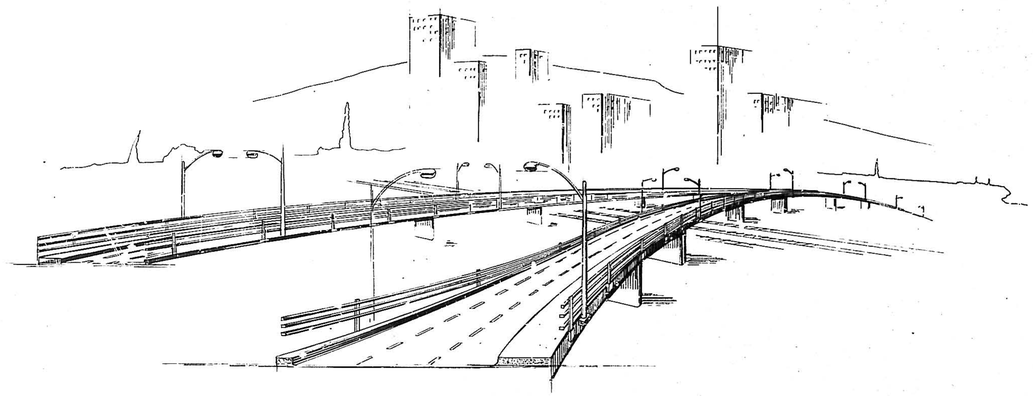
CITY OF

ALBUQUERQUE, NEW MEXICO

PRELIMINARY STRUCTURE LAYOUT FOR



GRAND AVENUE OVERPASS

DESIGN DATA

DESIGN IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATIONS, 1965 AND INTERIM SPECIFICATIONS TO DATE.

LIVE LOAD: HS 20-44

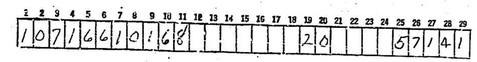
WEARING SURFACE: 1/4" MONOLITHIC WEARING SURFACE PLUS 15 LB. PER SQ. FT. ALLOWANCE FOR FUTURE WEARING SURFACE.

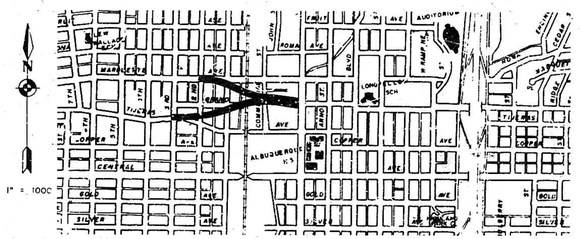
HORIZONTAL EARTH PRESSURE: 36 LB. PER CU. FT. EQUIVALENT FLUID PRESSURE.

WIND VELOCITY: 80 M.P.H.

DESIGN SPEED: 35 M.P.H. ON STRUCTURE.

MAXIMUM COMPUTED PILE LOAD: TREATED TIMBER PILES, 24 TONS.

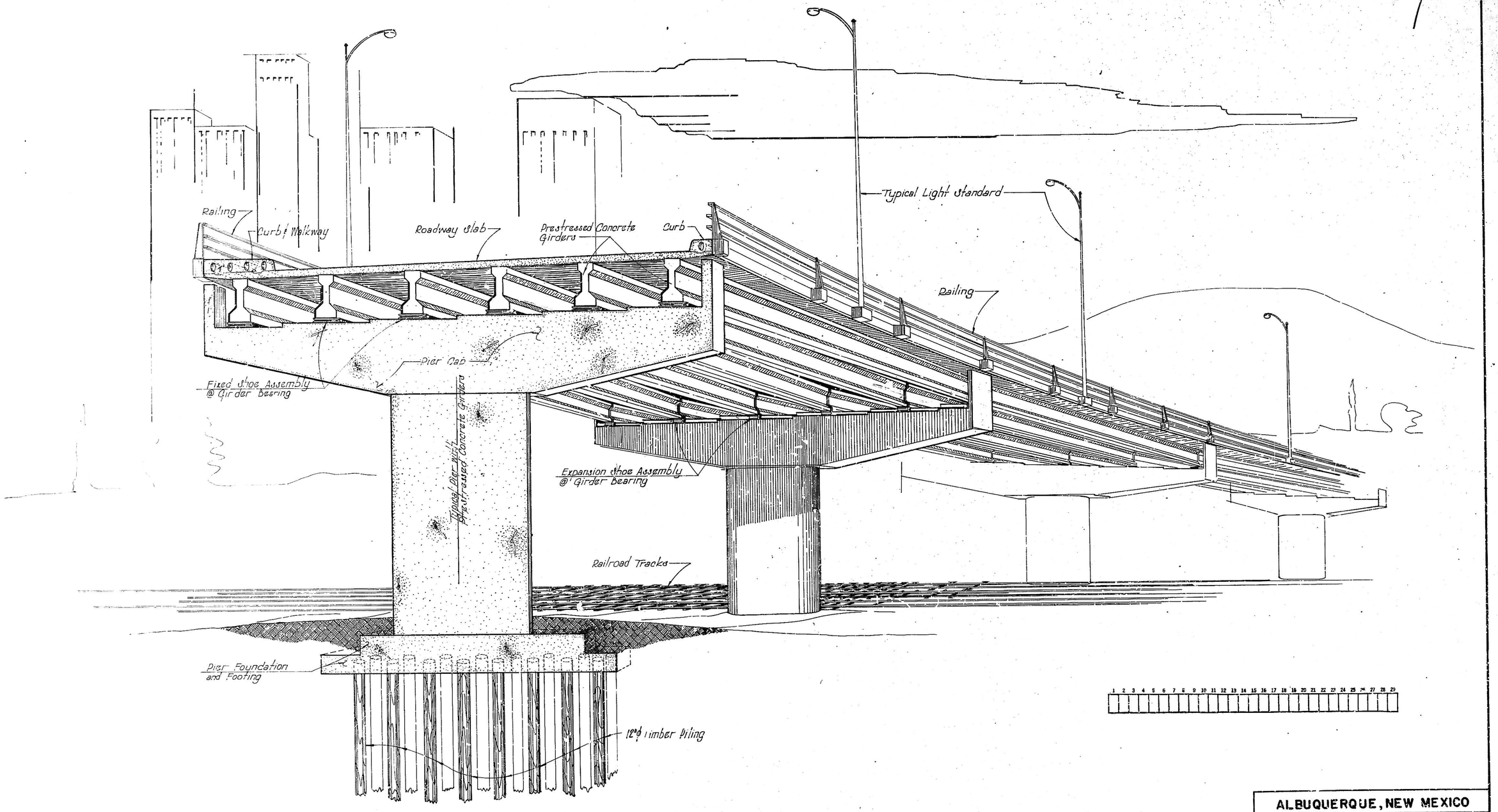




LOCATION MAP

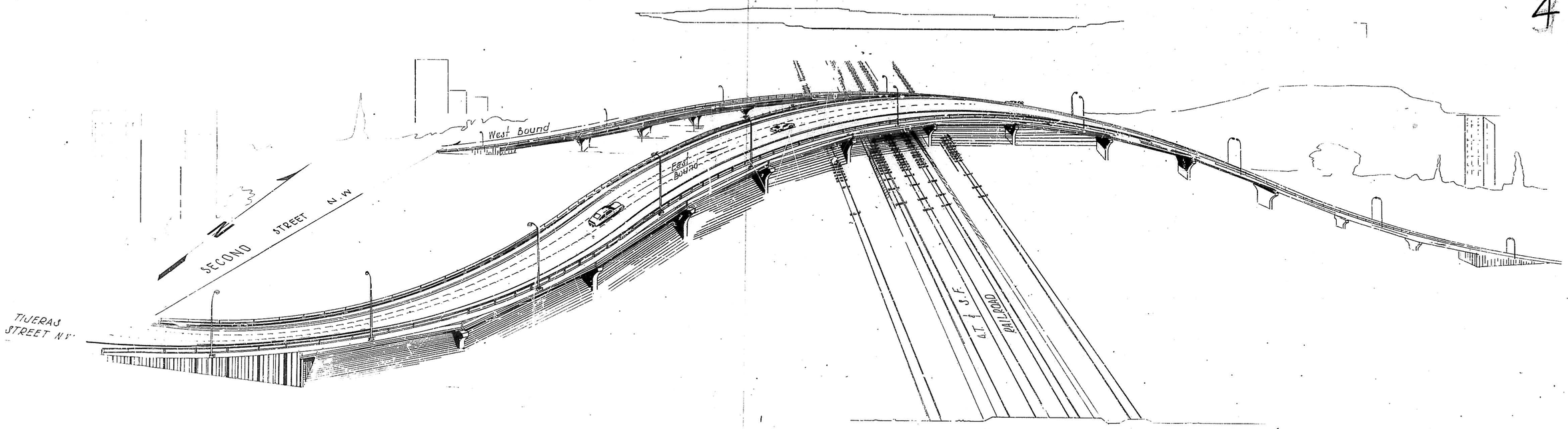
D-166-A

GORDON HERKENHOFF & ASSOCIATES, INC. CONSULTING ENGINEERS



ALBUQUERQUE, NEW MEXICO	
GRAND AVE. OVERPASS	
PRELIMINARY STRUCTURE SKETCHES	
PRESTRESSED CONCRETE GIRDER STRUCTURE PERSPECTIVE	
GORDON HERKENHOFF & ASSOCIATES, INC. CONSULTING ENGINEERS ALBUQUERQUE, NEW MEXICO	
SCALE: NONE	DATE: JULY 1969
DRAWN: R.A.G.	SHEET 7
CHECKED: L.M.P	OF 7

D-166-A



GRAND AVENUE OVERPASS

(Prestressed Concrete Girder Structure)

INDEX OF DRAWINGS

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3	PRESTRESSED CONCRETE GIRDER STRUCTURE PERSPECTIVE
4	SUMMARY OF QUANTITIES AND GENERAL NOTES
5	STAKING PLAN - W.B. & E.B. BRIDGES
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64	PAVEMENT CUTS AND MANHOLE DETAILS
65	PIPING AND VALVE DETAILS
66	BRONZE PLAQUE DETAILS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

1 0 7 1 6 6 2 0 2 7 0 2 1 2 1 2 1 2 1

07
08
09

AS CONSTRUCTED

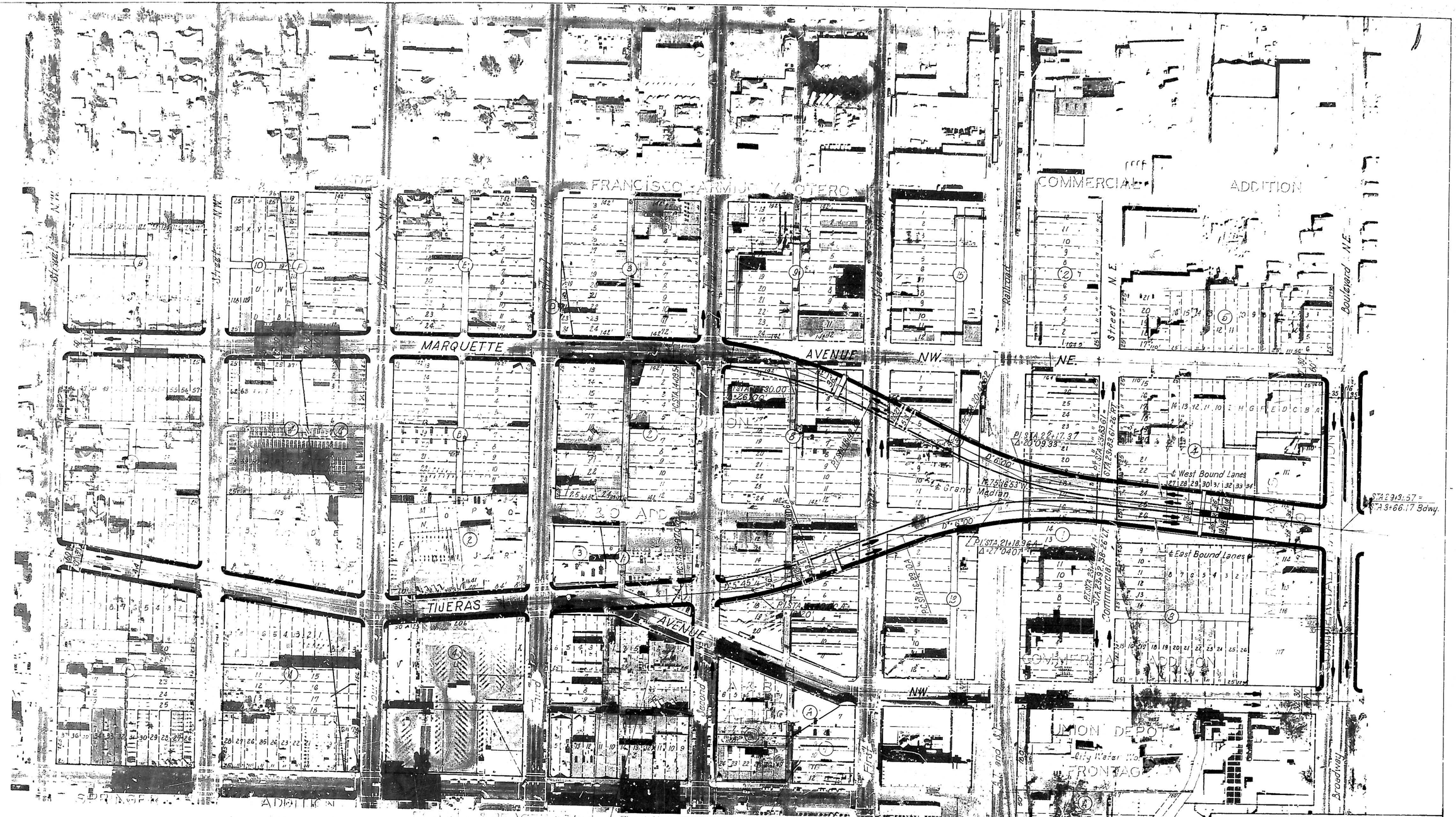
ALBUQUERQUE, NEW MEXICO

GRAND AVE. OVERPASS

PRESTRESSED CONCRETE GIRDER STRUCTURE PERSPECTIVE AND INDEX

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.G.	SHEET 2
NONE	JULY 1969	CHECKED: L.M.P.	OF 66



SECTION THRU BRIDGE DECK

ALBUQUERQUE, NEW MEXICO

GRAND PLAN

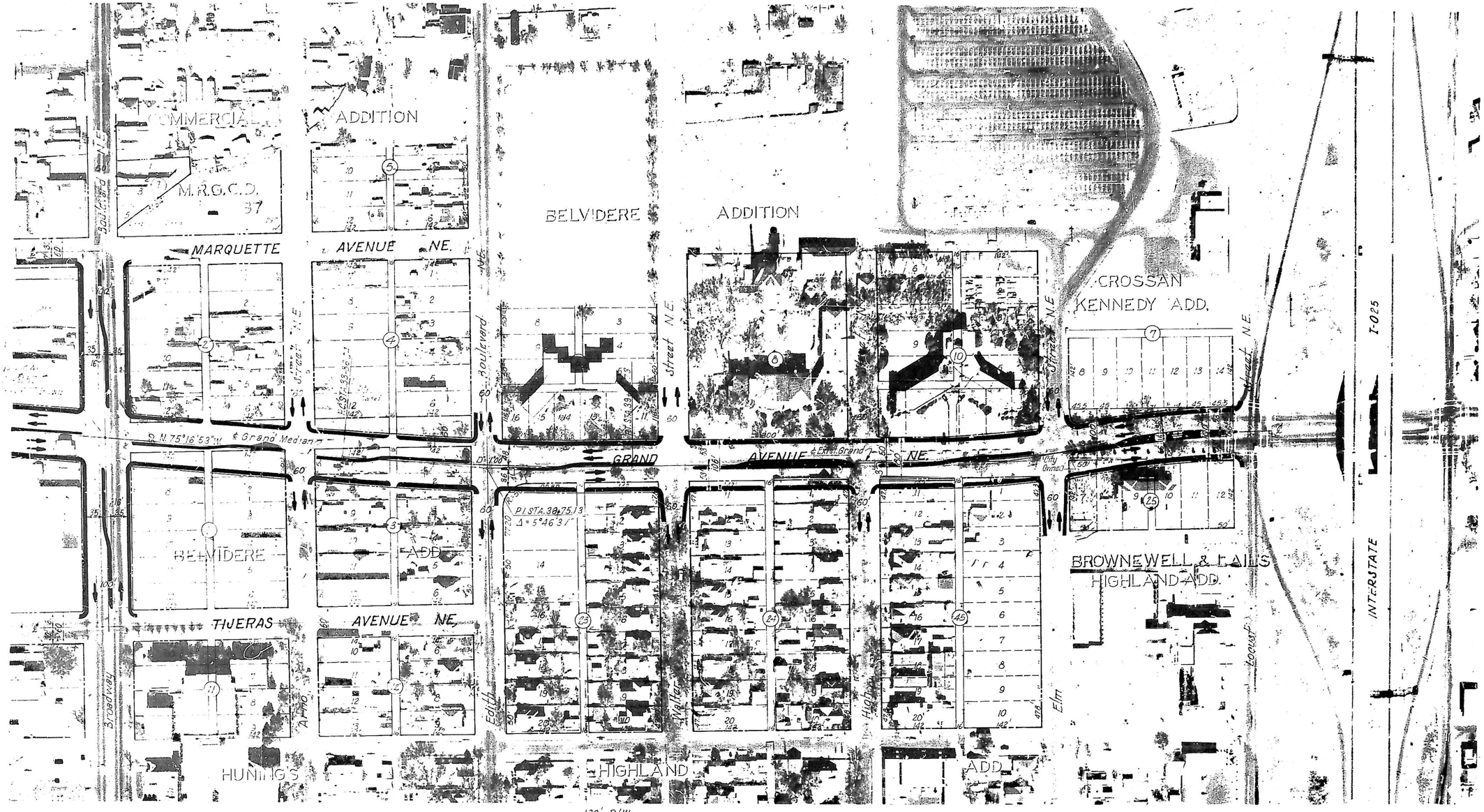
PRELIMINARY ALIGNMENT

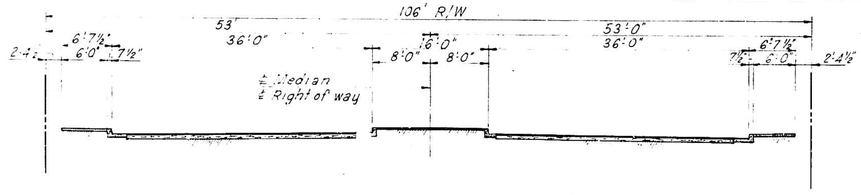
6 TH. STREET TO BROADWAY

GORDON HERKENHOFF & ASSOCIATES INC
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

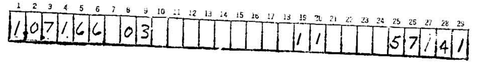
SCALE	DATE	DRAWN R.A.L.	SHEET 2
1"=100'	MARCH 1968	CHECKED L.M.P.	OF 4

D-166-2





TYPICAL STREET SECTION



D-166-3

ALBUQUERQUE, NEW MEXICO

GRAND PLAN

PRELIMINARY ALIGNMENT

BROADWAY TO INTERSTATE 25

GORDON HERKENHOFF & ASSOCIATES INC
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN	SHEET 3
1"=100'	MARCH 1968	CHECKED	OF 4

P.I. STA. 16+30.00
Δ = 26°00' RT.

MARQUETTE AVENUE

COMMERCIAL ADD.

COMMERCIAL PLACE

CURVE DATA No 1
P.I. STA. 16+30.00
Δ = 26°00'
D = 6°00'
R = 954.93'
T = 220.46'
L = 433.33'

Profile Grade

MIN. Clearance = 14'-6"

P.T. STA. 18+42.87

P.C. STA. 20+47.62

FIRST STREET

CURVE DATA No 2
P.I. STA. 22+47.37
Δ = 20°09'33"
D = 16°00'
R = 954.93'
T = 169.75'
L = 335.99'

MIN. Clearance = 23'-0"

℄ WEST BOUND LANES

℄ Grand Median

P.I. STA. 22+17.37
Δ = 20°09'33" LT.

P.I. STA. 21+18.96A
Δ = 27°04'07" RT.

N75°16'53"W

P.T. STA. 23+83.61
P.C. STA. 23+83.61
Δ = 90°12'50"

Profile Grade

Tr. 111
STA. 29+31.57 =
STA. 3+66.17 Bdwy.

STA. 17+64.72 Grand Survey
STA. 3+42.71 Bdwy.

S81°16'50"E

Asphalt

Brick Bldg.

℄ EAST BOUND LANES

Conc.

CURVE DATA No 3
P.I. STA. 15+40.00A
Δ = 16°20'
D = 5°45'
R = 996.45'
T = 143.00'
L = 284.06'

P.T. STA. 16+81.06A

P.C. STA. 13+97.00A

Profile Grade

MIN. Clearance = 14'-6"

P.C. STA. 18+89.10A

P.I. STA. 15+40.00A
Δ = 16°20' LT.

P.I. STA. 17+83.12
Δ = 21°28'20" LT.

Sta. 0+00 First St.
= Sta. 16+44.20 Tijeras Ave.

CURVE DATA No 4
P.I. STA. 21+18.96A
Δ = 27°04'07"
D = 6°00'
R = 954.93'
T = 229.86'
L = 451.14'

P.I. STA. 12+42.55
Δ = 90°22'30" LT.

P.T. STA. 23+40.24A
STA. 23+92.38 = 22.72 LT.

COMMERCIAL

Edge Conc.

Albuquerque High School
Phys. Ed. Field

Tr. 115 & 116

Tr. 117

BROADWAY

Concrete

Conc. Walls

N81°50'W

AVENUE

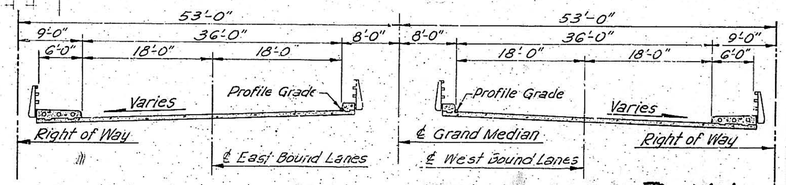
N08°25'W

S0°47'30"E

25+00

15+00

SECTION THRU BRIDGE DECK D-166-A



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	0	7	1	6	6		0	4																5	7	1	4	1

ALBUQUERQUE NEW MEXICO

GRAND PLAN

PRELIMINARY STRUCTURE ALIGNMENT

SECTION No 2

SECOND ST. TO BROADWAY

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: - R.D.M.	SHEET 4
1" = 50	MARCH 1968	CHECKED: L.M.P.	OF 4

NOTE: 1. All footings founded on Treated Timber Piles W/ Max. pile load of 24 Tons.
2. See Sheet No 4 for Typical Slab and Girder Layout, Slab Dets. Is, Typical Pier Details and Roadway Sections.

VERTICAL CLEARANCES

①	14.68'
②	24.02'
③	24.11'
④	22.43'

ANGLES
α = 63°41'
β = 84°11'

CURVE DATA No 1
P.I. STA. 105+20.54
Δ = 26°20'40"
D = 6°00'
R = 954.93'
T = 223.49'
L = 439.07'

CURVE DATA No 2
P.I. STA. 111+01.40
Δ = 20°30'
D = 6°00'
R = 954.93'
T = 172.68'
L = 341.67'

P.I. STA. 105+20.54 Δ = 26°20'40" RT.
P.I. STA. 111+01.40 Δ = 20°30' LT.
P.I. STA. 110+28.54(T) Δ = 27°30' RT.
P.I. STA. 12+42.55 Δ = 90°22'20" LT.
P.I. STA. 12+37.60 Δ = 90°12'20" RT.
P.C. STA. 102+97.5
P.T. STA. 107+36.12
P.C. STA. 109+28.72
P.T. STA. 112+70.39 = STA. 112+70.39 - 26' Pr.
STA. 3+79.94 First St. = STA. 7+19.54 Grand Ave.
Tr: 111 Wholesale Drug Co. STA. 118+15.41 = STA. 3+66.17 Bdwy. = STA. 17+64.72 Grand Survey
Tr: 112
Tr: 114

MARQUETTE AVE. — GRAND AVE. — COMMERCIAL ST. — FIRST ST. — SECOND ST. — BROADWAY

Marquette Survey Line — Right of Way — Profile Grade — Reverse Curve — 10' Approach Slab — 100' Radius Curve — 2.00% — 1.42% — 5.48% — 7.00% — 5.25% — 10.20% — 6.48% — 10.58' — 10.75' — 23.5' — 16.75' — 15.18' — 24.11' Min. — 24.02' — 14.68' Min. — 22.43' — 102.75' — 260.46' — 90°00'00" — 90°00'30" — 90°22'30" — 90°12'20"

GREYHOUND BUS DEPOT — Kent Beyer Bldg. — Overhang Brick Bldg. — Korber 14 Warehouse — Frame & Stucco Bldg. — Stucco Addition — Stucco Addition

GRAND MEDIAN S 83°36'10" E

℄ Brg. Abut. No 1 Sta. 106+33.43 — ℄ Pier No 1 Sta. 108+95.48 — ℄ Pier No 2 Sta. 107+73.41 — ℄ Pier No 3 Sta. 108+36.12 — ℄ Pier No 3A Sta. 108+98.81 — ℄ Pier No 4 Sta. 109+60.58 — ℄ Pier No 5 Sta. 110+24.29 — ℄ Pier No 6 Sta. 110+87.12 — ℄ Pier No 7 Sta. 111+49.96 — ℄ Pier No 8 Sta. 112+15.03 — ℄ Pier No 9 Sta. 113+09.23 — ℄ Pier No 10 Sta. 114+02.39 — ℄ Brg. Abut. No 2 Sta. 114+87.91

℄ EAST BOUND LANES — ℄ WEST BOUND LANES

℄ Track No 99 — ℄ West bound Main Track — ℄ Track No 511 — ℄ Track No 550 — ℄ East bound Main Track

Retaining wall 190' ℄ Brg. Abut. No 1 — Retaining wall 190' ℄ Brg. Abut. No 2

12 Simple Spans, 62.05', 77.95', 62.71', 62.69', 62.71', 62.77', 66.83', 80.01', 73.90', 74.20', 78.16' and 77.52' — ℄ Lines of Prestressed Concrete Girders (Type III) — Cast in Place Concrete Deck — 36' Roadway — N.M.S.H.T.D. S.D. BR-1-64 Bridge Rail, Type 'B' Modified — LL HS 20-44
6'-0" Sidewalk north side — 1'-6" Curb south side

PVI Sta. 107+36.12 EL. 4973.48 — PVI Sta. 110+61.60 EL. (4996.23) 4996.28 MO. = -9.953' — PVI Sta. 113+86.17 EL. 4979.17 — PVI Sta. 116+64.09 EL. 4984.09 — PVI Sta. 117+16.68 EL. 4982.32 — PVI Sta. 118+54.54 EL. 4983.28

EL. 4956.96 Profile Grade ℄ WB Lanes — EL. 4956.60 Profile Grade Gutter Line 18' Rt.

N.M.S.H.D. STD. Type 'B' Rail Modified & Sidewalk — Railway Clearance — Treated Timber Piles — Treated Timber Piles

+0.8180% — +0.308%

4948.50 — 4948.18 — 4948.45 — 4948.33 — 4948.56 — 4948.54 — 4949.41 — 4950.05 — 4950.36 — 4950.60 — 4950.93 — 4952.00 — 4951.55

℄ Second St. — First St. — ℄ Track No 511 — ℄ Track No 99 — ℄ West bound Main Track — ℄ Track No 550 — ℄ East bound Main Track — ℄ Commercial St. — ℄ Broadway

+.42 EL. 4952.56 — +90 P.V.I. EL. 4952.61 — +50 P.V.I. 120' V.C. EL. (4953.10) 4954.03 MO. = +0.9473' — +10 P.V.I. EL. 4957.80 — +33.43 ℄ Brg. Abut. No 1 — +95.48 ℄ Pier No 1 — +73.41 ℄ Pier No 2 — +36.12 ℄ Pier No 3 — +98.81 ℄ Pier No 3A — +61.52 ℄ Pier No 4 — +24.29 ℄ Pier No 5 — +91.12 ℄ Pier No 6 — +71.13 ℄ Pier No 7 — +51.03 ℄ Pier No 8 — +29.23 ℄ Pier No 9 — +07.39 ℄ Pier No 10 — +64.91 ℄ Brg. Abut. No 2

103 104 105 106 107 108 109 110 111 112 113 114 115 116

4990 4980 4970 4960 4950

PLAN — PROFILE

ALBUQUERQUE NEW MEXICO

GRAND AVE. OVERPASS

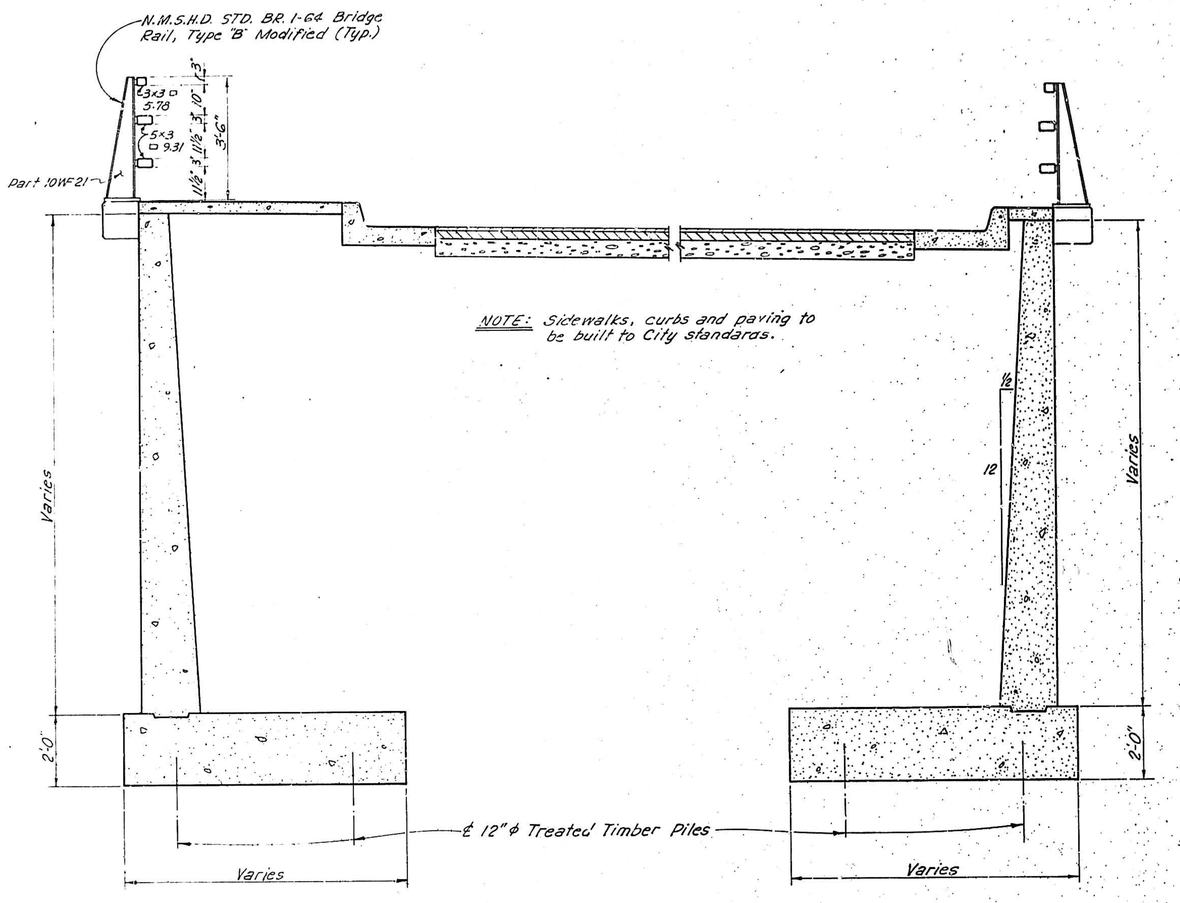
WEST BOUND LANES PRELIMINARY PRESTRESSED CONCRETE GIRDER LAYOUT

GORDON HERKENHOFF & ASSOCIATES INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

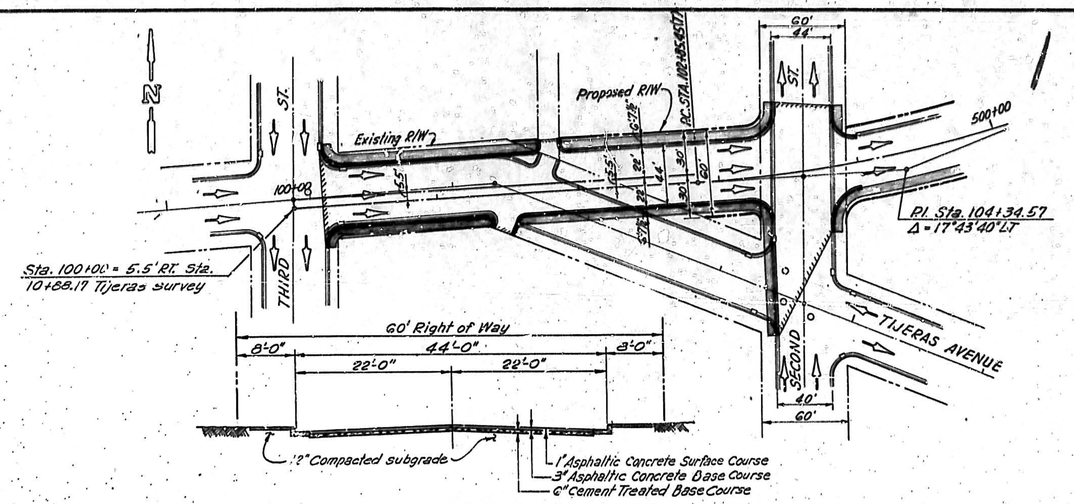
SCALE	DATE	DRAWN: R.D.M.	SHEET 2
1" = 50'	JULY 1968	CHECKED: L.M.P.	OF 7

D-166-A

PLATE 1 — PLAN-PROFILE

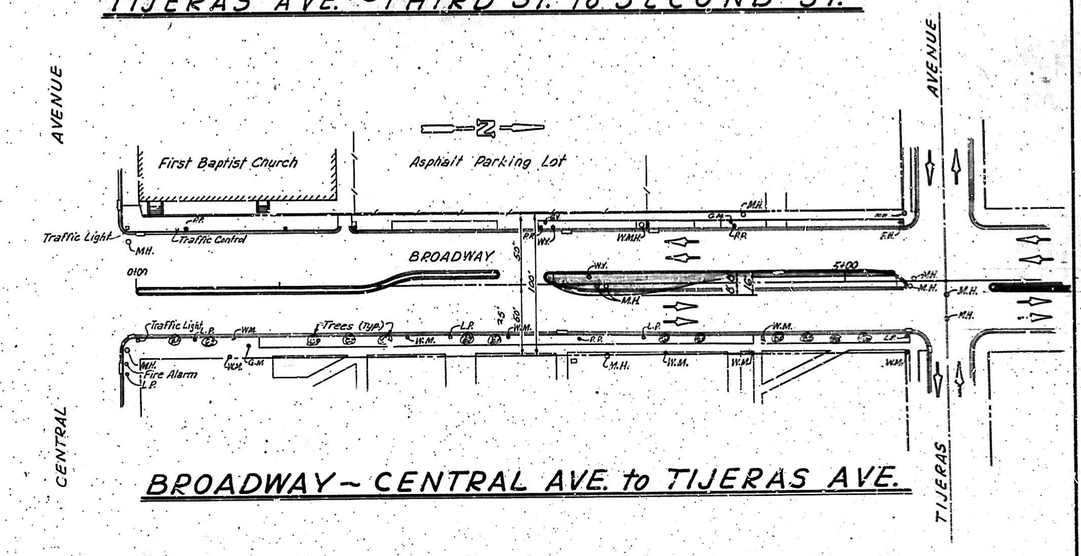


RETAINING WALLS



STREET SECTION

TIJERAS AVE. ~ THIRD ST. to SECOND ST.

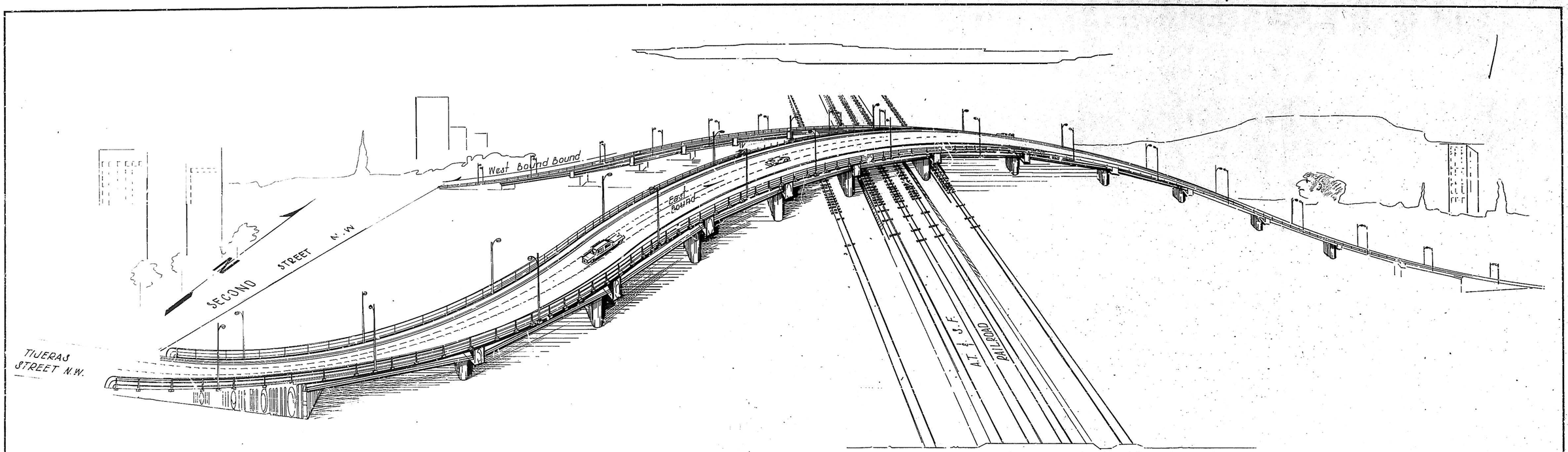


BROADWAY ~ CENTRAL AVE. to TIJERAS AVE.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	0	7	1	6	6	1	0	5	6	8									1	1				5	7	1	4	1

ALBUQUERQUE NEW MEXICO			
GRAND AVE. OVERPASS			
PRELIMINARY STRUCTURE LAYOUT RETAINING WALL SECTION AND RELATED STREET WORK			
GORDON HERKENHOFF & ASSOCIATES, INC. CONSULTING ENGINEERS ALBUQUERQUE NEW MEXICO			
SCALE	DATE JULY 1968	DRAWN: R.D.M. CHECKED: L.M.P.	SHEET 5 OF 7

D-166-A



GRAND AVENUE OVERPASS
(Prestressed Concrete Girder Structure)

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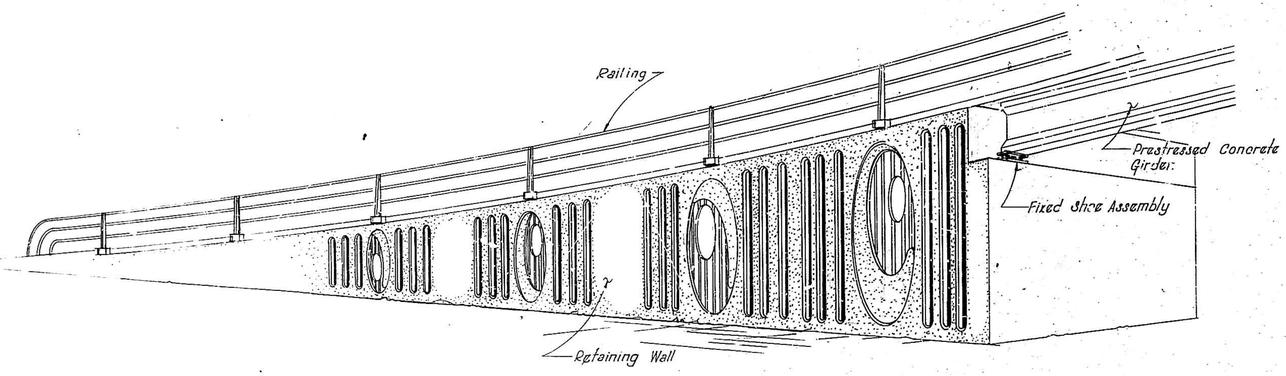
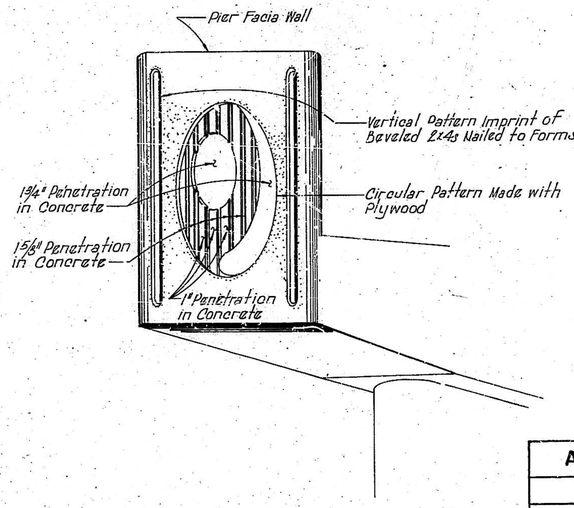
1 0 7 1 6 6 1 C 6 6 3 1 1 5 7 4 1



DECORATIVE PATTERN AT RETAINING WALL

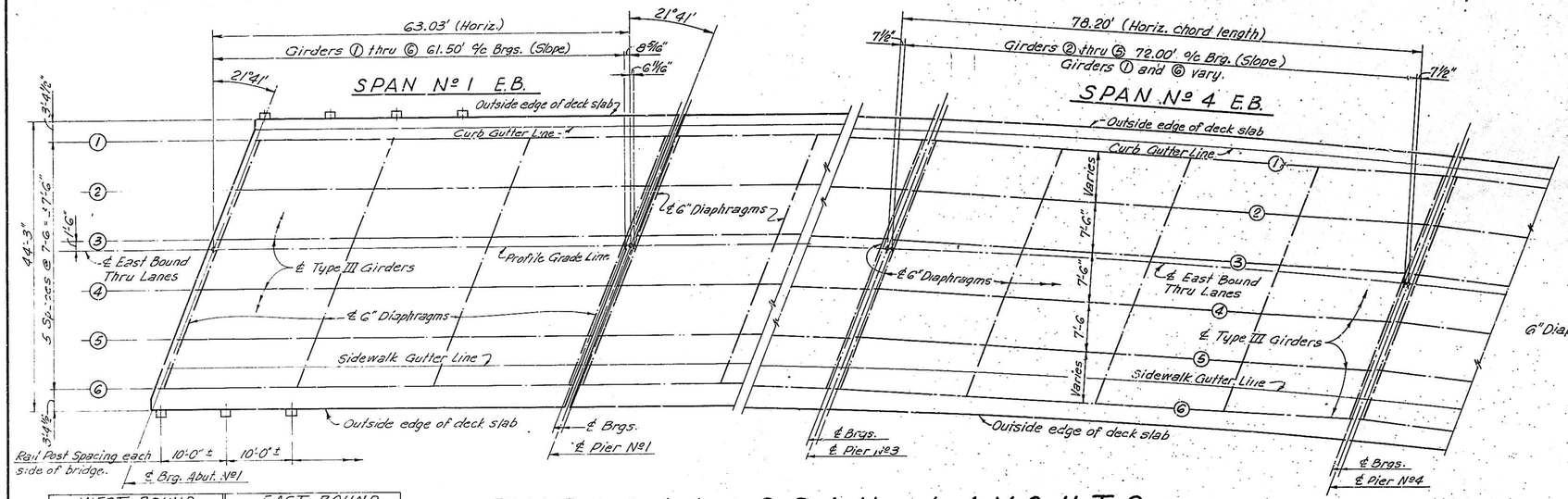


DECORATIVE PATTERN AT PIER FACIA WALL

ALBUQUERQUE, NEW MEXICO
GRAND AVE. OVERPASS
PRELIMINARY STRUCTURE SKETCHES
PRESTRESSED CONCRETE GIRDER STRUCTURE PERSPECTIVE AND DETAILS
GORDON HERKENHOFF & ASSOCIATES, INC. CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.G.	SHEET 6
NONE	JULY 1968	CHECKED: L.M.P.	OF 7

D-166-A



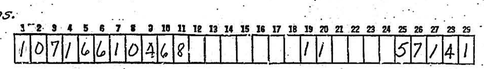
TYPICAL SPAN LAYOUTS

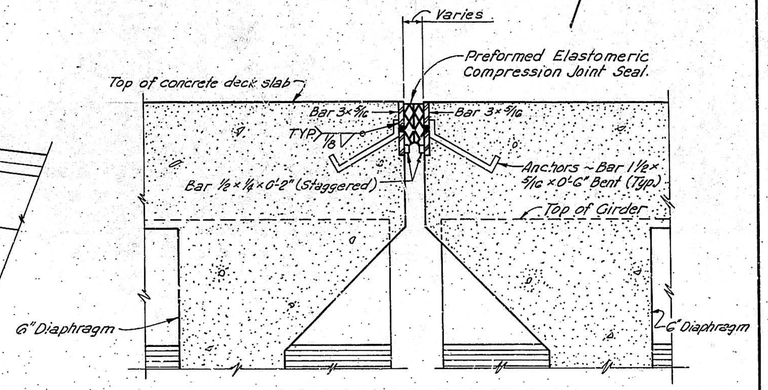
WEST BOUND				EAST BOUND			
SPAN Nº	b	GIRDER LENGTHS ℄ BRGS.	a	SPAN Nº	b	GIRDER LENGTHS ℄ BRGS.	a
1	8 5/16"	61.50'	0"	1	8 1/4"	62.50'	0
2	6 11/16"	77.00'	6 11/16"	2	7 1/2"	77.00'	6 3/4"
3	7 1/2"	61.50'	8 5/16"	3	7 1/2"	77.00'	7 1/2"
3A	7 1/2"	61.50'	7 1/2"	—	—	—	—
4	7 1/2"	61.50'	7 1/2	4	7 1/2"	77.00'	7 1/2"
5	7 3/4"	61.50'	7 1/2	5	6 3/4"	77.00'	7 1/2"
6	8 5/8"	65.50'	7 1/2	6	8 1/4"	62.50'	8 1/4"
7	7 1/2"	78.74'	6 3/8	7	7 1/2"	77.00	6 3/4"
8	7 1/2"	78.74'	7 1/2	8	7 1/2"	77.00'	7 1/2"
9	7 1/2"	77.00'	7 1/2	9	7 1/2"	77.00'	7 1/2"
10	7 1/2"	77.00'	7 1/2	10	7 1/2"	77.00'	7 1/2"
11	0	77.00'	7 1/2	11	0	77.00'	7 1/2"

a + b = 1'-3"

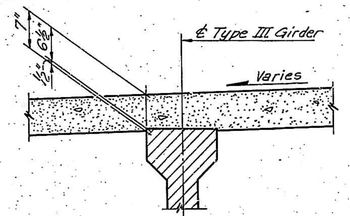
NOTE: Exterior girder lengths on curved spans vary.

NOTES: 1. Place main reinforcing bars in slab parallel to ℄ bearings.
2. Place girder diaphragms parallel to ℄ bearings.

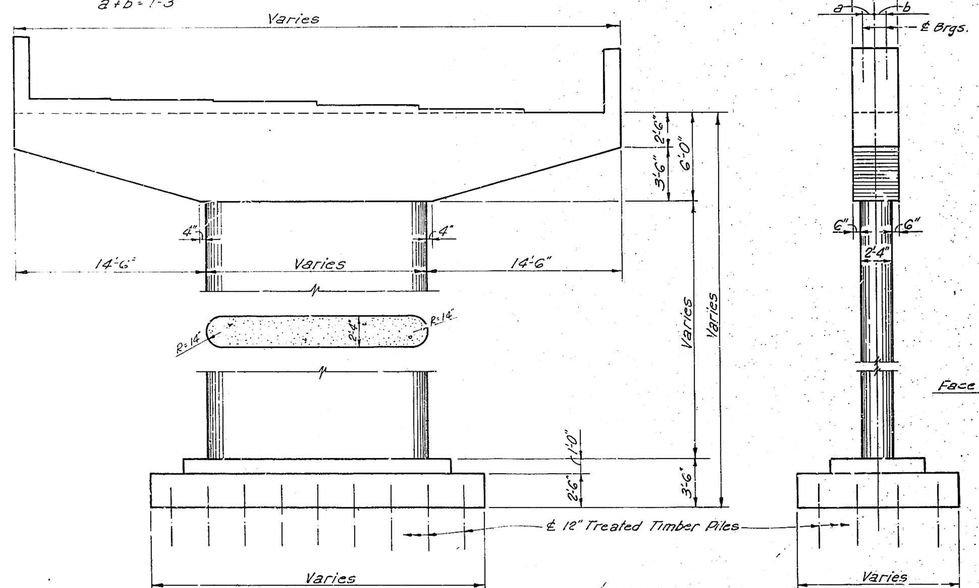




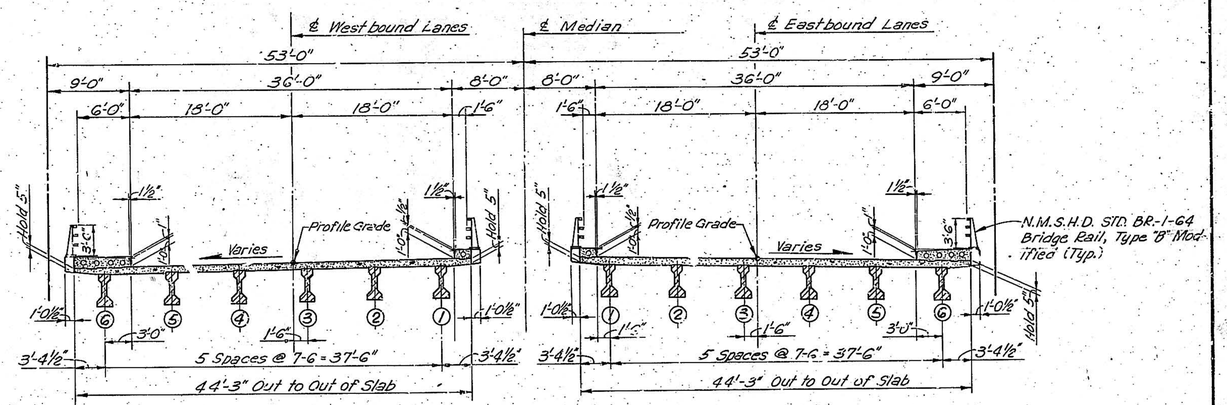
JOINT DETAIL



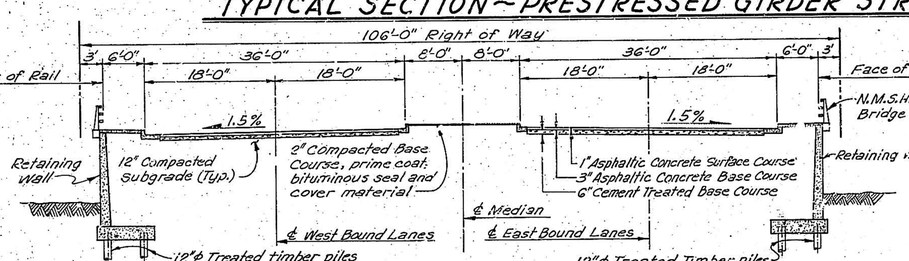
SLAB DETAIL



TYPICAL PIER



TYPICAL SECTION ~ PRESTRESSED GIRDER STRUCTURE



TYPICAL SECTION ~ ROADWAY

ALBUQUERQUE NEW MEXICO

GRAND AVE. OVERPASS

PRELIMINARY STRUCTURE LAYOUT

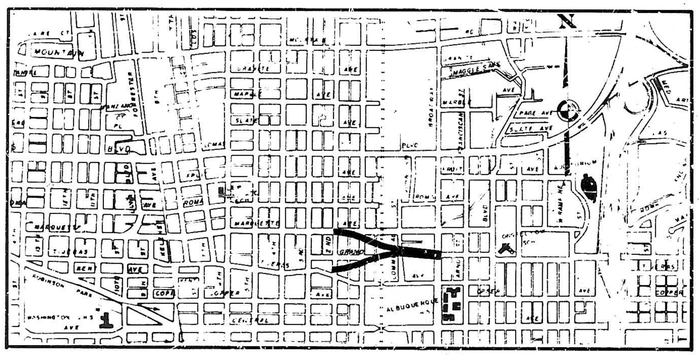
PRESTRESSED GIRDER STRUCTURE. DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.D.M.	SHEET 4
	JULY 1968	CHECKED: L.M.P.	OF 7

D-166-A

CITY OF
ALBUQUERQUE NEW MEXICO
PRELIMINARY ALIGNMENT FOR
GRAND PLAN



LOCATION MAP

08-7 -11

DESIGN CRITERIA

1. A.A.S.H.O. Specifications, 1965 and Interim Specifications to date

2 LIVE LOAD: HS-20-44 Loading

WEARING SURFACE: 1/4" Monolithic Wearing Surface plus 15 lbs. per sq. ft. allowance for future wearing surface

3 DESIGN SPEED: 35 M.P.H. on Structure, except for the curves at the intersections of Marquette and 2nd, and Tijeras and 2nd.

(a) SUPERELEVATION for curves; N.M.S.H.D Standard sheet SE-2 (revised 11/30/67)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 0 1 2 0 5 7 1 4 1

APPROVED

City Manager——— G.B. Robertson ——— Date: _____

Director of Public Works——— E. F. Hensch ——— Date: _____

Planning Director——— Ruben Ramirez ——— Date: _____

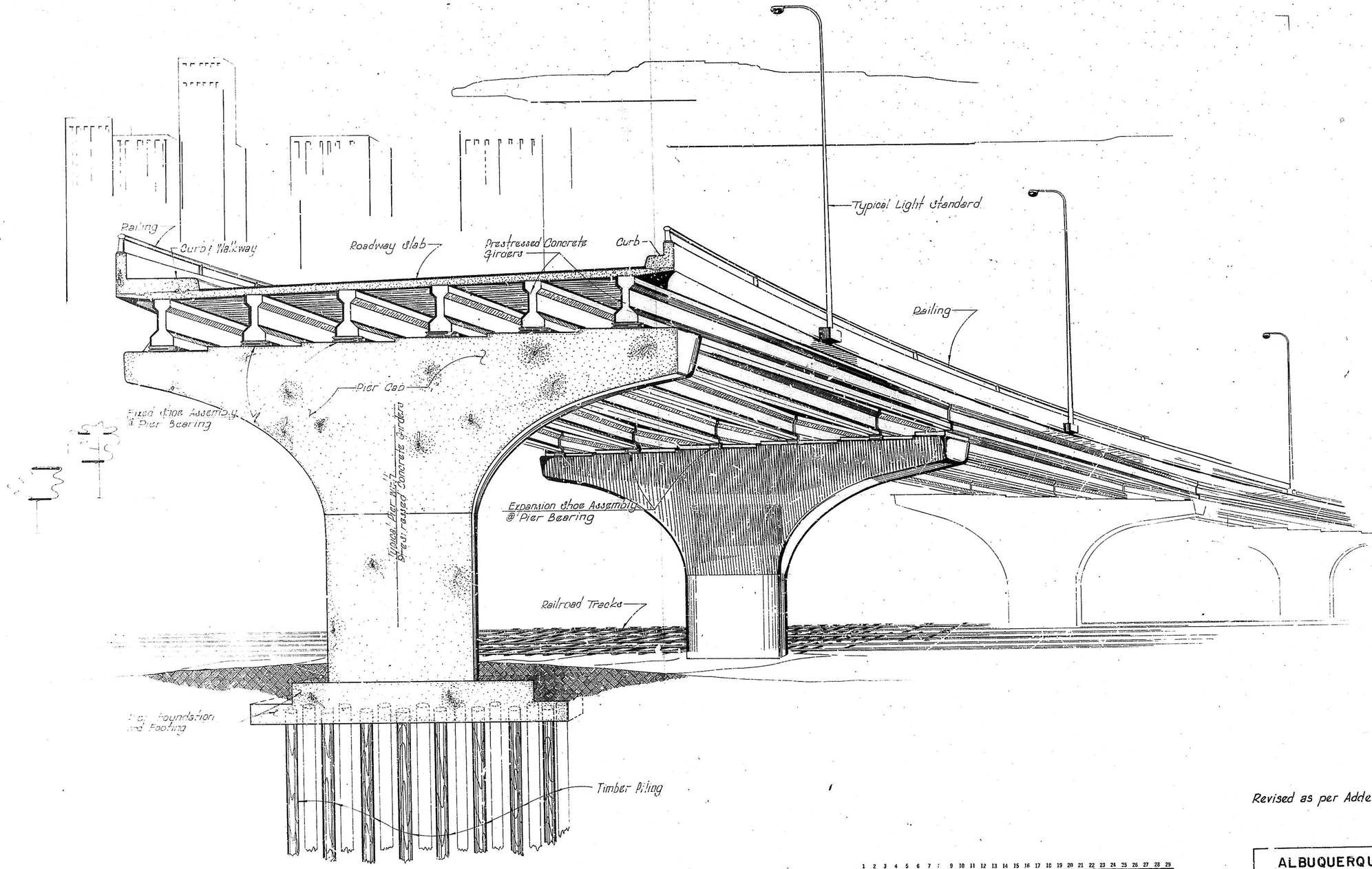
Director of Albuquerque Metropolitan Transportation Planning——— Stephen George Jr. ——— Date: _____

Executive Director of Urban Renewal Agency——— R.V. Allender ——— Date: _____

Model Cities Director——— J.J. Cordova ——— Date: _____

D-166-1

GORDON HERKENHOFF AND ASSOCIATES INC. CONSULTING ENGINEERS



Revised as per Addendum No 1

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

1 0 7 1 6 6 2 0 3 7 0 21

AS CONSTRUCTED

ALBUQUERQUE, NEW MEXICO

GRAND AVE. OVERPASS

PRESTRESSED CONCRETE GIRDER STRUCTURE PERSPECTIVE

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.G.	SHEET 3
NONE	JULY 1969	CHECKED: L.M.P	OF 66

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION OF ITEM	FINAL QUANTITY
			ROADWAY ITEMS	
			Clearing and grubbing complete.	
			Removal of old structures complete.	
			[illegible] complete.	
			[illegible] complete, including [illegible] complete.	
			[illegible]	
			[illegible] Plan "B" complete	
			[illegible] Plan "B" complete	
			[illegible] complete	
			[illegible]	
			[illegible] grade, complete	
			[illegible]	
			[illegible]	
			[illegible]

MARQUETTE AVE.
℄ West Bound Lanes
P.I. STA. 105+20.54
Δ = 26°20'40" RT.
℄ Brg Abut №1W STA 106+33.43
℄ Pier №1W STA 105+85.43
City Monument
CURVE DATA №1
P.I. STA. 105+20.54
Δ = 26°20'40"
D = 6°00'
T = 223.43'
L = 439.37'
R = 954.93'
PT. STA. 107+36.12
S 44°35'E
PC. STA 109+28.32
℄ GRAND AVE. MEDIAN
P.I. STA. 111+01.40
Δ = 20°30' LT.
281.92'
Control Dist. 102.75'
Control Line Mon. to Mon.
P.I. STA. 110+28.54 (T)
Δ = 27°30' RT.
GRAND AVE.
City Monument
CURVE DATA №3
P.I. STA. 104+34.57
Δ = 17°45'05"
D = 6°00'
T = 49.12'
L = 295.86'
R = 954.93'
P.I. STA. 104+34.57 (T)
Δ = 17°45'05"
℄ East Bound Lanes
MATCH LINE
TIJERAS AVE.
City Monument
℄ Tijeras Ave. Realignment
℄ East Bound Lanes
AC. STA. 102+85.45 (T)
102+00 (T)
104+00 (T)
FIRST ST.
SECOND ST.
THIRD ST.
℄ Pier №1E STA. 107+78.46 (T)
℄ Pier №2E STA. 108+52.50 (T)
℄ Pier №1E STA. 109+94.79 (T)
℄ Pier №2E STA. 110+16.97 (T)
℄ Pier №3E STA. 110+76.85 (T)
A.T. & S.F. R.R.
℄ Westbound Main Track and ℄ Right of Way
CURVE DATA №4
P.I. STA. 110+28.54 (T)
Δ = 27°30'
D = 6°00'
T = 233.67'
L = 458.33'
R = 954.93'
℄ Pier №3E STA. 111+55.12 (T)
PC. STA 109+28.32
PT. STA 112+70.39 = S.T.
STA 112+70.39 - 26' RT.
EQUATION
PT. STA. 112+53.20 (T) = STA. 112+76.18 - 26' LT.
COMMERCIAL
℄ Pier №1W STA 111+01.12
℄ Pier №2W STA 110+24.20
℄ Pier №3W STA 109+46.58
℄ Pier №4W STA 108+98.37
℄ Pier №5W STA 108+36.12
℄ Brg Abut №1W STA 106+33.43
℄ Pier №1W STA 105+85.43
℄ Pier №2W STA 107+73.41
℄ Pier №3W STA 111+51.03
℄ Pier №4W STA 111+97.08
℄ Pier №5W STA 112+56.33
℄ Pier №6W STA 113+01.23
℄ Pier №7W STA 113+07.99
℄ Brg Abut №8W STA 114+84.91
Perpendicular Distances
℄ to ℄ Piers — Spans 2w thru 10w inclusive.
℄ Bearing Abutment to ℄ Piers Spans 1w & 11w.
All Piers and Abutments parallel.
N
℄ West Bound Lanes
STA. 114+31.68
STA. 114+87.66
STA. 114+10.04
℄ East Bound Lanes
Control Line S 75°14'35" E
℄ GRAND AVE. MEDIAN
STA 118+15.41 = STA 3+68.17 Broadway
Sta. 118+12.86 - ℄ W.B. Lanes = Sta. 3+92.23 - ℄ Broadway
Sta. 118+17.96 - ℄ E.B. Lanes = Sta. 3+40.05 - ℄ Broadway
City Monument
on manhole cover
9.97 Control Dist.
BROADWAY
℄ Survey — Control Line Tijeras Ave. to Grand Ave.
ANGLES
α = 63°41'
β = 84°11'
φ = 68°19'
Note: ℄ Grand Ave. Median Between First Street & Broadway Is To Be Set At The Above Shown Distances From City Monuments On Said Streets.
P.I. STA. 104+34.57 (T)
Δ = 17°45'05"
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 0 5 7 0 1 1 1 5 7 4 0 1
AS CONSTRUCTED

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

W.B. & E.B. LANES

STAKING PLAN

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.D.M.	SHEET 5
	JULY 1969	CHECKED: L.M.P.	OF 66

PLAN — SURVEYED / PLOTTED / ALIGNMENT CHECKED / BY / DATE OF MAP CHECKED — NOTE BOOK — NO.

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / BY / DATE OF MAP CHECKED — NOTE BOOK — NO.

See Detail Sheet No 15 For Marquette Ave. Details Ahead of STA. 15+30

℄ Marquette Avenue Svy = STA. 14+77.28 = STA 6+47.42 2nd = ST. Svy

STA 0+12 Build "E" Drop Inlet

Match Line STA 15+30

105 Existing Right of Way

16' ℄ Survey MARQUETTE AVE. N.W.

Face of Curb

8PW

2PW

8°42'58" Rt

N.W. ℄ Marquette Avenue

P.I. STA. 105+20.54

R=300' Left Gutter Line

2" L.P. Gas ?

T.P.

P.P.

E.H.

1 Tel. Cable

Vertical Clearance Sign

Rod & Hole #1

Rod & Hole #2

Right of Way

Outside edge of parapet wall

Profile Grade

Building #3

LANES (100') S.54° 44' 35" E

Outside edge of parapet wall

Right of Way

Alley

Shop

Metal

Building #3 to be Removed this Contract

Welding Shop

Δ = 63° 41'

Pier No 2 STA. 107+73.41

Pier No 3 STA. 108+36.12

Pier No 3A STA. 108+98.81

End S.E. Transition P.C. STA. 109+28.72

Begin 150'S.E. Transition

Begin S.E. Transition

Vertical Clearance Sign

Build 5'-4" Sidewalk

Length = 35.14'

Length = 6.67'

Match Line

See details sheet 16

Retaining Wall

Outside Edge Parapet Wall

Remove & Rebuild Sidewalk

Build Sidewalk Swale

Drain to 2nd. St

Remove & Rebuild Sidewalk

Opp. POC STA 0+50 Begin Retaining Wall

Opp. STA 104+30 Begin Parapet Wall Lt & Rt

Build Type "A" C & G

Build Type "A" C & G

Retaining Wall See Details Sheet Nos 16, 17 & 18

Outside Edge of Parapet Wall

Opp. STA 104+16.82 Begin Retaining Wall

Opp. STA 104+40.58

Build Double "C" Drop Inlet.

STA. 0+90.11 Build Type "E" Drop Inlet

Remove & Rebuild Swale

Remove Existing Inlet & Plug Pipes

Remove Existing Inlet & Plug Pipes

Rebuild Intersection to Limits Shown

Remove & Rebuild Curb & Gutter

Remove & Rebuild Curb & Gutter

Remove & Rebuild Curb & Gutter

PLAN — SURVEYED / PLOTTED / NOTE BOOK / ALIGNMENT CHECKED / BY / NO / DATE

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / B. M.'s NOTED / STRUCTURE NOTES CHECKED / NO / DATE

N

Vertical Clearance Sign

℄ Pier No 4 Sta 109+61.52

P.C. STA. 109+28.72

Transition 2.0% to 3.0%

Begin Building to Remain in Place

To be left for City storage

MATCH LINE

℄ Pier No 5 Sta 110+24.29

RAILWAY CO.

CURVE DATA
P.I STA. 111+01.40
Δ = 20° 30' Lt.
D = 6° 00'
T = 172.68'
L = 341.67'
R = 954.93'

Building to Remain in Place

℄ Pier No 6 Sta 110+91.12

℄ Pier No 7 Sta 111+71.03

Building #5 to be Removed this Contract

℄ Pier No 8 Sta 112+51.03

P.T. STA. 112+70.39 = P.T.P. N. E.

P.T. STA. 112+70.39-26 Rt. P.T.P. S.T.

Vertical Clearance Sign

℄ Pier No 9 Sta 113+29.23

T.P.

MARQUETTE AVENUE

Scale: 1" = 50'

A.T. & S.F.

MATCH LINE

Build 59.75' Metal Beam Guard Rail conforming to N.M.S.H.D. Serial M-21-62 at Marquette Ave. N.W. each side of Rwy. Co. R.O.W. after Grand Avenue Overpass is opened to traffic.

Right of way

Rod No 3

S.54° 41' 35" E.

Rod & Hole No 4

Profile Grade

Outside edge of Parapet Wall

WEST BOUND LANES

Transition 2.0% to 3.0%

Build 3.0% Transition

End 50.3 S.E. Transition 2.0%

Begin 25 S.E. Transition

End 25 S.E. Transition

Cross M.H.

S.75° 14' 35" E.

P.I STA. 111+01.40

MEDIAN

Building #4 to be Removed this Contract

GRAND S.175° 14' 35" E.

Korber Warehouse

See Sheet 11 for South Limit of Building Removal

COMMERCIAL

℄ Track No 99

℄ West bound Main Track

℄ Track No 550

℄ East bound Main Track

℄ Track No 511

α = 69° 41'
β = 34° 11'

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

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

10716620770 11 57401

PROFILE

Vertical Clearance Sign (T.S.) See Sheet #15 for Details

Sidewalk

Parapet Wall

Type "C-4" Railing (North Side)

Profile Grade Line @ ℄ West Bound Lanes

Cinders (Railroad bed)

Fine grained sandy clay

Small gravel, fine & coarse sand Possibly water bearing

Fine grained sandy clay, few small gravel blue clay shown in

Blue clay with traces sand few small gravel

Light gravel & small boulders

Light brown sandy clay few small gravel

36' Long Treated Timber Piles 40 Piles Required

36' Long Treated Timber Piles 36 Piles Required

Revised as per Addendum No 1

109 110 111 112 113 114

4980 4970 4960 4950 4940 4930 4920 4910 4900

PLATE 1, PLAN-PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS

PLAN & PROFILE WEST BOUND LANES SHEET 7 OF 66

STA. 1+75
End Construction
Match Existing Grades.
Remove Existing Sidewalk
Build Type "C" Curb & Gutter
52.93 T.C.
140.24

STA. 102+35 to STA. 103+10
℄ Tijeras Ave. Realignment
Transition Out Crown.

All Parking Lot Surfacing for this Sheet to be Removed to a neat line to Right of Way Limits.

Parking Lot

Building #9 - Building Projection to be Removed and altered by others

Match Existing Grades

Right of Way

Remove Existing Sidewalk

Build 1½ Asph. Sidewalk to Building Line

52.96 T.C.

53.31 T.C.

Tr. L.

Remove Existing Curb & Gutter

Build Type "C" Curb & Gutter

P.I. STA. 12+30.88
Δ= 25°48'55" Rt.

℄ TIJERAS ℄ Survey Tijeras Ave.

℄ East Bound Lanes
S84°59'30"E

Remove Existing Pavement

Build Type "C" Curb & Gutter

Remove Existing Curb & Gutter

Build Sidewalk to ℄

2-Pole Structure

Vent

Freight Elevator

Remove Existing Sidewalk

Match Existing Grades

Alley Inverted Crown

Electric, Telephone and Gas Utilities Along with Traffic Lights & Street Lights to be Removed & Relocated by Others.

Note:
Alley Returns to be 5' Radius Unless Otherwise Noted.

STA 10+88.17 ℄ Survey Tijeras Ave
= STA 100+00 ℄ Tijeras Ave Realignment
= STA. 0+00 ℄ Survey Third St.

STA 100+00 ℄ East Bound Lanes =
= 550' Rt of STA. 100+00 ℄
Tijeras Ave Realignment

STA 100+200.5
Begin Construction

Second St.
STA. 0-21 to STA. 0+57.93 Lt.
Widen Street from 20' to 22'

See Sheet No 13 for Utility Details.

STA. 0+00 ℄ Second St. = STA. 4+64
℄ Survey Tijeras Ave.
STA. 0-21 Begin Construction
Sidewalk & Curb & Gutter Lt.
Match Existing Grade

Parking Lot

P.C. STA. 102+85.45 (T)
℄ East Bound Lane and ℄ Tijeras Avenue

Building #10 to be Removed this Contract

REALIGNMENT

R=949.43'
R=954.93'

Remove Existing Pavement

Remove Existing Curb & Gutter

Remove Existing Paving & Fill to Match New Grades

New 2" Asphalt Pavement

Survey Tijeras Avenue

Remove Existing Curb and Gutter

Remove & Rebuild Sidewalk to First Joint.

Existing Sidewalk to be Left in Place

SECOND ST.

Build Type "C" Curb & Gutter

Exist. ℄ Inlet Raise to Drain Parking Lot

City Monument (REFERENCE AND REPLACE)

TIJERAS AVE.

CURVE DATA
P.I. STA. 104+34.57 (T)
Δ= 17°45'05" Lt.
D= 6°00'
T= 149.12'
L= 295.86'
R= 954.93'

Build 6' Sidewalk

Begin Deceleration Wall

Outside Edge of Parapet Wall

℄ EAST BOUND LANES

50' S.E. Transition

Build Type "A" Curb & Gutter

Build 5 4½" Sidewalk

MATCH LINE STA. 104+60

Moved by Others

OUTSIDE EDGE OF PARAPET WALL

Begin Retaining Wall & Begin Parapet Wall Lt. & Rt.

P.I. STA. 104+34.57 (T)
Δ= 17°45'05" Lt.

Parking Lot

Build 6'-2½" Sidewalk.

STA. 0+05 to STA 1+75 Rt.
Remove Existing Curb & Gutter & Sidewalk

OPP STA. 0+085 Begin Sidewalk & Curb & Gutter Rt. at P.C. Curb Return
Match Existing Grade.

Build Type "A" Curb & Gutter Around N.E. and S.E. Curb Returns.

See Sheet No. 10 for Profile Grade Line East of Second St.

Scales
Horiz. 1" = 20'
Vert. 1" = 1'

STA. 0-21 to STA. 0+57.60
SECOND STREET
Transition out Crown
STA. 1+25 to STA. 1+75
SECOND STREET
Transition in Crown

PROFILE GRADES OF GUTTER LINES ON SECOND STREET

3RD St. to 2ND St.
TIJERAS AVENUE REALIGNMENT
Stationing is Along Curb Line

Scale
1" = 50' Horiz
1" = 1' Vert

Revised as per Addendum No 1

PLATE 1, PLAN-PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS

PLAN & PROFILE EAST BOUND LANES SHEET 9 OF 66

PLAN — SURVEYED · PLOTTED · NOTE BOOK · CHECKED · R/W CHECKED · BY · DATE

PROFILE — SURVEYED · PLOTTED · NOTE BOOK · CHECKED · R/W CHECKED · BY · DATE

N

℄ Pier No 10 Sta 114+07.39

℄ Brg Abut No 2 Sta 114+84.91

Outside edge of Parapet Wall

Gutter line

Outside Edge of Retaining Wall

Build 5'-2" Sidewalk

Right of way

Outside Edge of Parapet Wall

Retaining Wall See Details Sheet 22 & 23

Build Type "A" Curb & Gutter

Profile Grade

Gutter Line

WEST BOUND LANES

10' Bridge approach slab

S 75° 14' 35" E

For Details of Median Construction See Sheet No 25

Tract 111

Wholesale Drug Bldg

Tract 112

Slope Varies 18' 18' 27' 53'

GRAND MEDIAN

S 75° 14' 35" E

℄ GRAND AVENUE SURVEY

GRAND AVE (Vacated)

℄ BRG. Abut No 2 Sta 114+87.56 ℄ Median

Right of way

For Details of East Bound Lanes See Sheet No 12.

Tract 113 Northerly Portion

Westerly Portion Tract 113

Southerly Portion Tract 113

Building "6" to be removed this Contract.

Existing Curb & Gutter

Bench Mark: Chiseled "a" West End of N.W. Curb Return Tijeras & Broadway EL. 4962.75

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

Match Line STA. 116+50

For Details Ahead of STA. 116+50 See Sheet No 14

For Median Nose details see Sheet No 14.

℄ B'WAY SURVEY

50'

35' Transition

New Median

Transition

Existing Median

43'

Existing Curb & Gutter

STA 118+15.41 ℄ Grand Avenue Median

STA. 3+66.17 ℄ Broadway Survey

STA. 17+64.72 ℄ Grand Avenue Survey

STA 118+17.86 ℄ West Bound Lanes

STA. 3+92.29 ℄ Broadway Survey

BROADWAY

Existing City Monument

New Median

Existing Median

MARQUETTE AVENUE N.E.

Remove Existing Surfacing Adjacent to Medians and Build New Asphalt Surfacing all as Directed by the Engineer.

Nose Median STA. 6+91.9

Remove Existing Median Curb

℄ Broadway Survey

Existing Curb & Gutter

BROADWAY N.E.

New 4' Median

Existing Curb & Gutter

Nose Median STA. 4+21.3

West Bound Lanes

East Bound Lanes

GRAND AVENUE N.E.

Nose Median STA. 3+11.04

For Details This Median See Sheet No 12.

STA. 118+15.41 ℄ Grand Ave. M/

STA. 3+66.17 ℄ Broadway Survey

STA. 17+64.72 ℄ Grand Ave. Survey

Existing Median Curb

Scale: Horiz 1"=20'

PROFILE

4990 4980 4970 4960 4950 4940 4930

Profile Grade Line @ ℄ West Bound Lanes

@ 44' Lt of ℄ Median

Type C-4 Railing (North Side)

Profile Grade Line @ Gutter (North Side)

Existing ground

Retaining Wall Footing

Elev. 4951.432 4951.750

36" Long Treated Timber Piles 40 Piles Required

36" Long Treated Timber Piles 86 Piles Required

24" Long Treated Timber Piles Non Ft. Footing - 82 Piles Required

℄ Brg Abut No 2 Sta 114+84.91

℄ Pier No 10 Sta 114+07.39

EL 4962.98 Profile Grade ℄ W.B. Lanes

EL 4956.78 Profile Grade Gutter Line N.B.

PVI STA 117+00.00 EL 4960.54

PVI STA 117+60.32 EL 4961.48

PVI STA 117+40.00 EL 4960.54

PVI STA 117+79.68 EL 4959.68

114 115 116 117 118 119

107 16 52 08 70 | 111 | 57 40 1

Revised as per Addendum No 1

PLATE 1, PLAN-PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC. CONSULTING ENGINEERS

PLAN & PROFILE WEST BOUND LANES SHEET 8 OF 66

N

CURVE DATA
P.I. STA. 104+34.57 (T)
Δ = 17°45'05" Lt.
D = 6°00'
T = 149.12'
L = 295.86'
R = 954.93'

104+00 (T)
Match Line STA. 104+80
105+00 (T)
P.P. & T.P.
Retaining wall. See details Sheet No. 19, 20 & 21
Outside Edge of Retaining Wall
Remove Alley Pavement Within R/W Limits
Build Type "A" Curb & Gutter
Rod & Hole No. 5
Build Type "A" Curb & Gutter
Profile Grade
N77°15'25"E
To be Relocated by Others
2-Pole Struct.
Build 5' Wide Walk
Outside Edge of Retaining Wall
Retaining wall See details Sheet No. 19, 20 & 21
P.I. STA. 104+34.57 (T)
Δ = 17°45'05" Lt.
2-Pole Struct.
All parking lot surfacing falling under embankment to be removed to a neat line to Right of Way limits.
P.T. STA. 105+81.61 (T)
℄ Brg. Abut. No. 1 STA. 106+37.43 (T)
Building #11 to be Removed this contract
Building #11 to be removed this contract
℄ Pier No. 1 STA. 107+00.46 (T)
Building to Remain in Place
Outside edge of parapet wall
Outside edge of parapet wall
Vertical Clearance Sign
℄ LANES (10U')
℄ EAST BOUND (113.50')
7-P.W. To be Relocated by Others
Rod & Hole No. 6
To be Relocated by Others
End S.E. Transition
Begin S.E. Transition
℄ Pier No. 2 STA. 107+78.46 (T)
P.C. STA. 107+94.87 (T)
108+00 (T)
FIRST
S = 88°19'

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

Building #11 to be Removed this contract
Begin S.E. Transition
End S.E. Transitions
Vertical Clearance Sign See Sheet No. 15 for Details
Profile Grade Lines @ ℄ East Bound Lanes
Type E-4 Rail
+ 4.00 %
Existing Ground
Retaining Wall Footing
Brown sandy clay, few small gravel. Traces of caliche clay showing. Coarse sand & small to medium gravel.
Brown clay with few small gravel.
Stiff blue clay with few small gravel.
Small to medium gravel, small boulders, some fine & coarse sand.
Fine & coarse sand, traces of light brown sandy clay.
Fill with chunks of concrete and various other foreign material.
Brown sandy clay.
Coarse sand, small to medium gravel. Possible water bearing.
Fine grained brown sandy clay, few small gravel.
Blue clay with few small gravel.
Fine & coarse sand, few small gravel. Traces sandy clay showing.
Tight gravel & small boulders, some fine & coarse sand showing.
Fine coarse sand. Traces of light brown sandy clay.
36" Long Treated Timber Piles No. 11 Footing 44 Piles Required
South Footing 47 Piles Required
36" Long Treated Timber Piles 30 Piles Required
36" Long Treated Timber Piles 40 Piles Required
36" Long Treated Timber Piles 36 Piles Required
4906.1
4899.3
4942.09
4946.230
4946.660
104 (T)
105 (T)
106 (T)
107 (T)
108 (T)

Revised as per Addendum No. 1

PLATE 1, PLAN-PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS

PLAN & PROFILE EAST BOUND LANES SHEET 10 OF 66

℄ GRAND MEDIAN
S 75°14'55" E

STA. 7+37.5 Begin Construction

STA. 8+91.5 End Construction.

To be Relocated by Others

Building # 4 See Sheet 7

P.I. STA. 110+28.54 (T)
Δ = 27°30' RT.

110+00

T.P.

Remove Existing Pavement to Pier

LANES

℄ EAST BOUND

S 75°14'55" E 7

Building # 5 to be Removed this Contract

See Sheet 7 for North Limit of Building Removal

Remove & Replace Sidewalk

Remove Existing C & G

Outside edge of Parapet Wall

℄ GRAND AVE

Remove Existing Pavement Resurface with Asphalt to Limits Shown

Fill with Earth to Match New Grade

Remove & Replace Curb & Gutter

To be Relocated by Others

Vertical Clearance Sign

Brick Bldg Building to Remain in Place

Watch Line Alley

℄ Pier No 3
STA. 108+56.59 (T)

℄ Pier No 4
STA. 109+34.79 (T)

℄ Pier No 5
STA. 110+12.97 (T)

℄ Pier No 6
STA. 110+76.85

A. T. & S. F. R.R.

℄ Pier No 7
STA. 111+55.12 (T)

℄ Pier No 8
STA. 112+33.31 (T)

℄ Pier No 9
STA. 113+34.54

PC. STA. 107+94.87 (T)

℄ Track No 99

℄ West bound Main Track

℄ Track No 511

℄ Track No 550

℄ East bound Main Track

Korber Warehouse

CURVE DATA
P.I. STA. 110+28.54 (T)
Δ = 27°30'
D = 6°00'
T = 233.67'
L = 458.33'
R = 954.93'

EQUATION P.T. STA. 112+53.20 (T)
STA. 112+76.18 = 26.18' Ahead

P.I. STA. 121+37.60
Δ = 90°22'20" RT.

℄ STA. 121+42.55
L = 90°22'20" L.T.

EQUATION P.T. STA. 122+27.80 (T)
STA. 122+23.20 = 95.40' Back

COMMERCIAL ST.

Rod & Hole No 9

Guy pole

Vertical Clearance Sign

Begin 25' S.E. Transition

End 50' S.E. Transition

To be Relocated by Others

3.0% +05.20

+0.18 1.5%

Φ = 68°19'
β = 64°11'

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

Revised April 30, 1969 — Added Clearances @ R.R.

Revised as per Addendum No 1

PROFILE
SURVEYED
PLOTTED
NOTE NOOK
GRADES CHECKED
B.M.'S NOTED
STRUCTURES
NO.

4990
4980
4970
4960
4950
4940
4930
4920
4910
4900

Profile Grade Line @ ℄ East Bound Lanes

-7.00%

-5.25%

Typ. 1-4 Railing

Fix. Exp.

Vertical Clearance Sign See Sheet 15 For Details

Cinders, Railroad ball
Fine grained brown sandy clay.
Coarse Sand & small to medium size gravel could possibly be water bearing

Fine grained sandy clay & blue clay showing a few small gravel

Blue clay with a few small gravel

Tightly nested gravel and small boulders.

Light brown sandy clay

Fine to coarse sand & small gravel with some sandy clay showing

Fine Sandy Silt

Sandy clay, fine sand and small gravel mixture.

Fine sand, small gravel & small boulders

Slight quicksand

Fine sand & small gravel tightly compacted

36" Long Treated Timber Piles 40 Piles Required

54" Long Treated Timber Piles 38 Piles Required

98" Long Treated Timber Piles 40 Piles Required

Commercial St.

108(T) 109(T) 110(T) 111(T) 112(T) 113 114

PLATE 1, PLAN-PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC
CONSULTING ENGINEERS

PLAN & PROFILE EAST BOUND LANES

SHEET 11 OF 66

PLAN — PROJECT PLOTTED FROM FIELD NOTE BOOK — GRADES CHECKED BY — NOTE IN STRUCTURE DATA MYSCRIPT — NO. — DATE — BY

PROFILE — SURVEYED — PLOTTED — NOTE BOOK — GRADES CHECKED — NO. — DATE

Right of Way

114+00

115+00

& GRAND MEDIAN

Outside edge of Parapet Wall

STA. 114+87.56

Rod No. 10

10'

EAST BOUND LANES

& GRAND AVENUE SURVEY

S 75°14'35" E

Rod and Hole No. 11

STA. 115+03

10' Bridge Approach Slab

Build Type "M" Curb & Gutter

STA. 116+03

For Details of West Bound Lanes. See Sheet No. 8

136.15'

Tr. 112

New 4' Median

Nose Median STA. 117+50

10.65'

100' Parabolic Curve

15+00

Profile Grade

GRAND AVE (Vacated)

Build 5'-4" Sidewalk

Profile Grade

Outside edge of retaining Wall

Outside edge of Parapet Wall

Retaining wall. See details Sheet No. 22 & 23

Tract 113 Northerly Portion

Tract 113 Southerly Portion

Westerly Portion Tract 113

Slope Varies

Build Type "A" Curb & Gutter

Building #6 See Sheet 8

Frame Stucco Res. (To be removed)

Building #8 To be Removed this Contract Stucco Apt.

Building #7 - To be removed this Contract Stucco Res. W Basement.

Cost of Filling and Compacting Basement to be included in price bid for Removal of Obstructions.

Tel. Cable to be Moved by Others

Match Line STA. 116+50

Tr. 114

Tr. 115 & 116

For Details Ahead of STA. 116+50 See Sheet No. 14

6' Chain link fence w/ 2' footing, to be Removed by Contractor

Wholesale Drug Co.

Tr. 111

& Pier No. 10 STA. 114+12.69

& Brg. Abut. No. 2 STA. 114+90.21

A. Long Tongue High School

Intgr. Ed. Field

14

15

16

Bench Mark: Chiseled "O" West End N.W. Curb Return Tijeras & Broadway EL. 4962.75

Scale Horiz. 1" = 20' Vert. 1" = 10'

BROADWAY W. 102

118+00

4+00

Existing Median

New Median

Existing Curb & Gutter

F.H.

W.M.

W.V.

P.P.

S.M.H.

S.M.H. 959550

S.M.H.

N.M.

W.M.

W 16"

W 8"

S 34"

S 34"

S 34"

W 12"

W 8"

W 8"

S 34"

S 34"

S 34

N

STA. 100+10.8 ℄ Tijeras Ave. N.W. Realignment 4.9' Lt. Existing 8' DIA. S.D.M.H. Remove & Plug 2 Existing Lines & Connect New 24" Line

STA. 100+88.17 ℄ Survey Tijeras Ave. = STA 100+00 ℄ Tijeras Ave Realignment = STA 0+00 ℄ Survey Third ST.

STA. 100+00 ℄ East Bound Lanes = 5.50' Rt. of STA. 100+00 ℄ Tijeras Ave Realignment.

THIRD ST.

100+00 Build 24" R.C.P. x 27.8'

Remove Exist Inlet & Connect Pipe

Build Type "E" Drop Inlets

6-12" R.C.P.

12"±10.3'

Remove Existing Drop Inlet & Plug Pipe

Build 24" SD R.C.P. x 67.8'

TYPE "A" 4' MH

P.I. STA 12+36.68

Δ = 25°48'55" Rt.

℄ TIJERAS

Existing 12" Water Line

S84°59'30"E

Survey Tijeras Ave. W 12"

Remove Exist. Drop Inlet & Plug Pipe

W.M. to be Relocated by Others

2-Pole Structure

Remove Fitting and Connect New 12" C.I. Pipe with Coupling

Build Type "E" Drop Inlet

STA. 101+59 ± ℄ Tijeras Ave Realignment Existing S.M.H. Remove and Plug Pipe S.E. & Connect Pipe East.

STA. 100+42 ℄ Tijeras Realignment 10' LT. - Build 4' DIA. Type "A" Storm Drain Manhole Connect 1- Inlet Line.

Exist. Water Meter & Gas Valve to be Relocated by Others

Rebuild Exist. S.M.H. Cone

Build 4' Dia. x 18.1'

12" V.C.P.

Plug

6" W.M.

2-Pole Structure

Build 12" V.C.P. SD

24" x 242.2'

AVE.

W 12" Gate Valve @ Property Line

Existing 12" Water Line

Abandon-in-Place

See Relocation in Tijeras Realignment (by Others)

Gas Line to be Relocated (by Others)

STA. 101+78 ± ℄ Tijeras Ave. Realignment - Build 4' Dia. Type "B" Sanitary Sewer Manhole on Existing Sanitary Sewer Line North.

STA. 101+78 ± ℄ Tijeras Ave. Realignment 9' Rt. Existing S.M.H. Remove & Plug 3 Pipes Remove Manhole to 16" Below New Grade & Backfill with Compacted Earth.

PC. STA. 102+85.45 (T)

10' of Reinforced Concrete Encasement

STA. 103+49± Tijeras Ave. Realignment - 10' LT. - Build 6' DIA. Type "A" Storm Drain Manhole on Existing 10" S.D. Line. Connect 4 Inlet Lines and 3 Main Lines

Adjust to Grade by Others

Build Type "E" Drop Inlet

STA. 1+60 Build Type "E" Drop Inlet

Adjust to Grade by Others

CURVE DATA
P.I. STA. 104+34.57 (T)
Δ = 17°45'05"
D = 6°00'
T = 149.12'
L = 295.86'
R = 954.93'

Opp. STA. 104+41.41 Build Double "C" Drop Inlet

EAST BOUND LANES ℄

REALIGNMENT

79.3' 15" R.C.P.

12" R.C.P. SD 30.8

Steel Post

Lot P

Cost of New 6" Valve, Valve Box, and C.I. Pipe to be Included in Price Paid for Removing & Rebuilding Fire Hyd.

Build 12" C.I. x 19.6'

Relocated Fire Hyd.

Remove & Relocate Fire Hyd.

Connect New 12" C.I. Line to Existing 6" C.I. Pipe

1-12"x12"x12" Tee, 1-12"x6" Reduc.

6" Coupling

Plug & Abandon 10" Sanitary Sewer Line

Remove Existing Water Valves & Return to City

W.M. to be Relocated by Others

Build 12" C.I. x 88'

Remove Existing 8" Sewer Line

Build 12" V.C.P. x 86.5'

Remove Exist. Inlets & Plug Pipes

Existing 6" Water Line

SECOND ST.

Adj. M.H. to Grade

Remove Exist. Inlet & Plug Pipe

STA. 0+98.5 ℄ Second St. Lt. Build 4' Dia. Type "B" Sanitary Sewer Manhole on Existing 8" Sanitary Sewer Line.

Connect to New 12" Water Line to Existing 12" & 6" Water Lines
1-12"x12"x12" Tee
1-12"x 22½° Bend
1-12"x6" Reducer
1-12" Coupling
1-6" Coupling
1-6" Gate Valve

P.I. STA. 104+34.57 (T) Δ = 17°45'05"

STA. 0+10.5 ℄ Second St. 2' Lt. Existing S.M.H. Remove 2 Pipes Plug West & Connect 12" Pipe North

Adj. M.H to Grade

℄ City Monument

TIJERAS AVE.

SCALES
Horiz. 1" = 20'
Vert. 1" = 5'

PLAN — SURVEY DATE: PLOTTED: NOTE BOOK: ALIGNMENT CHECKED BY: DATE CHECKED: NO. BY: DATE:

PROFILE — SURVEY DATE: PLOTTED: GRADES CHECKED BY: NOTE BOOK: NO. BY: DATE:

4955
4950
4945
4940
4935

STA. 100+10.8 - 49.1' Lt. Begin Construction 24" R.C.P. Existing Storm Drain Manhole Invert Elev. 4945.5

24" R.C.P. Class III S=0.008

66" DIA Storm Drain Line

STA. 100+42 - 10.4' Lt. 4' DIA Type "A" Storm Drain Manhole Invert Elev. 4946.72

Begin Construction 12" V.C.P. Existing Sewer Manhole Invert Elev. 4942.28

4' Dia. Type "B" Sanitary Sewer Manhole Number 2 Elev. 4939.25

24" R.C.P. Class III S=0.004

12" R.C.P. S=0.00743

2 Existing 8" Sanitary Sewer Line

12" V.C.P. S=0.00743

STA. 103+49± 10' Lt. 6' Dia. Type "A" Storm Drain Manhole Invert Elev. 4941.03

STA. 0+98.5 ℄ Second Street 4' Dia. Type "B" Sanitary Sewer Manhole Number 1 Elev. 4939.25

Existing 8" Sanitary Sewer Line

12" V.C.P. S=0.00243

STA. 0+10.5 2' Lt. Second Street Existing Concrete Manhole Invert Elev. 4939.78

100 (T) 101 (T) 102 (T) 103 (T) 104 (T)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

1 0 7 1 6 6 2 1 3 7 0 0 4 0 1 0 4 5 7 0 1

07 0 4 0 1 0 4

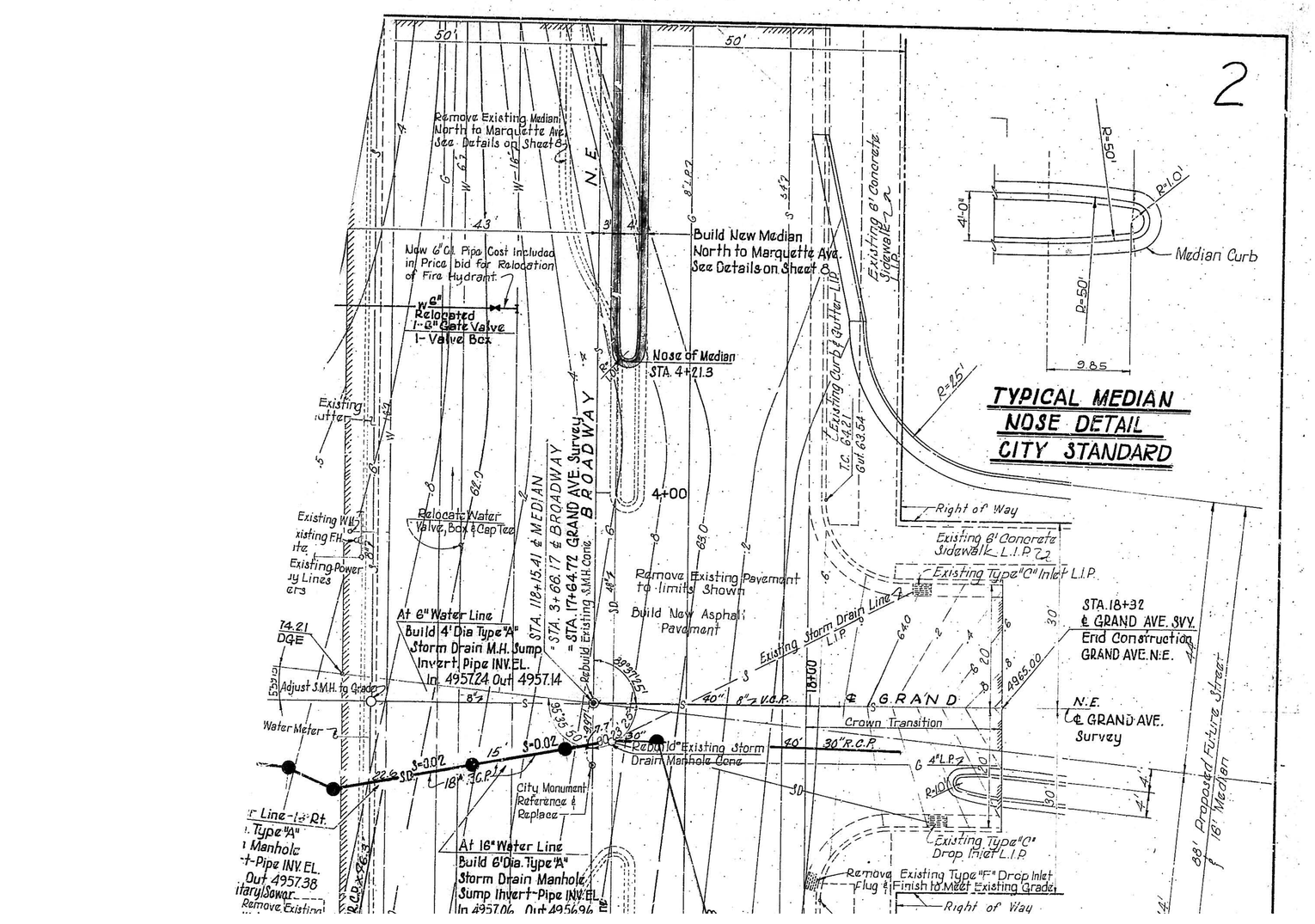
08 0 4 0 1 0 4

09 0 4 0 1 0 4

PLATE 1, PLAN-PROFILE

GORDON HERKENHOFF & ASSOCIATES, INC. CONSULTING ENGINEERS

PLAN & PROFILE EAST BOUND LANES SHEET 13 OF 66


50'
50'
Remove Existing Median North to Marquette Ave. See Details on Sheet 6
N. E.
Build New Median North to Marquette Ave. See Details on Sheet 6
New 6" Ca. Pipe Cost Included in Price bid for Relocation of Fire Hydrant.
6" Relocated 1-6" Gate Valve 1- Valve Box
Nose of Median STA. 4+21.3
Existing 6' Concrete Sidewalk L.I.P.
Existing Curb & Gutter-Lip
T.C. 64.21 Out 63.54
Existing Gutter
Relocate Water Valve, Box & Cap Tee
4+00
BROADWAY
STA. 3+66.17 & GRAND AVE. Survey = STA. 17+64.72 & BROADWAY & MEDIAN STA. 118+15.41
Existing W.V.
Existing F.H.
Existing Power Lines etc.
Remove Existing Pavement to limits Shown
Build New Asphalt Pavement
At 6" Water Line Build 4' Dia Type "A" Storm Drain M.H. Sump Invert Pipe INV. EL. In. 4957.24 Out 4957.14
Existing Storm Drain Line L.I.P.
T4.21 D&E
Adjust S.M.H. to Grade
Rebuild Existing S.M.H. Cone
18+00
4965.00
GRAND
Water Meter
Crown Transition
S-0.02
S-30'2
15'
18" R.C.P.
Rebuild Existing Storm Drain Manhole Cone
30" R.C.P.
City Monument Reference & Replace
At 16" Water Line Build 6' Dia. Type "A" Storm Drain Manhole Sump Invert Pipe INV. EL. In 4957.06 Out 4956.96
Existing Type "C" Drop Inlet L.I.P.
Remove Existing Type "F" Drop Inlet Plug & Finish to Meet Existing Grade
Right of Way
Existing Type "C" Inlet L.I.P.
STA. 18+32 & GRAND AVE. SVY.
Erid Construction GRAND AVE. N.E.
N.E. & GRAND AVE. Survey
38' Proposed Future Street 18' Median
Line - 18' Rt.
Type "A" Manhole
Pipe INV. EL. Out 4957.38
Sanitary Sewer
Remove Existing
R=10'
R=50'
4'-0"
Median Curb
9.85
R=25'
TYPICAL MEDIAN NOSE DETAIL CITY STANDARD

STA. 4+77.16 End Construction
Match Existing Grades.
(Rebuild Median North to Marquette Ave.)

STA. 4+77.16
T.C. El. 80
G.L. 61.13

Remove & Rebuild Sidewalk to Meet New Grades
Build Sidewalk to Back of New Curb and Remove Driveway Pad.
STA. 4+42.16

Existing Driveway
Existing 6' Sidewalk
Existing Curb & Gutter

Remove Existing Median North to Marquette Ave. See Details on Sheet 8

Match Line STA. 116+50

STA. 116+74.25
Build Double "C" Inlet

STA. 116+87.2 P.V.C. 100 V.C. Gutter Line
See PLAN & PROFILE Sheet No 8
STA. 116+90 End Retaining Wall

117

STA. 117+03
End Parapet Wall

STA. 117+40.32

Right of Way

Outside Edge Retaining Wall
Build 5'-4½" Sidewalk

Outside Edge of Sidewalk
Build 6'-2½" Sidewalk
T.C. 62.09
Gut. 61.42

Relocated Fire Hydrant

New 6" CI. Pipe Cost Included in Price bid for Relocation of Fire Hydrant

6" Relocated
1-6" Gate Valve
1- Valve Box

Build New Median North to Marquette Ave. See Details on Sheet 8

Nose of Median
STA. 4+21.3

4785.035
Gutter Line

Build Type "A" Curb & Gutter

Build Type "A" Curb & Gutter

Remove Existing Curb & Gutter

℄ WEST BOUND LANES

Existing Curb & Gutter L.I.P.
T.C. 64.21
Gut 63.54

Existing 6' Concrete Sidewalk L.I.P.

R=50'
R=10'
4'-0"
Median Curb
R=50'
9.85

R=15'

TYPICAL MEDIAN NOSE DETAIL CITY STANDARD

Right of Way

Existing 6' Concrete Sidewalk L.I.P.

Existing Type "C" Inlet L.I.P.

STA. 18+32
℄ GRAND AVE. SVY.
End Construction
GRAND AVE. N.E.

N.E. ℄ GRAND AVE. Survey

℄ GRAND

Crown Transition

Existing Storm Drain Line L.I.P.

Rebuild Existing S.M.H. Cone

Rebuild Existing Storm Drain Manhole Cone

40" 8"-7 V.C.P.

40" 30" R.C.P.

4"L.P.-7

Existing Type "C" Drop Inlet L.I.P.

Remove Existing Type "C" Drop Inlet Plug & Finish to Meet Existing Grade

Right of Way

88' Proposed Future Street
℄ 18" Median

Remove Existing Pavement to limits Shown

Build New Asphalt Pavement

4+00

STA. 118+15.41 ℄ MEDIAN
= STA. 3+68.17 ℄ BROADWAY

STA. 17+64.72 GRAND AVE. Survey
℄ BROADWAY

Relocate Water Valve, Box & Cap Tee

Remove Existing WM by City
Remove Existing FH & Relocate
Remove Existing Power Pole & Guy Lines by Others

Nose of Median STA. 1+17+50

R=50' Typ.

2.85 Typ.

Build Type "M" Curb & Gutter

℄ MEDIAN

16+00

4965.70

4961.12 +80

4963.50

4962.95

4962.47

4962.06

4961.75

4961.50 +40

65'

℄ GRAND AVENUE SURVEY

STA. 117+03 16' Rt.
Build 4' Dia. Type "A" Storm Drain Manhole
INV. Pipe EL. 4958.28

℄ EAST BOUND LANES

64.7

S.D. 18" R.C.P. x 80' Thick
S=0.010

S.D. 12" R.C.P.
S=0.020'/ Min

4965.035
Gutter Line

Build Type "A" Curb & Gutter 38.4'

Build 5'-4½" Sidewalk

R=50' Typ.

STA. 117+74.21
END BRIDGE SLAB

Adjust S.M.H. to Grade

Remove Existing Water Meter by City

At 16" Water Line-1-Rt.
Build 4' Dia. Type "A" Storm Drain Manhole
Sump Invert-Pipe INV. EL. in 4957.48 Out 4957.38
Protect Sanitary Sewer
Remove Existing

At 6" Water Line
Build 4' Dia Type "A" Storm Drain M.H. Sump
Invert Pipe INV. EL. In 4957.24 Out 4957.14

22.6 S.D.

S=0.02

15'

18" R.C.P.

S=0.02

City Monument Reference & Replace

At 16" Water Line
Build 6' Dia. Type "A" Storm Drain Manhole
Sump Invert-Pipe INV. EL. In 4957.06 Out 4956.96

8"-7

35.35

30"

4965.00

4'

4'

10'

10'

30'

8'-0"

6'-0"

6'-0"

5'-0"

5'-0"

5

N

STA. 4+77.16 End Construction
Match Existing Grades.
(Rebuild Median North to Marquette Ave.)

STA. 4+77.16
T.C. 61.80
G.L. 61.13

Remove & Rebuild Sidewalk to Meet New Grades
Build Sidewalk to Back of New Curb and Remove Driveway Pad.
STA. 4+42.16

Existing Driveway
Existing 6' Sidewalk

Match Line
STA. 116+50

STA. 116+74.25
Build Double "D" Inlet

STA. 116+87.2 P.V.C. 100' V.C. Gutter Line
See PLAN & PROFILE Sheet No 8
STA. 116+90 End Retaining Wall

117

STA. 117+05
End Parapet Wall

STA. 117+40.32

Relocated Fire Hydrant

Right of Way

Outside Edge Retaining Wall
Build 5'-4½" Sidewalk

Outside Edge of Sidewalk
Build 6'-2½" Sidewalk
T.C. 62.09
Gut. 61.42

4985.035
Gutter Line

Build Type "A" Curb & Gutter

Build Type "A" Curb & Gutter

℄ WEST BOUND LANES

S.D. S=0.020 1/ Min 12" R.C.P.

Nose of Median
STA. 117+50

Build Type "M" Curb & Gutter

R=50' Typ.

Typ.

℄ MEDIAN

4985.70

4984.12 +80
4983.50
4982.95
4982.417
4982.06
4981.75
4981.50 +40

STA. 117+03 16' Rt.
Build 4' Dia. Type "A" Storm Drain Manhole
INV. Pipe EL. 4958.28

16+00

℄ GRAND AVENUE SURVEY

℄ EAST BOUND LANES

64.7 S.D. 18" R.C.P. x 80' S=0.010

Remove Existing Water Meter by City

Adjust S.M.H. to Grade

S=0.15/15

R=10'

STA. 117+74.21
END BRIDGE SLAB

Remove Existing Will by City
Remove Existing F.H. & Relocate
Remove Existing Power Pole & Guy Lines by Others

At 18" Water Line - 1.5' Rt.
Build 4' Dia. Type "A" Storm Drain Manhole
Sump Invert-Pipe INV. EL. in 4957.48 Out 4957.38
Protect Sanitary Sewer

Remove Existing Water Meter by City

Build Type "A" Curb & Gutter

4985.035
Gutter Line

30.4'

Build 5'-4½" Sidewalk

Outside Edge Retaining Wall

Build 6'-2½"

Relocate Water Valve, Box & Cap Tee

At 6" Water Line
Build 4' Dia Type "A" Storm Drain M.H. Sump
Invert Pipe INV. EL. In 4957.24 Out 4957.14

Remove Existing Curb & Gutter

Rebuild Existing S.M.H. Cone

S=0.02

22.6 S.D. 18" R.C.P.

City Monument Reference & Replace

At 16" Water Line
Build 6' Dia. Type "A" Storm Drain Manhole
Sump Invert-Pipe INV. EL. In 4957.06 Out 4956.96

℄ Line

Remove Existing Median North to Marquette Ave. See Details on Sheet 8

50'

50'

W-16"

W-12"

N. E. BROADWAY

STA. 118+15.41 ℄ MEDIAN = STA. 3+66.17 ℄ BROADWAY
STA. 17+64.72 GRAND AVE. Survey

4.3'

3'

4'

Build New Median North to Marquette Ave. See Details on Sheet 8

New 6" Cl. Pipe Cost Included in Price bid for Relocation of Fire Hydrant

W 6" Relocated 1-6" Gate Valve 1-Valve Box

Nose of Median
STA. 4+21.3

4+00

Remove Existing Pavement to limits Shown

Build New Asphalt Pavement

Existing Storm Drain Line L.I.P.

Rebuild Existing Storm Drain Manhole Cone

40" 8" V.C.P.

30" R.C.P.

18+00

℄ GRAND

Crown Transition

Existing 8' Concrete Sidewalk L.I.P.

Existing Curb & Gutter L.I.P.

T.C. 64.21
Gut 63.54

Right of Way

Existing 6' Concrete Sidewalk L.I.P.

Existing Type "C" Inlet L.I.P.

STA. 18+32
℄ GRAND AVE. SVY.
End Construction
GRAND AVE. N.E.

N.E.
℄ GRAND AVE.
Survey

4965.00

6 4" L.P.

R=10'

Existing Type "C" Drop Inlet L.I.P.

Remove Existing Type "F" Drop Inlet Plug & Finish to Meet Existing Grade

Right of Way

Existing S.D. J.B. STA. 3+80.9 3' Rt.
N.I. in Elev. 4983.91

68' Proposed future Street
18' Median

R=25'

R=105'
R=10'
4'-0"
R=50'
9.85

TYPICAL MEDIAN NOSE DETAIL CITY STANDARD

K14076-K14075
MODEL DIA: 30"
AS-BUILT DIA: 30"

2

STA. 4+77.16 End Construction
Match Existing Grades.
(Rebuild Median North to Marquette Ave.)

STA. 4+77.16
T.C. 61.80
G.L. 61.13

Remove & Rebuild Sidewalk to Meet New Grades
Build Sidewalk to Back of New Curb and Remove Driveway Pad.

STA. 4+42.16

Existing Driveway

Existing 6' Sidewalk

Remove Existing Median North to Marquette Ave. See Details on Sheet 6

N.E.

Build New Median North to Marquette Ave. See Details on Sheet 6

Existing 8' Concrete Sidewalk L.I.P.

Existing Curb & Gutter L.I.P.

Nose of Median
STA. 4+21.3

4+00

Existing Curb & Gutter L.I.P.
T.C. 64.21
Gut. 63.54

Existing 8' Concrete Sidewalk L.I.P.

Existing Type "C" Inlet L.I.P.

Right of Way

Remove Existing Pavement to limits Shown

Build New Asphalt Pavement

Existing Storm Drain Line L.I.P.

STA. 18+32
℄ GRAND AVE. SVY.
End Construction
GRAND AVE. N.E.

N.E. ℄ GRAND AVE. Survey

℄ GRAND
Crown Transition

30" R.C.P.

Rebuild Existing Storm Drain Manhole Cone

Existing Type "C" Drop Inlet L.I.P.

Remove Existing Type "F" Drop Inlet Plug & Finish to Meet Existing Grade.

Existing S.D.J.B. STA. 3+80.9 3' Rt.
N.L.ig Elev. 4963.91
Existing 48" North Invert EL. 4955.46
48" South Invert EL. 4955.46
Build 18" West Invert EL. 4956.76
Connect 2 Lines

88' Proposed future Street 18' Median

AS CONSTRUCTED

TYPICAL MEDIAN NOSE DETAIL CITY STANDARD

R=50'
R=10'
41-0"
Median Curb
R=50'
9.85
R=15'

N

Match Line STA. 116+50

STA. 116+74.25
Build Double "C" Inlet

STA. 116+87.2 P.V.C. 100 V.C. Gutter Line
See PLAN & PROFILE Sheet No 8
STA. 116+90 End Retaining Wall

117

STA. 117+03 End Parapet Wall

STA. 117+40.32

Right of Way

Outside Edge Retaining Wall
Build 5'-4½" Sidewalk

Outside Edge of Sidewalk
Build 6'-2½" Sidewalk
T.C. 62.09
Gut. 61.42

4965.035 Gutter Line

Build Type "A" Curb & Gutter

Build Type "A" Curb & Gutter

Relocated Fire Hydrant

W 6" Relocated 1-6" Gate Valve 1-Valve Box

New 6" CI. Pipe Cost Included in Price bid for Relocation of Fire Hydrant

℄ WEST BOUND LANES

Remove Existing Curb & Gutter

Remove Existing W.L. by City
Remove Existing F.H. & Relocate
Remove Existing Power Pole & Guy Lines by Others

Relocate Water Valve, Box & Cap Tee

Nose of Median
STA. 117+50

R=50' Typ.

Build Type "M" Curb & Gutter

9.85 Typ.

STA. 117+74.21
END BRIDGE SLAB

At 6" Water Line
Build 4' Dia Type "A" Storm Drain M.H. Sump
Invert Pipe INV. EL.
In 4957.24 Out 4957.14

STA. 118+15.41 ℄ BROADWAY
= STA. 3+68.17 ℄ GRAND AVE Survey
= STA. 17+64.72 ℄ BROADWAY

Rebuild Existing S.M.H. Cone

Adjust S.M.H. to Grade

℄ MEDIAN

4965.70

4964.12 +80

4963.50

4962.95

4962.47

4962.06

4961.75

4961.50 +40

STA. 117+03 16' Rt.
Build 4' Dia. Type "A" Storm Drain Manhole
INV. Pipe EL. 4958.28

16+00

64.7' S.D. 15" R.C.P. x 80' S=0.010

Remove Existing Water Meter by City

T.A.M.

℄ EAST BOUND LANES

S.D. 12" R.C.P. S=0.020 1/4 Min

R=50' Typ.

At 18" Water Line - 1½ Rt.
Build 4' Dia. Type "A" Storm Drain Manhole
Sump Invert-Pipe INV. EL.
In 4957.48 Out 4957.38
Protect Sanitary Sewer

Remove Existing Water Meter by City

Build Type "A" Curb & Gutter

Build 5'-4½" Sidewalk

Build 6'-2½" Sidewalk
T.C. 62.20
Gut. 61.53

Outside Edge Retaining Wall

Outside Edge of Sidewalk

Right of Way

STA. 116+74.25
Build Double "C" Inlet

STA. 116+80 Begin Crown Transition
STA. 116+82.6 P.V.C. 100 V.C. Gutter Line. See PLAN & PROFILE Sheet No 12

STA. 117+05
End Retaining Wall and End Parapet Wall

STA. 117+40 End Crown Transition

STA. 117+53.84

Build Type "E" Inlet
STA. 3+03.50

Remove & Rebuild Sidewalk to Meet New Grades
Build Sidewalk to Back of New Curb.

Existing 6' T.C. 62.52 Sidewalk L.I.P.

STA. 2+68.5 Begin Construction
Match Existing Grades
(Rebuild Median South to Tijeras Ave.)

STA. 2+68.5
T.C. 62.66
Gut. 61.99

Nose of Median
STA. 3+11.04

℄ BROADWAY Survey Line

3+00

Remove Existing Median South to Tijeras Avenue See Details on Sheet 12

Build New Median South to Tijeras Ave. See Details Sheet 12

Build Double "C" Inlet

Existing 6' Concrete Sidewalk

NOTES:
1. Sta. 116+80 to STA. 117+40 Transtion Out 0.66' Crown as Shown Above.
2. For Details Back of STA. 116+50, See Sheet Nos 8 & 12
3. For Profile Grades of Gutter Lines See Sheet Nos 8 & 12

K14075
DATUM: 4955.46 + 2.67 = 4958.13

ALBUQUERQUE NEW MEXICO
GRAND AVENUE OVERPASS
W.B. & E.B. LANES
INTERSECTION DETAILS AT BROADWAY N.E.

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO

SCALE	DATE	DRAWN: R.A.G.	SHEET 14
	JULY 1969	CHECKED: L.M.R	OF 66

STA. 16+40 - 2.5' LT.
Build 4' DIA. Type "A"
Storm Drain Manhole
Manhole Inv. El. 4946.62

STA. 15+35 (2' Rt.)
Build 4' DIA. TYPE "B"
Sanitary Sewer Manhole
INV. EL. 4944.55

24" RCP - 163'
S = 0.004

Tower Building

Connect 8" V.C.P. to Existing 8" Galvinized Steel Roof Drain & Run Under Sidewalk to Manhole

Remove & Rebuild Sidewalk

Bldg. Line to ℄ Survey

Relocated Water Line 1' N. of ℄ Survey

18" Conc. Encased V.C.P.
S = 0.00352
163'

Remove & Rebuild Sidewalk

Remove Existing Curb & Gutter

Build Type "E" Drop Inlet

Build 6' Concrete Sidewalk

Build 4" Slope Paving
Slope Varies - ½" Preformed Expansion Jt. Adj. to Back of Curb (Included in Price for 4" Sidewalk)

Tie Exist. 2¼" CI Water Line & Cap Line

Exp. Jt.

Type "A" Curb & Gutter

Back of Curb

Gutter Line

54.87 T.C.

15" Abandon & Plug East & West

Semi Tangent Line

Remove Existing Pavement ℄ Second St. N.W. to STA. 17+21.65 Marquette Ave. N.W.

To be Moved by Others

Remove Existing Curb & Gutter

Remove Existing Sidewalk

Existing Electric Manhole to be Removed by Others

Remove Existing Curb and Gutter

Remove Existing Driveway

Remove Existing Sidewalk

Remove Existing Driveway

Remove Existing Sidewalk

Match Existing Grade

Match Existing Grade

Existing Curb & Gutter

Existing Curb & Gutter

½" Preformed Expansion Joint Where Adjacent to Retaining Wall. (Included in Price for 4" Sidewalk)

Existing Gas Line

Existing Sanitary Sewer Line

Existing Sanitary Sewer Manhole West Invert El. 4945.64

Existing S.D.M.H. SOUTH INV. EL. 4949.46

S.D.M.H. STA. 18+22.1 - 52' Rt.
N. Lug Elev. 4953.51
12" South Invert - 4949.46
10" Northwest Invert - 4950.71
10" Northeast Invert - 4949.46

Existing 6" Steel Concrete Lined Water Line

Private Residence

STA. 16+33.77 (2' Rt.)
Build 4' DIA. TYPE "B"
Sanitary Sewer Manhole
INV. EL. 4944.90
Build 8" x 20' V.C.P.

Alley
Inverted Crown Concrete Pavement

Match Existing Grade

Note:
From Alley to STA. 16+73.65
Remove and Rebuild Sidewalk
From Alley to STA. 16+73.65
Remove Exist. Curb & Gutter

STA. 16+60 - 5.2' RT.
Build 4' DIA. Type "A"
Storm Drain Manhole
Stub out and Plug 24" Pipe East & Stub
Manhole Inv. El. 4946.71

Brick Building

Remove & Rebuild Sidewalk

℄ Survey MARQUETTE AVENUE N.W. (℄ Back of Curb)

Build New Type "C" Curb & Gutter

Crown Transition
18" Conc. Ens. V.C.P.
S = 0.00352

New Asphalt Paving

STA. 16+90 Build 4' DIA. TYPE "B" SAN. Sewer M.H.
INV. EL. 4945.11

AVENUE N.W.

15" V.C.P.

MATCH LINE

MARQUETTE

STA. 15+30 ℄ Survey

STA. 104+50 (Reading 1+25.25)
Begin Bridge Sidewalk
Begin Retaining Wall

STA. 16+35.77
P.I. 6' Rt. of P.O.T.

STA. 16+48.85

STA. 16+73.65

STA. 17+21.65
END CONSTRUCTION

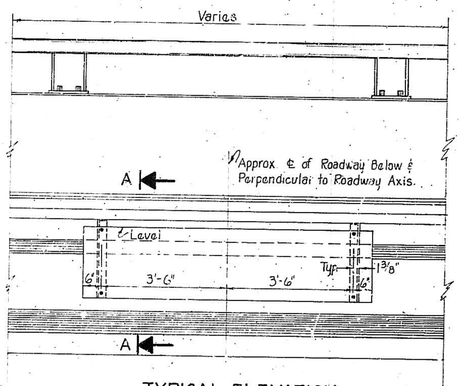
See Sheet No. 8 for Removals South of P.C.C. Retaining Wall & ℄ WEST BOUND LANES (GRAND AVENUE OVERPASS)

Semi Tangent Line

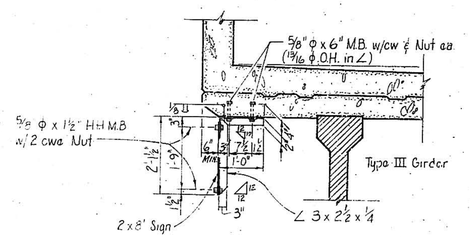
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 1 5 7 0 1 0 4 7 0 1 0 4 5 7 7 0 1
07
08
09

FIRST

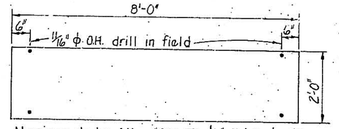
1. Install 18" Sanitary Sewer Line, 2¼" Waterline, and 24" Storm Drain Line Subsequent to Pile Driving and Prior to Building Retaining Wall.
2. Concrete for Encasing 18" V.C.P. to be Paid for under Item No. 68d Class "A" Concrete Miscellaneous, Including Reinforcing, Complete in Place.
3. See Sheet No. 65 Piping and Valve Details for Concrete Encasement Detail.
4. 4% Slope Paving to be Paid for Under Item No. 60a. Sidewalk Complete in Place Including Grading.
5. Provide 2'-6" Minimum Cover for 2¼" ϕ Cast Iron Water Line. From Opposite Sta. 15+40 to Opposite Sta. 16+23.5. Relocated Water Line to Run 1' North of ℄ Survey.
6. It Shall be the Responsibility of the Contractor to take such Measures Necessary to Protect Buildings from Damage.



TYPICAL ELEVATION



SECTION A-A



Aluminum to be Alloy 6061-T6, ⅛" thick & will be furnished by the City of Albuquerque. The sign is to be erected by the Contractor.

ALUMINUM CLEARANCE SIGN

SIGN LOCATION

West Bound Bridge — 3 Req'd - North side — 1st Street Alley east of 1st Commercial St.

East Bound Bridge — 3 Req'd - South Side — 1st Street Alley east of 1st Commercial St.

SUPPORT MATERIAL FOR ONE SIGN

2 Ł 3 - 3 x 2½ x ¼ x 1'-0"
2 Ł 3 - 3 x 2½ x ¼ x 2'-1½"
4 - ⅝" ϕ x 6" M.B. w/cw & Nut
4 - ⅝" ϕ x 1½" H.H.M.B. w/2 cw & Nut
Est. Wt. — 32 lbs.

CURVE DATA

① Δ = 27°29'
R = 20.00'
T = 4.89'
L = 9.59'

② Δ = 67°31'
R = 22.00'
T = 13.95'
L = 24.00'

③ Δ = 75°58'06"
R = 15.50'
T = 12.10'
L = 20.55'

④ Δ = 90°00'
R = 9.00'
T = 9.00'
L = 14.14'

⑤ Δ = 04°51'56"
R = 287.0'
T = 12.19'
L = 24.37'

⑥ Δ = 22°37'04"
R = 20.00'
T = 4.00'
L = 7.90'

GENERAL NOTES:

1. All material and workmanship shall conform to New Mexico State Highway Commission Specifications. All holes to be 11/16" ϕ except as noted.
2. Sign Supports to be steel conforming to AASHO Specifications M-183 latest edition.
3. For sign blank see detail on this sheet.
4. Sign to be installed near ℄ of underneath roadway and parallel to bridge grade. Place on side of bridge nearest approaching traffic.
5. Angles to be painted as required for structural steel. All bolts and washers to be hot dipped galvanized.
6. Clearance dimensions to be determined by field measurement after completion of pavements and structure.
7. Bolts and angles shall be furnished and installed by the contractor and will be paid for at the unit price bid per pound for structural steel. The weight is included in structural steel quantity.
8. Aluminum sign 2'-0" x 8'-0" with clearance figures, will be furnished by the City of Albuquerque. Signs shall be erected by the Contractor and the cost of installation shall be included in the unit price bid for structural steel.
9. Place overhead clearance sign normal to centerline of roadway beneath.

DETAILS OF OVERHEAD CLEARANCE SIGN SUPPORTS
For 8' x 2' Aluminum Signs

Revised as per Addendum No. 1

ALBUQUERQUE NEW MEXICO

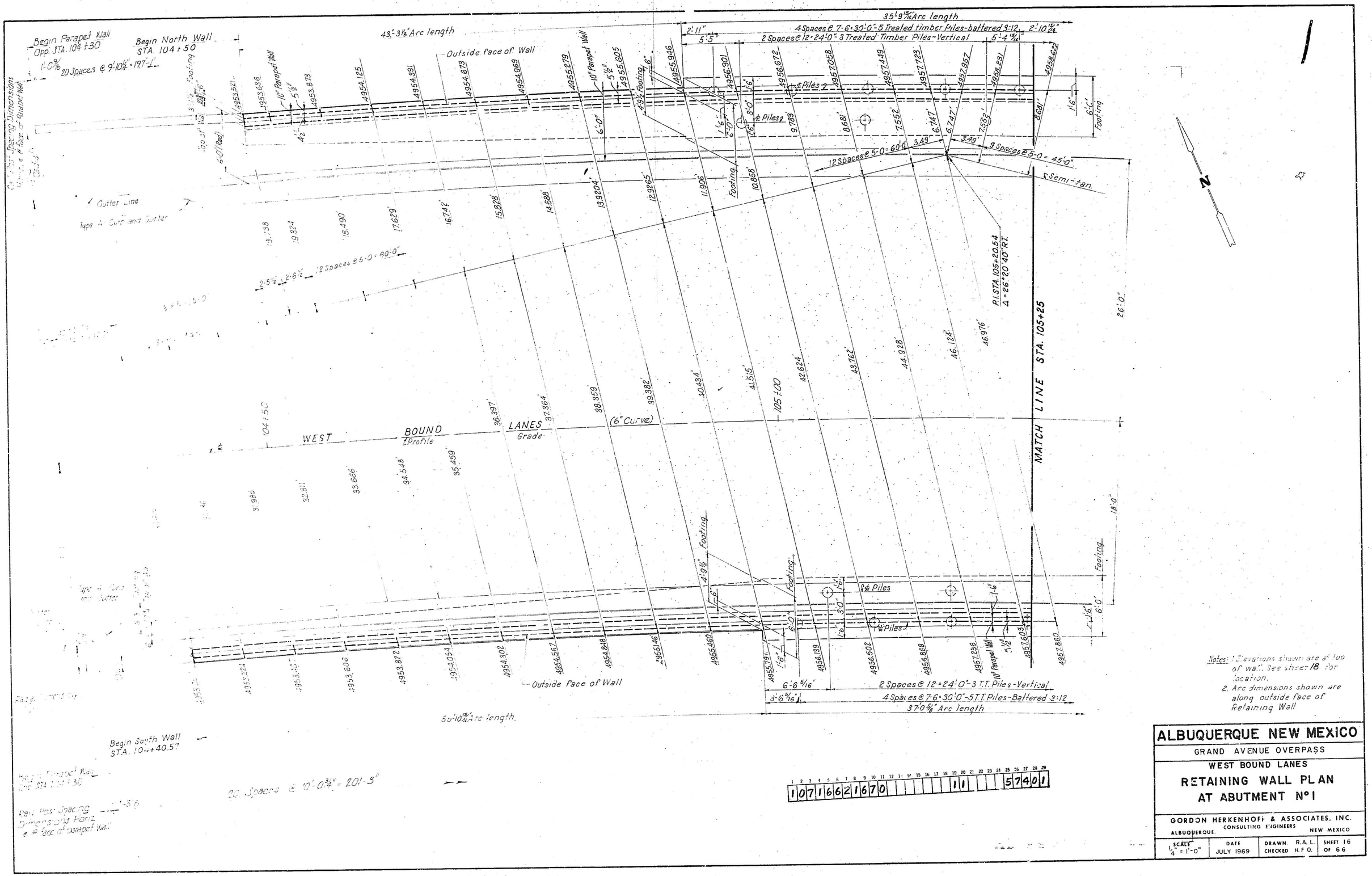
GRAND AVENUE OVERPASS

WEST BOUND LANES

MARQUETTE AVE. DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
ALBUQUERQUE CONSULTING ENGINEERS NEW MEXICO

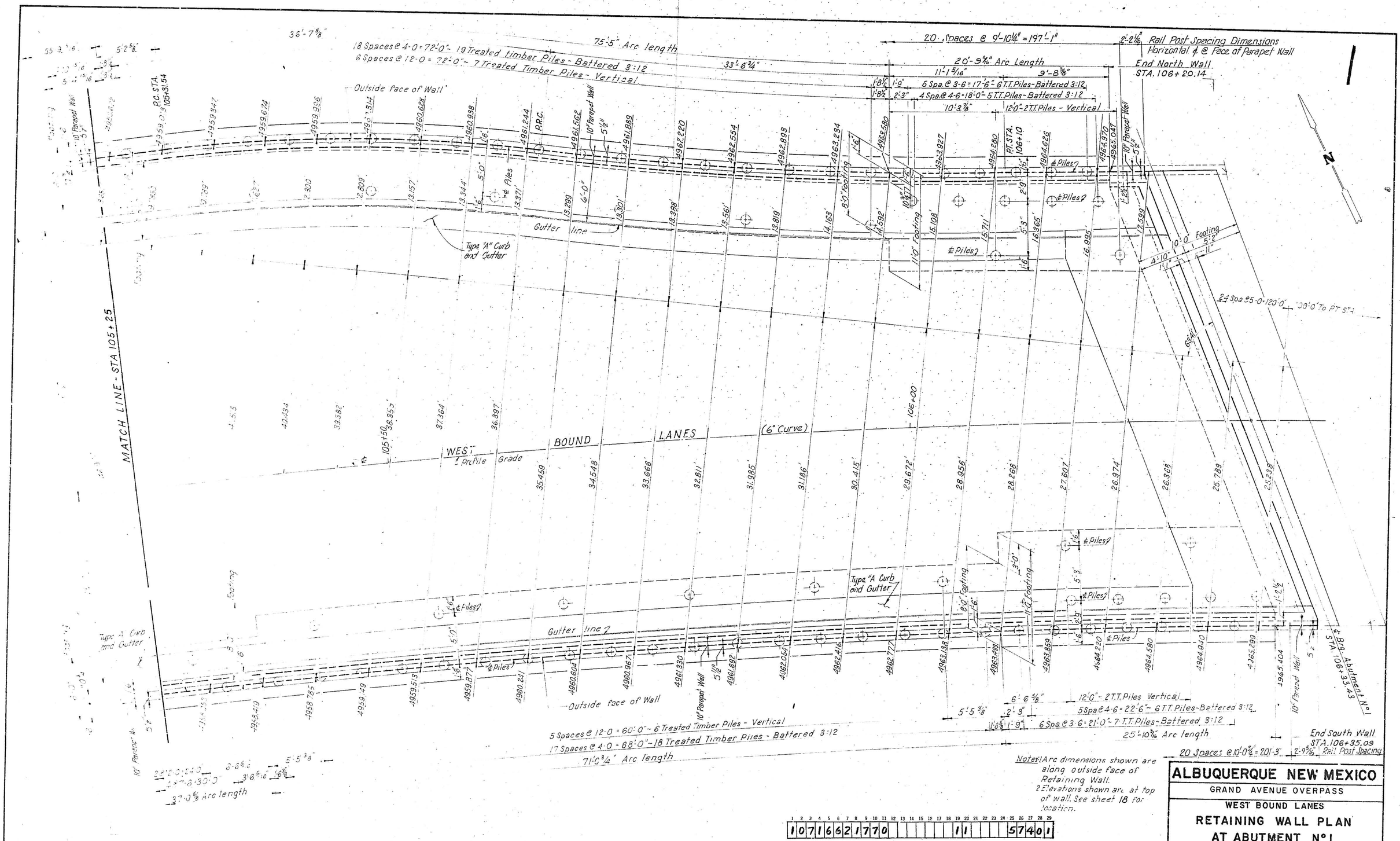
SCALE	DATE	DRAWN	CHECKED	SHEET
1" = 10'	JULY 1969	R.A.G.	L.M.H.	15 OF 66



ALBUQUERQUE NEW MEXICO	
GRAND AVENUE OVERPASS	
WEST BOUND LANES	
RETAINING WALL PLAN AT ABUTMENT N°1	
GORDON HERKENHOFF & ASSOCIATES, INC. CONSULTING ENGINEERS ALBUQUERQUE, NEW MEXICO	
SCALE 1/4" = 1'-0"	DATE JULY 1969
DRAWN R.A.L. CHECKED H.F.O.	SHEET 16 OF 66

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

1 0 7 1 6 6 2 1 6 7 0 | 1 1 | 5 7 4 0 1



Notes: 1 Arc dimensions shown are along outside face of Retaining Wall.
2 Elevations shown are at top of wall. See sheet 18 for location.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 1 7 7 0 1 1 5 7 4 0 1

ALBUQUERQUE NEW MEXICO

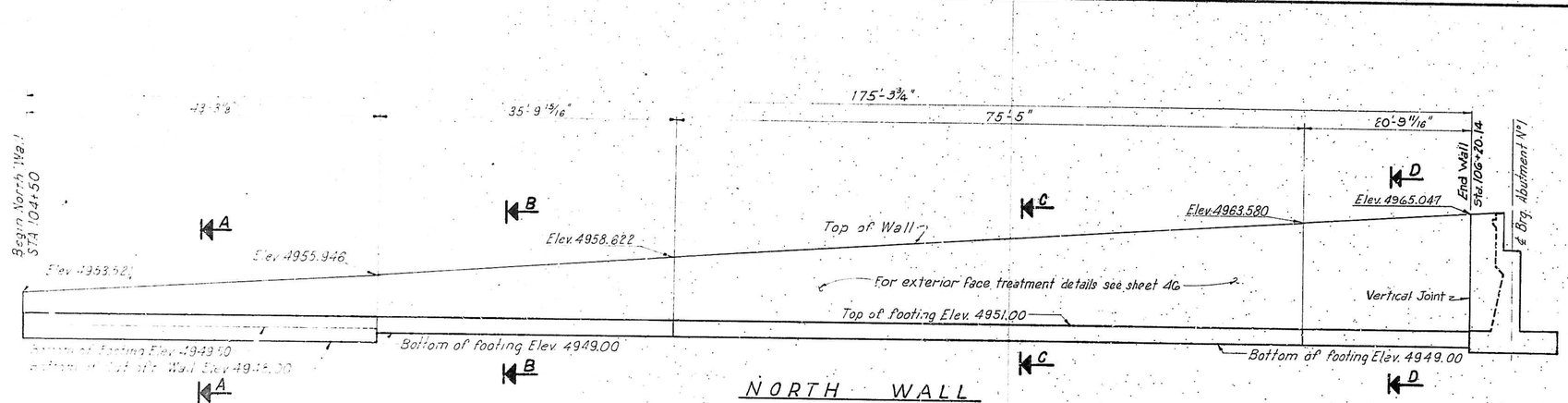
GRAND AVENUE OVERPASS

WEST BOUND LANES

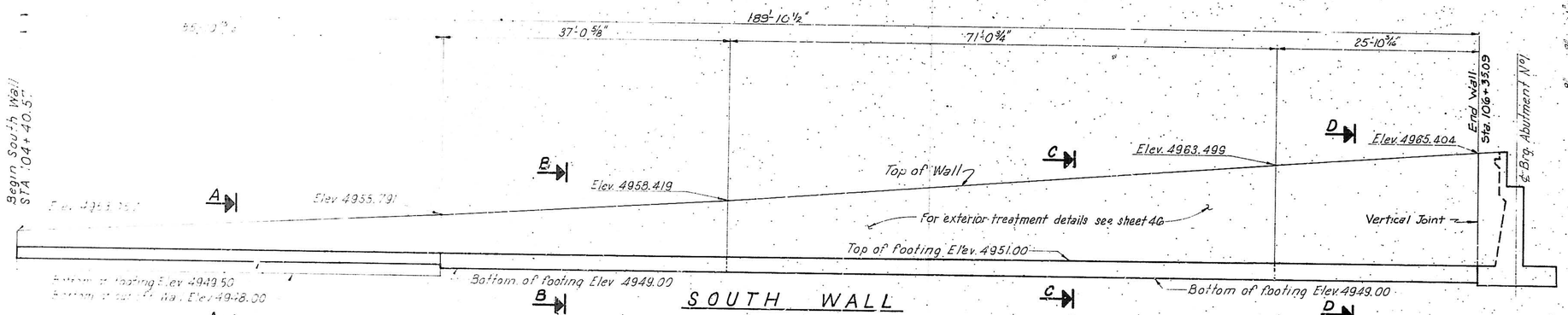
RETAINING WALL PLAN AT ABUTMENT N° 1

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO

SCALE	DATE	DRAWN. R.A.L. CHECKED H.R.O.	SHEET 17 OF 66
1/4" = 1'-0"	JULY 1969		

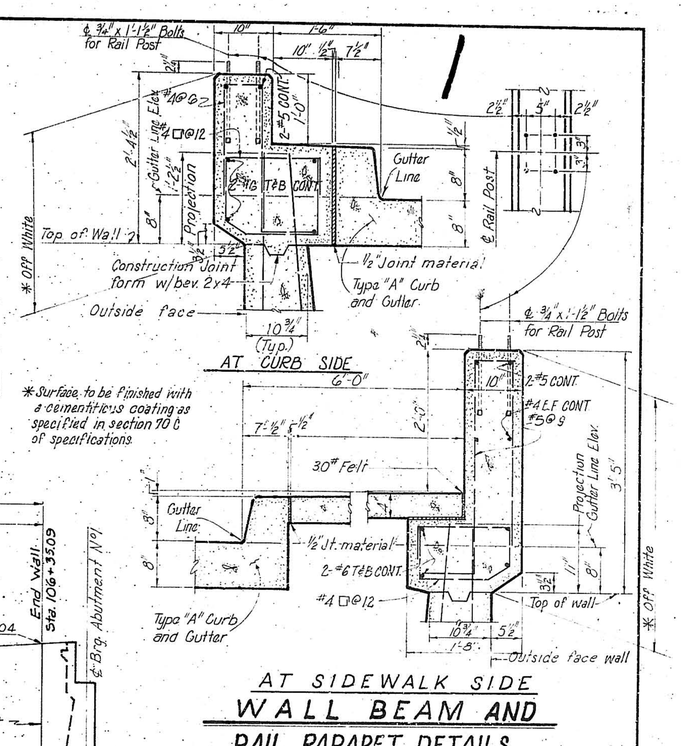


NORTH WALL



SOUTH WALL

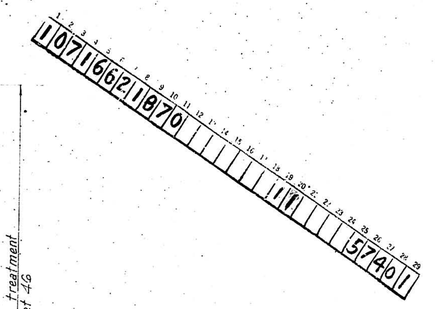
ELEVATIONS - (LOOKING NORTH)

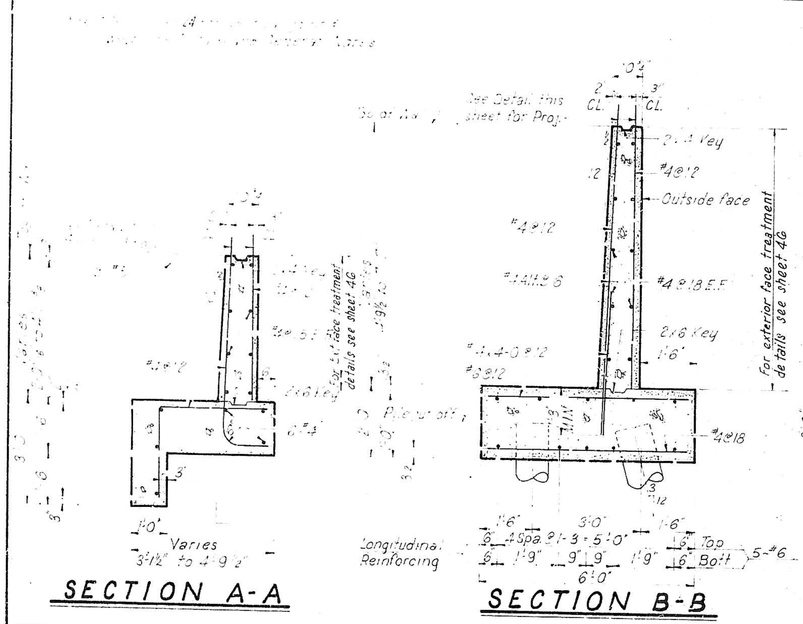


AT SIDEWALK SIDE

WALL BEAM AND RAIL PARAPET DETAILS

(For light standard bracket details see sheet 21)





SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

Revised as per Addendum N°1

ALBUQUERQUE NEW MEXICO	
GRAND AVENUE OVERPASS	
WEST BOUND LANES	
RETAINING WALL ELEVATIONS & SECTIONS AT ABUTMENT N° 1	
GORDON HERKENHOFF & ASSOCIATES, INC. CONSULTING ENGINEERS ALBUQUERQUE NEW MEXICO	
SCALE	DATE: JULY 1969
DRAWN: R.A.L. CHECKED: L.M.P	SHEET 18 OF 66

Rail Post Spacing
Dimensions Horiz. & @ Face of Parapet Wall

Begin Parapet Wall
Sta 104+39.46

11¾" | 20 Spaces @ 9'-11¾" = 199'-7"

Begin North Wall
STA. 104+53.27 (T)

50'-3½" (Arc length)

35'-0⅞" (Arc length)

2'-6⅞" | 4 Spaces @ 7-6 = 30'-0" - 5 T.T. Piles - Battered 3:12

5'-6⅞" | 2 Spaces @ 12-0 = 24'-0" - 3 T.T. Piles - Vertical

Outside Face of Wall

10" Parapet Wall

3'-1½" Footing

10½" Top of Wall

8"

4953.140 | 4953.399 | 4953.677 | 4953.972 | 4954.285 | 4954.615 | 4954.962 | 4955.321 | 4955.680 | 4956.039 | 4956.398 | 4956.756 | 4957.115 | 4957.473

4'-9½" Footing

6"

5½"

6'-0"

1'-6"

2'-0"

6'-0" Footing

10½" Top of Wall

6'-0" Footing

4 Piles @

Type "A" Curb and Gutter

Gutter Line

104+50 (T)

28.268 | 27.607 | 26.971 | 26.368 | 25.789 | 25.238 | 24.713 | 24.216 | 23.746 | 23.304 | 22.888 | 22.499 | 22.137 | 21.802

105+00 (T)

EAST BOUND LANES (6° Curve)

℄ Grade Brade

13 Spaces @ 11'-0" = 143'-0" to P.T. STA 105+81.31

Semi-Tan.

P.I. STA 104+34.57
Δ = 17°43'40" LT

Outside Face of Wall

3.708 | 4.365 | 4.995 | 5.599 | 6.176 | 6.730 | 7.256 | 7.756 | 8.231 | 8.679 | 9.102 | 9.499 | 9.870 | 10.216 | 10.535

4'-9½" Footing

6"

1'-6"

3'-0"

6'-0"

10½" Top of Wall

6'-0" Footing

4 Piles @

4953.195 | 4953.418 | 4953.654 | 4953.904 | 4954.154 | 4954.421 | 4954.704 | 4955.002 | 4955.317 | 4955.646 | 4955.990 | 4956.333 | 4956.676 | 4957.018 | 4957.361 | 4957.703 | 4958.045 | 4958.387

10" Parapet Wall

5½"

Begin South Retaining Wall
STA 104+39.46 (T)

55'-5" (Arc length)

2'-0⅝"

1'-3¾"

3 Spaces @ 12-0 = 36'-0" - 4 Treated Timber Piles - Vertical

5 Spaces @ 7-6 = 37'-6" - 6 Treated Timber Piles - Battered 3:12

40'-1¼" (Arc length)

MATCH LINE STA. 105+25 (T)

Notes: 1 Elevations shown are at top of wall. See sheet 21 for location
2 Arc dimensions shown are along outside face of Retaining Wall.

Rail Post Spacing
Dimensions Horiz. & @ Face of Parapet Wall

Begin Parapet Wall
Sta 104+39.46 T

1'-0⅝" | 19 Spaces @ 9 11½ = 188'-9¾"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 1 9 7 0 1 1 5 7 4 0 1

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

EAST BOUND LANES

RETAINING WALL PLAN AT ABUTMENT N° 1

GORDON HERKENHOFF & ASSOCIATES, INC.
ALBUQUERQUE CONSULTING ENGINEERS NEW MEXICO

SCALE	DATE	DRAWN. R.A.L.	SHEET 19
1/4" = 1'-0"	JULY 1969	CHECKED H.R.O.	OF 66

20 Spaces @ 9'-11¾" = 199'-7"

1'-1¾16" Rail Post Spacing Dimension Horiz. ℄ @ Face of Parapet Wall End North Wall STA. 106+39.65(T)

35'-0⅞" (Arc length)
2 Spaces @ 6-3-0"-5 T.T. Piles (Battered 3:12)
2 Spaces @ 4-0-24'-0"-3 T.T. Piles Vertical

40'-0 1/16" (Arc length)
3 Spaces @ 4-0=36'-0"-10 T.T. Piles-(Battered 3:12)
2 Spaces @ 12-0=24'-0"-3 T.T. Piles-(Vertical)

30'-0"
7 @ 4-0=28'-0"-8 Treated Timber Piles-(Battered 3:12)
2 @ 12-0=24'-0"-3 Treated Timber Piles-(Vertical)

28'-4⅛"
7 Spaces @ 3-6=24'-6"-8 T.T. Piles-(Battered 3:12)
5 Spaces @ 4-6=22'-6"-6 T.T. Piles-(Battered 3:12)
2 Spaces @ 11-4=22'-8"-3 T.T. Piles (Vertical)

Outside Face of Wall

10" Parapet Wall 5'-2"

Gutter Line

℄ Piles

Footing

Type "A" Curb and Gutter

11" Parapet Wall 5'-1½"

8'-0" Footing

11'-0" Footing

Bearing Abut. N°1 STA. 106+37.43(T)

10' Approach Slab

105+50 (T)

P.T. STA 105+81.91 (T)

106+00 (T)

℄ EAST BOUND LANES

Profile Grade

MATCH LINE - STA. 105+25

10'-0" Footing

25'-0 1/16"

Sidewalk

End South Wall STA. 106+23.02(T)

19 Spaces @ 3'-11¼" = 188'-9¾"

Rail Post Spacing Dimension Horiz. ℄ @ Face of Parapet Wall

5 Spaces @ 2-0=36'-0"-4 Treated Timber Piles (Vertical)
10 Spaces @ 4-0=48'-0"-13 Treated Timber Piles Battered 3:12)
50'-3¾" (Arc length)

2'-11⅞" 12'-0"-2 T.T. Piles (Vertical)
2'-11⅞" 4 @ 4-0=16'-0"-5 T.T. Piles (Batt)
20'-0"

6'-0" 12'-0"-2 T.T. Piles (Vertical)
4 @ 4-6=18'-0"-5 T.T. Piles (Battered 3:12)
5 @ 3-6=17'-6"-6 T.T. Piles (Battered 3:12)
21'-5½"

Notes 1. Elevations shown are at top of wall. See sheet 21 for location.
2. Arc dimensions shown are along outside face of Retaining Wall.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 2 0 7 0 1 1 5 7 4 0 1

ALBUQUERQUE NEW MEXICO

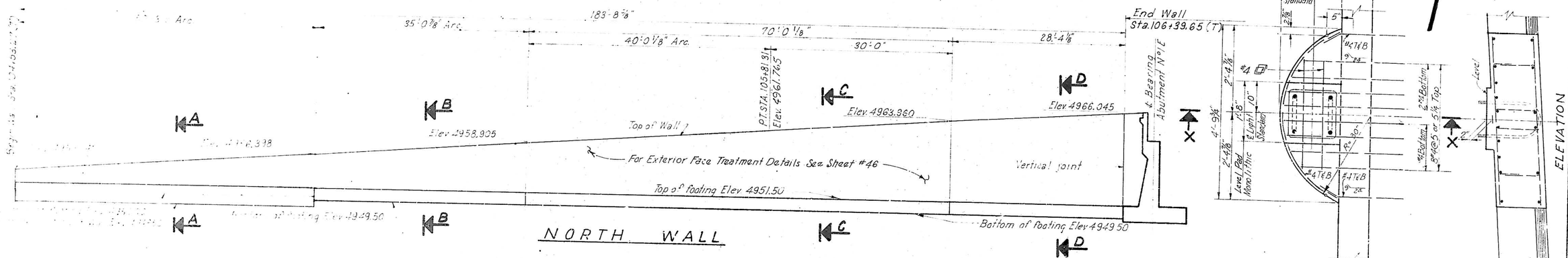
GRAND AVENUE OVERPASS

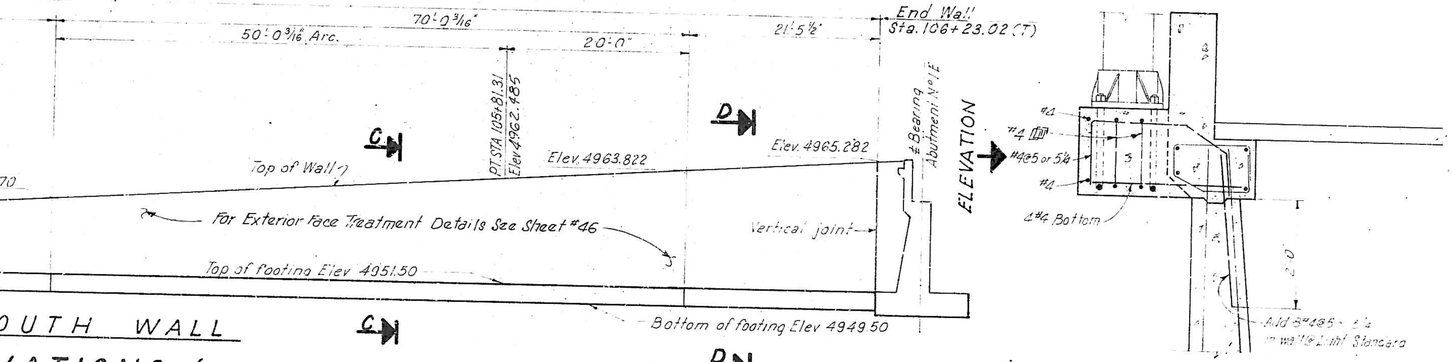
EAST BOUND LANES

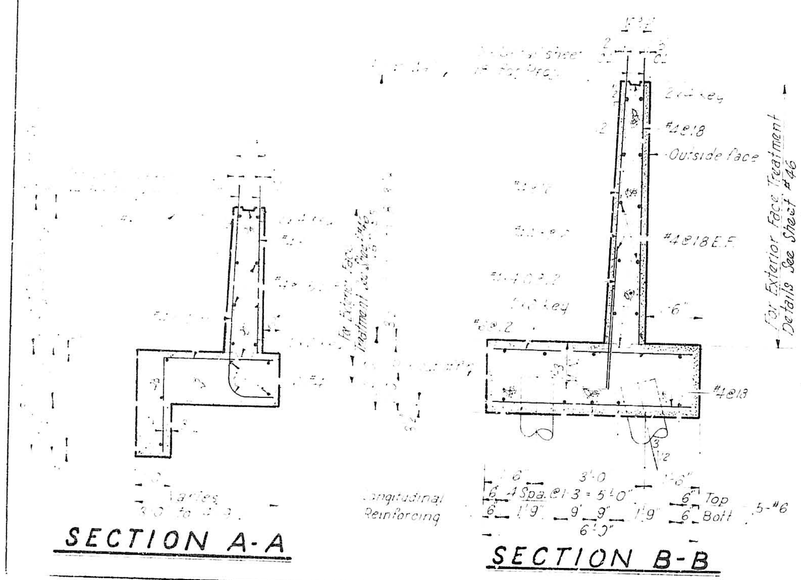
RETAINING WALL PLAN AT ABUTMENT N°1

GORDON HERKENHOFF & ASSOCIATES, INC
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN	CHECKED	SHEET
1/4" = 1'-0"	JULY 1969	R.A.L.	H.R.O.	20 OF 66







Note: See sheet 24 for Vertical Joint and Weep Hole Details and General Notes
See Sheet 18 for Wall Beam and Rail Parapet Details.

Job No. 107166221701 12 57401

Revised as per Addendum No 1

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

EAST BOUND LANES

RETAINING WALL ELEVATIONS & SECTIONS AT ABUTMENT N° 1

GORDON HERKENHOFF & ASSOCIATES, INC
ALBUQUERQUE CONSULTING ENGINEERS NEW MEXICO

SCALE	DATE	DRAWN R.A.L.	SHEET 21
	JULY, 1969	CHECKED L.M.P.	OF 66

℄ Bearing Abut. N.B.P. STA. 114+87.56

15'-11"

4 Spa @ 3'-0" = 12'-0" - 5 TT Piles (Bat 3:12) 2'-0½" 1'-0"
3 Spa @ 3'-9" = 11'-3" - 4 TT Piles (Bat 3:12) 2'-9½" 3'-6"
1 Spa @ 12'-0" = 12'-0" - 4 TT Piles (Vert.) 1'-9½" 5'-0"

70'-0"

19 Spaces @ 3'-6" = 66'-6" ~ 20 Treated Timber Piles (Battered 3:12)
14 Spaces @ 4'-6" = 63'-0" ~ 15 Treated Timber Piles (Battered 3:12)
5 Spaces @ 12'-0" = 60'-0" ~ 6 Treated Timber Piles (Vertical)

1'-9"
3'-6"
1'-6"
15'-0"
1'-6"

18 Spaces @ 4'-0" = 72'-0" ~ 19 Treated Timber Piles ~ (Battered 3:12)
6 Spaces @ 12'-0" = 72'-0" ~ 7 Treated Timber Piles ~ (Vertical)

75'-0"

1'-6"
1'-6"

4477.815 4472.508 4472.246 4471.983 4471.721 4471.458 4471.196 4470.933 4470.671 4470.408 4470.146 4469.883 4469.621 4469.358 4469.096 4468.833 4468.571 4468.308 4468.046 4467.783 4467.521 4467.258 4466.996 4466.733 4466.471 4466.208 4465.946 4465.683 4465.421 4465.158 4464.896 4464.633 4464.371

Rail Post Spacing Dimensions Horiz. ℄ ℄ Face of Parapet Wall

22 Spaces @ 9'-9¾" = 215'-10½"

Outside Face of Wall
Outside Face of Wall
Footing
11'-0" Footing
℄ Piles
℄ Piles
Gutter Line
℄ Piles
10¾" Top of Retaining Wall
℄ Piles
5'-0" Footing
Sidewalk
Inside Face Parapet Wall
Profile Grade
Profile Grade

℄ WEST BOUND LANES
Profile Grade

STA. 116+00

18'-0"

Face of Median Curb
Face of Median Curb

115+00
115+50
℄ MEDIAN
116+00
Sta. 116+03
STA. 116+50
MATCH LINE - STA. 116+50

N

100' Parabolic Curve

℄ EAST BOUND LANES
℄ Profile Grade

STA. 116+00

Profile Grade

Outside Face of Wall
℄ Piles
Gutter Line
℄ Piles
℄ Piles
℄ Piles
10¾" Top of Retaining Wall
Inside face Parapet Wall

4477.815 4472.508 4472.246 4471.983 4471.721 4471.458 4471.196 4470.933 4470.671 4470.408 4470.146 4469.883 4469.621 4469.358 4469.096 4468.833 4468.571 4468.308 4468.046 4467.783 4467.521 4467.258 4466.996 4466.733 4466.471 4466.208 4465.946 4465.683 4465.421 4465.158 4464.896 4464.633 4464.371

6 Spaces @ 12'-0" = 72'-0" ~ Treaded Timber Piles (Vertical)
16 Spaces @ 4'-6" = 72'-0" ~ 17 Treated Timber Piles (Battered 3:12)
20 Spaces @ 3'-6" = 70'-0" ~ 21 Treated Timber Piles (Battered 3:12)
70'-0"

6 Spaces @ 12'-0" = 72'-0" ~ 7 Treated Timber Piles (Vertical)
18 Spaces @ 4'-0" = 72'-0" ~ 19 Treated Timber Piles (Battered 3:12)
75'-0"

Begin So. Wall
Sta. 114+99.10 - El. 4972.292

Rail Post Spacing Dimensions Horizontal ℄ ℄ Face of Parapet Wall

20 Spaces @ 10'-2½" = 204'-2"

NOTES:
1. Elevations shown are at top of wall. See sheet No. 24 for location.
2. Arc dimensions shown are along outside face of retaining wall.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
10 7 16 6 2 2 2 7 0 11 5 7 4 0 1

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

W.B. & E.B. BRIDGES

RETAINING WALL PLAN AT ABUTMENT No. 2

GORDON HERKENHOFF & ASSOCIATES, INC.
ALBUQUERQUE, CONSULTING ENGINEERS NEW MEXICO

SCALE	DATE	DRAWN R.A.G.	SHEET 22
	JULY 1969	CHECKED H.R.O.	OF 65

15'-0"
3'-9" Line @ 7'-6" CTT Piles (Bal 3 1/2") 3'-9"
1'-6" Line @ 12'-0" CTT Piles (Vertical)
25'-0" No Piles
Outside Edge of Parapet Wall
End of Retaining Wall @ STA. 116+50
Footing
10" Parapet Wall
10" Top of Retaining Wall
4963.348
4963.504
4963.660
4963.058
4982.708
4982.533
4982.274
4982.089
℄ Piles
Gutter Line and Profile Grade
Type "A" Curb & Gutter
22 Spa. @ 9-9 3/4" = 215'-10 1/2"
STA. 116+74.25
Double "C" Inlet
STA. 117+05
End Parapet Wall
10 3/16" Rail Post Spacing Dimensions Horiz. & @ Face of Parapet Wall
Profile Grade
Type "A" Curb & Gutter
2-25'
6'-10"
18'-0"
℄ BROADWAY N.E.
℄ WEST BOUND LANES
Nose of Median STA. 117+50
Face of Median Curb
Type "M" Curb & Gutter
Face of Median Curb
℄ MEDIAN
117+00
4'-0"
4'-0"
26'-0"
R=10'
118+00
℄ BROADWAY STA. 118+15.41
93°25'50"
MATCH LINE STA. 116+50
N
℄ EAST BOUND LANES
STA. 116+74.25
Double "C" Inlet
Type "A" Curb & Gutter
Gutter Line
Profile Grade
Type "A" Curb & Gutter
18'-0"
6'-0"
4'-9½"
10" Top of Retaining Wall
4963.348
4963.504
4963.660
4963.058
4962.708
4962.533
4962.274
4962.089
Footing
Outside Edge of Retaining Wall
End of Retaining Wall @ STA. 117+05
8" Parapet Wall
3'-0" Footing
Outside Edge of Sidewalk
40'-0" (No Piles)
20 Spaces @ 10-2 1/2" = 204'-2"
9 7/8" Rail Post Spacing Dimensions Horiz. and @ Face of Parapet Wall.
STA. 117+05
End Parapet Wall
2-25'
Type "E" Inlet

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 2 3 7 0 1 1 5 7 4 0 1

NOTES:
1. See Sheet No. 14 for Intersection details.
2. See Sheet No. 14 for Median Nose details
3. Elevations shown are at top of wall. See sheet Nº 24 for location.
4. Arc dimensions shown are along outside face of retaining wall.

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

W.B. & E.B. LANES

RETAINING WALL PLAN AT ABUTMENT Nº 2

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO

SCALE	DATE	DRAWN: R.A.G.	SHEET 23
1'-0" = 3/16"	JULY 1969	CHECKED: H.R.G.	OF 66

NORTH WALL

Elev. 4968.308 — Top of wall — Elev. 4962.274 — Elev. 4964.371 — Elev. 4963.583 — End Wall Sta. 116+90.0

Top of footing Elev. 4956.50 — Top of footing Elev. 4958.50

Bottom of footing Elev. 4954.50 — Bottom of footing Elev. 4957.00

Bottom of footing Elev. 4956.50 — Bottom of footing Elev. 4955.50

For Exterior Face Treatment Details see Sheet No. 46

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

1 0 7 1 6 6 2 2 4 7 0 1 2 5 7 4 0 1

SOUTH WALL

Elev. 4968.307 — Top of wall — Elev. 4964.370 — Elev. 4963.582 — Elev. 4961.674 — End Wall Sta. 117+05

See Detail A

Top of footing Elev. 4956.50 — Top of footing Elev. 4958.50

Bottom of footing Elev. 4954.50 — Bottom of footing Elev. 4957.00

Bottom of footing Elev. 4956.50 — Bottom of cut off wall Elev. 4955.50

For Exterior Face Treatment Details see Sheet No. 46

ELEVATIONS - (LOOKING NORTH)

See detail sheet 18 for projection

2x4 Key

#4@12

Outside face

#5@18

#9x18-0@18

#10x10-6@18

#4@18

Alternate bars @ 6

#10x5-0@18

#9@12 c - #8@12 - Alt. @6

2x6 key

Pile cut off

#4@18

5'-6" — 1'-6" — 3'-6" — 1'-6"

5-#6 Top & bott — #4@18=6'-0" — 5-#5 Top & bottom

12'-0"

SECTION E-E

2½ Std. blk. Pipe

Finished ground

Materials: Pipe - 2" Std blk. x wall thickness. Filter - 2 cu. ft. + 2" sound pebbles enclosed in packet 12" DIA. x 2'-6" long of ½" galv. hardware cloth. Cost of pipe & filter to be included in cost of Class 'A' concrete. Pipe to be located 6" above finished ground line @ 15'-0" c/c.

WEEP HOLE DETAIL

2x6 Key

¼" Joint Filler

Waterproofing membrane

Outside face

Joint at inside face of wall, to be sealed with membrane waterproofing (Spec. Sec. N° 81) from top of base to top of wall, cost to be included in unit price bid for Class A concrete.

Rail post bracket or Light Post bracket — 2.5 MIN. — ℄ Joint

VERTICAL JOINT DETAIL

DETAIL A

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

RETAINING WALL NOTES

DESIGN DATA

Design in accordance with A.A.S.H.O. Specifications, 1965 and Interim Specifications to date.

Design Stresses:

Reinforced Concrete: 3,000 P.S.I. @ 28 days

f_c = 1,200 P.S.I. — f_s = 20,000 P.S.I. — n = 10

Live Load: HS 20-44

Horizontal Earth pressure: 120# / Sq. Ft. 36# / Sq. Ft. Fluid pressure; @ Surcharge

Maximum Computed Pile Load = 20 Tons

GENERAL NOTES

1. For Wall Beam and Pedestal details see Sheet 18.
2. For Light Standard Bracket details see Sheet 21.
3. All workmanship and materials shall conform to N.M.S.H.T.D. Commission Specifications.
4. All Concrete to be Class "A".
5. All reinforcing steel shall conform to A.S.T.M. Designation A615 Grade 40.
6. After Wall is completed, trench shall be backfilled & mechanically tamped to adjacent ground level before roadway fill is started. The compaction of fill for 6 feet outside of wall faces shall be performed by mechanical tamping. Wheeled compaction equipment will not be permitted within that distance.
7. All reinforcing bars extending into the footing must be in place prior to placing concrete in footing.

Revised as per Addendum N°1

ALBUQUERQUE NEW MEXICO

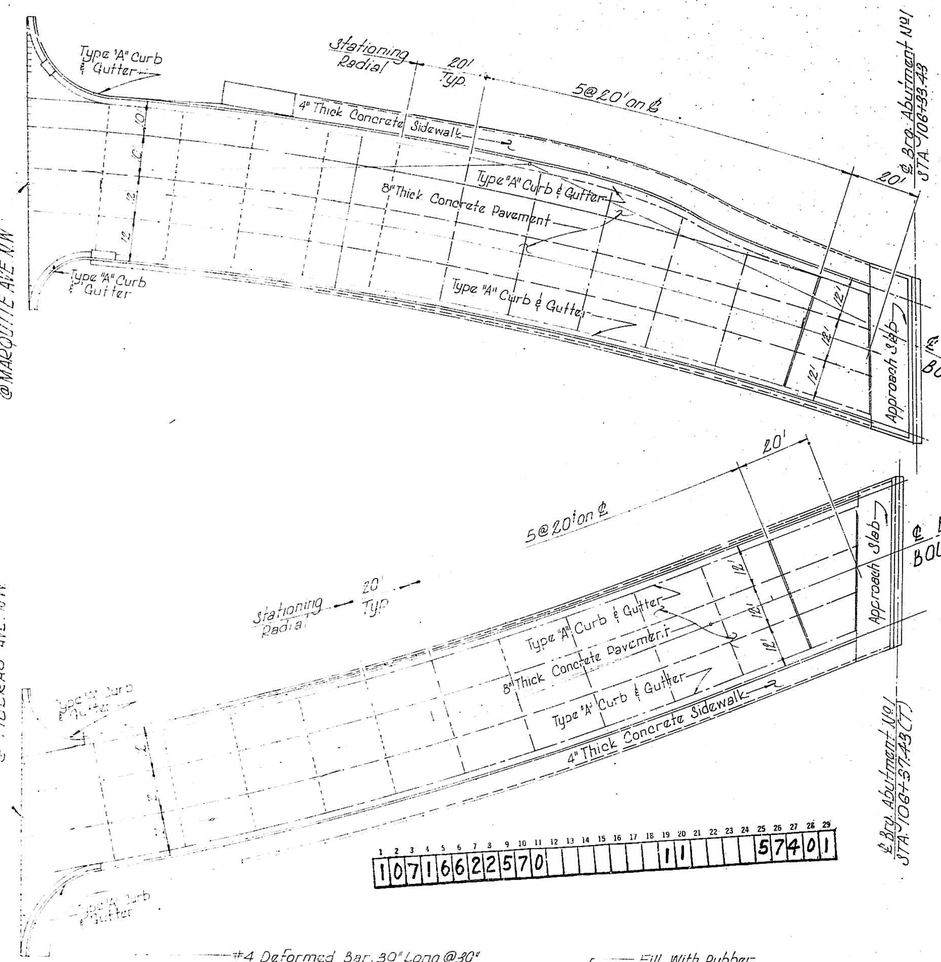
GRAND AVENUE OVERPASS

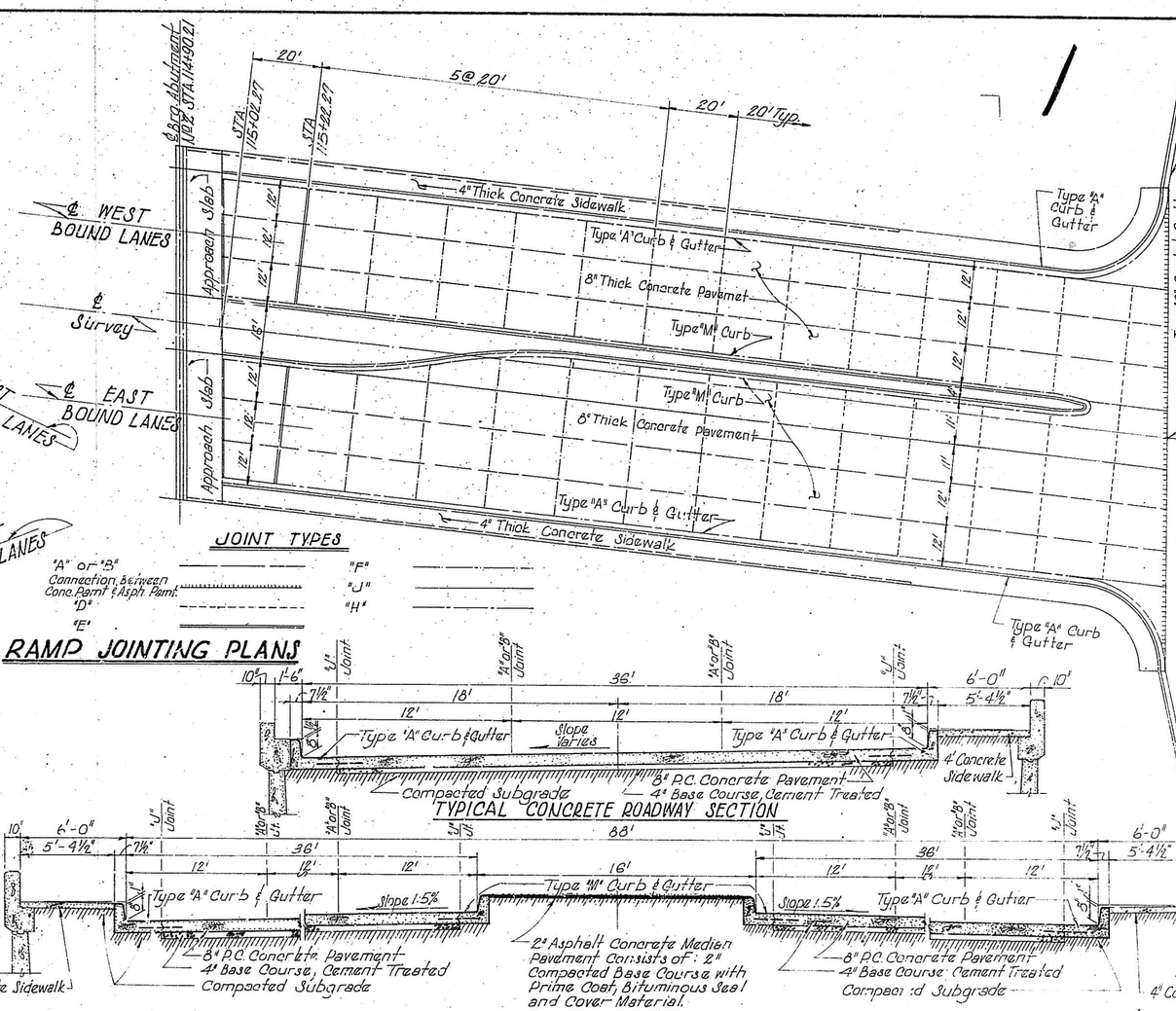
W.B. & E.B. LANES

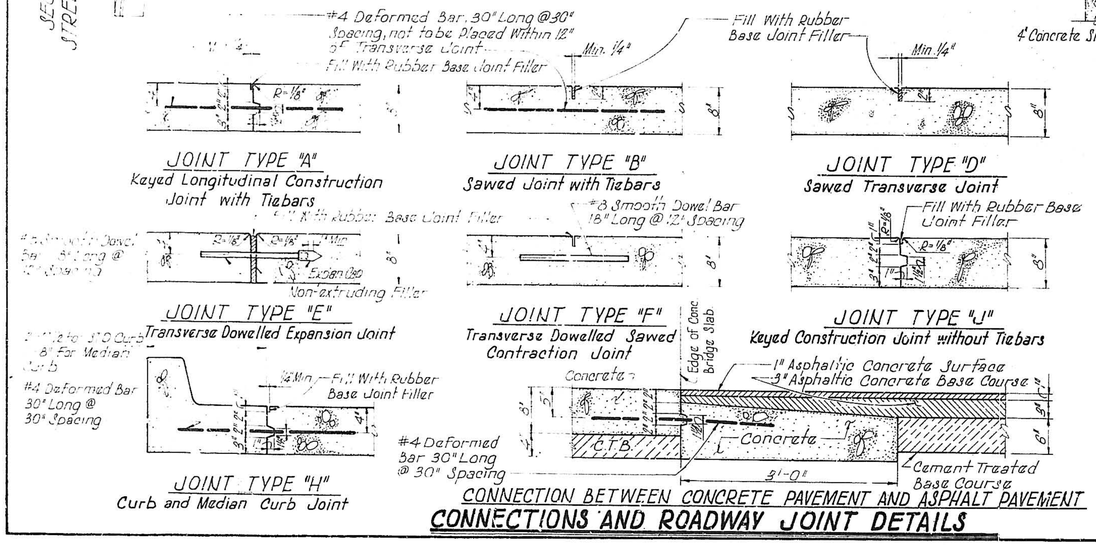
RETAINING WALL ELEVATIONS & SECTIONS AT ABUTMENT N° 2

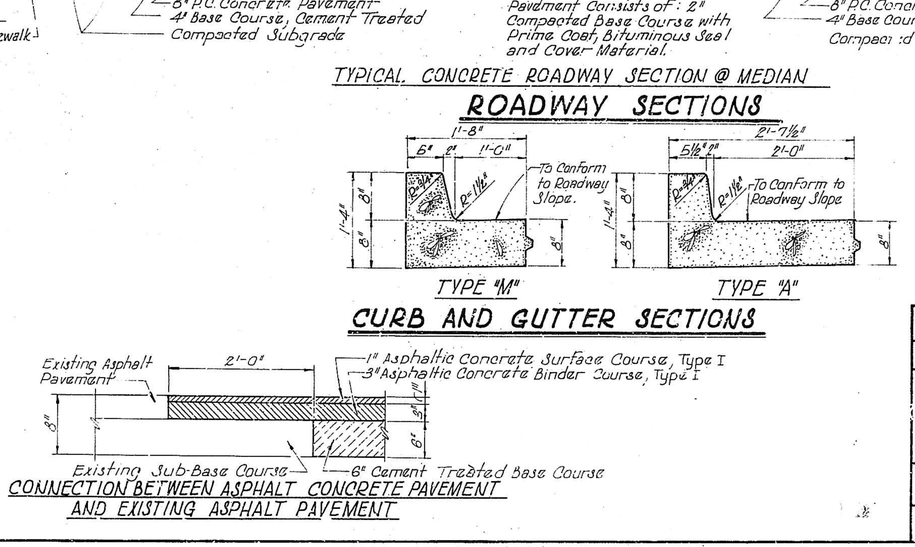
GORDON HERKENHOFF & ASSOCIATES, INC.
ALBUQUERQUE CONSULTING ENGINEERS NEW MEXICO

SCALE	DATE	DRAWN R.A.L.	SHEET 24
	JULY 1969	CHECKED L.M.P.	OF 66









ALBUQUERQUE NEW MEXICO

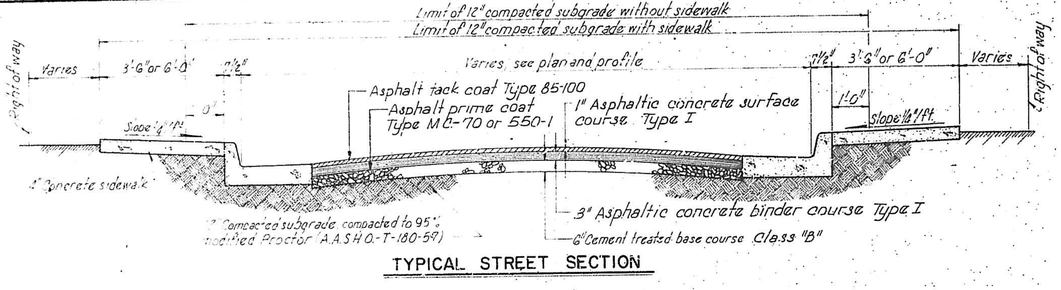
GRAND AVENUE OVERPASS

W.B. & E.B. LANES

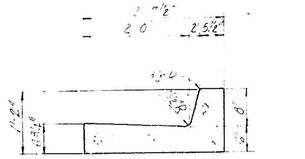
CONCRETE APPROACH RAMP DETAILS AND MISC. SECTIONS & DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO

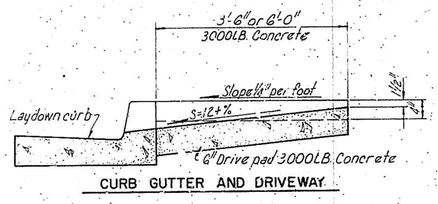
SCALE	DATE	DRAWN: R.A.G.	SHEET 25
	JULY 1969	CHECKED: L.M.P.	OF 66



TYPICAL STREET SECTION

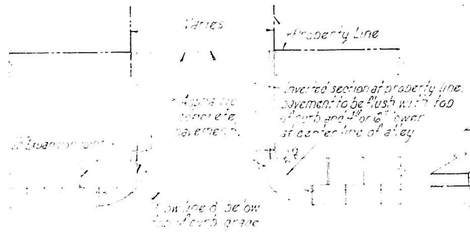


STANDARD CITY CURB AND GUTTER TYPE "C"

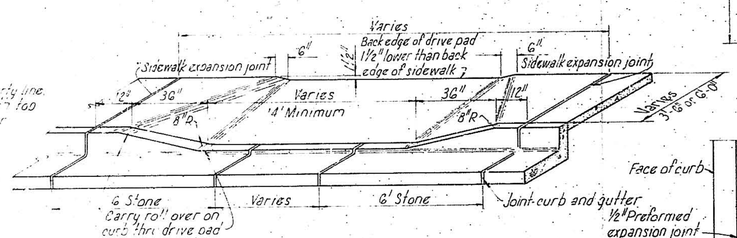


CURB GUTTER AND DRIVEWAY

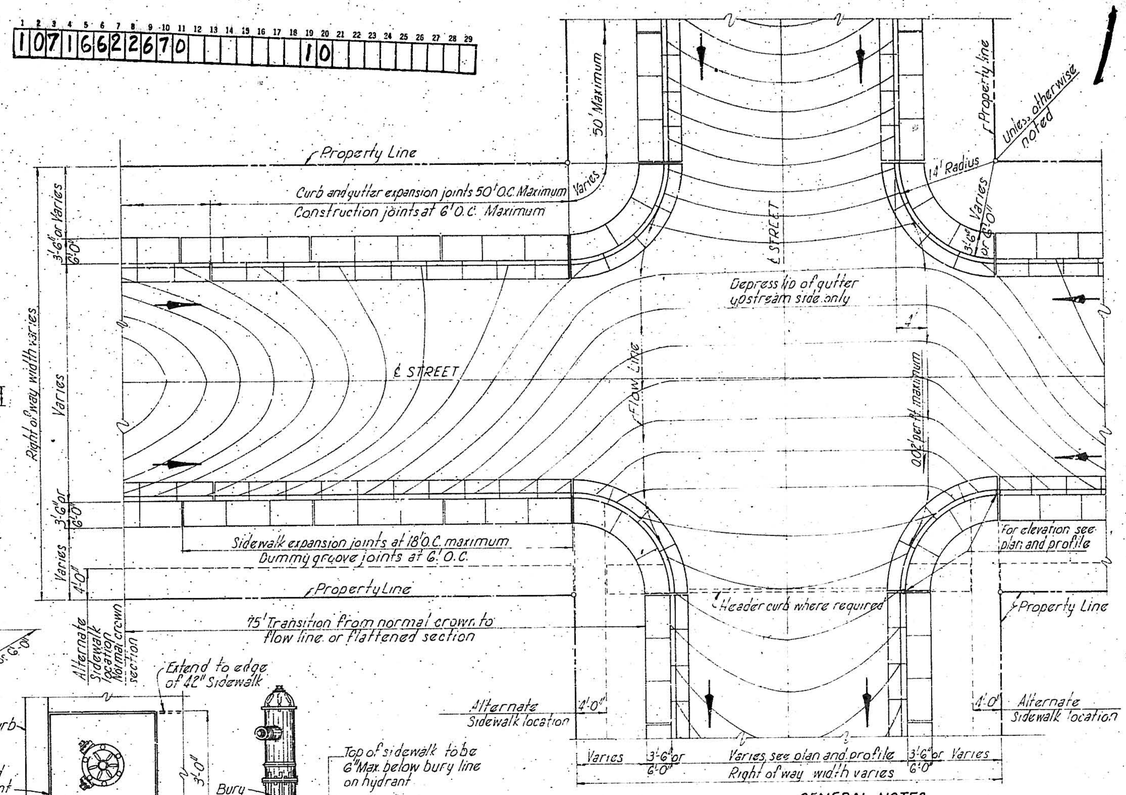
TYPICAL CURB AND GUTTER DETAILS



TYPICAL ALLEY DETAIL

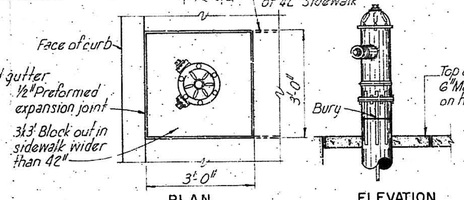


TYPICAL DRIVEWAY



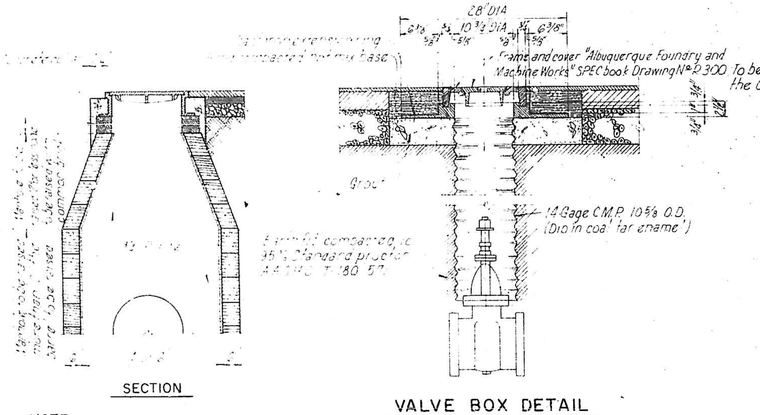
TYPICAL INTERSECTION DETAIL

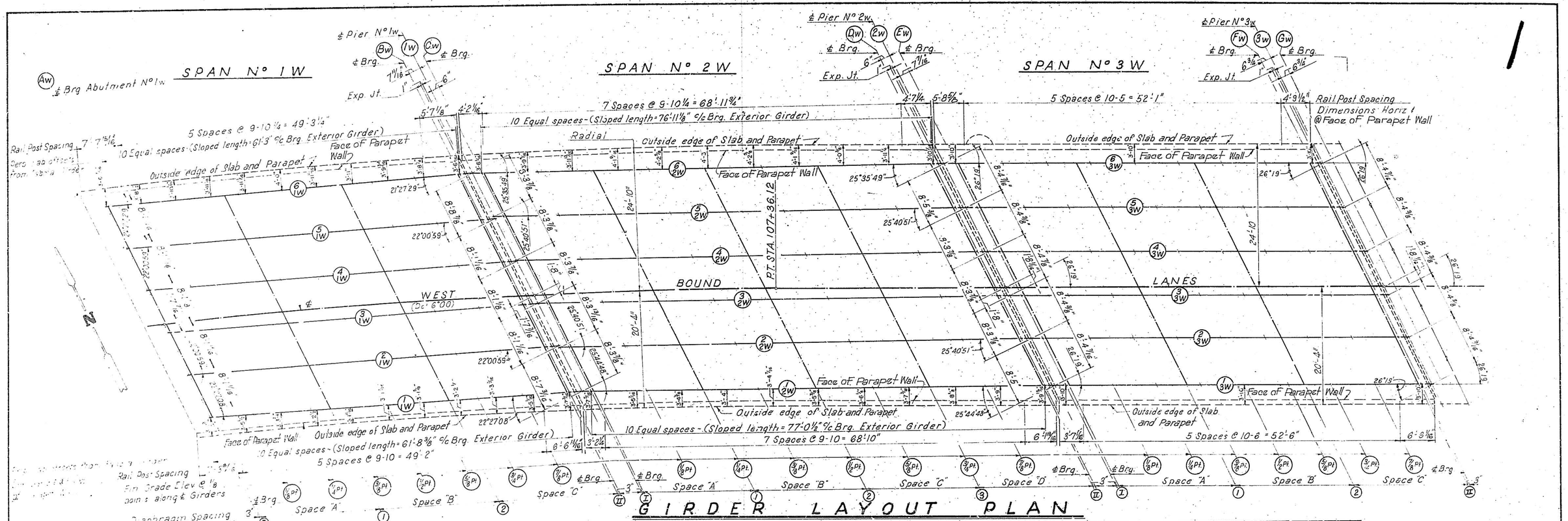
NOTE: For Intersection grading & contour details see sheets N° 6, 9, & 14.



PLAN ELEVATION

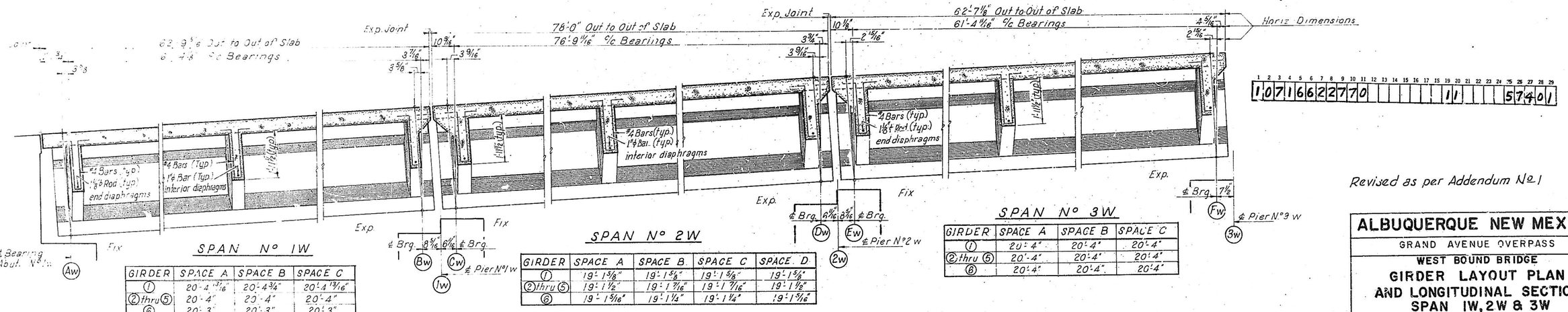
FIRE HYDRANT DETAIL


28" DIA
10 3/8 DIA
6 3/16
5/8
Frame and cover "Albuquerque Foundry and Machine Works" SPEC book Drawing N° 2-300 To be furnished by the Contractor
Grout
14 Gage C.M.P. 10 5/8 O.D. (Dia in coating name)
6" min. compacting to 95% standard proctor A.A.S.H.O. T 180 57
Varies
Varies
Varies



FINISHED GRADE ELEV. AT 8TH PT'S.	GIRDER	BRG. A	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. B	BRG. C	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. D	BRG. E	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. F
	1	4966.403	4966.947	4967.491	4966.038	4968.585	4965.134	4969.684	4970.235	4970.787	4970.877	4971.558	4972.240	4972.925	4973.623	4974.311	4974.982	4975.635	4976.270	4976.351	4976.843	4977.324	4977.794	4978.253	4978.701	4979.137	4979.561	4979.973
	2	4966.354	4966.892	4967.432	4967.973	4968.515	4969.058	4969.602	4970.148	4970.694	4970.786	4971.460	4972.137	4972.815	4973.499	4974.178	4374.840	4975.484	4976.110	4976.191	4976.676	4977.150	4977.612	4978.064	4978.505	4978.934	4979.352	4979.758
	3	4966.309	4966.842	4967.377	4967.913	4968.450	4968.989	4969.528	4970.069	4970.611	4970.699	4971.367	4972.038	4972.710	4973.385	4974.055	4974.708	4975 343	4975.960	1976.039	4976.517	4976.984	4977.440	4977.885	4978.318	4978.741	4979.152	4979.552
	4	4966.267	4966.795	4967.325	4967.856	4968.389	4968.923	4969.458	4969.994	4970.531	4970.616	4971.278	4971.943	4972.609	4973.278	4973.941	4974.586	4975.212	4975.821	4975.898	4976.369	4976.828	4977.277	4977.715	4978.141	4978.557	4978.961	4979 354
	5	4966.227	4966.751	4967.277	4967.803	4968.331	4968.860	4969.391	4969.923	4970.455	4970.537	4971.194	4971.852	4972.513	4973.175	4973.837	4974.472	4975.090	4975.690	4975.765	4976.229	4976.682	4977.124	4977.554	4977.974	4978.382	4978.779	4979.165
	6	4966.192	4966.710	4967.231	4967.752	4968.275	4968.799	4969.324	4969.850	4970.377	4970.462	4971.113	4971.765	4972.419	4973.076	4973.734	4974.368	4974.976	4975.567	4975.643	4976.099	4976.545	4976.980	4977.403	4977.815	4978.217	4978.607	4978.986

Note:
See Sheet N° 39 for ⅛ point spacings of finished grade elev. along ℄ girders.



SPAN N° 1W

GIRDER	SPACE A	SPACE B	SPACE C
①	20'-4 13/16"	20'-4¾"	20'-4 13/16"
②thru⑤	20'-4"	20'-4"	20'-4"
⑥	20'-3"	20'-3"	20'-3"

SPAN N° 2W

GIRDER	SPACE A	SPACE B	SPACE C	SPACE D
①	19'-1 5/8"	19'-1 5/8"	19'-1 5/8"	19'-1 5/8"
②thru⑤	19'-1½"	19'-1 7/16"	19'-1 7/16"	19'-1⅜"
⑥	19'-1 5/16"	19'-1¼"	19'-1¼"	19'-1 5/16"

SPAN N° 3W

GIRDER	SPACE A	SPACE B	SPACE C
①	20'-4"	20'-4"	20'-4"
②thru⑤	20'-4"	20'-4"	20'-4"
⑥	20'-4"	20'-4"	20'-4"

LONGITUDINAL SECTION

Revised as per Addendum No. 1

ALBUQUERQUE NEW MEXICO

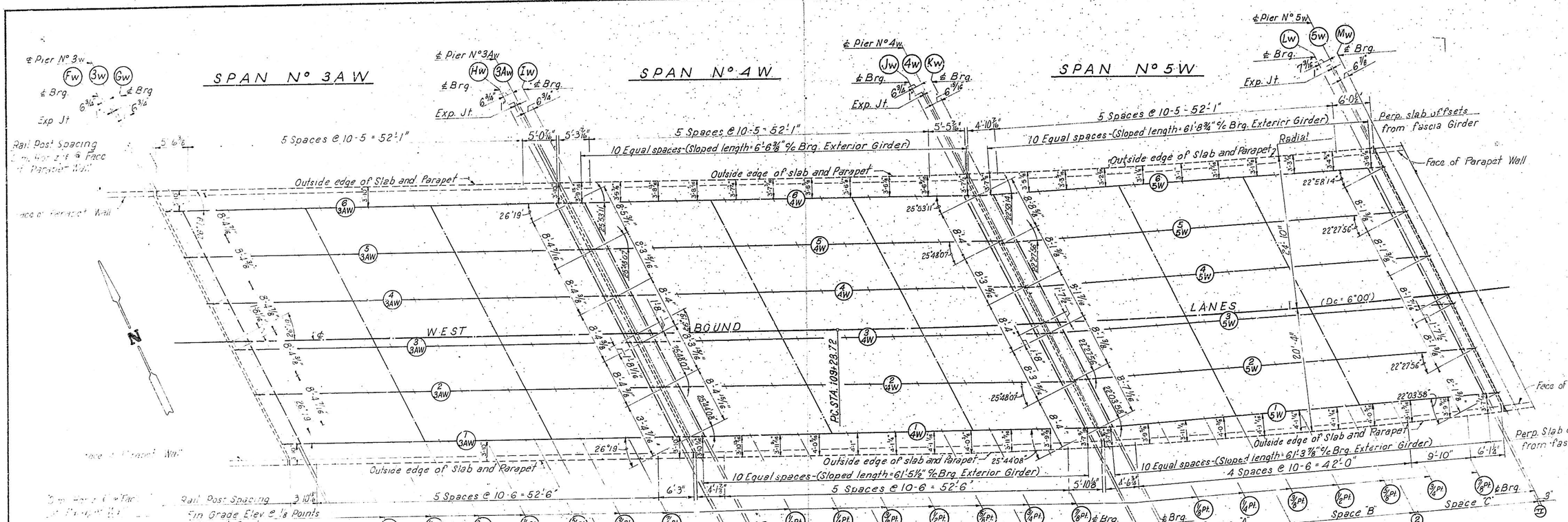
GRAND AVENUE OVERPASS

WEST BOUND BRIDGE

GIRDER LAYOUT PLAN AND LONGITUDINAL SECTION SPAN 1W, 2W & 3W

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

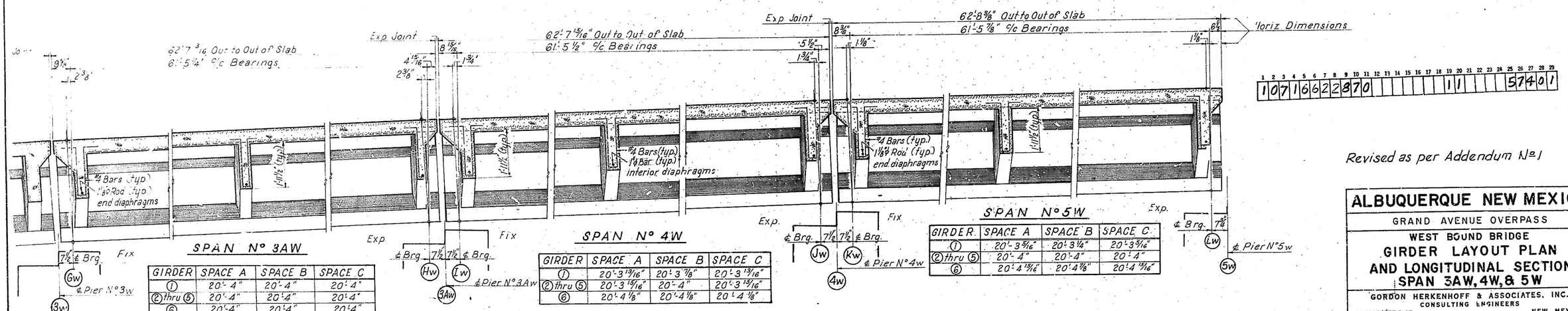
SCALE	DATE	DRAWN: R.A.L.	SHEET 27
	JULY 1969	CHECKED: L.M.P	OF 66



GIRDER LAYOUT PLAN

NOTE:
See Sheet N° 39 for 1/8 point spacings of finished grade elev. along ℄ girders.

FINISHED GRADE ELEV. AT 8TH PTS	GIRDER	BRG. G	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. H	BRG. I	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. J	BRG. K	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. L
	1	4980.039	4980.439	4980.828	4981.205	4981.572	4981.927	4982.271	4982.604	4982.926	4982.977	4983.285	4983.581	4983.865	4984.135	4984.395	4984.647	4984.889	4985.123	4985.159	4985.369	4985.549	4985.716	4985.873	4986.022	4986.161	4986.292	4985.414
	2	4979.823	4980.217	4980.600	4980.971	4981.331	4981.680	4982.018	4982.345	4982.661	4982.710	4983.012	4983.302	4983.581	4983.847	4984.103	4984.350	4984.587	4984.816	4984.842	4985.047	4985.239	4985.412	4985.577	4985.732	4985.879	4986.016	4986.144
	3	4979.616	4980.004	4980.380	4980.745	4981.094	4981.442	4981.774	4982.095	4982.405	4982.454	4982.749	4983.034	4983.307	4983.568	4983.819	4984.061	4984.293	4984.516	4984.548	4984.748	4984.935	4985.117	4985.287	4985.447	4985.598	4985.740	4985.872
	4	4979.417	4979.799	4980.169	4980.528	4980.876	4981.213	4981.539	4981.853	4982.157	4982.206	4982.495	4982.774	4983.041	4983.296	4983.542	4983.778	4984.005	4984.222	4984.262	4984.452	4984.640	4984.819	4984.994	4985.159	4985.315	4985.462	4985.599
	5	4979.227	4979.602	4979.966	4980.319	4980.661	4980.992	4981 311	4981.620	4981.917	4981 966	4982.250	4982.522	4982.783	4983.033	4983.272	4983.503	4983.724	4983.936	4983.981	4984.170	4984.348	4984.518	4984.699	4984.869	4985.030	4985.181	4986.323
	6	4979.046	4979.415	4979.773	4980.119	4980.455	4980.780	4981.093	4981.395	4981.686	4981.733	4982.010	4982.277	4982.532	4982.776	4983.008	4983.234	4983.450	4983.657	4983.688	4983.874	4984.048	4984.213	4984.389	4984.568	4984 37	4984.896	4985.045



SPAN N° 3AW

GIRDER	SPACE A	SPACE B	SPACE C
①	20'-4"	20'-4"	20'-4"
② thru ⑤	20'-4"	20'-4"	20'-4"
⑥	20'-4"	20'-4"	20'-4"

SPAN N° 4W

GIRDER	SPACE A	SPACE B	SPACE C
①	20'-3 13/16"	20'-3 7/8"	20'-3 13/16"
② thru ⑤	20'-3 15/16"	20'-4"	20'-3 15/16"
⑥	20'-4 1/8"	20'-4 1/8"	20'-4 1/8"

SPAN N° 5W

GIRDER	SPACE A	SPACE B	SPACE C
①	20'-3 5/16"	20'-3 1/4"	20'-3 3/16"
② thru ⑤	20'-4"	20'-4"	20'-4"
⑥	20'-4 1/16"	20'-4 1/8"	20'-4 1/16"

LONGITUDINAL SECTION

Revised as per Addendum N°1

ALBUQUERQUE NEW MEXICO

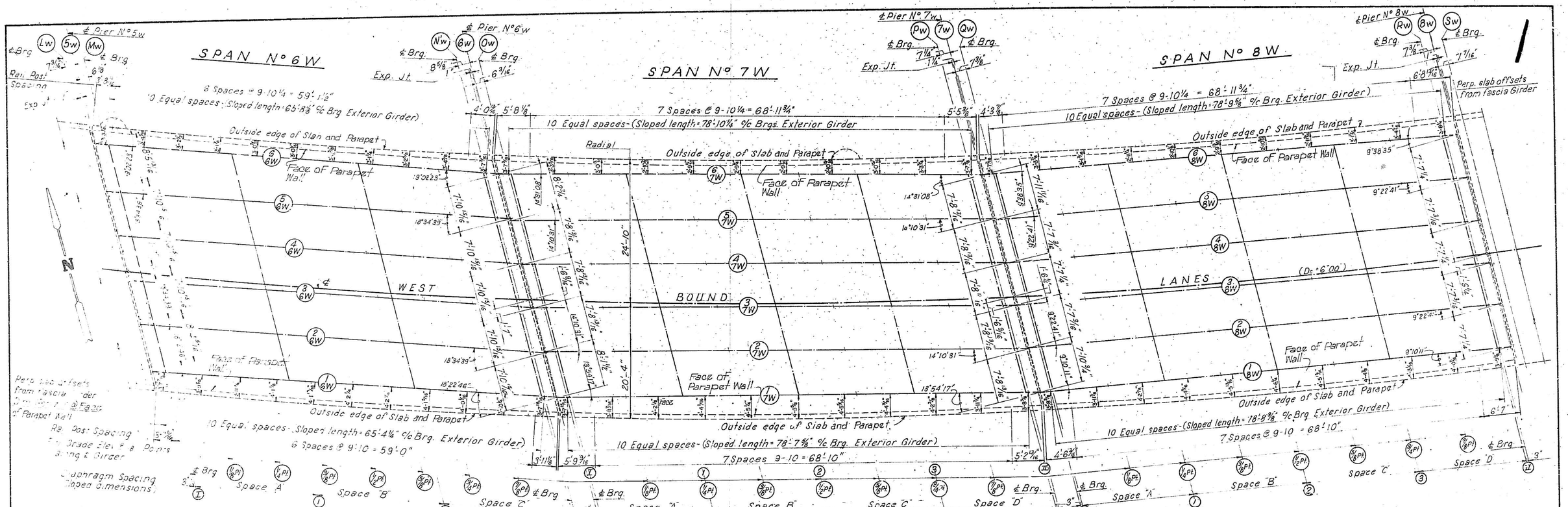
GRAND AVENUE OVERPASS

WEST BOUND BRIDGE

GIRDER LAYOUT PLAN AND LONGITUDINAL SECTION SPAN 3AW, 4W, & 5W

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.L.	SHEET 29
	JULY 1969	CHECKED: L.M.P	OF 66

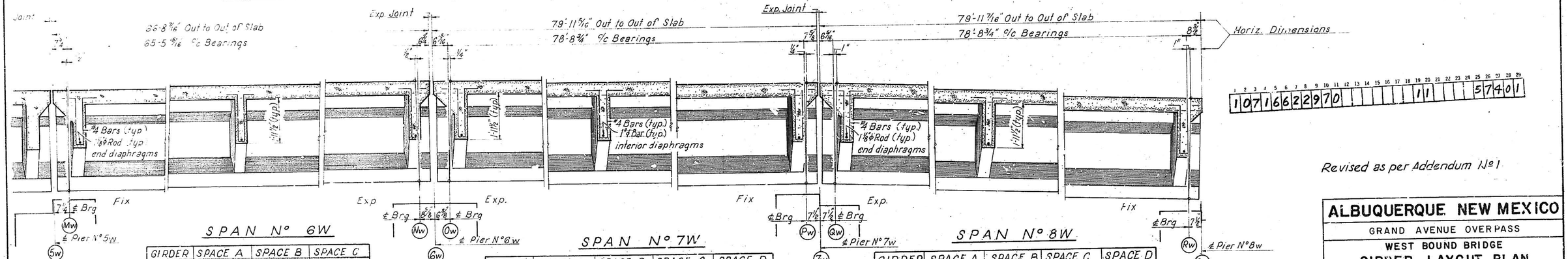


GIRDER LAYOUT PLAN

NOTE:
See Sheet N° 39 for 1/8 point spacings of finished grade elevations along ℄ girders

FINISHED GRADE ELEV. AT 8TH PTS	GIRDER	BRG. M	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. N	BRG. O	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. P	BRG. Q	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. R
	1	4986.432	4986.534	4986.620	4986.708	4986.780	4986.842	4986.893	4986.935	4986.966	4986.969	4986.970	4986.955	4986.927	4986.883	4986.825	4986.753	4986.665	4986.564	4986.548	4986.406	4986.248	4986.076	4985.889	4985.678	4985.431	4985.169	4984.891
	2	4986.155	4986.263	4986.361	4986.449	4986.526	4986.594	4986.650	4986.697	4986.733	4986.730	4986.735	4986.726	4986.701	4986.662	4986.608	4986.538	4986.454	4986.355	4986.336	4986.196	4986.040	4985.870	4985.685	4985.481	4985.250	4985.002	4984.738
	3	4985.891	4986.003	4986.106	4986.197	4986.279	4986.349	4986.410	4986.460	4986.499	4986.502	4986.510	4986.504	4986.482	4986.446	4986.394	4986.327	4986.244	4986.147	4986.131	4985.992	4985.838	4985.668	4985.484	4985.284	4985.067	4984.834	4984.584
	4	4985.624	4985.742	4985.845	4985.944	4986.030	4986.104	4986.168	4986.221	4986.264	4986.272	4986.287	4986.282	4986.263	4986.229	4986.180	4986.115	4986.034	4985.939	4985.927	4985.789	4985.636	4985.467	4985.283	4985.083	4984.881	4984.662	4984.427
	5	4985.357	4985.478	4985.589	4985.690	4985.779	4985.858	4985.925	4985.982	4986.028	4986.042	4986.058	4986.058	4986.043	4986.012	4985.965	4985.902	4985.824	4985.730	4985.722	4985.586	4985.434	4985.266	4985.082	4984.883	4984.692	4984.488	4984.268
	6	4985.067	4985.196	4985.315	4985.422	4986.518	4985.603	4985.677	4985.739	4985.791	4985.796	4985.818	4985.824	4985.814	4985.787	4985.745	4985.686	4985.612	4985.522	4985.507	4985.374	4985.224	4985.059	4984.877	4984.679	4984.497	4984.310	4984.106

LONGITUDINAL SECTION



SPAN N° 6W			
GIRDER	SPACE A	SPACE B	SPACE C
①	21'-7 7/16"	21'-7 3/8"	21'-7 7/16"
②thru⑤	21'-8"	21'-8"	21'-8"
⑥	21'-8 11/16"	21'-8 3/4"	21'-8 11/16"

SPAN N° 7W				
GIRDER	SPACE A	SPACE B	SPACE C	SPACE D
①	19'-6 7/16"	19'-6 3/8"	19'-6 3/8"	19'-6 7/16"
②thru⑤	19'-6 7/16"	19'-6 7/16"	19'-6 11/16"	19'-6 7/16"
⑥	19'-7 7/16"	19'-7 1/16"	19'-7 1/16"	19'-7 7/16"

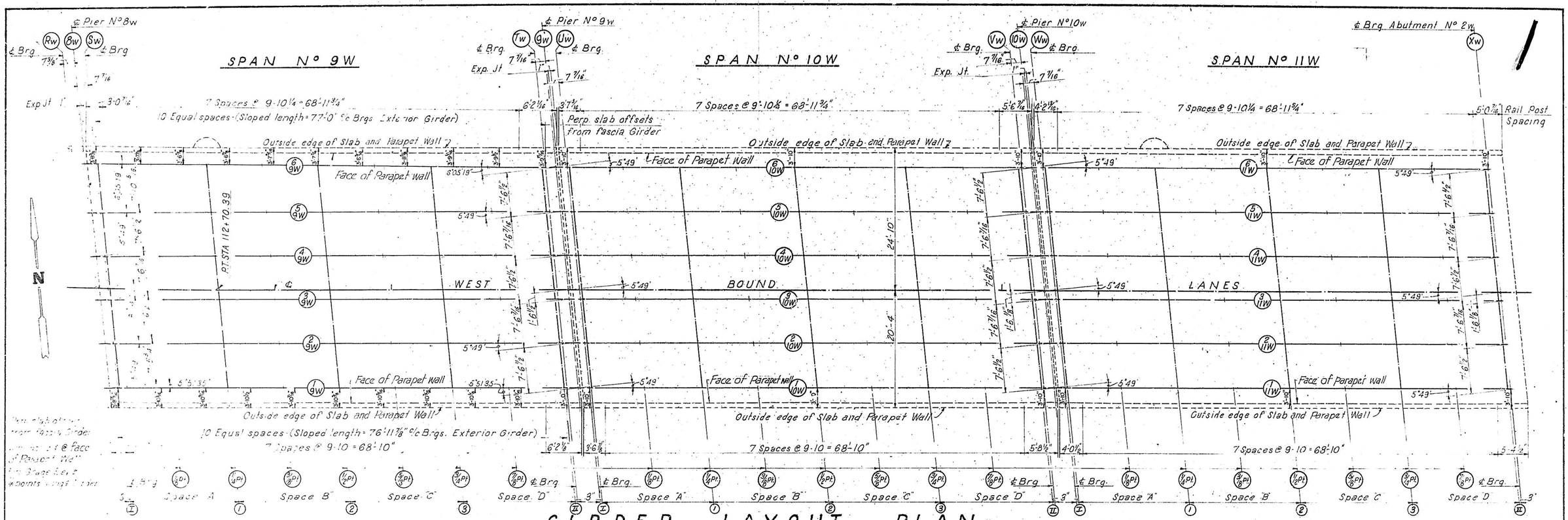
SPAN N° 8W				
GIRDER	SPACE A	SPACE B	SPACE C	SPACE D
①	19'-6 5/8"	19'-6 9/16"	19'-6 9/16"	19'-6 5/8"
②thru⑤	19'-6 3/4"	19'-6 11/16"	19'-6 11/16"	19'-6 3/4"
⑥	19'-6 13/16"	19'-6 7/8"	19'-6 7/8"	19'-6 13/16"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 2 9 7 0 | | | | | | | | | | | 5 7 4 0 1

Revised as per Addendum N° 1

ALBUQUERQUE NEW MEXICO
GRAND AVENUE OVERPASS
WEST BOUND BRIDGE
GIRDER LAYOUT PLAN AND LONGITUDINAL SECTION SPAN 6W, 7W, & 8W
GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS,
ALBUQUERQUE NEW MEXICO

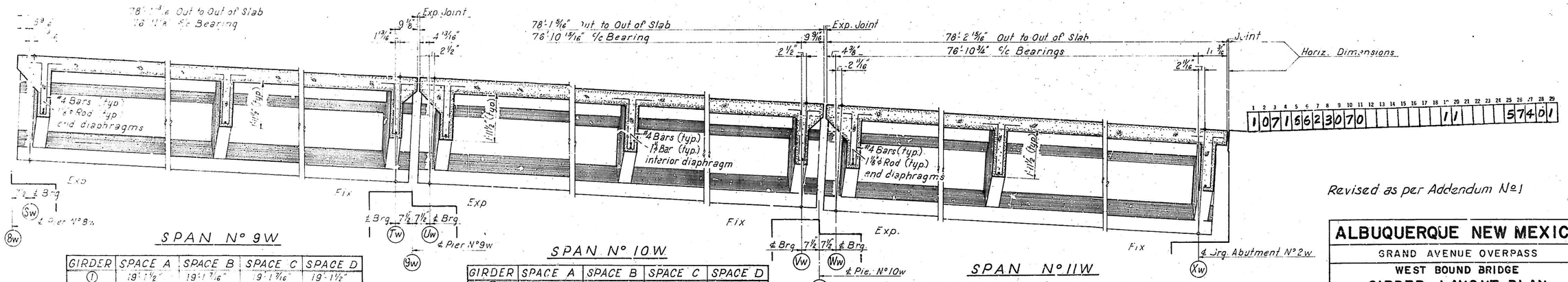
SCALE	DATE	DRAWN: R.A.L.	SHEET 29
	JULY 1969	CHECKED: L.M.R	OF 66



GIRDER LAYOUT PLAN

NOTE:
See Sheet N° 39 for ⅛ point spacings of finished grade elevations along ℄ girders.

FINISHED GRADE ELEV. AT ⅛ PTS.	GIRDER	BRG. S	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. T	BRG. U	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. V	BRG. W	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. X
	1	4984.853	4984.550	4984.232	4983.832	4983.535	4983.180	4982.820	4982.443	4982.047	4981.995	4981.580	4981.148	4980.698	4980.231	4979.747	4979.246	4978.741	4978.237	4978.171	4977.667	4977.162	4976.657	4976.152	4975.648	4975.143	4974.639	4974.134
	2	4984.705	4984.416	4984.111	4983.787	4983.445	4983.096	4982.737	4982.361	4981.967	4981.915	4981.501	4981.070	4980.622	4980.157	4979.674	4979.174	4978.669	4978.164	4978.099	4977.594	4977.089	4976.585	4976.080	4975.575	4975.071	4974.566	4974.062
	3	4984.554	4984.278	4983.987	4983.679	4983.353	4983.011	4982.654	4982.279	4981.886	4981.834	4981.422	4980.993	4980.546	4980.082	4979.600	4979.101	4978.597	4978.092	4978.026	4977.522	4977.017	4976.512	4976.008	4975.503	4974.998	4974.494	4973.989
	4	4984.400	4984.138	4983.860	4983.568	4983.258	4982.927	4982.570	4982.197	4981.806	4981.754	4981.343	4980.915	4980.470	4980.007	4979.526	4979.029	4978.524	4978.019	4977.954	4977.449	4976.945	4976.440	4975.935	4975.431	4974.926	4974.421	4973.917
	5	4984.244	4983.996	4983.732	4983.455	4983.161	4982.842	4982.487	4982.115	4981.725	4981.673	4981.264	4980.837	4980.393	4979.932	4979.453	4978.956	4978.452	4977.947	4977.881	4977.377	4976.872	4976.368	4975.863	4975.358	4974.854	4974.349	4973.844
	6	4984.078	4983.845	4983.596	4983.336	4983.059	4982.755	4982.402	4982.032	4981.644	4981.592	4981.184	4980.759	4980.317	4979.856	4979.379	4978.884	4978.379	4977.875	4977.809	4977.304	4976.800	4976.295	4975.791	4975.286	4974.781	4974.277	4973.772



SPAN N° 9W

GIRDER	SPACE A	SPACE B	SPACE C	SPACE D
①	19'-1½"	19'-1 7/16"	19'-1 7/16"	19'-1½"
②thru⑤	19'-1 7/16"	19'-1 7/16"	19'-1 7/16"	19'-1 7/16"
⑥	19'-1½"	19'-1½"	19'-1½"	19'-1½"

SPAN N° 10W

GIRDER	SPACE A	SPACE B	SPACE C	SPACE D
①	19'-1½"	19'-1½"	19'-1½"	19'-1½"
②thru⑤	19'-1½"	19'-1½"	19'-1½"	19'-1½"
⑥	19'-1½"	19'-1½"	19'-1½"	19'-1½"

SPAN N° 11W

GIRDER	SPACE A	SPACE B	SPACE C	SPACE D
①	19'-1½"	19'-1½"	19'-1½"	19'-1½"
②thru⑤	19'-1½"	19'-1½"	19'-1½"	19'-1½"
⑥	19'-1½"	19'-1½"	19'-1½"	19'-1½"

LONGITUDINAL SECTION

Revised as per Addendum N°1

ALBUQUERQUE NEW MEXICO

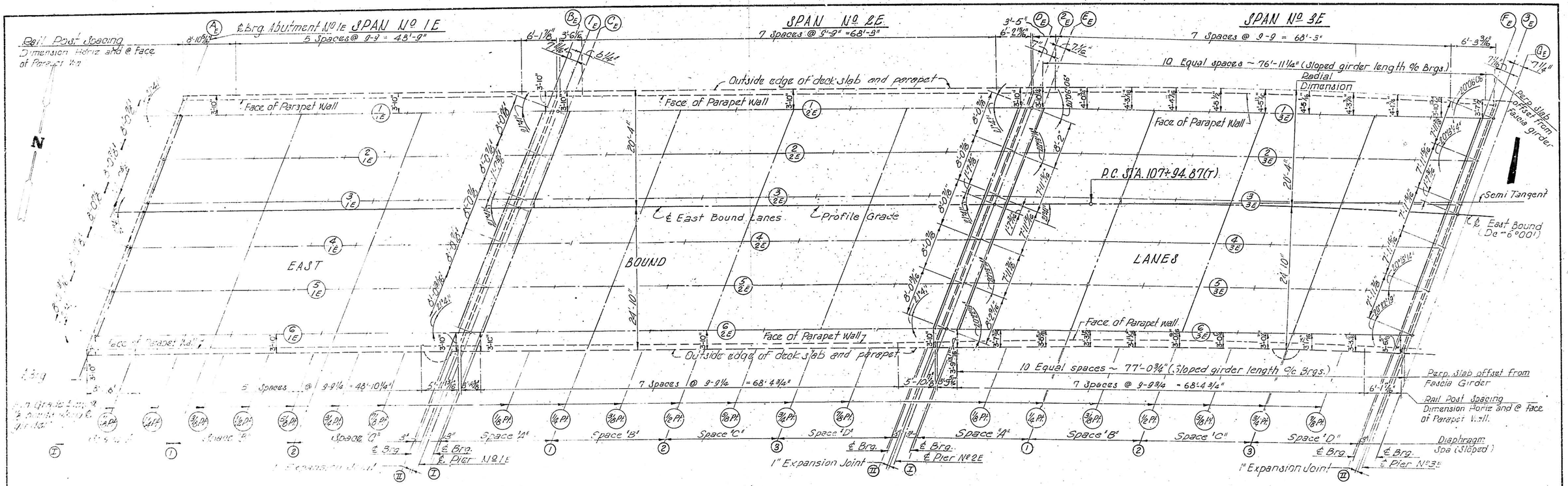
GRAND AVENUE OVERPASS

WEST BOUND BRIDGE

GIRDER LAYOUT PLAN AND LONGITUDINAL SECTION SPAN 9W, 10W & 11W

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.L.	SHEET 30
	JULY 1969	CHECKED: I.M.P.	OF 66



GIRDER LAYOUT PLAN

FINISH GRADE ELEVATIONS	GIRDER	BRG A	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. B	BRG. C	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. D	BRG. E	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. F
	1	4967.021	4967.600	4968.168	4968.736	4969.304	4969.872	4970.440	4971.010	4971.581	4971.673	4972.377	4973.080	4973.784	4974.488	4975.192	4975.896	4976.597	4977.280	4977.368	4978.022	4978.647	4979.254	4979.844	4980.416	4980.972	4981.489	4981.981
	2	4966.885	4967.443	4968.001	4968.559	4969.117	4969.674	4970.232	4970.790	4971.350	4971.440	4972.129	4972.818	4973.508	4974.197	4974.887	4975.576	4976.265	4976.940	4977.023	4977.671	4978.294	4978.898	4979.484	4980.051	4980.603	4981.131	4981.632
	3	4966.747	4967.294	4967.842	4968.389	4968.937	4969.485	4970.032	4970.580	4971.127	4971.215	4971.890	4972.565	4973.240	4973.915	4974.590	4975.265	4975.940	4976.607	4976.692	4977.332	4977.951	4978.550	4979.132	4979.695	4980.241	4980.770	4981.279
	4	4966.610	4967.154	4967.691	4968.228	4968.765	4969.303	4969.840	4970.377	4970.914	4971.000	4971.661	4972.321	4972.982	4973.642	4974.303	4974.964	4975.624	4976.282	4976.368	4977.000	4977.612	4978.207	4978.784	4979.342	4979.883	4980.406	4980.924
	5	4966.494	4967.021	4967.548	4968.075	4968.602	4969.129	4969.656	4970.182	4970.709	4970.794	4971.440	4972.086	4972.782	4973.378	4974.025	4974.671	4975.317	4975.963	4976.051	4976.675	4977.278	4977.868	4978.440	4978.994	4979.529	4980.047	4980.565
	6	4966.379	4966.896	4967.412	4967.929	4968.446	4968.962	4969.479	4969.996	4970.512	4970.595	4971.228	4971.860	4972.492	4973.123	4973.755	4974.387	4975.019	4975.651	4975.733	4976.350	4976.946	4977.528	4978.097	4978.646	4979.177	4979.690	4980.203

NOTE:
See Sheet No 39 for ⅛ point spacings of finished grade elevations along ℄ girders.

2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
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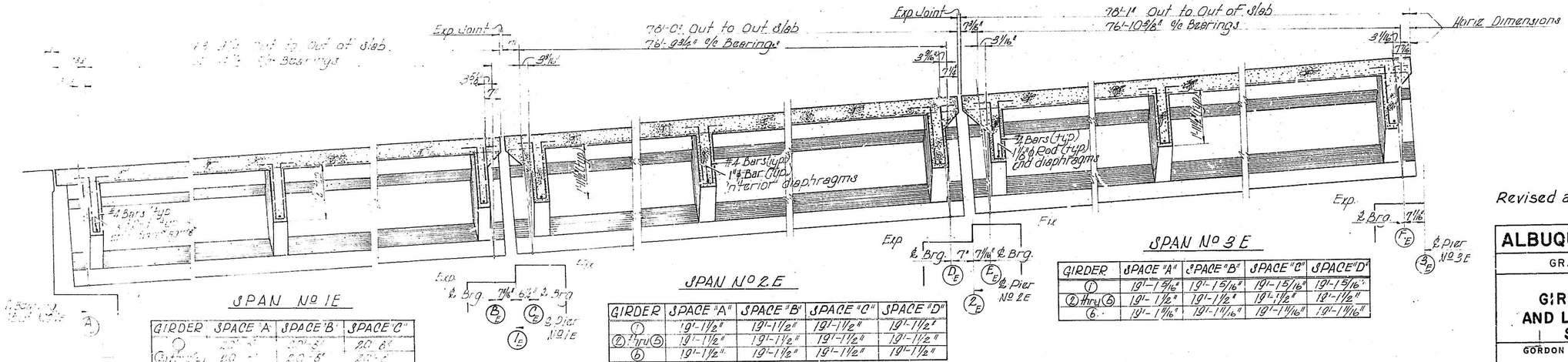


SPAN No 1E

GIRDER	SPACE 'A'	SPACE 'B'	SPACE 'C'
①	20'-6"	20'-6"	20'-6"
② thru ⑤	20'-6"	20'-6"	20'-6"
⑥	20'-6"	20'-6"	20'-6"

SPAN No 2E

GIRDER	SPACE "A"	SPACE "B"	SPACE "C"	SPACE "D"
①	19'-1⅝"	19'-1½"	19'-1½"	19'-1½"
② thru ⑤	19'-1½"	19'-1½"	19'-1½"	19'-1½"
⑥	19'-1½"	19'-1½"	19'-1½"	19'-1½"

SPAN No 3E

GIRDER	SPACE "A"	SPACE "B"	SPACE "C"	SPACE "D"
①	19'-1⅝"	19'-1⅝"	19'-1⅝"	19'-1⅝"
② thru ⑤	19'-1½"	19'-1½"	19'-1½"	19'-1½"
⑥	19'-1⅝"	19'-1⅝"	19'-1⅝"	19'-1⅝"

LONGITUDINAL SECTION

Revised as per Addendum No 1

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

EAST BOUND BRIDGE

GIRDER LAYOUT PLAN AND LONGITUDINAL SECTION SPAN 1E, 2E, & 3E

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.G.	SHEET 31
	JULY 1969	CHECKED: L.M.P.	OF 66

SPAN Nº 4E

Spaces @ 9-9 = 68'-3"

10 Equal spaces ~ 76'-10½" (Sloped girder length ℄ Brgs.)

Outside edge of deck slab and parapet

Radial Dimension

Perp Dist. Offsets from Fascia girder

Face of Parapet Wall

EAST BOUND

SPAN Nº 5E

7 Spaces @ 9-9 = 68'-3"

10 Equal spaces ~ 76'-11¼" (Sloped girder length ℄ Brgs.)

Outside edge of deck slab and parapet

Face of Parapet Wall

Profile Grade

℄ East Bound Lanes De = 6°00'

Face of Parapet Wall

Outside edge of deck slab and parapet

10 Equal spaces ~ 77'-0⅞" (Sloped girder length ℄ Brgs.)

7 Spaces @ 9-9⅛ = 68'-4¾"

10 Equal spaces ~ 77'-1⅞" (Sloped girder length ℄ Brgs.)

7 Spaces @ 9-9⅛ = 68'-4¾"

P.I. STA. 110+28.54 (τ)

Δ = 27°30' Rt.

SPAN Nº 6E

6 Spaces @ 9-7 = 57'-6"

10 Equal spaces ~ 62'-6" (Sloped girder length ℄ Brgs.)

Outside edge of deck slab and parapet

Face of Parapet Wall

LANES

10 Equal spaces ~ 62'-6" (Sloped girder length ℄ Brgs.)

6 Spaces @ 9-7 = 57'-6"

Perp Dist. Spacing Dimensions Horiz and @ face of parapet wall.

Perp Slab offsets From Fascia girder

Space A | Space B | Space C | Space D | ℄ Brg. | 1"@ 68° F | Exp. Jt. | ℄ Pier Nº 4E

Space "A" | Space "B" | Space "C" | Space "D" | ℄ Brg. | 1"@ 68° F | Exp. Jt. | ℄ Pier Nº 5E

Space "A" | Space "B" | Space "C" | ℄ Brg. | 1¼"@ 68° | Exp. Jt. | ℄ Pier Nº 6E

GIRDER LAYOUT PLAN

FINISH GRADE ELEVATIONS	GIRDER	BRG. G	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. J	BRG. K	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. L	BRG. M	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. N
	1	4982.042	4982.492	4982.325	4983.341	4983.741	4984.125	4984.491	4984.841	4985.174	4985.215	4985.506	4985.781	4986.040	4986.281	4986.506	4986.715	4986.906	4987.081	4987.101	4987.212	4987.311	4987.400	4587.478	4987.545	4987.601	4987.645	4987.679
	2	4981.684	4982143	4982.586	4983 013	4983.422	4983.814	4984 189	4984.547	4984.888	4984.923	4985.222	4985.503	4985.768	4986.016	4986.246	4986.460	4986.656	4986.836	4986.853	4986.967	4937.070	4987.161	4987.242	4987.311	4987.369	4987.416	4387 451
	3	4981.341	4981 809	4982.259	4982 693	4983.109	4983.508	4983. 890	4984.254	4984.601	4984.642	4984.946	4985.233	4985.502	4985.754	4985.989	4986.207	4986.407	4986.590	4986.610	4986727	4986.832	4986.926	4987.008	4987.079	4987.139	4987.187	4987.224
	4	4980 996	4981. 471	4981 930	4982.371	4982.794	4983.200	4983.588	4983.959	4984.312	4984.359	4984.669	4984. 961	4985.235	4985.492	4985.732	4985.953	4986.157	4986.344	4936.367	4986.487	4986.594	4986 690	4986.775	4986.847	4986.909	4986.958	4986.996
	5	4980.647	4981 131	4981. 597	4982.046	4982 477	4982.890	4983.285	4983.662	4984.021	4984.075	4984 390	4984.688	4984.967	4965.229	49 85473	4985.699	4985.907	4986.097	4986.124	4986.246	4986.356	4986.454	4986.541	4986.615	4986.678	4986.729	4986.768
	6	4980 270	4980 766	4981.244	4981.704	4982.146	4982.569	498. 974	4983.361	4983.729	4983. 774	4984.097	4984.402	4984.689	4984.958	4985.208	4985.440	4985.654	4985.850	4985.872	4985.998	4986.111	4986.213	4986.302	4986.380	4986.445	4986.499	4986. 540

NOTE:
See Sheet Nº 39 for ⅛ point spacings of finished grade elevations along ℄ girders.

78'-2 7/16" Out to Out of Slab

76'-11 5/8" ℄ to ℄ Bearings

Exp Joint

62'-8 11/16"

62'-5 15/16" ℄ to ℄ Bearings

Horiz Dimensions

#4 Bars (typ.)
1"ϕ Bar (typ.) interior diaphragms

#4 Bars (typ.)
1⅛"ϕ Rod (typ.) end diaphragms

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

1 0 7 1 6 6 2 3 2 7 0 1 1 1 5 7 4 0 1

SPAN Nº 4E

GIRDER	SPACE A	SPACE B	SPACE C	SPACE D
①	19'-1½"	19'-1½"	19'-1½"	19'-1½"
②thru⑤	19'-2"	19'-1½"	19'-1½"	19'-1½"
⑥	19'-2"	19'-1 15/16"	19'-1 15/16"	19'-2"

SPAN Nº 5E

GIRDER	SPACE "A"	SPACE "B"	SPACE "C"	SPACE "D"
①	19'-1 5/16"	19'-1 5/16"	19'-1 5/16"	19'-1 5/16"
②thru⑤	19'-1½"	19'-1½"	19'-1½"	19'-1½"
⑥	19'-1¾"	19'-1⅞"	19'-1 15/16"	19'-1 11/16"

SPAN Nº 6E

GIRDER	SPACE "A"	SPACE "B"	SPACE "C"
①	20'-8"	20'-8"	20'-8"
②thru⑤	20'-8"	20'-8"	20'-8"
⑥	20'-8"	20'-8"	20'-8"

LONGITUDINAL SECTION

Revised as per Addendum Nº1

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

EAST BOUND BRIDGE

GIRDER LAYOUT PLAN AND LONGITUDINAL SECTION SPAN 4E, 5E, & 6E

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.C	SHEET 32
	JULY 1969	CHECKED: L.M.P	OF 66

SPAN No 7E

SPAN No 8E

SPAN No 9E

7 Spaces @ 9-9 = 68'-3"

10 Equal spaces ~ 77'-0" (Sloped girder length ℄ Brgs.)

Face of Parapet Wall

Outside edge of deck slab and parapet

℄ Brg.

Radial Dimension

EAST BOUND LANES

Profile Grade

Pt. Sta. 112+53.20 (Bk.)
Sta. 112+76.18 (Ahd.)

7 Spaces @ 9-9¼ = 68'-4¾"

Space "A" 1⅛ Pt.

Space "B" ¼ Pt.

Space "C" ⅜ Pt.

Space "D" ½ Pt.

1" Exp. Joint @ 68°F

℄ Pier No 7E

℄ Pier No 8E

℄ Pier No 9E

N

GIRDER LAYOUT PLAN

	GIRDER	BRG. O	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. P	BRG. Q	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. R	BRG. S	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. T
FINISH GRADE ELEVATIONS	1	4987.682	4987.654	4987.672	4987.642	4987.595	4987.531	4987.450	4987.353	4987.239	4987.222	4987.066	4986.893	4986.703	4986.497	4986.274	4986.005	4985.717	4985.412	4985.370	4985.031	4984.675	4984.296	4983.895	4983.481	4983.071	4982.640	4982.190
	2	4987.453	4987.458	4987.446	4987.416	4987.370	4987.307	4987.226	4987.129	4987.014	4986.997	4986.839	4986.665	4986.474	4986.265	4986.040	4985.781	4985.505	4985.211	4985.171	4984.843	4984.497	4984.129	4983.740	4983.337	4982.925	4982.493	4982.040
	3	4987.227	4987.233	4987.222	4987.197	4987.147	4987.083	4987.003	4986.905	4986.789	4986.772	4986.613	4986.437	4986.244	4986.034	4985.806	4985.559	4985.294	4985.011	4984.972	4984.654	4984.318	4983.963	4983.587	4983.192	4982.779	4982.345	4981.891
	4	4987.001	4987.008	4986.998	4986.970	4986.924	4986.860	4986.779	4986.681	4986.564	4986.546	4986.387	4986.209	4986.015	4985.802	4985.573	4985.338	4985.084	4984.812	4984.774	4984.467	4984.142	4983.799	4983.436	4983.048	4982.633	4982.197	4981.742
	5	4986.775	4986.783	4986.774	4986.746	4986.701	4986.637	4986.556	4986.456	4986.339	4986.321	4986.160	4985.982	4985.785	4985.570	4985.341	4985.118	4984.876	4984.615	4984.577	4984.281	4983.967	4983.638	4983.288	4982.903	4982.486	4982.049	4981.592
	6	4986.545	4986.555	4986.547	4986.520	4986.475	4986.413	4986.331	4986.232	4986.114	4986.096	4985.934	4985.754	4985.555	4985.338	4985.110	4984.898	4984.669	4984.419	4984.384	4984.099	4983.797	4983.479	4983.142	4982.759	4982.340	4981.901	4981.442

78'-2 5/8" Out to Out of Slab
76'-11 3/4" ℄ Bearing

78'-1 15/16" Out to Out of Slab
76'-11 1/4" ℄ Bearing

Exp. Joint

#4 Bars (Typ.) 1"ø Rod (Typ.) end diaphragms

#4 Bars (Typ.) 1"ø Bar (Typ.) interior diaphragm

Fix

Exp.

℄ Pier Note

℄ Pier No 8E

℄ Pier No 9E

Hor. Dimensions

NOTE:
See Sheet No 39 for 1/8 point spacings of finished grade elevations along ℄ girders.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 3 3 7 0 1 1 5 7 4 0 1

SPAN No 7E

GIRDER	SPACE "A"	SPACE "B"	SPACE "C"	SPACE "D"
①	19'-1 11/16"	19'-1 11/16"	19'-1 11/16"	19'-1 11/16"
②thru⑤	19'-1 11/16"	19'-1 11/16"	19'-1 11/16"	19'-1 11/16"
⑥	19'-1 11/16"	19'-1 11/16"	19'-1 11/16"	19'-1 11/16"

SPAN No 8E

GIRDER	SPACE "A"	SPACE "B"	SPACE "C"	SPACE "D"
①	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"
②thru⑤	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"
⑥	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"

SPAN No 9E

GIRDER	SPACE "A"	SPACE "B"	SPACE "C"	SPACE "D"
①	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"
②thru⑤	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"
⑥	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"

LONGITUDINAL SECTION

Revised as per Addendum No 1

ALBUQUERQUE NEW MEXICO

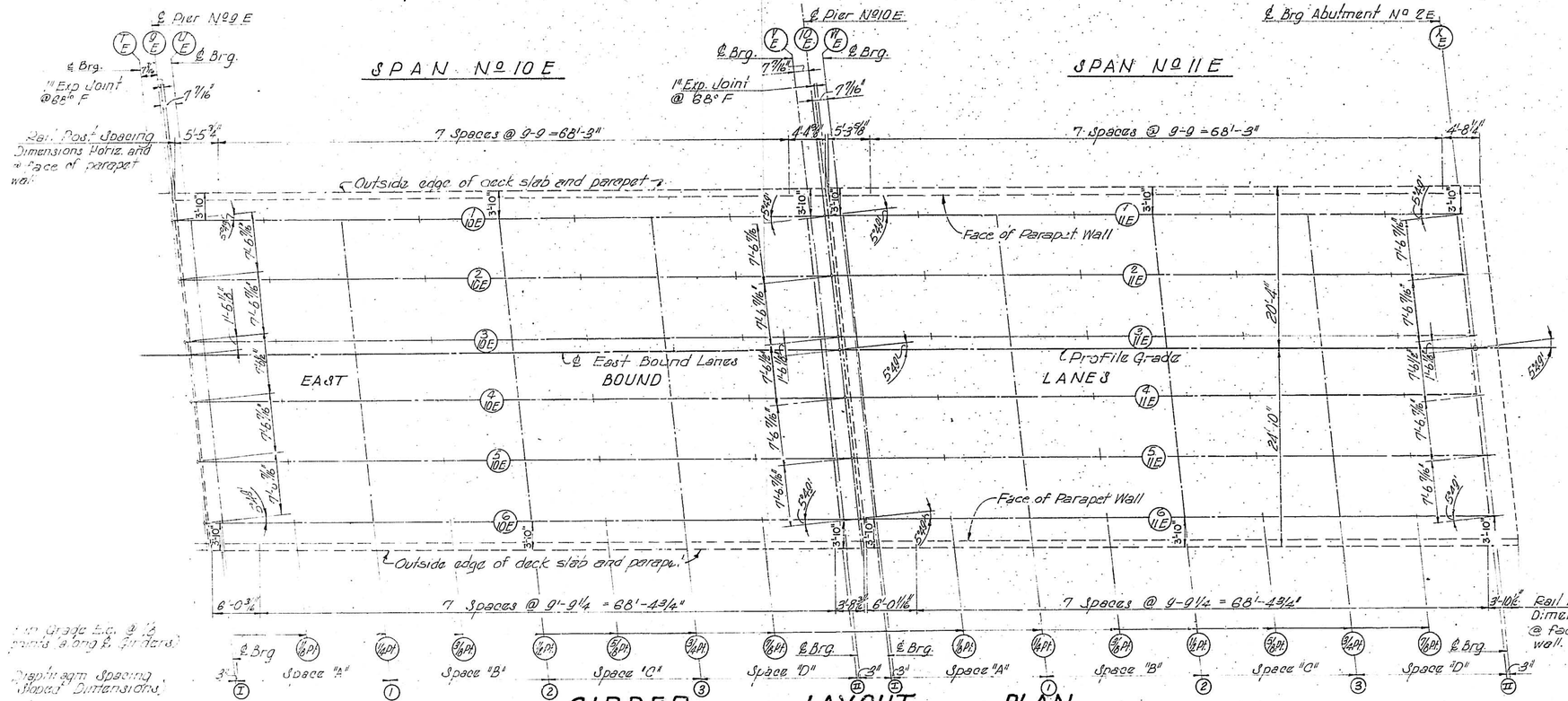
GRAND AVENUE OVERPASS

EAST BOUND BRIDGE

GIRDER LAYOUT PLAN AND LONGITUDINAL SECTION SPAN 7E, 8E, & 9E

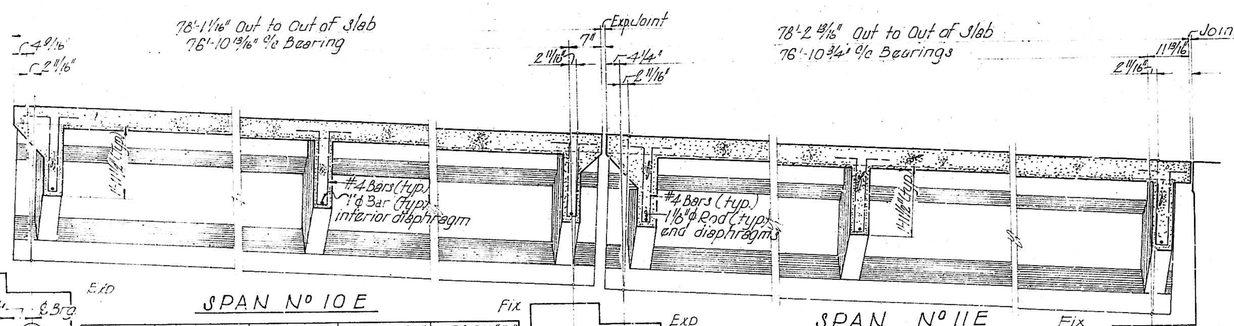
GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.G.	SHEET 33
	JULY 1969	CHECKED: L.M.R.	OF 66



FINISH GRADE ELEVATIONS	GIRDER	BRG. U	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. V	BRG. W	1/8	1/4	3/8	1/2	5/8	3/4	7/8	BRG. X
	1	4982.129	4981.656	4981.182	4980.657	4980.152	4979.648	4979.143	4978.639	4978.134	4978.068	4977.564	4977.059	4976.554	4976.050	4975.545	4975.040	4974.536	4974.031
	2	4981.980	4981.505	4981.009	4980.504	4980.000	4979.495	4978.990	4978.486	4977.981	4977.916	4977.411	4976.906	4976.402	4975.897	4975.392	4974.888	4974.383	4973.879
	3	4981.830	4981.354	4980.856	4980.352	4979.847	4979.343	4978.838	4978.333	4977.829	4977.763	4977.258	4976.754	4976.249	4975.744	4975.240	4974.735	4974.231	4973.726
	4	4981.681	4981.202	4980.704	4980.199	4979.695	4979.190	4978.685	4978.181	4977.676	4977.610	4977.105	4976.601	4976.096	4975.592	4975.087	4974.583	4974.078	4973.573
	5	4981.531	4981.051	4980.551	4980.047	4979.542	4979.037	4978.533	4978.028	4977.523	4977.457	4976.951	4976.448	4975.944	4975.439	4974.935	4974.430	4973.925	4973.421
	6	4981.381	4980.899	4980.399	4979.894	4979.389	4978.885	4978.380	4977.875	4977.371	4977.305	4976.800	4976.296	4975.791	4975.287	4974.782	4974.277	4973.773	4973.268

NOTE:
See Sheet No 39 for 1/8 point spacings of finished grade elevations along ℄ girders.



SPAN No 10 E

GIRDER	SPACE "A"	SPACE "B"	SPACE "C"	SPACE "D"
1	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"
2 thru 5	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"
6	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"

SPAN No 11 E

GIRDER	SPACE "A"	SPACE "B"	SPACE "C"	SPACE "D"
1	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"
2 thru 5	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"
6	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"	19'-1 1/2"

ALBUQUERQUE NEW MEXICO
GRAND AVENUE OVERPASS
EAST BOUND BRIDGE
GIRDER LAYOUT PLAN AND LONGITUDINAL SECTION SPAN 10E & 11E
GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO
SCALE | DATE JULY 1969 | DRAWN R.A.G. CHECKED L.M.P. | SHEET 34 OF 66

A (Out to Out of Slab, Horiz. Dimension Perpendicular to ℄ Piers)
Spacing = #5a Bars (top) & #5b Bars (bottom)
Spacing - #5c Bars (bent) & #5d Bars (bottom)
Spacing - #4k Bars, splice with #5b Bars (Bottom of Slab) & splice with #4ℓ Bars (top of Sidewalk)

Beginning of Slab
Exp. Joint
East Brg.
West Brg.
Radial Dimensions (Curved Spans)
Splice
1'-0" Lap (TYP)
Outside edge of Deck Slab & Parapet Wall
7-#4f Bars top of Sidewalk
Normal Dimensions (Tangent Spans)
West Brg.
End of Slab
East Brg.
#4ℓ Bars @ 10 or #4ℓ Bars @ 10½ Splice with #4k Bars
6'-0" Sidewalk
℄ Girder
Gutter Line
Varies
6 @ 7½ = 3'-9"
Typ. Spacing (bottom) Between Exterior Girder
9-#5g Bars
#4k Bars, splice with #5b Bars (bottom)
Typ. Spacing (bottom) Between Interior Girders
18'-0"
Splice 1'-0" Lap (TYP)
D (Out to Out of slab, Horiz. Dimension along ℄ Interior Girder)
F (Horiz. Dimension c/c Bearings along ℄ Interior Girder)
℄ WEST BOUND LANES
℄ Profile Grade
29 Spaces @ 1'-6" = 43'-6" Typical spacing #4f Bars in Top of Slab
#5a Bars (top) & #5b Bars (bottom)
#5c Bars (bent) & #5d Bars (bottom)
Longitudinal Reinf. Reqd. per Span
92 - #5g Bars (Bottom)
84 - #4f Bars (Top)
Spacing #4e Bars @ 10½ (curb side only) Span 7 & 8 only
Spacing - #4j Bars & #5m Bars, Splice with #5b Bars (Bottom)
#4f Bars
Gutter line
1'-6" Curb
Outside Edge of Deck Slab & Parapet Wall
Splice 1'-0" Lap (TYP)
3-#4f Bars top of Curb
#4j Bars
SPANS 7W & 8W ONLY
East Brg.
℄ Pier
Beginning of Slab
West Brg.
End of Slab
East Brg.
West Brg.
℄ Pier

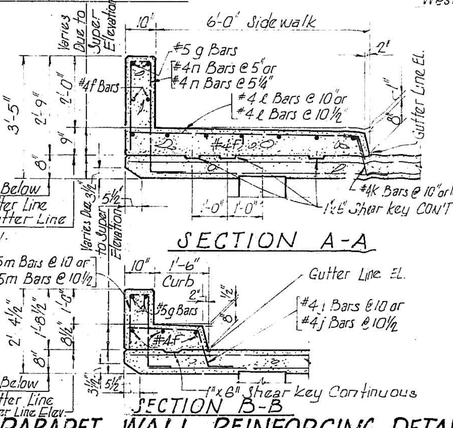
TYPICAL DECK SLAB PLAN - WEST BOUND BRIDGE

#4k & #4ℓ @ 10 or 10½ splice with #5b Bars
Bent or 10½ #4k & #4ℓ
Additional #4k & #4ℓ Bars @ Carriers
Outside Edge of Deck Slab & Parapet Wall
Face of Parapet Wall
℄ Girder
#4ℓ
#4k
Sidewalk
Gutter Line

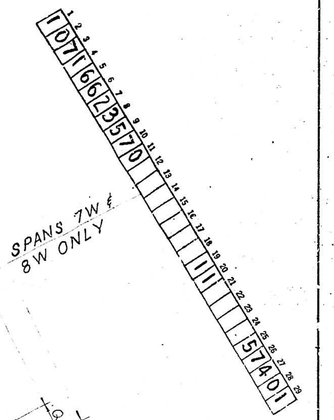
CORNER DETAIL AT SIDEWALK

TABLE

SPAN N°	A	∝	Nominal Slab Thickness	Exp. Joint	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V
SPAN N° 1W	58 2⅝	22°00'59"	7"	1"	3'-3¼"	3'-6"	82'-9⅝"	1'-1¾"	6'-1 1/8"	3 7/16"	46'-3⅝"	1'-7 3/16"	17'-7 3/8"	20'-8⅝"	6'-4 7/16"	1'-7 7/16"	1'-2 1/4"	47'-6 1/2"	1'-7¾"	18'-1 1/16"	21'-3 3/16"	6'-8 5/16"	1'-7 7/16"	1'-5⅝"
SPAN N° 2W	70'-3 2	25°40'51"	7"	1"	9'-2"	3'-8"	78'-0"	10'-9 1/16"	16'-9 11/16"	3 3/4"	47'-0 3/16"	1'-7¾"	18'-0 1/16"	21'-3 5/16"	6'-6 3/8"	1'-8"	1'-6 5/16"	48'-6 3/8"	1'-8 1/16"	18'-4 15/16"	21'-9 1/16"	6'-8 5/16"	1'-8"	1'-6 1/16"
SPAN N° 3W	56'-4	26°19	7"	1"	9'-1⅛"	3'-8"	82'-1⅜"	10'-8"	61'-4 11/16"	4 5/16"	48'-6 1/8"	1'-8 1/16"	18'-4 15/16"	21'-9 1/16"	6'-6 5/16"	1'-8 1/16"	1'-7¼"	48'-6 3/8"	1'-8 1/16"	18'-4 15/16"	21'-9 1/16"	6'-8 5/16"	1'-8 1/16"	1'-6 1/16"
SPAN N° 3AW	56'-7⅜	26°19	7"	1"	8'-8"	4'-1⅝"	82'-7 3/16"	9'-5⅜"	61'-5¼"	4 5/16"	48'-6 3/8"	1'-8 1/16"	18'-4 15/16"	21'-9 1/16"	6'-6 5/16"	1'-8 1/16"	1'-7 1/8"	48'-6 3/8"	1'-8 1/16"	18'-4 15/16"	21'-9 1/16"	6'-8 5/16"	1'-8 1/16"	1'-6 15/16"
SPAN N° 4W	56'-5"	25°46'07"	7"	1"	8 1/16"	4'-1⅝"	82'-7 15/16"	8 15/16"	61'-5½"	5 1/2"	48'-6 3/8"	1'-8 1/16"	18'-4 15/16"	21'-9 1/8"	6'-6 5/16"	1'-8"	1'-7⅜"	47'-9 5/16"	1'-7 1/16"	18'-1 1/16"	21'-5 1/2"	6'-7 9/16"	1'-8"	1'-7⅛"
SPAN N° 5W	57'-1 5/16	22°27'56"	7"	1"	7¾"	5 1/16"	82'-8⅜"	8⅜"	61'-5⅛"	6⅛"	47'-9 5/16"	1'-7 1/16"	18'-1 1/8"	21'-5 1/16"	6'-7 1/16"	1'-7½"	1'-7½"	46'-5 9/16"	1'-7 1/16"	17'-7"	20'-10 1/16"	6'-5 11/16"	1'-7½"	1'-6 7/16"
SPAN N° 6W	63 2 3/4"	18°34'39"	7"	1"	7⅜"	6⅜"	86'-8 7/16"	7 3/4"	65'-5 5/16"	6 3/4"	46'-5 13/16"	1'-7 11/16"	17'-7 7/16"	20'-10 1/16"	6'-5 1/16"	1'-7"	1'-6 13/16"	45'-4 3/4"	1'-6 3/4"	17'-2 1/4"	20'-4 1/2"	6'-3 1/4"	1'-7"	1'-6 3/16"
SPAN N° 7W	77'-6 1/16	15°03'31"	7"	1 1/16"	6 3/4"	7 3/8"	79'-11 5/16"	7 3/16"	78'-8 3/4"	7 5/8"	45'-4 3/4"	1'-6 3/4"	17'-2 9/16"	20'-4 1/8"	6'-3 5/16"	1'-6 1/16"	1'-6 7/16"	44'-5 5/16"	1'-6 5/16"	16'-10"	19'-11 5/16"	6'-1 5/8"	1'-6 9/16"	1'-6 5/8"
SPAN N° 8W	78'-10 5/8	9°22'41"	7"	1"	6'-4"	8'-4"	79'-11 7/16"	8 3/16"	78'-8 3/4"	8 3/8"	44'-5 5/16"	1'-6 9/16"	18'-10 3/8"	19'-10 15/16"	6'-1 5/8"	1'-6 1/4"	1'-6 7/16"	43'-9 15/16"	1'-6 1/8"	16'-7 5/16"	19'-7 1/16"	6'-0 9/16"	1'-6 1/4"	1'-6 3/8"
SPAN N° 9W	77'-9"	5°49"	7"	1"	5 9/16"	9 1/16"	78'-11 3/8"	5 9/16"	76'-11 7/8"	9 1/8"	43'-9 15/16"	1'-6 1/8"	16'-5 3/16"	19'-10 1/16"	6'-0 7/16"	1'-8 7/16"	1'-6 5/8"	43'-8 11/16"	1'-6 1/16"	16'-7 1/16"	19'-7 3/16"	6'-0 9/16"	1'-6 1/8"	1'-6 1/4"
SPAN N° 10W	77'-8½	5°49"	7"	1"	4 13/16"	9½"	78'-1 5/16"	4 13/16"	76'-10 7/16"	9 9/16"	43'-8 11/16"	1'-6 1/16"	16'-7 1/16"	19'-7 3/16"	6'-0 5/8"	1'-6 1/8"	1'-6 3/8"	43'-8 11/16"	1'-6 1/16"	16'-7 1/16"	19'-7 3/16"	6'-0 9/16"	1'-6 1/8"	1'-6 5/16"
SPAN N° 11W	77'-10 1/8	5°49"	7"	1"	4 3/8"	11 3/4"	78'-2 5/16"	4 3/8"	76'-10 3/4"	11 13/16"	43'-8 11/16"	1'-6 11/16"	16'-7 1/16"	19'-7 3/16"	6'-0 7/8"	1'-6 1/8"	1'-6 3/8"	43'-8 11/16"	1'-6 1/16"	16'-7 1/16"	19'-7 3/16"	6'-0 9/16"	1'-6 1/8"	1'-7 3/16"



PARAPET WALL REINFORCING DETAILS

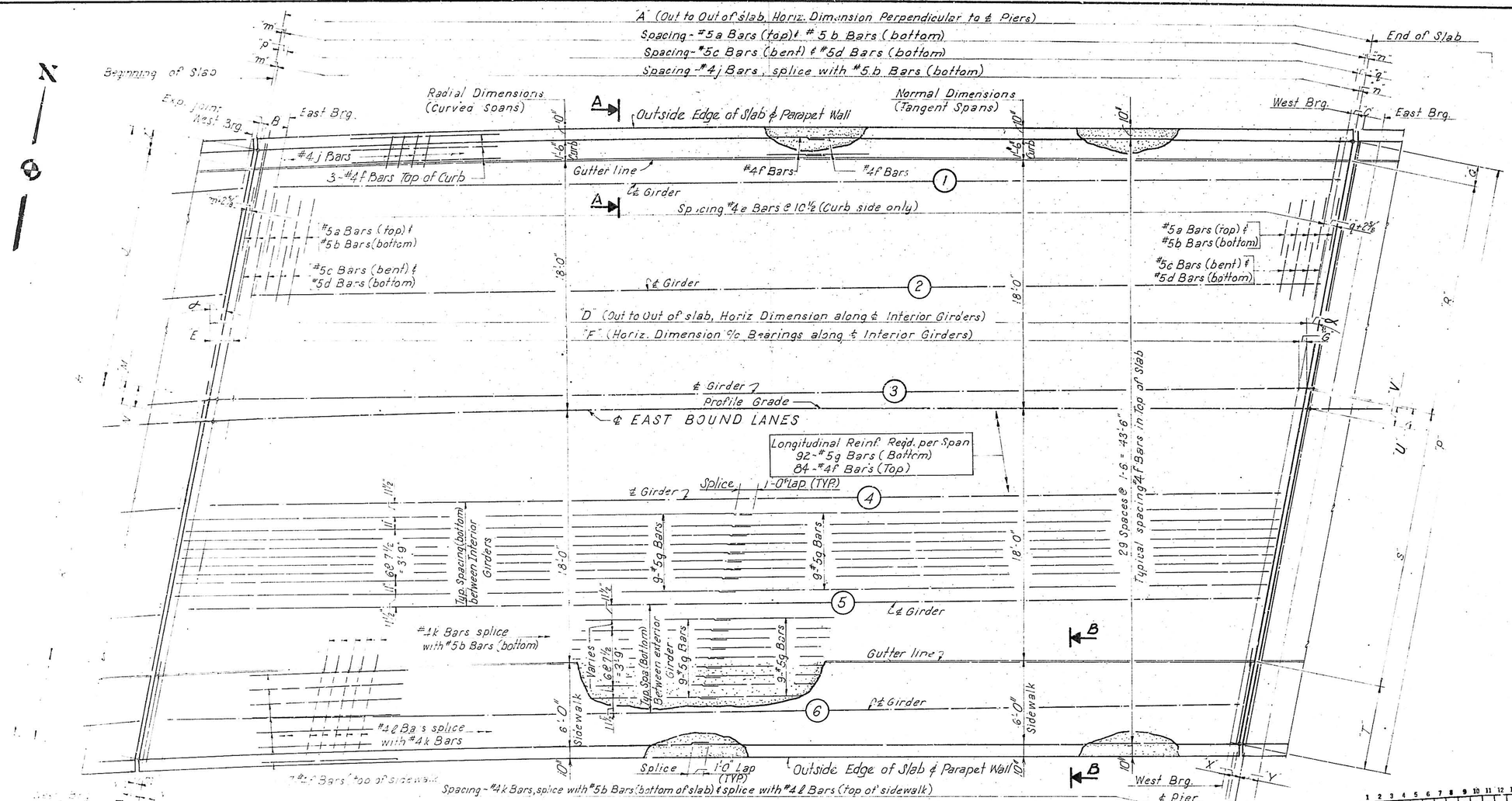


Note: 1. See Girder Layout sheets or Pier Detail sheets for X & Y Dimensions.
2. See Girder Layout sheets for angles between ℄ Piers & ℄ Girders.
3. See Sheet U.10.38 for Corner Details.
4. See Sheet U.10.33 & 34 for Setting Anchor Bolts for Metal Bridge Railing.
5. See Sheet U.9.40 For Light Standard Bracket.

ALBUQUERQUE NEW MEXICO
GRAND AVENUE OVERPASS
WEST BOUND BRIDGE
DECK SLAB PLAN SPANS 1W THRU 11W

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

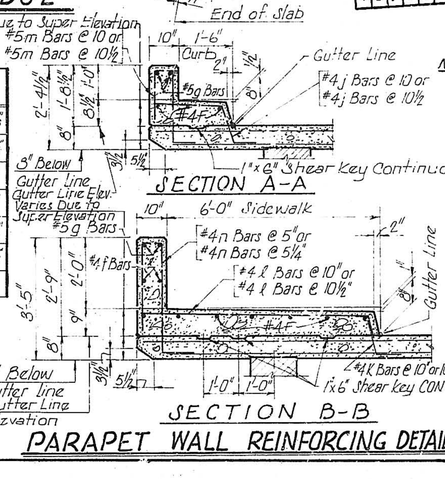
SCALE	DATE	DRAWN: R.A.L.	SHEET 35
	JULY 1969	CHECKED: L.M.P.	OF 66



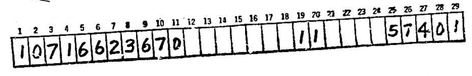
TYPICAL DECK SLAB PLAN - EAST BOUND BRIDGE

TABLE

SPAN No.	"A"	∝	Nominal Slab Thickness	Exp. Joint	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	"K"	"L"	"M"	"N"	"P"	"Q"	"R"	"S"	"T"	"U"	"V"
SPAN No. 1E	59 3 8 2				1'-0 3/4"	3'8"	63'-3 1/4"	1'-1 3/4"	62'-4 1/8"	3 3/8"	46'-9 3/4"	1'-7 1/16"	17'-9 1/16"	20'-11 13/16"	6'-5 1/2"	1'-7 3/8"	1'-2 5/16"	46'-9 3/4"	1'-7 1/8"	17'-9 1/16"	20'-11 13/16"	6'-5 1/4"	1'-7 3/8"	1'-5 9/16"
SPAN No. 2E	78 5 3	2 1 4			9 13/16	3 7/16	78'-0"	10 3/16"	76'-9 1/4"	3 1/16"	46'-9 3/4"	1'-7 1/16"	17'-9 1/16"	20'-11 13/16"	6'-5 1/2"	1'-7 3/8"	1'-5 15/16"	46'-9 3/4"	1'-7 1/8"	17'-9 1/16"	20'-11 13/16"	6'-5 1/4"	1'-7 3/8"	1'-5 15/16"
SPAN No. 3E	93 5 4	20 13 4			9 5/8	4 1/16	78'-1"	10 1/4"	76'-10 3/8"	4 3/8"	46'-9 3/4"	1'-7 1/16"	17'-9 3/16"	20'-11 11/16"	6'-5 1/2"	1'-7 3/16"	1'-6 1/4"	45'-9"	1'-6 7/8"	17'-3 7/16"	20'-6 7/8"	6'-5 3/16"	1'-7 3/16"	1'-6 1/16"
SPAN No. 4E	15 3 4	5 38 03			9 3/16	5 1/16	78'-1 3/16"	9 3/16"	76'-11 1/8"	5 1/4"	45'-9"	1'-6 7/8"	17'-4 1/8"	20'-6 1/8"	6'-3 7/8"	1'-6 1/16"	1'-6 1/8"	44'-8 1/16"	1'-6 1/2"	16'-11 1/4"	20'-0 7/16"	6'-2 1/8"	1'-6 1/16"	1'-6 1/16"
SPAN No. 5E	78 3 8	0 56 34			8 3/16	5 5/16	78'-2 7/16"	8 3/4"	76'-11 5/8"	6 1/16"	44'-8 7/16"	1'-6 1/2"	16'-11 7/16"	20'-0 7/16"	6'-2 1/16"	1'-6 5/16"	1'-6 1/8"	44'-0"	1'-6 5/16"	16'-8 1/8"	19'-8 1/16"	6'-0 7/8"	1'-6 5/16"	1'-6 3/16"
SPAN No. 6E	33 3 8	6 40 5	1		7 5/8	6 3/4"	63'-8 7/16"	7 1/16"	62'-5 15/16"	6 13/16"	44'-0"	1'-6 3/16"	16'-8 5/16"	19'-8 3/8"	6'-0 7/8"	1'-6 1/8"	1'-6 3/16"	43'-7 15/16"	1'-6 1/16"	16'-6 1/16"	19'-6 13/16"	6'-0 1/4"	1'-6 1/16"	1'-5 15/16"
SPAN No. 7E	78 2 5 8	2 24 59	1	1/4	6 5/8	7 3/4"	78'-3 7/16"	6 5/16"	77'-0 3/4"	7 3/4"	43'-7 13/16"	1'-6 1/16"	16'-6 1/16"	19'-6 13/16"	6'-0 1/4"	1'-6"	1'-6"	43'-6"	1'-6"	16'-6"	19'-6"	6'-0"	1'-6"	1'-6"



PARAPET WALL REINFORCING DETAILS



Note:
1. See Girder Layout sheets or Pier Detail sheets for "X" & "Y" Dimensions.
2. See Girder Layout sheets for angles between ℄ Piers & ℄ Girders.
3. See sheet 1/938 for Corner Details.
4. See Sheet 1/1033 & 34 for Setting Anchor Bolts For Metal Bridge Railing.
5. See Sheet 1/940 For Light Standard Bracket

ALBUQUERQUE NEW MEXICO

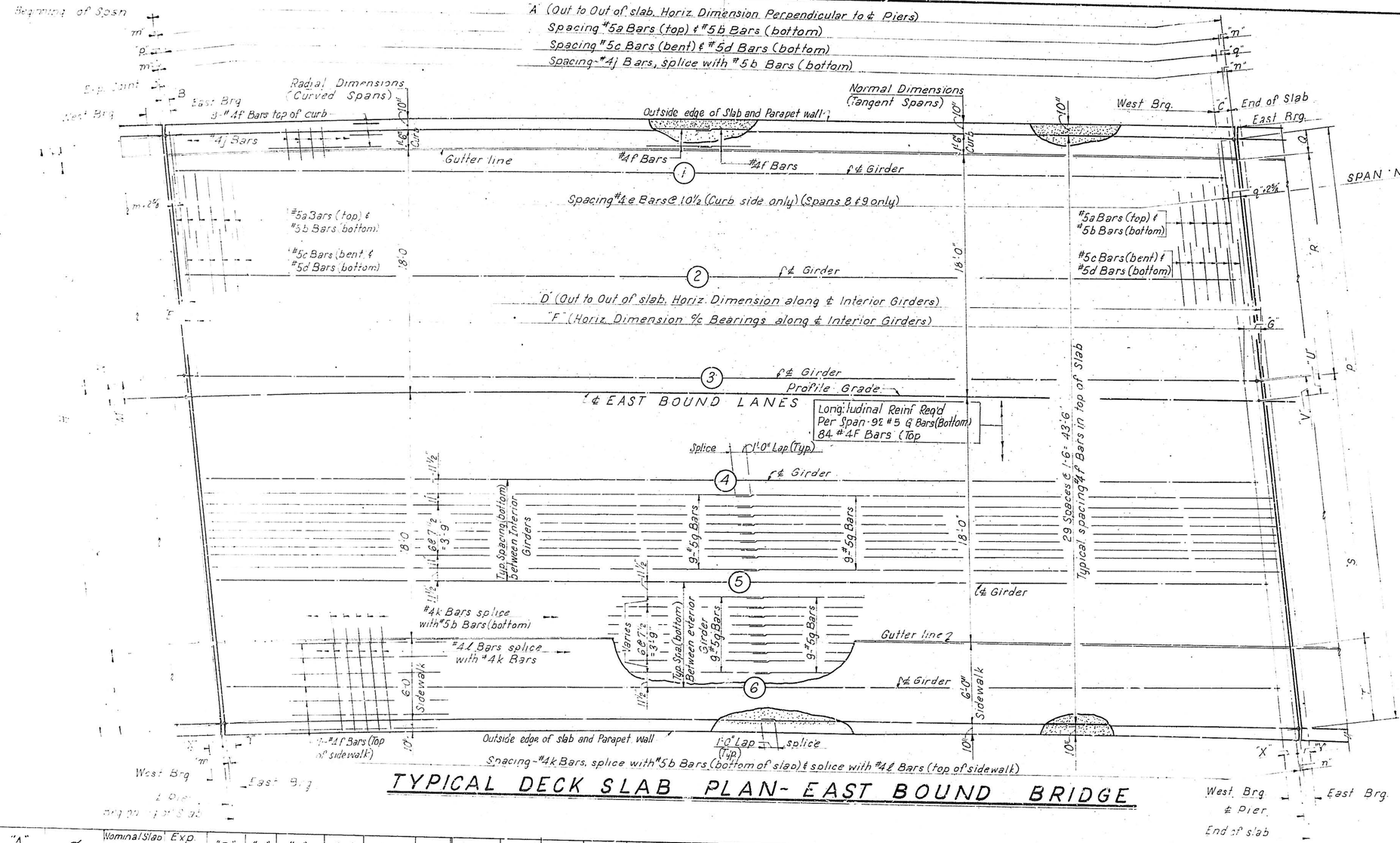
GRAND AVENUE OVERPASS

EAST BOUND BRIDGE

DECK SLAB PLAN
SPANS 1E THRU 7E

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.L.	SHEET 36
	JULY 1969	CHECKED: L. M.P.	OF 66



TYPICAL DECK SLAB PLAN - EAST BOUND BRIDGE

SPAN No	"A"	∝	Nominal Slab Thickness	Exp. Joint	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	"K"	"L"	"M"	"N"	"P"	"Q"	"R"	"S"	"T"	"U"	"V"
SPAN No 8E		2°16'45"			6"	8⅝"	78'-2⅜"	6¼"	76'-11¾"	8⅝"	43'-6"	1'-6"	16'-6 1/16"	19'-5 15/16"	6'-0"	1'-6"	1'-6 1/16"	43'-7 1/16"	1'-6 1/16"	16'-6⅝"	19'-6 13/16"	6'-0 1/4"	1'-6"	1'-6 1/16"
SPAN No 9E		5°33'57"			5 5/16"	9 5/16"	78'-1 15/16"	5 5/16"	76'-11¼"	9⅜"	43'-7 1/16"	1'-6 1/16"	16'-6 3/8"	19'-6 3/4"	6'-0 1/4"	1'-6 1/16"	1'-6 5/16"	43'-8 5/16"	1'-6 1/16"	16'-7"	19'-7 3/16"	6'-0 3/8"	1'-6 1/16"	1'-6 1/4"
SPAN No 10E		5°49			4 9/16"	9⅝"	78'-1 1/16"	4 9/16"	76'-10 3/16"	9 11/16"	43'-8 1/16"	1'-6 1/16"	16'-7"	19'-7 1/4"	6'-0 3/8"	1'-6 1/8"	1'-6 3/8"	43'-8 1/16"	1'-6 1/16"	16'-7"	19'-7 1/4"	6'-0 3/8"	1'-6 1/8"	1'-6 5/16"
SPAN No 11E		5°49			4¼"	0-11⅜"	78'-2 1/16"	4¼"	76'-10¾"	11 3/16"	43'-8 1/16"	1'-6 1/16"	16'-7"	19'-7 1/4"	6'-0 3/8"	1'-6 1/8"	1'-6 3/16"	43'-8 1/16"	1'-6 1/16"	16'-7"	19'-7 1/4"	6'-0 3/8"	1'-6 1/8"	1'-7 5/16"

Note: 1. See Girder Layout sheets or Pier Detail sheets for "X" & "Y" Dimensions.
2. See Girder Layout sheets for angles between ℄ Piers & ℄ Girders.
3. See sheet # 38 for Corner Details.
4. See sheet # 36 for Parapet Wall Reinforcing Details.
5. See Sheet No 133 & 134 for Anchor Bolts for Metal Bridge Railing.
6. See Sheet No 1040 for Light Standard Bracket

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 3 7 7 0 1 1 5 7 4 0 1

ALBUQUERQUE NEW MEXICO

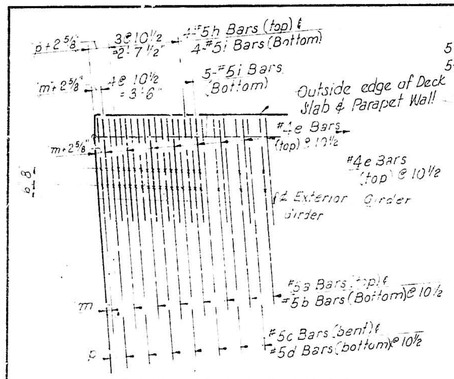
GRAND AVENUE OVERPASS

EAST BOUND BRIDGE

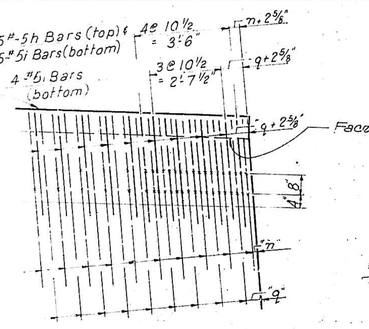
DECK SLAB PLAN SPANS 8E THRU 11E

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

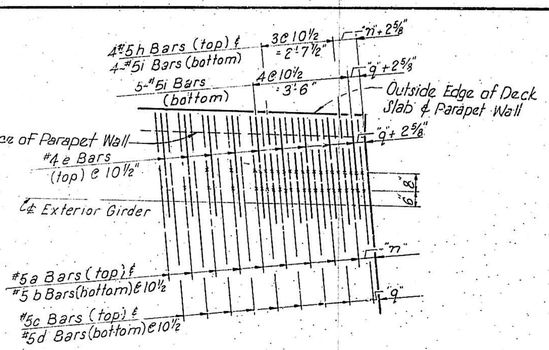
SCALE	DATE	DRAWN: R.A.L.	SHEET 37
	JULY 1969	CHECKED: L.M.P.	OF 66



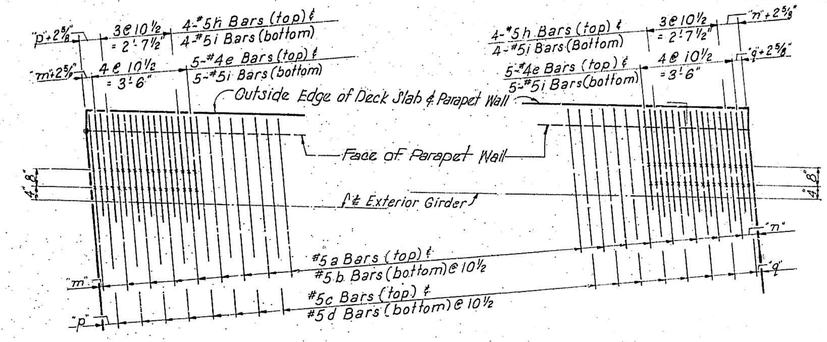
SPAN N° 1E THRU 9E
SPAN N° 7W AND 8W



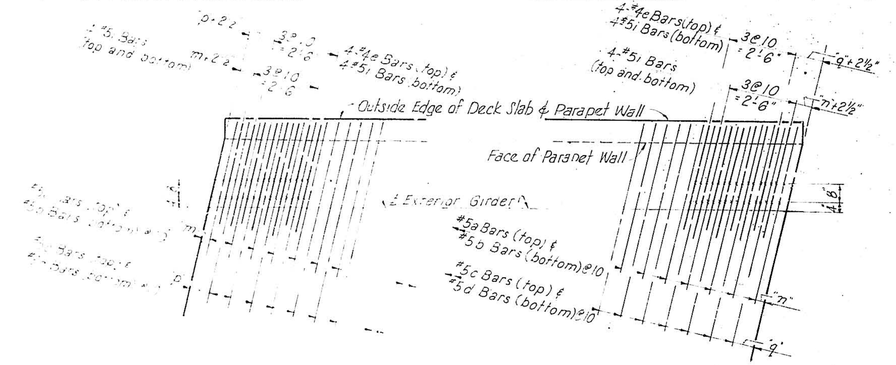
SPAN N° 1E, 6E THRU 8E
SPAN N° 7W



SPAN N° 2E THRU 5E & 9E
SPAN N° 8W

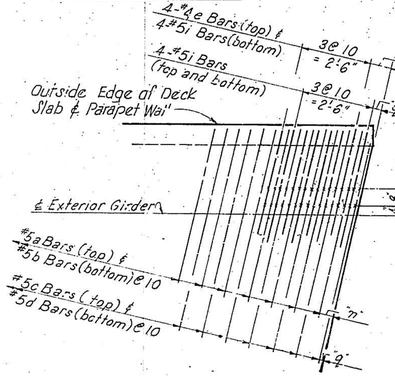


SPAN N° 10E AND 11E
SPAN N° 9W, 10W AND 11W



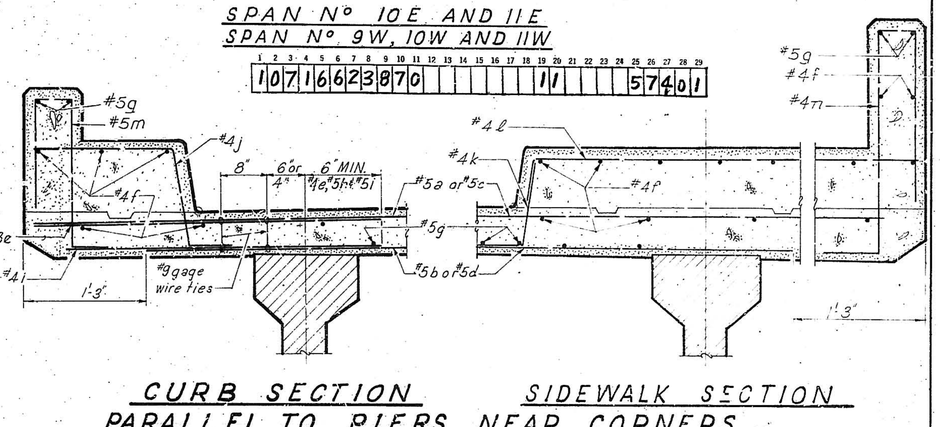
SPAN N° 1W THRU 6W

SPAN N° 2W THRU 5W



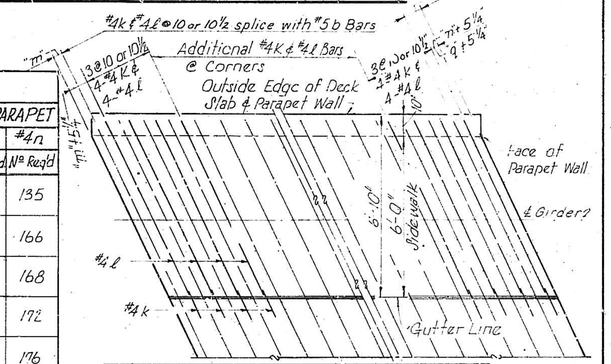
SPAN N° 1W AND 6W

SLAB CORNER DETAILS - CURB SIDE ONLY



CURB SECTION PARALLEL TO PIERS, NEAR CORNERS

SIDEWALK SECTION



USE	WEST BOUND	EAST BOUND
"m"	Spans 2W-5W & 7W	1E & 6E-3E
"q"	Spans 1W, 6W & 8W-11W	2E-5E & 9E-11E

SLAB CORNER DETAIL @ SIDEWALK

WEST BOUND BRIDGE

SPAN N°	TRANSVERSE #5a & #5b			TRANSVERSE #5c & #5d				LONGITUDINAL		CURB & PARAPET				SIDEWALK & PARAPET		
	"m"	Spa.	N° Reqd.	"m"	"p"	Spa.	N° Reqd.	"q"	#4f N° Reqd.	#5g N° Reqd.	#4e N° Reqd.	#5h N° Reqd.	#5i N° Reqd.	#4j & #5m N° Reqd.	#4k N° Reqd.	#4ℓ N° Reqd.	#4n N° Reqd.
1W	3"	82 @ 10½	70	3 3/16"	6 11/16"	69 @ 10	70	1 11/16"	84	92	8	—	24	70	78	78	140
2W	3¼"	82 @ 10½	85	3¼"	6¾"	83 @ 10	84	6¾"	84	92	8	—	24	85	93	93	169
3W	3⅛"	83 @ 10½	68	3⅛"	6⅝"	66.3 @ 10	67	6⅝"	84	92	8	—	24	68	76	76	135
3AW	3 5/16"	83 @ 10½	68	3 5/16"	6 5/16"	66 @ 10	67	6 5/16"	84	92	8	—	24	68	76	76	135
4W	3½"	83 @ 10½	68	3½"	8½"	66 @ 10	67	8½"	84	92	8	—	24	68	76	76	135
5W	2 11/16"	69 @ 10½	70	2⅜"	7 11/16"	68 @ 10	69	7⅜"	84	92	8	—	24	70	78	78	139
6W	3"	75 @ 10½	76	3⅛"	5⅞"	75 @ 10	76	1⅞"	84	92	8	—	24	76	84	84	152
7W	3 5/16"	88 @ 10½	89	3 1/16"	8 5/16"	87 @ 10½	88	8 5/16"	84	92	89	9	18	89	97	97	177
8W	3 1/16"	89 @ 10½	90	3 1/16"	8 1/16"	89 @ 10½	90	3 1/16"	84	92	90	8	18	90	98	98	180
9W	3"	88 @ 10½	89	7⅛"	7⅛"	88 @ 10½	89	1⅞"	84	92	10	8	18	89	97	97	178
10W	3⅛"	88 @ 10½	89	6 1/8"	6⅞"	88 @ 10½	89	1 5/8"	84	92	10	8	18	89	97	97	178
11W	2 11/16"	88 @ 10½	89	7 11/16"	7 11/16"	88 @ 10½	89	2 11/16"	84	92	10	8	18	89	97	97	178

EAST BOUND BRIDGE

SPAN N°	TRANSVERSE #5a & #5b			TRANSVERSE #5c & #5d				LONGITUDINAL		CURB & PARAPET				SIDEWALK & PARAPET		
	"m"	Spa.	N° Reqd.	"m"	"p"	Spa.	N° Reqd.	"q"	#4f N° Reqd.	#5g N° Reqd.	#4e N° Reqd.	#5h N° Reqd.	#5i N° Reqd.	#4j & #5m N° Reqd.	#4k N° Reqd.	#4ℓ N° Reqd.	#4n N° Reqd.
1E	3¾"	67 @ 10½	68	3 13/16"	9"	66 @ 10½	67	9 1/16"	84	92	67	9	18	68	76	76	135
2E	1¾"	82 @ 10½	83	7"	7"	82 @ 10½	83	1¾"	84	92	83	8	18	83	91	91	166
3E	1¼"	83 @ 10½	84	6½"	6½"	83 @ 10½	84	1¼"	84	92	84	8	18	84	92	92	168
4E	2⅜"	85 @ 10½	86	8"	8"	85 @ 10½	86	2¾"	84	92	86	8	18	86	94	94	172
5E	1 5/16"	87 @ 10½	88	6 9/16"	6 9/16"	87 @ 10½	88	1 5/16"	84	92	88	8	18	88	96	96	176
6E	1¾"	72 @ 10½	73	1¾"	7"	71 @ 10½	72	7"	84	92	72	9	18	73	81	81	145
7E	2 1/16"	89 @ 10½	90	2 1/16"	7 5/16"	88 @ 10½	89	7 5/16"	84	92	89	9	18	90	98	98	179
8E	1 11/16"	89 @ 10½	90	1 11/16"	6 13/16"	88 @ 10½	89	6 13/16"	84	92	89	9	18	90	98	98	179
9E	2 1/16"	88 @ 10½	89	7 5/16"	7 5/16"	88 @ 10½	89	2 1/16"	84	92	89	8	18	89	97	97	178
10E	1½"	88 @ 10½	89	6¾"	6¾"	88 @ 10½	89	1½"	84	92	10	8	18	89	97	97	178
11E	2⅜"	88 @ 10½	89	7 5/16"	7 5/16"	88 @ 10½	89	2⅜"	84	92	10	8	18	89	97	97	178

* Total N° of #5c Bars Req'd. only
Total N° of #5d Bars = 2 times the N° of #5c Bars.

ALBUQUERQUE NEW MEXICO

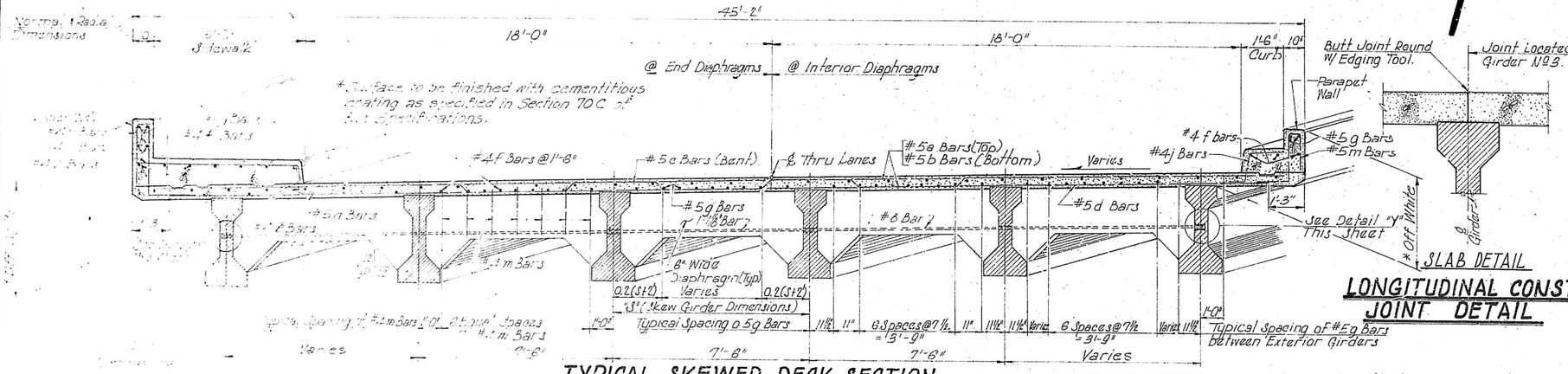
GRAND AVENUE OVERPASS

W.S. & E.B. BRIDGES

DECK SLAB CORNER DETAILS AND REINFORCING SCHEDULE

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN:	SHEET 36
	JULY 1969	CHECKED: L.M.P	OF 66



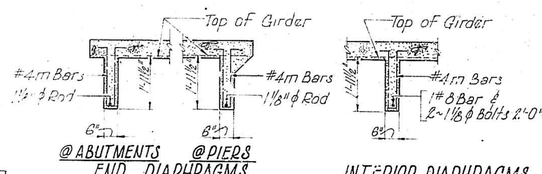
TYPICAL SKEWED DECK SECTION

LONGITUDINAL CONST. JOINT DETAIL

DIAPHRAGM LAYOUTS

TABLE OF DIAPHRAGM RODS

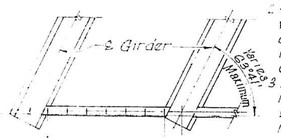
SPAN №	DIAPHRAGM												1⅛"ø Rods 2'-0" Long
	End Diaphragm		℄ Washer 3"x3"	Interior Diaphragm									
	I		II		1		2		3				
	№ REQD.	LENGTH	№ REQD.	№ REQD.	LENGTH	№ REQD.	LENGTH	№ REQD.	LENGTH	№ REQD.			2'-0" Long № Reqd.
1w	2	1'-5	2	1	1'-5	1	39'-5	—	—	—			4
2w	2	1'-5	2	1	1'-5	1	39'-5	1	39'-5	6			
3w	2	1'-5	2	1	1'-5	1	39'-5	1	39'-5	6			
3Aw	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
4w	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
5w	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
6w	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
7w	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
8w	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
9w	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
10w	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
11w	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
1E	2	1'-5	2	1	1'-5	1	40'-8	—	—	—			4
2E	2	1'-5	2	1	1'-5	1	40'-8	1	40'-8	6			
3E	2	1'-5	2	1	1'-5	1	40'-8	1	40'-8	6			
4E	2	1'-5	2	1	1'-5	1	40'-8	1	40'-8	6			
5E	2	1'-5	2	1	1'-5	1	40'-8	1	40'-8	6			
6E	2	1'-5	2	1	1'-5	1	40'-8	1	40'-8	6			
7E	2	1'-5	2	1	1'-5	1	40'-8	1	40'-8	6			
8E	2	1'-5	2	1	1'-5	1	40'-8	1	40'-8	6			
9E	2	1'-5	2	1	1'-5	1	40'-8	1	40'-8	6			
10E	2	1'-5	2	1	1'-5	1	40'-8	1	40'-8	6			
11E	2	1'-5	2	1	1'-5	1	40'-8	1	40'-8	6			
1E	2	1'-5	2	1	1'-5	1	39'-5	—	—	—			4
2E	2	1'-5	2	1	1'-5	1	39'-5	1	39'-5	6			
3E	2	1'-5	2	1	1'-5	1	39'-5	1	39'-5	6			
4E	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
5E	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
6E	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
7E	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
8E	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
9E	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
10E	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			
11E	2	1'-5	2	1	1'-5	1	38'-8	1	38'-8	6			



TYPICAL DIAPHRAGM SECTIONS

Diaphragm Notes

1. Weight of rods, nuts, and ℄ washers are included in the quantity shown for structural steel.
2. Back holes around end diaphragm rods with non-shrink mortar before placing diaphragm forms. Cost to be included in unit contract price bid for Class A concrete - Bridge Superstructure
3. After forms are removed tighten nuts on end diaphragm rods, burr thread and pack holes with non-shrink mortar.



DIAPHRAGM AND GIRDER PLAN DETAIL

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
10	7	1	6	6	2	3	9	7	0									1	1					5	7	4	0	1

SLAB DETAILS ~ WEST BOUND & EAST BOUND BRIDGES

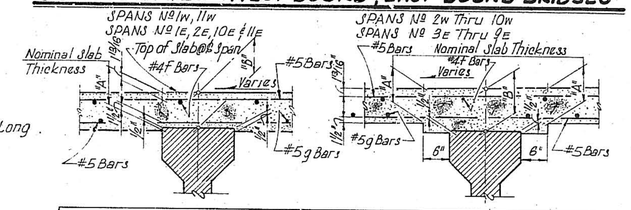


TABLE OF DIMENSIONS FOR SLAB THICKENING

	WEST BOUND BRIDGE										EAST BOUND BRIDGE									
SPAN №	1w	2w	3w	3Aw	4w	5w	6w	7w	8w	9w	10w	11w	1E	2E	3E	4E	5E	6E	7E	8E	9E	10E	11E
"A"	7¼											7	7	7								7	7
"B"	6⅝											6⅝	6⅝	6⅝								6⅝	6⅝
"C"	0'0⅛											0'0⅛	0'0⅛	0								—	0'0⅛
"D"	—											—	—	—								—	0'0⅛
	See Table														See Table								

	Span № 2w			Span № 3w			Span № 3Aw		
	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.
"A"	7⅛	7¼	7¼	7⅛	7⅛	7¼	7⅛	7¼	7¼
"B"	7	* 7⅛	* 7⅞	* 7 1/16	6 7/8	* 7 1/16	* 7⅛	* 7⅜	* 7 1/16

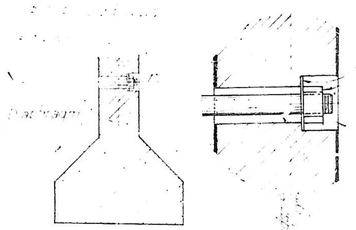
	Span № 4w			Span № 5w			Span № 6w		
	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.
"A"	7¼	7¼	7¼	7⅛	7⅛	7⅛	7⅛	7¼	7¼
"B"	7 1/16	* 7 1/16	* 7 3/4	* 7⅛	* 7⅛	* 7 3/4	* 7⅛	* 7 3/4	* 7 1/16

	Span № 7w			Span № 8w			Span № 9w			Span № 10w		
	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.
"A"	7	7	7	7	7	7	7	7	7	7	7	7
"B"	6 15/16	* 8 1/16	* 8 1/16	6 15/16	* 8 1/16	* 8 1/16	6 3/4	* 7 15/16	* 8 1/16	6 15/16	* 7 3/4	* 8 1/16

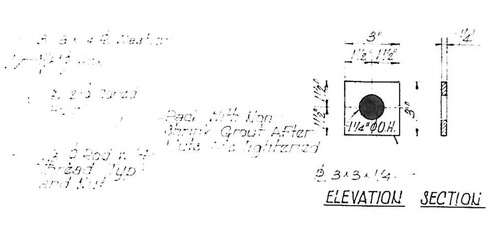
	Span № 1E			Span № 2E			Span № 3E			Span № 4E		
	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.
"A"	7	7	7	7	7	7	7	7	7	7	7	7
"B"	6 7/8	* 8 1/16	* 8 1/16	6 15/16	* 8 1/16	* 8 1/16	6 15/16	* 8 1/16	* 8 1/16	6 15/16	* 8 1/16	* 8 1/16

	Span № 5E			Span № 6E			Span № 7E			Span № 8E			Span № 9E		
	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.	℄ Brg. @ ¼ Pt.	@ ℄ Span	@ ¾ Pt.
"A"	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
"B"	6 15/16	* 8 1/16	* 8 1/16	6 15/16	* 8 1/16	* 8 1/16	6 7/8	* 8 1/16	* 8 1/16	6 7/8	* 8 1/16	* 8 1/16	6 3/4	* 8 1/16	* 8 1/16

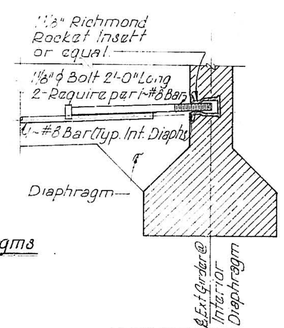
* Dimensions are based from Girder № 3w for West Bound Spans and from Girder № 3E for East Bound Spans.



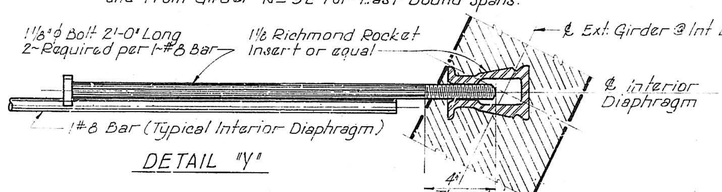
END DIAPHRAGM DETAILS



WASHER DETAIL @ End Diaphragms



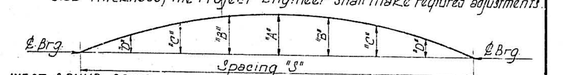
INTERIOR DIAPHRAGM DETAILS



Revised as per Addendum №1

DIAGRAM FOR PLACING CONCRETE DECK

Note: After girders are placed and before screeds are set, a profile shall be taken along the top of each girder. If the actual camber exceeds the camber on the plans, which would cause a deficient slab thickness, the Project Engineer shall make required adjustments.

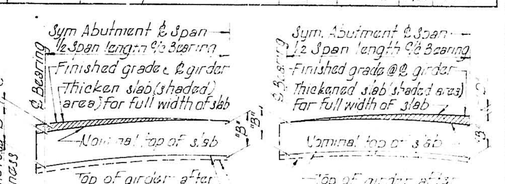


WEST BOUND BRIDGE

SPAN №	GIRDER №	SPACING "S"	"A"	"B"	"C"	"D"	± "E"	S-GIRD. LEN.
1w	1sw	1 8½ ~ 6 Spaces @ 7 - 8 3/16 ~ 7 - 8½	15/32	9/16	7/16	¼	7/8	61'-8 3/8"
	2sw Thru 5sw	8 Spaces @ 7 - 8 ¼	17/32	9/16	7/16	¼	7/8	61'-8"
	6sw	8 Spaces @ 7 - 7 ⅞	19/32	9/16	7/16	½	7/8	61'-3"
2w	1sw	1 Spaces @ 9 - 7 9/16	1 1/16	1 1/32	1 3/32	⅝	1 15/32	77'-0 1/4"
	2sw Thru 5sw	9 - 7 9/16 ~ 8 Spaces @ 9 - 7 ⅞ ~ 9 - 7 9/16	1 1/16	1 1/32	1 3/32	⅝	1 15/32	77'-0"
	6sw	8 - 7 9/16 ~ 6 Spaces @ 9 - 7 ⅞ ~ 9 - 7 9/16	1 1/16	1 1/32	1 3/32	⅝	1 15/32	76'-11 7/8"
3w	1sw Thru 6sw	8 Spaces @ 7 - 8 ¼	19/32	9/16	7/16	¼	7/8	61'-8"
3Aw	1sAw Thru 6sAw	8 Spaces @ 7 - 8 ¼	19/32	9/16	7/16	¼	7/8	61'-8"
4w	1sw	8 Spaces @ 7 - 8 3/16	9/32	9/16	7/16	¼	7/8	61'-8 3/4"
	2sw Thru 5sw	7 - 8 3/16 ~ 6 Spaces @ 7 - 8 ¼ ~ 7 - 8 3/16	1/32	9/16	7/16	¼	7/8	61'-5 1/4"
	6sw	7 - 8½ ~ 6 Spaces @ 7 - 8 3/16 ~ 7 - 8 ¼	1/32	9/16	7/16	¼	7/8	61'-5 1/2"
5w	1sw	7 - 7 15/16 ~ 8 Spaces @ 7 - 8 ~ 7 - 7 15/16	31/32	9/16	7/16	¼	7/8	61'-3 7/8"
	2sw Thru 5sw	8 Spaces @ 7 - 8 ¼	31/32	9/16	7/16	¼	7/8	61'-6"
	6sw	7 - 8 1/2 ~ 6 Space s @ 7 - 8 3/16 - 7 - 8 ¼	1 1/32	9/16	7/16	1/4	7/8	61'-6 1/4"
6w	1sw	8 - 2 1/16 ~ 6 Space s @ 8 - 2 ~ 8 - 2 1/16	¾	23/32	9/16	11/32	1 1/32	65'-4 1/2"
	2sw Thru 5sw	8 Spaces @ 8 - 2 1/16	¾	23/32	9/16	11/32	1 1/32	65'-6"
	6sw	8 - 2 9/16 ~ 6 Spaces @ 8 - 2 ½ ~ 8 - 2 1/16	¾	23/32	9/16	11/32	1 1/32	65'-8 1/8
7w	1sw	9 - 10 ~ 6 Spaces @ 9 - 9 15/16 ~ 9 - 10	1 1/32	1 1/16	1 5/32	11/16	1 15/32	78'-7 5/8"
	2sw Thru 5sw	9 - 10 ~ 6 Spaces @ 9 - 10 1/16 ~ 9 - 10	1 1/32	1 1/16	1 5/32	11/16	1 15/32	78'-8 3/4"
	6sw	9 - 10 3/16 ~ 6 Spaces @ 9 - 10 1/16 ~ 9 - 10 3/16	1 1/32	1 1/16	1 5/32	11/16	1 15/32	78'-10 1/4"
8w	1sw	9 - 10 - 6 Spaces @ 9 - 10 1/16 ~ 9 - 10	1 1/32	1 1/16	1 5/32	11/16	1 15/32	78'-8 3/16"
	2sw Thru 5sw	9 - 10 1/16 ~ 6 Spaces @ 9 - 10 1/16 ~ 9 - 10 1/16	1 1/32	1 1/16	1 5/32	11/16	1 15/32	78'-8 1/2"
	6sw	9 - 10 1/4 ~ 6 Spaces @ 9 - 10 1/16 ~ 9 - 10 1/4	1 1/32	1 1/16	1 5/32	11/16	1 15/32	78'-9 5/8"
9w	1sw	9 - 7 7/16 ~ 6 Spaces @ 9 - 7 ½ ~ 9 - 7 7/16	1 13/32	1 5/16	1 11/16	⅝	1 15/32	76'-11 7/8"
	2sw Thru 5sw	9 - 7 5/8 ~ 6 Spaces @ 9 - 7 ½ ~ 9 - 7 5/8	1 13/32	1 5/16	1 11/16	⅝	1 15/32	76'-11 3/4"
	6sw	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"
10w	1sow Thru 6sw	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"
11w	1saw Thru 6sw	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"

EAST BOUND BRIDGE

SPAN №	GIRDER №	SPACING "S"	"A"	"B"	"C"	"D"	± "E"	S-GIRD. LEN.
1E	1sE Thru 6sE	8 Spaces @ 7 - 9 3/4	5/8	9/16	15/32	9/32	7/8	62'-8"
2E	1sE Thru 6sE	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"
3E	1sE	9 - 7 1/16 ~ 8 Spaces @ 9 - 7 3/16 ~ 9 - 7 1/16	1 13/32	1 5/16	1 11/16	⅝	1 15/32	76'-11 1/2"
	2sE Thru 5sE	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"
	6sE	9 - 7 1/16 ~ 8 Spaces @ 9 - 7 5/16 ~ 9 - 7 1/16	1 13/32	1 5/16	1 11/16	⅝	1 15/32	76'-10 3/4"
4E	1sE	8 Spaces @ 9 - 7 5/16	1 9/32	1 5/16	1 11/16	⅝	1 15/32	76'-10 3/4"
	2sE Thru 5sE	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"
	6sE	9 - 7 1/16 ~ 8 Spaces @ 9 - 7 3/16 ~ 9 - 7 1/16	1 13/32	1 5/16	1 11/16	⅝	1 15/32	76'-11 1/2"
5E	1sE	9 - 7 1/16 ~ 8 Spaces @ 9 - 7 3/16 ~ 9 - 7 1/16	1 13/32	1 5/16	1 11/16	⅝	1 15/32	76'-11 1/2"
	2sE Thru 5sE	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"
	6sE	9 - 7 9/16 ~ 8 Spaces @ 9 - 7 5/16 ~ 9 - 7 9/16	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0 7/8"
6E	1sE Thru 6sE	8 Spaces @ 9 - 7 3/4	3/8	9/16	15/32	9/32	7/8	62'-8"
7E	1sE Thru 6sE	9 - 7 1/2 ~ 6 Spaces @ 9 - 7 5/16 ~ 9 - 7 1/2	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0 3/4"
8E	1sE Thru 6sE	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"
9E	1sE Thru 6sE	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"
10E	1soE Thru 6soE	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"
11E	1saE Thru 6saE	8 Spaces @ 9 - 7 ½	1 13/32	1 5/16	1 11/16	⅝	1 15/32	77'-0"



NOTE: NOT TO BE USED FOR CONSTRUCTION. Information is for quantity calculations only and not for setting screeds

SLAB THICKENING SKETCH

ALBUQUERQUE, NEW MEXICO

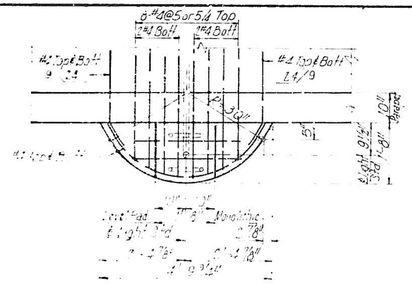
GRAND AVENUE OVERPASS

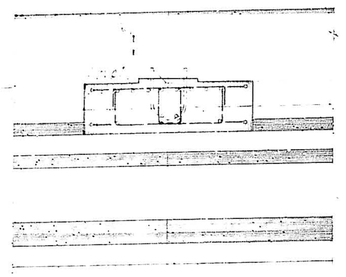
WEST BOUND AND EAST BOUND BRIDGES

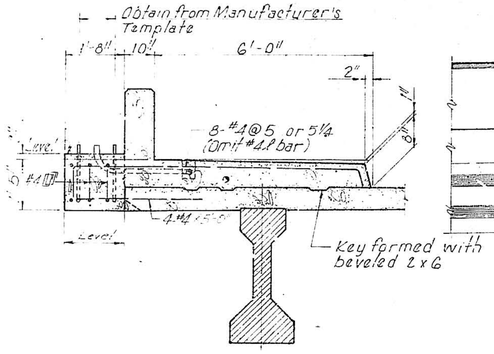
DECK SLAB DETAILS & TRANSVERSE SECTION

GORDON HERKENHOFF & ASSOCIATES, INC.
ALBUQUERQUE CONSULTING ENGINEERS NEW MEXICO

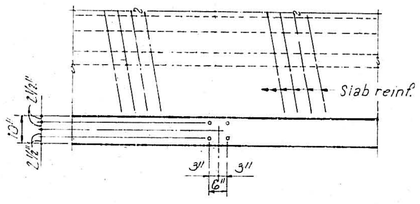
SCALE	DATE	DRAWN R.A.G.	SHEET 39
	JULY 1969	CHECKED L.M.P.	OF 66

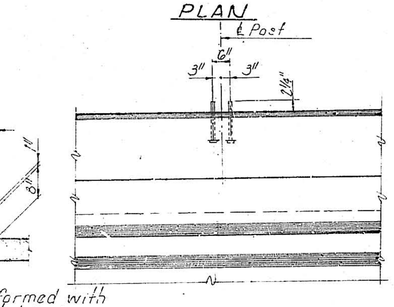


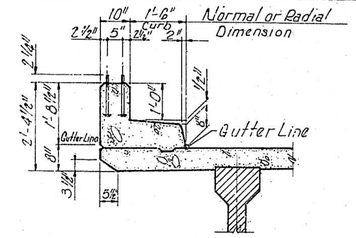


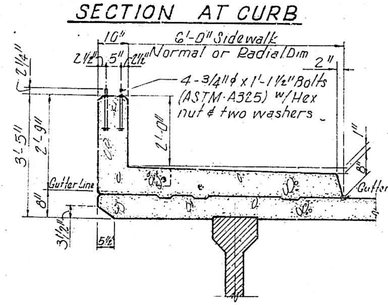


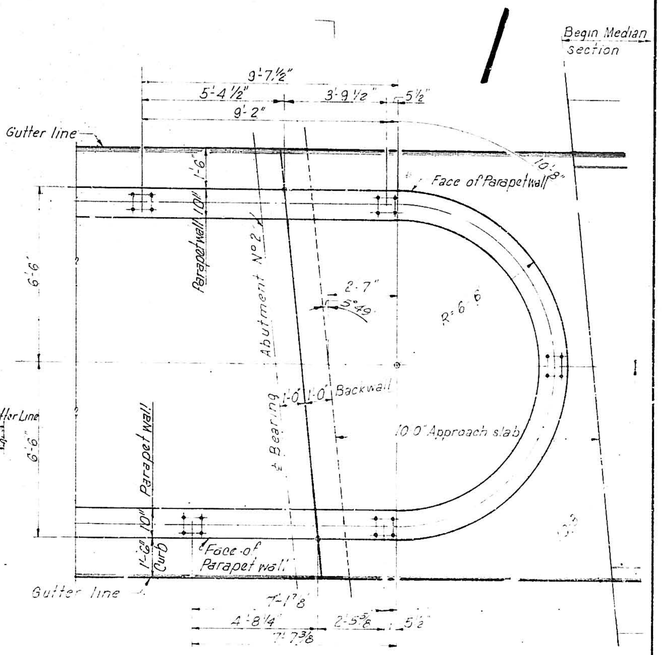
LIGHT STANDARD BRACKET DETAIL





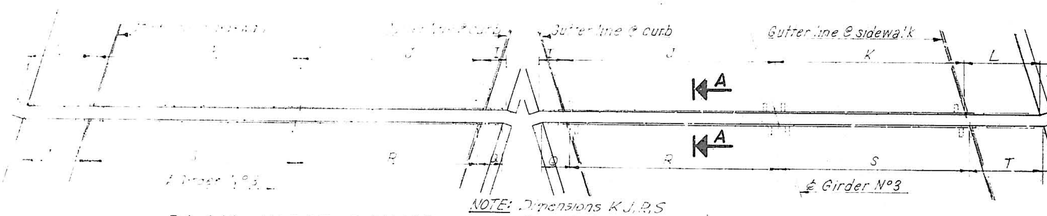


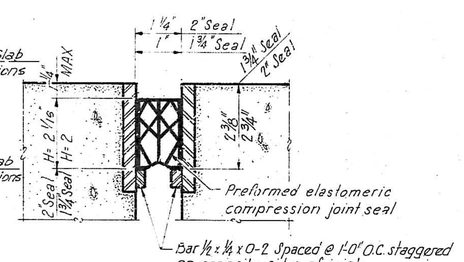


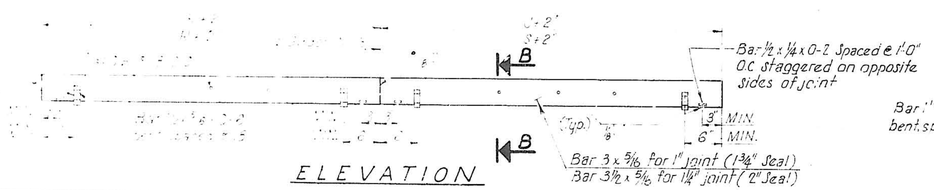


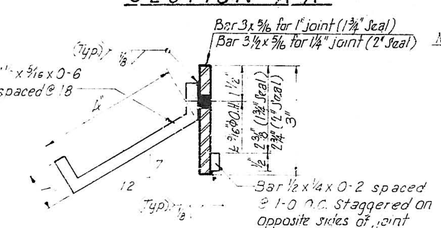
RAIL POST ANCHOR BOLTS

NOTE: 8"x4⅞" elliptical rail member return around 6'-6" outside radius may be fabricated by butt welding eleven equal chord sections with beveled ends.





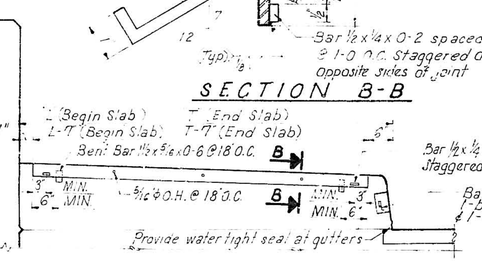


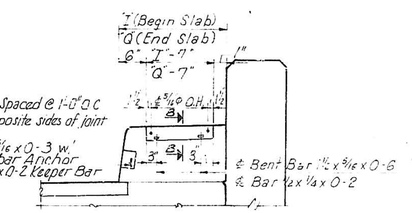


Note: 1. See Deck Slab Plan's sheets 35 thru 37 for variable dimensions.
2. Cost of Preformed elastomeric joint seal to be included in the Unit bid price for Class "A" Concrete, Br. Superstructure, including reinforcing.

WEST BOUND TABLE				
SPAN N°	J+2	K+2	S+2"	R+2"
1W				
2W				
3W				
3+W				
4W				
5W				
6W				
7W				
8W				
9W				
10W				
11W				

EAST BOUND TABLE				
SPAN N°	J+2"	K+2"	R+2"	S+2"
1E	1'-1 1/16"	21'-1 3/16"	17'-11 11/16"	21'-1 3/16"
2E	17'-11 11/16"	21'-1 3/16"	17'-11 11/16"	21'-1 3/16"
3E	17'-5"	21'-1 5/8"	17'-5 7/8"	17'-6 3/8"
4E	1'-6 8"	20'-8 1/8"	17'-1 1/4"	20'-2 11/16"
5E	17'-7 7/16"	20'-2 11/16"	16'-10 1/8"	19'-10 3/16"
6E	16'-10 5/16"	19'-10 5/8"	16'-8 11/16"	19'-8 3/16"
7E	16'-8 11/16"	19'-8 3/16"	16'-8"	19'-8"
8E	16'-8 1/16"	19'-7 15/16"	16'-8 5/8"	19'-8 13/16"
9E	16'-8 5/8"	19'-8 3/4"	16'-9"	19'-9 3/16"
10E	16'-9"	19'-9 1/4"	16'-9"	19'-9 1/4"
11E	16'-9"	19'-9 1/4"	16'-9"	19'-9 1/4"





EXPANSION DAM DETAILS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

1 0 7 1 6 6 2 4 0 7 0 | | | | | | | | | | | 5 7 4 0 1

Revised as per Addendum N°1

ALBUQUERQUE NEW MEXICO

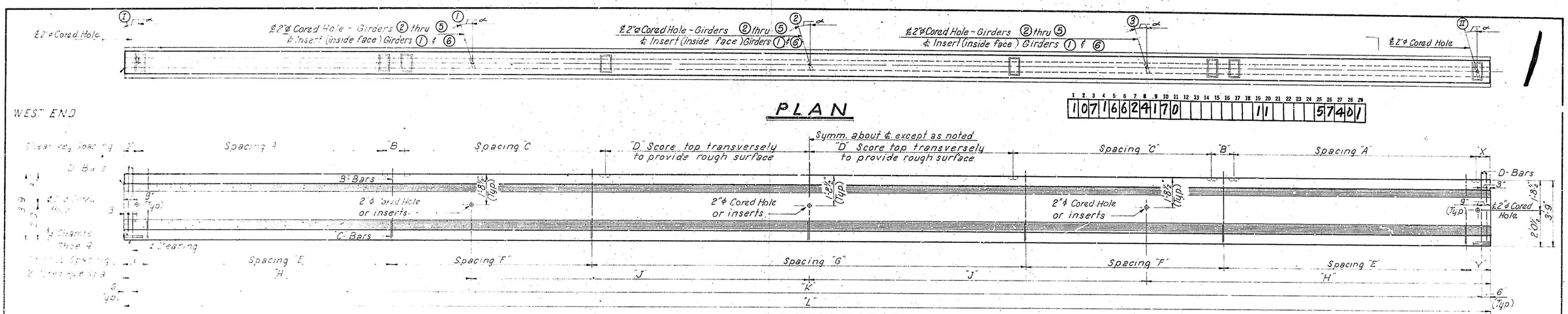
GRAND AVENUE OVERPASS

W.S. & E.B. BRIDGES

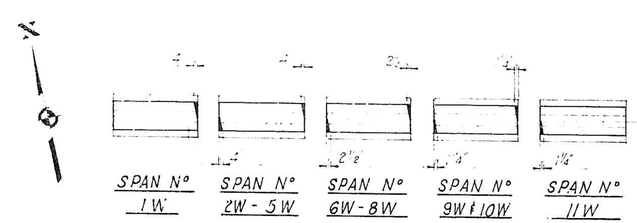
EXPANSION DEVICE LAYOUT & DETAILS AND MISC. DECK SLAB SECTIONS & DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

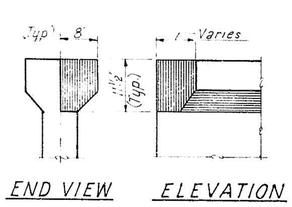
SCALE	DATE	DRAWN	SHEET
	JULY 1969	R.A.L.	40
		CHECKED L.M.P.	OF 66

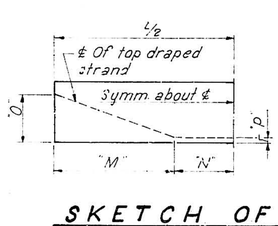


GIRDER DESIGNATION	SPAN N° AND GIRDER LOCATION	N° REQ'D.	SKEW ANGLE ∝	TOTAL GIRDER LENGTH "L"	GIRDER LENGTH C/C BRG. "K"	SHEAR KEY SPACING "X"	SHEAR KEY SPACING "A"	SHEAR KEY SPACING "B"	SHEAR KEY SPACING "C"	SHEAR KEY SPACING "D"	STIRRUP SPACING "Y"	STIRRUP SPACING "E"	STIRRUP SPACING "F"	STIRRUP SPACING "G"	2" ϕ HOLE SPACING OR INSERT SPACING "H"	2" ϕ HOLE SPACING OR INSERT SPACING "J"	2" ϕ HOLE SPACING OR INSERT SPACING "J"	2" ϕ HOLE SPACING OR INSERT SPACING "H"	DRAPED STRANDS L/2	DRAPED STRANDS "M"	DRAPED STRANDS "N"	DRAPED STRANDS "O"	DRAPED STRANDS "P"	ESTIMATED QUANTITIES FOR ONE GIRDER: CONC. CU.YD.	½"ϕ Prestressing Strands L.F.	REINFORCING STEEL: #5A Bars Length	#5A Bars N° Reqd.	#4B Bars Length	#4B Bars N° Reqd.	#4C Bars Length	#4C Bars N° Reqd.	#7D Bars Length	#7D Bars N° Reqd.	REINFORCING STEEL WT. LB.	STRUCT. STEEL LB.	WT. TONS
W-1	SPAN N° 1W (N)	1	22°27'08"	62'-8⅜"	61'-8⅜"	1'-0 7/16"	14@ 1'-2½" = 16'-11"	—	—	13'-4¾"	1'-7 11/16"	13@ 1'-2½" = 15'-8½"	—	16@ 1'-9 = 28'-0"	21'-1 13/16"	—	20'-4¾"	21'-1 13/16"	31'-4 3/16"	22'-2 3/16"	9'-2"	2'-11"	6"	9.03	1,256	32'-0"	4	5'-0"	86	4'-3"	43	5'-0"	8		625	62	18.3
W-2	SPAN N° 1W (S) to (S) SPAN N° 5W	4	22°00'59"	62'-6"	61'-6"	11'-1¼"	14@ 1'-2½" = 16'-11"	—	—	13'-4¾"	1'-6½"	13@ 1'-2½" = 15'-8½"	—	16@ 1'-9 = 28'-0"	21'-1"	—	20'-4"	21'-1"	31'-3"	22'-1"	9'-2"	2'-11"	6"	9.00	1,252	32'-0"	4	5'-0"	86	4'-3"	43	5'-0"	8		625	62	18.2
	SPAN N° 3W (N) to (S) SPAN N° 3AW	6	26°19'																																		
W-3	SPAN N° 1W (S)	1	21°27'29"	62'-3"	61'-3"	9¾"	14@ 1'-2½" = 16'-11"	—	—	13'-4¾"	1'-5"	13@ 1'-2½" = 15'-8½"	—	16@ 1'-9 = 28'-0"	21'-0"	—	20'-3"	21'-0"	31'-1½"	21'-11½"	9'-2"	2'-11"	6"	8.96	1,247	32'-0"	4	5'-0"	86	4'-3"	43	5'-0"	8		625	62	18.1
W-4	SPAN N° 2W (N)	1	25°44'48"	78'-0½"	77'-0½"	10'-¼"	12@ 1'-2 = 14'-0"	1'-3½"	8@ 1'-5 = 11'-4"	11'-6½"	1'-5¼"	12@ 1'-2 = 14'-0"	8@ 1'-5 = 11'-4"	14@ 1'-9 = 24'-6"	19'-10⅝"	19'-1⅝"	19'-1⅝"	19'-10⅝"	39'-0½"	27'-9¼"	11'-3"	3'-7"	10"	11.24	2,343	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	8		771	62	22.7
W-5	SPAN N° 2W (S) to (S) SPAN N° 9W	4	25°40'51" to 25°51'35"	77'-11⅞"	76'-11⅞"	9 15/16"	12@ 1'-2 = 14'-0"	1'-3½"	8@ 1'-5 = 11'-4"	11'-6½"	1'-4 13/16"	12@ 1'-2 = 14'-0"	8@ 1'-5 = 11'-4"	14@ 1'-9 = 24'-6"	19'-10½"	19'-1 7/16"	19'-1 7/16"	19'-10½"	38'-11 5/16"	27'-8 9/16"	11'-3"	3'-7"	10"	11.23	2,342	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	8		771	62	22.7
W-6	SPAN N° 1W (S) to (S) 2W	1	25°35'49"	77'-11⅛"	76'-11⅛"	9 9/16"	12@ 1'-2 = 14'-0"	1'-3½"	8@ 1'-5 = 11'-4"	11'-6½"	1'-4 9/16"	12@ 1'-2 = 14'-0"	8@ 1'-5 = 11'-4"	14@ 1'-9 = 24'-6"	19'-10⅝"	19'-1¼"	19'-1¼"	19'-10⅝"	38'-11 9/16"	27'-8 9/16"	11'-3"	3'-7"	10"	11.22	2,340	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	8		771	62	22.7
W-7	SPAN N° 4W (N)	1	25°44'08"	62'-5½"	61'-5½"	11"	14@ 1'-2½" = 16'-11"	—	—	13'-4¾"	1'-6¼"	13@ 1'-2½" = 15'-8½"	—	16@ 1'-9 = 28'-0"	21'-0 13/16"	—	20'-3 7/8"	21'-0 13/16"	31'-2 3/4"	22'-0 3/4"	9'-2"	2'-11"	6"	8.99	1,251	32'-0"	4	5'-0"	86	4'-3"	43	5'-0"	8		625	62	18.2
W-8	SPAN N° 4W (S) to (S) 4W	4	25°48'07"	62'-5⅞"	61'-5⅞"	11 3/16"	14@ 1'-2½" = 16'-11"	—	—	13'-4¾"	1'-6 7/16"	13@ 1'-2½" = 15'-8½"	—	16@ 1'-9 = 28'-0"	21'-0 15/16"	—	20'-4"	21'-0 15/16"	31'-2 15/16"	22'-0 15/16"	9'-2"	2'-11"	6"	9.00	1,251	32'-0"	4	5'-0"	86	4'-3"	43	5'-0"	8		625	62	18.2
W-9	SPAN N° 4W (S)	1	25°53'11"	62'-6⅜"	61'-6⅜"	11 7/16"	14@ 1'-2½" = 16'-11"	—	—	13'-4¾"	1'-6 11/16"	13@ 1'-2½" = 15'-8½"	—	16@ 1'-9 = 28'-0"	21'-1⅛"	—	20'-4⅛"	21'-1⅛"	31'-3 3/16"	22'-1 3/16"	9'-2"	2'-11"	6"	9.01	1,252	32'-0"	4	5'-0"	86	4'-3"	43	5'-0"	8		625	62	18.2
W-10	SPAN N° 5W (S)	1	22°03'58"	62'-3 7/8"	61'-3 7/8"	10 3/16"	14@ 1'-2½" = 16'-11"	—	—	13'-4¾"	1'-5 7/16"	13@ 1'-2½" = 15'-8½"	—	16@ 1'-9 = 28'-0"	21'-0 5/16"	—	20'-3¼"	21'-0 5/16"	31'-1 5/16"	21'-11 5/16"	9'-2"	2'-11"	6"	8.97	1,248	32'-0"	4	5'-0"	86	4'-3"	43	5'-0"	8		625	62	18.2

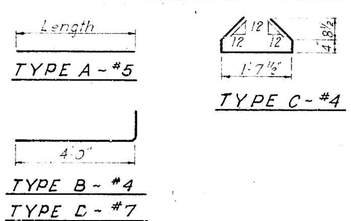


GIRDER NOTCH DETAILS





SKETCH OF DRAPED STRANDS



BAR BENDING DETAILS

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

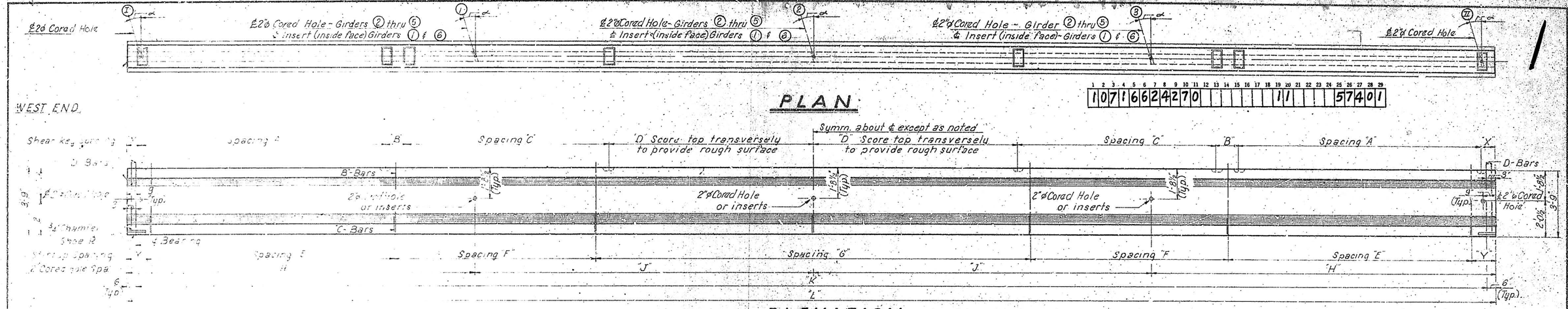
WEST BOUND BRIDGE

PRESTRESSED CONCRETE GIRDER DETAILS

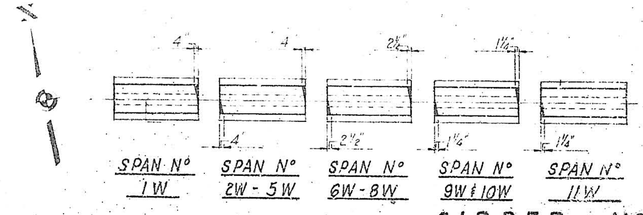
W-1 THRU W-10

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

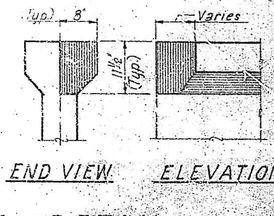
SCALE	DATE	DRAWN: R.A.L.	SHEET 41
	JULY 1969	CHECKED: L.M.P.	OF 66



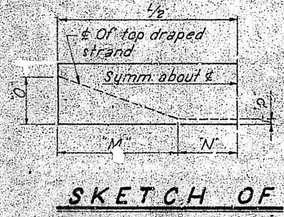
GIRDER DESIGNATION	SPAN N° AND GIRDER LOCATION	N° REQ'D.	SKEW ANGLE ∝	TOTAL GIRDER LENGTH "L"	GIRDER LENGTH ℄ BRG. "K"	SHEAR KEY SPACING "X"	SHEAR KEY SPACING Spacing "A"	SHEAR KEY SPACING "B"	SHEAR KEY SPACING Spacing "C"	SHEAR KEY SPACING "D"	STIRRUP SPACING "Y"	STIRRUP SPACING Spacing "E"	STIRRUP SPACING Spacing "F"	STIRRUP SPACING Spacing "G"	2"¢ HOLE SPACING OR INSERT SPACING "H"	2"¢ HOLE SPACING OR INSERT SPACING "J"	2"¢ HOLE SPACING OR INSERT SPACING "J"	2"¢ HOLE SPACING OR INSERT SPACING "H"	DRAPED STRANDS L/2	DRAPED STRANDS "M"	DRAPED STRANDS "N"	DRAPED STRANDS "O"	DRAPED STRANDS "P"	ESTIMATED QUANTITIES FOR ONE GIRDER: CONC. CU.YD.	½"¢ Prestressing Strands L.F.	REINFORCING STEEL #5A Bars Length	#5A Bars N° Reqd.	#4B Bars Length	#4B Bars N° Reqd.	#4C Bars Length	#4C Bars N° Reqd.	#7D Bars Length	#7D Bars N° Reqd.	WT. LB.	STRUCT. STEEL LB.	WT. TONS
W-11	SPAN N° 5W (6 5W)	1	22°58'14"	62-8¾"	61'-8¾"	1'-0⅝"	14 @ 1-2½ = 16'-11"	—	—	13'-4¾"	1'-7⅞"	13 @ 1-2½ = 15'-8½"	—	16 @ 1-9 = 28'-0"	21'-1 15/16"	—	20'-4⅞"	21'-1 15/16"	91'-4⅜"	22'-2⅜"	9'-2"	2'-11"	6"	9.03	1,256	32'-0"	4	5'-0"	86	4'-3"	43	5'-0"	8		625	62	18.3
W-12	SPAN N° 6W (1 6W)	1	18°12'46"	66'-4¼"	65'-4¼"	8⅞"	11 @ 1-2 = 12'-10"	1'-3"	4 @ 1-4¼ = 5'-5"	12'-11¼"	1'-3⅞"	11 @ 1-2 = 12'-10"	5 @ 1-4¼ = 6'-9¼"	14 @ 1-9 = 24'-6"	22'-4 7/16"	—	21'-7⅞"	22'-4 7/16"	93'-2⅝"	23'-7⅛"	9'-7"	3'-1"	6"	9.56	1,461	34'-0"	4	5'-0"	94	4'-3"	47	5'-0"	8		671	62	19.3
W-13	SPAN N° 8W (2 6W) thru (5 6W)	4	18°34'39"	66'-6"	65'-6"	9 3/16"	11 @ 1-2 = 12'-10"	1'-3"	4 @ 1-4¼ = 5'-5"	12'-11¼"	1'-4¾"	11 @ 1-2 = 12'-10"	5 @ 1-4¼ = 6'-9¼"	14 @ 1-9 = 24'-6"	22'-5"	—	21'-8"	22'-5"	93'-3"	23'-8"	9'-7"	3'-1"	6"	9.58	1,465	34'-0"	4	5'-0"	94	4'-3"	47	5'-0"	6		671	62	19.4
W-14	SPAN N° 6W (3 6W)	1	19°32'23"	66'-8⅛"	65'-8⅛"	10 3/16"	11 @ 1-2 = 12'-10"	1'-3"	4 @ 1-4¼ = 5'-5"	12'-11¼"	1'-5 13/16"	11 @ 1-2 = 12'-10"	5 @ 1-4¼ = 6'-9¼"	14 @ 1-9 = 24'-6"	22'-5 11/16"	—	21'-8¾"	22'-5 11/16"	93'-4 11/16"	23'-9 1/16"	9'-7"	3'-1"	6"	9.60	1,469	34'-0"	4	5'-0"	94	4'-3"	47	5'-0"	8		671	62	19.4
W-15	SPAN N° 7W (4 7W)	1	13°54'17"	79'-7⅝"	78'-7⅝"	8 1/16"	13 @ 1-2 = 15'-2"	1'-3⅛"	7 @ 1-4⅝ = 9'-8 3/16"	12'-11½"	1'-3 13/16"	13 @ 1-2 = 15'-2"	8 @ 1-4⅝ = 11'-1"	14 @ 1-9 = 24'-6"	20'-3 11/16"	19'-6 3/16"	19'-6 3/16"	20'-3 11/16"	39'-9 11/16"	28'-1 13/16"	11'-8"	3'-7"	10"	11.47	2,550	40'-6"	4	5'-0"	114	4'-3"	57	5'-0"	8		793	62	23.2
W-16	SPAN N° 7W (5 7W) thru (5 5W)	4	14°10'31"	79'-8¾"	78'-8¾"	9 ½"	13 @ 1-2 = 15'-2"	1'-3⅛"	7 @ 1-4⅝ = 9'-8 3/16"	12'-11½"	1'-4 3/16"	13 @ 1-2 = 15'-2"	8 @ 1-4⅝ = 11'-1"	14 @ 1-9 = 24'-6"	20'-3 11/16"	19'-6 11/16"	19'-6 11/16"	20'-3 11/16"	39'-10⅜"	28'-2⅜"	11'-8"	3'-7"	10"	11.48	2,553	40'-6"	4	5'-0"	114	4'-3"	57	5'-0"	8		793	62	23.2
W-17	SPAN N° 7W (6 7W)	1	4°31'08"	79'-10¼"	78'-10¼"	10 1/16"	13 @ 1-2 = 15'-2"	1'-3⅛"	7 @ 1-4⅝ = 9'-8 3/16"	12'-11½"	1'-5⅛"	13 @ 1-2 = 15'-2"	8 @ 1-4⅝ = 11'-1"	14 @ 1-9 = 24'-6"	20'-4 1/16"	19'-7 1/16"	19'-7 1/16"	20'-4 1/16"	39'-11⅛"	28'-3 1/16"	11'-8"	3'-7"	10"	11.50	2,557	40'-6"	4	5'-0"	114	4'-3"	57	5'-0"	8		793	62	23.3
W-18	SPAN N° 8W (3 8W)	1	9°10'11"	79'-8⅜"	78'-8⅜"	9 3/16"	13 @ 1-2 = 15'-2"	1'-3⅛"	7 @ 1-4⅝ = 9'-8 3/16"	12'-11½"	1'-4 3/16"	13 @ 1-2 = 15'-2"	8 @ 1-4⅝ = 11'-1"	14 @ 1-9 = 24'-6"	20'-3 5/16"	19'-8 3/16"	19'-6 9/16"	20'-3 5/16"	39'-10⅜"	28'-2⅜"	11'-8"	3'-7"	10"	11.48	2,552	40'-6"	4	5'-0"	114	4'-3"	57	5'-0"	8		793	62	23.2
W-19	SPAN N° 8W (4 8W) thru (5 8W)	2	9°22'41"	79'-8⅛"	78'-8⅞"	9 1/16"	13 @ 1-2 = 15'-2"	1'-3⅛"	7 @ 1-4⅝ = 9'-8 3/16"	12'-11½"	1'-4 7/16"	13 @ 1-2 = 15'-2"	8 @ 1-4⅝ = 11'-1"	14 @ 1-9 = 24'-6"	20'-3¾"	19'-6 11/16"	19'-6 11/16"	20'-3¾"	39'-10 7/16"	28'-2 7/16"	11'-8"	3'-7"	10"	11.48	2,554	40'-6"	4	5'-0"	114	4'-3"	57	5'-0"	8		793	62	23.2
W-20	SPAN N° 8W (6 8W)	1	9°32'35"	79'-9⅝"	78'-9⅝"	9 13/16"	13 @ 1-2 = 15'-2"	1'-3⅛"	7 @ 1-4⅝ = 9'-8 3/16"	12'-11½"	1'-4 3/16"	13 @ 1-2 = 15'-2"	8 @ 1-4⅝ = 11'-1"	14 @ 1-9 = 24'-6"	20'-3 15/16"	19'-6 7/8"	19'-6 7/8"	20'-3 15/16"	39'-10 7/16"	28'-2 7/16"	11'-8"	3'-7"	10"	11.49	2,556	40'-6"	4	5'-0"	114	4'-3"	57	5'-0"	8		793	62	23.3
W-21	SPAN N° 9W (9 9W) thru (5 9W)	4	5°49"	77'-11¾"	76'-11¾"	9 7/8"	12 @ 1-2 = 14'-0"	1'-3½"	8 @ 1-5 = 11'-4"	11'-6½"	1'-4 7/8"	12 @ 1-2 = 14'-0"	8 @ 1-5 = 11'-4"	14 @ 1-9 = 24'-6"	19'-10 7/16"	19'-1 7/16"	19'-1 7/16"	19'-10 7/16"	38'-11⅝"	27'-8⅞"	11'-3"	3'-7"	10"	11.23	2,342	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	8		771	62	22.7
W-22	SPAN N° 9W (6 9W)	1	6°05'19"	78'-0"	77'-0"	10"	12 @ 1-2 = 14'-0"	1'-3½"	8 @ 1-5 = 11'-4"	11'-6½"	1'-5"	12 @ 1-2 = 14'-0"	8 @ 1-5 = 11'-4"	14 @ 1-9 = 24'-6"	19'-10½"	19'-1½"	19'-1½"	19'-10½"	39'-0"	27'-8"	11'-3"	3'-7"	10"	11.23	2,342	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	8		771	62	22.7
	SPAN N° 10W (10W) thru (8 10W)	3	5°49"																																	
	SPAN N° 11W (11W) thru (8 11W)	6	5°49"																																	



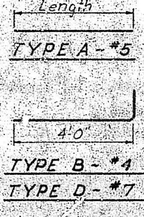
GIRDER NOTCH DETAILS



END VIEW ELEVATION



SKETCH OF DRAPED STRANDS



BAR BENDING DETAILS

AS CONSTRUCTED

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

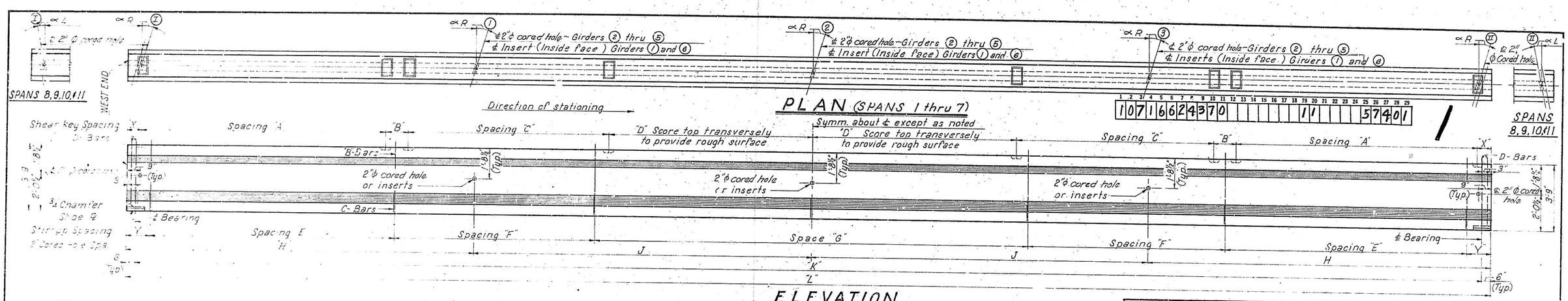
WEST BOUND BRIDGE

PRESTRESSED CONCRETE GIRDER DETAILS

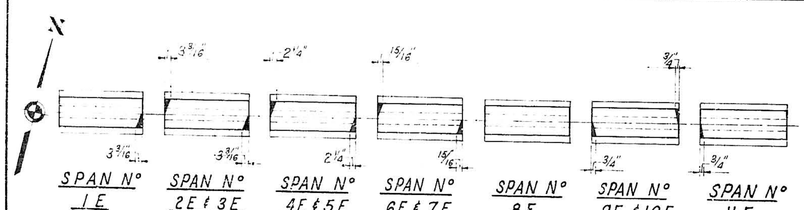
W-11 THRU W-22

GORDON WERKE, HOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

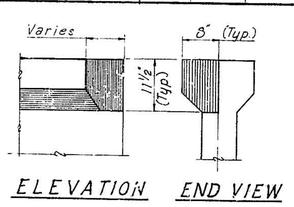
SCALE	DATE	DRAWN: R.A.L.	SHEET 42
	JULY 1969	CHECKED: L.M.D.	OF 66



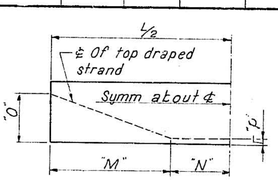
GIRDER DESIGNATION	SPAN N° AND GIRDER LOCATION	N° REQ'D.	SKEW ANGLE ∝	TOTAL GIRDER LENGTH "L"	GIRDER LENGTH c/c BRG. "K"	SHEAR KEY SPACING "X"	SHEAR KEY SPACING Spacing "A"	SHEAR KEY SPACING "B"	SHEAR KEY SPACING Spacing "C"	SHEAR KEY SPACING "D"	STIRRUP SPACING "Y"	STIRRUP SPACING Spacing "E"	STIRRUP SPACING Spacing "F"	STIRRUP SPACING Spacing "G"	2" ϕ HOLE SPACING or INSERT SPACING "H"	2" ϕ HOLE SPACING or INSERT SPACING "J"	2" ϕ HOLE SPACING or INSERT SPACING "J"	2" ϕ HOLE SPACING or INSERT SPACING "H"	DRAPED STRANDS L/2	DRAPED STRANDS "M"	DRAPED STRANDS "N"	DRAPED STRANDS "O"	DRAPED STRANDS "P"	ESTIMATED QUANTITIES FOR ONE GIRDER CONC. C.U. YD.	½" ϕ Prestressing Strands L.F.	REINFORCING STEEL #5A Bars length	#5A Bars N° Reqd.	#4B Bars length	#4B Bars N° Reqd.	#4C Bars length	#4C Bars N° Reqd.	#7D Bars length	#7D Bars N° Reqd.	WT. LB.	STRUCT. STEEL LB.	WT. TONS
E-1	SPAN N° 1E (1-1E) thru (5-1E)	8	21°41' R	63'-6"	62'-6"	10⅛"	1 @ 1'-2¼" = 16'-7½"	——	——	14'-3⅜"	1'-5¼"	13 @ 1'-2¼" = 15'-5¼"	8 @ 1'-9" = 14'-0"	1 @ 1'-9"	21'-5"	20'-8"	——	21'-5"	31'-9"	22'-7"	9'-2"	3'-1"	6"	9.14	1,272	32'-6"	4	5'-0"	68	4'-3"	44	5'-0"	8	636	62	18.5
	SPAN N° 6E (1-6E)	1	6°30'33" R																																	
	(2-6E) thru (5-6E)	4	6°40'51" R																																	
	(6-6E)	1	6°53'58" R																																	
E-2	SPAN N° 2E (1-2E) thru (6-2E)	6	21°41' R	78'-0"	77'-0"	10"	12 @ 1'-2" = 14'-0"	1'-3½"	8 @ 1'-5" = 11'-4"	11'-6½"	1'-5"	12 @ 1'-2" = 14'-0"	8 @ 1'-5" = 11'-4"	14 @ 1'-9" = 24'-6"	19'-10½"	19'-1½"	19'-1½"	19'-10½"	39'-0"	27'-9"	11'-3"	3'-7"	10"	11.23	2,342	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	8	771	62	22.7
	SPAN N° 3E (2-3E) thru (5-3E)	4	20°13'4" R																																	
	SPAN N° 4E (2-4E) thru (5-4E)	4	15°38'03" R																																	
	SPAN N° 5E (2-5E) thru (5-5E)	4	10°56'34" R																																	
	(1-8E)	1	2°16'49" L																																	
	SPAN N° 8E (2-8E) thru (5-8E)	4	2°16'45" L																																	
	(6-8E)	1	2°16'40" L																																	
	(1-9E)	1	5°36'47" L																																	
	SPAN N° 9E (2-9E) thru (5-9E)	4	5°39'57" L																																	
	(6-9E)	1	5°43'58" L																																	
	SPAN N° 10E (1-10E) thru (6-10E)	6	5°49' L																																	
	SPAN N° 11E (1-11E) thru (6-11E)	6	5°49' L																																	
E-3	SPAN N° 3E (1-3E)	1	20°06'06" R	77'-11¼"	76'-11¼"	9⅝"	12 @ 1'-2" = 14'-0"	1'-3½"	8 @ 1'-5" = 11'-4"	11'-5½"	1'-4⅝"	12 @ 1'-2" = 14'-0"	8 @ 1'-5" = 11'-4"	14 @ 1'-9" = 24'-6"	19'-10⅝"	19'-1⅝"	19'-1⅝"	19'-10⅜"	38'-11⅞"	27'-8⅝"	11'-3"	3'-7"	10"	11.22	2,340	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	8	771	62	22.7
	SPAN N° 5E (1-5E)	1	10°42'22" R																																	
E-4	SPAN N° 3E (8-3E)	1	20°22'19" R	78'-0¾"	77'-0¾"	10⅜"	12 @ 1'-2" = 14'-0"	1'-3½"	8 @ 1'-5" = 11'-4"	11'-5½"	1'-5⅜"	12 @ 1'-2" = 14'-0"	8 @ 1'-5" = 11'-4"	14 @ 1'-9" = 24'-6"	19'-10⅛"	19'-1⅛"	19'-1⅛"	19'-10⅛"	39'-0⅜"	27'-9⅜"	11'-3"	3'-7"	10"	11.24	2,344	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	3	771	62	22.8
	(1-7E)	1	2°20'41" R																																	
	SPAN N° 7E (2-7E) thru (5-7E)	4	2°24'59" R																																	
	(6-7E)	1	2°30'28" R																																	
E-5	SPAN N° 4E (1-4E)	1	15°18'58" R	77'-10½"	76'-10½"	9¼"	12 @ 1'-2" = 14'-0"	1'-3½"	8 @ 1'-5" = 11'-4"	11'-6½"	1'-4¼"	12 @ 1'-2" = 14'-0"	8 @ 1'-5" = 11'-4"	14 @ 1'-9" = 24'-6"	19'-10⅛"	19'-1⅛"	19'-1⅛"	19'-10⅛"	38'-11¼"	27'-8¼"	11'-3"	3'-7"	10"	11.21	2,338	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	8	771	62	22.7
E-6	SPAN N° 4E (3-4E)	1	16°02'14" R	78'-1⅞"	77'-1⅞"	10 15/16"	12 @ 1'-2" = 14'-0"	1'-3½"	8 @ 1'-5" = 11'-4"	11'-6½"	1'-5 15/16"	12 @ 1'-2" = 14'-0"	8 @ 1'-5" = 11'-4"	14 @ 1'-9" = 24'-6"	19'-11"	19'-1 15/16"	19'-1 15/16"	19'-11"	39'-0 15/16"	27'-9 15/16"	11'-3"	3'-7"	10"	11.26	2,347	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	8	771	62	22.8
E-7	SPAN N° 5E (6-5E)	1	11°14'36" R	78'-0 7/8"	77'-0 7/8"	10 7/16"	12 @ 1'-2" = 14'-0"	1'-3½"	8 @ 1'-5" = 11'-4"	11'-6½"	1'-5 7/16"	12 @ 1'-2" = 14'-0"	8 @ 1'-5" = 11'-4"	14 @ 1'-9" = 24'-6"	19'-10¾"	19'-1 7/16"	19'-1 7/16"	19'-10¾"	39'-0 7/16"	27'-9 7/16"	11'-3"	3'-7"	10"	11.24	2,344	39'-9"	4	5'-0"	110	4'-3"	55	5'-0"	8	771	62	22.8



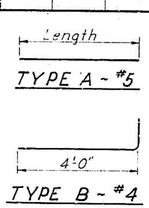
GIRDER NOTCH DETAILS

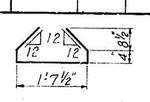


ELEVATION END VIEW



SKETCH OF DRAPED STRANDS





BAR BENDING DETAILS

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

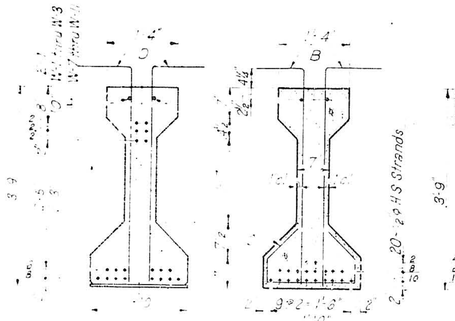
EAST BOUND BRIDGE

PRESTRESSED CONCRETE GIRDER DETAILS

E-1 THRU E-7

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.L.	SHEET 43
	JULY 1969	CHECKED: L.M.P.	OF 66

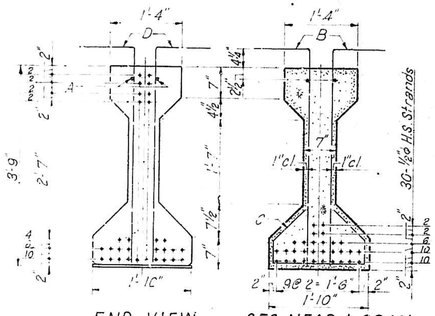


END VIEW SEC. NEAR ℄ SPAN

45-64-20 ~ E-1

45-63-20 ~ W-1, W-2, W-9, W-11

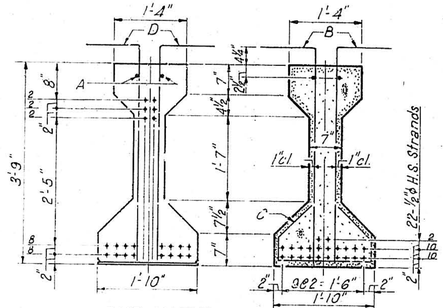
45-62-20 ~ W-3, W-7, W-8, W-10



END VIEW SEC. NEAR ℄ SPAN

E-2 thru E-7, W-4 thru W-6, W-21 & W-22

45-78-30

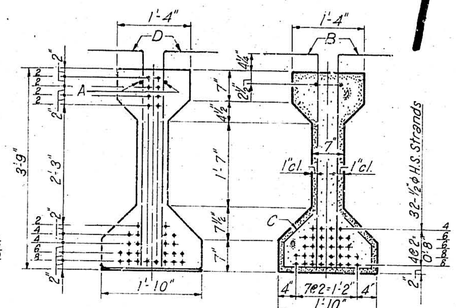


END VIEW SEC. NEAR ℄ SPAN

45-66-22 ~ W-12

45-67-22 ~ W-13 & W-14

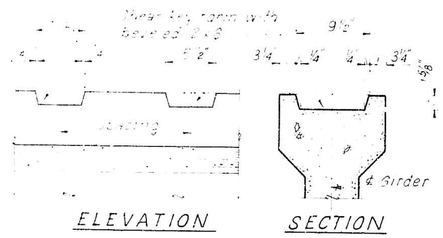
STRAND PATTERNS



END VIEW SEC. NEAR ℄ SPAN

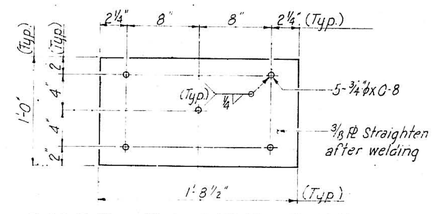
W-15 thru W-20

45-80-32

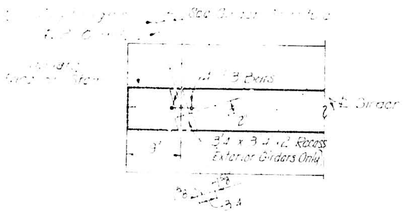


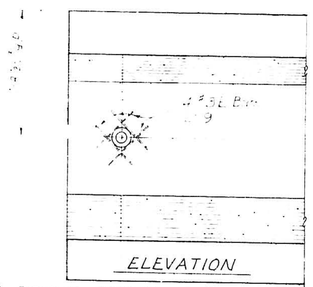
ELEVATION SECTION

SHEAR KEY DETAIL



SHOE PLATE DETAIL





EAST BOUND BRIDGE - Total Recesses Reqd = 22

Girder N°1, Spans 1E thru 11E - North side of Girder

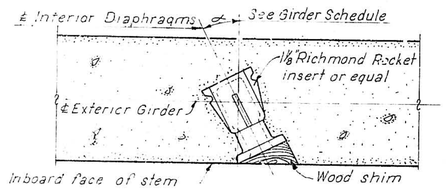
Girder N°6, Spans 1E thru 11E - South side of Girder

WEST BOUND BRIDGE - Total Recesses Reqd = 24

Girder N°1, Spans 1W thru 11W - South side of Girder

Girder N°6, Spans 1W thru 11W - North side of Girder

END DIAPHRAGM RECESS DETAIL



EAST BOUND BRIDGE - Total Reqd. = 62

Girder N°1, Spans 1E thru 11E - South side of Girders

Girder N°6, Spans 1E thru 11E - North side of Girders

WEST BOUND BRIDGE - Total Reqd. = 60

Girder N°1, Spans 1W thru 11W - North side of Girders

Girder N°6, Spans 1W thru 11W - South side of Girders

Note: Cost of inserts & ¾ø E Bars to be included in the unit price bid for 46 (each) girders

INSERT DETAIL

GIRDER NOTES

1. Pretensioned Girders shall be manufactured without end blocks
2. All workmanship and materials shall conform to the New Mexico State Highway Commission Specifications.
3. All exposed corners shall be chamfered ¾" or rounded to ¾" radius. Angles of intersection between flanges and webs shall be rounded to not less than ¾" radius.
4. Stirrups may be welded into a cage at the fabricators option. Stirrup spacing bars may be used subject to approval by the Engineer. No extra payment will be allowed for stirrup spacing bars, cost of same to be included in bid price.
5. Girder shall be provided with cast-in eyes or other anchors to recieve lifting devices. Lifting eyes and devices shall be designed by the Contractor and submitted for the Engineer's approval prior to casting girders. Girders shall be cast, lifted, stored, hauled and installed in an upright position.
6. Prestressing tendons for pretensioned girders shall consist of high-tensile strength seven-wire steel strands conforming to requirements of New Mexico State Highway Commission Specifications. Details of hold downs for draped strands shall be submitted to the Engineer for approval prior to their use.
   Prestressing tendons for post-tensioned girders may consist of either high-tensile strength seven wire steel strands, high-tensile strength steel wires in parallel assemblies or high-tensile strength alloy steel bars installed, tensioned, anchored and grouted as provided in the New Mexico State Highway Commission Specifications.
7. All mild steel reinforcing bars shall be deformed bars, intermediate grade. All dimensions refer to centerline of bar unless otherwise noted.
8. Cost of prestressing tendons, anchors, conduits, reinforcing bars and structural steel items embedded in the girders shall be included in the unit price bid for each girder.
9. Post tensioned girders may be used. Should the contractor elect to use this method, he must submit design calculations and details for approval. Post tensioned girders shall have end blocks.
10. ½" DIA. Seven-wire high-tensile strength prestressing strands having properties other than those shown in Design Data may be used. Should the contractor elect to use such strands, the number of strands per girder and the strand pattern will be redetermined on the basis of strand strength. The new design to be prepared by the contractor and submitted for approval.
11. Type III cement may be used at the fabricaters option without obtaining written permission from the Engineer.
12. All holes in outside face of exterior girders to be packed w/ non-shrink matching grout.

DESIGN DATA

Design according to A.A.S.H.O. Specifications, 1965 with subsequent amendments and additions thereto.

Design based on pretensioned beams with ½" Dia. high-tensile strength seven wire steel strand.

Design Stresses:

GIRDERS - W-1 thru W-14; W-21 & W-22; & E-1 thru E-7

f'c = 5,000 #/□", Minimum cylinder strength of concrete at time of prestressing, f'ci = 4,500 #/□"

GIRDERS - W-15 thru W-20

f'c = 5,550 #/□", Minimum cylinder strength of concrete at time of prestressing, f'ci = 4,700 #/□"

Initial prestress = 28,910 # per strand. n = 6

For Reinforcing bars: fs = 20,000 #/□" fs = 41,300 #/ strand

Design provides for 15 #/□' future wearing surface

Live Load: H.S 20-44 Loading

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

1 0 7 1 6 6 2 4 4 7 0 | | | | | | | 1 2 | | | | | 5 7 4 0 1

ALBUQUERQUE NEW MEXICO

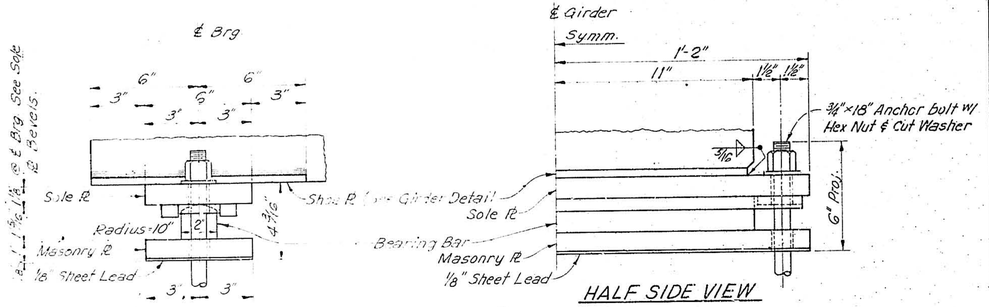
GRAND AVENUE OVERPASS

W.B. & E.B. BRIDGES

PRESTRESSED CONCRETE GIRDER DETAILS AND GENERAL NOTES

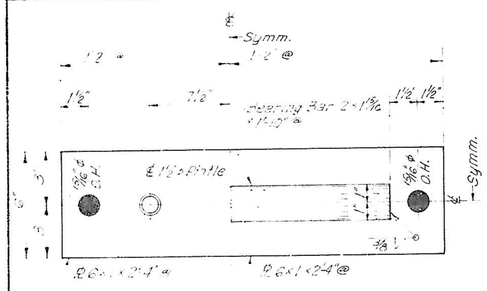
GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.L.	SHEET 44
	JULY 1969	CHECKED: L.M.P	OF 66



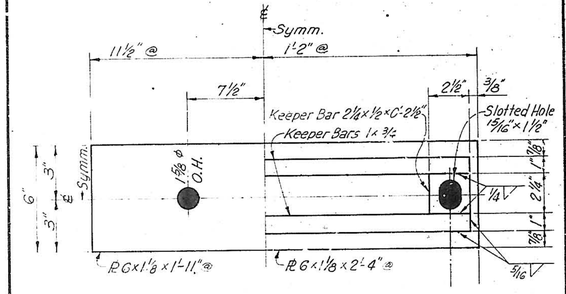
72 REQ'D. - W.B. BRIDGE
66 REQ'D. - E.B. BRIDGE
TOTAL Nº REQ'D. = 138

DETAILS OF FIXED SHOE ASSEMBLY



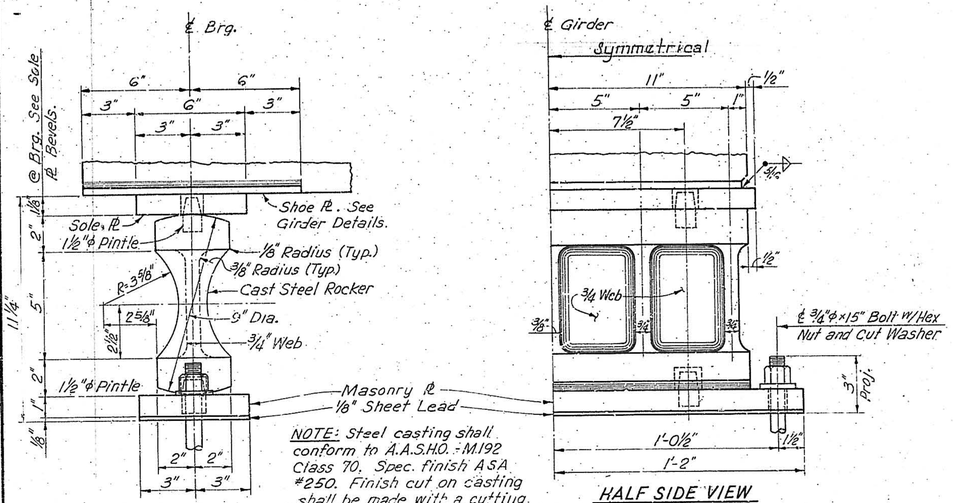
EXPANSION SHOE FIXED SHOE

HALF PLAN - MASONRY Pl's



EXPANSION SHOE FIXED SHOE

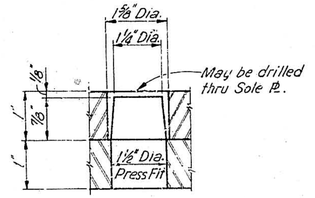
HALF PLAN - SOLE Pl's



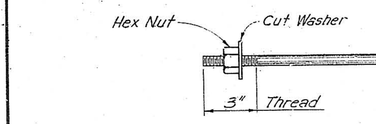
NOTE: Steel casting shall conform to A.A.S.H.O. - M192 Class 70. Spec. finish ASA #250. Finish cut on casting shall be made with a cutting tool, not a grinder.

72 REQ'D. - W.B. BRIDGE
66 REQ'D. - E.B BRIDGE
TOTAL Nº REQ'D. = 138

DETAILS OF EXPANSION SHOE ASSEMBLY



1½" ϕ PINTLE DETAIL



ANCHOR BOLT DETAIL

(See Shoe Assembly Details for lengths)
2 REQ'D. per Assembly

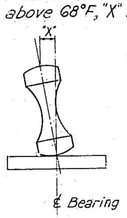
GIRDER SHOE NOTES

FABRICATION

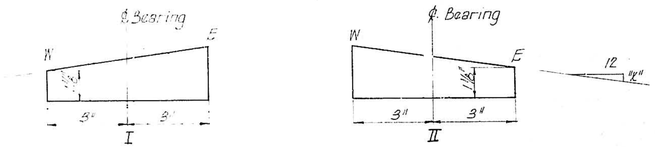
1. All plates and bars shall be flat and free from edge burrs. Straighten after welding if necessary.
2. Paint all structural steel members with one field coat of red lead and linseed oil and two field coats of aluminum paint. Omit paint on contact surfaces and surfaces embedded in concrete. No increase in the computed pay weight for structural steel will be made for paint.
3. All parts shown as steel castings may be fabricated from structural steel weldments at the option of the Contractor subject to approval by the Engineer. No increase in pay weight will be allowed.

ASSEMBLY

1. All members shall be shop fitted and assembled.
2. Each unit shall be clearly marked with shoe assembly designation.
3. Shoe assemblies shall be placed and bolted before placing girder and field welding.
4. Sole plates shall not be welded to shoe plates until all setting adjustments have been made and accepted by the Engineer.
5. Bearings shall be carefully set level transversely to avoid excessive local pressure at side of girder bearing.
6. Expansion rockers for shoe assemblies shall be vertical @ 68°F and shall be tipped at other temperatures as indicated by table below. For temperatures lower than 68°F, "X" is measured toward the center of the span. For temperatures above 68°F, "X" is measured away from the center of the span.



Location	"X" per 10°F (From 68°F)
@ (Aw) & (Bw)	0.0414"
@ (Bw) thru (Lw)	0.0414"
@ (Ae) & (Be)	0.0419"
@ (Me) & (Ne)	0.0419"
@ (Mw) & (Nw)	0.0440"
@ (Cw) & (Dw)	0.0516"
@ (Jw) thru (Xw)	0.0516"
@ (Ce) thru (Le)	0.0516"
@ (De) thru (Ee)	0.0516"
@ (Dw) & (Pw)	0.0527"



	Span Nº	GIRDER Nº AND LOCATION	"X"
I	1E	Girders Nº 1 and Nº 2	7/16
		Girders Nº 3 thru Nº 6	13/16
	2E	Girders Nº 1 and Nº 2	7/16
		Girders Nº 3 thru Nº 6	13/16
	3E	Girders Nº 1 and Nº 2	¾
		Girders Nº 3 thru Nº 6	11/16
	4E	Girders Nº 1 thru Nº 5	½
		Girder Nº 6	9/16
	5E	Girders Nº 1 thru Nº 6	5/16
	6E	Girders Nº 1 thru Nº 6	⅛
II	7E	Girders Nº 1 thru Nº 6	11/16
	8E	Girder Nº 1	5/16
		Girders Nº 2 thru Nº 6	¼
	9E	Girders Nº 1 thru Nº 4	½
		Girders Nº 5 and Nº 6	7/16
	10E	Girders Nº 1 thru Nº 6	⅜
	11E	Girders Nº 1 thru Nº 6	⅜

	Span Nº	GIRDER Nº AND LOCATION	"X"
I	1W	Girders Nº 1 and Nº 2	7/16
		Girders Nº 3 thru Nº 6	13/16
	2W	Girders Nº 1 thru Nº 6	13/16
	3W	Girders Nº 1 thru Nº 5	11/16
		Girder Nº 6	5/16
	3AW	Girders Nº 1 thru Nº 4	9/16
		Girders Nº 5 and Nº 6	½
	4W	Girders Nº 1 and Nº 2	7/16
		Girders Nº 3 thru Nº 6	3/16
	5W	Girders Nº 1 thru Nº 6	¼
	6W	Girders Nº 1 thru Nº 6	⅛
II	7W	Girders Nº 1 thru Nº 6	1/16
	8W	Girders Nº 1 thru Nº 5	¼
		Girder Nº 6	9/16
	9W	Girders Nº 1 thru Nº 3	7/16
		Girders Nº 3 thru Nº 6	5/16
	10W	Girders Nº 1 thru Nº 6	9/16
	11W	Girders Nº 1 thru Nº 6	5/16

FIXED SHOE ASSEMBLY LOCATIONS

West Bound Bridge Bearing Lines	(Aw)	(Cw)	(Ew)	(Gw)	(Iw)	(Kw)	(Mw)	(Pw)	(Rw)
	(Tw)	(Vw)	(Xw)						
East Bound Bridge Bearing Lines	(Ae)	(Ce)	(Ee)	(Ge)	(Ke)	(Me)	(Pe)	(Re)	(Te)
	(Ve)	(Xe)							

EXPANSION SHOE ASSEMBLY LOCATIONS

West Bound Bridge Bearing Lines	(Bw)	(Dw)	(Fw)	(Hw)	(Jw)	(Lw)	(Nw)	(Ow)	(Qw)
	(Sw)	(Uw)	(Ww)						
East Bound Bridge Bearing Lines	(Be)	(De)	(Fe)	(Je)	(Le)	(Ne)	(Oe)	(Qe)	(Se)
	(Ue)	(We)							

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

1 0 7 1 6 6 2 4 5 7 0 1 1 5 7 4 0 1

ALBUQUERQUE NEW MEXICO

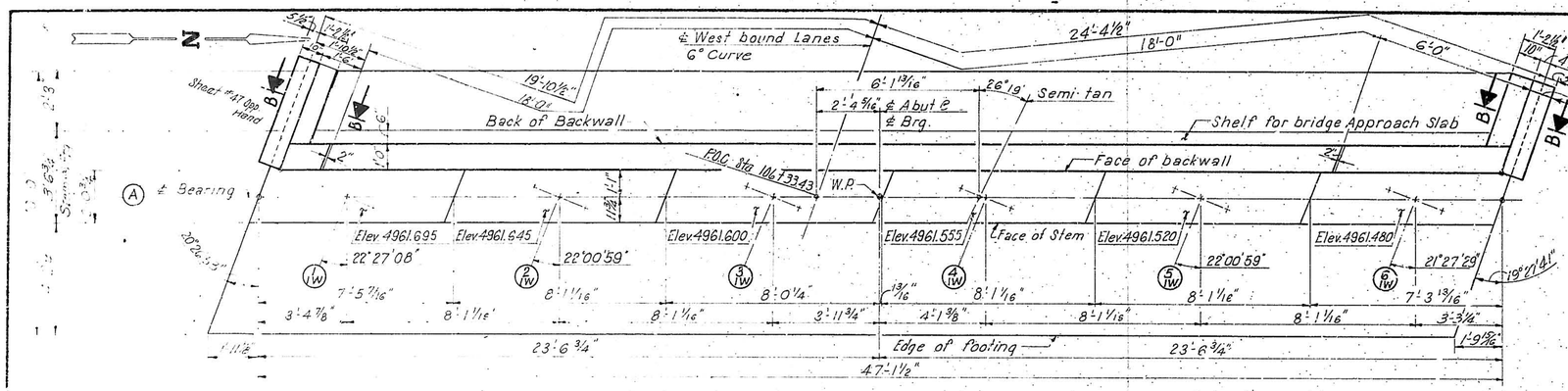
GRAND AVENUE OVERPASS

W.B. & E.B. BRIDGES

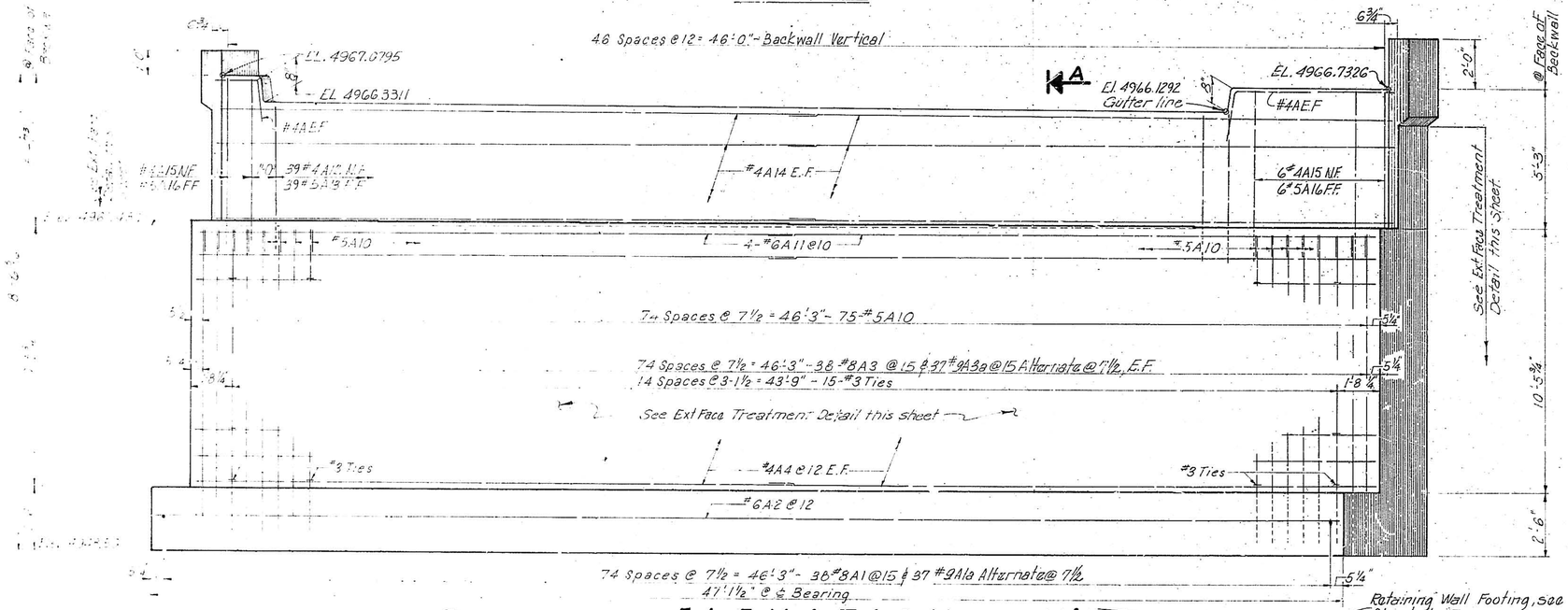
BEARING DETAILS.

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

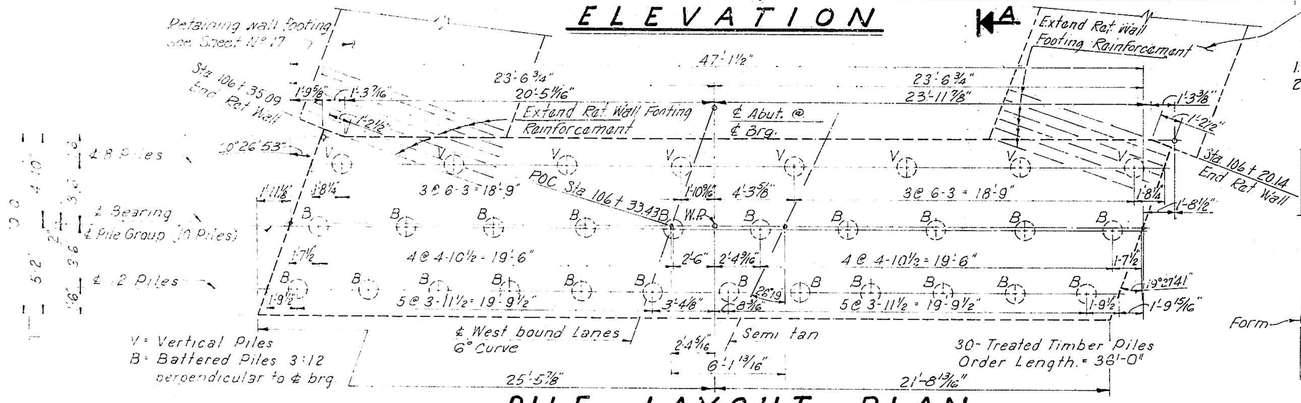
SCALE	DATE	DRAWN: R.D.M.	SHEET 45
	JULY 1969	CHECKED: L.W.P.	OF 66



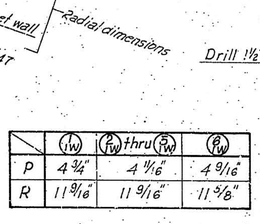
PLAN



ELEVATION



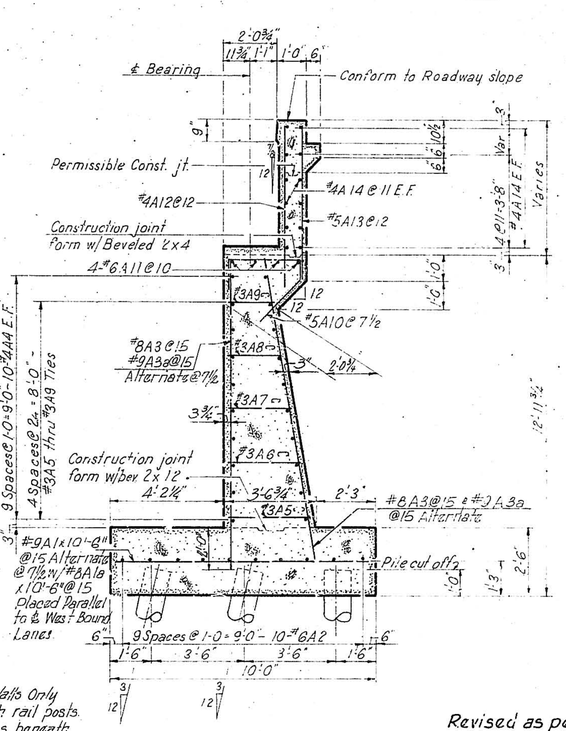
PILE LAYOUT PLAN



	1W	2W thru 5W	6W
P	4¾"	4 1/16"	4 9/16"
R	11 9/16"	11 9/16"	11 5/8"

ANCHOR BOLT LAYOUT PLAN

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	0	7	1	6	6	2	4	6	7	0								1	1					5	7	4	0	1



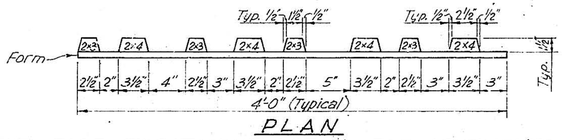
SECTION A-A

Revised as per Addendum No 1

Retaining Wall Footing, see Sheet No. 17

Notes:
Ext. Face Treatment - Retaining Walls Only
1. 2"x 4" Depression to be aligned with rail posts.
2. Inside surfaces of 2"x4" Depressions beneath rail posts to be painted black or charcoal gray with Super-color coat as specified under section 70c of the specifications.

PART ELEVATION



PLAN

EXT. FACE TREATMENT DETAIL FOR ABUTMENTS AND RETAINING WALLS

NOTE: 1. See Sheet No 47 for Wingwall Sections.
2. See Sheet No 17 for offsets to outside face of abutment walls.
3. All reinforcing bars extending into the footing shall be in place prior to placing concrete in footing.

ALBUQUERQUE NEW MEXICO

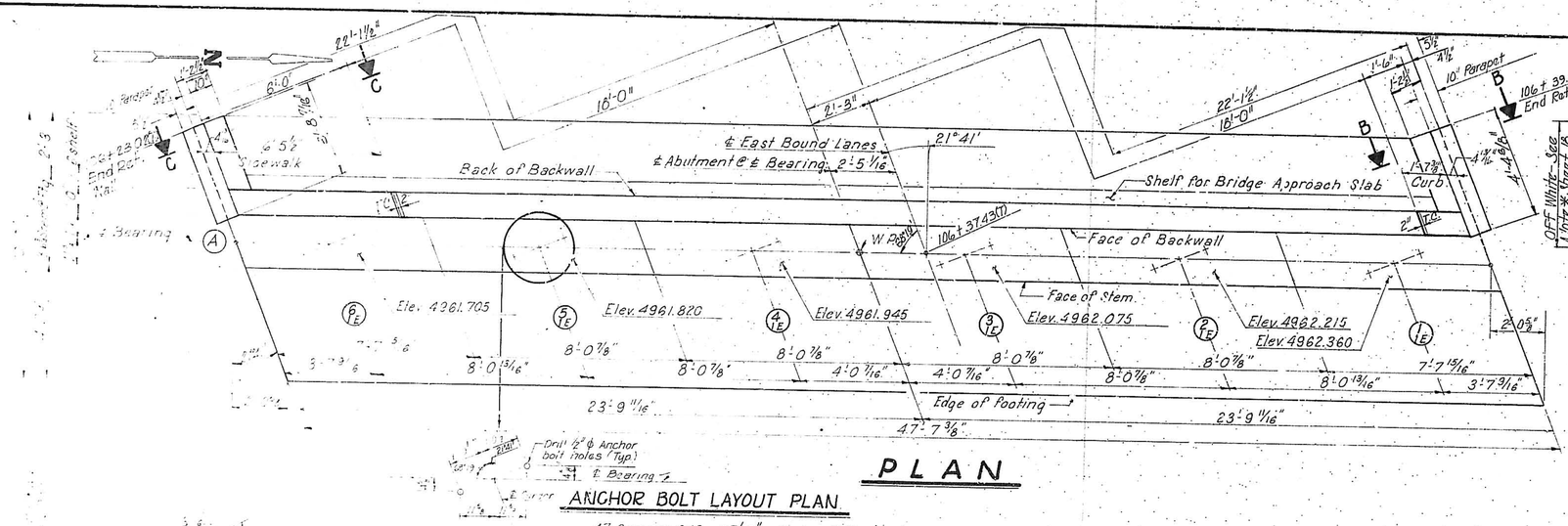
GRAND AVENUE OVERPASS

WEST BOUND BRIDGE

ABUTMENT No 1

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO

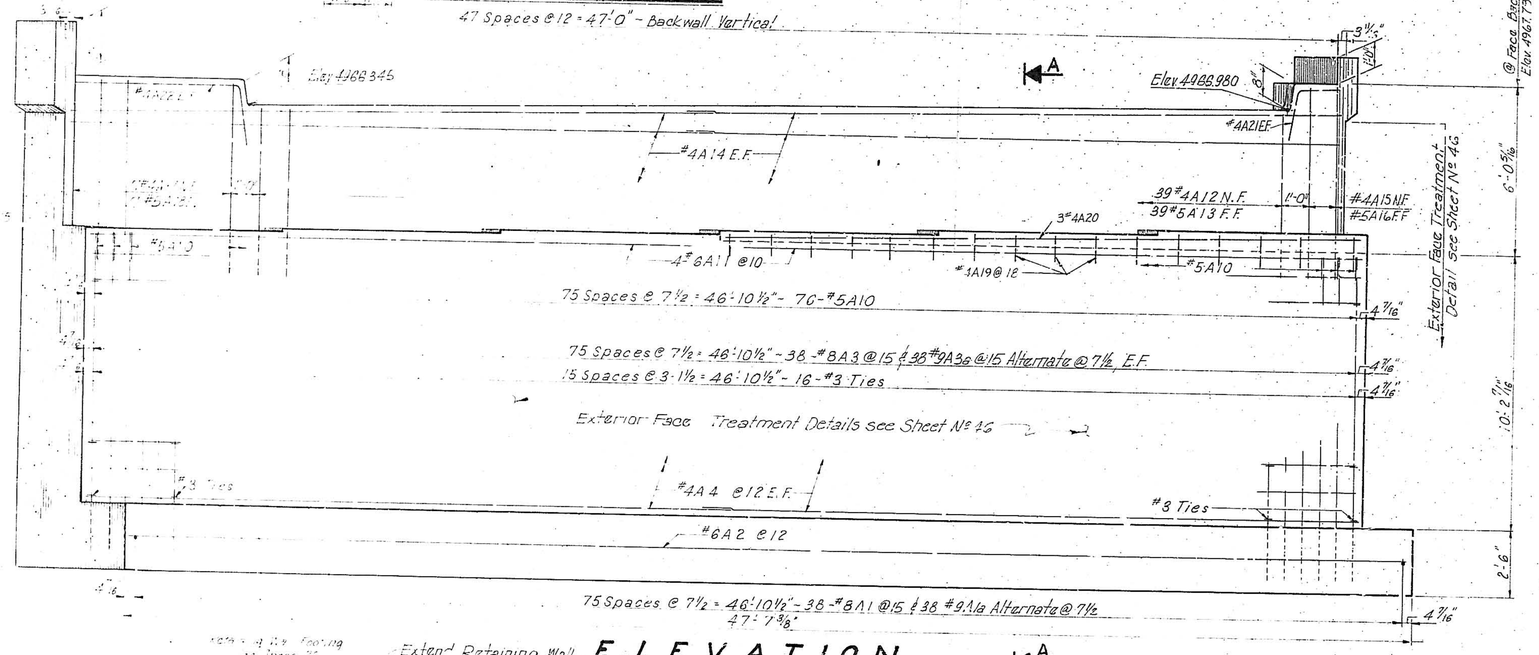
SCALE	DATE	DRAWN: R.A.L.	SHEET 46
	JULY 1969	CHECKED L.W.P.	OF 66



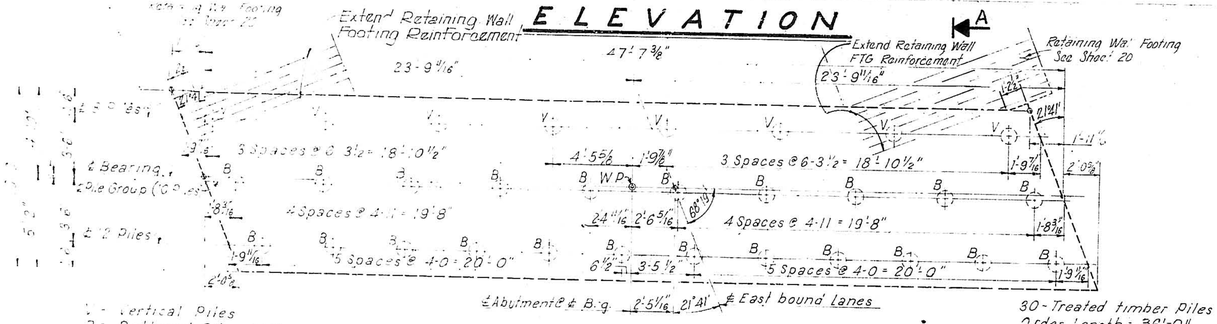
PLAN

ANCHOR BOLT LAYOUT PLAN

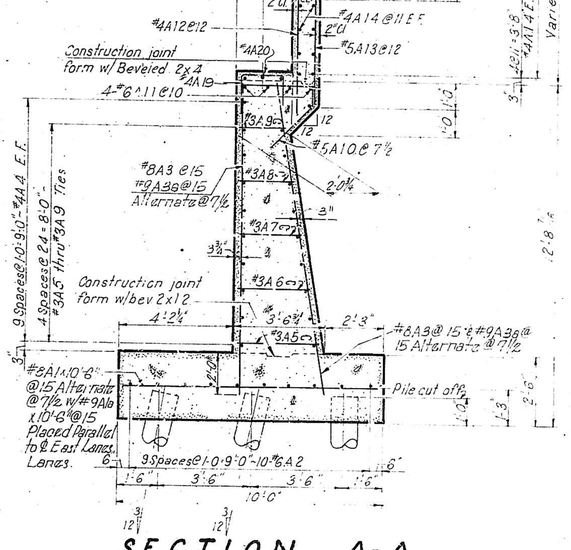
47 Spaces @ 12 = 47'-0" - Backwall Vertical



ELEVATION



PILE LAYOUT PLAN



NOTE: 1. All reinforcing bars extending into the footing shall be in place prior to placing concrete in footing.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

1 0 7 1 6 6 2 4 7 7 0 | | | | | | | | | | 1 1 | | | | | 5 7 4 0 1

Revised as per Addendum No 1

ALBUQUERQUE NEW MEXICO

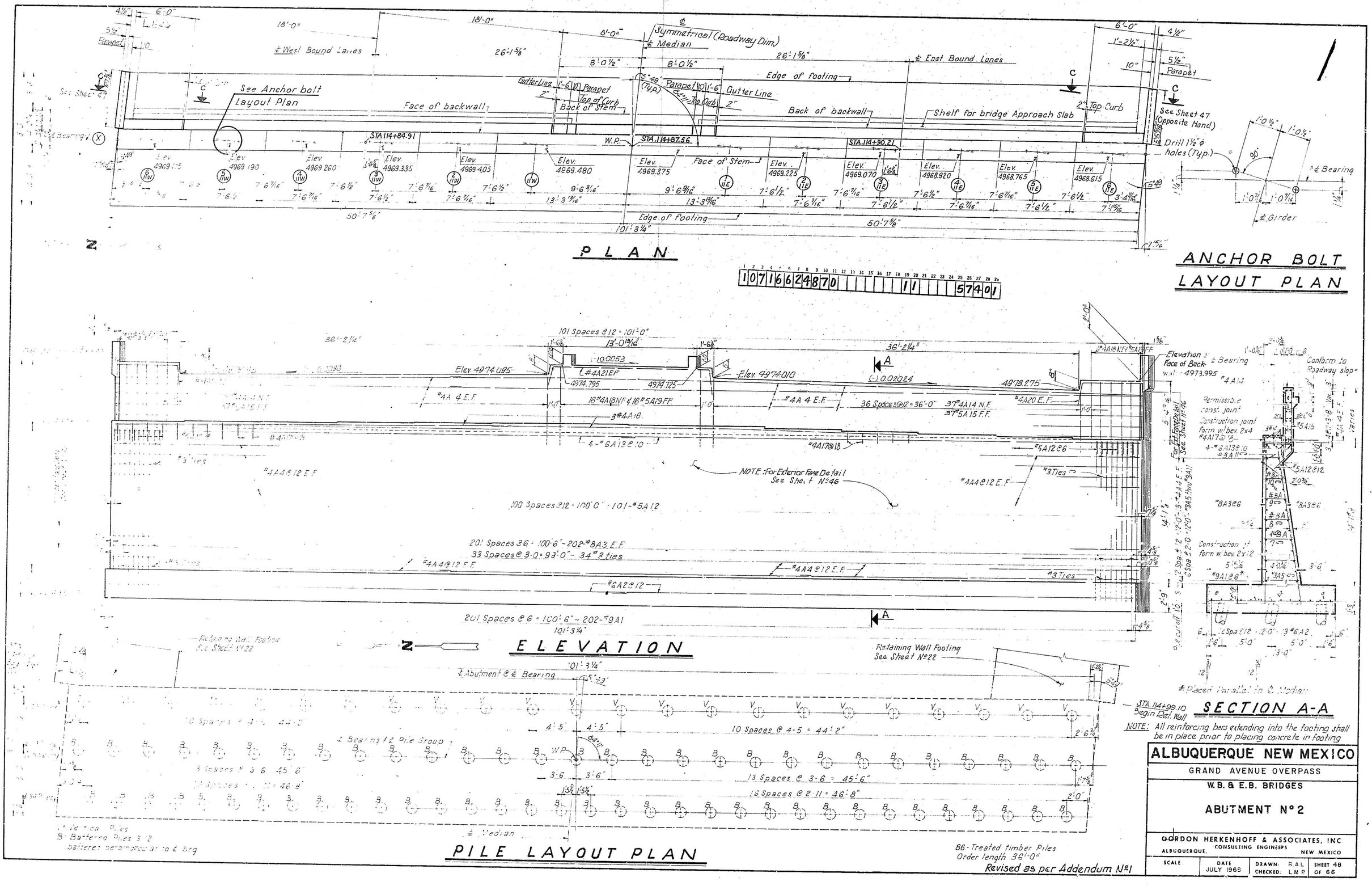
GRAND AVENUE OVERPASS.

EAST BOUND BRIDGE

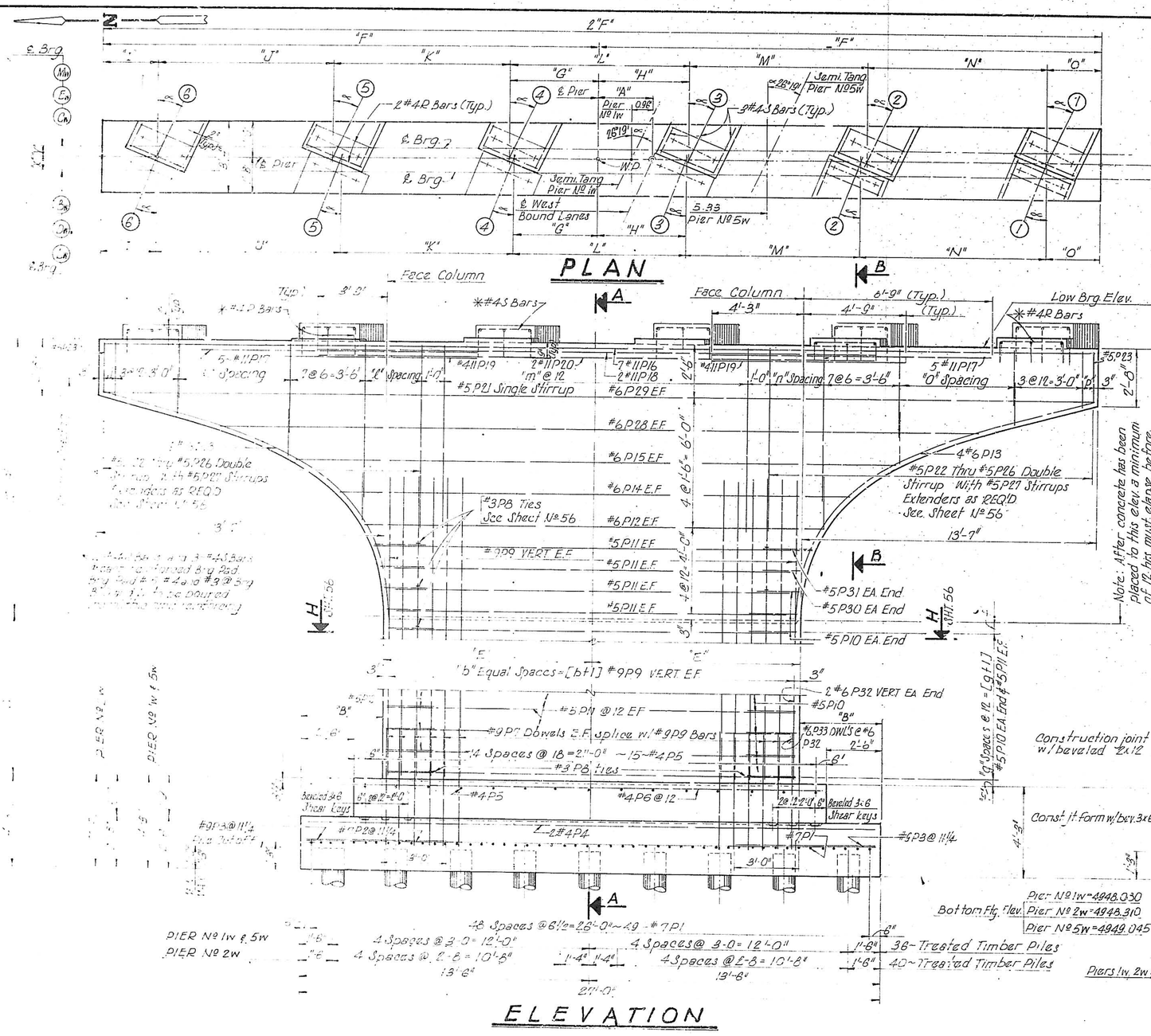
ABUTMENT No 1

GORDON HERKENHOFF & ASSOCIATES, INC.
ALBUQUERQUE CONSULTING ENGINEERS NEW MEXICO

SCALE	DATE	DRAWN R.A.L.	SHEET 47
	JULY 1969	CHECKED L.M.P.	OF 66



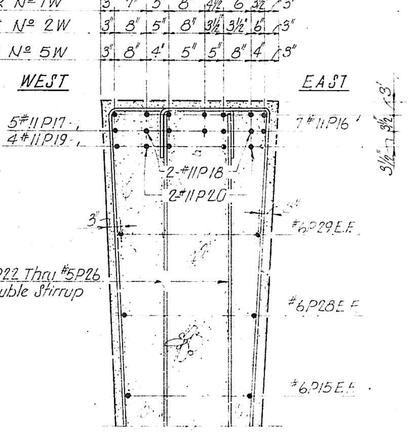
ALBUQUERQUE NEW MEXICO	
GRAND AVENUE OVERPASS	
W.B. & E.B. BRIDGES	
ABUTMENT No 2	
GORDON HERKENHOFF & ASSOCIATES, INC ALBUQUERQUE, CONSULTING ENGINEERS NEW MEXICO	
SCALE	DATE JULY 1965
DRAWN: R.A.L. CHECKED: L.M.P.	SHEET 48 OF 66



	LOCATION	PIER 1w	PIER 2w	PIER 5w
STEM REINF. SPACING DIM.	"b" Spacing	26 @ 8 1/16 (-) = 16'-9 5/8"	29 @ 8 3/16 (-) = 19'-9 3/8"	26 @ 8 3/16 (-) = 17'-8 3/4"
	"F" Space	None	6"	4 1/16"
	"g" Spacing	None	4 @ 12 = 4'-0"	13 @ 12 = 13'-0"
	℄ F	46'-5 5/8"	47'-5 3/8"	45'-4 3/4"
CAP STIRRUP SPACING DIM.	"j" Space	6 1/8"	1'-0 1/16"	8 15/16"
	"k" Spacing	5 @ 12 9/16 = 5'-2 7/8"	5 @ 13 1/16 = 5'-5 3/8"	5 @ 12 11/16 = 5'-0 3/8"
	"ℓ" Spacing	7 @ 6 1/4 = 3'-7 1/8"	5 @ 6 = 2'-6"	6 @ 6 1/2 = 3'-3 1/16"
	"m" Spacing	12 @ 12 = 12'-0"	14 @ 12 = 14'-0"	12 @ 12 = 12'-0"
	"n" Spacing	7 @ 6 = 3'-5 1/16"	5 @ 6 1/16 = 2'-6 5/16"	6 @ 6 1/2 = 3'-3"
	"o" Spacing	5 @ 12 5/16 = 5'-3 9/16"	5 @ 12 13/16 = 5'-4"	5 @ 12 1/16 = 5'-0 3/4"
	"p" Space	10 3/16"	1'-0 1/16"	6 7/8"

NOTE: All reinforcing bars extending into the footing shall be in place prior to placing concrete in footing.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	0	7	1	6	6	2	4	9	7	0							1	1	1					5	7	4	0	1



PIER DIMENSIONS

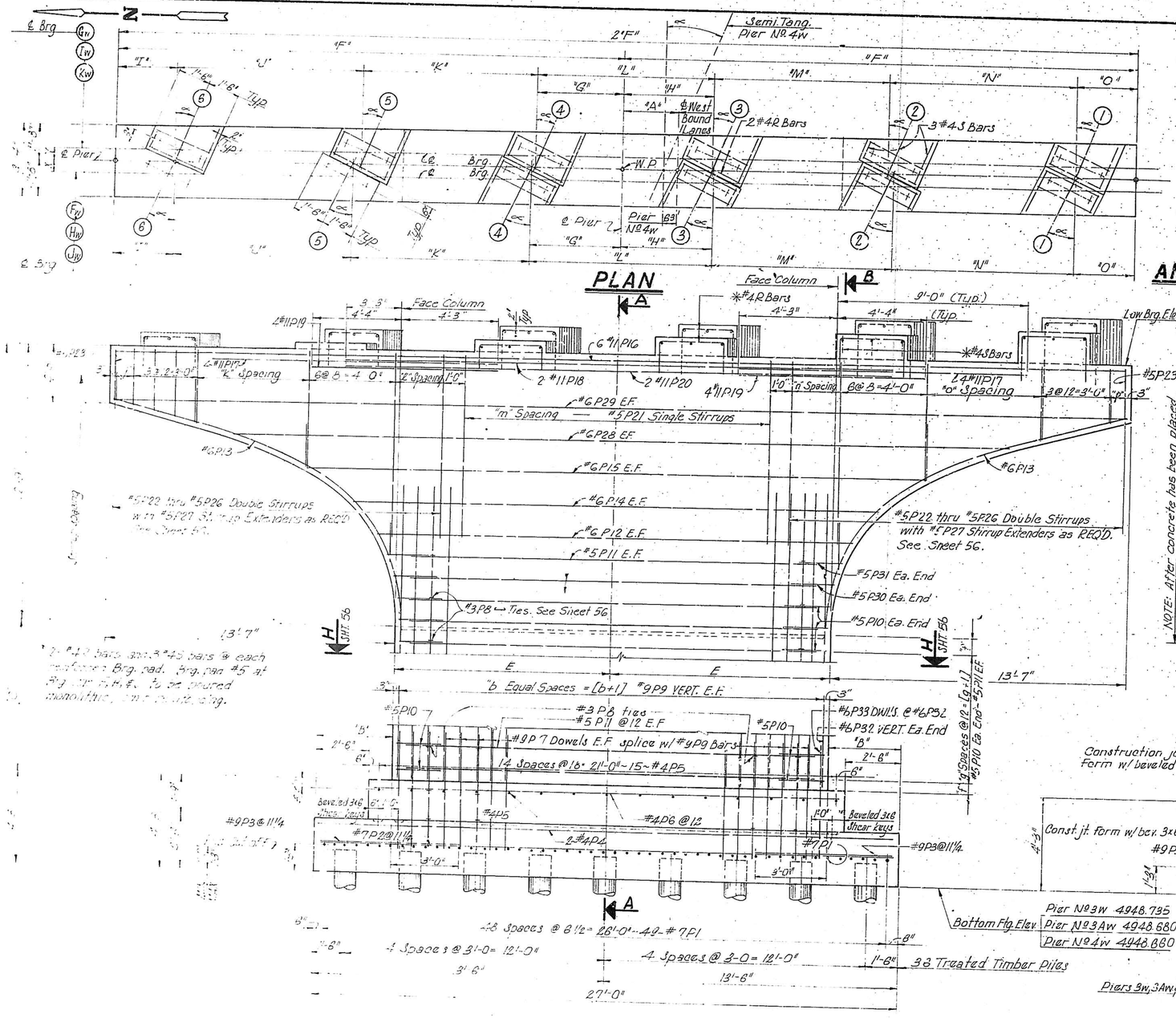
LOCATION	FOOTING A	FOOTING B	STEM C	STEM D	STEM E	STEM F	STEM X	STEM Y	PIER CAP BRG.	G	H	I	J	K	L	M	N	O
PIER 1w	2-3 5/16	3-10 9/16	3-0	11-0	9-7 13/16	23-2 3/16	6'-0"	8'-0"	Brg 1	4-1 3/4	3-11 9/16	2-3 1/16	8-8 7/16	8-1 11/16	8-1 1/16	8-1 11/16	8-7 13/16	2-7 3/16
									Brg 2	4-1 3/4	3-11 5/16	2-3 1/16	8-3 7/16	8-3 7/16	8-3 7/16	8-3 7/16	8-3 7/16	2-7 3/16
PIER 2w	2-6 1/16	3-4 5/8	5-0	22-0	10-1 1/16	23-8 1/16	6'	8'	Brg 1	4-1 3/4	4-2 1/8	2-9 11/16	8-5 3/16	8-3 7/16	8-3 7/16	8-3 7/16	8-5	2'-9 1/16
									Brg 2	4-2 9/16	4-2 9/16	2-9 11/16	8-4 7/16	8-4 3/16	8-4 3/16	8-4 3/16	8-4 7/16	2'-9 1/16
PIER 5w	2-8 1/4	4-4 5/8	3-9	30-9	9-1 3/16	22-8 3/16	7'-9 1/16	8' 7/8	Brg 1	3-11 7/16	4-1 3/4	2-5 15/16	8-1 3/16	8-1 3/16	8-1 7/16	8-1 3/16	8-1 3/16	2-3 7/16
									Brg 2	3-9 1/16	4-1 1/4	2-5 15/16	8-5 13/16	7-10 5/16	7-10 5/16	7-10 1/16	8-4 1/16	2-3 7/16

BEARING SEAT ELEVATIONS & DIMENSIONS

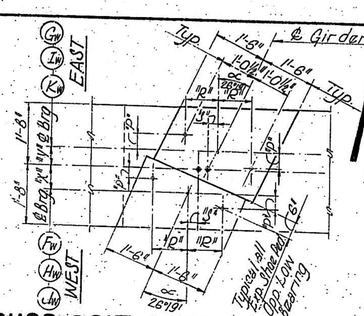
Revised as per Addendum Nº 1

	⑥ ANGLE	⑥ ELEV.	⑥ "P"	⑥ "R"	⑥ "S"	⑤ ANGLE	⑤ ELEV.	⑤ "P"	⑤ "R"	⑤ "S"	④ ANGLE	④ ELEV.	④ "P"	④ "R"	④ "S"	③ ANGLE	③ ELEV.	③ "P"	③ "R"	③ "S"	② ANGLE	② ELEV.	② "P"	② "R"	② "S"	① ANGLE	① ELEV.	① "P"	① "R"	① "S"
PIER 1w	21°27'29"	65.080	4 9/16	11 9/16	3 1/2	21°00'59"	65.155	4 9/16	11 9/16	3 1/2	20°00'58"	65.235	4 9/16	11 9/16	3 1/2	20°00'58"	65.315	4 3/4	11 9/16	3 1/2	20°00'58"	65.395	4 11/16	11 9/16	3 1/8	22°07'08"	65.490	4 3/4	11 9/16	3 9/16
	25°36'48"	65.790	5 3/8	11 1/4	2 7/8	25°40'51"	65.885	5 7/16	11 1/4	2 7/8	25°40'51"	65.940	5 7/16	11 1/4	2 7/8	25°40'51"	66.025	5 5/16	11 1/4	2 7/8	25°40'51"	66.110	5 5/16	11 1/4	2 7/8	25°44'48"	66.200	5 5/16	11 1/4	2 7/8
PIER 2w	25°35'49"	70.310	5 3/8	11 1/4	2 7/8	25°40'51"	70.430	5 7/16	11 1/4	2 7/8	25°40'51"	70.580	5 7/16	11 1/4	2 7/8	25°40'51"	70.700	5 5/16	11 1/4	2 7/8	25°40'51"	70.850	5 5/16	11 1/4	2 7/8	25°44'48"	71.015	5 5/16	11 1/4	2 7/8
	26°19'	70.990	5 9/16	11 9/16	3 1/16	26°19'	71.095	5 9/16	11 3/16	3 1/16	26°19'	71.230	5 9/16	11 3/16	3 1/16	26°19'	71.370	5 9/16	11 9/16	3 1/16	26°19'	71.520	5 9/16	11 3/16	3 1/16	26°19'	71.685	5 5/16	11 3/16	3 1/16
PIER 5w	22°58'14"	79.795	4 7/16	11 1/16	3 1/16	22°27'58"	80.075	4 3/16	11 9/16	3	21°27'58"	80.350	4 3/16	11 9/16	3	21°27'58"	80.625	4 3/16	11 9/16	3	22°27'58"	80.895	4 3/16	11 9/16	3	22°03'58"	81.165	4 7/16	11 9/16	2 15/16
	19°02'28"	80.405	4 7/16	11 9/16	2 9/16	18°34'39"	80.695	4	11 7/16	2 5/16	18°34'39"	80.985	4	11 7/16	2 5/16	18°34'39"	81.230	4	11 7/16	2 5/16	18°34'39"	81.495	4	11 7/16	2 5/16	18°12'48"	81.790	3 15/16	11 7/16	2 1/4

CITY	ALBUQUERQUE NEW MEXICO
PROJECT	GRAND AVENUE OVERPASS
	WEST BOUND BRIDGE
TITLE	PIER DETAILS Nº 1W, 2W, & 5W
ENGINEERS	GORDON HERKENHOFF & ASSOCIATES, INC. ALBUQUERQUE CONSULTING ENGINEERS NEW MEXICO
SCALE	
DATE	JULY 1969
DRAWN	R.A.G.
CHECKED	L.M.P.
SHEET	49 OF 66



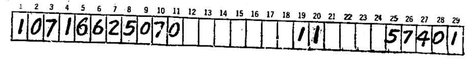
2-#4 bars and 3-#4S bars @ each footing Brg. pad. Brg. pad #5 at Brg. pt. F.H.E. to be poured monolithic with footing.



ANCHOR BOLT LAYOUT PLAN

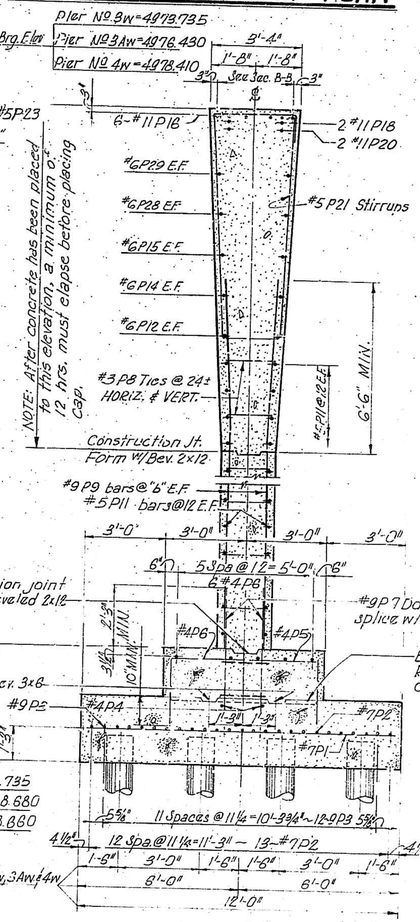
	LOCATION	PIER 3W	PIER 3AW	PIER 4W
STEM REINF. SPACING & DIM.	"b" Spacing	29@8 3/16" = 19'-9 3/16"	29@8 3/16" = 19'-9 3/16"	28@8 3/16" = 19'-0 1/4"
	"F" Space	8"	4 1/2"	4 1/2"
	"g" Spacing	7@12 = 7'-0"	10@12 = 10'-0"	12@12 = 12'-0"
	"Z"	47'-5 3/8"	47'-5 3/8"	46'-6 1/4"
CAP STIRRUPS SPACING & DIM.	"j" Space	1'-0 11/16"	1'-0 11/16"	0-10 1/4"
	"k" Spacing	4@15 5/8" = 5'-2 7/16"	4@15 5/8" = 5'-2 7/16"	4@16 = 5'-4"
	"l" Spacing	3@8 7/8" = 2'-2 9/16"	3@8 7/8" = 2'-2 9/16"	4@9 = 2'-11 5/16"
	"m" Spacing	4@12 = 14'-0"	14@12 = 14'-0"	12@12 = 12'-0"
	"n" Spacing	3@8 7/8" = 2'-2 9/16"	3@8 7/8" = 2'-2 9/16"	5@8 7/8" = 3'-3 1/16"
	"o" Spacing	4@15 5/8" = 5'-0 7/8"	4@15 5/8" = 5'-2 7/16"	4@15 = 5'-0"
	"p" Space	1'-0 7/16"	1'-0 11/16"	0-8 1/16"

NOTE: All reinforcing bars extending into the footing shall be in place prior to placing concrete in footing

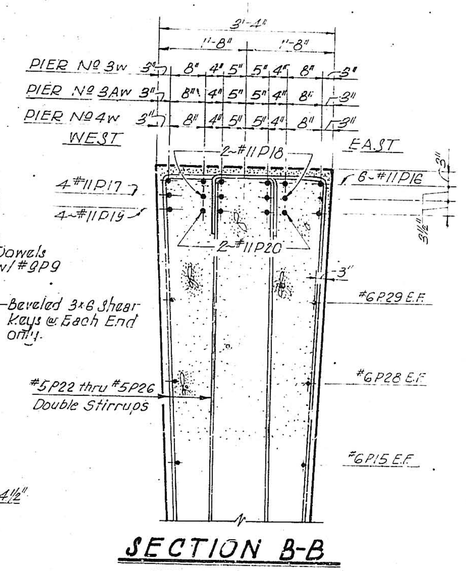


SECTION A-A

Revised as per Addendum No.



SECTION B-B



NOTE: See Sheet No. 56 for Typical Details and dimensions not shown.

PIER DIMENSIONS

LOCATION	FOOTING A	FOOTING B	STEM C	STEM D	STEM E	PIER CAP F	X	Y	BRG.	G	H	I	J	K	L	M	N	O
PIER 3W	2-6 1/16	3-4 5/16	8-0	2-5	10-1 1/16	23-8 1/16	6-3 1/4	6-3 1/4	E	4-2 3/16	4-2 9/16	2-9 1/16	8-4 7/16	8-4 3/8	8-4 1/8	8-4 3/8	8-4 7/16	2-9 1/16
									B	4-2 3/16	4-2 3/16	2-9 1/16	8-4 7/16	8-4 3/8	8-4 3/8	8-4 3/8	8-4 7/16	2-9 1/16
									H	4-2 3/16	4-2 3/16	2-9 1/16	8-4 7/16	8-4 3/8	8-4 3/8	8-4 3/8	8-4 7/16	2-9 1/16
									J	4-1 7/16	4-2 1/16	2-9 1/16	8-5 9/16	8-3 15/16	8-4	8-3 15/16	8-4	2-9 1/16
PIER 3AW	2-6 1/16	3-4 5/16	10-9	1'-7-9	10-1 11/16	23-8 1/16	6-3 1/4	6-3 1/4	E	4-2 3/16	4-2 9/16	2-9 1/16	8-4 7/16	8-4 3/8	8-4 3/8	8-4 3/8	8-4 7/16	2-9 1/16
									B	4-2 3/16	4-2 3/16	2-9 1/16	8-4 7/16	8-4 3/8	8-4 3/8	8-4 3/8	8-4 7/16	2-9 1/16
									H	4-2 3/16	4-2 3/16	2-9 1/16	8-4 7/16	8-4 3/8	8-4 3/8	8-4 3/8	8-4 7/16	2-9 1/16
									J	4-1 7/16	4-2 1/16	2-9 1/16	8-5 9/16	8-3 15/16	8-4	8-3 15/16	8-4	2-9 1/16
PIER 4W	2-7 5/16	3-6 7/16	12-9	2'-9-9	9-9 1/16	23-4 1/8	6-3 1/4	6-15 1/16	E	4-2 3/16	4-2 9/16	2-9 1/16	8-4 7/16	8-4 3/8	8-4 1/8	8-4 3/8	8-4 7/16	2-9 1/16
									B	4-2 3/16	4-2 3/16	2-9 1/16	8-4 7/16	8-4 3/8	8-4 3/8	8-4 3/8	8-4 7/16	2-9 1/16
									H	4-2 3/16	4-2 3/16	2-9 1/16	8-4 7/16	8-4 3/8	8-4 3/8	8-4 3/8	8-4 7/16	2-9 1/16
									J	4'-0 11/16	4'-3 9/16	2'-7 1/2	8-4	8-3 15/16	8-4	8-3 15/16	8-4	2-9 1/16
									K	3'-10 5/16	4'-2 1/16	2'-7 1/2	8-6 5/16	8-1 3/16	8-1 7/16	8-1 3/16	8-1 7/16	2-9 1/16

BEARING SEAT ELEVATIONS & DIMENSIONS

	⑤ ANGLE	⑤ ELEV.	⑤ "P"	⑤ "R"	⑤ "S"	⑤ ANGLE	⑤ ELEV.	⑤ "P"	⑤ "R"	⑤ "S"	④ ANGLE	④ ELEV.	④ "P"	④ "R"	④ "S"	③ ANGLE	③ ELEV.	③ "P"	③ "R"	③ "S"	② ANGLE	② ELEV	② "P"	② "R"	② "S"	① ANGLE	① ELEV	① "P"	① "R"	① "S"
PIER 3W	26°19'	73.735	5 9/16	11 3/16	3 5/16	26°19'	73.735	5 9/16	11 3/16	3 5/16	26°19'	74.105	5 9/16	11 3/16	3 5/16	26°19'	74.300	5 5/16	11 3/16	3 5/16	26°19'	74.505	5 5/16	11 3/16	3 5/16	26°19'	74.720	5 5/16	11 3/16	3 5/16
	25°13'	74.385	5 9/16	11 3/16	3 5/16	25°13'	74.385	5 9/16	11 3/16	3 5/16	25°13'	74.585	5 9/16	11 3/16	3 5/16	25°13'	74.765	5 9/16	11 3/16	3 5/16	25°13'	74.955	5 5/16	11 3/16	3 5/16	25°13'	75.160	5 5/16	11 3/16	3 5/16
	26°19'	76.430	5 9/16	11 3/16	3 5/16	26°19'	76.860	5 9/16	11 3/16	3 5/16	26°19'	76.960	5 9/16	11 3/16	3 5/16	26°19'	76.960	5 9/16	11 3/16	3 5/16	26°19'	77.145	5 5/16	11 3/16	3 5/16	26°19'	77.400	5 5/16	11 3/16	3 5/16
	25°53'11"	77.085	5 9/16	11 1/4	3 1/4	25°48'07"	77.315	5 9/16	11 1/4	3 1/4	25°48'07"	77.555	5 9/16	11 1/4	3 1/4	25°48'07"	77.605	5 9/16	11 1/4	3 1/4	25°48'07"	78.080	5 9/16	11 1/4	3 1/4	25°48'07"	78.325	5 9/16	11 1/4	3 1/4
	25°53'11"	76.410	5 7/16	11 1/4	3 1/4	25°48'07"	78.690	4 11/16	11 1/4	3 1/4	25°48'07"	78.975	4 11/16	11 1/4	3 1/4	25°48'07"	78.805	4 11/16	11 9/16	2 1/16	25°48'07"	79.070	5 7/16	11 1/4	3 1/4	25°48'07"	78.570	5 7/16	11 1/4	3 1/4
	22°57'56"	79.030	4 7/8	11 1/2	2 15/16	22°27'56"	79.325	4 9/16	11 9/16	2 1/16	22°27'56"	79.610	4 9/16	11 9/16	2 1/16	22°27'56"	79.390	4 9/16	11 9/16	2 1/16	22°27'56"	80.185	4 9/16	11 9/16	2 1/16	22°03'58"	80.500	4 5/16	11 5/16	2 1/16

PIER 3AW	26°19'	73.735	5 9/16	11 3/16	3 5/16	26°19'	73.735	5 9/16	11 3/16	3 5/16	26°19'	74.105	5 9/16	11 3/16	3 5/16	26°19'	74.300	5 5/16	11 3/16	3 5/16	26°19'	74.505	5 5/16	11 3/16	3 5/16	26°19'	74.720	5 5/16	11 3/16	3 5/16
	25°13'	74.385	5 9/16	11 3/16	3 5/16	25°13'	74.385	5 9/16	11 3/16	3 5/16	25°13'	74.585	5 9/16	11 3/16	3 5/16	25°13'	74.765	5 9/16	11 3/16	3 5/16	25°13'	74.955	5 5/16	11 3/16	3 5/16	25°13'	75.160	5 5/16	11 3/16	3 5/16
	26°19'	76.430	5 9/16	11 3/16	3 5/16	26°19'	76.860	5 9/16	11 3/16	3 5/16	26°19'	76.960	5 9/16	11 3/16	3 5/16	26°19'	76.960	5 9/16	11 3/16	3 5/16	26°19'	77.145	5 5/16	11 3/16	3 5/16	26°19'	77.400	5 5/16	11 3/16	3 5/16
	25°53'11"	77.085	5 9/16	11 1/4	3 1/4	25°48'07"	77.315	5 9/16	11 1/4	3 1/4	25°48'07"	77.555	5 9/16	11 1/4	3 1/4	25°48'07"	77.605	5 9/16	11 1/4	3 1/4	25°48'07"	78.080	5 9/16	11 1/4	3 1/4	25°48'07"	78.325	5 9/16	11 1/4	3 1/4
	25°53'11"	76.410	5 7/16	11 1/4	3 1/4	25°48'07"	78.690	4 11/16	11 1/4	3 1/4	25°48'07"	78.975	4 11/16	11 1/4	3 1/4	25°48'07"	78.805	4 11/16	11 9/16	2 1/16	25°48'07"	79.070	5 7/16	11 1/4	3 1/4	25°48'07"	78.570	5 7/16	11 1/4	3 1/4
	22°57'56"	79.030	4 7/8	11 1/2	2 15/16	22°27'56"	79.325	4 9/16	11 9/16	2 1/16	22°27'56"	79.610	4 9/16	11 9/16	2 1/16	22°27'56"	79.390	4 9/16	11 9/16	2 1/16	22°27'56"	80.185	4 9/16	11 9/16	2 1/16	22°03'58"	80.500	4 5/16	11 5/16	2 1/16

PIER 4W	26°19'	73.735	5 9/16	11 3/16	3 5/16	26°19'	73.735	5 9/16	11 3/16	3 5/16	26°19'	74.105	5 9/16	11 3/16	3 5/16	26°19'	74.300	5 5/16	11 3/16	3 5/16	26°19'	74.505	5 5/16	11 3/16	3 5/16	26°19'	74.720	5 5/16	11 3/16	3 5/16
	25°13'	74.385	5 9/16	11 3/16	3 5/16	25°13'	74.385	5 9/16	11 3/16	3 5/16	25°13'	74.585	5 9/16	11 3/16	3 5/16	25°13'	74.765	5 9/16	11 3/16	3 5/16	25°13'	74.955	5 5/16	11 3/16	3 5/16	25°13'	75.160	5 5/16	11 3/16	3 5/16
	26°19'	76.430	5 9/16	11 3/16	3 5/16	26°19'	76.860	5 9/16	11 3/16	3 5/16	26°19'	76.960	5 9/16	11 3/16	3 5/16	26°19'	76.960	5 9/16	11 3/16	3 5/16	26°19'	77.145	5 5/16	11 3/16	3 5/16	26°19'	77.400	5 5/16	11 3/16	3 5/16
	25°53'11"	77.085	5 9/16	11 1/4	3 1/4	25°48'07"	77.315	5 9/16	11 1/4	3 1/4	25°48'07"	77.555	5 9/16	11 1/4	3 1/4	25°48'07"	77.605	5 9/16	11 1/4	3 1/4	25°48'07"	78.080	5 9/16	11 1/4	3 1/4	25°48'07"	78.325	5 9/16	11 1/4	3 1/4
	25°53'11"	76.410	5 7/16	11 1/4	3 1/4	25°48'07"	78.690	4 11/16	11 1/4	3 1/4	25°48'07"	78.975	4 11/16	11 1/4	3 1/4	25°48'07"	78.805	4 11/16	11 9/16	2 1/16	25°48'07"	79.070	5 7/16	11 1/4	3 1/4	25°48'07"	78.570	5 7/16	11 1/4	3 1/4
	22°57'56"	79.030	4 7/8	11 1/2	2 15/16	22°27'56"	79.325	4 9/16	11 9/16	2 1/16	22°27'56"	79.610	4 9/16	11 9/16	2 1/16	22°27'56"	79.390	4 9/16	11 9/16	2 1/16	22°27'56"	80.185	4 9/16	11 9/16	2 1/16	22°03'58"	80.500	4 5/16	11 5/16	2 1/16

ALBUQUERQUE NEW MEXICO

GRAND AVENUE OVERPASS

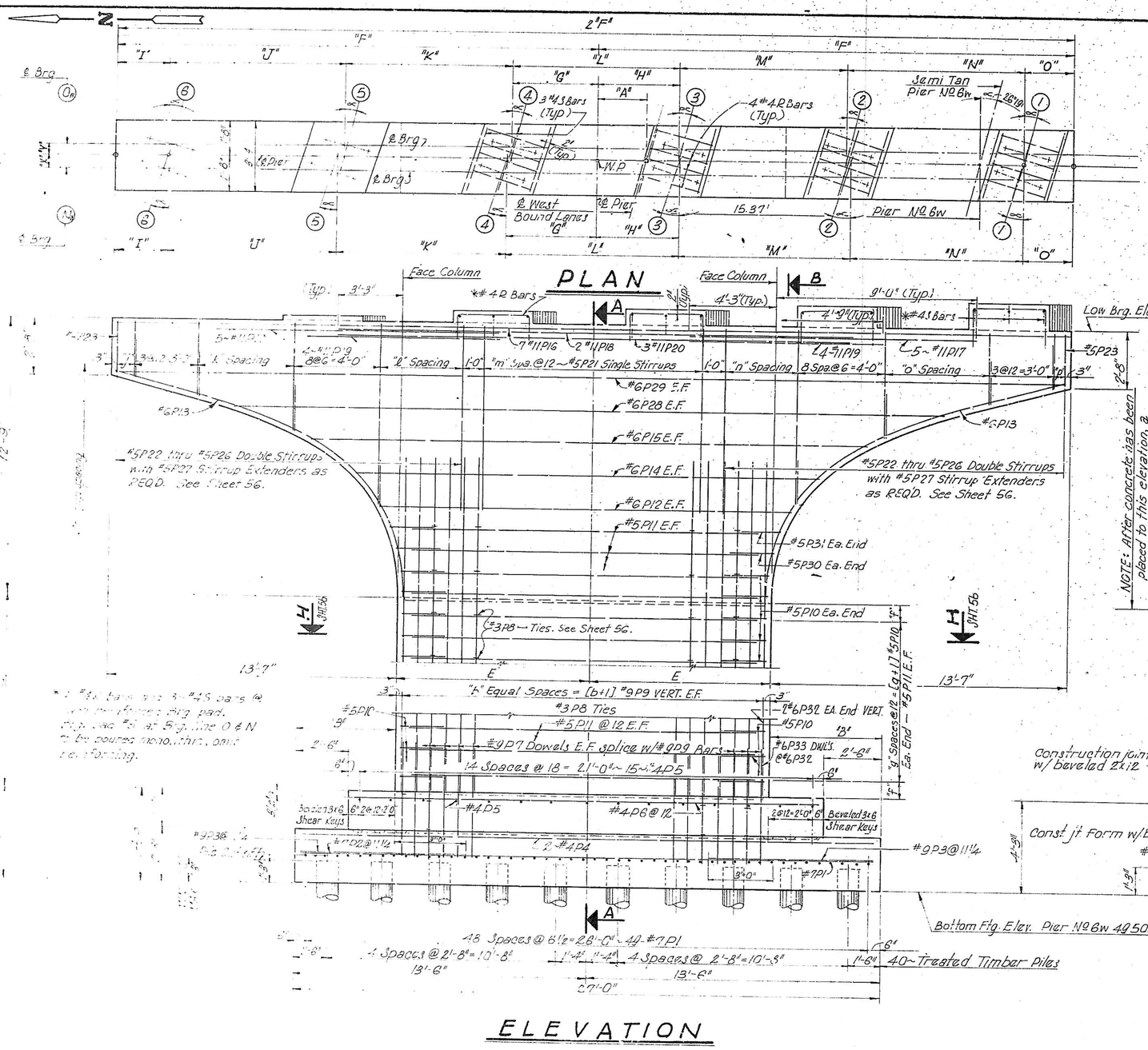
WEST BOUND BRIDGE

PIER DETAILS

No 3W, 3AW, & 4W

GORDON HERKENHOFF & ASSOCIATES, INC
ALBUQUERQUE, CONSULTING ENGINEERS NEW MEXICO

SCALE	DATE	DRAWN: R.A.G.	SHEET 50
	JULY 1969	CHECKED: L.M.P.	OF 66


PLAN
ELEVATION
Face Column
Face Column
Low Brg. Elev. 4980.54
Bottom Ftg. Elev. Pier Nº 6W 4950.040
40~Treated Timber Piles
#5P22 thru #5P26 Double Stirrups with #5P27 Stirrup Extenders as REQD. See Sheet 56.
#3P8 Ties. See Sheet 56.
#5P10 Ea. End
#5P30 Ea. End
#5P31 Ea. End
#9P7 Dowels E.F. splice w/#9P9 Bars
#9P3@11¼
#5P11 @12 E.F.
#3P8 Ties
14 Spaces @ 18 = 21'-0" ~ 15~"4P5
18 Spaces @ 6½ = 28'-0" ~ 49~#7P1
4 Spaces @ 2'-8" = 10'-8"
4 Spaces @ 2'-8" = 10'-8"
13'-6"
13'-6"
27'-0"
Bevelled 3x6 Shear Keys
Pier Nº 6W
Semi Tan Pier Nº 6W
W.P.
℄ West Bound Lanes "G"
℄ Pier
℄ Brg
℄ Girder
EAST
WEST
Typ. 8" ESG Shoe Pedestal
ANCHOR BOLT LAYOUT PLAN
SECTION A-A
SECTION B-B
NOTE: After concrete has been placed to this elevation, a minimum of 12 hrs. must elapse before placing cap.
Construction Jt. Form W Bev. 2x12
Construction joint form w/ beveled 2x12
Const. jt Form w/bev. 3x6
#9P9 bars @ 6" E.F.
#5P11 bars @ 12 E.F.
#9P7 Dowels Splice w/#9P9
Beveled 3x6 Shear Keys @ Each End Only.
#5P22 thru #5P26 Double Stirrups
2~#11P18
3~#11P20
5~#11P17
4~#11P19
#6P29 E.F.
#6P28 E.F.
#6P15 E.F.
#6P14 E.F.
#6P12 E.F.
#5P21 Stirrups
#3P8 Ties @ 24 HORIZ & VERT.
6'-6" MIN.
11 Spaces @ 11¼ = 10'-3⅜" ~ 12~9P3 6⅝"
12 Spa @ 11¼ = 11'-3" ~ 13~#7P2
#7P1
#7P2
#4P4
#4P5
#4P6
#9P3
#9P9
#5P23
#6P13
#5P21 Single Stirrups
#5P27 Stirrup Extenders
#5P10
#5P11
#6P33 Dwls @ #6P32
#9P38 Dwls @ #9P37
Bevelled 3x6 Shear Keys
Typ. 3'-3"
Typ. 9'-0" (Typ.)
4'-3" (Typ.)
4'-3" (Typ.)
#4 #2 Bars
#4 #3 Bars
3 #4 #3 Bars (Typ.)
4 #4 #2 Bars (Typ.)
#4 #3 Bars (Typ.)
#4 #2 Bars (Typ.)
#4 #2 Bars (Typ.)
#4 #3

	LOCATION	PIER 7W	PIER 8W	PIER 9W	PIER 10W
STEM REINF. SPACING & DIM.	"b" Spacing	23 @ 8 3/16 (3-2) 15'-6 3/4"	22 @ 8 1/2 (3-2) = 15'-1"	22 @ 8 3/16 (3-2) = 14'-11 3/4"	22 @ 8 3/16 (3-2) = 14'-11 3/4"
	"F" Space	9"	7 1/2"	4 1/2"	6"
	"g" Spacing	12 @ 12 = 12'-0"	10 @ 12 = 10'-0"	7 @ 12 = 7'-0"	3 @ 12 = 3'-0"
	LF	43'-4 1/4"	42'-9"	42'-7 3/4"	42'-7 3/4"
CAP STIRRUPS SPACING & DIM.	"j" Space	7 7/8"	8 3/16"	8 11/16"	8 11/16"
	"k" Spacing	4 @ 13 = 4'-3 5/16"	4 @ 12 9/16 = 4'-3 1/2"	4 @ 12 9/16 = 4'-3 1/2"	4 @ 12 9/16 = 4'-3 1/2"
	"l" Spacing	7 @ 6 7/8 = 4'-0 1/8"	9 @ 6 7/16 = 4'-9 1/16"	8 @ 6 3/16 = 4'-6 1/16"	8 @ 6 3/16 = 4'-6 1/16"
	"m" Spacing	10 @ 12 = 10'-0"	8 @ 12 = 8'-0"	8 @ 12 = 8'-0"	8 @ 12 = 8'-0"
	"n" Spacing	7 @ 6 3/8 (11-3'-0 5/8")	9 @ 6 1/16 = 4'-11 5/16"	8 @ 6 3/16 = 4'-6 1/16"	8 @ 6 3/16 = 4'-6 1/16"
	"o" Spacing	4 @ 14 = 4'-7 13/16"	4 @ 12 1/16 = 4'-0 1/4"	4 @ 12 7/8 = 4'-3 1/2"	4 @ 12 7/8 = 4'-3 1/2"
	"p" Space	6 5/16"	6 1/16"	8 1/16"	8 1/16"

NOTE: All reinforcing bars extending into the footing shall be in place prior to placing concrete in footing.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 5 2 7 0 | 1 1 | 5 7 4 0 1

Note: After concrete has been placed in this area a minimum of 12 hrs must elapse before placing cap

Construction joint Form w/ Beveled 2x12

Const. jt Form w/ bev. 3x6

Beveled 3x6 Shear Keys @ Ea. End Only

Construction joint Form w/ Beveled 2x12

Beveled 3x6 Shear Keys

Too all Exp. Shoe Pads Fix Shoe Dep. Low Brg.

Low Brg. Elev.

Bottom Ftg Elev.

Pier Nº 7W = 4949.447
Pier Nº 8W = 4950.247
Pier Nº 9W = 4951.272
Pier Nº 10W = 4951.252

Pier Nº 7W = 4980.260
Pier Nº 8W = 4978.830
Pier Nº 9W = 4976.355
Pier Nº 10W = 4972.585

ELEVATION

PLAN

ANCHOR BOLT LAYOUT PLAN

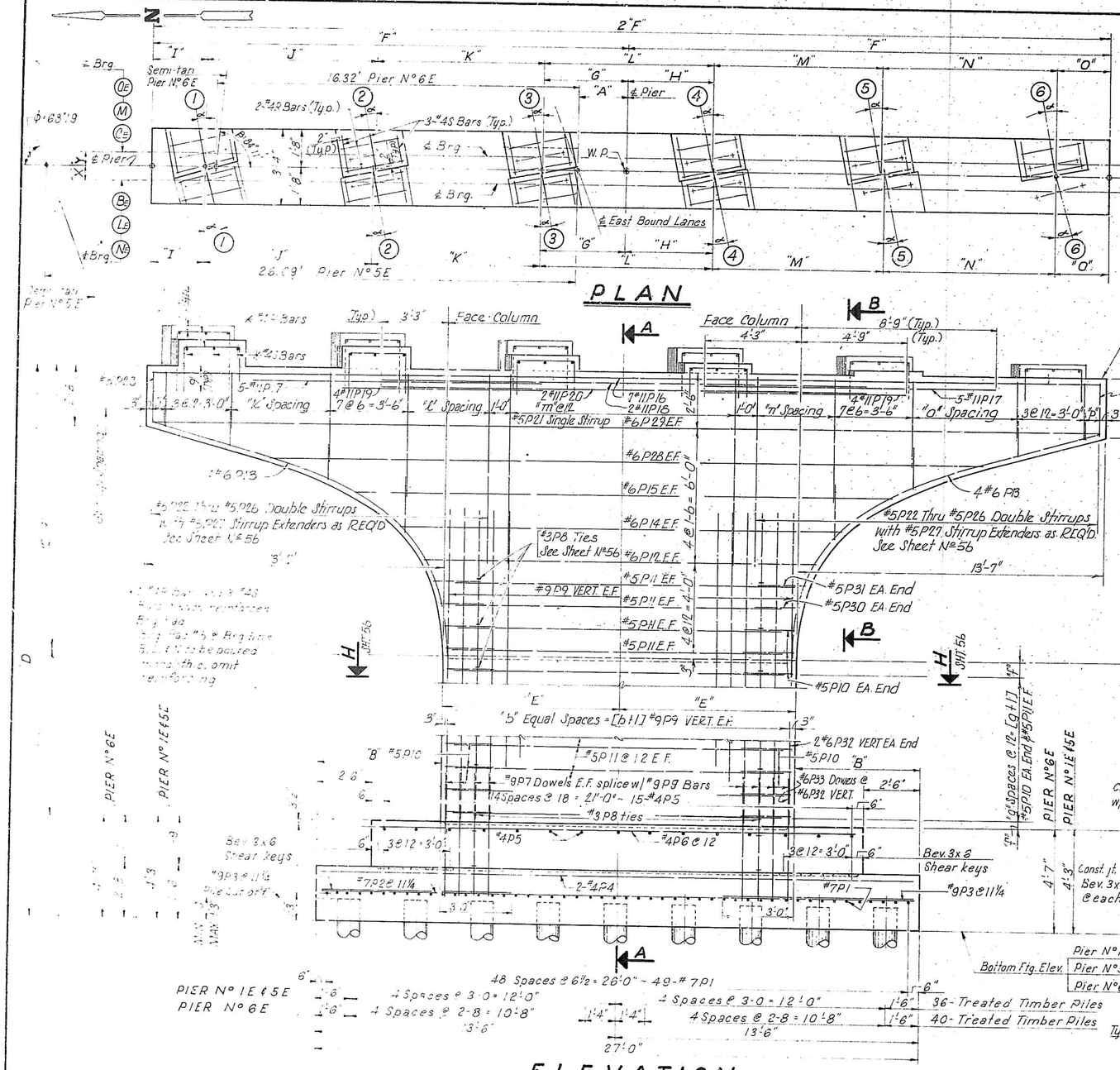
SECTION A-A

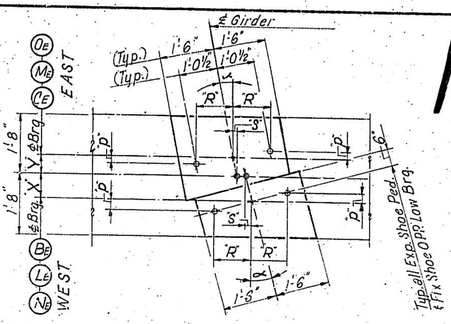
SECTION B-B

Note: See Sheet Nº 56 For Typical Pier Details and Dimensions not Shown.

Revised as per Addendum Nº 1

| PIER DIMENSIONS | | |



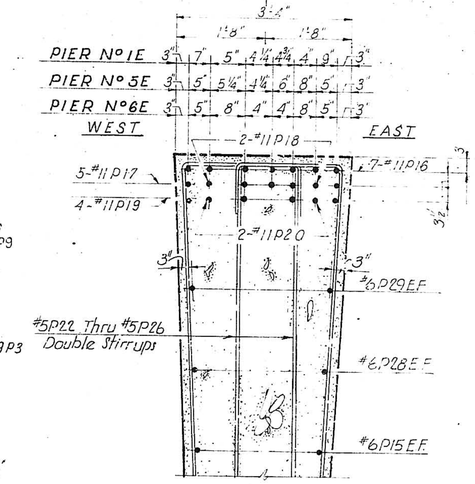


ANCHOR BOLT LAYOUT PLAN

	LOCATION	PIER 1E	PIER 5E	PIER 6E
STEM REINF. SPACING & DIM.	"b" Spacing	27 @ 8(4)-18-0¾	23 @ 7⅝(4)-15'-3"	22 @ 8½(4)-14'-10½"
	"f" Space	None	7½"	6"
	"g" Spacing	None	13 @ 12 = 13'-0"	13 @ 12 = 13'-0"
	2f	45'-8¾"	42'-11"	42'-6⅞"
CAP STIRRUPS SPACING & DIM.	"j" Space	11¼"	6⅞"	7⅜"
	"k" Spacing	4 @ 13⅜+ = 4'-6½"	4 @ 13⅛+ = 4'-5⅝"	4 @ 13⅛+ = 4'-4⅝"
	"l" Spacing	6 @ 7¼+ = 3'-7⅝"	8 @ 6⅝ = 4'-7⅜"	8 @ 6⅞ = 4'-5⅞"
	"m" Spacing	12 @ 12 = 12'-0"	8 @ 12 = 8'-0"	8 @ 12 = 8'-0"
	"n" Spacing	6 @ 7¼+ = 3'-7⅝"	8 @ 6⅜ = 4'-5⅝"	8 @ 6⅝ = 4'-6"
	"o" Spacing	4 @ 13⅜+ = 4'-6½"	4 @ 13⅛+ = 4'-7⅛"	4 @ 13⅛+ = 4'-4⅝"
	"p" Space	11¼"	8½"	8⅞"

NOTE: All reinforcing bars extending into the footing shall be in place prior to placing concrete in footing.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 7 6 6 2 5 3 7 0 1 1 5 7 4 0 1

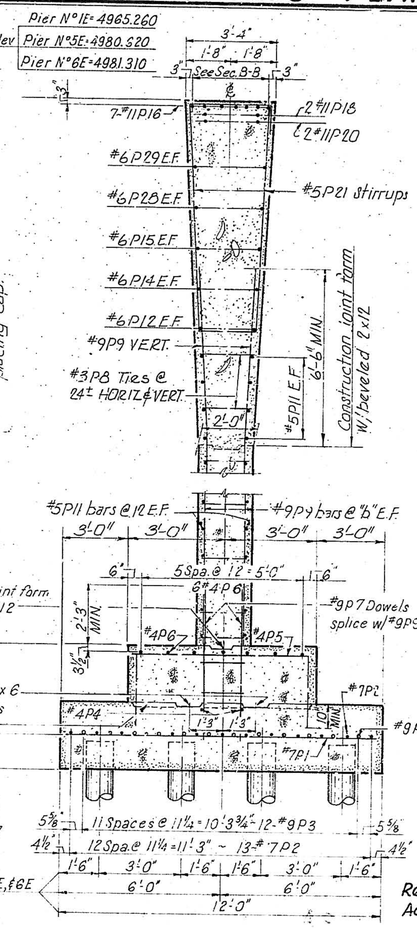


SECTION B-B

Note: See Sheet N°58 For typical Pier Details and Dimensions not shown

Revised as per Addendum N°1

SECTION A-A



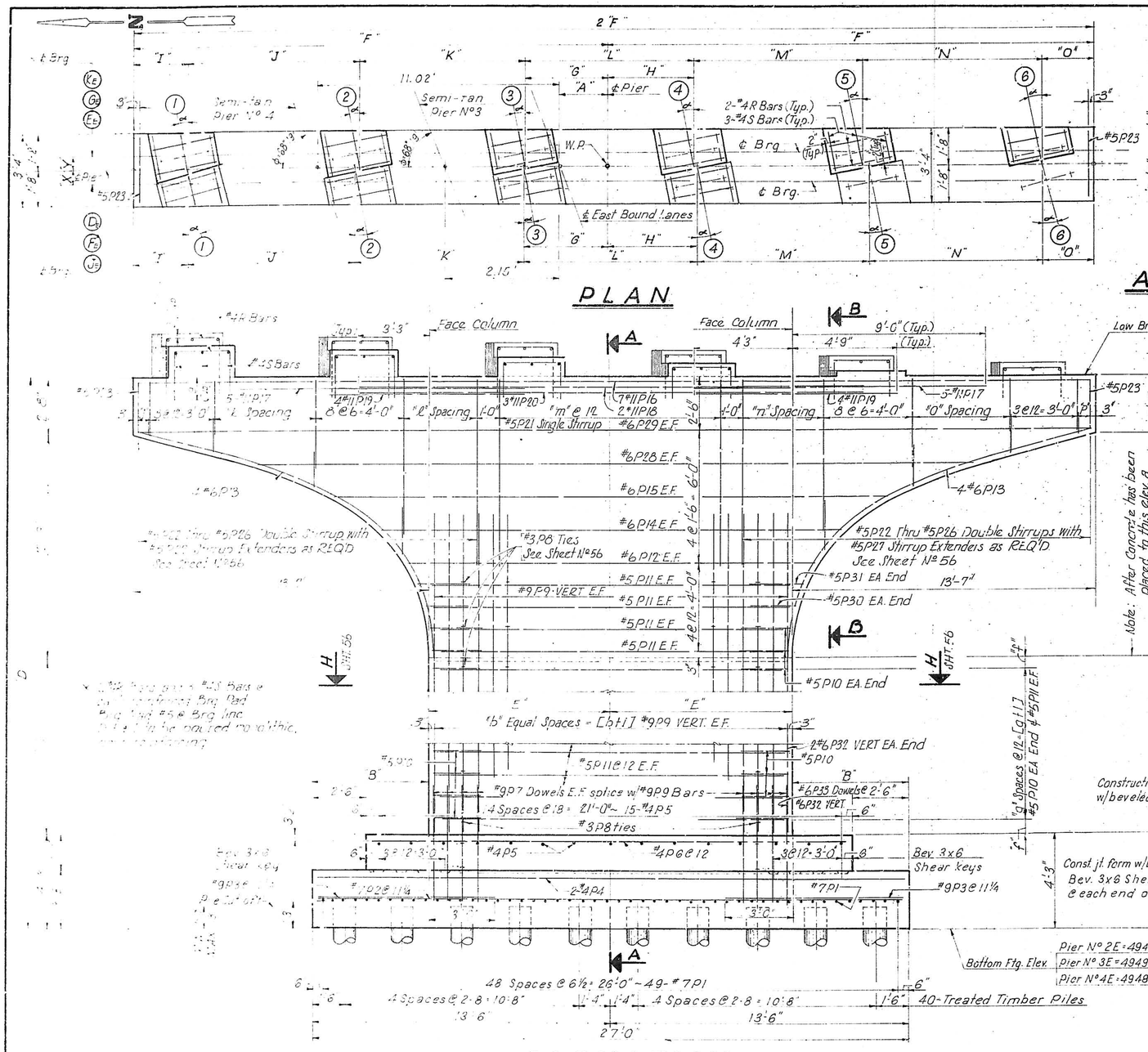
PIER DIMENSIONS

LOCATION	FOOTING A	FOOTING B	STEM C	STEM D	STEM E	PIER CAP F	X	Y	BRG.	G	H	I	J	K	L	M	N	O
PIER 1E	2'-5 31/32	4'-2 5/8	0'-0	1'-7'-0		9'-3 3/8	22'-10 3/8	7 1/16	6 1/4	(B℄)	4'-0 13/32	4'-0 13/32	2'-8 7/32	8'-0 7/8	8'-0 7/8	8'-0 7/8	8'-0 7/8	8'-0 3/16	2'-8 7/32
										(C℄)	4'-0 13/32	4'-0 13/32	2'-8 7/32	8'-0 7/8	8'-0 7/8	8'-0 7/8	8'-0 7/8	8'-0 3/16	2'-8 7/32
PIER 5E	2'-4 5/16	5'-7 1/2	14'-3	3'-3	1'-10 1/2		21'-5 1/2	6 5/8	8 3/4	(L℄)	3'-10 5/8	3'-9	2'-3 7/16	7'-7 5/8	7'-7 11/16	7'-7 5/8	7'-7 11/16	7'-7 11/16	2'-5 1/8
										(M℄)	3'-10 7/16	3'-8 3/16	2'-3 7/16	7'-8 7/8	7'-6 5/8	7'-6 5/8	7'-6 5/8	7'-9 9/16	2'-5 1/8
PIER 6E	2'-4	5'-3 9/16	14'-0	3'-3	1'-8 1/16		21'-3 7/16	8 3/16	8 3/4	(N℄)	3'-10 11/16	3'-8	2'-4 1/16	7'-7 1/4	7'-6 1/8	7'-6 5/16	7'-6 11/16	7'-7 3/8	2'-5 1/16
										(O℄)	3'-10 1/16	3'-8	2'-4 1/16	7'-7 1/4	7'-6 1/8	7'-6 1/16	7'-6 11/16	7'-7 3/8	2'-5 1/16

BEARING SEAT ELEVATIONS & DIMENSIONS

	① ANGLE ∝	① ELEV.	① P	① R	① S	② ANGLE ∝	② EL. EV.	② P	② R	② S	③ ANGLE ∝	③ ELEV.	③ P	③ R	③ S	④ ANGLE ∝	④ ELEV.	④ P	④ R	④ S	⑤ ANGLE ∝	⑤ ELEV.	⑤ P	⑤ R	⑤ S	⑥ ANGLE ∝	⑥ ELEV.	⑥ P	⑥ R	⑥ S
PIER 1E	21°41'	66.325	4 3/8	11 3/8	3 1/16	21°41'	66.095	4 5/8	11 3/8	3 1/16	21°41'	65.870	4 5/8	11 3/8	3 1/16	21°41'	65.660	4 5/8	11 3/8	3 1/16	21°41'	65.455	4 5/8	11 3/8	3 1/16	21°41'	65.260	4 5/8	11 3/8	3 1/16
	21°41'	67.030	4 5/8	11 3/8	2 1/2	21°41'	66.800	4 5/8	11 5/8	2 1/2	21°41'	66.575	4 5/8	11 5/8	2 1/2	21°41'	66.360	4 5/8	11 5/8	2 1/2	21°41'	66.155	4 5/8	11 5/8	2 1/2	21°41'	65.955	4 5/8	11 5/8	2 1/2
PIER 5E	10°42'22"	81.855	2 5/16	1'-0 7/16	1 1/4	10°56'34"	81.605	2 3/8	1'-0 1/4	1 1/4	10°56'34"	81.360	2 3/8	1'-0 1/4	1 1/4	10°56'34"	81.115	2 3/8	1'-0 1/4	1 1/4	10°56'34"	80.870	2 3/8	1'-0 1/4	1 1/4	11°14'36"	80.620	2 7/16	1'-0 1/4	1 5/16
	6°30'33"	82.460	1 7/16	1'-0 7/16	15/16	6°40'51"	82.215	1 7/16	1'-0 7/16	15/16	6°40'51"	81.970	1 7/16	1'-0 7/16	15/16	6°40'51"	81.730	1 7/16	1'-0 7/16	15/16	6°40'51"	81.485	1 7/16	1'-0 7/16	15/16	6°53'58"	81.230	1 1/2	1'-0 7/16	1
PIER 6E	6°30'33"	82.460	1 7/16	1'-0 7/16	15/16	6°40'51"	82.225	1 7/16	1'-0 7/16	15/16	6°40'51"	81.995	1 7/16	1'-0 7/16	15/16	6°40'51"	81.770	1 7/16	1'-0 7/16	15/16	6°40'51"	81.540	1 7/16	1'-0 7/16	15/16	6°53'58"	81.310	1 1/2	1'-0 7/16	1
	2°20'41"	82.455	1/2	1'-0 1/2	1/4	2°24'59"	82.225	1/2	1'-0 1/2	5/16	2°24'59"	82.000	1/2	1'-0 1/2	5/16	2°24'59"	81.775	1/2	1'-0 1/2	5/16	2°24'59"	81.545	1/2	1'-0 1/2	5/16	2°30'28"	81.315	3/16	1'-0 1/2	5/16

	ALBUQUERQUE NEW MEXICO
	GRAND AVENUE OVERPASS
	EAST BOUND BRIDGE
	PIER DETAILS N°1E, 5E, & 6E
	GORDON HERKENHOFF & ASSOCIATES, INC. ALBUQUERQUE, CONSULTING ENGINEERS NEW MEXICO
SCALE	
DATE	JULY 1969
DRAWN: R.A.L. CHECKED: L.M.P.	
SHEET 53 OF 66	



LOCATION		PIER 2E	PIER 3E	PIER 4E
STEM REINF. SPACING & DIM.	"b" Spacing	27 @ 6(+) = 18'-0¾"	25 @ 8¾/16(+) = 17'-0"	24 @ 8(+) = 15'-11⅜"
	"f" Space	4½"	4½"	4½"
	"g" Spacing	4 @ 12 = 4'-0"	8 @ 12 = 8'-0"	12 @ 12 = 12'-0"
	2f	45'-8¾"	44'-8"	43'-7⅜"
CAP STIRRUPS SPACING & DIM.	"j" Space	11¼"	6⅜"	6¼"
	"k" Spacing	4 @ 14 = 4'-7⅛"	4 @ 13¼ = 4'-4⅞"	4 @ 13⅜ = 4'-7½"
	"l" Spacing	7 @ 6 15/16 + = 4'-0⅜"	7 @ 7 = 4'-0⅞"	6 @ 6⅛ = 3'-4⅛"
	"m" Spacing	10 @ 12 = 10'-0"	10 @ 12 = 10'-0"	10 @ 12 = 10'-0
	"n" Spacing	7 @ 6 15/16 + = 4'-0⅜"	7 @ 6⅞ = 3'-9 15/16	6 @ 7¼ = 3'-7¼"
	"o" Spacing	4 @ 14 = 4'-7⅛"	4 @ 14 = 4'-7⅞"	4 @ 13⅛ = 4'-4½"
	"p" Space	11¼"	6 1/16"	7 13/16"

NOTE: All reinforcing bars extending into the footing shall be in place prior to placing concrete in footing.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 5 4 7 0 1 1 5 7 4 0 1

PIER DIMENSIONS

LOCATION	FOOTING A	FOOTING B	STEM C	STEM D	STEM E	PIER CAP F	X	Y	BRG.
PIER 2E	25 5/32	42 5/8	4'-0	21'-3	9 3/8	22-10⅜	7"	7⅛	(De)
									(Ee)
PIER 3E	25 5/8	4'-9	8'-9	25'-9	8'-3	22'-4	7⅛	7¼	(Fe)
									(Ge)
PIER 4E	24 1/16	5 3 5/16	12'-9	29'-9	8-2 11/16	21-9 11/16	7¼	7⅜	(Je)
									(Ke)

LOCATION	G	H	I	J	K	L	M	N	O
PIER 2E	4'-0 3/32	4'-0 15/32	2'-8 3/32	8'-0⅛	8'-0⅞	8'-0⅞	8'-0⅞	8'-0 13/16	2'-8 7/32
	4'-0 7/32	3'-11 23/32	2'-8 7/32	8'-2	7'-11 5/16	7'-11 5/16	7'-11⅞	8'-2 9/16	2'-8 7/32
PIER 3E	4'-0 13/16	3'-11⅞	2'-3⅜	7'-11⅞	7'-11 5/16	7'-11 5/16	7'-11 5/16	7'-11⅞	2'-5 1/16
	4'-0 5/16	3'-9⅛	2'-3⅜	8'-2⅞	7'-9 7/16	7'-9 7/16	7'-9½	8'-4 5/16	2'-5 1/16
PIER 4E	3'-11½	3'-9 7/16	2'-3¼	7'-9½	7'-9 7/16	7'-9 7/16	7'-9 7/16	7'-9½	2'-4 13/16
	3'-11⅛	3'-8½	2'-3¼	7'-1 5/8	7'-7 1/16	7'-7 5/8	7'-7 1/16	8'-0 1/16	2'-4 13/16

BEARING SEAT ELEVATIONS & DIMENSIONS

LOCATION	① ANGLE ∠	① ELEV.	① P	① R	① S	② ANGLE ∠	② ELEV.	② P	② R	② S	③ ANGLE ∠	③ ELEV.	③ P	③ R	③ S	④ ANGLE ∠	④ ELEV.	④ P	④ R	④ S	⑤ ANGLE ∠	⑤ ELEV.	⑤ P	⑤ R	⑤ S	⑥ ANGLE ∠	⑥ ELEV.	⑥ P	⑥ R	⑥ S
PIER 2E	20°06'06"	72.040	4⅜	11⅜	2 13/16	20°13'14"	71.700	4⅜	11⅜	2 13/16	20°13'14"	71.365	4⅜	11⅜	2 13/16	20°13'14"	71.040	4⅜	11⅜	2 13/16	20°13'14"	70.725	4⅜	11⅜	2 13/16	20°22'19"	70.410	4⅜	11⅜	2 13/16
	20°06'06"	72.735	4⅜	11¾	2 9/16	20°13'14"	72.390	4⅜	11¾	2⅝	20°13'14"	72.060	4⅜	11¾	2⅝	20°13'14"	71.735	4⅜	11¾	2⅝	20°13'14"	71.420	4⅜	11¾	2⅝	20°22'19"	71.105	4⅜	11¾	2⅝
PIER 3E	20°06'06"	76.755	4⅜	11⅜	2 9/16	20°13'14"	76.405	4⅜	11¾	2⅝	20°13'14"	76.050	4⅜	11¾	2⅝	20°13'14"	75.695	4⅜	11¾	2⅝	20°13'14"	75.335	4⅜	11¾	2⅝	20°22'19"	74.975	4⅜	11¾	2⅝
	15°18'56"	77.405	3 5/16	1-0⅛	2"	15°38'03"	77.045	3⅜	1-0⅛	2"	15°38'03"	76.700	3⅜	1-0⅛	2"	15°38'03"	76.355	3⅜	1-0⅛	2	15°38'03"	75.010	3⅜	1-0⅛	2	16°02'14"	75.630	3⅜	1-0	2⅛
PIER 4E	15°18'56"	79.945	3⅜	1-0⅛	2	15°38'03"	79.660	3⅜	1-0⅛	2	15°38'03"	79.375	3⅜	1-0⅛	2	15°38'03"	79.085	3⅜	1-0⅛	2	15°38'03"	78.795	3⅜	1-0⅛	2	16°02'14"	78.500	3⅜	1-0	2⅛
	10°42'22"	80.575	2⅝	1-0⅝	1⅜	10°56'34"	80.285	2⅜	1-0¼	1 7/16	10°56'34"	80.000	2⅜	1-0¼	1 7/16	10°56'34"	79.720	2⅜	1-0¼	1 7/16	10°56'34"	79.435	2⅜	1-0¼	1 7/16	11°14'36"	79.135	2 7/16	1-0¼	1 7/16

Revised as per Addendum N°1

Note: See Sheet N°56 For Typical Pier Details and Dimensions not shown

ALBUQUERQUE NEW MEXICO

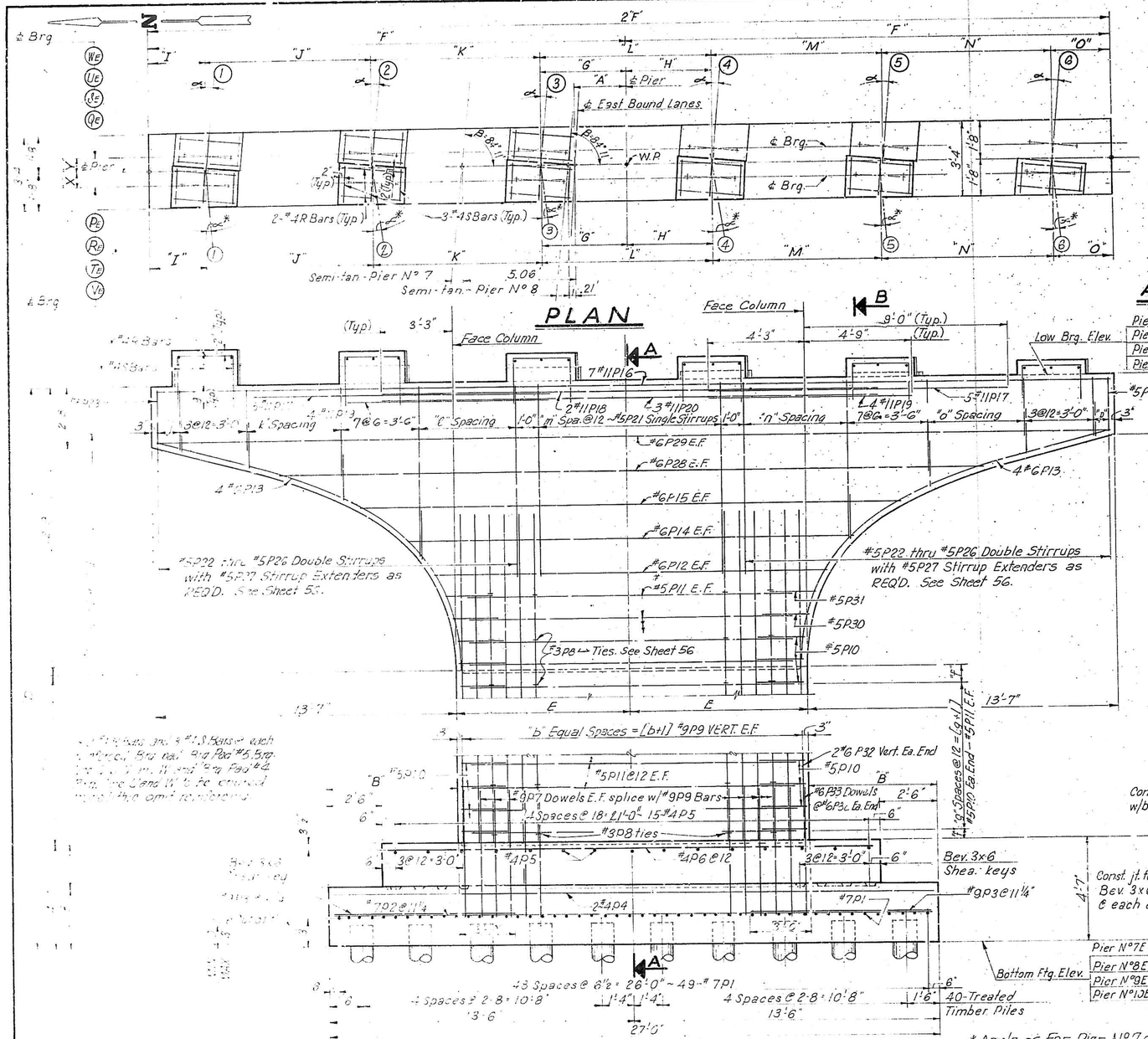
GRAND AVENUE OVERPASS

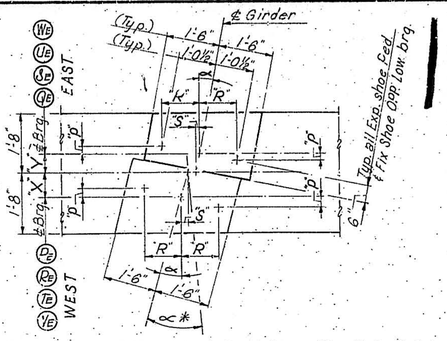
EAST BOUND BRIDGE

PIER DETAILS N°2E, 3E, & 4E

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO

SCALE	DATE	DRAWN: R.A.L.	SHEET 54
	JULY 1969	CHECKED: L.M.P.	OF 66

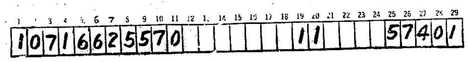


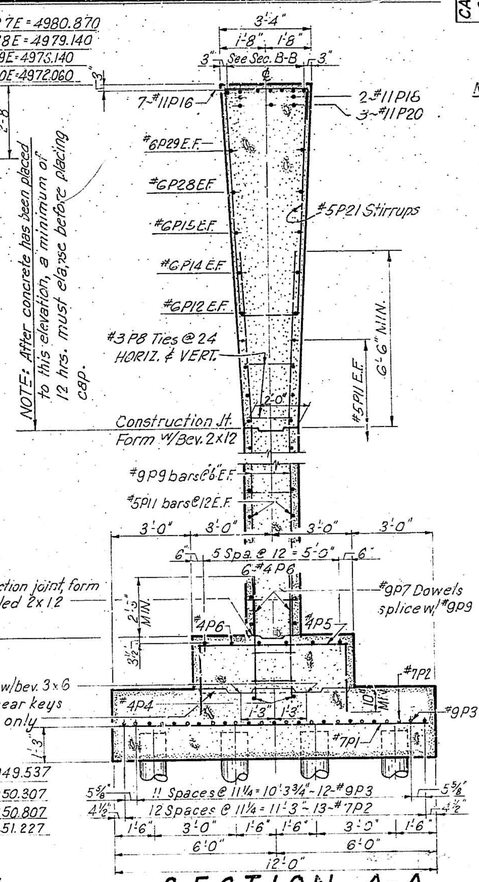


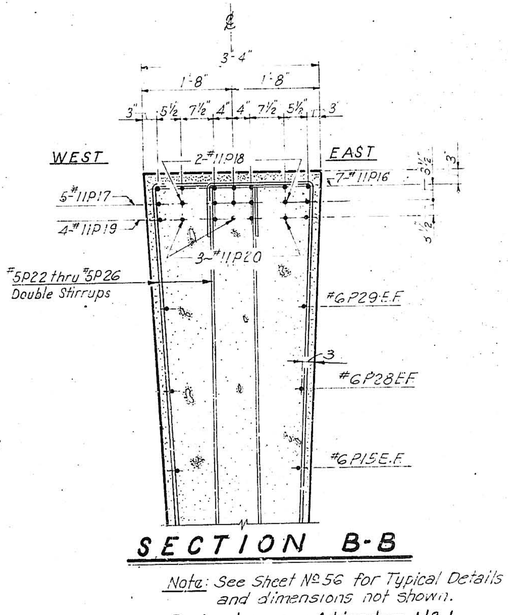
ANCHOR BOLT LAYOUT PLAN

		PIER N°7E	PIER N°8E	PIER N°9E	PIER N°10E
STEM REINF. SPACING & DIM.	"b" Spacing	22@8 1/16" c-c = 14'-9"	22@8 1/8" = 14'-10 3/4"	22@8 3/16" c-c = 14'-11 3/4"	22@8 3/16" c-c = 14'-11 3/4"
	"f" Space	6	9	6	9
	"g" Spacing	13@12" = 13'-0"	10@12" = 10'-0"	7@12" = 7'-0"	2@12" = 2'-0"
	2f	42'-5"	42'-6 3/4"	42'-7 3/4"	42'-7 3/4"
CAP STIRRUPS SPACING & DIM.	"j" Space	7 5/16"	8 3/16"	8 3/4"	8 3/4"
	"k" Spacing	4@12 3/4" = 4'-3 1/8"	4@12 5/8" = 4'-2 5/8"	4@12 7/8" = 4'-3 7/16"	4@12 7/8" = 4'-3 7/16"
	"l" Spacing	8@6 3/4" = 4'-6 1/16"	8@6 7/16" = 4'-6 3/8"	8@6 3/16" = 4'-6 1/16"	8@6 3/16" = 4'-6 1/16"
	"m" Spacing	8@12" = 8'-0"	8@12" = 8'-0"	8@12" = 8'-0"	8@12" = 8'-0"
	"n" Spacing	8@6 3/16" = 4'-6 1/8"	8@6 13/16" = 4'-6 11/16"	8@6 13/16" = 4'-6 11/16"	8@6 13/16" = 4'-6 11/16"
	"o" Spacing	4@12 3/4" = 4'-3 1/8"	4@12 5/8" = 4'-2 1/2"	4@12 7/8" = 4'-3 7/16"	4@12 7/8" = 4'-3 7/16"
	"p" Space	9 1/8	10 1/8	8 3/4	8 3/4

NOTE: All reinforcing bars extending into the footing shall be in place prior to placing concrete in footing.







Note: See Sheet N° 56 for Typical Details and dimensions not shown.

Revised as per Addendum N° 1

PIER DIMENSIONS

LOCATION	FOOTING A	FOOTING B	STEM C	STEM D	STEM E	PIER CAP F	X	Y	BRG.	G	H	I	J	K	L	M	N	O
PIER 7E	2'-3 1/2"	5'-10 3/16"	14'-0"	3'-4"	7'-7 1/2"	2'-2 1/2"	7'-2"	7'-2"	Pe	3'-9 15/16"	3'-8 1/8"	2'-4 7/16"	7'-6 1/8"	7'-6 1/16"	7'-6 1/16"	7'-6 1/16"	7'-6 1/8"	2'-6 1/8"
									Qe	3'-9 15/16"	3'-8 1/8"	2'-4 7/16"	7'-6 1/8"	7'-6 1/16"	7'-6 1/16"	7'-6 1/16"	7'-6 1/8"	2'-6 1/8"
PIER 8E	2'-4"	5'-9 15/16"	11'-6"	2'-8'-10"	7'-2 9/16"	2'-3 3/8"	7'-2"	7'-2"	Re	3'-10"	3'-8 1/16"	2'-5 7/16"	7'-6 1/16"	7'-6 1/16"	7'-6 1/16"	7'-6 1/16"	7'-6 1/16"	2'-7 1/8"
									Se	3'-10 1/16"	3'-8 3/8"	2'-5 7/16"	7'-6 1/16"	7'-5 5/8"	7'-6 1/16"	7'-6 1/16"	7'-6 3/16"	2'-7 1/8"
PIER 9E	2'-3 3/8"	5'-9 1/8"	8'-0"	2'-5'-4"	7'-8 3/8"	2'-3 7/8"	7'-7/16"	7'-7/16"	Te	3'-9 1/4"	3'-9 1/4"	2'-5 3/4"	7'-6 1/16"	7'-6 1/16"	7'-6 1/16"	7'-6 1/16"	7'-6 1/16"	2'-5 3/4"
									Ue	3'-9 1/4"	3'-9 1/4"	2'-5 3/4"	7'-6 1/16"	7'-6 1/16"	7'-6 1/2"	7'-6 1/16"	7'-6 1/16"	2'-5 3/4"
PIER 10E	2'-3 1/8"	5'-9 1/8"	3'-6"	2'-0'-10"	7'-8 3/8"	2'-3 7/8"	7'-7/16"	7'-7/16"	Ve	3'-9 1/4"	3'-9 1/4"	2'-5 3/4"	7'-6 7/16"	7'-6 7/16"	7'-6 1/2"	7'-6 7/16"	7'-6 7/16"	2'-5 3/4"
									We	3'-9 1/4"	3'-9 1/4"	2'-5 3/4"	7'-6 7/16"	7'-6 7/16"	7'-6 1/2"	7'-6 7/16"	7'-6 7/16"	2'-5 3/4"

BEARING SEAT ELEVATIONS & DIMENSIONS

LOCATION	① ANGLE	① ELEV.	① P	① R	① S	② ANGLE	② ELEV.	② P	② R	② S	③ ANGLE	③ ELEV.	③ P	③ R	③ S	④ ANGLE	④ ELEV.	④ P	④ R	④ S	⑤ ANGLE	⑤ ELEV.	⑤ P	⑤ R	⑤ S	⑥ ANGLE	⑥ ELEV.	⑥ P	⑥ R	⑥ S
PIER 7E	2°20'41"	82.600	1/2	1-0 1/2	5/16	2°24'59"	82.375	1/2	1-0 1/2	5/16	2°24'59"	82.150	1/2	1-0 1/2	5/16	2°24'59"	81.925	1/2	1-0 1/2	5/16	2°24'59"	81.700	1/2	1-0 1/2	5/16	2°30'28"	81.475	9/16	1-0 1/2	5/16
	2°16'49"	81.995	1/2	1-0 1/2	5/16	2°16'45"	81.770	1/2	1-0 1/2	5/16	2°16'45"	81.545	1/2	1-0 1/2	5/16	2°16'45"	81.320	1/2	1-0 1/2	5/16	2°16'45"	81.095	1/2	1-0 1/2	5/16	2°16'40"	80.870	1/2	1-0 1/2	5/16
PIER 8E	2°16'49"	80.775	1/2	1-0 1/2	5/16	2°16'45"	80.575	1/2	1-0 1/2	5/16	2°16'45"	80.375	1/2	1-0 1/2	5/16	2°16'45"	80.175	1/2	1-0 1/2	5/16	2°16'45"	79.980	1/2	1-0 1/2	5/16	2°16'40"	79.785	1/2	1-0 1/2	5/16
	5°36'47"	80.125	1 1/4	1-0 7/16	3/4	5°39'57"	79.925	1 1/4	1-0 7/16	3/4	5°39'57"	79.725	1 1/4	1-0 7/16	3/4	5°39'57"	79.530	1 1/4	1-0 7/16	3/4	5°39'57"	79.330	1 1/4	1-0 7/16	3/4	5°43'58"	79.140	1 1/4	1-0 7/16	3/4
PIER 9E	5°36'47"	77.540	1 1/4	1-0 7/16	3/4	5°39'57"	77.390	1 1/4	1-0 7/16	3/4	5°39'57"	77.240	1 1/4	1-0 7/16	3/4	5°39'57"	77.090	1 1/4	1-0 7/16	3/4	5°39'57"	76.940	1 1/4	1-0 7/16	3/4	5°43'58"	76.790	1 1/4	1-0 7/16	3/4
	5°49'	76.890	1 1/4	1-0 7/16	3/4	5°49'	76.740	1 1/4	1-0 7/16	3/4	5°49'	76.590	1 1/4	1-0 7/16	3/4	5°49'	76.440	1 1/4	1-0 7/16	3/4	5°49'	76.290	1 1/4	1-0 7/16	3/4	5°49'	76.140	1 1/4	1-0 7/16	3/4
PIER 10E	5°49'	73.485	1 1/4	1-0 7/16	3/4	5°49'	73.330	1 1/4	1-0 7/16	3/4	5°49'	73.180	1 1/4	1-0 7/16	3/4	5°49'	73.025	1 1/4	1-0 7/16	3/4	5°49'	72.875	1 1/4	1-0 7/16	3/4	5°49'	72.720	1 1/4	1-0 7/16	3/4
	5°49'	72.825	1 1/4	1-0 7/16	3/4	5°49'	72.670	1 1/4	1-0 7/16	3/4	5°49'	72.520	1 1/4	1-0 7/16	3/4	5°49'	72.365	1 1/4	1-0 7/16	3/4	5°49'	72.215	1 1/4	1-0 7/16	3/4	5°49'	72.060	1 1/4	1-0 7/16	3/4

ALBUQUERQUE NEW MEXICO

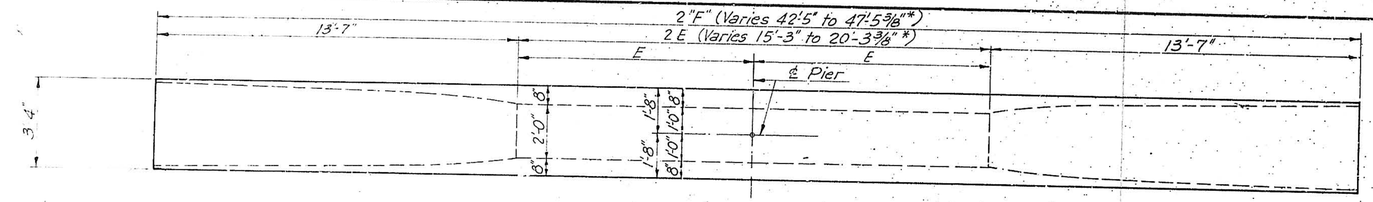
GRAND AVENUE OVERPASS

EAST BOUND BRIDGE

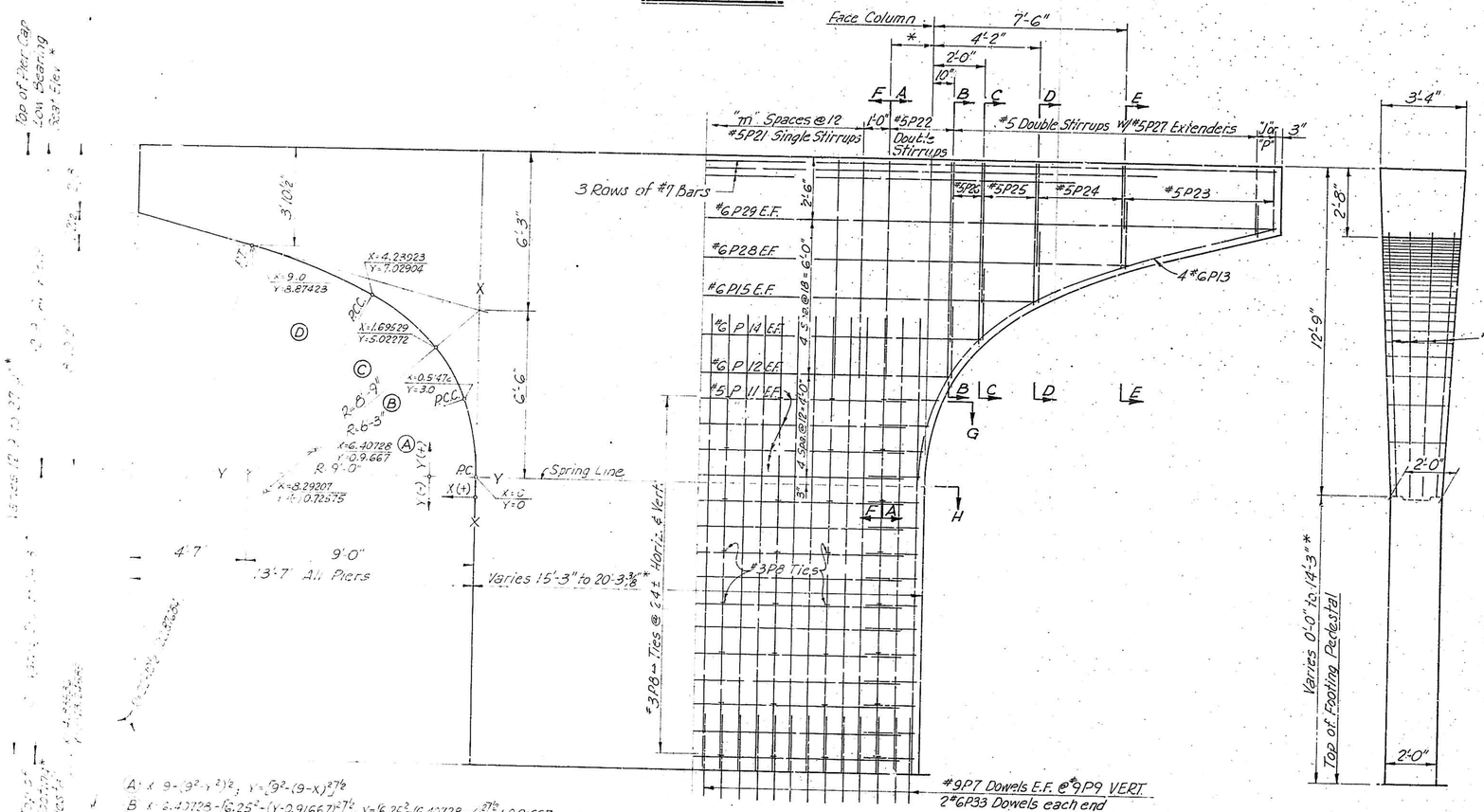
PIER DETAILS N° 7E, 8E, 9E, & 10E

GORDON HERKENHOFF & ASSOCIATES, INC
ALBUQUERQUE CONSULTING ENGINEERS NEW MEXICO

SCALE	DATE	DRAWN	R.A.L.	SHEET 55
	JULY 1969	CHECKED	L.M.P.	OF 66



PLAN



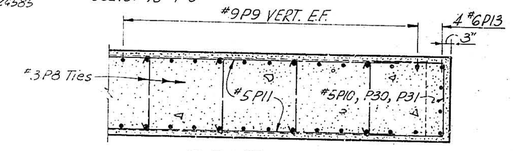
TYPICAL ELEVATION
Scale: 3/16"=1'-0"

SIDE ELEVATION

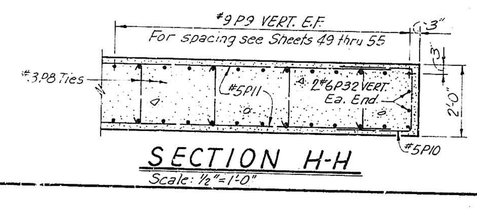
A: $x = 9-(9^2-y^2)^{1/2}$; $y=[9^2-(9-x)^2]^{1/2}$
B: $x = 6.40728-[6.25^2-(y-0.91667)^2]^{1/2}$; $y=[6.25^2-(6.40728-x)^2]^{1/2}+0.91667$.
C: $x = 8.29207-[8.75^2-(y+0.72575)^2]^{1/2}$; $y=[8.75^2-(8.29207-x)^2]^{1/2}-0.72575$.
D: $x=4.83536-[22.87684^2-(y+13.24585)^2]^{1/2}$; $y=[22.87684^2-(14.83536-x)^2]^{1/2}-13.24585$

TABLE OF COORDINATES
FOR INTERMEDIATE POINTS ON CURVED SOFFIT
AT 3-INCH INCREMENTS ON EACH AXIS
(ALL DIMENSIONS IN FEET)

X or Y	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25
X	0.0035	0.0139	0.0313	0.0557	0.0872	0.1259	0.1716	0.2250	0.2858
Y	2.1065	2.9580	3.5733	4.0510	4.4472	4.7872	5.0849	5.3547	5.6032
X or Y	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
X	0.3542	0.4304	0.5147	0.6092	0.7162	0.8364	0.9708	1.1204	1.2865
Y	5.8328	6.0454	6.2425	6.4255	6.5954	6.7530	6.8993	7.0347	7.1632
X or Y	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75
X	1.4709	1.6756	1.9004	2.1437	2.4076	2.6950	3.0099	3.3574	3.7450
Y	7.2879	7.4088	7.5260	7.6396	7.7495	7.8560	7.9589	8.0584	8.1545
X or Y	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00
X	4.1841	4.6732	5.1938	5.7536	6.3522	7.0073	7.7313	8.5479	———
Y	8.2473	8.3368	8.4231	8.506	8.5860	8.6626	8.7363	8.8068	8.8742

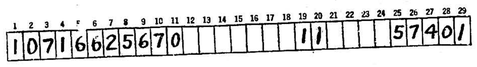


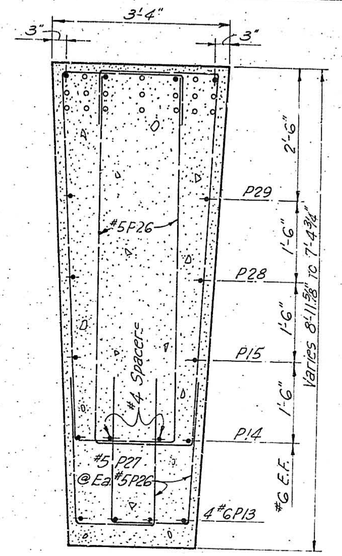
SECTION G-G
Scale: 1/2"=1'-0"



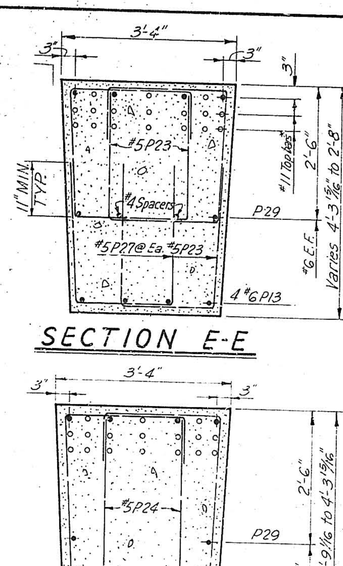
SECTION H-H
Scale: 1/2"=1'-0"

NOTE:
Details and dimensions shown are typical for all piers.
*For details and dimensions not shown see pier details Sheets 49 thru 55.
Stirrups and ties within the limits of Sections A thru F shall be of size and arrangement shown in their respective limit. Exact spacing of stirrups for each pier shall be as noted on sheets 49 thru 55.

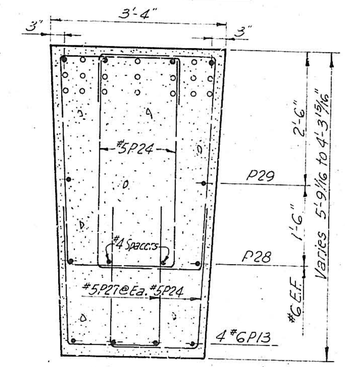




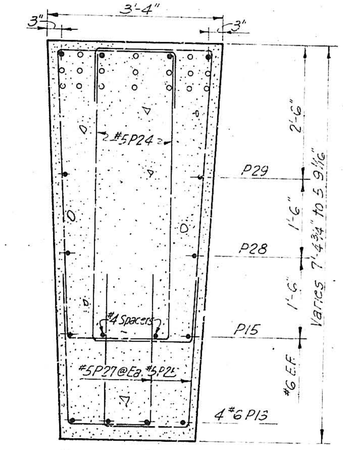
SECTION B-B



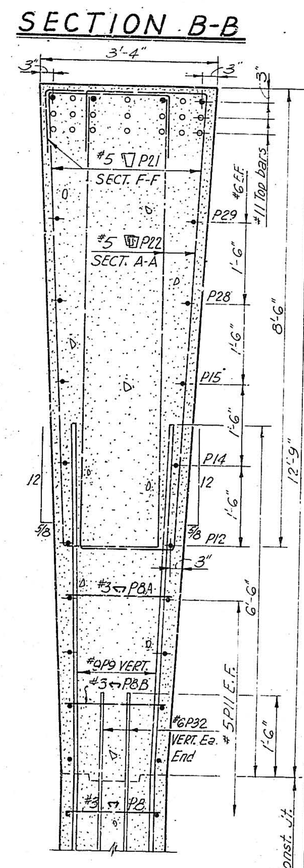
SECTION E-E



SECTION D-D



SECTION C-C



SECTION A-A (as noted)
SECTION F-F (as noted)

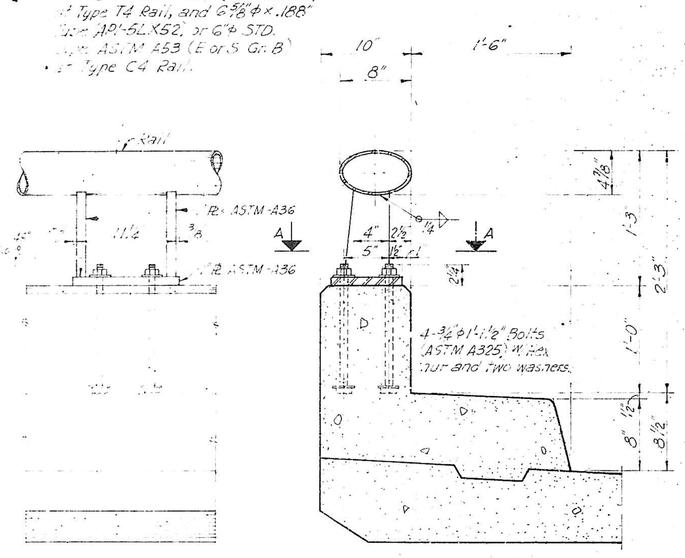
ALBUQUERQUE, NEW MEXICO
GRAND AVENUE OVERPASS
WEST BOUND AND EAST BOUND BRIDGES
TYPICAL PIER DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO

SCALE	DATE	DRAWN: R.D.M.	SHEET 56
	JULY 1969	CHECKED P.J.G.	OF 66

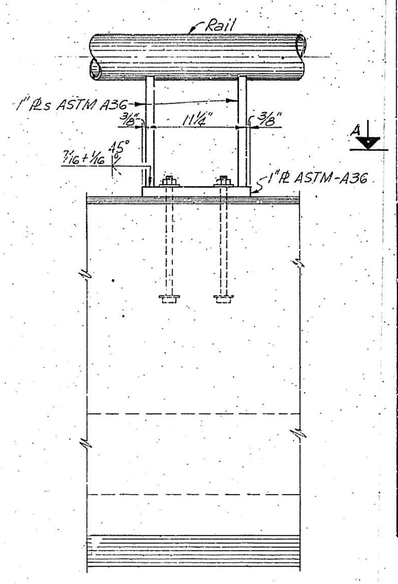
NOTE: Rail members shaped to 8"x4⅞" ellipse from 6⅝ Extra Strong pipe ASTM-A53 (E or S Gr. B) or 6⅝"ϕ x .219" Wall (API-5LX52) at Type T4 Rail, and 6⅝"ϕ x .188" Wall API-5LX52, or 6"ϕ STD. Wall ASTM A53 (E or S Gr. B) at Type C4 Rail.

PAINTING: Railing shall be painted in accordance with General Notes Sheet 4 except that two field coats of Foliage Green paint, (or other green paint if so desired by the Engineer), conforming to the applicable AASHO standard specification for Bridge Paint shall be applied in lieu of aluminum paint. The contractor shall submit manufacturers color chips from which the Engineer will select the shade of green to be used.

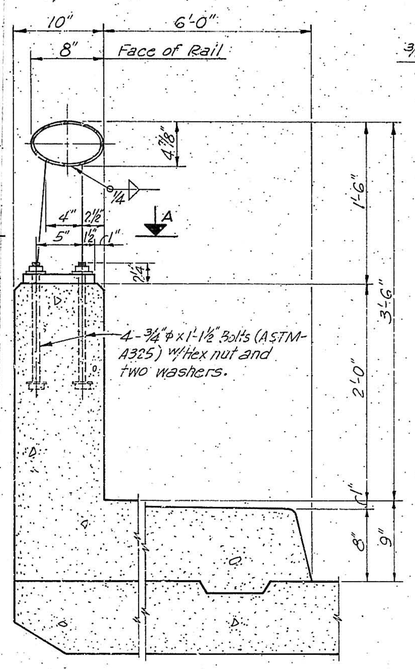


ELEVATION SECTION

TYPE "T4" TRAFFIC RAIL
(At Curb Side)

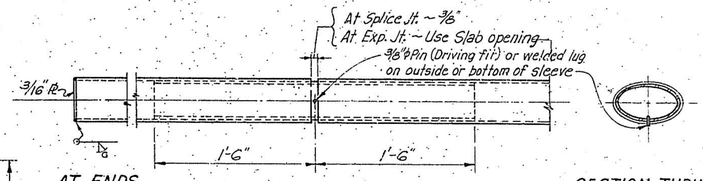


ELEVATION



SECTION

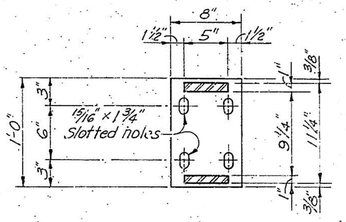
TYPE "C4" COMBINATION RAIL
(At Sidewalk Side)



AT ENDS OF RAIL — AT SPLICE AND EXP. JOINT — SECTION THRU SPLICE AND EXP. SLEEVE

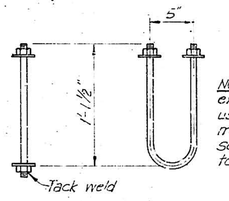
RAIL MEMBER DETAILS

NOTE: The difference between the outside dimensions of the sleeve and the inside dimensions of the rail shall not exceed .125" along either axis.



SECTION A-A

MIN. WALL THICKNESS FOR SLEEVES TYPE T-4		
Rail Member → / Splice Material ↓	○ A53	○ 5LX52
ASTM-A53-B	.528"	.427"
ASTM-A36	.500"	.406"
ASTM-A441	.343"	.280"
API-5LX52	.320"	.266"



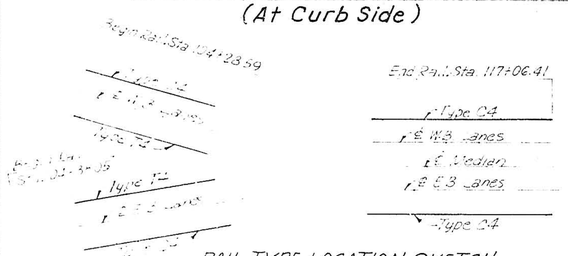
NOTE: Bolts may have extra length threads for use with nuts or sheet metal fasteners for securing bolts to template.

MIN. WALL THICKNESS FOR SLEEVES TYPE C-4		
Rail Member → / Splice Material ↓	○ A53	○ 5LX52
ASTM-A53-B	.353"	.339"
ASTM-A36	.339"	.325"
ASTM-A441	.239"	.231"
API-5LX52	.224"	.216"

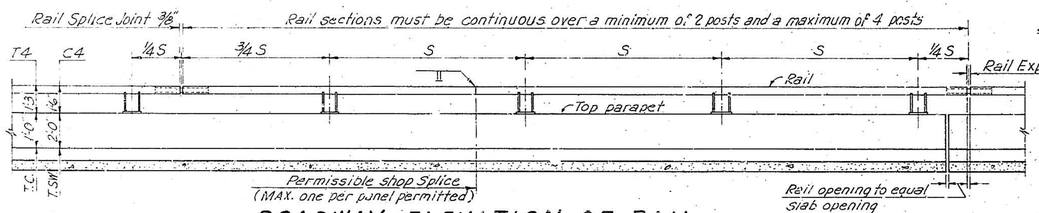
Threaded Anchors ASTM-A321 with Hex Nuts (A325) & Washers

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	0	7	1	6	6	2	5	7	7	0							1	1						5	7	4	0	1

OPTIONAL ANCHORS



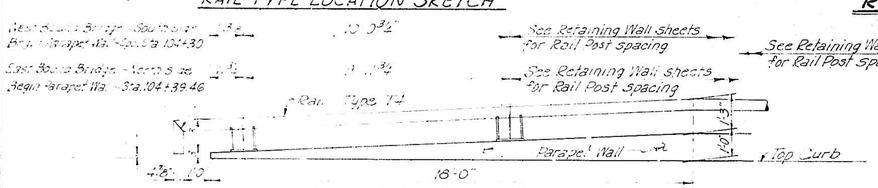
RAIL TYPE LOCATION SKETCH



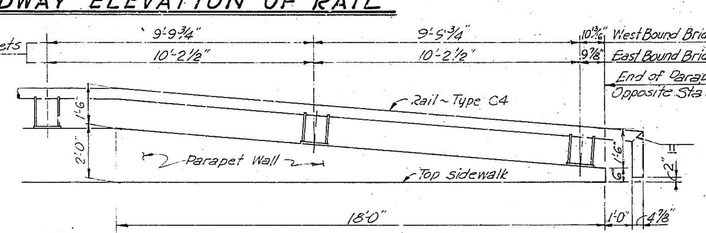
ROADWAY ELEVATION OF RAIL

GENERAL NOTES

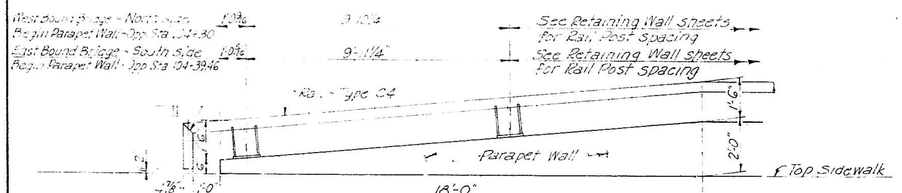
1. All materials and workmanship shall conform to N.M.S.H. Commission Specifications.
2. Design in accordance with A.A.S.H.O. Specifications 1965 and Interim Specifications to date.
3. Rail Posts shall be set perpendicular to top of parapet.
4. Rail Posts shall be seated on elastomeric pads having the same dimensions as post base and 1/16" thick. Additional pads or half pads may be used in shimming for alignment. Post heights shown will increase by the pad thickness. Elastomeric pads may be neoprene, rubber-asbestos, rubber fabric or any other elastomeric product having a durometer hardness between 70 and 100 as certified by the manufacturer to the Engineer. Testing requirements for elastomeric pads will be waived for these pads.
5. All open ends of rail shall be capped.
6. See superstructure and retaining wall plans for post spacing.
7. For horizontal curves of radius greater than 1800 feet, the rail members may be fabricated in straight 2-post panels. For curves of radius 1800 feet and less, panels shall be fabricated to the required radius or in chord lengths not to exceed 15 feet by beveled shop splices in the rail members and sleeves.
8. Metal Bridge Railing will be paid for at the unit price bid per foot. Bid price shall include all rails, posts, splices, elastomeric bearing pads and shims, bolts, nuts and washers necessary for installation of the rail complete. Concrete parapet wall will be paid for as Class "A" Reinforced Concrete for the item to which the work applies.



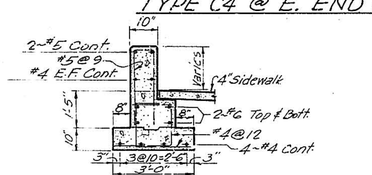
TYPE T4 @ W. END OF BRIDGE



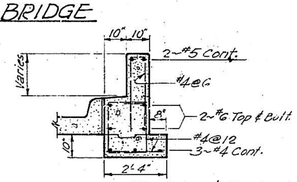
TYPE C4 @ E. END OF BRIDGE



TYPE C4 @ W. END OF BRIDGE



SIDEWALK PARAPET WALL & FOOTING



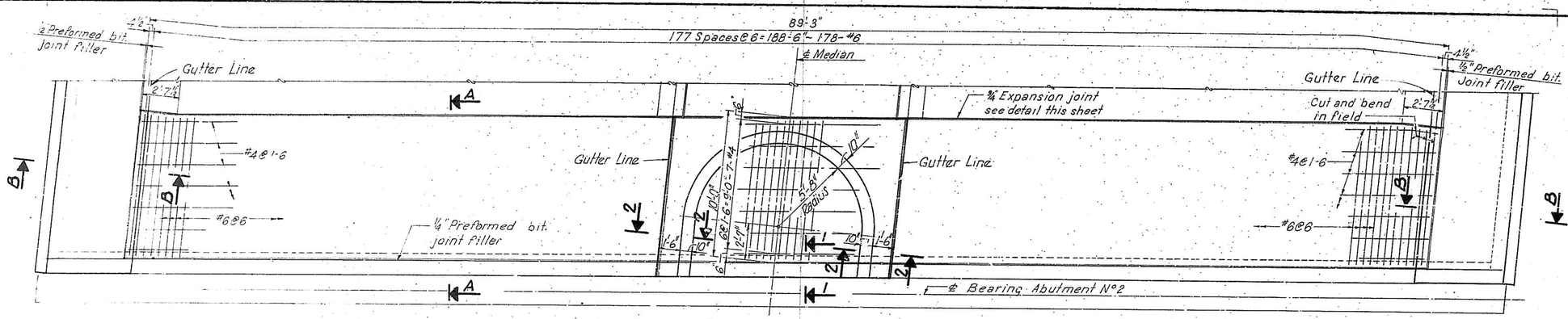
CURB PARAPET-WALL & FOOTING

PARAPET WALL DETAILS @ END OF RETAINING WALLS

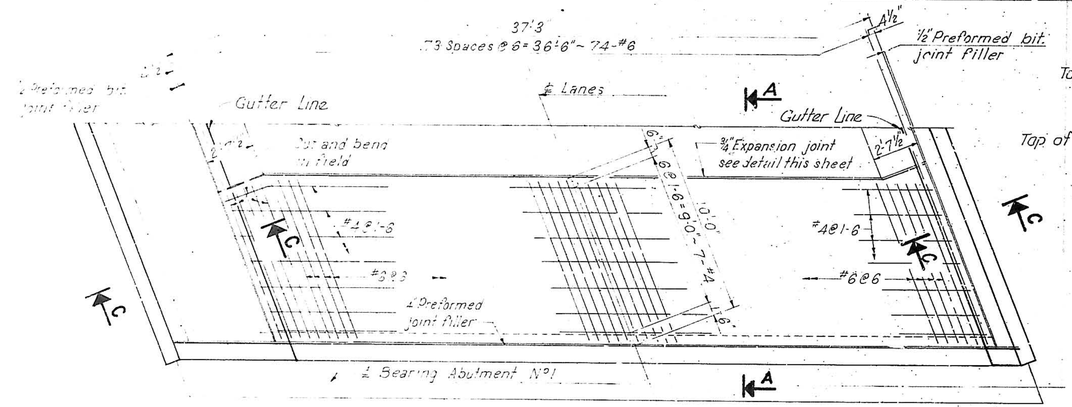
ALBUQUERQUE, NEW MEXICO
GRAND AVENUE OVERPASS
WEST BOUND AND EAST BOUND BRIDGES
BRIDGE RAILING DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
ALBUQUERQUE, CONSULTING ENGINEERS NEW MEXICO

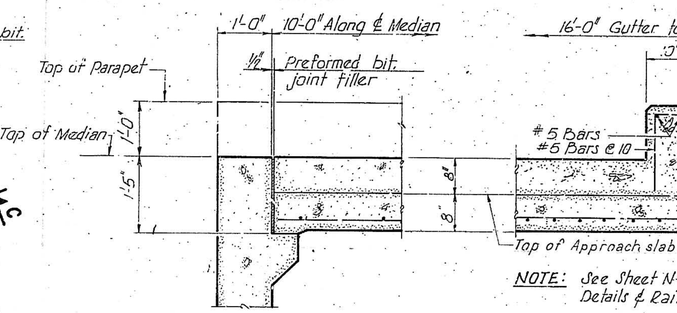
SCALE	DATE	DRAWN R.D.M. CHECKED L.M.P.	SHEET 57 OF 66
	JULY 1969		



PLAN - AT ABUTMENT N° 2



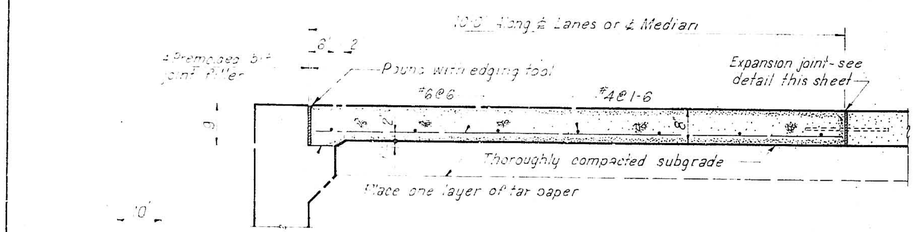
PLAN - AT ABUTMENT N° 1 - E.B.
(W.B. - OPP. HAND)



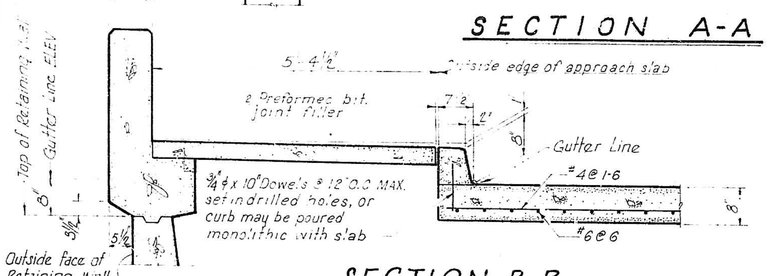
NOTE: See Sheet N° 40 for median Railing Details & Rail Post Locations

SECTION 1-1 SECTION 2-2

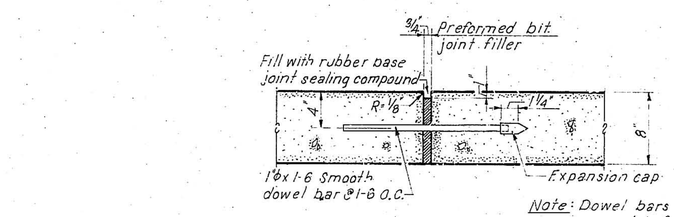
CONCRETE MEDIAN DETAILS
(AT ABUTMENT N° 2 ONLY)



SECTION A-A



SECTION B-B

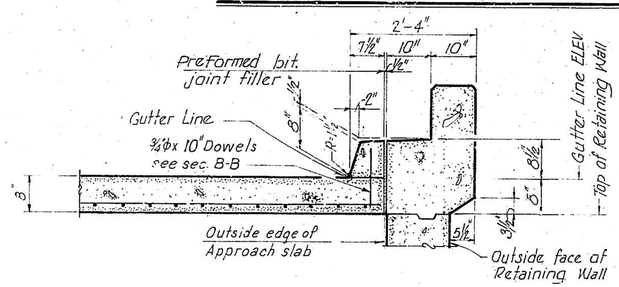


Note: Dowel bars to be heavily greased before placing concrete.

EXPANSION JOINT DETAIL

1 2 3 4 5 5 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

1 0 7 1 6 6 2 5 8 7 0 | 1 1 | 5 7 4 0 1



SECTION C-C

GENERAL NOTES

1. All materials and workmanship shall conform to N.M.S.H. commission Specifications.
2. All Concrete shall be Class 'A'.
3. All reinforcing steel shall be deformed bars of intermediate grade, and shall conform to A.S.T.M. Designation A-615, Grade 40
4. Slab shall be placed only on material compacted in conformance with the specifications.
5. Preformed bituminous joint filler shall conform to A.S.T.M. Specification D-1751. Cost of joint filler, dowel bars and tar paper to be included in the unit price bid for Class 'A' Concrete miscellaneous, including reinforcing steel complete in place.

ALBUQUERQUE NEW MEXICO

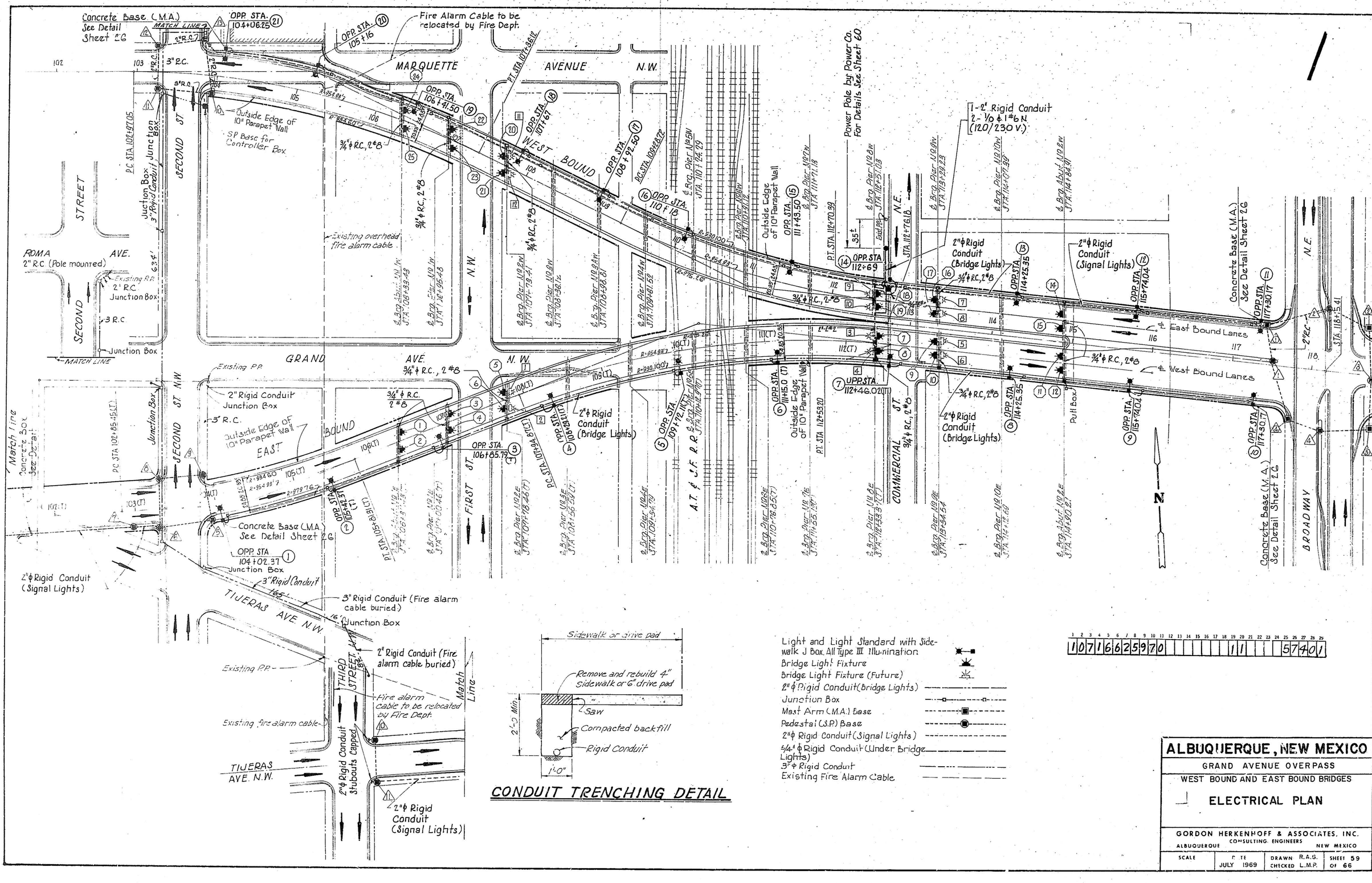
GRAND AVENUE OVERPASS

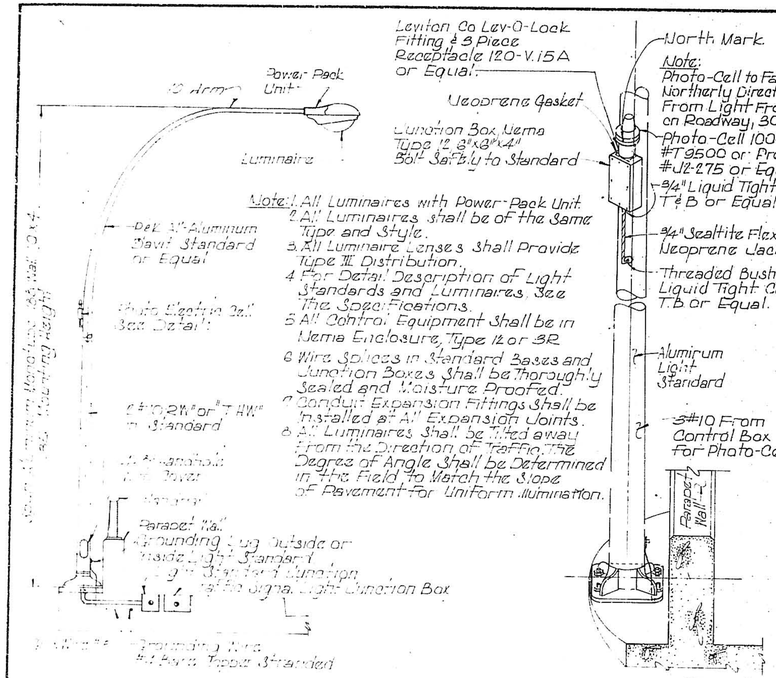
W.B. & E.B. LANES

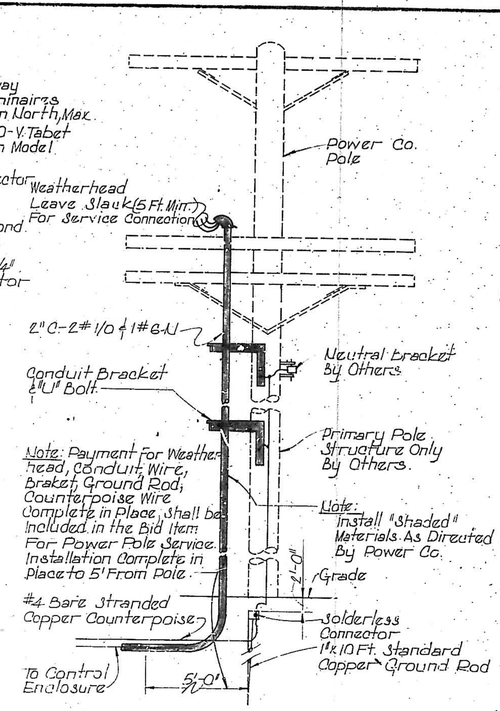
APPROACH SLAB DETAILS

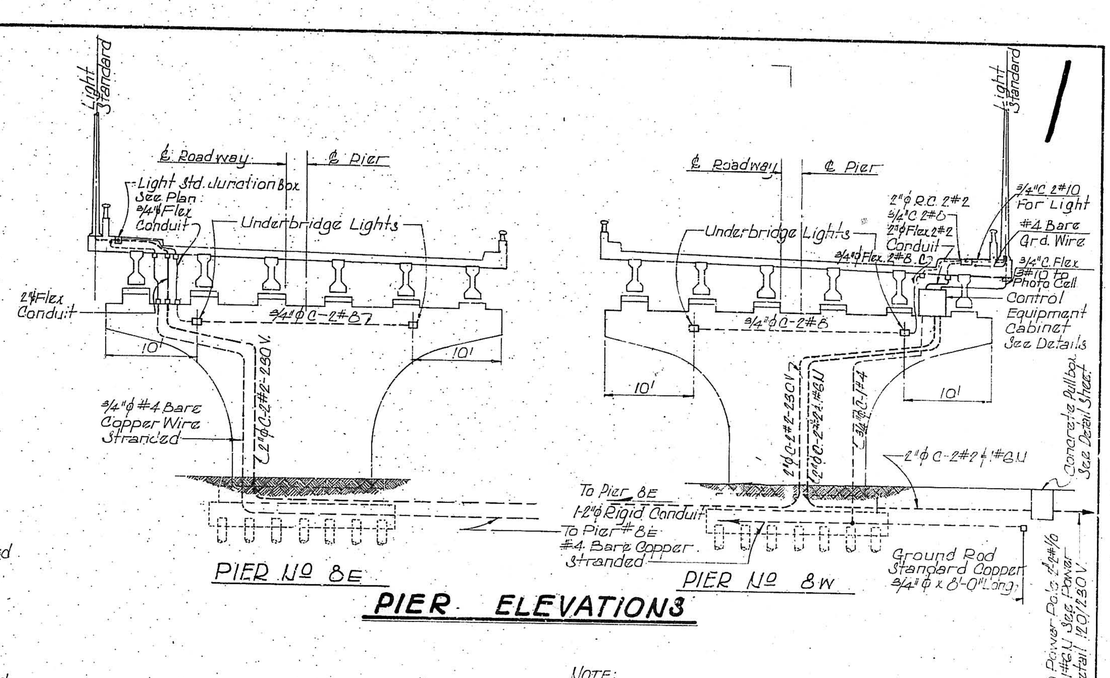
GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.L.	SHEET 58
	JULY 1969	CHECKED: L.M.P.	OF 66


Concrete Base (M.A.) See Detail Sheet 2.6
MATCH LINE
OPP. STA. 10+06.75
Fire Alarm Cable to be relocated by Fire Dept.
OPP. STA. 105+16
MARQUETTE AVENUE N.W.
P.T. STA. 107+36.12
OPP. STA. 106+41.50
OPP. STA. 107+67
OPP. STA. 108+92.50
P.C. STA. 109+48.72
WEST BOUND
OPP. STA. 110+18
Power Pole by Power Co. For Details See Sheet 60
OPP. STA. 111+43.50
P.T. STA. 112+70.39
OPP. STA. 112+69
35'±
N.E.
OPP. STA. 112+46.02 (T)
OPP. STA. 111+15.0 (T)
OPP. STA. 109+72.11 (T)
OPP. STA. 106+85.79
OPP. STA. 105+41.31 (T)
OPP. STA. 104+02.37
Junction Box
3" Rigid Conduit
165'
3" Rigid Conduit (Fire alarm cable buried)
Junction Box
2" Rigid Conduit (Fire alarm cable buried)
Fire alarm cable to be relocated by Fire Dept.
Existing fire alarm cable
2"ϕ Rigid Conduit Stubouts Capped
2"ϕ Rigid Conduit (Signal Lights)
2"ϕ Rigid Conduit (Bridge Lights)
2"ϕ Rigid Conduit (Signal Lights)
2"ϕ Rigid Conduit (Bridge Lights)
2"ϕ Rigid Conduit (Signal Lights)
2-2" Rigid Conduit 2-1/0 & 1-#6 N. (120/230 V.)
Existing overhead fire alarm cable
Existing P.P.
Outside Edge of 10" Parapet Wall
SP Base for Controller Box
Junction Box 3" Rigid Conduit
ROMA AVE. 2" R.C. (Pole mounted)
2' R.C. Junction Box
3 R.C.
Junction Box
MATCH LINE
SECOND STREET
FIRST ST.
THIRD STREET
TIJERAS AVE. N.W.
GRAND AVE. N.W.
COMMERCIAL ST. N.E.
Concrete Base (M.A.) See Detail Sheet 2.6
East Bound Lanes
West Bound Lanes
Pull Box
BROADWAY
N
Match Line
Concrete Box See Detail
3/4"ϕ R.C., 2-#8
3/4"ϕ R.C., 2-#8
3/4"ϕ R.C., 2-#8

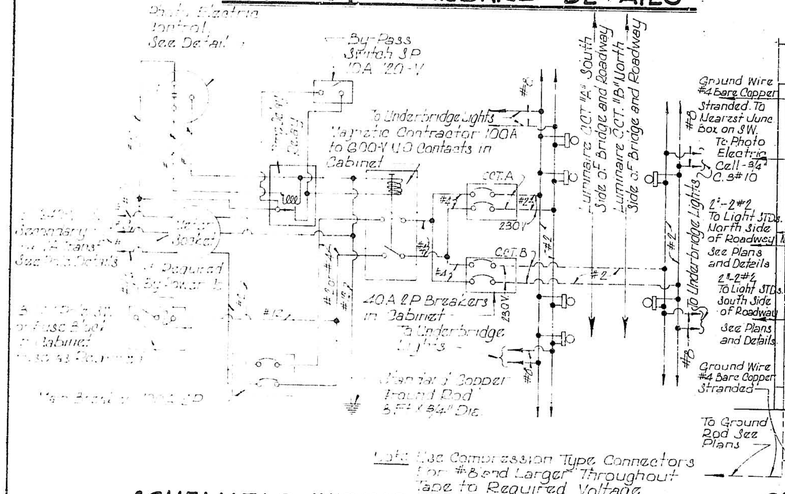




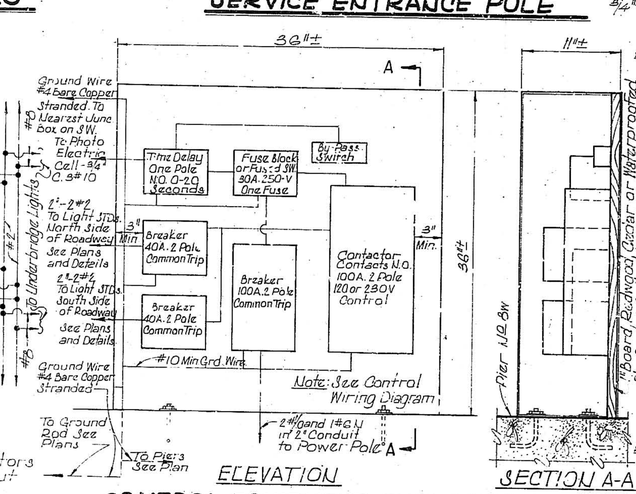


PIER ELEVATIONS

LIGHTING STANDARD DETAILS



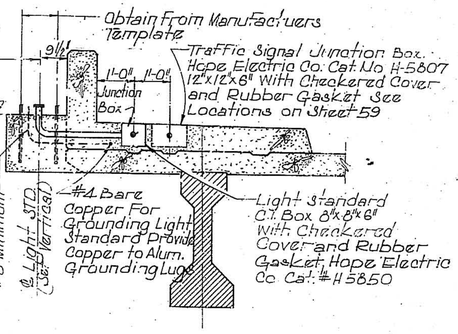
SERVICE ENTRANCE POLE

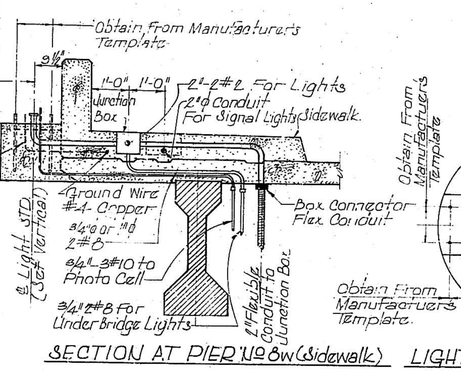


ELEVATION

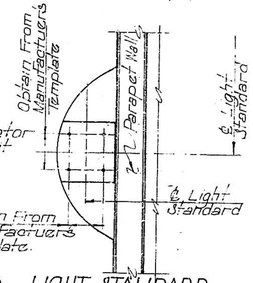
SECTION A-A

TYPICAL SECTION (Sidewalk)





SECTION AT PIER No 8W (Sidewalk)



LIGHT STANDARD BRACKET PLAN

SCHEMATIC WIRING DIAGRAM-STREET LIGHTING

EQUIPMENT SCHEDULE

1. P.E.K. All Aluminum Davit Standard or Approved Equal. 30'-0" Base and 10'-0" Arm See Detail Above.
2. Luminaire General Electric Localux Model With Power-Pack, Mounted in the Luminaire, Type III, E.S.S.A.B.A. Distribution All Lights.
3. All Ballasts Shall be Regulated Constant Power Type, and of Low Temperature For Outdoor Installation and 240-V Multiple Operation.
4. Magnetic Contactor: Electrically Operated Electrically Held, 100A. 2 Pole 120-V. Control, A.B.C. Cat. No. 35270

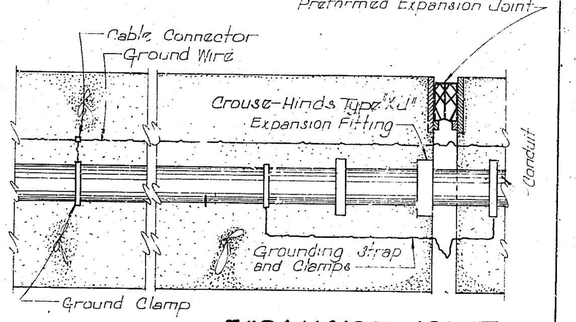
CONTROL EQUIPMENT ENCLOSURE

Notes:
1. The Equipment Enclosure Shall be Made of Heavy Gauge Steel NEMA Type 12 With Hinged Door, Securely Fastened. Similar to Circle A-W. Cat. # AW 363012-12, Except that Provision For Pad-Lock Shall be Provided and Dimensions are Required by Approved Manufacture of Equipment.
2. All Equipment in the Control Cabinet Shall be of the Enclosed Type, NEMA Type 1, and Identified with Stamped or Painted Lettering on Each Cover.
3. Equipment Mounting can be Rearranged to Suit Wiring
4. Wires Between Control Equipment Shall be Bent and Dressed Neatly, and All Knockouts Where Wires Enter Shall be Bushed.
5. Connect Rigid or Flex. Conduit on Side, Top or Bottom of Cabinet Where Convenient. For Flex. Conduit Use Flex. to Rigid Conduit Seal Tight Box Connector.

LIGHTING CONNECTION AND STANDARD MOUNTING DETAILS

Note:
For Mast Arm (M.A.), Pedestal (S.P.) Foundation and Junction Box Details See Arterial Street Paving Detail Sheet 110.26

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	0	7	1	6	6	2	6	0	7	0							1	1				5	7	4	0	1		



EXPANSION JOINT DETAIL

ALBUQUERQUE, NEW MEXICO

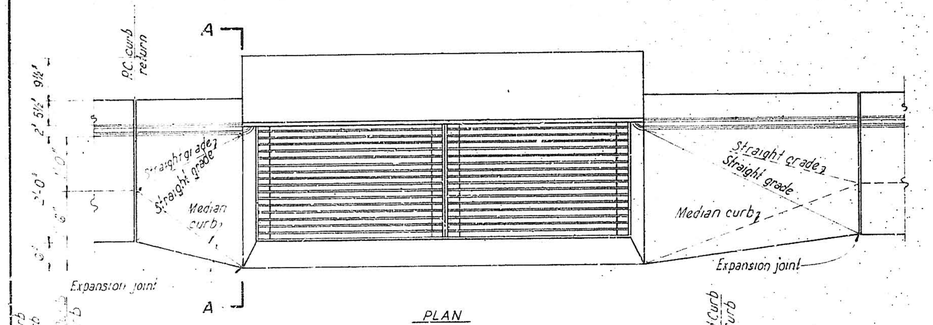
GRAND AVENUE OVERPASS.

W.B. & E.B. BRIDGES

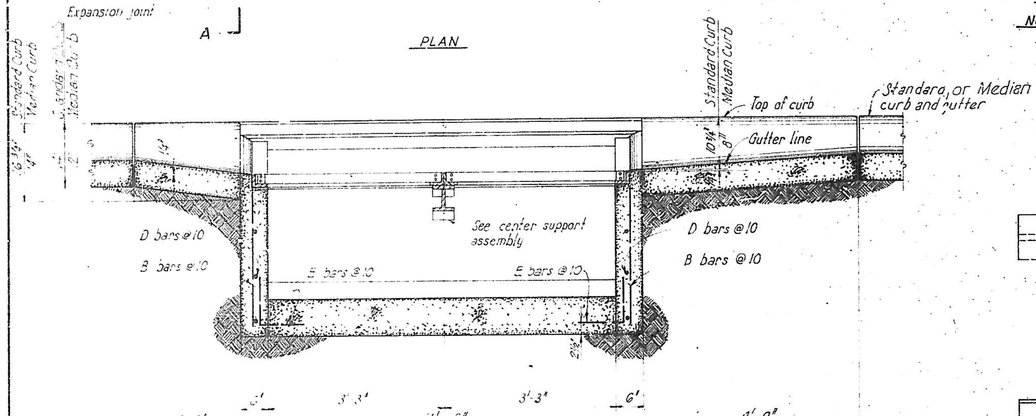
ELECTRICAL DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
ALBUQUERQUE CONSULTING ENGINEERS NEW MEXICO

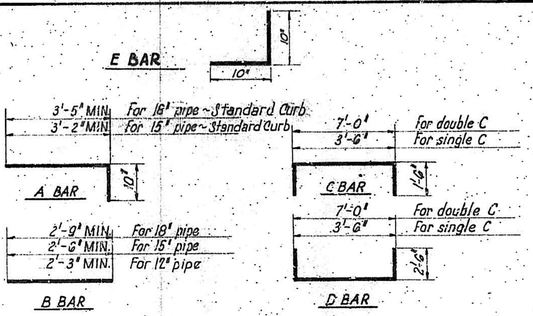
SCALE	DATE	DRAWN: R.A.G.	SHEET 60
	JULY 1969	CHECKED L.M.P.	OF 66



PLAN



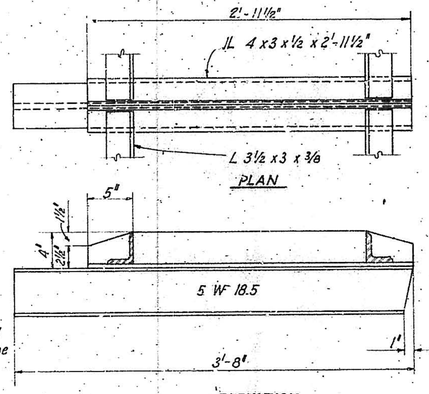
LONGITUDINAL SECTION



NOTE: All bars to be #4

BAR BENDING DETAILS

Not to scale



ELEVATION

CENTER SUPPORT ASSEMBLY

Scale: 1½" = 1'-0"

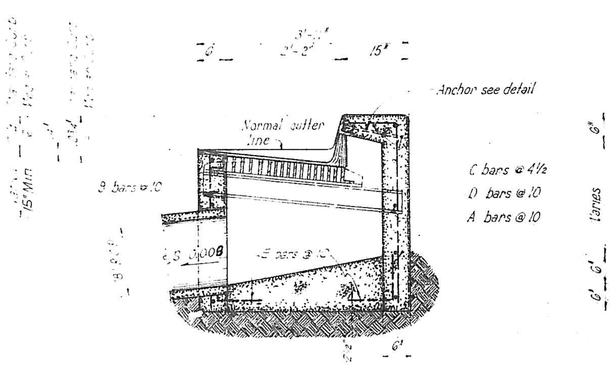
STEP DETAIL

Scale: ¾" = 1'-0"

TRANSVERSE SECTION

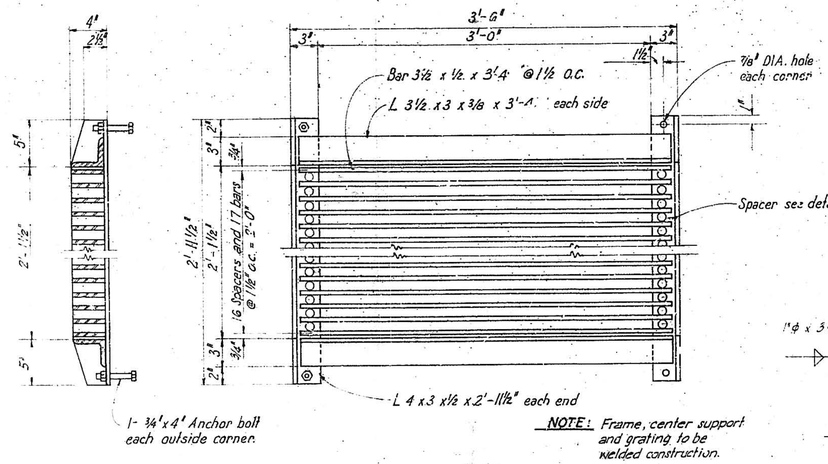
DOUBLE C INLET

Scale: ¾" = 1'-0"



ANCHOR DETAIL

Not to scale.

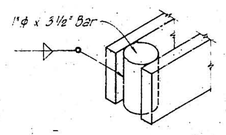


SECTION PLAN

NOTE: Frame, center support and grating to be welded construction.

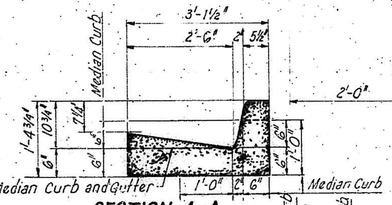
FRAME AND GRATING DETAILS

Scale: 1½" = 1'-0"



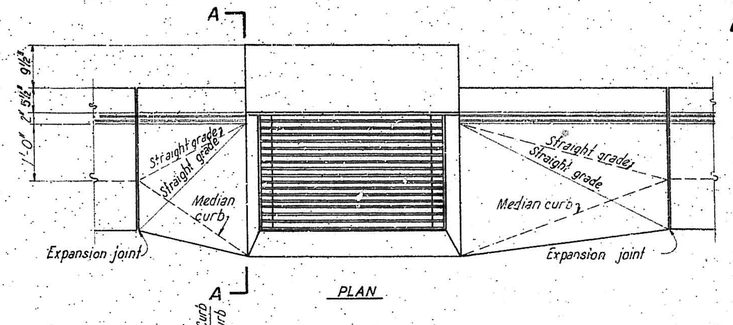
SPACER DETAIL

Not to scale.

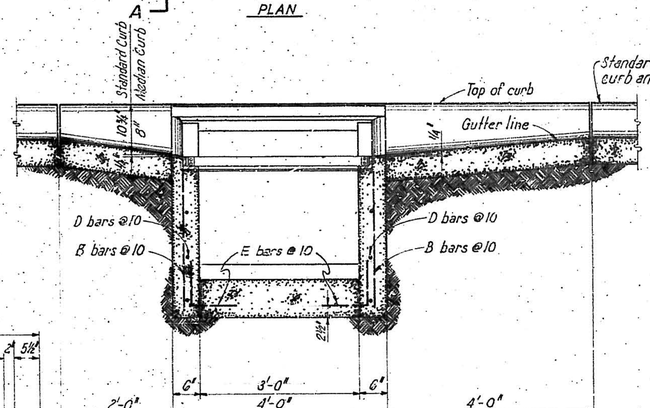


SECTION A-A

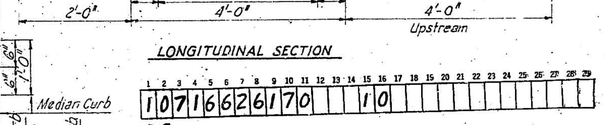
Scale ¾" = 1'-0"



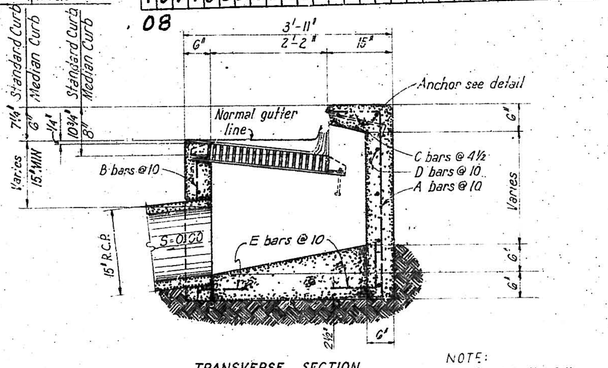
PLAN



LONGITUDINAL SECTION



08



TRANSVERSE SECTION

SINGLE C INLET

Scale: ¾" = 1'-0"

NOTE:
Provide the following slopes for inlet pipes:
15" R.C.P. — S=0.006 Slope ¾" Per 10' of line
18" R.C.P. — S=0.009 1½"
24" R.C.P. — S=0.008 1"

AS CONSTRUCTED

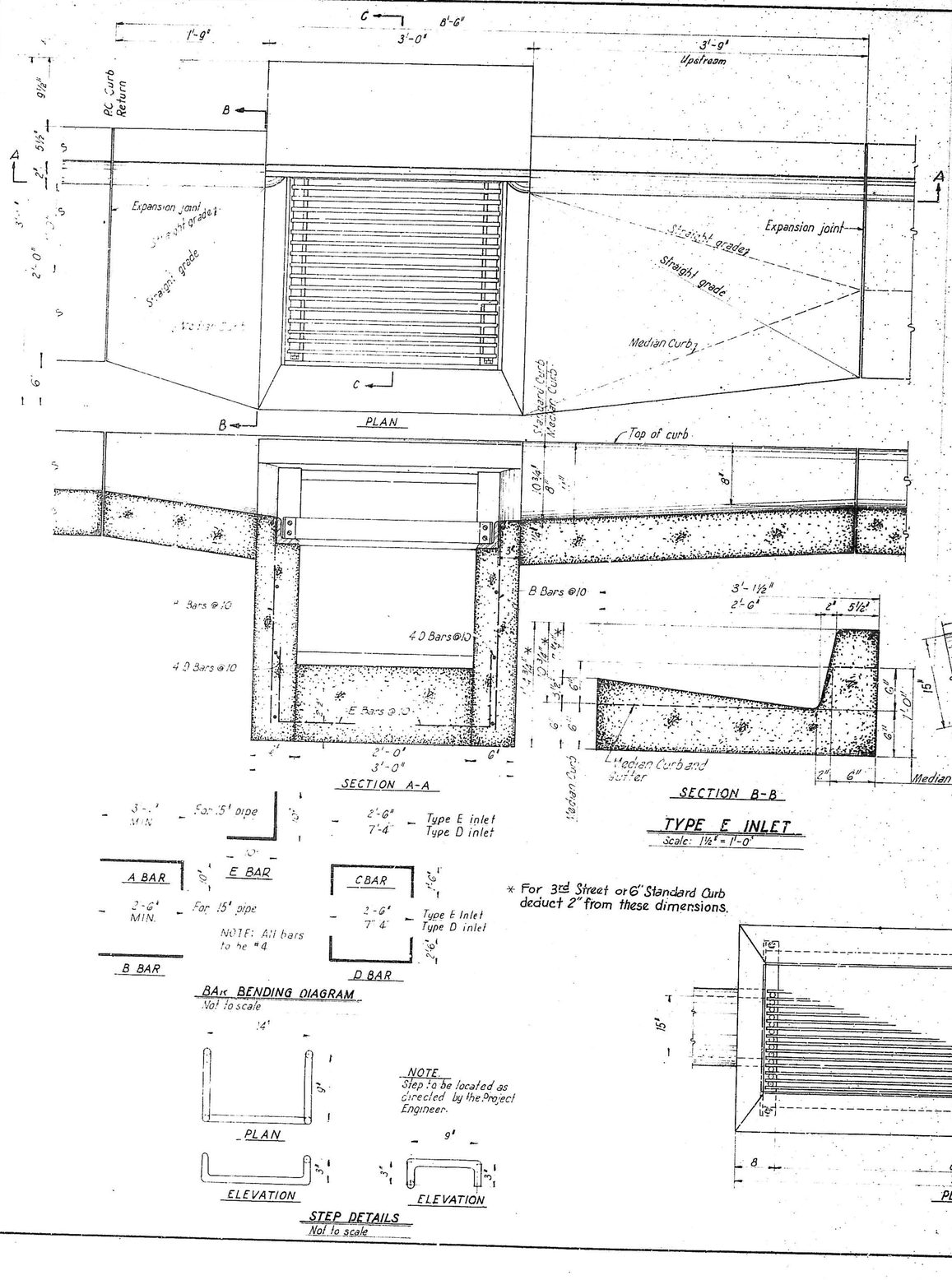
ALBUQUERQUE, NEW MEXICO

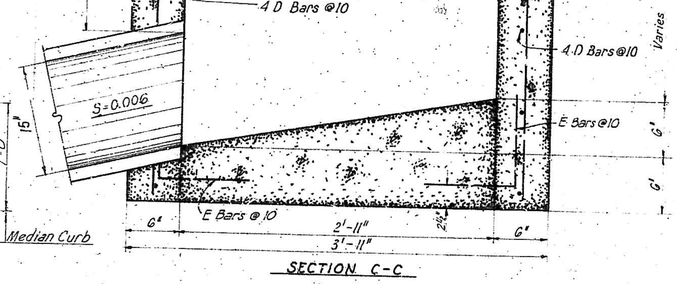
STORM DRAIN STANDARDS

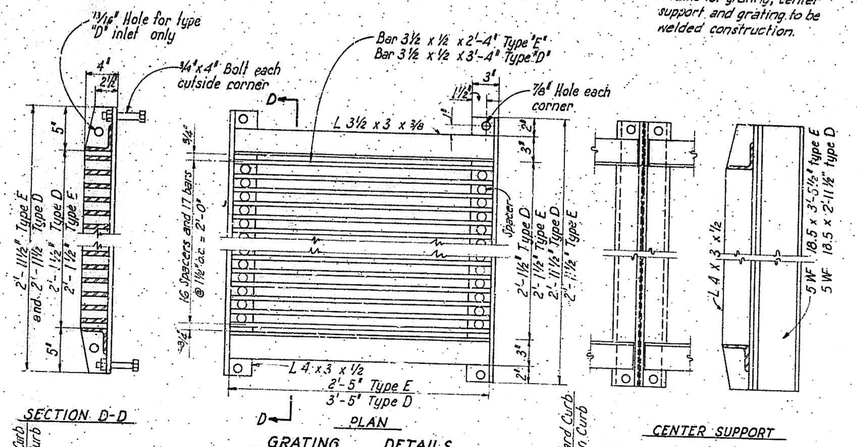
DOUBLE C AND SINGLE C DROP INLET DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

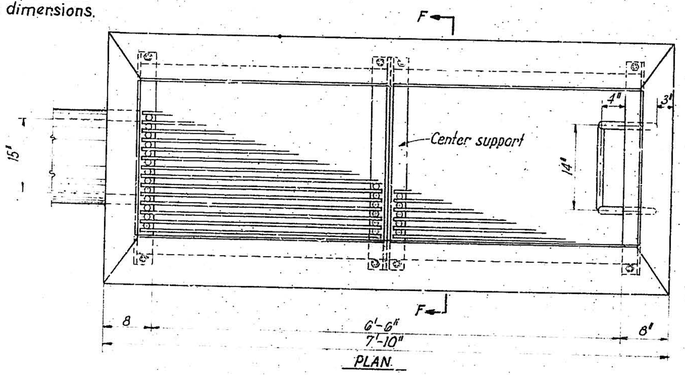
SCALE	DATE	DRAWN: A.O.H.	SHEET 61
AS SHOWN	JULY 1969	CHECKED: G.A.J.	OF 66

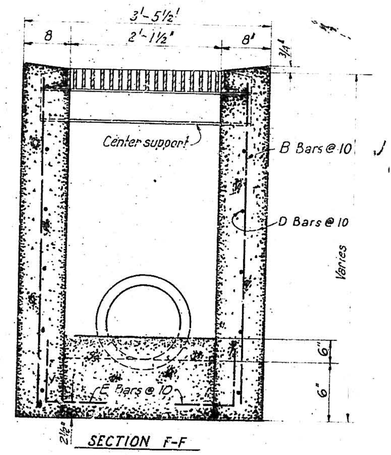






* For 3rd Street or 6" Standard Curb deduct 2" from these dimensions.





NOTE
Provide the following slopes for inlet pipes:
15" R.C.P. — S=0.006 Slope ¾" Per 10' of line
18" R.C.P. — S=0.009 Slope 1⅛" Per 10' of line
24" R.C.P. — S=0.008 Slope 1" Per 10' of line

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
1 0 7 1 6 6 2 6 2 7 0 | 1 0
0 8

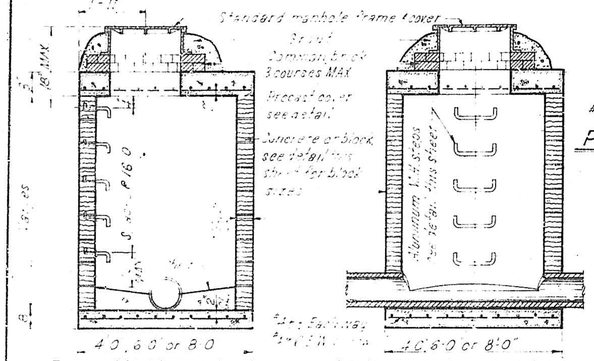
ALBUQUERQUE, NEW MEXICO

STORM SEWER STANDARDS

TYPE D, AND E DROP INLET DETAILS

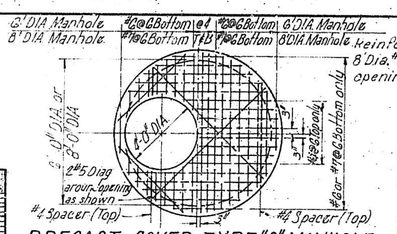
GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: A.O.H.	SHEET 62
AS SHOWN	JULY 1969	CHECKED: G.A.J.	OF 66

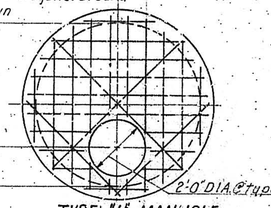


TRANSVERSE SECTION — LONGITUDINAL SECTION

TYPE A MANHOLE

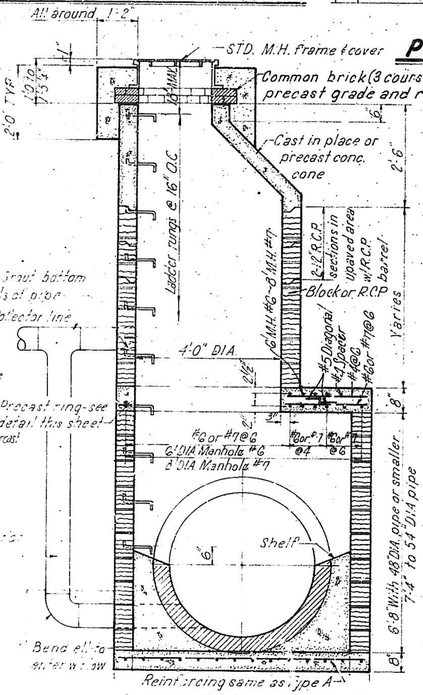


PRECAST COVER TYPE "C" MANHOLE



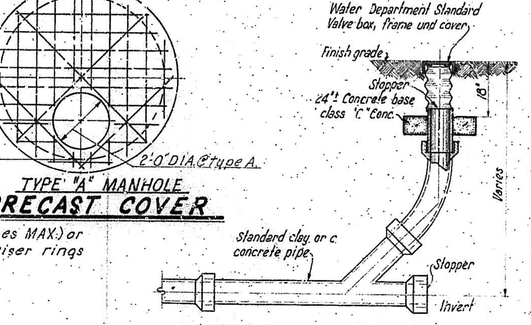
TYPE "A" MANHOLE

PRECAST COVER



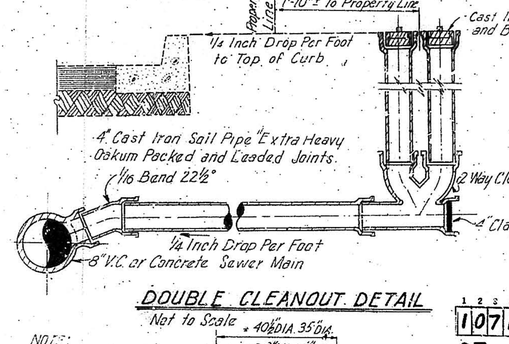
Note: Type A manhole to be used, applying dimensions and reinforcing as shown on Type C manhole and precast cover detail 5 when invert is less than 10'0" from top of M.H cover.

TYPE C MANHOLE



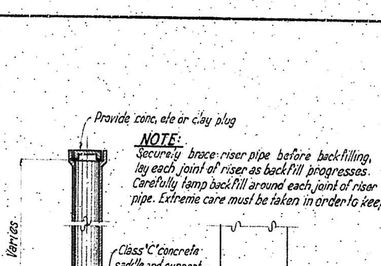
LAMP HOLE OR CLEANOUT AND COVER

Scale: ½" = 1'-0"



DOUBLE CLEANOUT DETAIL

Not to Scale

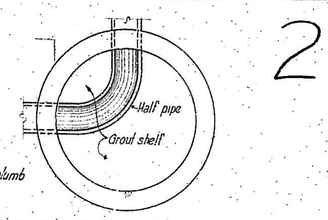


NOTE: Securely brace riser pipe before backfilling, lay each joint of riser as backfill progresses. Carefully tamp backfill around each joint of riser pipe. Extreme care must be taken in order to keep riser plumb

SECTION — PLAN

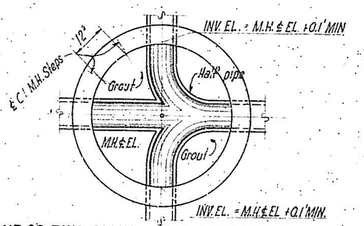
RISER DETAILS

Scale: ½" = 1'-0"



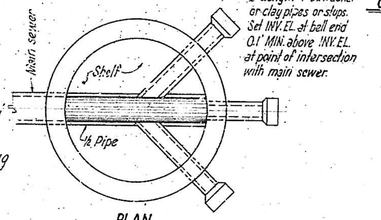
RIGHT ANGLE ENTRY AND EXIT TYPE "B" M.H.

Not to scale.

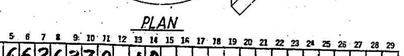


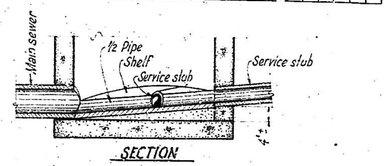
ONE OR TWO RIGHT ANGLE ENTRANCES INTO MAIN FLOW LINE TYPE "B" M.H.

Not to scale



PLAN





SECTION

DETAIL OF HOUSE SERVICE LINES AT DEAD-END MANHOLES IN CUL-DE-SAC STREETS

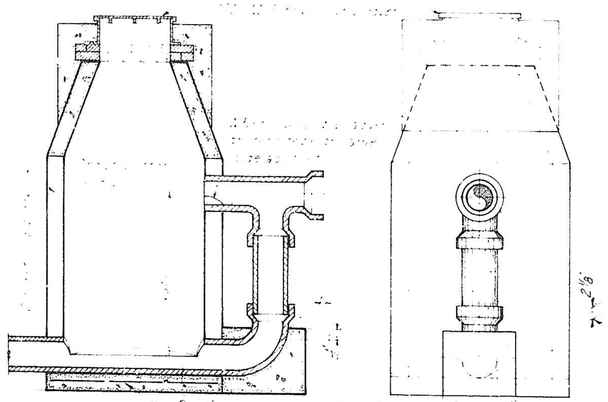
Scale: ½" = 1'-0"

MANHOLE SPECIFICATIONS

The Contractor has the option of building the masonry walls of all manholes of solid concrete or block. If solid concrete is used, the walls must have a thickness of not less than six (6") inches. Block for manhole walls must have a thickness of not less than five (5") inches, and a height of not less than eight (8") inches, a lenght of twelve (12") inches to fourteen (14") inches and shall be lock joint type. The concrete from which such blocks are constructed shall meet the specifications for Class "B" as set forth in Sanitary Sewer Specifications for the City of Albuquerque, New Mexico. Type of block must be approved by the Engineer and each block shall be molded with a curvature equal to and matching that of the manhole being built. All concrete blocks shall conform in all respects to the standard specifications for "Concrete Masonry Units for Construction of Catch Basin & Manholes" A.S.T.M. Designation C139-44 or any subsequent revisions there of. Cones may be poured in place or precast and than grouted to manhole barrel. All manhole frames and covers to be standard cast iron as shown. In wet sewer construction manhole shall be constructed of poured concrete to a predetermined elevation as shown on plan and profile sheets. Remainder of barrel may be constructed of curved concrete block set in waterproof mortar. Manhole cones may be constructed of concrete blocks, providing the blocks are formed so as to provide a smooth and true surface on the inside of cone. Manhole in excess of 16'-1" depth shall have ½"ø steel bars on 6" ctrs. each way in the bottom slab, steel to be placed 2" below top face of slab. All manholes shall be plastered inside with ½" minimum thickness water-proof cement plaster from shelf to top of cone.

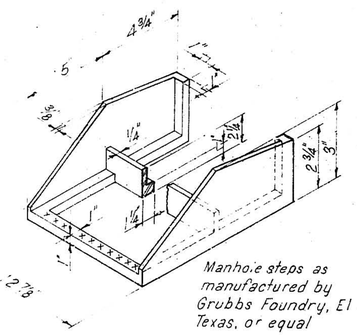
Calcium chloride shall not be added to concrete, mortar, or plaster used in junction boxes or manhole construction.

Access shafts for type C manholes may be constructed of reinforced concrete pipe class III wall B (with mortar joints) at contractors option. Where water is encountered joints shall recieve flat rubber gaskets and mortar.



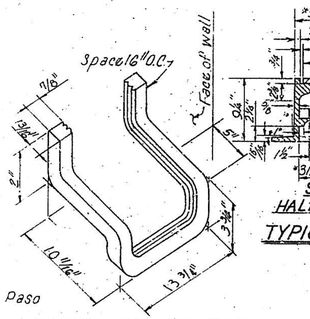
LONGITUDINAL SECTION — ELEVATION

DROP MANHOLE

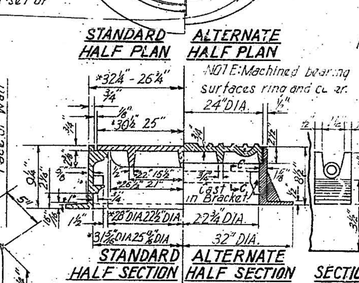


Manhole steps as manufactured by Grubbs Foundry, El Paso Texas, or equal

MANHOLE STEP DETAIL



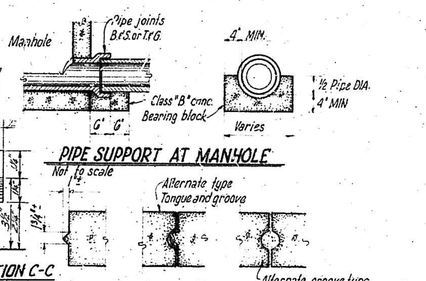
LADDER RUNG FOR MANHOLE OR JUNCTION BOX



SECTION C-C Not to Scale

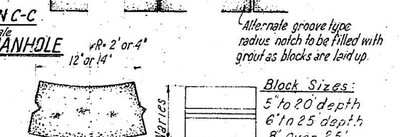
TYPICAL DETAILS OF CAST IRON MANHOLE RING AND COVER

SCALE: 3/32" = 1"



PIPE SUPPORT AT MANHOLE

Not to scale



Alternate groove type radius notch to be filled with grout as blocks are laid up.

CONCRETE MANHOLE BLOCK DETAILS

Not to scale

CONCENTRIC CONE MANHOLES LESS THAN 12' DEEP

OFF-SET CONE MANHOLES MORE THAN 12' DEEP

TYPE B MANHOLE

ALBUQUERQUE, NEW MEXICO

SANITARY SEWER STANDARDS

MANHOLE DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: A.D.H.	SHEET 63
AS SHOWN	JULY 1959	CHECKED: G.A.J.	OF 66

4' or 5' DIA MANHOLE
Reinforce for residential streets #4@8 each way bottom of slab reinforced for truck traffic #5@8 each way bottom of slab.

8' DIA MANHOLE
Reinforce for residential streets #5@8 each way bottom, #6@8 each way bottom for arterial streets

4'0, 6'0 or 8'0 DIA

5'

TOP PLAN OF TYPE A
SCALE: 3/8" = 1'-0"

4'0, 6'0 or 8'0 DIA

Note: Shape invert of manhole to conform to pipe size by concrete fill or cut pipe section grouted in place.

C.I. Manhole steps @ 12" o.c. Vertical staggered. Top step 18" MAX. from top of ring

SECTION PLAN OF TYPE A AND TYPE B
SCALE: 3/8" = 1'-0"

1/4

3/4

12" to 14"

6" x 6" x 6" Cone Block

5" 4'0 DIA MH

6" x 6" for 5'0 DIA MH

5'-0" DIA MH

6" x 6" for 6'0 DIA MH

6"

TYPICAL DETAIL OF CONCRETE BLOCK
SCALE: 1/2" = 1"

Space 16" O.C.

1 7/8"

10 1/16"

2"

6" Face of Wall

3 3/4"

13 3/16"

LADDER RUNG FOR MANHOLE OR JUNCTION BOX

4 3/16"

5"

3/8" x 3/4"

1 1/2"

1"

1 1/2"

2 3/4"

8"

2 1/8"

1"

12 7/8"

MANHOLE STEP DETAIL

Manhole steps as manufactured by Grubbs Foundry, El Paso, Texas, or equal

9 1/4"

3'-4" for 4'0 DIA MH

4'-8" for 6'0 DIA MH

1'-2"

1'-2"

3 Courses of common brick

1/2" Plaster inside and out

Top of junction box

Varies

STANDARD MANHOLE CONE

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

1'-2"

1'-2"

3 Courses of common brick

1/2" Plaster inside and out

Top of junction box

Varies

2'-8" MIN.

3'-4" MAX.

4'0" MIN.

4'8" MAX.

4' DIA. M.H.

6' DIA. M.H.

Varies

Varies

2'-6" MIN.

4'-8" MAX.

4' DIA. M.H.

6' DIA. M.H.

Varies

1'-2"

1'-2"

3 Courses of common brick

1/2" Plaster inside and out

Top of junction box

Varies

ALTERNATE MANHOLE CONE NO. 1

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

1'-2"

1'-2"

3 Courses of common brick

1/2" Plaster inside and out

Top of junction box

Varies

ALTERNATE MANHOLE CONE NO. 2

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

Ground

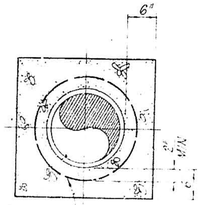
6'0 W.I. Frame and Cover

Grade

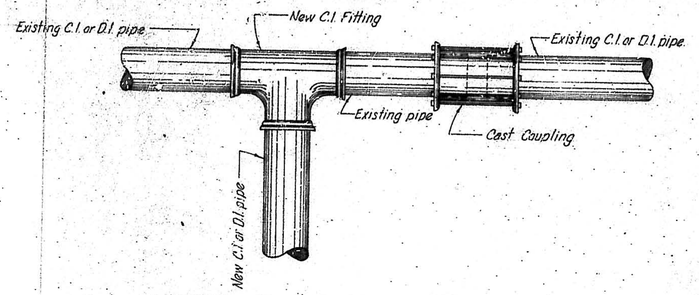
Grade

Grade

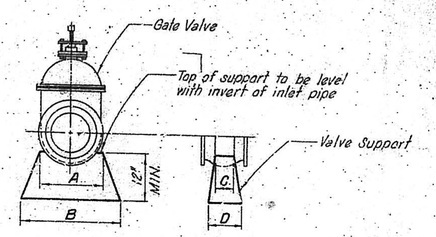
NOTE
Sanitary Sewer line may be replaced with steel or cast iron pipe, 10' each side of waterline, in lieu of concrete encasement



CONCRETE ENCASEMENT DETAIL
No Scale

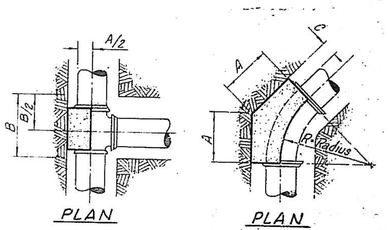


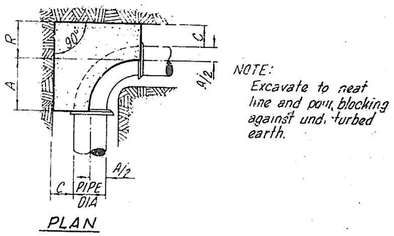
TYPICAL CONNECTION TO EXISTING CAST IRON OR DUCTILE IRON PIPE
No Scale



VALVE SUPPORT DETAIL
No Scale

VALVE SUPPORT TABLE				
Valve Size	A	B	C	D
6"	8"	14"	3"	6"
8"	17"	29"	4"	8"
12"	21"	33"	6"	12"
16"	25"	37"	8"	16"
18"	27"	39"	9"	18"

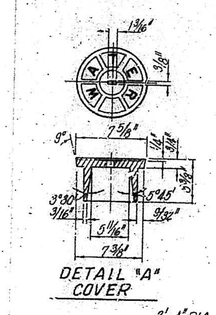




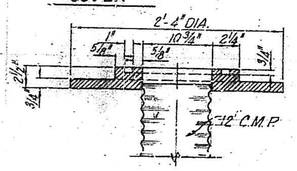
NOTE:
Excavate to neat line and pour blocking against undisturbed earth.

CONCRETE BLOCKING DETAILS
No Scale

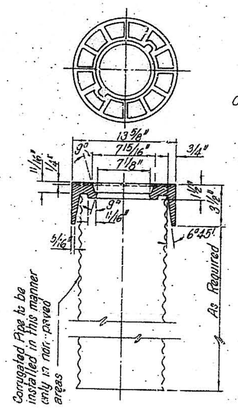
TABLE FOR CONCRETE BLOCKING FOR TEES AND BENDS					
PIPE DIA	A	B	C	D	R=Radius of Type of Pipe Supplied
12"	12"	24"	12"	18"	



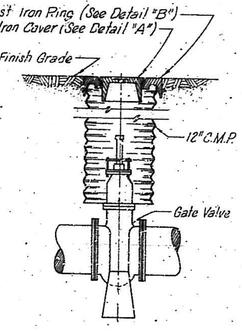
DETAIL "A" COVER



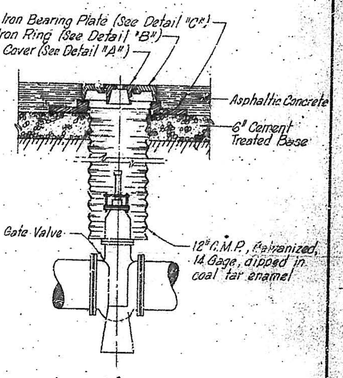
DETAIL "C" BEARING PLATE



DETAIL "B" RING

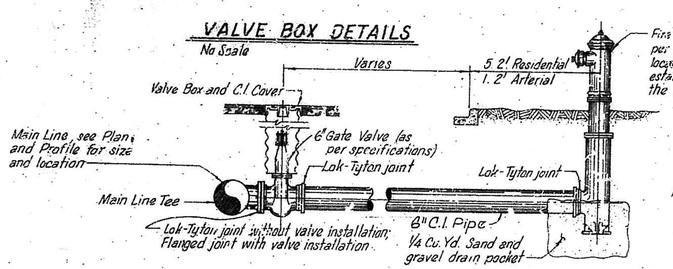


UNPAVED STREET SECTION



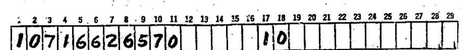
PAVED STREET SECTION

VALVE BOX DETAILS
No Scale

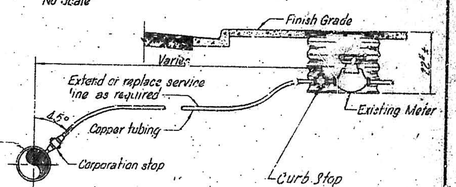


NOTES:
1. A 6" Gate Valve on fire hydrant connection piping is only required when the main line is sized 12" DIA. and larger.
2. When connecting an existing fire hydrant to new main, cut connection piping and use cast coupling to make connection. Lok-Tyton joint not required.

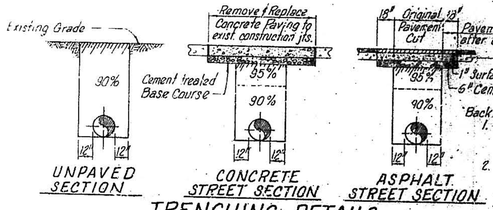
FIRE HYDRANT SETTING DETAIL
No Scale



VALVE BOX DETAILS
No Scale



TRANSFER and SETBACK METER SERVICE LINE INSTALLATION
No Scale



Backfill Compaction Notes:
1. Top 6" Residential streets and top 12" Arterial Streets (Paved) to be compacted to 95% Mod. Proctor (A.A.S.H.O. T-180-57).
2. Unpaved streets and balance of backfill to be 90% Mod Proctor (A.A.S.H.O. T-180-57).

TRENCHING DETAILS
No Scale

AS CONSTRUCTED

ALBUQUERQUE, NEW MEXICO
GRAND AVENUE OVERPASS

PIPING AND VALVE DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.A.G.	SHEET 65
AS SHOWN	JULY 1969	CHECKED: G.M.P.	OF 156

GRAND AVENUE OVERPASS

CONSTRUCTED 19

CITY COMMISSION

PETE V. DOMENICI CHAIRMAN

C. E. BARNHART — H. E. KINNEY

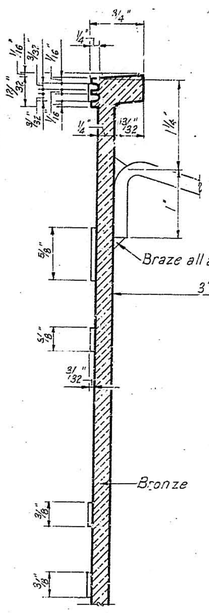
W. H. PAYNE — L. E. SAAVEDRA

RICHARD H. WILSON CITY MANAGER

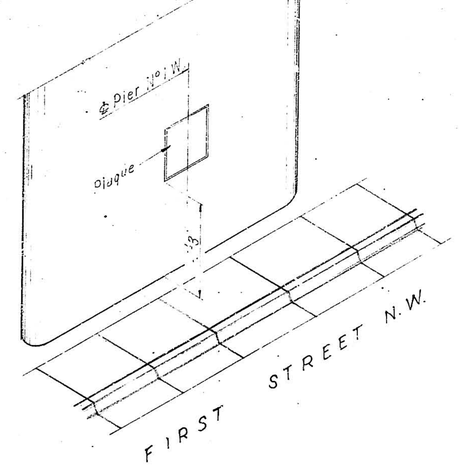
E. F. HENSCH DIRECTOR OF PUBLIC WORKS

GORDON HERKENHOFF AND ASSOCIATES ENGINEERS

CONTRACTORS NAME



SECTION



LOCATION DETAIL

Note: No separate payment shall be made for the bronze plaque. Cost of the plaque shall be included in the unit price bid for Class A Concrete.

ALBUQUERQUE NEW MEXICO			
GRAND AVENUE OVERPASS			
W.B. & E.B. BRIDGES			
BRONZE PLAQUE DETAILS			
GORDON HERKENHOFF & ASSOCIATES, INC. CONSULTING ENGINEERS ALBUQUERQUE NEW MEXICO			
SCALE	DATE - 1969	DRAWN R.A.L. CHECKED L.M.P.	SHEET 66 OF 66

STA. 2+66.52 Second St. = STA. 3+59.88 Grand Ave

STA. 3+79.90 First St. = STA. 7+19.54 Grand Ave.

GRAND AVE.

SECOND ST.

FIRST ST.

COMMERCIAL ST.

BROADWAY

TIJERAS AVE.

℄ GRAND MEDIAN S 83°36' 10" E

℄ WEST BOUND LANES

℄ EAST BOUND LANES

Right of Way

Profile Grade

Curb

Korber Warehouse

Brick Bldg.

Overhang

Wholesale Drug Co. Tr 111

Tr 112

Tr 115 & 116

Albuquerque High School Phys. Ed. Field

Stucco Ret. Wall

Stucco Rest. W Basement

Stucco Abut.

Frame Stucco Rest.

CURVE DATA No 3
P.I. STA. 104+34.57 (T)
Δ = 17°45'05"
D = 6°00'
R = 954.93'
T = 149.12'
L = 295.86'

P.I. STA. 104+34.57 (T)
Δ = 17°43'40" LT.

P.C. STA. 102+85.45 (T)

P.I. STA. 105+81.31 (T)

P.C. STA. 101+94.87 (T)

CURVE DATA No 4
P.I. STA. 110+28.54 (T)
Δ = 27°30'
D = 6°00'
R = 954.93'
T = 233.67'
L = 458.33'

P.I. STA. 111+01.40
Δ = 20°30' LT.

P.I. STA. 110+28.54 (T)
Δ = 27°30' RT.

P.I. STA. 12+42.55
Δ = 90°22'20" LT.

P.I. STA. 12+37.60
Δ = 90°12'20" RT.

P.T. STA. 112+53.20 (T) = STA. 112+76.18 ~ 26' LT. EQUATION

STA. 118+15.41 = STA. 3+66.17 Bdwy. = STA. 17+64.72 Grand Survey

STA. 0+00 Second St. = STA. 14+64.00 Tijeras

STA. 0+00 Bdwy. = STA. 28+83.17 Tijeras

℄ Track No 99
℄ West-bound Main Track

℄ Track No 511
℄ Track No 550
℄ East-bound Main Track

℄ Brg. Abut. No 1

℄ Brg. Abut. No 2

℄ Pier No 1

℄ Pier No 2

℄ Pier No 3

℄ Pier No 4

℄ Pier No 5

℄ Pier No 6

℄ Pier No 7

℄ Pier No 8

℄ Pier No 9

℄ Pier No 10

A.T. & S.F. R.R. Sta 110+129.0 (T)

Sta 109+34.79 (T)

Sta 108+56.59 (T)

Sta 107+40.06 (T)

Sta 106+37.43 (T)

Sta 104+78.46 (T)

Sta 101+94.87 (T)

Sta 114+76.18

Sta 113+34.34

Sta 114+90.27

Sta 114+02.56

ANGLES
Δ = 68°19'
B = 34°11'

VERTICAL CLEARANCES

①	14.50
②	23.82'
③	23.93'
④	22.01'

11 Simple Spans, 63.03', 78.00', 78.13', 78.20', 78.18', 63.88', 78.27', 78.25, 78.19', 78.15', and 77.52' ~ 6 Lines of Prestressed Concrete Girders (Type III) ~ Cast in Place Concrete Deck ~ 36' Roadway ~ N.M.S.H.D. STD. BR-1-64 Bridge Rail Type "B" Modified ~ LL HS 20-44
6'-0" Sidewalk, south side ~ 1'-6" Curb, north side.

Retaining wall 190'

Retaining wall 190'

NOTES: 1. All footings founded on Treated Timber Piles w/ Max. pile load of 24 Tons.
2. See Sheet No 4 for Typical Slab and Girder Layout, Slab Details, Typical Pier Details and Roadway Sections.

PROFILE

PLAN

Profile Grade at Gutter Line, north side

Retaining wall

Treated Timber Piles

Existing Ground

Railway Clearances

N.M.S.H.D. STD. Type "B" Rail Modified @ Median

Profile Grade ℄ East bound Lanes

Profile Grade at Gutter Line, south side

Retaining wall

Treated Timber Piles

℄ Second St.

℄ First St.

℄ Broadway

℄ Commercial St.

℄ Track No 99
℄ West bound Main Track

℄ Track No 511
℄ Track No 550
℄ East bound Main Track

PVC Sta. 101+70 (T) El. 4996.00

PVI Sta. 101+50 (T) 5.40% Up - 1.40% = 4.00% El. (4992.60) 4987.02

PVT Sta. 113+52.38 El. 4988.90

PVC Sta. 116+25 El. 4992.25

PVI Sta. 117+25 (T) El. 4996.00 Δ = 10.46%

PVT Sta. 117+75 El. 4967.38

PVC Sta. 107+40 (T) El. 4992.54

PVI Sta. 107+60 (T) El. 4993.00 Δ = 0.80%

PVT Sta. 107+80 (T) El. 4993.16

+7.00%

-5.25%

+0.51%

-1.51%

Sta 104+34.57 (T) El. 4948.03

Sta 106+37.43 (T) El. 4948.53

Sta 107+40.06 (T) El. 4948.98

Sta 108+56.59 (T) El. 4949.60

Sta 109+34.79 (T) El. 4950.30

Sta 110+129.0 (T) El. 4950.45

Sta 110+76.85 (T) El. 4950.75

Sta 112+33.37 (T) El. 4951.00

Sta 113+34.34 El. 4951.59

Sta 114+90.27 El. 4952.21

103(T) 104(T) 105(T) 106(T) 107(T) 108(T) 109(T) 110(T) 111(T) 112(T) 113 114 115 116

4990 4980 4970 4960 4950

PLATE 1—PLAN—PROFILE

MADE AND PRINTED IN U.S.A. CHARLES. BRUNING. COMPANY

ALBUQUERQUE NEW MEXICO

GRAND AVE. OVERPASS

EAST BOUND LANES PRELIMINARY PRESTRESSED CONCRETE GIRDER LAYOUT

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: R.D.M.	SHEET 3
1" = 50'	JULY 1968	CHECKED: L.M.P.	OF 7

D-166-A