3-8'x8' R.C.B.C. EXTENSION

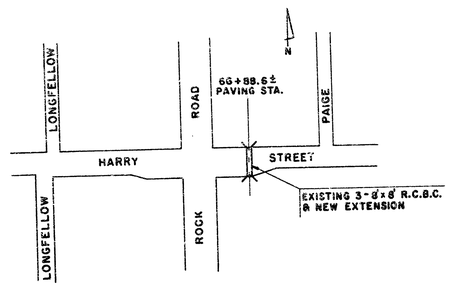
IN CONNECTION WITH PAVING HARRY STREET
FROM E.L. FABRIQUE TO E.L. EASTMOOR

CITY OF WICHITA, KANSAS

D.S. SELLERS ACTING CITY ENGINEER

DATE:

PROJ. NO. 472 76 245 80641 000 000 001

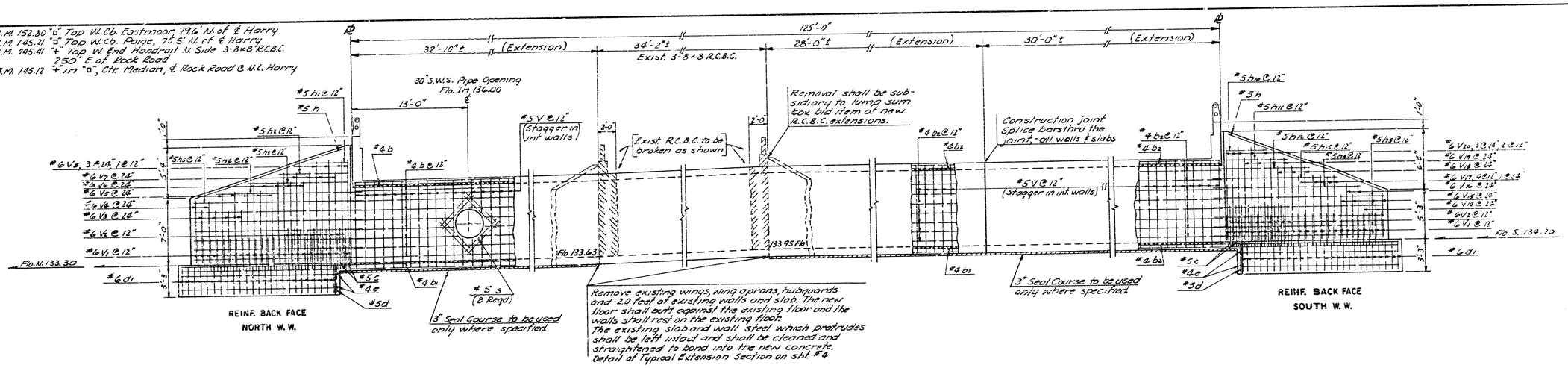


LOCATION MAP

STEPHEN R. LACKEY
REGISTERED
7714

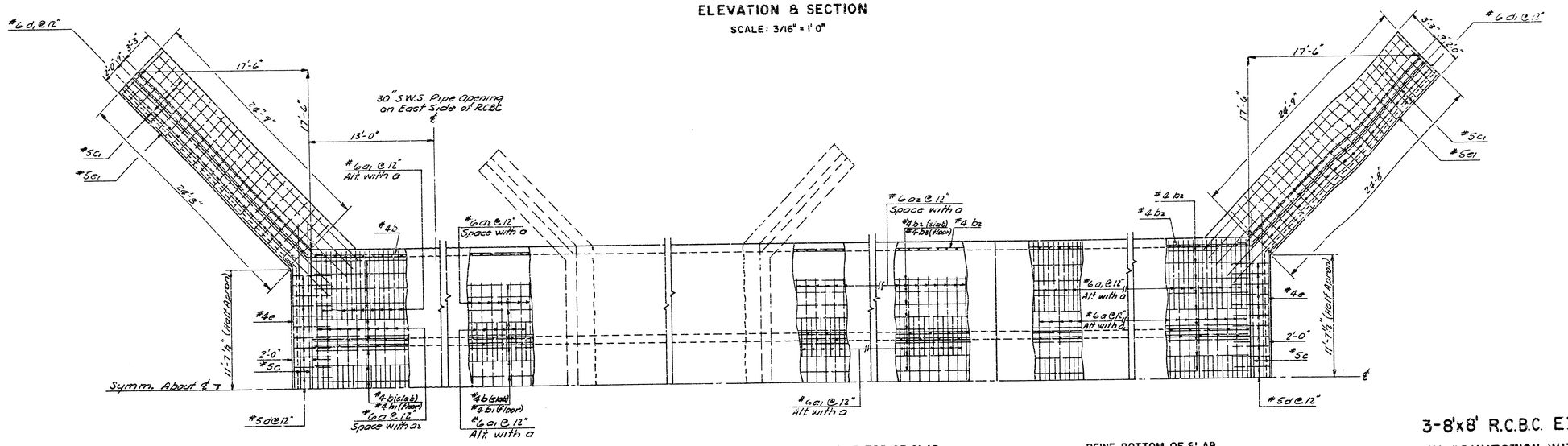
B.M. 152.80 "a" Top W. Cb. Eastmoor, 79.6' N. of ℄ Harry
B.M. 145.21 "a" Top W. Cb. Paige, 75.5' N. of ℄ Harry
B.M. 145.41 "+" Top W. End Handrail N. Side 3-8x8 R.C.B.C. 250' E. of Rock Road
B.M. 145.12 +in "a", Ctr. Median, ℄ Rock Road @ N.L. Harry

Survey O.C.K. Bk. 242 269
Plan O.E.C. 242 292
Est. 242 305
Checked



ELEVATION & SECTION

SCALE: 3/16" = 1' 0"



PLAN & SECTION

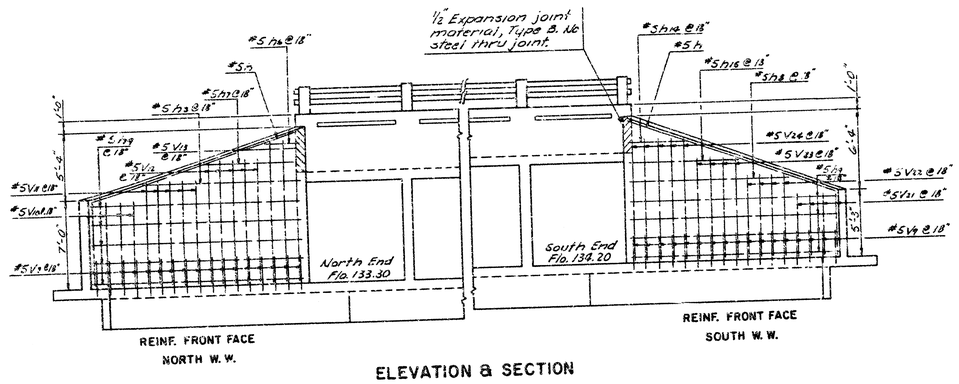
SCALE: 3/16" = 1' 0"

2/6

3-8'x8' R.C.B.C. EXTENSION

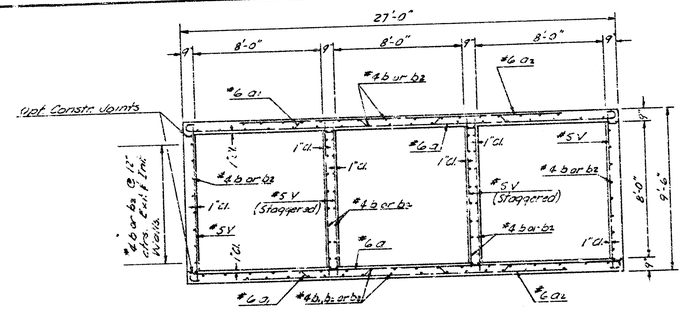
IN CONNECTION WITH PAVING HARRY STREET FROM E. L. FARRIQUE TO E. L. EASTMOOR

PROJ. NO. 472 76 245 80641 000 000 001 2/6



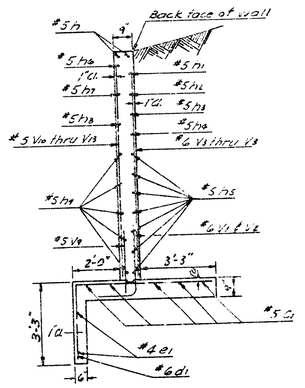
ELEVATION & SECTION

SCALE: 3/16" = 1' 0"



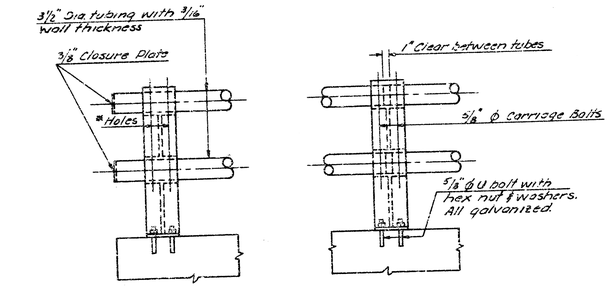
BOX SECTION

SCALE: 1/4" = 1' 0"



SECTION NORTH WINGWALL

NO SCALE

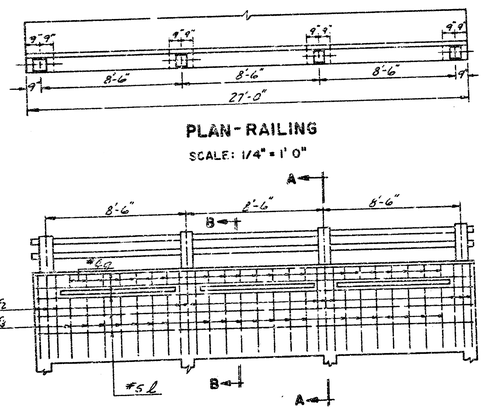


* Holes: 11/16" square holes in post under head and 11/16" round holes under nuts for 5/8" ϕ x 5½" carriage bolts with hex nuts.

DETAIL-ALUMINUM RAILING

NO SCALE

NOTE: Aluminum Handrail
Aluminum posts shall be Reynolds Aluminum Highway Products Bridge Railing System #1 2R19A or equal.
Top & bottom rails shall be 3½" O.D. x 3/16" wall tube of 6063-T6 Aluminum.
Aluminum shims between concrete and post base may be used. The space below posts shall be thoroughly caulked with Alumilastic compound or other approved material.

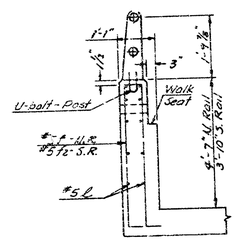


PLAN-RAILING

SCALE: 1/4" = 1' 0"

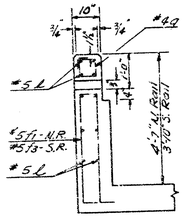
SECTION-RAILING

SCALE: 1/4" = 1' 0"



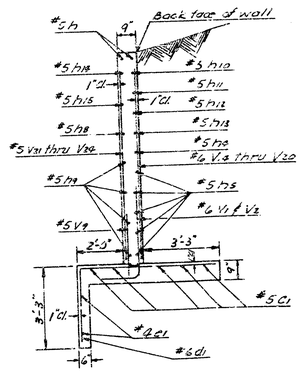
SECTION A-A

NO SCALE



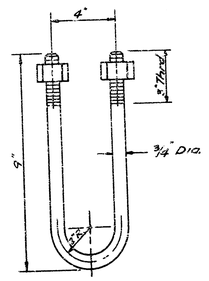
SECTION B-B

NO SCALE



SECTION SOUTH WINGWALL

NO SCALE



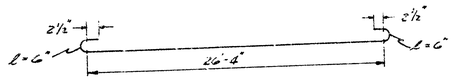
GALVANIZED U BOLT

NO SCALE

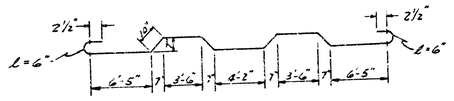
3/16

3-8'x8' R.C.B.C. EXTENSION
IN CONNECTION WITH PAVING
HARRY STREET FROM
E.L. FABRIQUE TO E.L. EASTMOOR

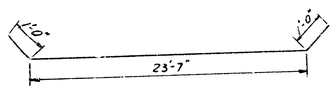
PROJ. NO. 472 76 245 80641 000 000 001 3/6



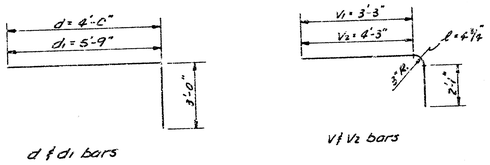
a bar



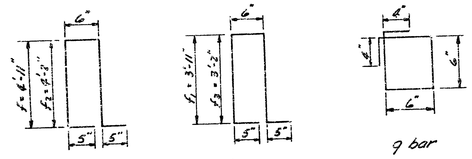
a1 bar



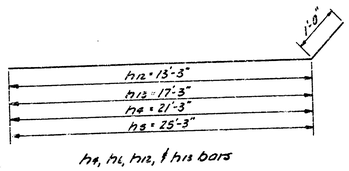
e bar



d & d1 bars V1 V2 bars



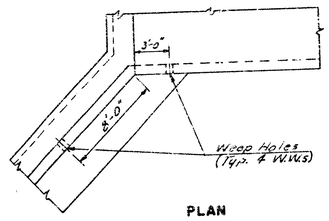
f & f2 bars f1 & f2 bars g bar



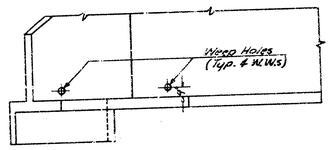
h4, h6, h10, & h12 bars

BENDING DIAGRAMS

NO SCALE



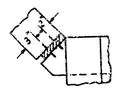
PLAN



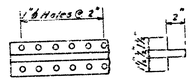
ELEVATION

WEEPHOLE LOCATIONS

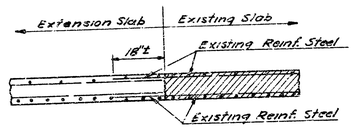
NO SCALE



WING EXP. JOINT



12 OZ. SHEET COPPER RETAINER
8 REQD



TYPICAL EXTENSION SECTION

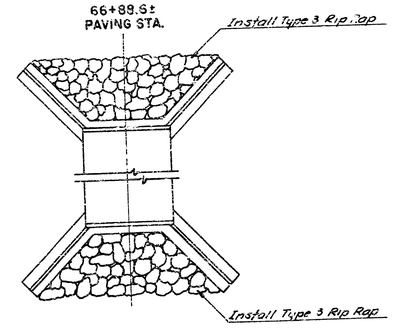
NO SCALE

BILL OF MATERIALS

	ITEMS	QUANTITY	UNIT
Lump Sum Bid	Class A-AE Concrete	283.7	C.Y.
	Reinforcing Steel	40859.3	Lbs.
	Hand Excavation	20.2	C.Y.
	Aluminum Handrail	56.0	L.F.
	Portion of Exist. RCBC Removed	——	——
Bid Items	Class A Concrete Seal Course	23.7	C.Y.
	Excavation	502.3	C.Y.
	Compacted Fill	203.4	C.Y.
	Rip Rap	157.7	S.Y.

GENERAL NOTES

1. CLASS A-AE - CONCRETE SHALL BE USED THROUGHOUT ON THE STRUCTURE. THE REINFORCING STEEL SHALL CONFORM TO A.S.T.M. SPECIFICATIONS.
2. EARTHWORK - ALL EARTHWORK SHALL BE CONSIDERED AS "COMMON EXCAVATION" EXCEPT FOR THE TOEWALL. TOEWALL EXCAVATION SHALL BE INCLUDED IN "LUMP SUM BID".
3. BACKFILL - ALL BACKFILL AND EXCAVATION TO EXTEND TO (2') BEYOND SIDES OF BOX AND WING-WALLS.
4. BEVEL - ALL EXPOSED EDGES OF CONCRETE WITH 3/4" TRIANGULAR MOULDING.
5. WEEPHOLES - COURSE AGGREGATE SHALL BE DEPOSITED BEHIND EACH WEEPHOLE TO OCCUPY A SPACE EXTENDING (1'5") IN ALL DIRECTIONS ABOVE WEEPHOLE FLOW LINE. THIS WORK SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED A PART OF THE EXCAVATION WORK.
6. SEAL COURSE - A SEAL COURSE CONSISTING OF 3" CLASS "A" CONCRETE SHALL BE CONSTRUCTED ONLY WHERE SPECIFIED ON THE PLANS OR BY THE ENGINEER. NO REINFORCING SHALL BE PLACED UNTIL THE SEAL COURSE HAS GAINED SUFFICIENT STRENGTH TO PERMIT WORKING UPON IT WITHOUT DAMAGE.
7. BASIS OF PAYMENT - THE CULVERT SHALL BE BID AS A "LUMP SUM BID" WHICH SHALL INCLUDE THE FOLLOWING ITEMS: CLASS A-AE CONCRETE, REINFORCING STEEL, HAND EXCAVATION, ALUMINUM HAND RAIL, AND PORTION OF EXISTING RCBC REMOVED. ALL OTHER ITEMS SHALL BE INCLUDED AS BID ITEMS.
8. THE QUANTITIES SHOWN IN THE "BILL OF MATERIALS OR ITEMS" WHICH ARE INCLUDED IN THE "LUMP SUM BID" OF THE CULVERT ARE FOR "INFORMATION PURPOSES ONLY". THE CONTRACTOR MUST SATISFY HIMSELF AS TO THE "QUANTITIES" AND THE ENGINEER ASSUMES NO RESPONSIBILITIES FOR THEIR ACCURACY. THE CONTRACTOR WILL HAVE THE FULL RESPONSIBILITY FOR PROVIDING ALL MATERIALS ON THE DETAILED PLANS NECESSARY TO COMPLETE THE PROJECT.
9. THROUGH TRAFFIC TO BE MAINTAINED DURING CONSTRUCTION AT ALL TIMES.



RIP RAP

NO SCALE

BAR SCHEDULE

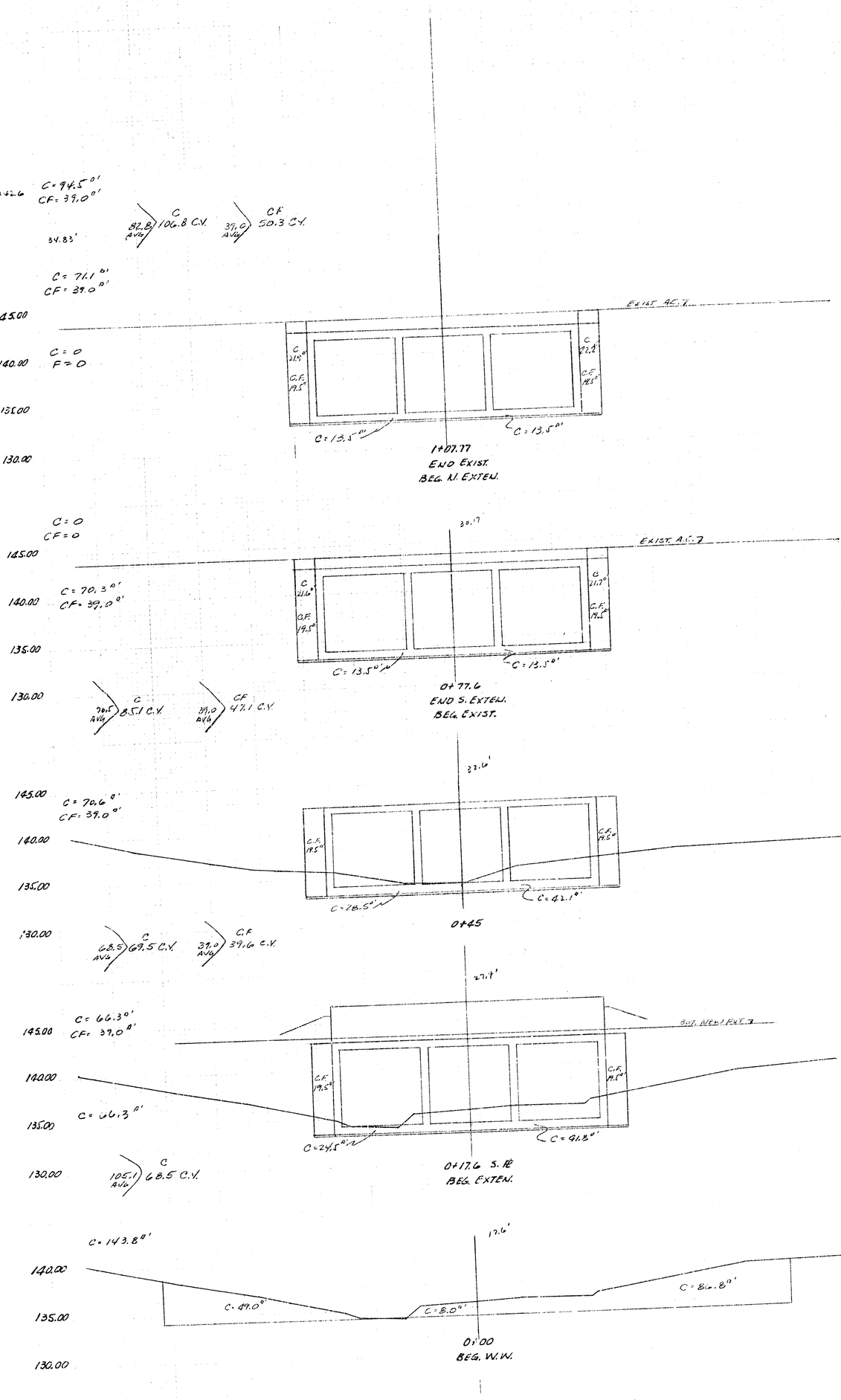
BAR	SIZE	LENGTH	NO.	SHAPE	WEIGHT
a	#6	27'-9"	182		7585.55
a1	#6	28'-9"	182		7859.13
a2	#6	20'-0"	182		5467.26
b	#4	36'-6"	82		1859.77
b1	#4	32'-6"	34		738.15
b2	#4	31'-0"	198		4709.18
b3	#4	29'-0"	34		658.65
c	#5	32'-0"	4		133.10
c1	#5	29'-9"	20		604.98
d	#5	7'-0"	46		335.55
d1	#4	8'-9"	100		583.35
e	#4	23'-7"	1		15.70
e1	#5	24'-8"	5		205.55
f	#5	11'-2"	12		139.42
f1	#5	9'-2"	21		200.35
f2	#5	9'-8"	12		121.23
f3	#5	7'-8"	21		168.10
g	#4	3'-8"	42		73.71
h1	#5	25'-0"	8		208.07
h1	#5	5'-6"	2		11.47
h2	#5	10'-6"	2		21.93
h3	#5	15'-6"	2		32.35
h4	#5	22'-3"	4		92.53
h5	#5	26'-3"	24		655.79
h6	#5	3'-5"	2		7.13
h7	#5	10'-11"	2		22.75
h8	#5	18'-5"	4		76.85
h9	#5	38'-5"	18		638.96
h10	#5	6'-6"	2		13.56
h11	#5	9'-6"	2		19.81
h12	#5	18'-5"	2		38.39
h13	#5	18'-3"	2		38.07
h14	#5	6'-5"	2		13.39
h15	#5	12'-5"	2		25.91
k	#5	24'-6"	20		510.79
s	#5	5'-0"	8		41.73
s	#3	9'-3"	380		360.15
V	#6	5'-8⅝"	100		864.65
V1	#6	6'-8⅛"	40		413.34
V2	#6	5'-7"	8		67.05
V3	#6	6'-7"	4		39.53
V4	#6	6'-7"	10		173.85
V5	#6	7'-7"	10		176.87
V6	#6	8'-7"	10		183.99
V7	#6	9'-7"	10		127.13
V8	#6	10'-7"	8		212.77
V9	#5	3'-0"	68		50.04
V10	#5	6'-0"	8		83.21
V11	#5	8'-2"	10		100.96
V12	#5	9'-8"	10		67.34
V13	#6	11'-7"	4		77.53
V14	#6	3'-9"	4		57.68
V15	#6	8'-9"	8		34.55
V16	#6	5'-9"	4		101.99
V17	#6	6'-9"	10		69.36
V18	#6	7'-9"	6		105.16
V19	#6	8'-9"	8		146.15
V20	#6	9'-9"	10		41.72
V21	#5	5'-0"	8		56.24
V22	#5	6'-2"	8		66.75
V23	#5	8'-0"	8		99.09
V24	#5	9'-6"	10		

4/6

3-8'x8' R.C.B.C. EXTENSION

IN CONNECTION WITH PAVING
HARRY STREET FROM
E.L. FABRIQUE TO E.L. EASTMOOR

PROJ. NO. 472 76 245 80641 000 000 001 4/6



40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40

EARTHWORK THIS SHEET

EXCAV.	HAND EXCAV	C.F.
329.9 C.Y.	0	137.0 C.Y.

EARTHWORK - ALL SHEETS

EXCAV.	HAND EXCAV.	C.F.
502.2 C.Y.	20.2 C.Y.	205.4 C.Y.

3-8'x8' R.C.B.C. EXTENSION
IN CONNECTION WITH PAVING
HARRY STREET FROM
E.L. FABRIQUE TO E.L. EASTMOOR

PROJ. NO. 472 76 245 80641 000 000 001

9/5

5/6

EARTHWORK No. W.W.

EXCAV. { BASE = 2(60.0 × .75 × 24.75) = 2222.8/27 = 8.3 C.Y. (C)
BACK FACE W.W. = 3.25((4.5+3.1)/2) 24.75 = 305.7/27 = 11.3 C.Y. (C)
" " " = 3.25((4.5+1.5)/2) 24.75 = 241.3/27 = 8.9 C.Y.(C)

HAND EXCAV. TOE WALL = (72.59)(2.5)(1.5) = 272.2/27 = 10.1 C.Y.(C)

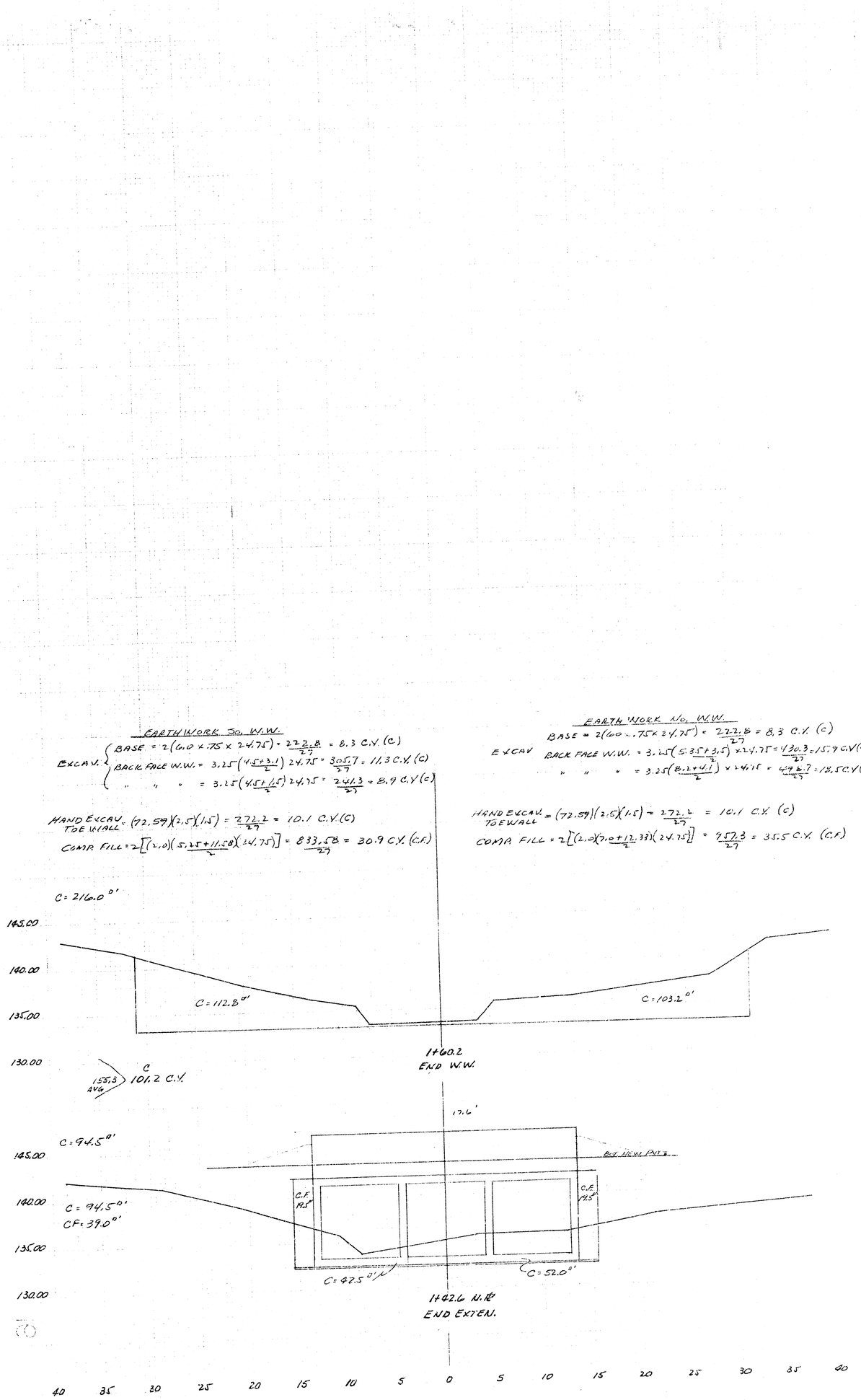
COMB FILL = 2[(2.0)((5.25+11.58)/2)(24.75)] = 833.58/27 = 30.9 C.Y. (C.F.)

EARTH WORK No. W.W.

EXCAV BASE = 2(60 × .75 × 24.75) = 2222.8/27 = 8.3 C.Y. (C)
BACK FACE W.W. = 3.25((5.3+3.5)/2) × 24.75 = 430.3/27 = 15.9 C.Y.(C)
" " " = 3.25((8.2+4.1)/2) × 24.75 = 449.7/27 = 16.5 C.Y.(C)

HAND EXCAV. TOEWALL = (72.59)(2.5)(1.5) = 272.2/27 = 10.1 C.Y. (C)

COMB FILL = 2[(2.0)((7.0+12.33)/2)(24.75)] = 957.3/27 = 35.5 C.Y. (C.F.)



EARTHWORK THIS SHEET

EXCAV.	HAND EXCAV.	C.F.
172.4 C.Y.	20.2 C.Y.	66.4 C.Y.

3-8'x8' R.C.B.C. EXTENSION
IN CONNECTION WITH PAVING
HARRY STREET FROM
E.L. FABRIQUE TO E.L. EASTMOOR

PROJ. NO. 472 76 245 80641 000 000 001

6/6