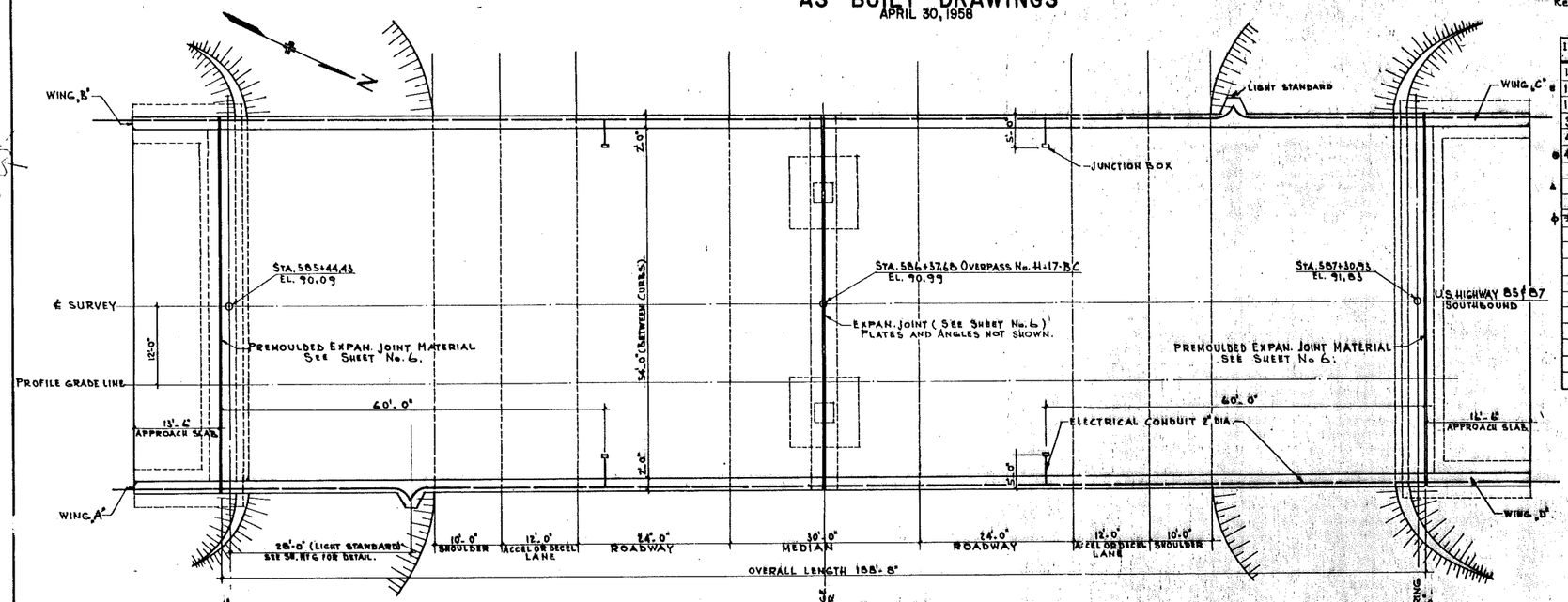
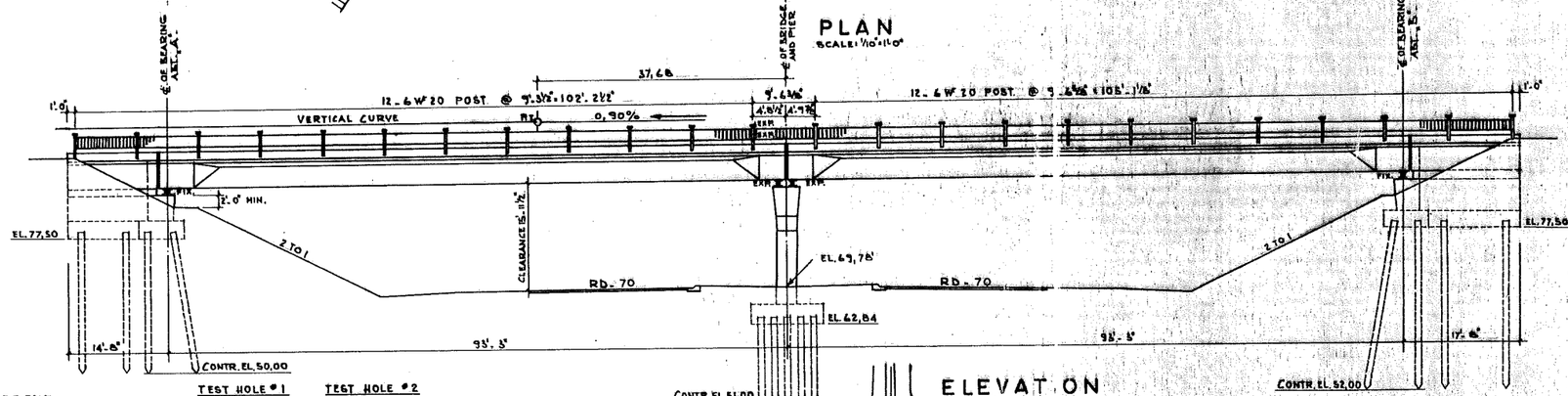
AS BUILT DRAWINGS
APRIL 30, 1958

Revision: Added concrete finish note 12-14-58 R.R.A.
Revision: Changed bar quantities 8-29-57 J.V.G.

FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.
9	COLO.	IN.002-2(40)	10

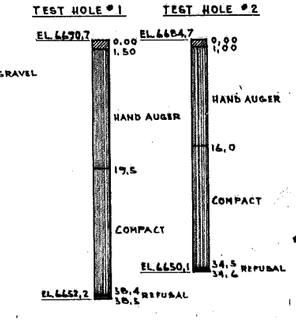


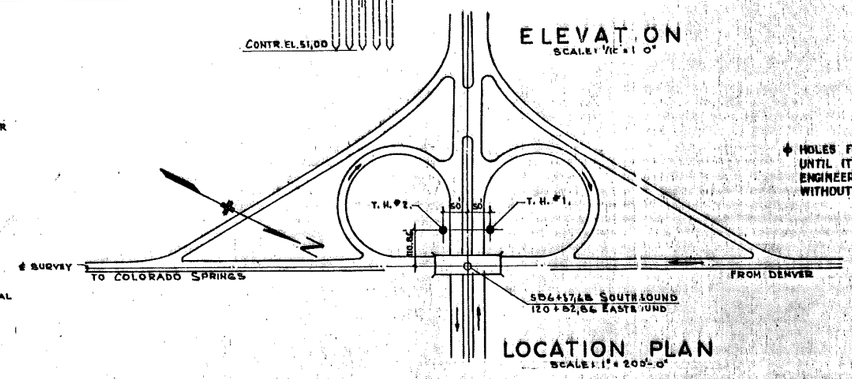
PLAN
SCALE: 1/10" = 1'-0"



ELEVATION
SCALE: 1/16" = 1'-0"

LEGEND
- TOP SOIL WITH SAND
- CLEAN WHITE SAND AND GRAVEL
- CLEAN GRAY SAND





LOCATION PLAN
SCALE: 1" = 200'-0"

♦ HOLES FOR PILES SHALL NOT BE DRILLED UNTIL IT IS DEFINITELY DETERMINED BY THE ENGINEER THAT PILES CANNOT BE DRIVEN WITHOUT THEM.

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	SUPER	ABT. "A"	PIER	ABT. "B"	TOTAL	2-APPR. SLABS.
14g	DRY COMMON EXCAVATION (STR.)	CU.YD.	.	250	88	266	604	
16ax	STRUCTURE BACKFILL (CLASS 1)	CU.YD.	.	156	56	173	385	
16c.	MECHANICAL TAMPING	HR.		20	8	22	50	
34d	PLAN MIXED ASPHALTIC SURFACING	TON.	108				108	18
46a.	CLASS "A" CONCRETE	CU.YD.	251	111	85	134	581	62
● 46p.	CLASS "P" CONCRETE - BEAM	CU.YD.	394				394	
47	REINFORCING STEEL (+1% OVERRUN)	LB.	~~[illegible]~~	7650	18590	8595	~~[illegible]~~ 86604	9415
48	STRUCTURAL STEEL (+½% FOR PAINT.)	LB.	72110 6560	3100.	10150	6100.	~~[illegible]~~ 88370	11,000 16550
61ax	STEEL PILING 12 3/4" O.D. 1/4" WALL	LIN.FT.		541	351	503	~~[illegible]~~ 1845	
♦ ~~[illegible]~~	~~[illegible]~~	~~LIN.FT.~~		~~251~~	~~162~~	~~242~~	~~655~~	
80c.	SHEET COPPER (32 OZ. PER SQ.FT.)	LB.	232	54		66	352	
#	HARD LEAD (3/16" THICK.)	SQ.FT.			10.2		10.2	
#	FELT (3/16" THICK.)	SQ.FT.			15.0		15.0	
90b.	ELECTRICAL CONDUIT 2" ϕ	LIN.FT.	400	30		35	465	4-JUNC. BOXES.
#	1/2" EXPANSION JOINT MATERIAL	SQ.FT.						88
#	WATER PROOFING COAT	SQ.YD.		93		120	213	

SUMMARY OF QUANTITIES - REFERENCE NOTES

STONE BACKFILL INCLUDED
● PRESTRESSING STEEL WITH ANCHORS INCLUDED WITH BID PRICE FOR CLASS "P" CONCRETE (160 UNITS REQUIRED IN GIRDERS)
△ INCLUDES STEEL RAILING, PLATES, ANCHOR BOLTS, ANCHOR BARS AND BEARINGS.
* INCLUDES WITH BID PRICE FOR CLASS "A" CONCRETE.
NOTE: ITEM 47 DOES NOT INCLUDE PRESTRESSING STEEL.

DESIGN SPECIFICATIONS:
1953 A.A.S.H.O. WITH 1953 AND 1954 AMENDMENTS.
LIVE LOAD: H20-S16-44
f_s: 20000 P.S.I.
WEIGHT OF EARTH: 120 LBS. PER CU.FT.
EQUIVALENT FLUID PRESSURE: 30 LBS. PER CU.FT.
MAX. ALLOWABLE LOAD PER STEEL PIPE PILE 12" DIA. FILLED WITH CONCRETE 3000 P.S.I. = 47 TONS.

GENERAL NOTES
ALL WORK SHALL BE DONE ACCORDING TO THE STANDARD SPECIFICATIONS OF THE COLORADO DEPARTMENT OF HIGHWAYS, ADOPTED JUNE 1, 1952.

SOUNDINGS AND DEPTH OF FOOTINGS SHOWN ACCORDING TO THE BEST AVAILABLE DATA. IF ESSENTIALLY DIFFERENT CONDITIONS ARE ENCOUNTERED THE BRIDGE ENGINEER WILL INSPECT AND DETERMINE IF REDESIGN IS NECESSARY.

ALL CONCRETE SHALL BE CLASS "A" AND AIR ENTRAINED AS SPECIFIED, EXCEPT OTHERWISE NOTED FOR PRESTRESSED GIRDERS, ABUTMENTS AND WING WALLS.

CHAMFER ALL EXPOSED CORNERS 3/4", EXCEPT AS NOTED.

ALL REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS CONFORMING TO A.A.S.H.O. SPECIFICATIONS M 31 AND M 137 (A.S.T.M. DESIGNATIONS A 15 AND A 305).

ALL REINFORCING BARS SHALL BE TAGGED WITH THE STRUCTURE NUMBER AND MARK.

ALL DIMENSIONS ON BAR DETAILS ARE OUT TO OUT.

ALL HOOKS AND BENDS IN BARS SHALL CONFORM TO A.C.I. STANDARD 315-51. 2" MINIMUM CLEAR TO STEEL, EXCEPT AS NOTED.

ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF ZINC CHROMATE AND TWO FIELD COATS OF ALUMINUM PAINT.

WHEN EXCAVATING FOR FOOTINGS THE FINAL ONE FOOT IN DEPTH SHALL BE DONE BY HAND LABOR METHODS.

ALL CONCRETE SURFACES EXPOSED TO NORMAL VIEW BY HIGHWAY TRAFFIC SHALL RECEIVE CLASS 1 SURFACE FINISH. WING FACES SHALL RECEIVE ORDINARY SURFACE FINISH.

* INDEX OF SHEETS.

SHEET No. 1. GENERAL PLAN AND ELEVATION
2. PIER
3. ABUTMENT "A"
4. ABUTMENT "B"
5. GIRDERS
5A. GIRDERS
6. DECK
7. RAILING

* Sheet numbers shown refer to Bridge Sheet numbers.

COLORADO DEPARTMENT OF HIGHWAYS
U.S. HIGHWAY 85-87 SOUTH BOUND
NORTH ENTRANCE INTERCHANGE
A. F. A.
OVERPASS No. H-17-BG.
GENERAL PLAN AND ELEVATION

L. BODUROFF & ASSOCIATE
CONSULTING ENGINEERS
DENVER - COLORADO

Designed: N.N.	Scale: as noted	Sheet: No. 1
Drawn: J.N.		
Checked: N.N.	Date: 11.28.58	No. of Sheets 7

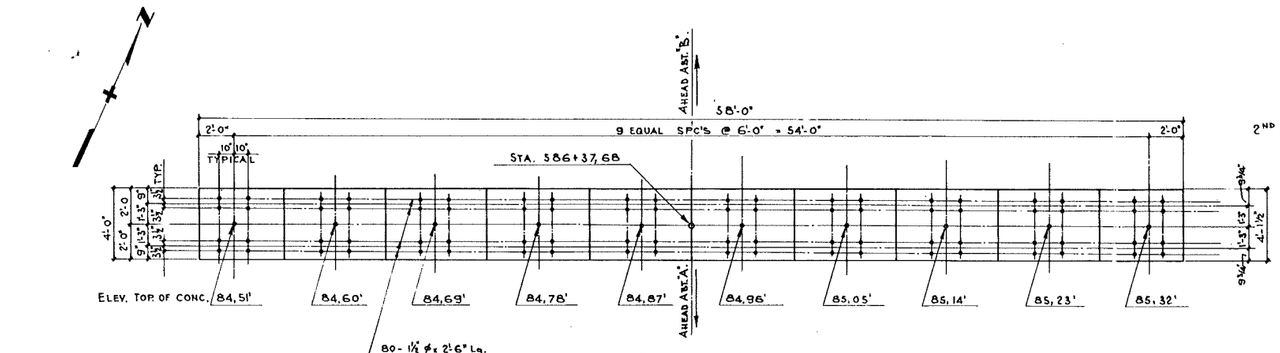
MAY 5 1962
RECEIVED

FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO
9	COLO.	UN.002-2(40)	11

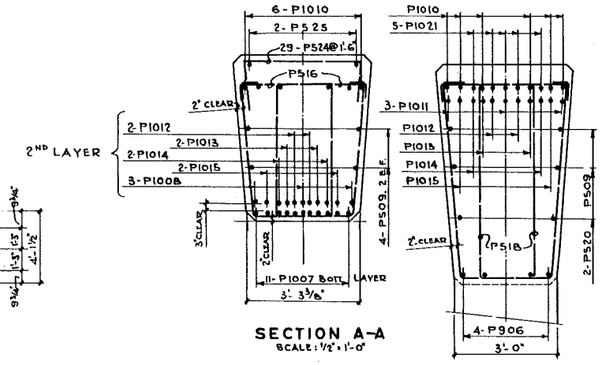
Rev. Changed Reinf. Steel quantities 9-29-57 J.V.G.

AS BUILT DRAWINGS

APRIL 30, 1958

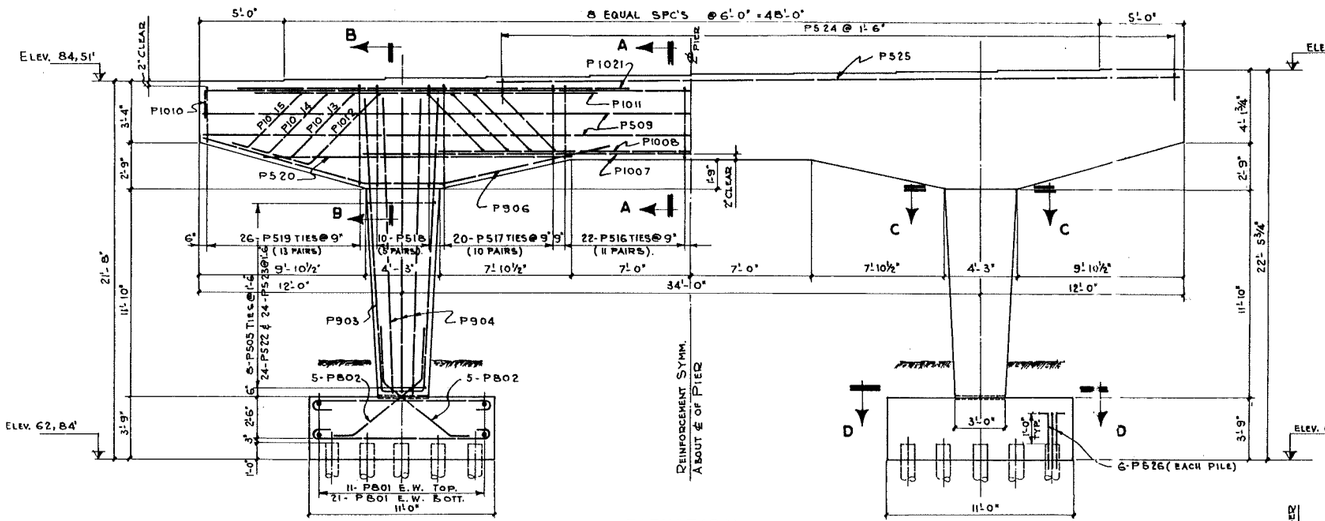


CAP PLAN
SCALE: 1/4" = 1'-0"



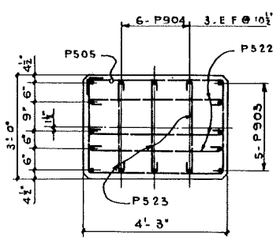
SECTION A-A
SCALE: 1/2" = 1'-0"

SECTION B-B
SCALE: 1/2" = 1'-0"

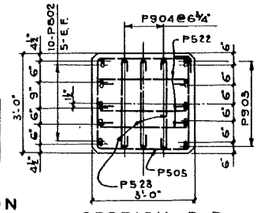


ELEVATION
SCALE: 1/4" = 1'-0"

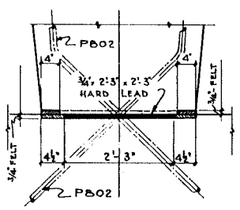
SIDE ELEVATION
SCALE: 1/4" = 1'-0"



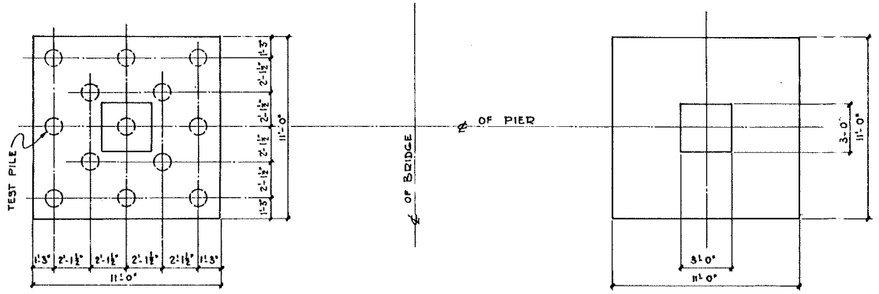
SECTION C-C
SCALE 1/2" = 1'-0"



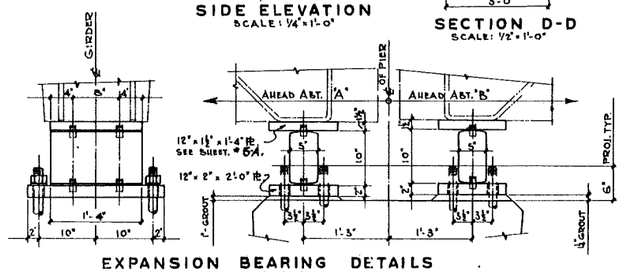
SECTION D-D
SCALE: 1/2" = 1'-0"



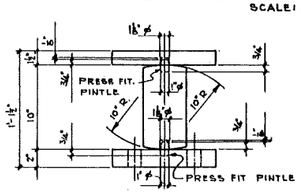
PIER HINGE DTL.
SCALE: 3/4" = 1'-0"



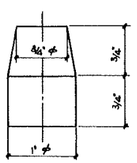
FOOTING PLAN
SCALE: 1/4" = 1'-0"



EXPANSION BEARING DETAILS
SCALE: 1" = 1'-0"

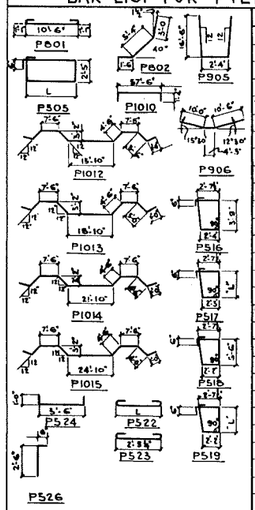


ROCKER DTL.
SCALE: 1½" = 1'-0"



PINTLE DTL.
FULL SIZE.

BAR LIST FOR PIER



MARK	TYPE	LENGHT	No REQ	SIZE
P801	BENT	12'-8"	126	8
P802	"	9'-10"	20	8
P903	"	35'-3"	10	9
P904	STR.	16'-6"	12	9
*)P505	BENT	11'-4½" Av.	16	5
P906	"	24'-9"	8	9
P1007	STR.	36'-0"	11	10
P1008	"	30'-0"	3	10
P509	"	59'-6"	4	5
P1010	BENT.	60'-0"	6	10
P1011	STR.	20'-0"	6	10
P1012	BENT.	52'-9"	2	10
P1013	"	54'-9"	2	10
P1014	"	56'-9"	2	10
P1015	"	58'-9"	2	10
P516	"	15'-0"	44	5
*)P517	"	15'-1" Av.	40	5
P518	"	16'-6"	20	5
*)P519	"	18'-10½" Av.	52	5
P520	STR.	15'-0"	4	5
P1021	"	23'-0"	10	10
*)P522	BENT	4'-1" Av.	48	5
P523	"	3'-7"	48	5
P524	"	5'-4"	29	5
P525	STR.	42'-0"	2	5
P526	BENT	3'-0"	156	5

*) VARIABLE BARS

MARK	L max.	L min.	TOTAL LENGHT max.	TOTAL LENGHT min.	SPT SIZE	SPT No	MTR SIZE	MTR No
P505	5'-4½"	2'-6	12'-3"	10'-6"	1½"	7	2	8
P517	5'-6"	4'-0"	16'-8"	13'-6"	2"	9	4	10
P519	5'-5"	3'-0"	16'-3"	11'-6"	2½"	12	4	13
P522	5'-4½"	2'-6"	4'-6½"	3'-6"	1½"	7	6	8

BAR SUMMARY

37179 Lin. ft	# 5 @ 1.043# = 3941#
1,818 "	# 8 @ 2.67# = 4854
749 "	# 9 @ 3.40# = 2547
1,641 "	# 10 @ 4.303# = 7061
1% OVERRUN	187
TOTAL	18,590#

QUANTITIES

ITEM	QUANTITY	UNIT
COMMON EXCAVATION	88	Cu Yds
CLASS "A" CONCRETE:		
FOOTINGS	34	"
COLUMNS	9.6	"
BEAM	41.5	"
STEEL PILING 12" O.D. ¼" WALL.	351	L.Ft.
HARD LEAD ¾" th.	10.2	Sq.Ft.
FELT - ¾" th.	15.0	"
REINFORCING BARS	18,590	Lbs
80 - 1¼" ϕ x 2'-6" Sw. B. Hex. N.	1220	"
20 - EPX. BRS. (ROCKER + B.PL.)	8,880	"
BACKFILL	56	Cu Yds
MECH. TAMPING	8	Hrs.

FOR GENERAL NOTES SEE SHEET No 1.

COLORADO DEPARTMENT OF HIGHWAY
U.S. HIGHWAY 85-87 SOUTH BOUND

NORTH ENTRANCE INTERCHANGE
A. F. A.
OVERPASS No H-17-BC

PIER

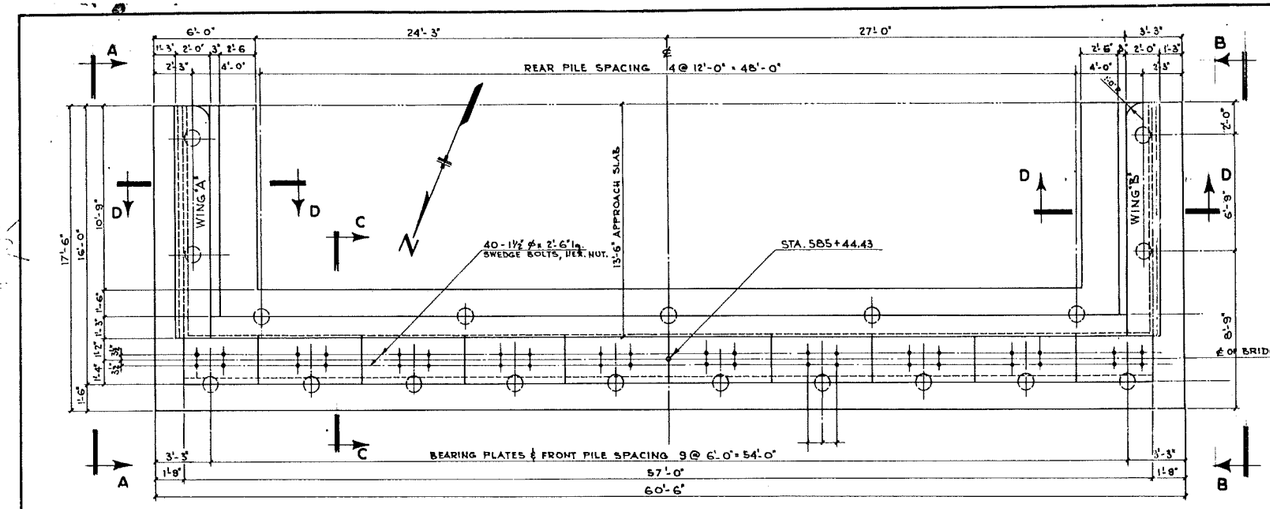
L. BODUROFF & ASSOCIATE
CONSULTING ENGINEERS

Designed: N.N.	Scale: as noted	Sheet No 2
Drawn: N.H.D.		
Checked: N.N.	Date: 11.28.56	No of Sheets 7

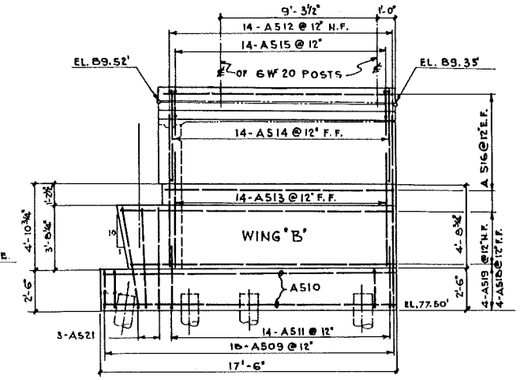
AS BUILT DRAWINGS
APRIL 30, 1958

FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.
9	COLO.	LN002-2(40)	12

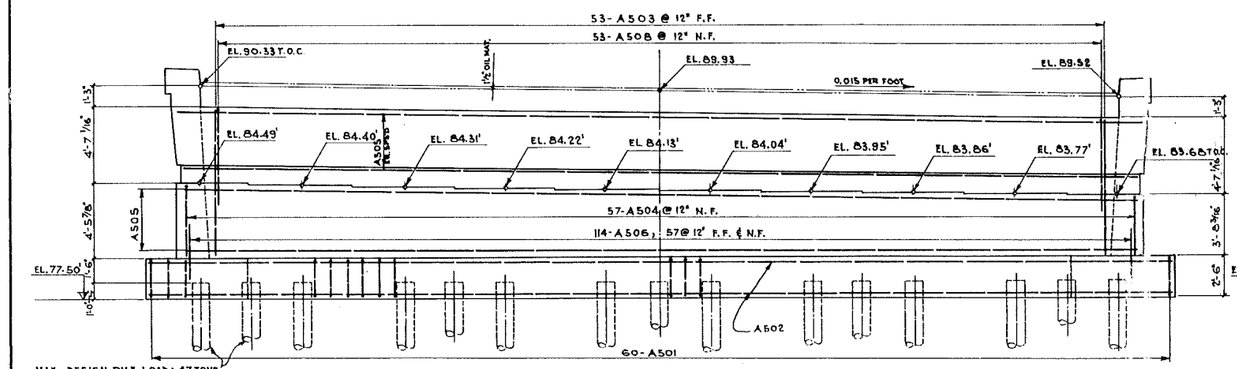
Rev. Changed Reinf. Steel Quantities 3-29-57 J.V.G.



ABUTMENT "A" - PLAN
SCALE: 1/4" = 1'-0"

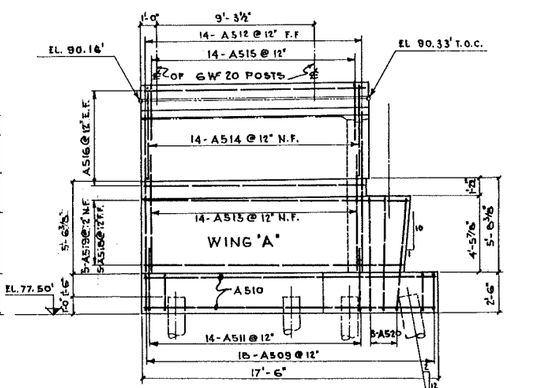


ELEVATION B-B
SCALE: 1/4" = 1'-0"



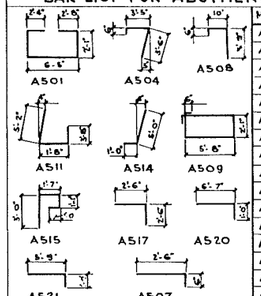
MAX. DESIGN PILE LOAD: 47 TONS.
ALL PILES SHALL BE 12" DIA.
STEEL FILLED WITH CONCRETE.

ABUTMENT "A" - ELEVATION
SCALE: 1/4" = 1'-0"



ELEVATION A-A
SCALE: 1/4" = 1'-0"

BAR LIST FOR ABUTMENT "A"



MARK	TYPE	LENGTH	No. REQ'D	SIZE
A501	BENT	15'-8"	60	5
A502	STR	60'-0"	8	
A503	"	8'-3"	53	
A504	BENT	7'-3"	57	
A505	STR.	56'-0"	21	
A506	"	3'-3"	114	
A507	BENT	3'-0"	114	
A508	"	6'-11"	53	
A509	"	16'-2"	36	
A510	STR.	17'-0"	20	
A511	BENT	10'-4"	28	
A512	STR.	10'-0"	28	
A513	"	6'-6"	28	
A514	BENT	5'-11"	28	
A515	"	6'-5"	28	
A516	STR	13'-0"	28	
A517	BENT	4'-11"	18	
A518	STR.	14'-6"	9	
A519	"	15'-0"	9	
A520	BENT	7'-6"	3	
A521	"	6'-8"	3	5

BAR SUMMARY

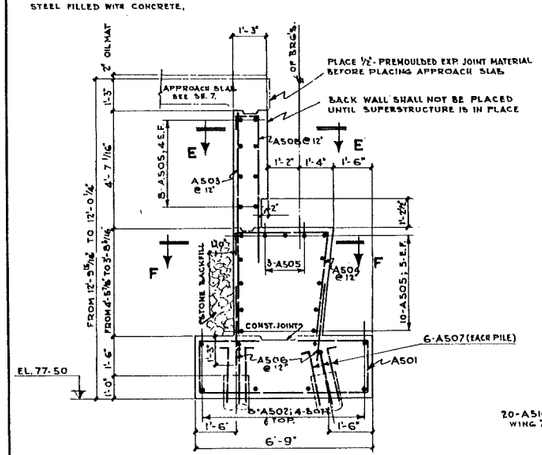
7,267 Lin. ft. #5 @ 1.043#	= 7,579#
1% OVERRUN	71#
TOTAL	7,650#

QUANTITIES.

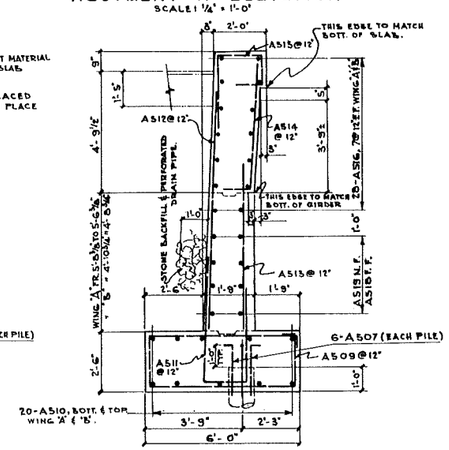
ITEM	QUANTITY	UNIT
STEEL PILING 12¾" O.D. ¼" WALL	541	lin. ft.
REINFORCEMENT	7,650	Lbs.
COMMON EXCAVATION	250	CU. YD.
CONCRETE CLASS "A" - FOOTING	50	CU. YD.
WALLS	61	"
10 - FIXED BRG. TYPE (ROCKER & BASE PL.)	4,440	Lbs.
8 - D40B STIRRUPS (SEE SHEET Nº 6)	10	"
16 - ⅞" ø x 1'-0" BOLTS W. Sq. Hd. Hex. Nut (Posts)	41	"
40 - 1½" ø x 2'-6" Swedge Bolt, Hex. Nut.	610	"
STONE BACKFILL	26	Cu. Yd.
STRUCTURE BACKFILL (CLASS)	130	"
MECHANICAL TAMPING	20	HR.
WATER PROOFING	93	Sq. Yd.
SHEET COPPER (32 oz. PER Sq. ft.)	54	Lbs.
ELECTRICAL CONDUIT 2" ø	35	Lin. ft.

NOTE: PLACE TWO-COAT PAINTED WATERPROOFING ON TOPS OF HEELS AND ON REAR FACES OF ABT'S AND WING WALLS UP TO A LINE 1'-6" BELOW TOPS OF WALLS.

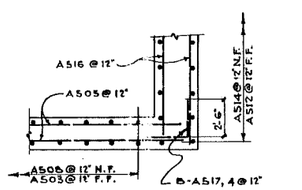
FOR GENERAL NOTES SEE SHEET Nº 1.



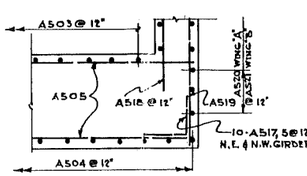
SECTION C-C
SCALE: 3/8" = 1'-0"



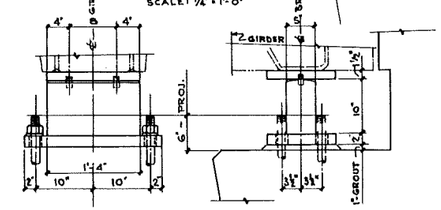
SECTION D-D
SCALE: 3/8" = 1'-0"



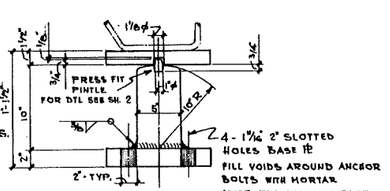
SECTION E-E



SECTION F-F



FIXED BEARING - DTL.
SCALE: 1" = 1'-0"



ROCKER DTL.
SCALE: 1½" = 1'-0"

COLORADO DEPARTMENT OF HIGHWAYS
U.S. HIGHWAY 85 - 87 SOUTH BOUND

NORTH ENTRANCE INTERCHANGE
A. F. A.

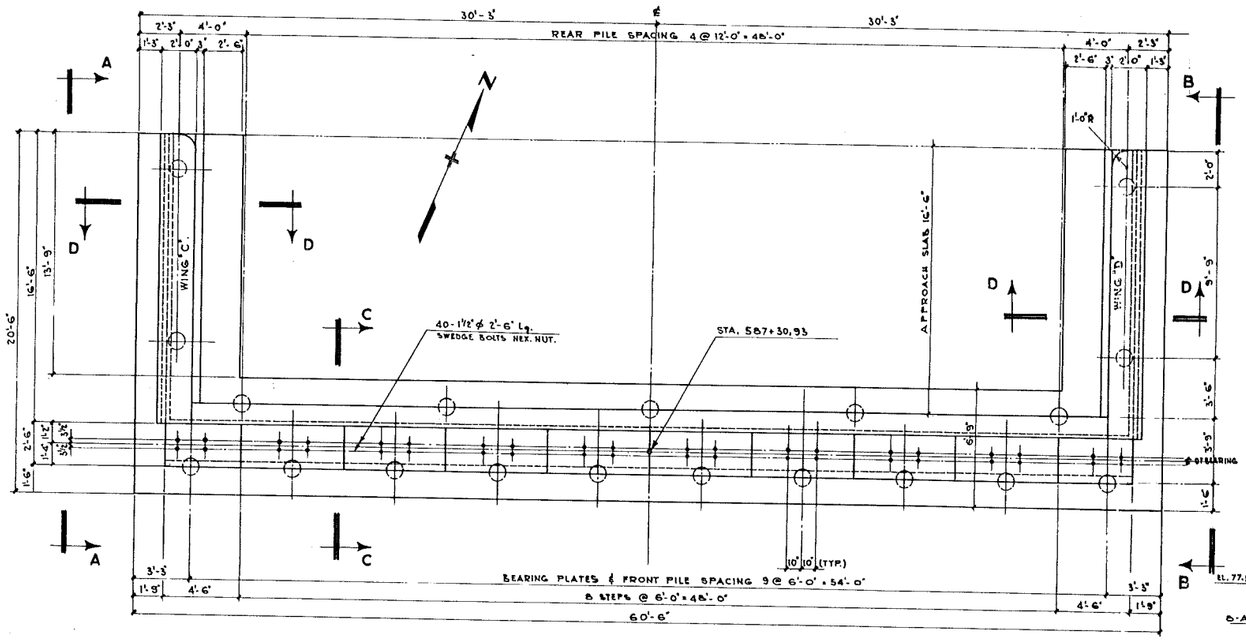
OVERPASS Nº H-17-B.C
ABUTMENT "A"

L. BODUROFF & ASSOCIATE
CONSULTING ENGINEERS

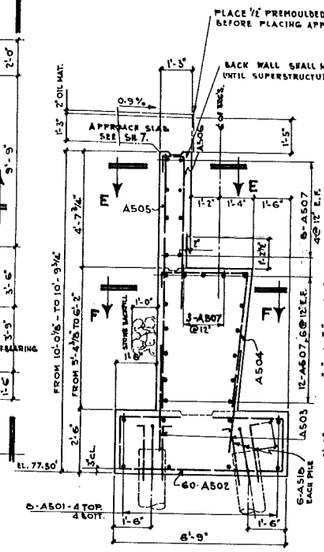
Design: N.N.	Scale: as noted	Sheet: Nº 3
Drawn: N.M.D.		
Checked: N.N.	Date: 11-28-56	Nº of Sheets 7

AS BUILT DRAWINGS
APRIL 30, 1958

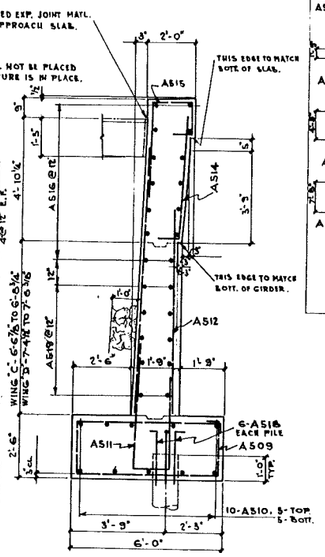
FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.
9	COLO.	IN.002-2(40)	13



ABUTMENT "B" – PLAN
SCALE: 1/4" = 1'-0"



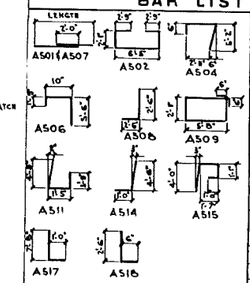
SECTION C-C
SCALE 3/8" = 1'-0"



SECTION D-D
SCALE 3/8" = 1'-0"

NOTE:
1. PLACE TWO-COAT PAINTED WATERPROOFING ON TOPS OF HEELS AND REAR FACES OF ABT'S AND WING WALLS UP TO A LINE 1'-6" BELOW TOPS OF WALLS.
2. FOR FIXED BEARING DTL'S SEE SHEET Nº 3.

BAR LIST ABT. "B"

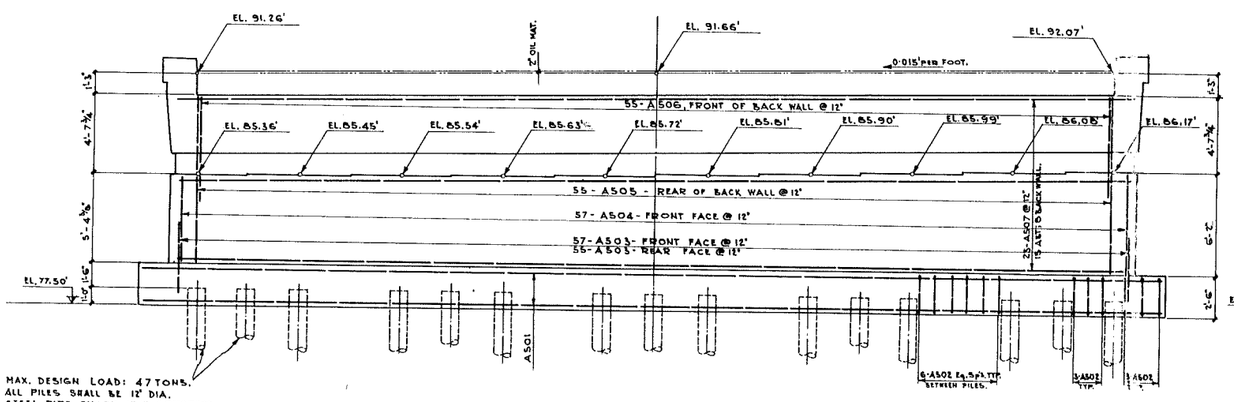


MARK.	TYPE	LENGTH	NO. REQ'D	SIZE
A501	STR.	62'-0"	8	#5
A502	BENT	15'-9"	60	
A503	STR.	4'-3"	112	
A504	BENT	9'-5"	57	
A505	STR.	9'-10"	55	
A506	BENT	8'-0"	55	
A507	STR.	58'-0"	23	
A508	BENT	5'-0"	20	
A509	BENT	16'-1"	44	
A510	STR.	20'-0"	20	
A511	BENT	9'-9"	24	
A512	STR.	8'-6"	24	
A513	STR.	10'-0"	24	
A514	BENT	5'-8"	24	
A515	BENT	7'-6"	24	
A516	STR.	16'-0"	28	
A517	BENT	8'-8"	6	
A518	BENT	3'-0"	114	
A519	STR.	18'-0"	20	#5

#5-8173 Lin. ft. @ 1.043#/Lin. ft. = 8510#
1% OVERRUN 85#
TOTAL 8595#

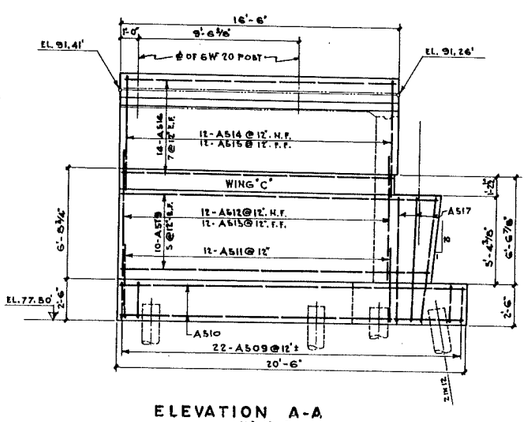
QUANTITIES

ITEM	QUANTITY	UNIT
STEEL PILING 12 3/4" O.D. 1/4" WALL	503	Lin. ft.
REINFORCEMENT	8595	Lbs.
COMMON EXCAVATION	266	Cu. Yds.
CONCRETE CLASS "A", FOOTING	53	"
WALLS	81	"
FIXED BEARING TYPE (ROCKER & BOTT. PL.)	4440	Lbs.
5-D408 STIRRUPS (SEE SH. Nº 6)	10	"
16-7/8" ϕ 12" BOLTS WITH Sq. Bd. HEX. NUT	41	"
40-1 7/8" ϕ x 2'-6" Lg. SWEDGE BOLT HEX. NUT.	610	"
STONE BACKFILL	35	Cu. Yds.
STRUCTURE BACKFILL (CLASS)	140	"
MECHANICAL TAMPING	22	HR.
WATER PROOFING	120	Sq. Yds.
SHEET COPPER (32 oz. PER Sq. Ft.)	66	Lbs.
ELECTRICAL CONDUIT 2" ϕ	35	Lin. ft.

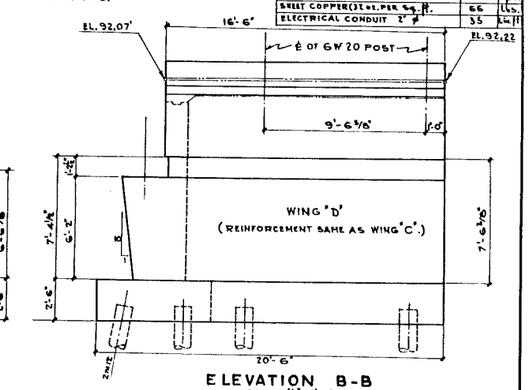


MAX. DESIGN LOAD: 47 TONS.
ALL PILES SHALL BE 12" DIA.
STEEL PIPE FILLED WITH CONCRETE.

ABUTMENT "B" ELEVATION
SCALE: 1/4" = 1'-0"

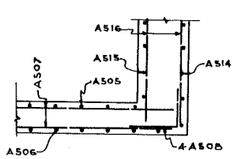


ELEVATION A-A
SCALE 1/4" = 1'-0"

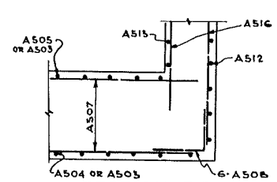


ELEVATION B-B
SCALE 1/4" = 1'-0"

FOR GENERAL NOTES, SEE SHEET Nº 1.



SECTION E-E
SCALE: 3/8" = 1'-0"



SECTION F-F
SCALE 3/8" = 1'-0"

COLORADO DEPARTMENT OF HIGHWAYS
U.S. HIGHWAY 85-87 SOUTH BOUND
NORTH ENTRANCE INTERCHANGE
A. F. A.
OVERPASS Nº H-17-B.C.
ABUTMENT "B"

L. BODUROFF & ASSOCIATE
CONSULTING ENGINEERS

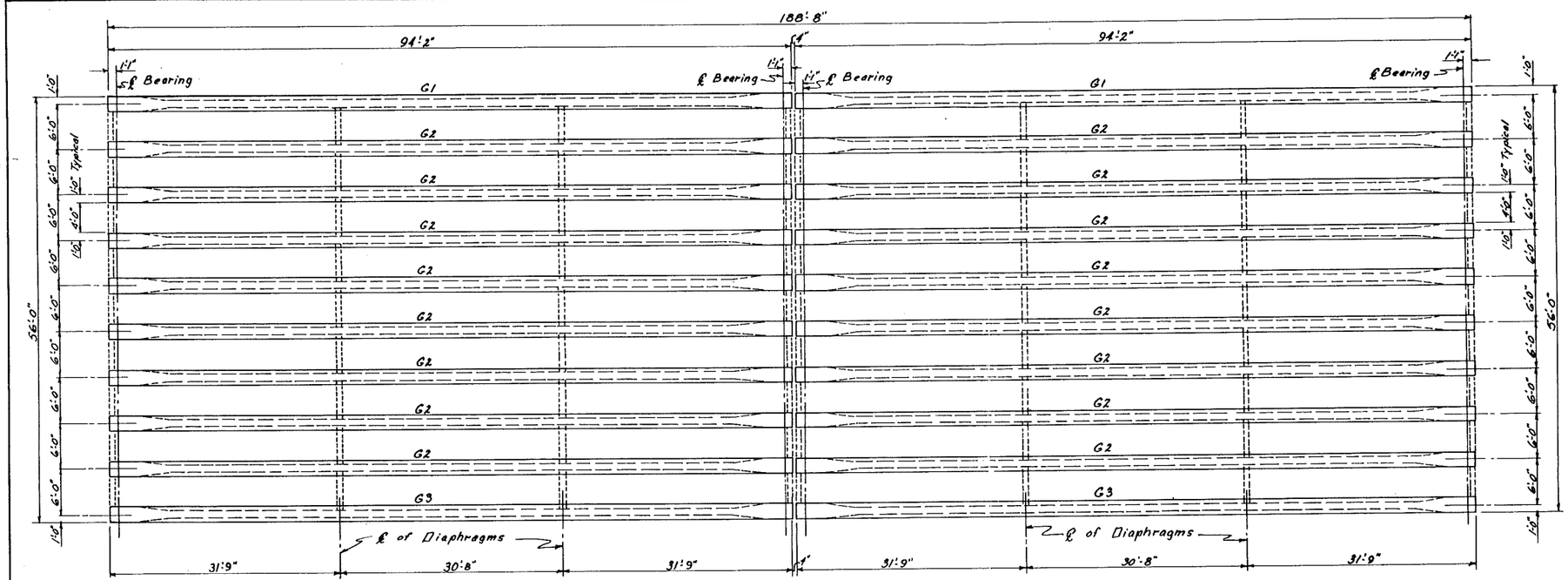
Designed: N.N.	Scale: as noted	Sheet Nº 4
Drawn: N.M.D.	Date: 11.28.56	Nº of Sheets 7
Checked: N.N.		

FED ROAD DIV NO	DIST.	PROJ NO.	SHEET NO.
9	COLO.	IM 002-2(40)	14

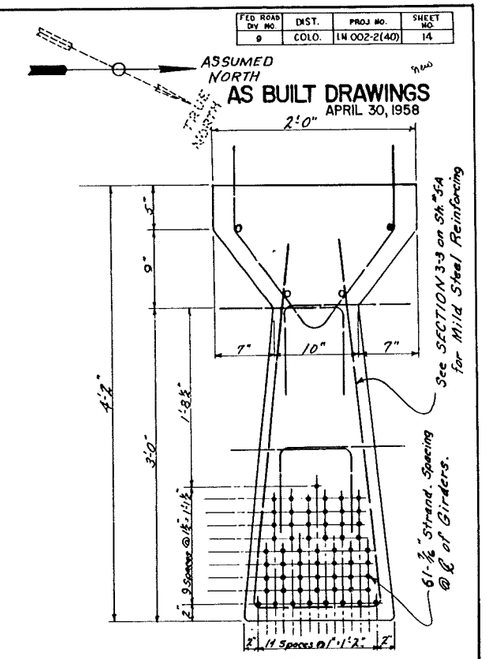
ASSUMED NORTH

TRUE NORTH

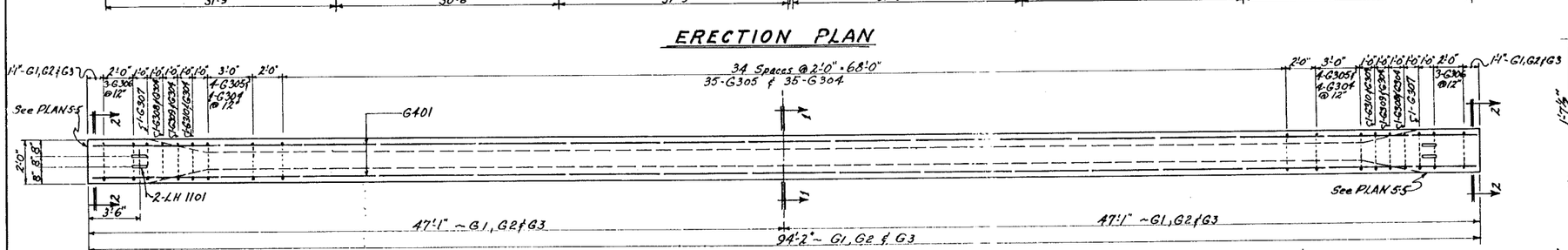
AS BUILT DRAWINGS
APRIL 30, 1958



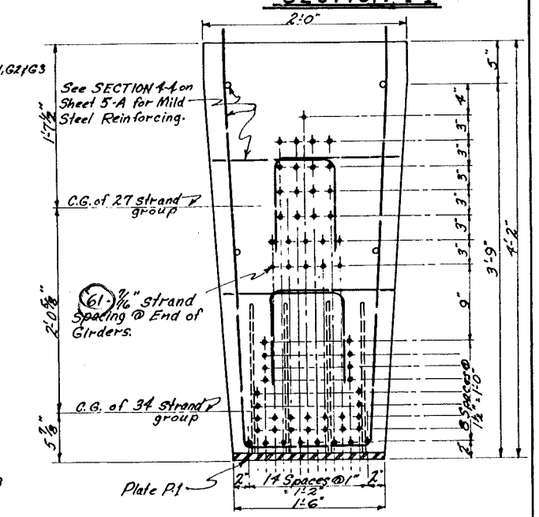
ERECTION PLAN



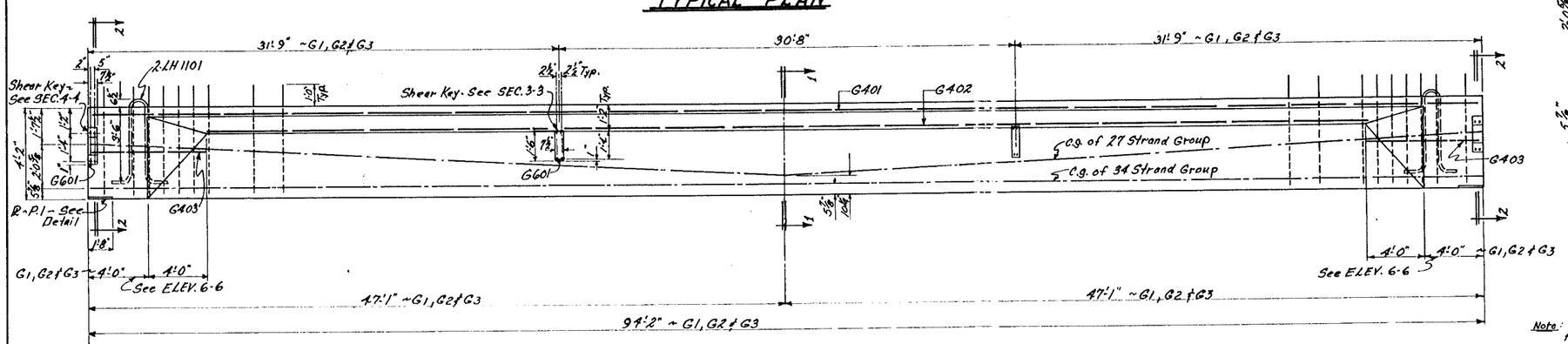
SECTION 1-1



TYPICAL PLAN



SECTION 2-2



ELEVATION G2
INTERIOR ELEVATION G1, G3

Note: See Sheet No. 5-A for Bar List.

COLORADO DEPARTMENT OF HIGHWAYS
U.S. HIGHWAY 85-87 SOUTH BOUND

NORTH ENTRANCE INTERCHANGE
A. F. A.
OVERPASS No. H-17-BC
PRESTRESSED GIRDER

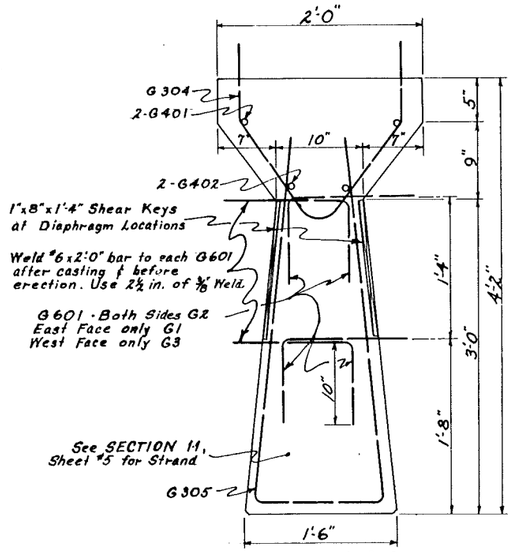
L. BODUROFF & ASSOCIATE
CONSULTING ENGINEERS

Designed: L.B.	Scale: as noted	Sheet No. 5
Drawn: B.F.W.		
Checked: L.B.	Date: 11-28-56	No. of Sheets 7

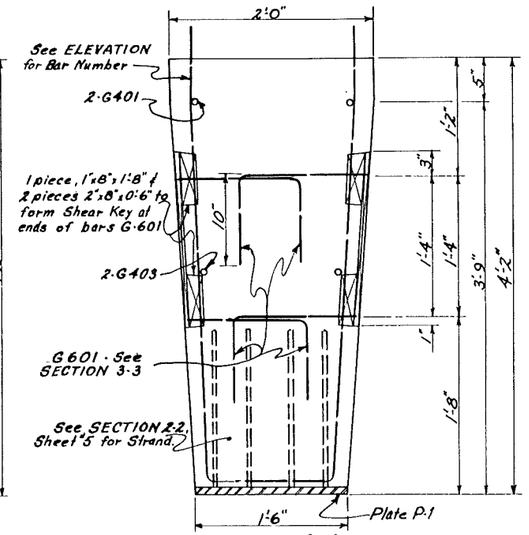
AS BUILT DRAWINGS

APRIL 30, 1958

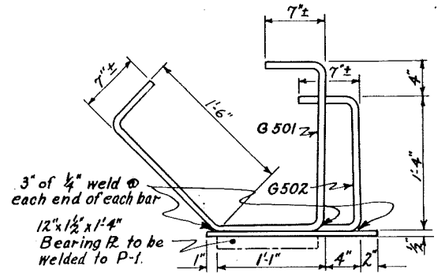
FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.
9	COLO.	IN 002-2(40)	14-A



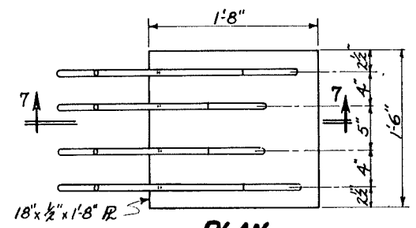
SECTION 3-3



SECTION 4-4



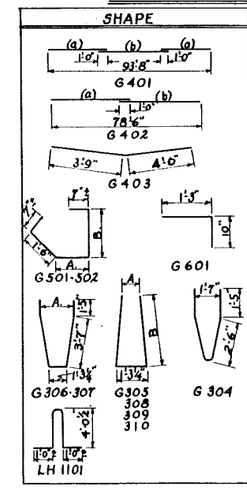
SECTION 7-7



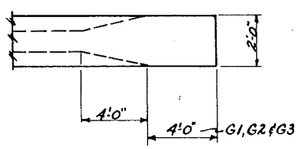
PLAN P-1 40 REQ'D.

BAR LIST FOR 20 GIRDERS

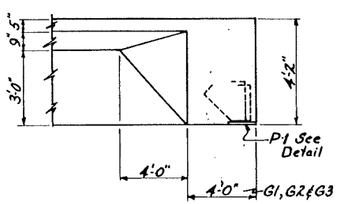
SHAPE	MARK	SIZE	LENGTH	No. REQ.	A.	B.
G 401		#4		40		
	(a)	#4	40'-0"	80		
	(b)	#4	15'-8"	40		
G 402		#4		40		
	(a)	#4	40'-0"	40		
	(b)	#4	39'-6"	40		
G 403		#4	7'-9"	80		
G 501		#5	5'-2"	80	1'-1"	1'-8"
G 502		#5	5'-2"	80	1'-5"	1'-4"
G 601		#6	2'-0"	576		
		#6	2'-0"	576	Weld to G601	
G 306		#3	11'-3"	120	1'-7"	
G 307		#3	11'-3"	40	1'-3"	
G 305		#3	8'-3"	860	0'-5"	3'-6"
G 308		#3	9'-3"	40	0'-11"	4'-0"
G 309		#3	9'-3"	40	0'-8"	4'-0"
G 310		#3	9'-3"	40	0'-5"	4'-0"
G 304		#3	7'-10"	980		
LH 1101		#11	10'-2"	80		



17,678 lin. ft. #3 @ 0.376 #/ft. = 6647 #
7,627 " " #4 @ 0.668 " " = 5095
828 " " #5 @ 1.043 " " = 864
2,304 " " #6 @ 1.502 " " = 3461
814 " " #11 @ 5.313 " " = 4325
20,392 #
1% Over-run 204
Total Weight = 20,596 #



PLAN 5-5



ELEVATION 6-6

QUANTITIES FOR 20 GIRDERS

ITEM	QUANT.	UNIT
5500 psi CONCRETE	394	Cu. Yds.
REINF. STEEL + 1%	20,596	Lbs.
40-PL 12"x1½"x1'-4"	3264	"
40-PL 18"x½"x1'-8"	2044	"

NOTES:

Concrete for the Precast Girders to be 5,500 psi Cylinder Strength at 28 days.

High Tensile Strand for Prestressing Units to have Min. Ult. Strength of 200,000 psi and Unit Elongation at breaking point of 3% on 10" long testing wire.

The Water-Cement Ratio of the Concrete for Girders to be Max. 0.5 and Slump not more than 2".

All Exposed Surfaces of Bearing Plates to be Aluminum Sprayed.

For General Notes, See Sheet #1.

COLORADO DEPARTMENT OF HIGHWAYS
U.S. HIGHWAY 85-87 SOUTHBOUND

NORTH ENTRANCE INTERCHANGE A.F.A.
OVERPASS No. H-17-BC

PRESTRESSED GIRDER DETAILS

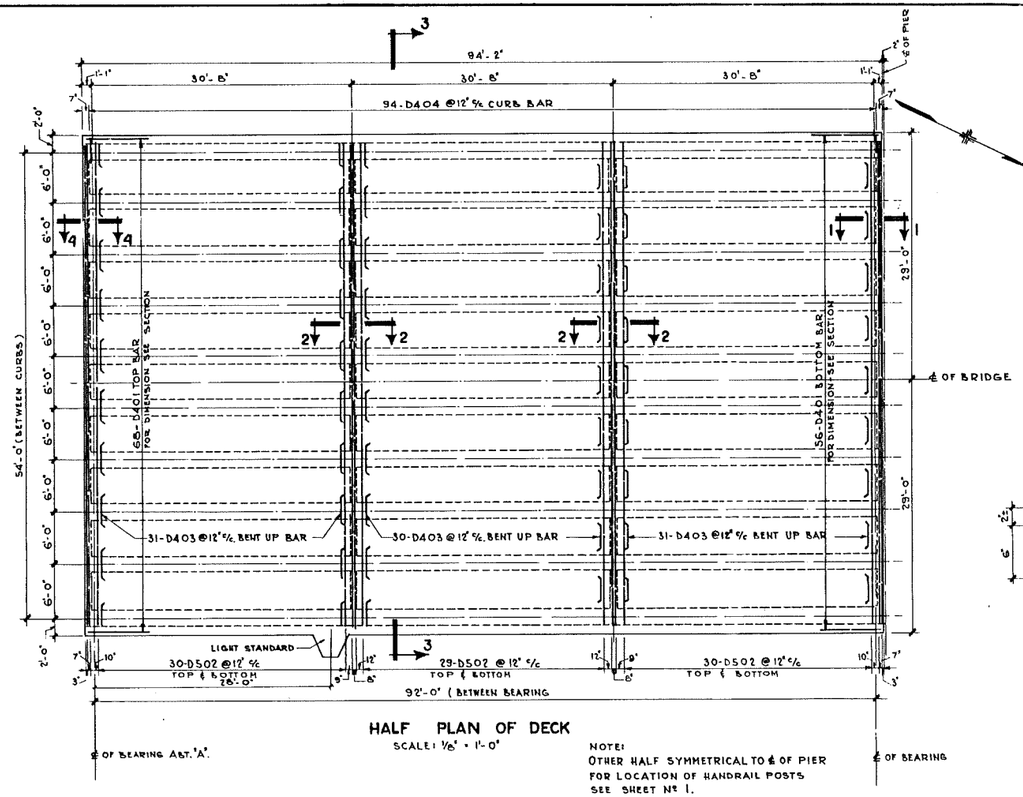
L. BODUROFF & ASSOCIATE
CONSULTING ENGINEERS

Designed: L.B.	Scale: As Noted	Sheet No. 5-A
Drawn: J.E.E.	Date: 11-28-56	No. of Sheets: 7
Checked: L.B.		

AS BUILT DRAWINGS

APRIL 30, 1958

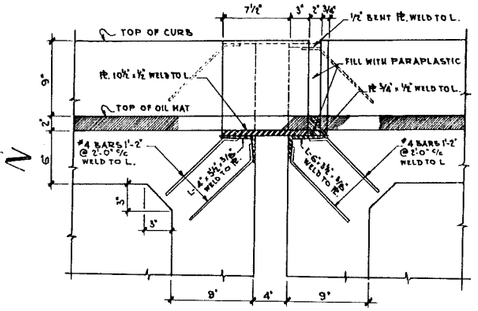
FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.
9	COLO.	LN.002-2(40)	15



HALF PLAN OF DECK

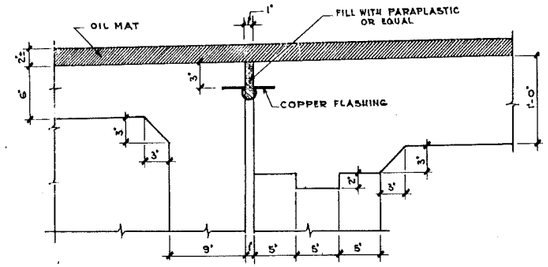
SCALE: 1/8" = 1'-0"

NOTE:
OTHER HALF SYMMETRICAL TO ℄ OF PIER
FOR LOCATION OF HANDRAIL POSTS
SEE SHEET Nº 1.



EXP. JOINT AT PIER

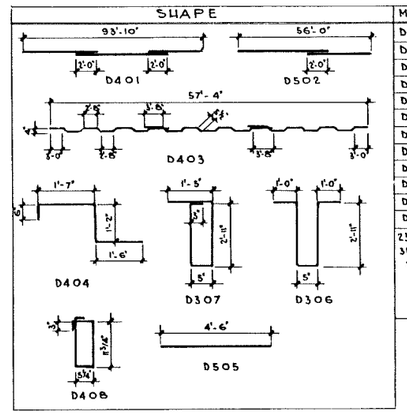
SCALE: 1½" = 1'-0"



SECTION 4-4 (AT ABTS. "A" AND "B")

SCALE: 1½" = 1'-0"

BAR LIST FOR DECK



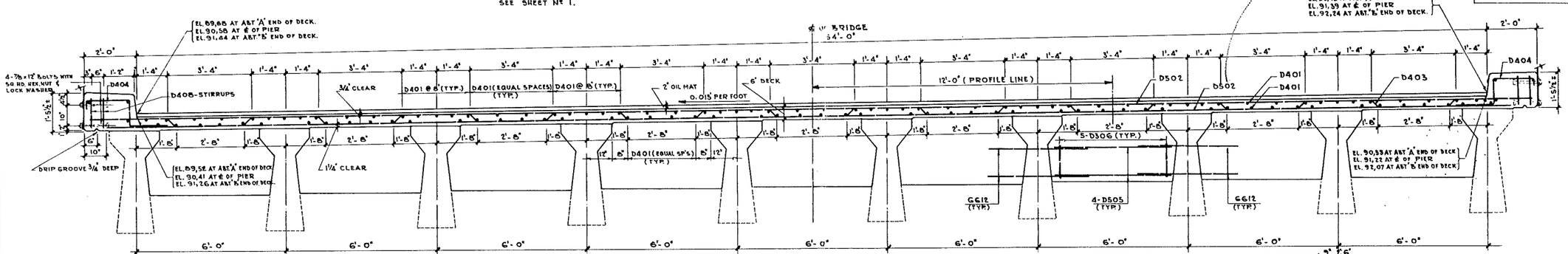
MARK	SIZE	LENGTH	Nº. REQ'D
D401	#4	97'-10"	248
D502	#5	58'-0"	388
D403	#4	68'-11"	184
D404	#4	4'-6"	376
D505	#5	4'-6"	288
D306	#3	8'-0"	180
D307	#3	7'-7"	180
D408	#4	3'-0"	80
D509	#5	3'-3"	8
D510	#5	2'-0"	4
D511	#5	10'-6"	8
D512	#5	5'-6"	4

23942 Lin. ft. #5 @ 1.043# = 24971#
38675 " #4 @ .668# = 25969
2804 " #3 @ .376# = 1054
51994
1% OVERRUN 520
TOTAL WEIGHT 52514

NOTE.
TO FORM THE VERTICAL CURVE, SLAB THICKNESS IS UNIFORMLY DECREASED FROM 6" AT STA. 586+00 TO 5½" AT STA. 585+44.43.

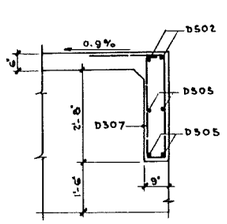
QUANTITIES FOR DECK

ITEM	QUANTITY	UNIT
CLASS "A" CONCRETE	250.60	CU. YDS.
PLANT MIXED ASPHALTIC SURF.	108.00	TONS.
REINFORCING STEEL (1½% OVERRUN)	52514	Lbs.
160-7/8" x 12" BOLTS	401.60	Lbs.
114 #4 ANCOR BARS-1'-2"	88.18	Lbs.
PL. 10½" x ½" x 6'-0"	1074.00	Lbs.
PL. 3¼" x ½" x 6'-0"	76.80	Lbs.
PL. 5¾" x ½" x 6'-0"	58.68	Lbs.
L-4" x 3½" x 5/16" x 54'-0"	491.40	Lbs.
L-6" x 3½" x 5/16" x 54'-0"	631.80	Lbs.
SHEET COPPER (32 oz. per sq. ft.)	232.00	Lbs.
ELECTRICAL CONDUIT 2" ø	400	Lin. ft.
1¼" x 10 5/16 STD. PIPE	30	Lbs.



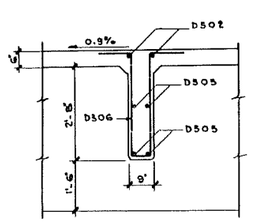
SECTION 3-3

SCALE: 1½" = 1'-0"



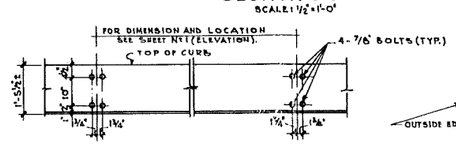
SECTION 1-1

SCALE: 1½" = 1'-0"



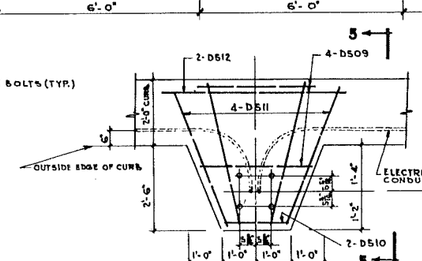
SECTION 2-2

SCALE: 1½" = 1'-0"



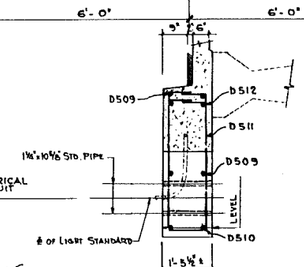
BOLT LOCATION FOR 6 WF 20 POST

SCALE: 1½" = 1'-0"



LIGHT STANDART SUPPORT

SCALE: 1½" = 1'-0"



SECTION 5-5

SCALE: 1½" = 1'-0"

FOR GENERAL NOTES, SEE SHEET Nº 1.

COLORADO DEPARTMENT OF HIGHWAYS
U.S. HIGHWAY 85-87 SOUTH BOUND

NORTH ENTRANCE INTERCHANGE A.F.A.
OVERPASS Nº H-17-B.C.

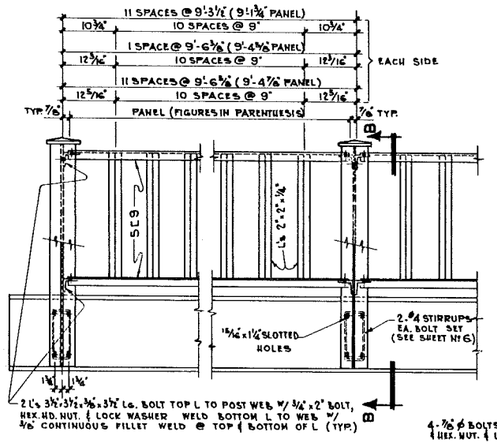
DECK PLAN AND SECTIONS

L. BODUROFF & ASSOCIATE
CONSULTING ENGINEERS

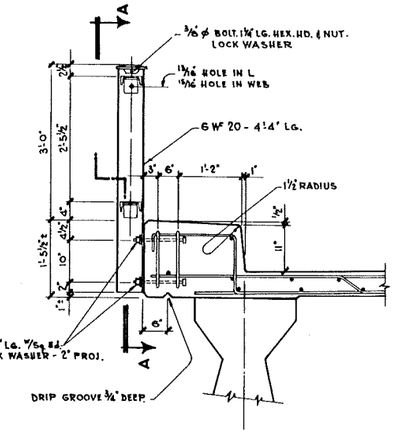
Designed: N.N.	Scale: as noted	Sheet Nº 6
Drawn: J.N.	Date: 11.28.56	Nº of Sheets 7
Checked: N.N.		

AS BUILT DRAWINGS
APRIL 30, 1958

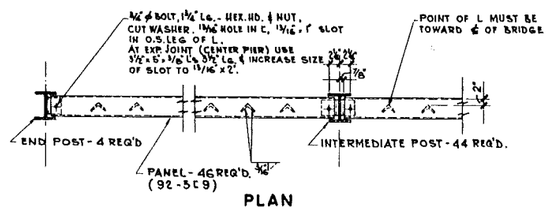
FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.
9	COLO.	I.N.002-2(40)	16



SECTION A-A
SCALE 3/4" = 1'-0"



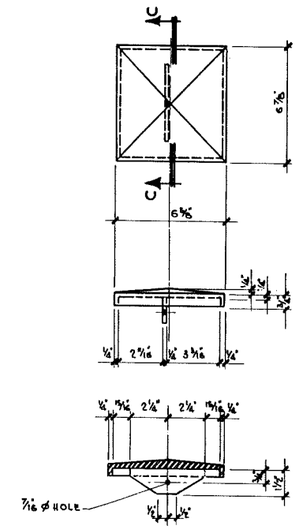
SECTION B-B
SCALE 3/4" = 1'-0"



PLAN
CAP REMOVED
SCALE 3/4" = 1'-0"

NOTE. FOR GENERAL ELEVATION OF STEEL HANDRAIL SEE SHEET Nº 1.

STEEL HANDRAIL



SECTION

CAST IRON CAP FOR POST
48 - REQ'D
SCALE 3" = 1'-0"

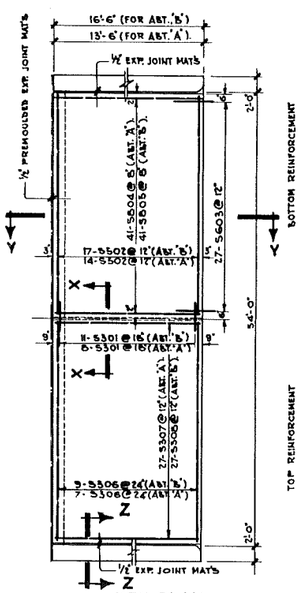
BAR LIST FOR TWO APPROACH SLAB

MARK	TYPE	LENGTH	Nº REQ'D	SIZE
S301	STRAIGHT	2'-0"	19	#3
S502	"	26'-8"	62	#5
S603	"	2'-0"	108	#6
S804	"	13'-0"	82	#8
S805	"	16'-0"	82	#8
S306	"	26'-8"	32	#3
S307	"	13'-0"	54	#3
S308	"	16'-0"	54	#3

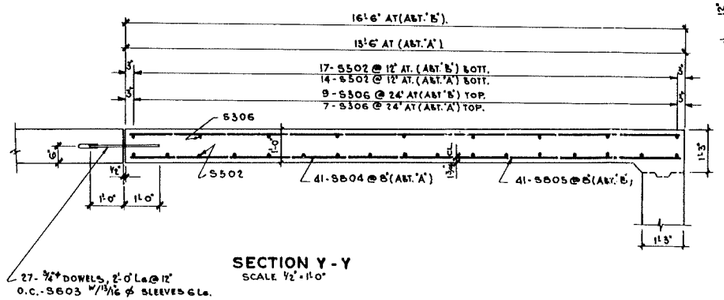
#3 BARS - 2457 Lin. ft. @ .376#/Lin. ft. = 924.00
#5 BARS - 1653 " @ 1.043 " = 1724.10
#6 BARS - 216 " @ 1.502 " = 324.40
#8 BARS - 2378 " @ 2.670 " = 6349.20
9321.70
1% OVERRUN 93.30
TOTAL WEIGHT = 9415.00

QUANTITIES

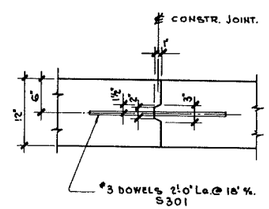
ITEM	QUANTITIES	UNIT
REINFORCING STEEL	9415	Lbs.
CONCRETE CLASS 'A'	62	Cu. Yds.
PLAN MIXED ASPHALTING	16	TONS.
1/2" EXPANSION JOINT MATERIAL	88	SQ. FT.
STEEL HANDRAILING	16550	Lbs.



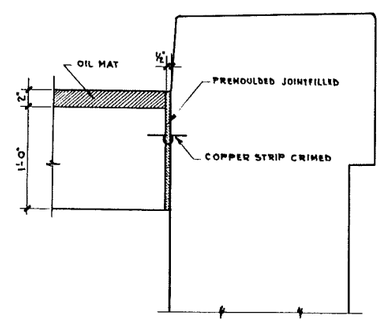
KEY PLAN
SCALE 1/8" = 1'-0"



SECTION Y-Y
SCALE 1/2" = 1'-0"



SECTION X-X
SCALE 1" = 1'-0"



SECTION Z-Z
SCALE 1 1/2" = 1'-0"

L. Boduroff
K.28.5C

COLORADO DEPARTMENT OF HIGHWAYS
U.S. HIGHWAY 85-87 SOUTH BOUND
NORTH ENTRANCE INTERCHANGE
A. F. A.
OVERPASS Nº H-17-B.C.
STEEL HANDRAIL
APPROACH SLAB

L. BODUROFF & ASSOCIATE
CONSULTING ENGINEERS
DENVER COLORADO

Designed: N.N.	Scale: as shown	Sheet Nº 7
Drawn: J.N.		
Checked: N.N.	Date: 11 28 56	Nº of Sheets 7