DIMENSIONS AND QUANTITIES IN ONE HEADWALL TYPE III 1:4 SLOPE

PIPE DIA	DIMENSIONS											NO. OF SPACES			CONCRETE CLASS SI CU. YD.	REINF. STEEL LBS.
	H	L	M	P	S	T	U	V	W	A	E	B	C	D		
18"	2'-0"	7'-4"	2'-3"	2"	7'-6¾"	2"	2'-8"	3'-0"	4'-4"	2'-2"	1'-8"	--	1	--	1.7	132
24"	2'-8"	10'-0"	3'-0"	3"	10'-3¾"	2"	2'-8"	4'-0"	5'-4"	2'-2"	2'-2"	--	2	--	2.8	201
30"	3'-2"	12'-0"	3'-6"	4"	12'-4½"	2"	2'-8"	5'-0"	6'-4"	2'-8"	2'-8"	2	--	--	4.0	275
36"	3'-8"	14'-0"	4'-3"	4"	14'-5¼"	2"	2'-8"	6'-0"	7'-4"	2'-2"	1'-8"	--	4	--	5.3	351
42"	4'-3"	16'-4"	4'-8"	6"	16'-10"	2"	3'-2"	6'-6"	7'-10"	2'-8"	1'-8"	4	--	--	6.8	436
48"	4'-9"	18'-4"	5'-0"	6"	18'-10¾"	2"	3'-2"	7'-0"	8'-4"	2'-2"	1'-8"	--	6	--	8.2	513

DIMENSIONS AND QUANTITIES IN ONE HEADWALL TYPE III 1:6 SLOPE

PIPE DIA	DIMENSIONS											NO. OF SPACES			CONCRETE CLASS SI CU. YD.	REINF. STEEL LBS.
	H	L	M	P	S	T	U	V	W	A	E	B	C	D		
18"	2'-0"	11'-0"	2'-3"	2"	11'-1¾"	2"	2'-8"	3'-0"	4'-4"	2'-2"	1'-8"	--	1	2	2.2	183
24"	2'-8"	15'-0"	3'-0"	3"	15'-2½"	2"	2'-8"	4'-0"	5'-4"	2'-8"	2'-8"	3	--	--	3.8	278
30"	3'-2"	18'-0"	3'-6"	4"	18'-3"	2"	2'-8"	5'-0"	6'-4"	2'-2"	1'-8"	--	5	1	5.3	385
36"	3'-8"	21'-0"	4'-3"	4"	21'-3½"	2"	2'-8"	6'-0"	7'-4"	2'-8"	2'-2"	3	3	--	7.3	492
42"	4'-3"	24'-6"	4'-8"	6"	24'-10"	2"	3'-2"	6'-6"	7'-10"	2'-8"	1'-8"	5	--	3	9.4	616
48"	4'-9"	27'-6"	5'-0"	6"	27'-10½"	2"	3'-2"	7'-0"	8'-4"	2'-8"	2'-2"	7	1	--	11.3	727

DIMENSIONS AND QUANTITIES IN ONE HEADWALL TYPE III 1:10 SLOPE

PIPE DIA	DIMENSIONS											NO. OF SPACES			CONCRETE CLASS SI CU. YD.	REINF. STEEL LBS.
	H	L	M	P	S	T	U	V	W	A	E	B	C	D		
18"	2'-0"	18'-4"	2'-3"	2"	18'-5"	2"	2'-8"	3'-0"	4'-4"	2'-2"	1'-8"	--	5	1	3.4	279
24"	2'-8"	25'-0"	3'-0"	3"	25'-1½"	2"	2'-8"	4'-0"	5'-4"	2'-2"	1'-8"	--	8	1	5.8	434
30"	3'-2"	30'-0"	3'-6"	4"	30'-1¾"	2"	2'-8"	5'-0"	6'-4"	2'-2"	1'-8"	--	11	--	8.2	610
36"	3'-8"	35'-0"	4'-3"	4"	35'-2"	2"	2'-8"	6'-0"	7'-4"	2'-2"	2'-2"	--	13	--	11.2	778
42"	4'-3"	40'-10"	4'-8"	6"	41'-0½"	2"	3'-2"	6'-6"	7'-10"	2'-2"	1'-8"	--	12	5	14.3	984
48"	4'-9"	45'-10"	5'-0"	6"	46'-0¾"	2"	3'-2"	7'-0"	8'-4"	2'-2"	1'-8"	--	15	4	17.4	1165

REINFORCING BAR SCHEDULE FOR ONE HEADWALL

TYPE III 1:4 SLOPE

PIPE DIA	NO. 4 REINFORCING BARS					
	MARK	TYPE	NO. REQ'D.	LENGTH	a	b
18"	a18	1	1	8'-7"	2'-5"	
	d18	2	20	2'-6"	1'-9"	9"
	h18	STR.	6	7'-0"		
	n18	2	5	3'-0"	2'-0"	1'-0"
	t18	STR.	10	4'-0"		
	u18	STR.	4	1'-9"		
	w18	STR.	5	7'-0"		
24"	a24	1	1	10'-5"	3'-0"	
	d24	2	26	2'-3"	1'-6"	9"
	h24	STR.	6	9'-8"		
	n24	2	6	3'-0"	2'-0"	1'-0"
	t24	STR.	13	5'-0"		
	u24	STR.	4	2'-6"		
	v24	3	6	3'-9"	1'-3"	2'-6"
	w24	STR.	6	9'-8"		
30"	a30	1	1	11'-9"	3'-5"	
	d30	2	30	2'-3"	1'-6"	9"
	h30	STR.	8	11'-8"		
	n30	2	7	3'-0"	2'-0"	1'-0"
	t30	STR.	15	6'-0"		
	u30	STR.	4	3'-0"		
	v30	3	8	4'-3"	1'-3"	3'-0"
	w30	STR.	7	11'-8"		
36"	a36	1	1	13'-7"	4'-0"	
	d36	2	36	2'-3"	1'-6"	9"
	h36	STR.	8	13'-8"		
	n36	2	8	3'-0"	2'-0"	1'-0"
	t36	STR.	17	7'-0"		
	u36	STR.	6	3'-6"		
	v36	3	10	4'-9"	1'-3"	3'-6"
	w36	STR.	8	13'-8"		
42"	a42	1	1	15'-5"	4'-7"	
	d42	2	40	2'-3"	1'-6"	9"
	h42	STR.	10	16'-0"		
	n42	2	8	3'-6"	2'-6"	1'-0"
	t42	STR.	19	7'-6"		
	u42	STR.	6	4'-1"		
	v42	3	12	5'-4"	1'-3"	4'-1"
	w42	STR.	8	16'-0"		
48"	a48	1	1	17'-3"	5'-2"	
	d48	2	44	2'-3"	1'-6"	9"
	h48	STR.	10	18'-0"		
	n48	2	9	3'-6"	2'-6"	1'-0"
	t48	STR.	21	8'-0"		
	u48	STR.	6	4'-7"		
	v48	3	14	5'-10"	1'-3"	4'-7"
	w48	STR.	9	18'-0"		

REINFORCING BAR SCHEDULE FOR ONE HEADWALL

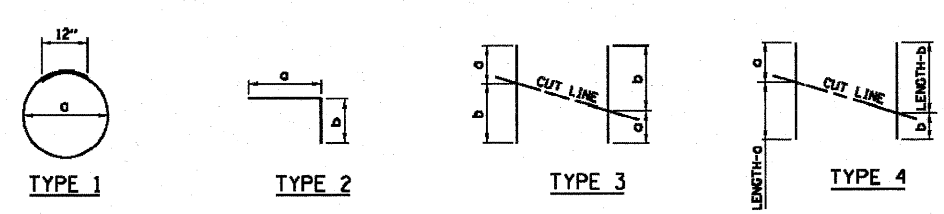
TYPE III 1:6 SLOPE

PIPE DIA	NO. 4 REINFORCING BARS					
	MARK	TYPE	NO. REQ'D.	LENGTH	a	b
18"	a18	1	1	8'-7"	2'-5"	
	d18	2	28	2'-6"	1'-9"	9"
	h18	STR.	6	10'-8"		
	n18	2	5	3'-0"	2'-0"	1'-0"
	t18	STR.	14	4'-0"		
	u18	STR.	4	1'-9"		
	w18	STR.	5	10'-8"		
24"	a24	1	1	10'-5"	3'-0"	
	d24	2	36	2'-3"	1'-6"	9"
	h24	STR.	6	14'-8"		
	n24	2	6	3'-0"	2'-0"	1'-0"
	t24	STR.	18	5'-0"		
	u24	STR.	4	2'-6"		
	v24	3	8	3'-9"	1'-3"	2'-6"
	w24	STR.	6	14'-8"		
30"	a30	1	1	11'-9"	3'-5"	
	d30	2	42	2'-3"	1'-6"	9"
	h30	STR.	8	17'-8"		
	n30	2	7	3'-0"	2'-0"	1'-0"
	t30		21	6'-0"		
	u30	STR.	4	3'-0"		
	v30	3	11	4'-3"	1'-3"	3'-0"
	w30	STR.	7	17'-8"		
36"	a36	1	1	13'-7"	4'-0"	
	d36	2	50	2'-3"	1'-6"	9"
	h36	STR.	8	20'-8"		
	n36	2	8	3'-0"	2'-0"	1'-0"
	t36	STR.	24	7'-0"		
	u36	STR.	6	3'-6"		
	v36	3	14	4'-9"	1'-3"	3'-6"
	w36	STR.	8	20'-8"		
42"	a42	1	1	15'-5"	4'-7"	
	d42	2	56	2'-3"	1'-6"	9"
	h42	STR.	10	24'-2"		
	n42	2	8	3'-6"	2'-6"	1'-0"
	t42	STR.	27	7'-6"		
	u42	STR.	6	4'-1"		
	v42	3	17	5'-4"	1'-3"	4'-1"
	w42	STR.	8	24'-2"		
48"	a48	1	1	17'-3"	5'-2"	
	d48	2	62	2'-3"	1'-6"	9"
	h48	STR.	10	27'-2"		
	n48	2	9	3'-6"	2'-6"	1'-0"
	t48	STR.	30	8'-0"		
	u48	STR.	6	4'-7"		
	v48	3	20	5'-10"	1'-3"	4'-7"
	w48	STR.	9	27'-2"		

REINFORCING BAR SCHEDULE FOR ONE HEADWALL

TYPE III 1:10 SLOPE

PIPE DIA	NO. 4 REINFORCING BARS					
	MARK	TYPE	NO. REQ'D.	LENGTH	a	b
18"	a18	1	1	8'-7"	2'-5"	
	d18	2	42	2'-6"	1'-9"	9"
	h18	STR.	6	18'-0"		
	n18	2	5	3'-0"	2'-0"	1'-0"
	t18	STR.	21	4'-0"		
	u18	STR.	4	1'-9"		
	w18	STR.	5	18'-0"		
24"	a24	1	1	10'-5"	3'-0"	
	d24	2	56	2'-3"	1'-6"	9"
	h24	STR.	6	24'-8"		
	n24	2	6	3'-0"	2'-0"	1'-0"
	t24	STR.	28	5'-0"		
	u24	STR.	4	2'-6"		
	v24	3	13	3'-9"	1'-3"	2'-6"
	w24	STR.	6	24'-8"		
30"	a30	1	1	11'-9"	3'-5"	
	d30	2	66	2'-3"	1'-6"	9"
	h30		8	29'-8"		
	n30	2	7	3'-0"	2'-0"	1'-0"
	t30	STR.	33	6'-0"		
	u30	STR.	4	3'-0"		
	v30	3	18	4'-3"	1'-3"	3'-0"
	w30	STR.	7	29'-8"		
36"	a36	1	1	13'-7"	4'-0"	
	d36	2	78	2'-3"	1'-6"	9"
	h36	STR.	8	34'-8"		
	n36	2	8	3'-0"	2'-0"	1'-0"
	t36	STR.	38	7'-0"		
	u36	STR.	6	3'-6"		
	v36	3	23	4'-9"	1'-3"	3'-6"
	w36	STR.	8	34'-8"		
42"	a42	1	1	15'-5"	4'-7"	
	d42	2	90	2'-3"	1'-6"	9"
	h42	STR.	10	40'-6"		
	n42	2	8	3'-6"	2'-6"	1'-0"
	t42	STR.	44	7'-6"		
	u42	STR.	6	4'-1"		
	v42	3	27	5'-4"	1'-3"	4'-1"
	w42	STR.	8	40'-6"		
48"	a48	1	1	17'-3"	5'-2"	
	d48	2	100	2'-3"	1'-6"	9"
	h48	STR.	10	45'-6"		
	n48	2	9	3'-6"	2'-6"	1'-0"
	t48	STR.	49	8'-0"		
	u48	STR.	6	4'-7"		
	v48	3	32	5'-10"	1'-3"	4'-7"
	w48	STR.	9	45'-6"		



TYPE 1　TYPE 2　TYPE 3　TYPE 4

SINGLE PIPE DESIGN

NOTES:

1. THE 'v' BARS, TYPE 3, SHALL BE ORDERED FULL LENGTH AND CUT IN THE FIELD. THE REMAINING PORTION OF THE 'v' BARS SHALL BE USED IN THE OTHER WALL.
2. THE LONG LEG OF THE 'd' AND 'n' BARS SHALL BE VERTICAL.
3. QUANTITIES ON THIS DRAWING ARE BASED ON THE CAST-IN-PLACE DESIGN.
4. "STR." = STRAIGHT BAR.
5. ALL REINFORCING BARS ARE #4 BARS.
6. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

Paul Kovacs
APPROVED .... CHIEF ENGINEER　DATE 6-1-2009

Illinois Tollway
Open Roads for a Faster Future

HEADWALL TYPE III
18"-24"-30"-42"-48"
FOR 1:4, 1:6, AND 1:10 SLOPES

STANDARD B6-02

Rev. 1-9-12

McClure LOCHNER / RWA / QUIGG ENGINEERING INC.	USER NAME = USERNAME	DESIGNED - BLM	REVISED -
		DRAWN - JPW	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED - BLM	REVISED -
	PLOT DATE = 12/22/2011	DATE - 12/22/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HEADWALL TYPE III - 2

SCALE: NTS　SHEET NO.　OF　SHEETS　STA.　TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(X2-1)R	WINNEBAGO	510	240B

CONTRACT NO. 64C29

ILLINOIS FED. AID PROJECT