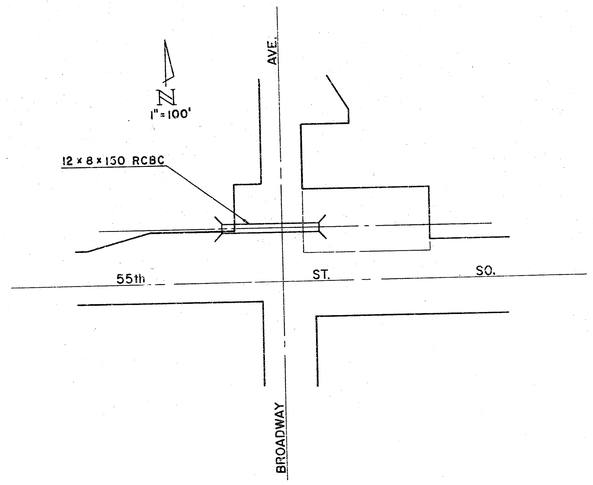
12'x8'x150' R.C.B.C.
BROADWAY - 80' NORTH ℄ 55th ST. SO.

CITY OF WICHITA, KANSAS

D. SELLERS CITY ENGINEER

PROJECT NO. 468 76 245 80583 000 000 004

DATE:



STEPHEN R. LACKEY
LICENSED
7734
KANSAS
PROFESSIONAL ENGINEER

DAVID E. CADWELL
LICENSED
2412
KANSAS
PROFESSIONAL ENGINEER

B.M. 83.58 Cut, Sta. 2+50, 41.6' Lt. of ℄ Broadway + 85.34 So.

NOTE: Construct 2" plank bulkheads and install over ends of pipe stubouts. 4 reqd. Pipe stubouts and bulkheads to be considered incidental to cost of R.C.B.C. construction.

Remove existing pavement for box construction. Replace with 8" Asph. Conc. Pvt. (2" Surface, 6" Base)

Service Station Bldg., Conc. Pvt., Pumps, & Tanks to be removed by Others. Before excavating for RCBC and channel, area is to be cross sectioned.

Beg. R.C.B.C. 0+00

End R.C.B.C. 1+50

75'

75'

16.3

AVE.

Inlet & pipe by Others, Sta. 223+13 Rt., State Hwy. Plans. Stub out 4'-1" L.F. 18" R.C.P. from R.C.B.C. See Std. # 4 for box opening detail. Flo. Out Inlet 16.50 - Flo. In R.C.B.C. 16.20 -

21+38.5

31+00.5

31+28.5

End Proj. 32+43.5

Inlet & pipe by Others, Sta. 219+41 Lt., State Hwy. Plans. Stub out 4 L.F. 18" R.C.P. from R.C.B.C. See Std. # 4 for box opening detail. Flo. Out Inlet 18.60 Flo. In R.C.B.C. 18.10

15'

Install Type 3 Rip Rap

B.L.B.C. T.C.

32.82

Saw Jt.

62.65 T.C.

8 R.C.P.

Saw Jt.

Install Type 3 Rip Rap

℄ Channel

15'

60' R

Non Conformity Due to Utility Lines

12" Water

W

55th ST.

SO.

from in Thimble

82.62 T.C.

82.62 T.C.

Sewer Line

BROADWAY (℄ Proposed Improvement)

Inlet & pipe by Others, Sta. 50+47 Lt., State Hwy. Plans. Stub out 4 L.F. 36" R.C.P. from R.C.B.C. See Std. # 4 for box opening detail. Flo. Out Inlet 13.80 Flo. In R.C.B.C. 12.35

22.0'

Exist. Hot Mix Surfacing

12" Exist. Surface & Course

Exist. Brick Pavement

Exist. Hot Mix Pavement

Exist. Conc. Base Course

TYPICAL SECTION EXIST. ROADWAY

CONSTRUCTION SEQUENCE

1. THE 12 x 8 x 150 R.C.B.C. IS DESIGNED WITH FOUR KEYED JOINTS IN WALLS AND SLABS MAKING FIVE SECTIONS 30 FT. LONG. AS NOTED ON THE PLAN, THE CONTRACTOR, AT HIS OPTION, MAY SUBSTITUTE NO. 4 STEEL REINFORCING BARS FOR THE KEYED JOINTS (SEE NOTE SHEET NO. 3).
2. THE R.C.B.C. CONSTRUCTION SEQUENCE DETAIL (1), THIS SHEET, SHOWS THE EAST 60 L.F. (2-30' SECTIONS) OF THE R.C.B.C. IS TO BE CONSTRUCTED FIRST WHILE THE TRAFFIC IS DIVERTED BY DETOUR AROUND THE WEST END OF THE CONSTRUCTION AREA. THE NEW PAVEMENT FOR DETOUR SHALL BE 8" ASPHALTIC CONCRETE (BASE MATERIAL).
3. THE R.C.B.C. CONSTRUCTION SEQUENCE DETAIL (2), THIS SHEET, SHOWS THE WEST 90 L.F. (3-30' SECTIONS) OF THE R.C.B.C. IS TO BE CONSTRUCTED WHILE TRAFFIC IS DIVERTED BY DETOUR AROUND THE EAST END OF THE CONSTRUCTION AREA OVER THE COMPLETED 60 L.F. OF R.C.B.C. THE NEW PAVEMENT FOR DETOUR SHALL BE 8" ASPHALTIC CONCRETE (BASE MATERIAL).
4. TRAFFIC ENGINEERING SHALL POST THE SPEED LIMIT SIGNS OF 20 M.P.H., AND WILL PROVIDE TEMPORARY MARKINGS AS REQUIRED.
5. THE CONTRACTOR SHALL FURNISH AND MAINTAIN PROPER BARRICADES WITH FLASHERS FOR CHANNELING TRAFFIC SAFELY THROUGH THE DETOURS.
6. PRIOR TO PLACING THE 8" ASPHALTIC CONCRETE FOR DETOURS AND FOR REPLACING EXISTING PAVEMENT REMOVED, THE SUBGRADE SHALL BE COMPACTED TO CITY SPECIFICATIONS.
7. AFTER CONSTRUCTION IS COMPLETE, REMOVE ALL ASPHALT MAT USED FOR TEMPORARY DETOURS, AND FILL AND LEVEL GROUND.
8. ANY SPOIL NOT NEEDED FOR CONSTRUCTION MAY BE DISPOSED OF BY CALLING W. DALE COOPER OF ROBBINS REALTY AT 522-1587.

Extend width of exist. pvt. with 8" Asph. mat for detour. Provide barricades for channeling traffic.

Construct Exist. two 30' Sections of R.C.B.C. (60 L.F.)

AVE.

150

30'

55'

40'

55th ST.

Pvt.

SO.

Exist.

BROADWAY

80'±

①

Construct West three 30' Sections of R.C.B.C. (90 L.F.)

Fill over completed section of R.C.B.C. and place 8" Asph. Mat for detour. Provide barricades for channeling traffic.

AVE.

150

30'

55'

40'

55th ST.

Pvt.

SO.

Exist.

BROADWAY

80'±

②

CONSTRUCTION SEQUENCE

Note: Subgrade compaction in connection with paving the detour shall be considered incidental to cost of 8" Asph. Conc. (Base). Compaction over completed R.C.B.C. and 2' each side shall be paid for as C.Y. compacted till determined by the cross-sections.

2/6

12'×8' R.C.B.C.

BROADWAY - 80' NORTH ℄ 55th ST. SO.

CITY OF WICHITA, KANSAS

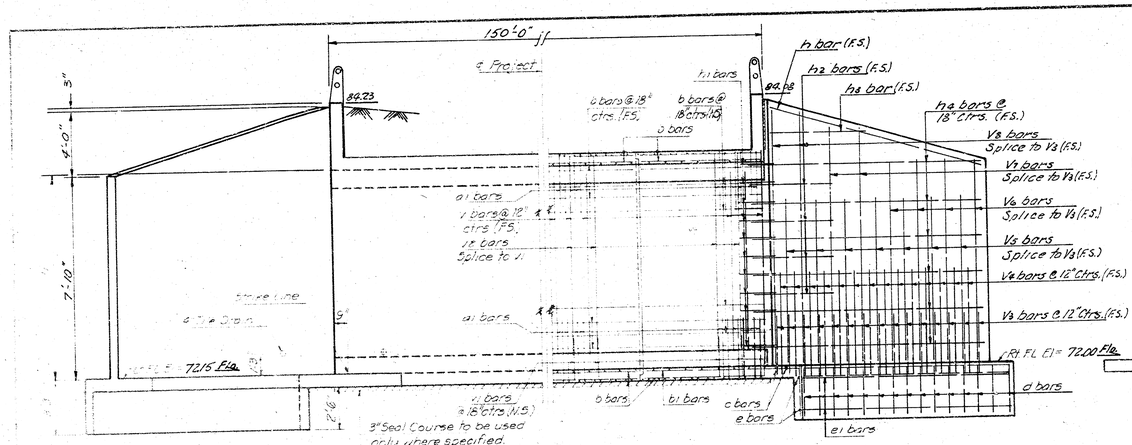
R.W. LINN CITY ENGINEER

DATE

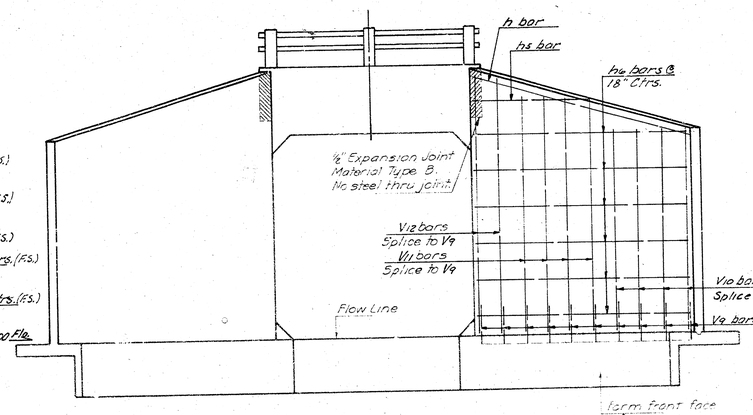
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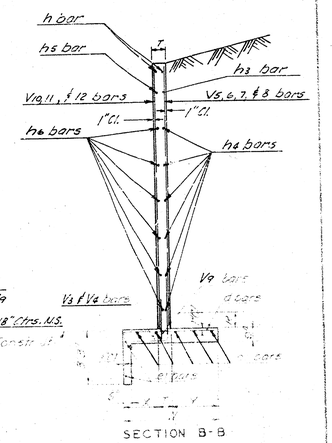
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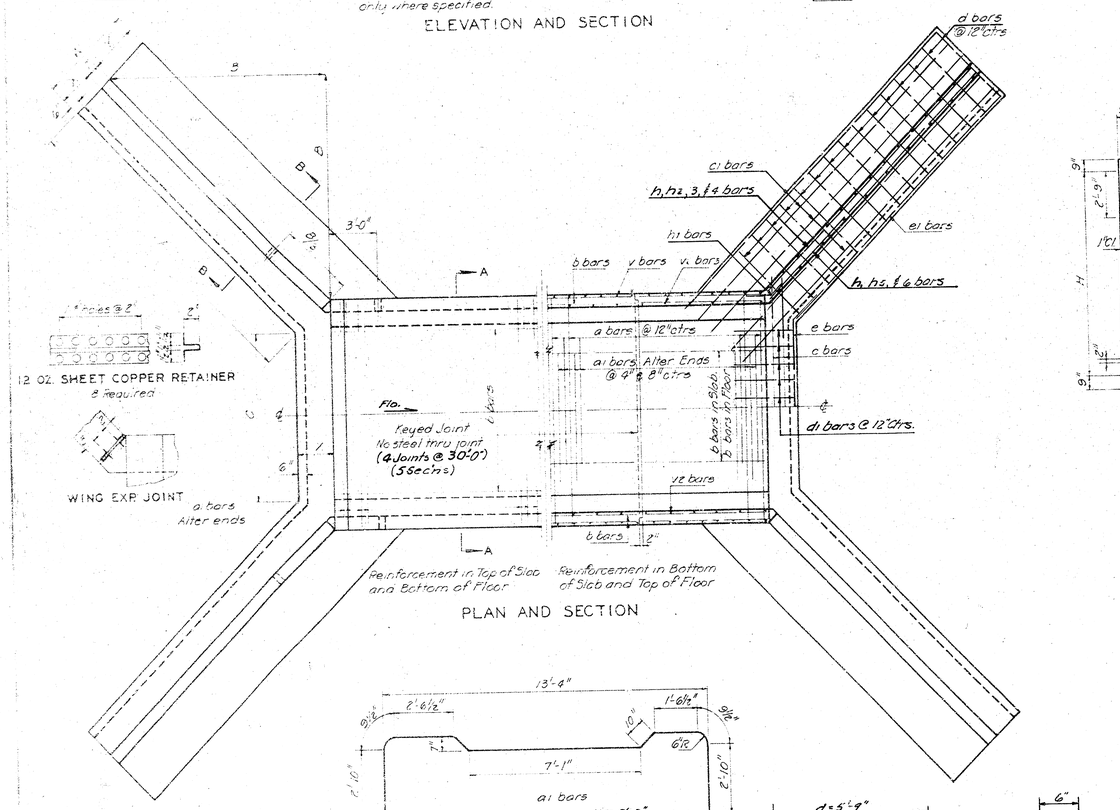
ELEVATION AND SECTION



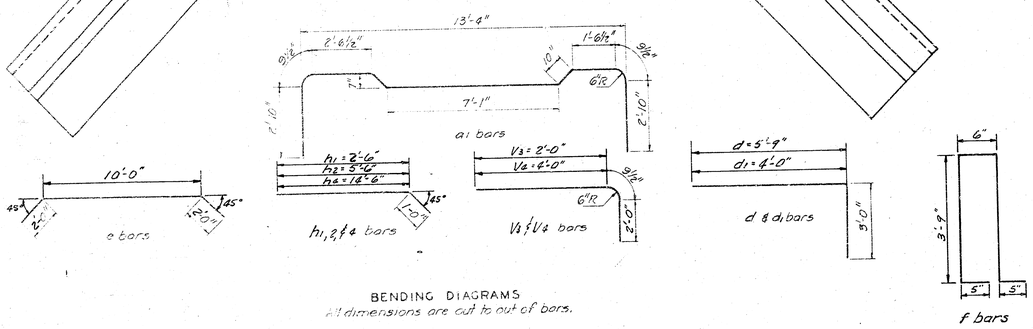
END ELEVATION



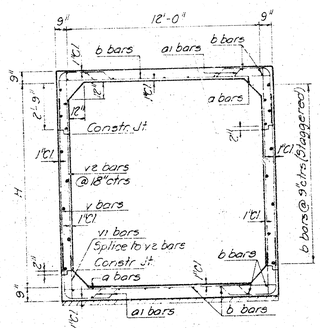
SECTION B-B



PLAN AND SECTION



BENDING DIAGRAMS
All dimensions are out to out of bars.



SECTION A-A

NOTE: THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE NO. 4 STEEL REINFORCING BARS FOR THE KEYED CONSTRUCTION JOINTS. REBARS ARE TO BE A MINIMUM OF THIRTY (30) INCHES IN LENGTH, SET SO THE JOINT DIVIDES THE BAR EQUALLY AND THESE EXTRA REBARS WILL BE REQUIRED IN EACH PLANE OF STEEL IN THE CULVERT. THE EXTRA STEEL REQUIRED WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

LIST OF BARS AND DIMENSIONS

12 x 8 x 150

Letter									A	B	C	H	R	T	W	X	Y																			
Dimension									14'-6"	10'-3"	9'-8½"	8'-0"	6"	9"	6'-0"	2'-0"	3'-3"																			
Bar	a	a1	b	c	c1	d	d1	e	e1	f	g	h	h1	h2	h3	h4	h5	h6	S	S1	S2	S3	V	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Number	300	600	180	4	20	60	20	4	8	28	12	8	40	16	4	24	4	24	10	2	2	2	300	202	202	60	56	28	16	8	8	40	16	16	8
Size	#5	#5	#4	#4	#4	#5	#4	#4	#4	#4	#5	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	#4	#4	#5	#6	#5	#5	#5	#5	#4	#4	#4	#4
Length	13'-3"	20'-1"	29'-9"	15'-6"	18'-0"	8'-9"	7'-0"	16'-6"	16'-6"	3'-10"	13'-3"	16'-7"	3'-6"	6'-6"	7'-0"	15'-6"	7'-9"	16'-3"	5'-0"	5'-6"	6'-6"	5'-0"	6'-3"	2'-6"	7'-6"	8'-9½"	6'-9½"	6'-9"	7'-10"	9'-8"	11'-0"	1'-6"	7'-10"	9'-6"	11'-2"

12 x 12 x

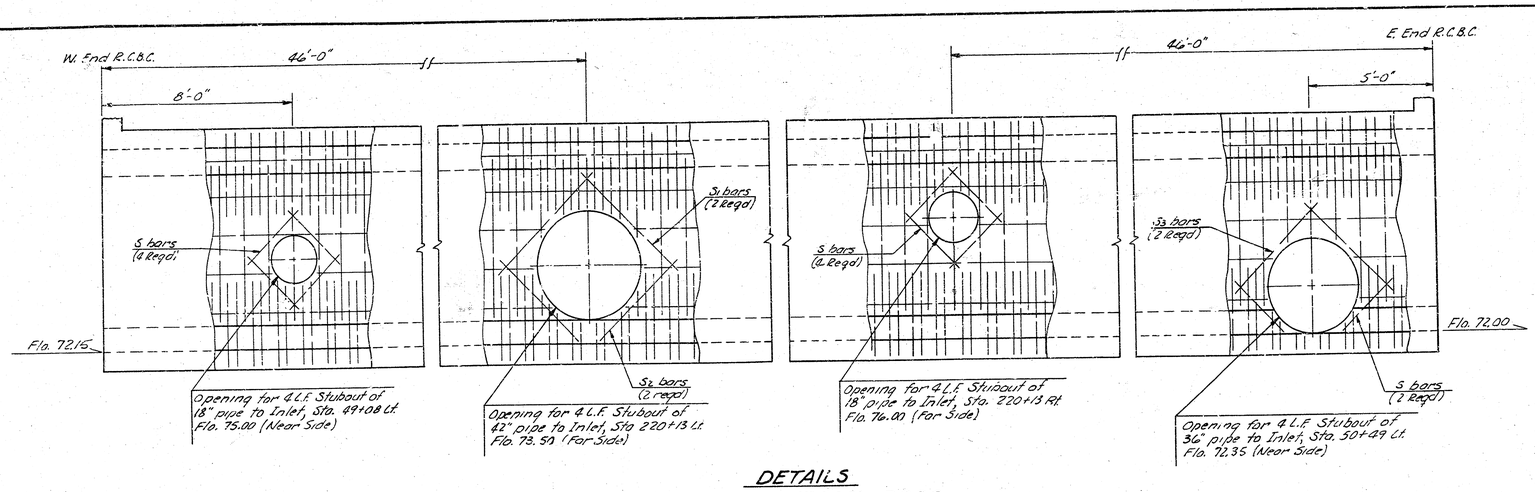
Apron Steel																																				
Apron Concrete																																			
Letter									A	B	C	H	R	T	W	X	Y																			
Dimension									18'-9"	13'-3"	9'-8½"	12'-0"	9"	0"	4'-0"	2'-0"	3'-0"																			
Bar	a	a1	b									h	h1	h2	h3	h4	h5	h6	h7	h8	p	V	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12		
Number																				B	20	4														
Size	#	#5	#4	#4	#4	#4	#6	#4	#4	#5	#5	#5	#5	#5	#5	#5	#5	#4	#4	#4	#4	#8	#4	#4	#4	#5	#4	#4	#4	#4	#4	#4	#4	#4		
Length	13'-3"	20'-1"										15'-6"	20'-3"	6'-3"	10'-6"	18'-9"	2'-8	10'-3"	2'-6"	11'-6"	3'-11"	6'-7"	8'-11"	11'-6"	9'-8"	6'-8"	1'-6"	11'-6"	9'-10"	6'-8"					

Apron Concrete: 6.3 C.Y. Apron Seal Course
Lbs Seal Course
C.Y. Wing Concrete
C.F.

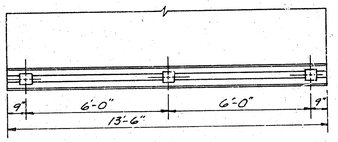
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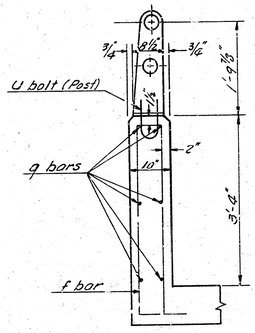
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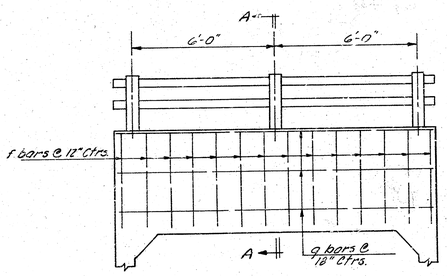
DETAILS
PIPE OPENINGS - RCBC
No Scale



PLAN-RAILING
No Scale

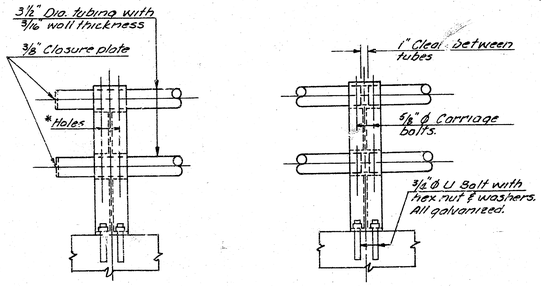


SECTION A-A
No Scale



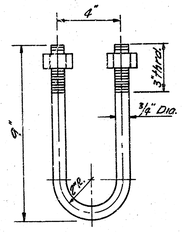
SECTION-RAILING
No Scale

Note: Aluminum Handrail
Aluminum posts shall be Reynolds Aluminum Highway Products Bridge Railing System N° 2R19.9 or equal.
Top & bottom rails shall be 3½" O.D. × 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 Aluminastic compound or other approved material.



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

DETAIL-ALUMINUM RAILING
No Scale



GALV. U BOLT
No Scale

GENERAL NOTES

1. CLASS A-AE - CONCRETE SHALL BE USED THROUGHOUT ON THE STRUCTURE. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. SPECIFICATIONS.
2. EARTHWORK - ALL EARTHWORK SHALL BE CONSIDERED AS "COMMON EXCAVATION" EXCEPT FOR THE TOE-WALL. 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 (15") 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. BIDDING OF CULVERT - THE CULVERT SHALL BE BID AS A "LUMP SUM BID" WHICH SHALL INCLUDE THE FOLLOWING ITEMS: CLASS A-AE CONCRETE, REINFORCING STEEL, HAND EXCAVATION, AND ALUMINUM HANDRAIL. 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 THE MATERIALS ON THE DETAILED PLANS NECESSARY TO COMPLETE THE PROJECT.

	BILL OF MATERIALS		
	ITEMS	QUANTITY	UNIT
Lump Sum Bid	Class AAE Concrete	224.24	C.Y.
	Reinforcing Steel	28,275	Lbs.
	Hand Excavation	10.8	C.Y.
	Aluminum Handrail	27	L.F.
Bid Items	Class A Concrete-Seal Course	19.75	C.Y.
	Excavation	4859.3	C.Y.
	Compacted Fill	494.5	C.Y.
	Riprap - Type 3	189.0	S.Y.

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