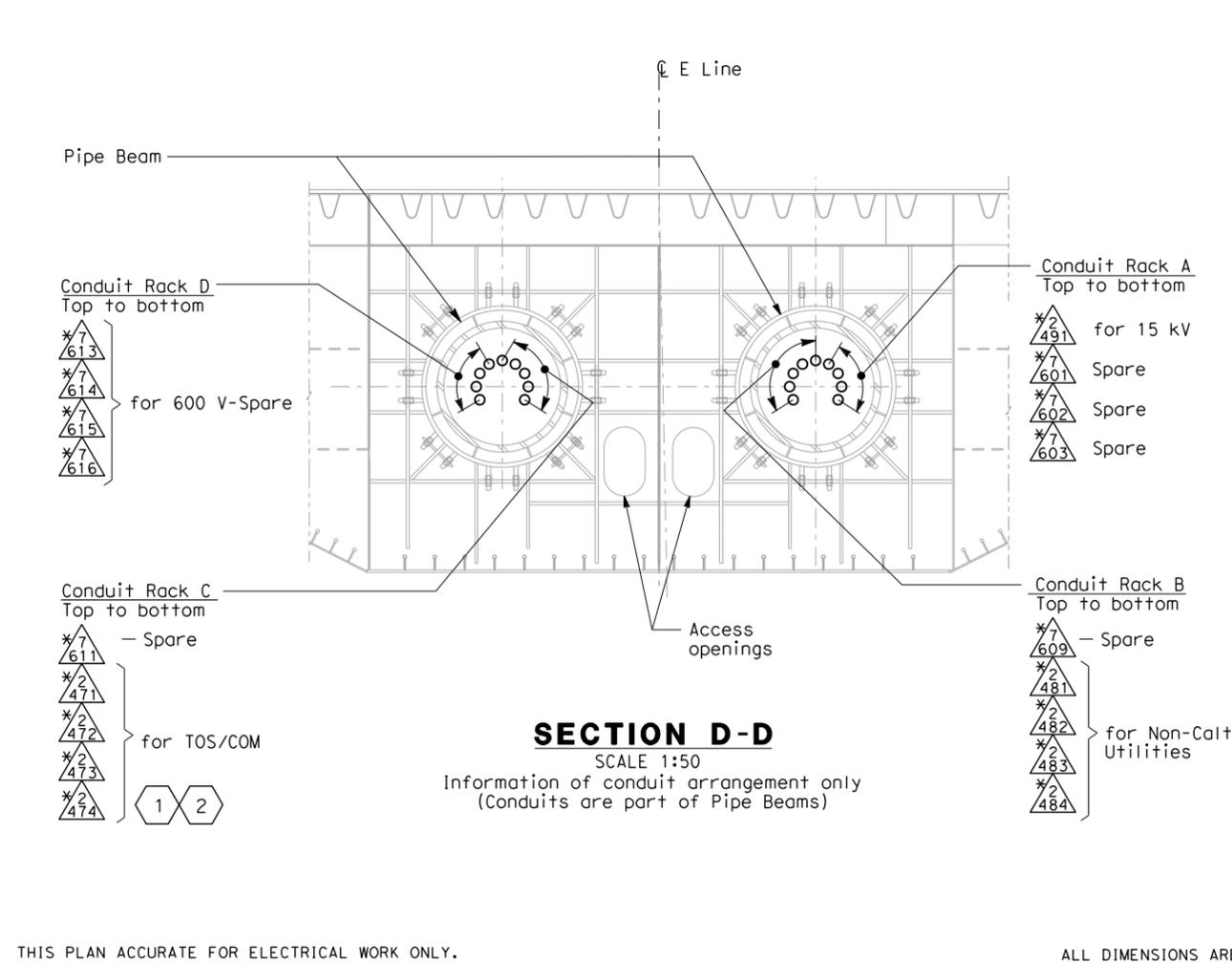
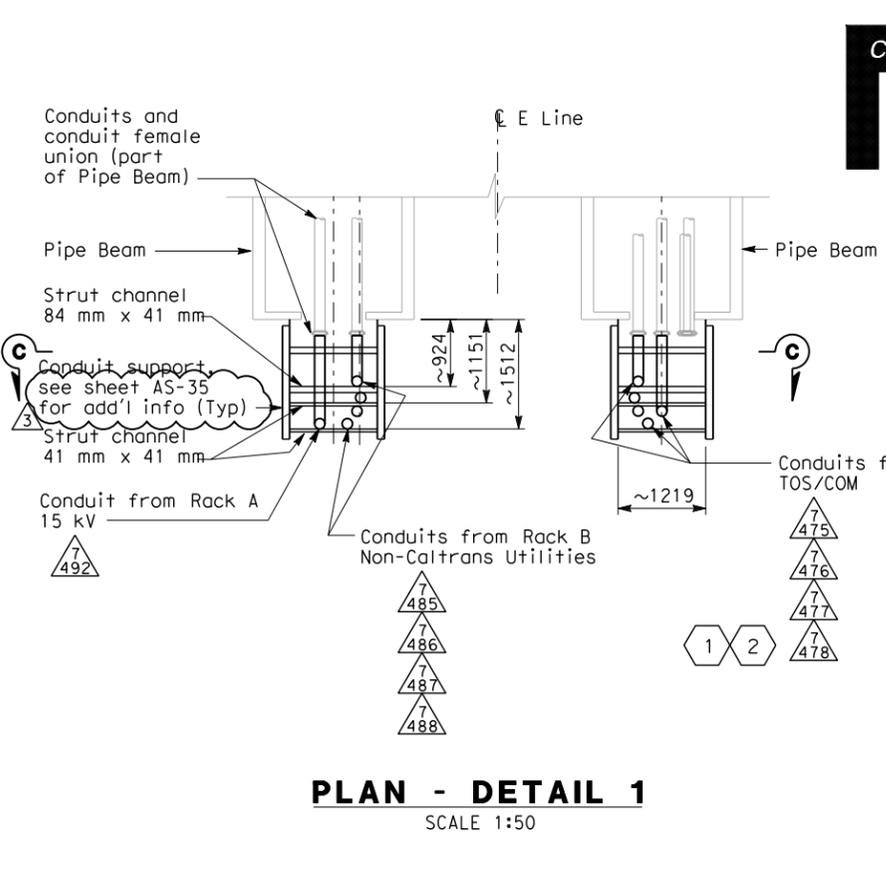
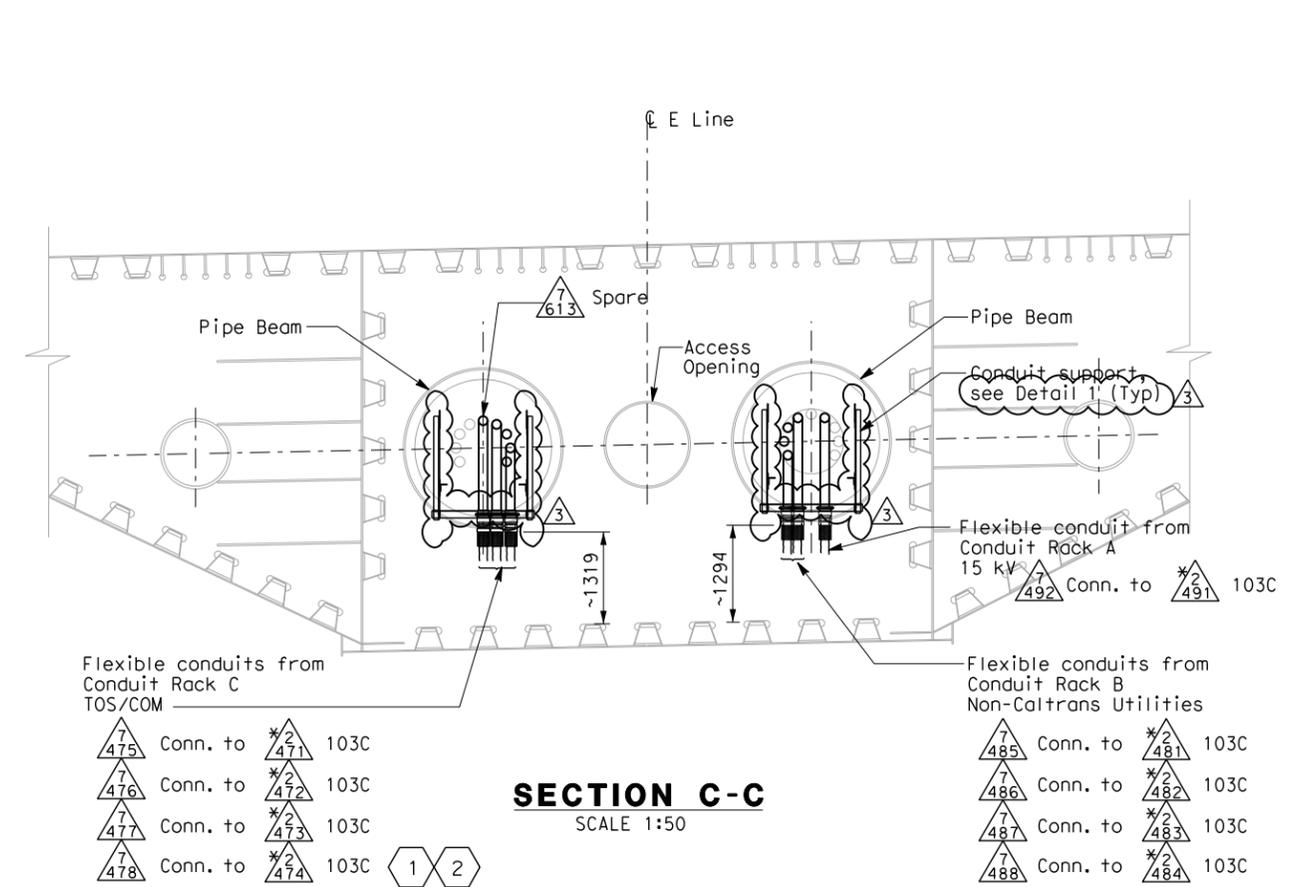
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04	SF	80	13.2/13.9		243 R3	1204

Jens Erlingsson 2/16/04
 REGISTERED ELECTRICAL ENGINEER DATE
 12-6-04
 PLANS APPROVAL DATE
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- NOTES:**
- Materials, hardware and fittings shall be galvanized or stainless steel. For additional requirements, see Electrical Special Provisions.
 - References:
 - For Westbound plans and sections, see sheets E-186A and E-221A.
 - Existing conduits (*) inside pipe beam are supplied in Skyway contract.
- SHEET NOTES:**
- Furnish and install 4-25.4 mm innerducts inside TOS/COM conduits (*2474, 7478) and 1-25.4 mm innerduct per BASE fiber optic cable in TOS/COM cable tray.
 - Furnish and install BASE fiber optic cable in innerduct inside TOS/COM conduit and cable tray. See sheet E-1101.

David H. Oto FOR REVISION ONLY
Syn Yee Chin FOR REVISION ONLY
S. A. Estoque, Jr. FOR REVISION ONLY

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
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2	03/01/11	BASE INTEGRATION	RSB	WB	150
1	02/25/08	CABLE TRAY CHANGES	JD	RG SE	42S1

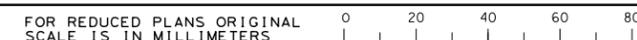
CONTRACT CHANGE ORDER NO. _____
 SHEET _____ OF _____

DETAILS
SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE
GIRDER INTERFACE EASTBOUND
HINGE AE SUPPORTS
 SCALE AS NOTED

E-221C

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

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