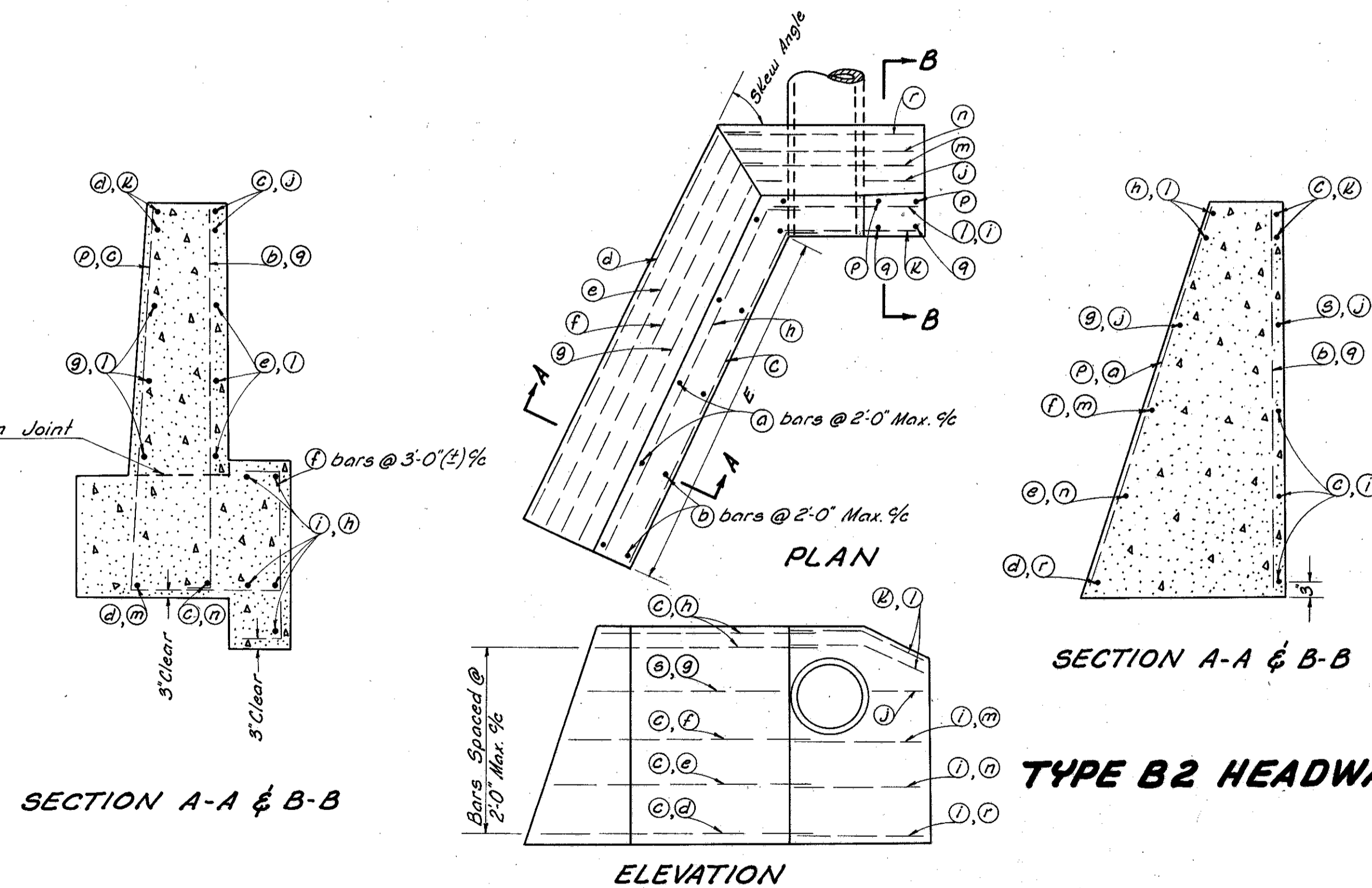
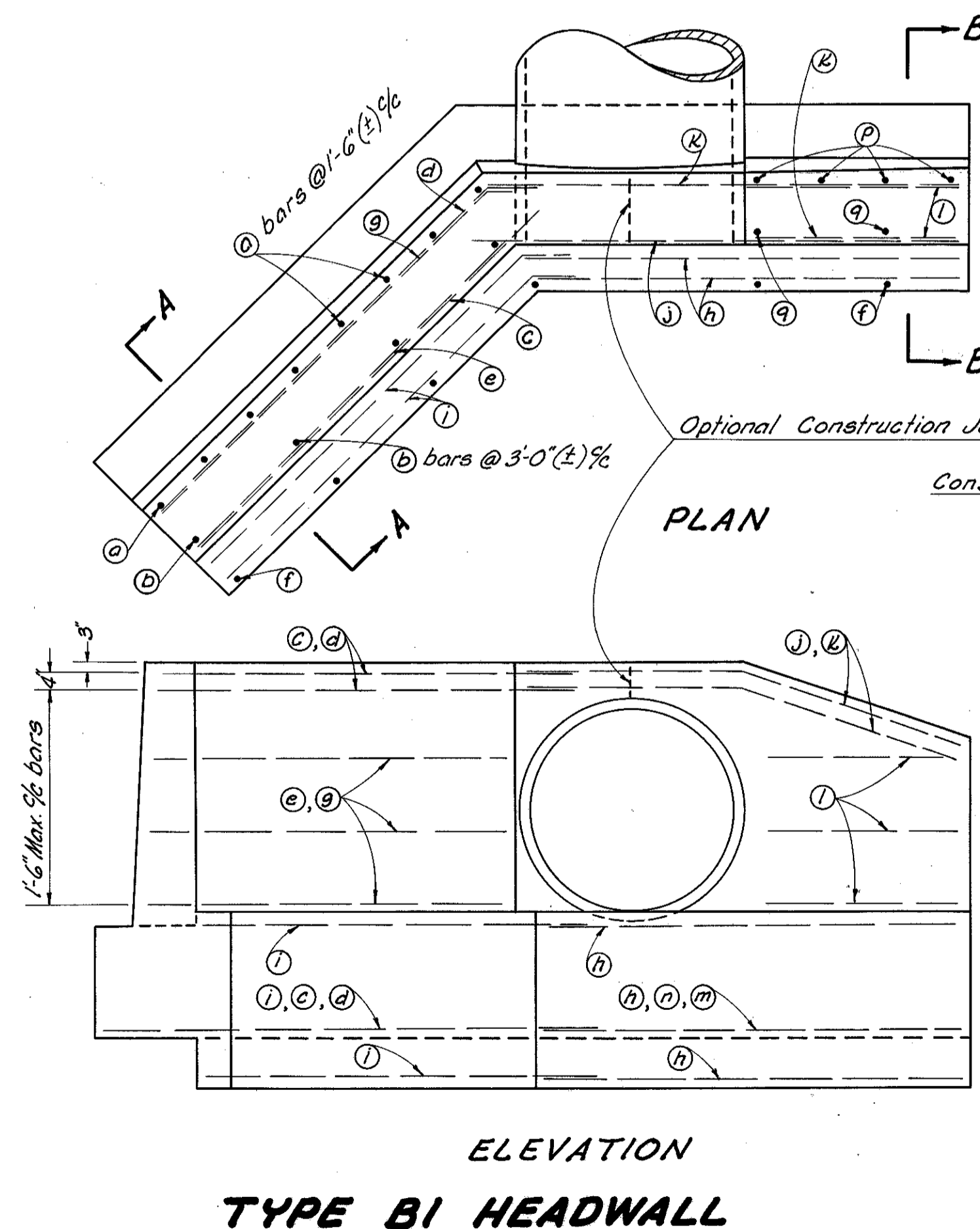
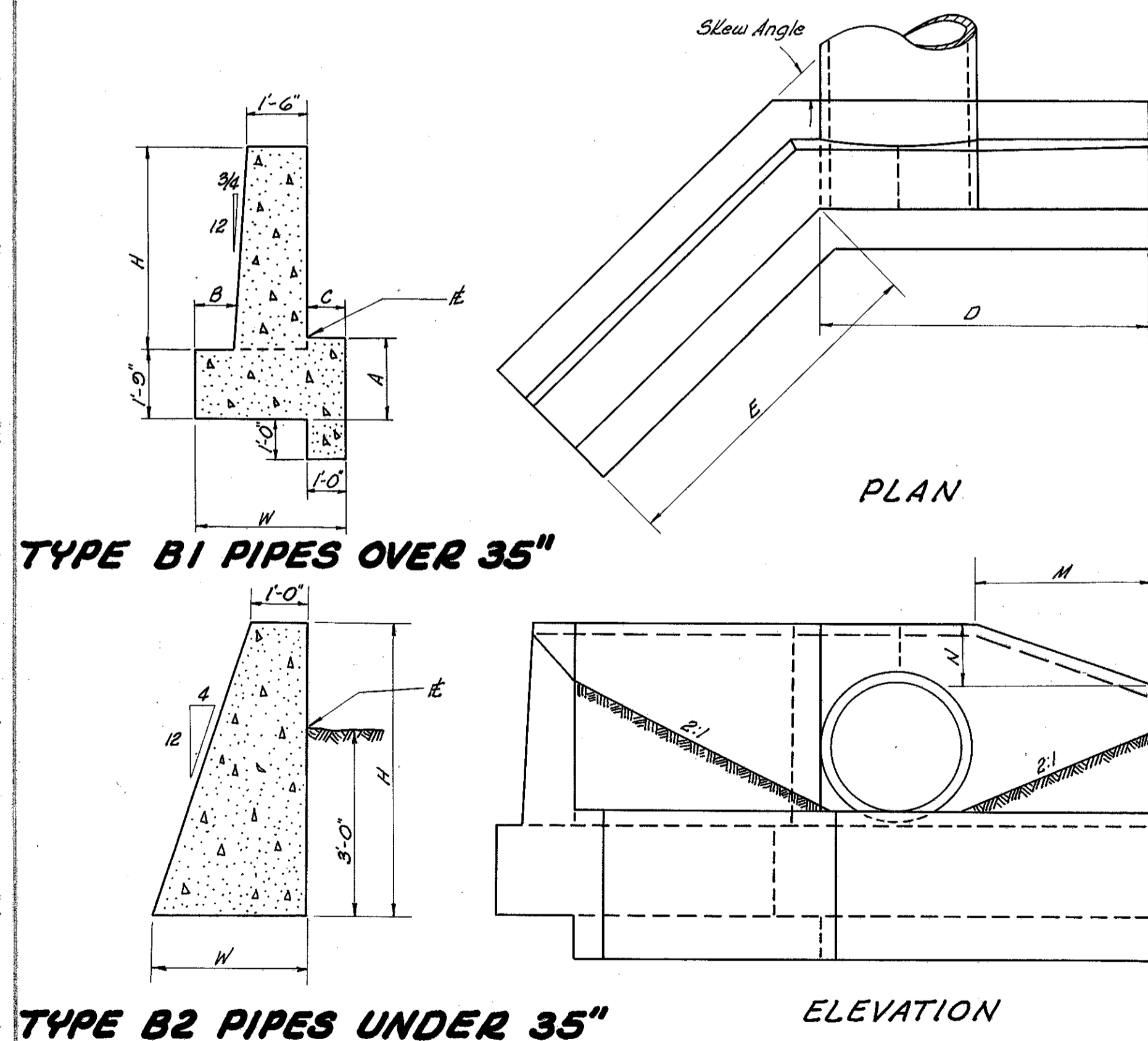


HEADWALL TYPE "B" (QUANTITIES FOR ONE HEADWALL)

CUYAHOGA & LAKE
COUNTIES
CUY-1-15.91
LAK-1-0.00

HEADWALL DIMENSIONS														REINFORCEMENT BAR SCHEDULE																		QUANTITIES—																			
Station	Skew	Pipe Size	Type	H	W	A	B	C	D	E	M	N		a	b	c	d	e	f	g	h	i	j	k	l	m	n	p	q	r	s	Reinf. Steel Lbs.	Concrete Cu. Yds.																		
7+81 Lt.	30°	66"	B-1	7'-5"	5'-4"	2'-3 1/2"	1'-5 1/2"	1'-11"	15'-5"	14'-1"	0'-1"	11'-0"		10	12'-6"	5	9'-2"	3	15'-3"	3	15'-11"	4	13'-10"	9	3'-7"	4	14'-4"	5	15'-9"	5	16'-0"	2	15'-6"	2	15'-9"	8	8'-9"	1	16'-0"	1	15'-6"	7	12'-6" to 11'-6", Varies by 2"	4	9'-2" to 8'-2" Varies by 4"	937	24.5				
7+81 Rt.	37°	66"	B-1	7'-5"	5'-4"	2'-3 1/2"	1'-5 1/2"	1'-11"	14'-8"	15'-3"	8'-1"	11'-6"		11	12'-6"	6	9'-2"	3	16'-5"	3	17'-1"	4	15'-0"	10	3'-7"	4	15'-6"	5	14'-10"	5	15'-2"	2	14'-9"	2	15'-0"	8	8'-0"	1	15'-0"	1	14'-6"	6	9'-2" to 8'-3" Varies by 3"	3	9'-2" to 8'-3" Varies by 5"	951	24.5				
24+50 Lt.	32°	84"	B-1	9'-2"	6'-0"	2'-5"	1'-8"	2'-3"	10'-11"	18'-0"	11'-7"	1'-4"		14	14'-4"	7	11'-0"	3	18'-8"	3	19'-10"	6	17'-8"	13	5'-4"	6	18'-6"	5	19'-9"	5	19'-5"	2	20'-7"	2	20'-2"	12	11'-3"	1	20'-2"	1	20'-7"	9	9'-5" to 11'-0" Varies by 2"	5	9'-5" to 11'-0" Varies by 4"	1363.4	35.26				
24+50 Rt.	30°	84"	B-1	9'-2"	6'-0"	2'-5"	1'-8"	2'-3"	17'-2"	17'-0"	8'-10"	2'-8"		13	14'-4"	7	11'-0"	3	17'-8"	3	18'-10"	6	16'-8"	12	5'-4"	6	17'-6"	5	17'-0"	5	18'-5"	2	17'-10"	2	17'-9"	12	8'-6"	1	17'-5"	1	17'-10"	7	11'-8" to 14'-2" Varies by 5"	4	Varies by 10"	1206.1	27.44				
44+00 Lt. Rt.	45°	48"	B-1	5'-8"	4'-6"	2'-2"	1'-2 3/4"	1'-5"	8'-5"	11'-11"	5'-7"	2'-2"		9	9'-11"	5	7'-6"	3	13'-2"	3	13'-8"	3	11'-11"	7	4'-6"	3	12'-8"	5	8'-3"	5	13'-0"	2	8'-9"	2	9'-3"	6	3'-4"	1	8'-11"	1	8'-3"	3	9'-11" to 8'-1", Varies by 11"	2	1 ea. @ 7'-6" @ 5'-4"	596	14.1				
90+50 Lt. Rt.	34°	106" x 168"	B-1	7'-11"	5'-9"	2'-4"	1'-7"	2'-2"	17'-0"	14'-0"	6'-6"	2'-2"		11	13'-1"	6	9'-9"	3	16'-0"	3	16'-5"	4	14'-9"	9	3'-8"	4	15'-3"	5	17'-3"	5	15'-11"	2	17'-5"	2	17'-9"	8	6'-9"	1	17'-6"	1	16'-10"	5	13'-1" to 11'-1", Varies by 6"	3	9'-9" to 7'-9" Varies by 1'-0"	970	26.1				
37+00 Lt. Rt.	20°	91" x 158"	B-1	6'-11"	5'-0"	2'-3"	1'-3 3/4"	1'-9"	15'-5"	11'-3"	6'-7"	1'-7"		8	11'-6"	4	8'-9"	3	12'-5"	3	12'-8"	4	11'-0"	9	3'-7"	4	11'-7"	5	15'-0"	5	12'-5"	2	15'-3"	2	15'-6"	8	6'-0"	1	15'-6"	1	15'-3"	5	11'-6" to 9'-6", Varies by 6"	3	8'-9" to 6'-9" Varies by 1'-0"	749	19.5				
69+50 Lt.	30°	42"	B-1	5'-1"	4'-0"	2'-1 1/2"	0'-11 1/8"	1'-3"	8'-11"	8'-10"	4'-8"	1'-2"		6	9'-3"	4	7'-0"	3	10'-2"	3	10'-6"	3	8'-6"	6	4'-6"	3	9'-4"	5	8'-9"	5	9'-11"	2	8'-9"	2	9'-2"	6	4'-4"	1	9'-3"	1	8'-9"	4	9'-3" to 8'-3", Varies by 4"	2	1 ea. @ 7'-4" @ 6'-8"	469	10.3				
88+00 Rt.	25°	27"	B-2	6'-4"	3'-1"				6'-5"	5'-11"	3'-8"	0'-6"		4	6'-4"	4	6'-0"	5	5'-8"	1	7'-8"	1	7'-6"	1	7'-4"	1	6'-3"	2	7'-3"	3	6'-3"	1	3'-6"	2	6'-3"	2	6'-5"	1	6'-7"	1	6'-9"	4	6'-2" to 5'-5", Varies by 3"	2	1 ea. @ 6'-0" @ 5'-6"	219	5.8				
96+86 Lt.	84°-30°	60"	B-1	6'-10"	5'-0"	2'-5"	1'-3 3/4"	1'-9"	13'-0"	21'-0"	4'-0"	2'-0"		15	11'-6"	8	8'-3"	3	22'-4"	3	23'-6"	4	21'-0"	11	3'-7"	4	23'-0"	5	12'-4"	5	21'-8"	2	13'-3"	2	14'-3"	8	6'-6"	1	14'-3"	1	13'-0"	5	11'-6" to 9'-6", Varies by 6"	3	8'-3" to 6'-3", Varies by 9"	1092	26.8				
96+86 Rt.	25°-30°	60"	B-1	6'-2"	4'-9"	2'-2 1/2"	1'-2 1/4"	1'-8"	11'-5"	11'-7"	6'-0"	1'-10"		9	10'-9"	5	8'-0"	3	12'-8"	3	12'-11"	4	11'-5"	8	3'-7"	4	11'-9"	5	11'-0"	5	12'-5"	2	11'-5"	2	11'-8"	8	5'-9"	1	11'-9"	1	11'-4"	4	10'-9" to 9'-0", Varies by 7"	2	1 ea. @ 7'-6" @ 6'-9"	694	16.1				
107+34 Lt.	35°	36"	B-1	4'-2"	3'-6"	2'-1"	0'-8 1/2"	1'-0"	5'-9"	6'-11"	3'-4"	1'-8"		5	8'-2"	3	6'-2"	3	8'-4"	3	8'-10"	2	6'-9"	5	3'-5"	2	7'-7"	5	5'-6"	5	8'-3"	2	6'-0"	2	6'-3"	4	2'-3"	1	6'-3"	1	5'-8"	2	1 ea. @ 7'-6" @ 6'-9"	1	4'-9"	302	6.4				
107+34 Rt.	35°	36"	B-1	4'-2"	3'-6"	2'-1"	0'-8 1/2"	1'-0"	6'-3"	7'-4"	2'-11"	1'-5"		5	8'-2"	3	6'-2"	3	8'-9"	3	9'-3"	3	7'-2"	5	3'-5"	3	8'-0"	5	6'-0"	5	8'-8"	2	6'-6"	2	6'-9"	4	2'-9"	1	6'-9"	1	6'-2"	2	1 ea. @ 7'-6" @ 6'-9"	1	4'-9"	332	6.9				
Euclid Spur 29+86 Lt.	17°	60"	B-1	6'-2"	4'-9"	2'-2 1/2"	1'-2 1/4"	1'-8"	9'-3"	12'-3"	5'-0"	2'-10"		9	10'-9"	5	8'-0"	3	13'-7"	3	14'-2"	4	12'-0"	7	3'-7"	4	12'-7"	5	9'-0"	5	13'-6"	2	12'-10"	2	13'-0"	8	6'-0"	1	11'-6"	1	11'-4"	6	10'-9" to 9'-1", Varies by 5"	3	8'-0" to 6'-4", Varies by 10"	660	15.1				
Euclid Spur 29+86 Rt.	38°	60"	B-1	6'-2"	4'-9"	2'-2 1/2"	1'-2 1/4"	1'-8"	9'-3"	12'-3"	5'-0"	2'-10"		9	10'-9"	5	8'-0"	3	13'-7"	3	14'-2"	4	12'-0"	7	3'-7"	4	12'-7"	5	9'-0"	5	13'-6"	2	12'-10"	2	13'-0"	8	6'-0"	1	9'-9"	1	9'-3"	3	9'-11" to 8'-3", Varies by 10"	2	1 ea. @ 7'-2" @ 5'-6"	667	15.1				
Ramp "C" Spur 37+00 Lt.	33°	24"	B-2	6'-1"	3'-0"				5'-1"	5'-7"	2'-7"	1'-0"		4	6'-0"	2	5'-8"	5	7'-2"	1	8'-0"	1	7'-9"	1	7'-6"	1	6'-0"	2	7'-7"	2	5'-0"	2	2'-6"	2	5'-2"	2	6'-3"	1	5'-4"	1	5'-6"	2	1 ea. @ 5'-9" @ 5'-0"	1	5'-0"	1	5'-9"	1	5'-6"	199	4.8
Ramp "D" Spur 31+38 Lt.	40°	27"	B-2	6'-4"	3'-1"				5'-7"	6'-10"	2'-9"	0'-11"		5	6'-3"	3	6'-0"	5	8'-5"	1	9'-5"	1	9'-2"	1	8'-11"	1	8'-8"	2	8'-7"	3	5'-3"	2	2'-9"	2	5'-7"	2	6'-10"	1	6'-0"	1	6'-3"	3	1 ea. @ 6'-3" @ 5'-11" @ 5'-7"	2	1 ea. @ 6'-0" @ 5'-4"	255	6.0				
Ramp "D" Spur 34+75 Lt.	37°	27"	B-2	6'-4"	3'-1"				6'-5"	6'-7"	3'-7"	0'-6"		5	6'-3"	3	6'-0"	5	8'-2"	1	9'-2"	1	8'-11"	1	8'-8"	1	8'-5"	2	8'-4"	3	6'-1"	2	3'-7"	2	6'-5"	2	7'-5"	1	5'-9"	1	6'-0"	4	6'-3" to 5'-9", Varies by 2"	2	6'-0" to 5'-8", Varies by 4"	265	6.2				
Euclid Spur 26+68 Lt.	30°	15"	B-2	5'-3"	2'-9"				3'-8"	3'-9"	2'-0"	0'-3"		3	5'-2"	3	4'-11"	4	4'-11"	1	5'-10"	1	5'-7"				1	5'-5"	2	5'-3"	2	3'-7"	2	1'-9"	2	3'-6"	2	3'-9"		1	4'-0"	2	1 ea. @ 5'-2" @ 5'-0"	1	4'-9"	1	4'-0"	1	4'-0"	124	2.8

* Denotes #6 Bars.



Notes: Reinforcing Bars are #5 except as noted.
All other notes and details not shown on this sheet will conform to Standard Headwalls "A" & "C".

MICHAEL BAKER JR., CONSULTING ENGINEERS ROCHESTER PENNSYLVANIA					
STATE OF OHIO DEPARTMENT OF HIGHWAYS					
STATE HIGHWAY NO. 1 C-41 & C-42					
TYPE "B" HEADWALLS					
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
F.A.N.	A.L.H.	R.A.	L.S.I.		