



Structure ID: 2 HW-1

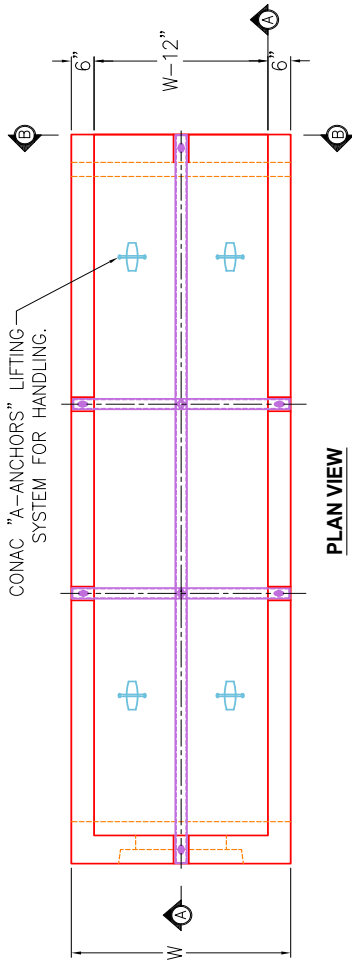
P1 HWTDOT3-1TU42

42" - HW TDOT 3:1 Type U Cross Drain Endwall

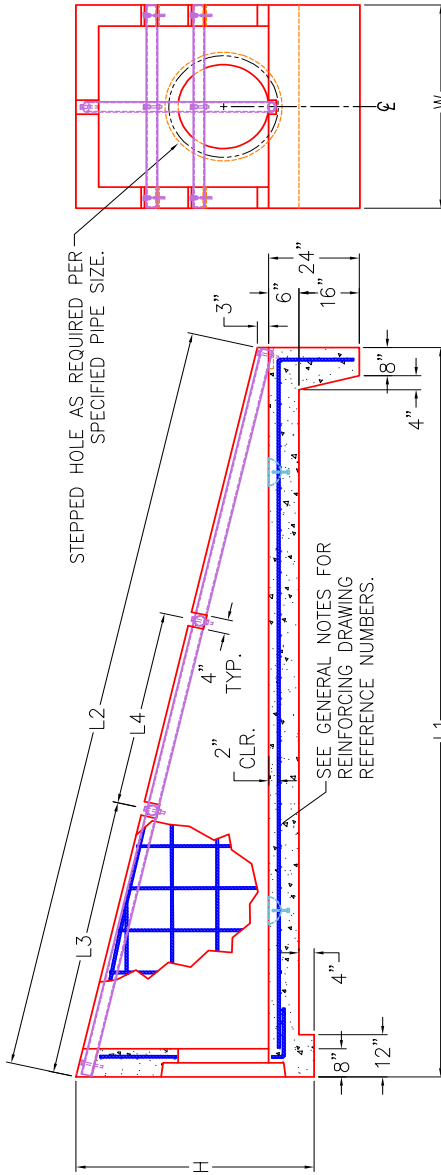
GENERAL NOTES

- DRAWING TO BE USED FOR ALL 12" THROUGH 48" SIDE DRAIN CONCRETE ENDWALLS.
- MANUFACTURING, FOR CROSS DRAINS ONLY.
- CONCRETE: $f'_c = 4,500$ PSI @ 28 DAYS.
- REINFORCING STEEL: ASTM A615, $F_y=60,000$ PSI. SEE STD. DWGS. D-PE-15A, D-PE-18, D-PE-24A, D-PE-30A, D-PE-36A, D-PE-42A & D-PE-48A FOR BILL OF STEEL.
- SPLICING OF REINFORCEMENT IS ACCEPTABLE PROVIDED THAT A MINIMUM 21" SPLICE LENGTH IS USED.
- APPROPRIATE SIZING AND LOCATIONS OF THE LIFTING INSERTS WILL BE THE RESPONSIBILITY OF INFRASTRUCTURE PRECAST, INC.
- LIFTING INSERT POCKETS SHALL BE GROUTED ON SITE BY THE CONTRACTOR AFTER THE ENDWALL IS SET AS PER TDOT REQUIREMENTS.
- DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 5-3.
- PIPE OPENINGS FOR HEADWALLS ARE BASED ON REINFORCED CONCRETE PIPE WITH TYPE "B" WALL AS PER AMERICAN CONCRETE PIPE ASSOCIATION (ACPA). OUTSIDE DIAMETER + 3"-4". TOE WALL BACK SLOPE MAY BE CONSTRUCTED VARIABLE FROM VERTICAL UP TO 15°.

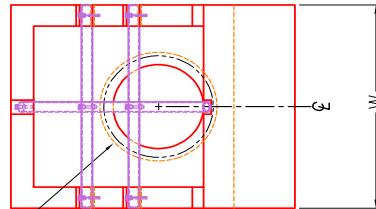
NOTE:
JBS 42" TDOT 3:1 "U"
Cross Drain EW Grate
supplied by ICAST



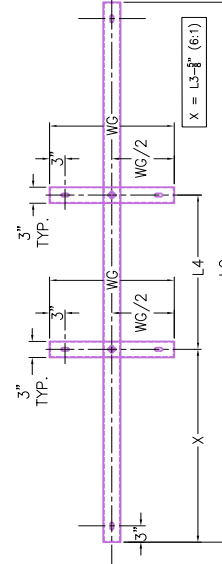
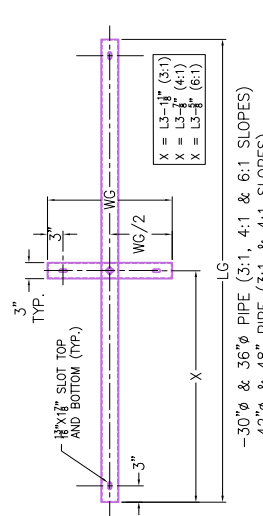
PLAN VIEW



SECTION A-A



ELEVATION B-B



STEEL PIPE GRATE PLAN VIEWS

(SEE D-PE-99 FOR MOUNTING STEEL GRATES)

PIPE DIA. (O)	CONCRETE ENDWALL DIMENSIONS				GRATE DISPLACEMENT DIMENSIONS				STRUCT. STEEL		WEIGHT	
	H	W	L1	L2	L3	L4	L5	L6	LBS.	LBS.	LBS.	LBS.
15"	2'-11"	2'-8"	8'-0"	8'-3"	N/A	N/A	N/A	N/A	N/A	N/A	3,484	4,228
18"	3'-2"	2'-11"	8'-8"	8'-11"	N/A	N/A	N/A	N/A	N/A	N/A	4,228	5,011
24"	3'-9"	3'-6"	11'-0"	11'-4"	N/A	N/A	N/A	N/A	N/A	N/A	6,303	7,204
30"	4'-5"	4'-1"	13'-8"	14'-1"	N/A	N/A	N/A	N/A	N/A	N/A	9,083	10,508
36"	5'-0"	4'-8"	16'-0"	16'-3"	N/A	N/A	N/A	N/A	N/A	N/A	12,058	13,862
42"	5'-6"	5'-3"	18'-0"	18'-3"	N/A	N/A	N/A	N/A	N/A	N/A	15,073	17,438
48"	6'-1"	5'-10"	20'-4"	20'-11"	N/A	N/A	N/A	N/A	N/A	N/A	18,910	21,866

PIPE DIA. (O)	CONCRETE ENDWALL DIMENSIONS				GRATE DISPLACEMENT DIMENSIONS				STRUCT. STEEL		WEIGHT	
	H	W	L1	L2	L3	L4	L5	L6	LBS.	LBS.	LBS.	LBS.
15"	2'-11"	2'-8"	8'-0"	8'-3"	N/A	N/A	N/A	N/A	N/A	N/A	3,484	4,228
18"	3'-2"	2'-11"	8'-8"	8'-11"	N/A	N/A	N/A	N/A	N/A	N/A	4,228	5,011
24"	3'-9"	3'-6"	11'-0"	11'-4"	N/A	N/A	N/A	N/A	N/A	N/A	6,303	7,204
30"	4'-5"	4'-1"	13'-8"	14'-1"	N/A	N/A	N/A	N/A	N/A	N/A	9,083	10,508
36"	5'-0"	4'-8"	16'-0"	16'-3"	N/A	N/A	N/A	N/A	N/A	N/A	12,058	13,862
42"	5'-6"	5'-3"	18'-0"	18'-3"	N/A	N/A	N/A	N/A	N/A	N/A	15,073	17,438
48"	6'-1"	5'-10"	20'-4"	20'-11"	N/A	N/A	N/A	N/A	N/A	N/A	18,910	21,866



INFRASTRUCTURE PRECAST, INC.
981 WEST 7TH ST., BEAVER DAM, KY. 42320
PHONE: (270) 363-2238, FAX: (270) 298-7424

TDOT TYPE "U" CROSS DRAIN ENDWALL WITH STEEL PIPE GRATE FOR 15" THROUGH 48" PIPES	
DRAWING NO.: ET-TDOT-202	DATE: 11-24-25
REVIEWED BY: J.H. ROSS, PE	DRAWN BY: N. RICHARDS
WEB: WWW.ICASTINC.COM	SCALE: NTS

STEEL PIPE GRATE DIMENSIONS					
PIPE DIA.	ALL SLOPES	3:1 LG	4:1 LG	6:1 LG	LG
30"	4'-1"	10'-10"	14'-0"	20'-4"	23'-11"
36"	4'-8"	12'-0"	16'-5"	23'-11"	26'-11"
42"	5'-3"	14'-3"	18'-5"	26'-11"	30'-0"
48"	5'-10"	16'-1"	20'-10"	30'-0"	33'-0"

DIMENSIONS & QUANTITIES FOR ONE ENDWALL 6:1					
PIPE DIA. (O)	CONCRETE ENDWALL DIMENSIONS				STRUCT. STEEL
	H	W	L1	L2	
15"	2'-11"	2'-8"	11'-2"	11'-3"	N/A
18"	3'-2"	2'-11"	12'-8"	12'-10"	N/A
24"	3'-9"	3'-6"	16'-2"	16'-4"	N/A
30"	4'-5"	4'-1"	20'-2"	20'-3"	N/A
36"	5'-0"	4'-8"	23'-8"	23'-11"	N/A
42"	5'-6"	5'-3"	26'-8"	27'-0"	N/A
48"	6'-1"	5'-10"	30'-2"	30'-7"	N/A