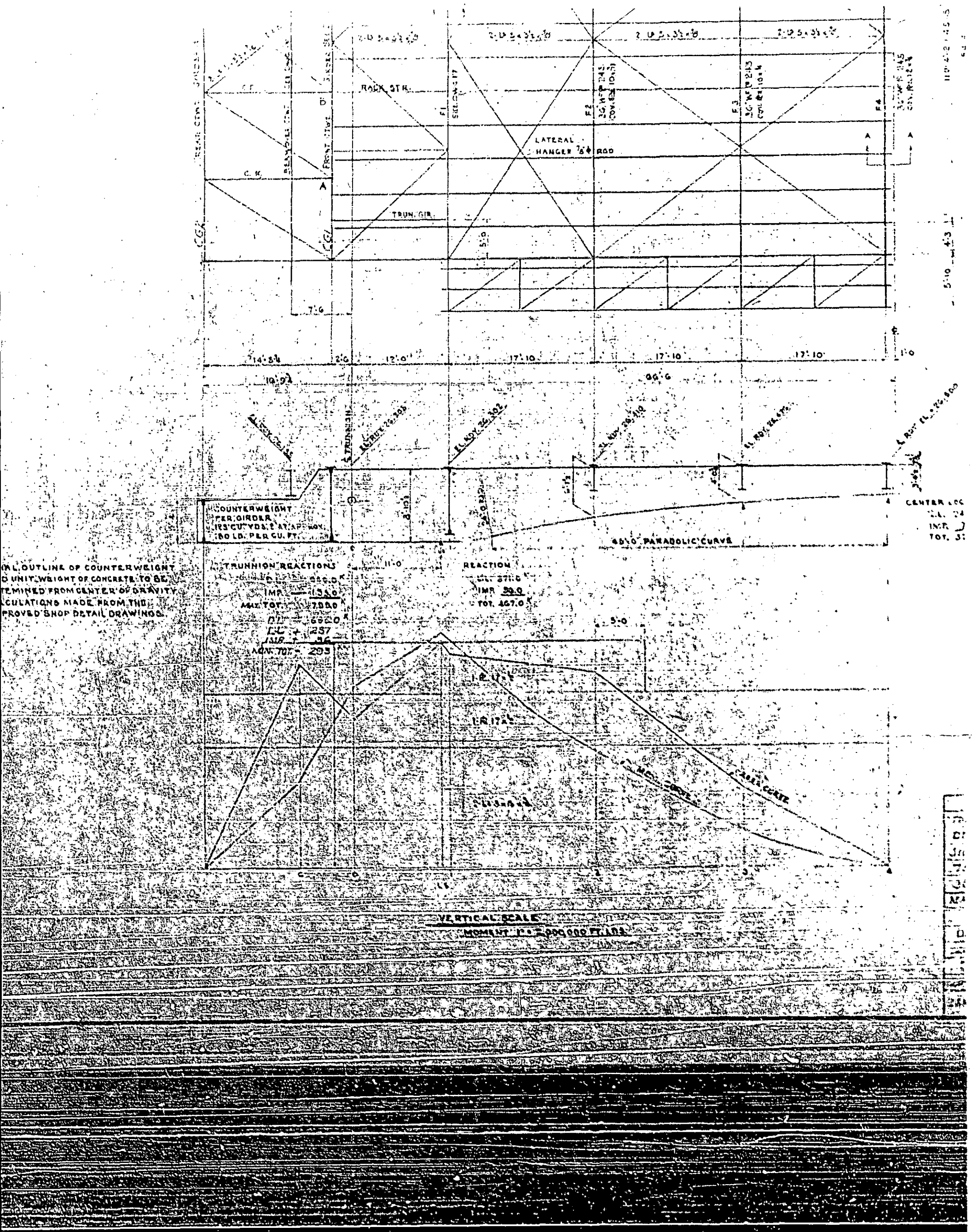
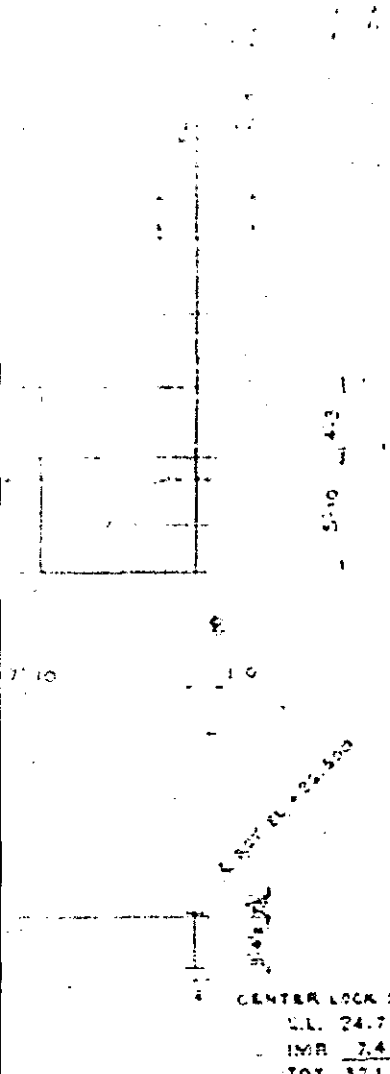

ROCK STR.
LATERAL HANGER 7/8 ROD
TRUN. GIR.
F1
F2
F3
F4
7'-6
14'-8½
2'-0
12'-0"
17'-10
17'-10
17'-10
10'-9½
TRUNNION
COUNTERWEIGHT PER GIRDER 185 CU.YDS. @ AV. 4" APHON. 180 LB. PER CU. FT.
11'-0
TRUNNION REACTIONS
DL
IMP. 130.0
MAX TOT.
DL
LL + 257
I.S.I.P. + 36
MAX. TOT. = 293
REACTION
DL
IMP. 39.0
TOT. 467.0
5'-0
65'-0" PARABOLIC CURVE
VERTICAL SCALE
MOMENT 1"=200,000 FT. LBS.
M.L. OUTLINE OF COUNTERWEIGHT
O UNIT WEIGHT OF CONCRETE TO BE
TERMINED FROM CENTER OF GRAVITY
CULATIONS MADE FROM THE
PROVED SHOP DETAIL DRAWINGS.

ALL ROADWAY STRINGERS
16"WF 36#
FOR CURB DETAIL AND SIDE-
WALK BRACKET SEE DWG 15



3 ARMORED

END L 4 x 4 x ½
ANG. BARS 1½ x 1½
5" CTRS. ALT.

GE

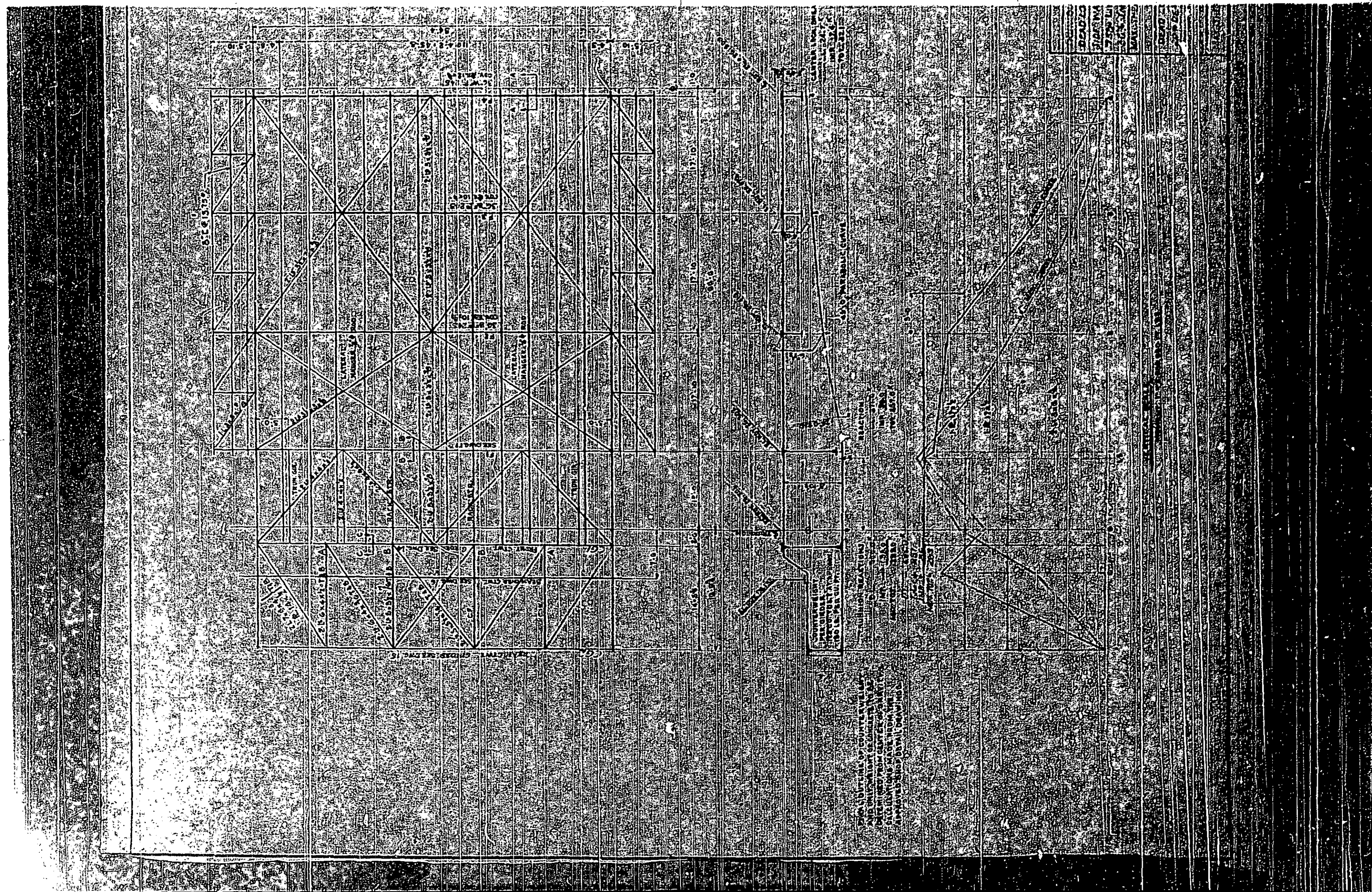
GENERAL REAMING WILL BE REQUIRED FOR
MAIN GIRDERS, TRUNNION GIRDERS, COUNTER
GIRDERS, RACK STRINGERS AND FLOOR BEAMS
SPECIFICATIONS.
COUNTERWEIGHT DETAILS SHALL BE FURNISHED
THE SHOP PLANS. PROVISIONS SHALL BE MADE
MOVABLE BLOCKS EQUAL TO 3% UNDER AND
OVER THE CALCULATED WEIGHT. BLOCKS EA
3% OF THE CALCULATED WEIGHT SHALL BE
COUNTERWEIGHT BLOCKS TO WEIGH APPROXIM
00 LBS. EACH. THE COST OF COUNTERWEIGHT
TO BE INCLUDED IN THE CONTRACT UNIT PRICE
CUBIC YARD FOR COUNTERWEIGHT CONCRETE
POINT; SEE SPECIFICATION AND SPECIAL PROVI
ALL WELDED FABRICATION SHALL BE PERFORMED
TO AUTHORIZE SHOP DRAWING SHOP

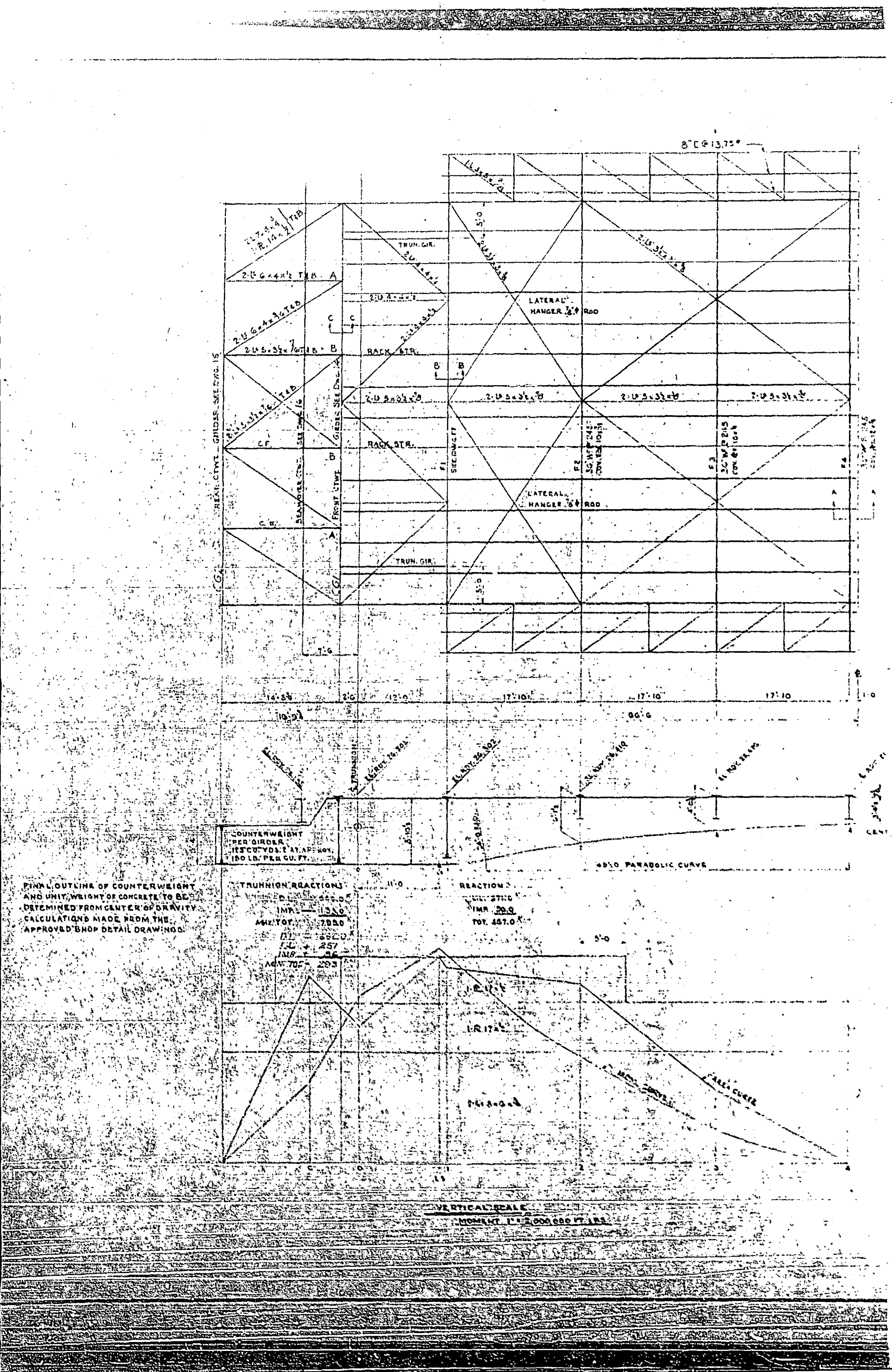
GIRDER MOMENT TABLE FT. KIPS

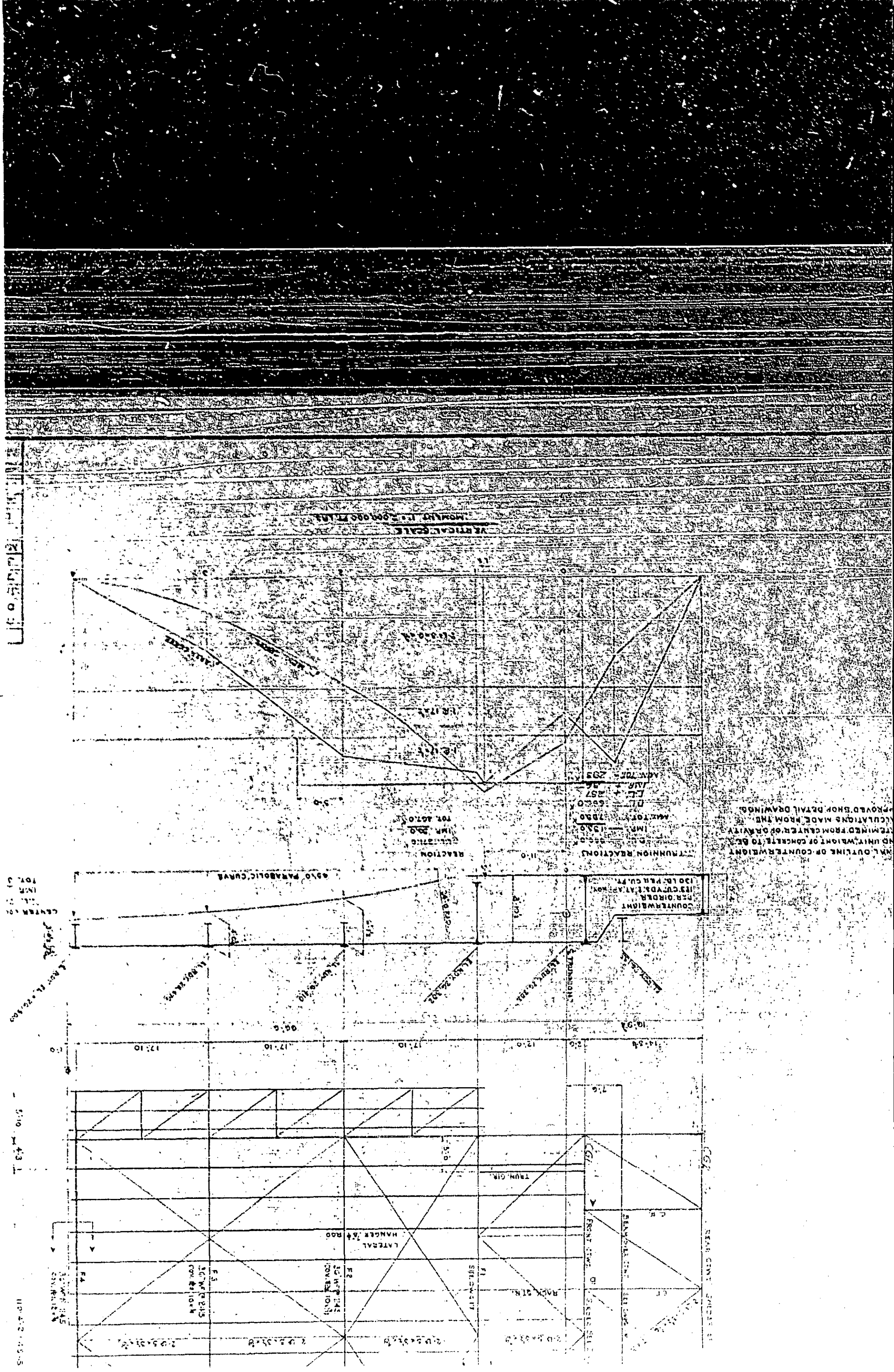
POINT	D.L.	L.L.	IMP.	TOTAL
0	4654.0			
L5	3172.4	3360.5	601.0	7133.4
1	3043.6	3074.6	751.0	6869.2
2	1492.0	1807.5	360.0	
3	396.1	557.0	149.4	
4	0	38.8	10.4	48.2
C	2209.0		480.0	2689.0

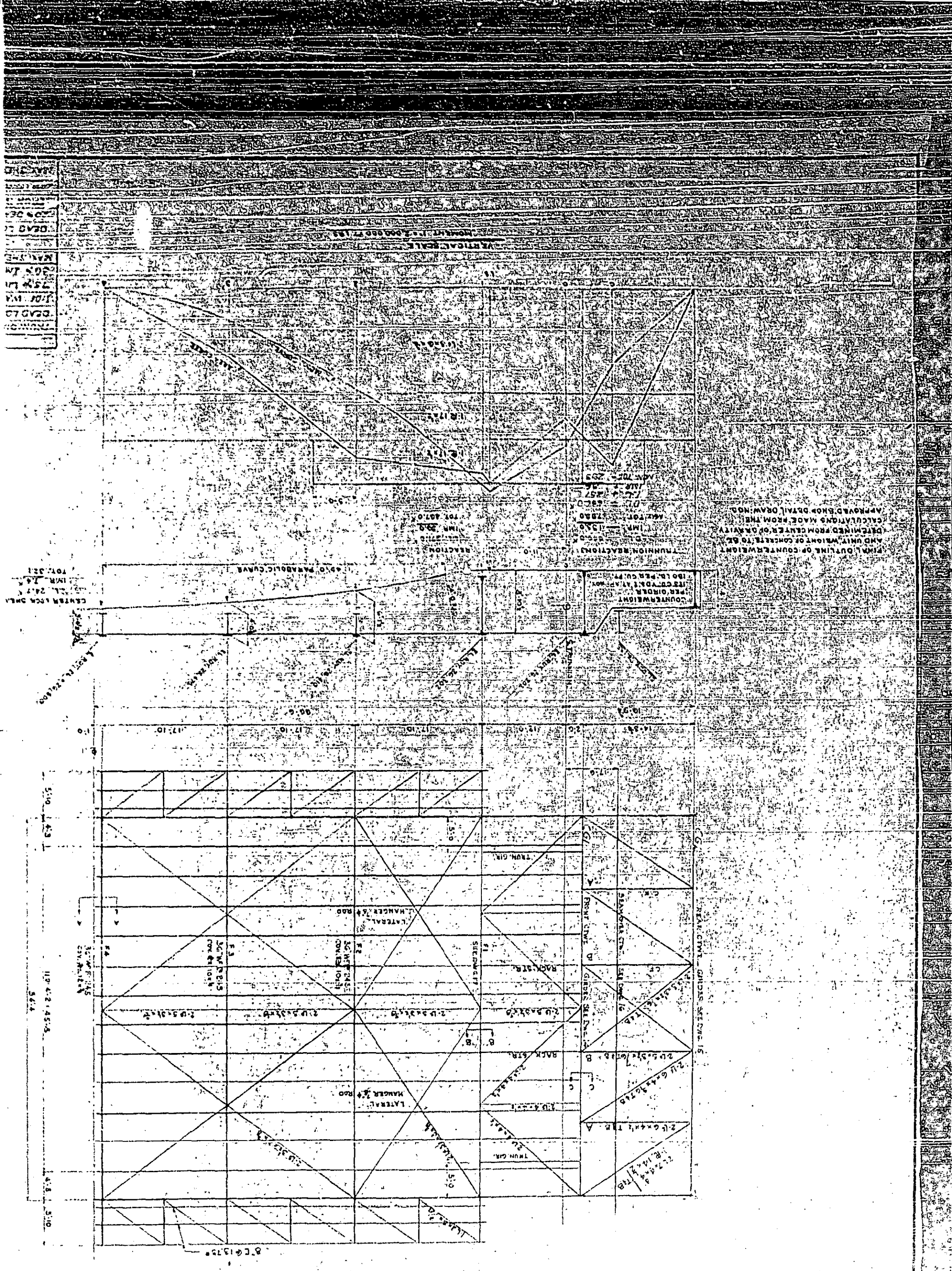
SHEAR TABLE KIPS

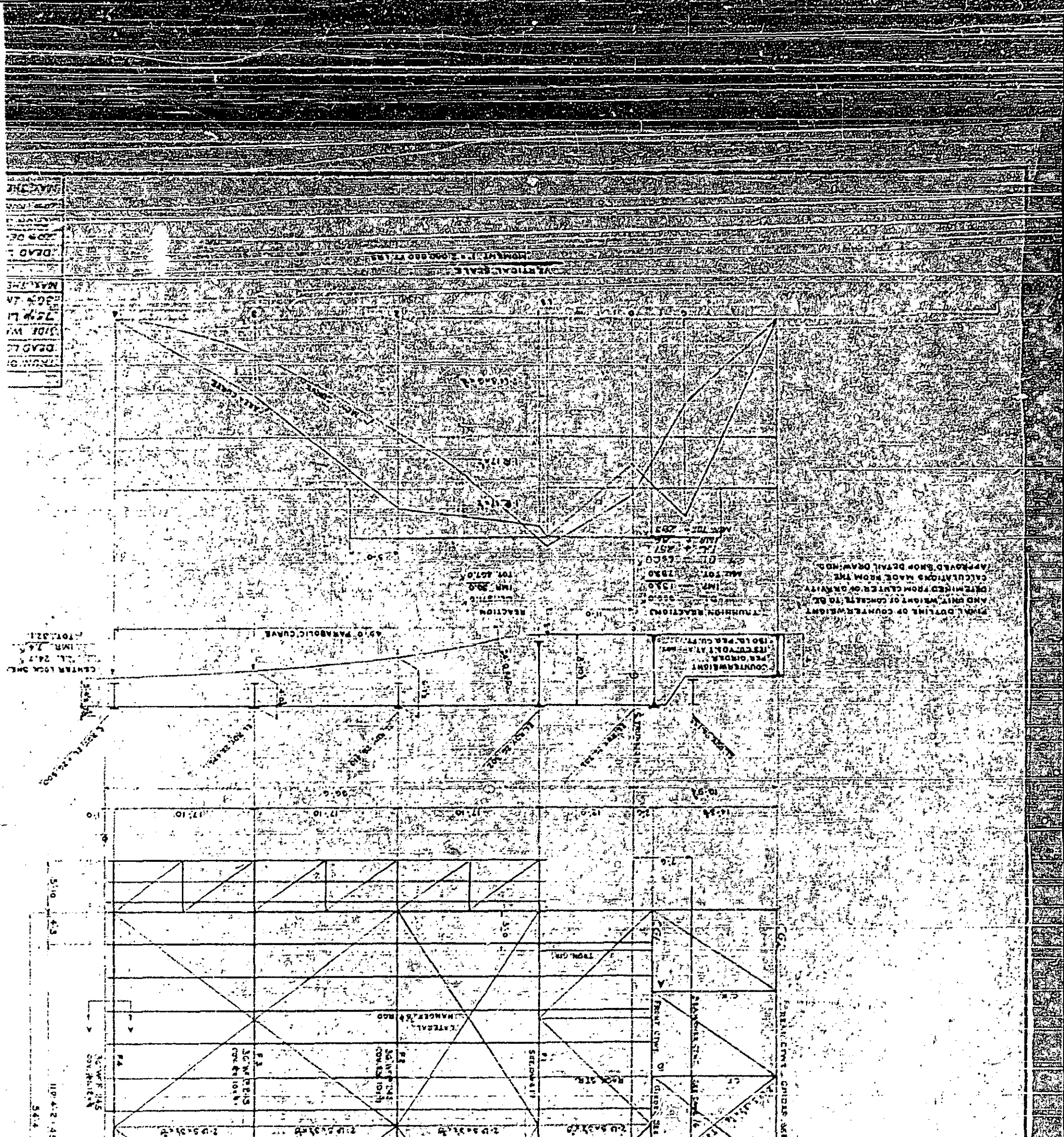
	CO2	CO1	TRUN.	L.L.S	F1	F2	F3	F4
TRUN. GIRDER		207						
DEAD LOAD	179	528	626	128.9	128.3	87.9	52.0	20.9
SIDE WALK				17.1	17.1	12.1	7.6	3.7
75% LIVE LOAD		147.5	52.6	107.5	101.5	69.2	36.8	15.8
30% IMPACT		44.1	17.2	32.3	32.3	25.2	13.0	10.9
MAX. SHEARS TOTAL	179	2963	1340.8	285.0	285.9	204	113.2	63.3
DEAD LOAD	179	528	266					
20% DEAD LOAD	36	105	133					
FROM GIRDER		207						
20% FROM GIRDER		41						
MAX. SHEARS TOTAL	215	881	749					

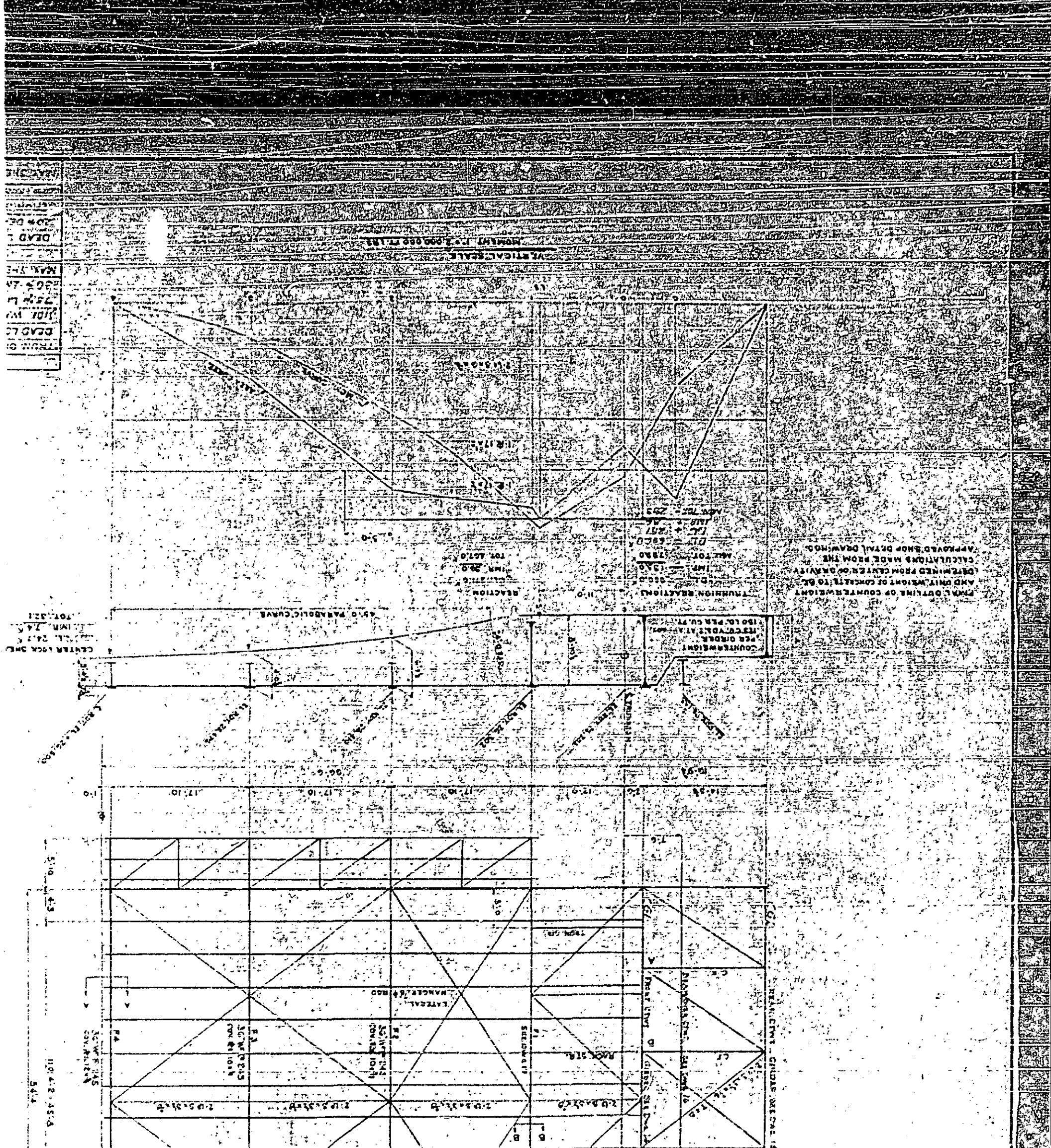


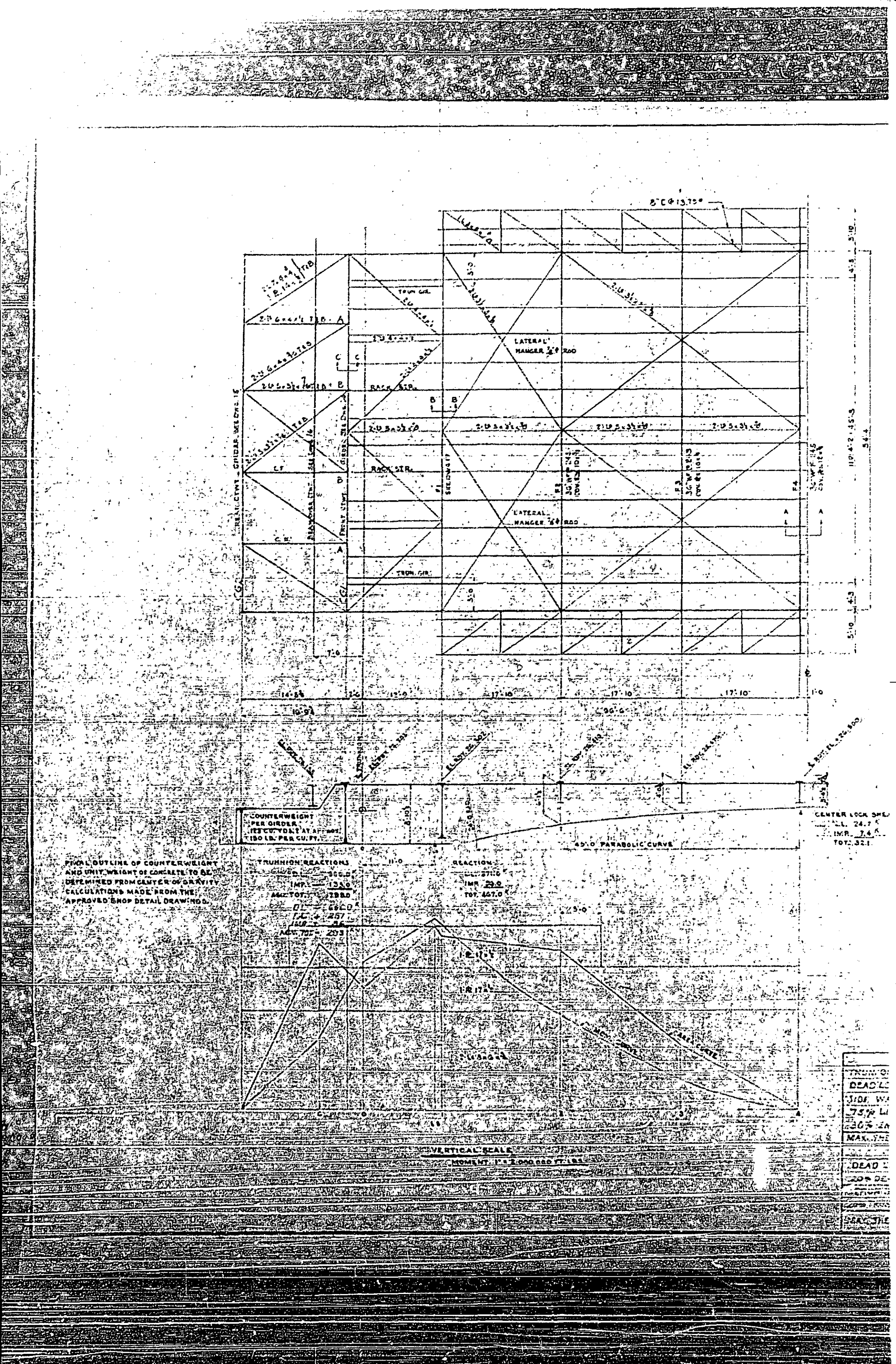

8"C @ 13.75°
TRUN. GIR.
LATERAL HANGER 3/4" ROD
BACK STR.
FRONT STR.
REAR STR.
SEE DWG. 15
SEE DWG. 14
COUNTERWEIGHT PER GIRDER 185 CU YDS. AT .145 CON. 180 LB. PER CU. FT.
TRUNNION REACTIONS
REACTIONS
TOT. 467.0
TOT. 709.0
9'-0" PARABOLIC CURVE
FINAL OUTLINE OF COUNTERWEIGHT AND UNIT WEIGHT OF CONCRETE TO BE DETERMINED FROM CENTER OF GRAVITY CALCULATIONS MADE FROM THE APPROVED SHOP DETAIL DRAWINGS.
VERTICAL SCALE
MOMENT 1" = 2,000,000 FT. LBS.

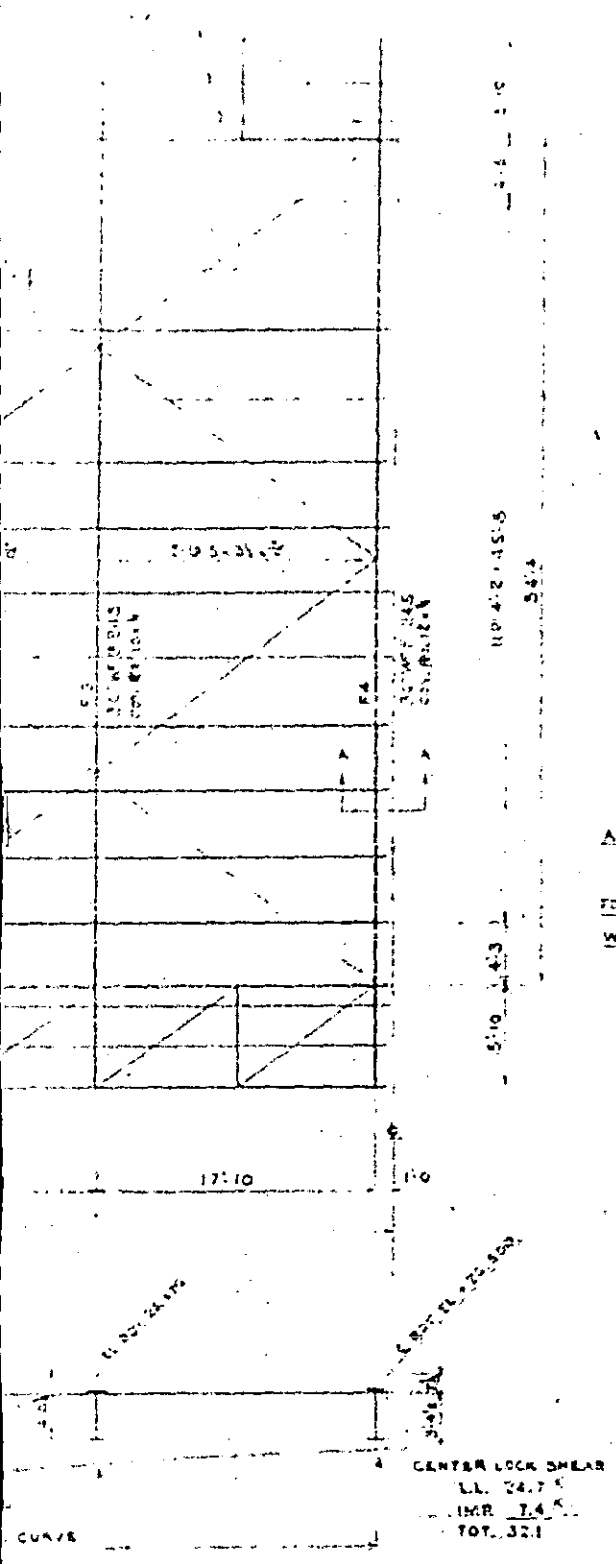


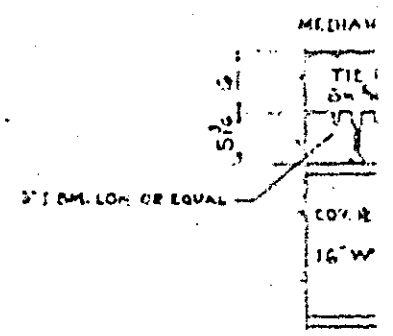







FINAL OUTLINE OF COUNTERWEIGHT AND UNIT WEIGHT OF CONCRETE TO BE DETERMINED FROM CENTER OF GRAVITY CALCULATIONS MADE FROM THE APPROVED SHOP DETAIL DRAWINGS.
TRUNNION REACTIONS
REACTION
LATERAL HANGER
RACK SIR.
TRUN. GIR.
COUNTERWEIGHT PER GIRDER
45'-0" PARABOLIC CURVE
CENTER LOCK SHE
VERTICAL SCALE
MOMENT

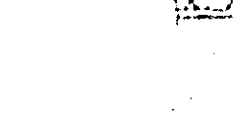


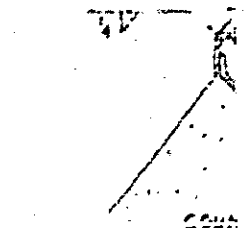


STEEL BRIDGE FLOOR

STEEL BRIDGE FLOOR SHALL BE 5" I BM. LOCK (OR EQUAL) EXCEPT OVER MACHINERY AREA WHERE 3" I BM. LOCK (OR EQUAL) SHALL BE USED. THE COST OF CONCRETE (CLASS A) FOR THE 5" ARMORED FLOOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR STEEL ROADWAY FLOOR.

ALL ROADWAY STRINGERS
16" WP 56#
FOR CURB DETAIL AND SIDE WALK BRACKET SEE DWG 18





GENE

GENERAL FRAMING WILL BE REQUIRED FOR THE MAIN GIRDERS, TRUNNION GIRDERS, COUNTERWE GIRDERS, R/CK STRINGERS AND FLOOR BEAMS. SEE SPECIFICATIONS.

COUNTERWEIGHT DETAILS SHALL BE FURNISHED WI THE SHOP PLANS. PROVISIONS SHALL BE MADE FOR MOVABLE BLOCKS EQUAL TO 3% UNDER AND 3% OVER THE CALCULATED WEIGHT. BLOCKS EQUAL TO 5% OF THE CALCULATED WEIGHT SHALL BE PROVIDED COUNTERWEIGHT BLOCKS TO WEIGH APPROXIMATELY 200 LBS. EACH. THE COST OF COUNTERWEIGHT BLOCKS TO BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR COUNTERWEIGHT CONCRETE.

PAINT: SEE SPECIFICATION AND SPECIAL PROVISIONS

ALL WELDED CONSTRUCTION TO BE STRAIGHTENED IN THE SHOP BY HEAT OR HAND, BEFORE SHIPMENT

GIRDER MOMENT TABLE FT. KIPS

POINT	D.L.	L.L.	IMP.	TOTAL
0	2654.0		930.5	5584.5
1/8	5172.5	3150.0	901.0	11223.5
1/4	5047.5	3078.0	781.0	10906.5
3/8	4892.5	2807.0	780.0	10279.5
1/2	4605.1	2607.0	780.0	9992.1
5/8	3951.1	2507.0	782.4	9240.5
3/4	2.0	1838.8	654.2	4495.0
7/8	2200.0		440.0	2640.0

SHEAR TABLE KIPS

	CO2	CO1	TRUN	L.L.S	F1	F2	F3	F4
TRUN. GIRDER								
DEAD LOAD	179	548	656	128.9	128.9	87.0	52.0	8.0
SIDE WALK				17.2	17.2	15.1	2.0	0.3
75% LIVE LOAD		1472	516	107.5	101.5	89.2	52.8	24.8
30% IMPACT		441	17.2	32.3	32.3	27.2	17.0	10.4
MAX. TREAD TOTAL	179	1989	1190.2	286.0	285.4	218.5	123.8	43.5
DEAD LOAD	179	548	656					
20% DEAD LOAD		109	133					
		274						
		91						
REACTIONS	215	88	789					

AREA CURVE