



Structure ID: QL3 HW (1)

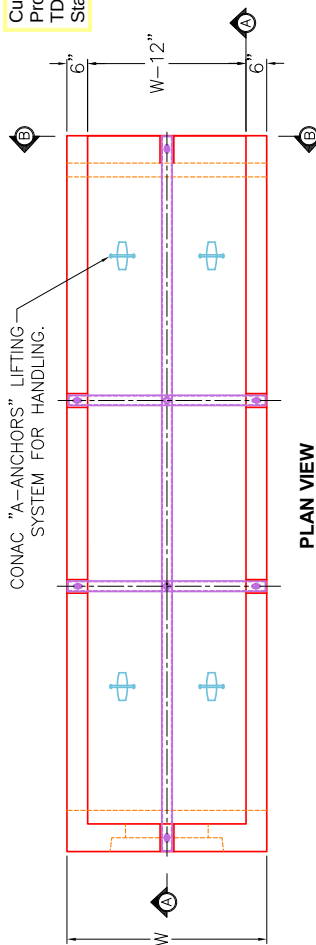
P1 HWTDOT3-1TU36

36" - HW TDOT 3:1 Type U Cross Drain Endwall F/F

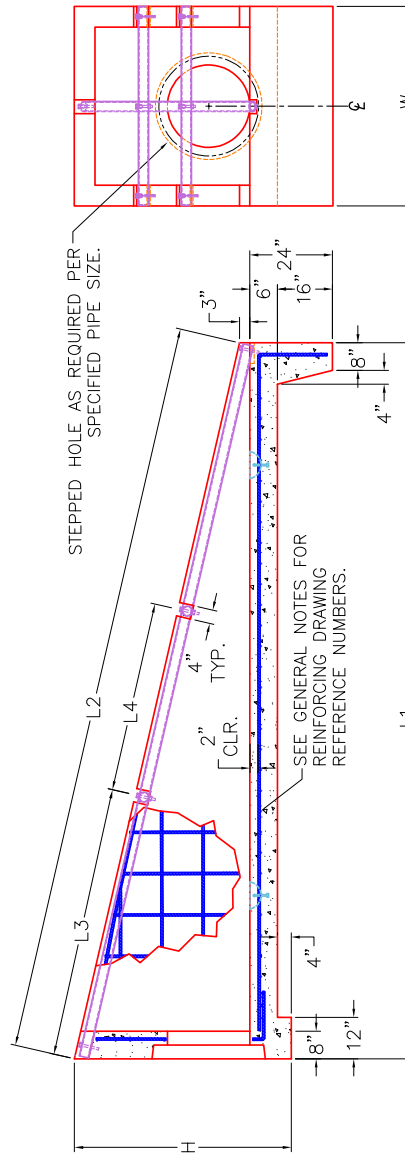
GENERAL NOTES

1. DRAWING TO BE USED FOR ALL 12" THROUGH 48" SIDE DRAIN CONCRETE ENDWALLS.
2. MANUFACTURING, FOR CROSS DRAINS ONLY.
3. CONCRETE: $F_c' = 4,500$ PSI @ 28 DAYS.
4. REINFORCING STEEL: ASTM A615, $F_y=60,000$ PSI.
5. 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.
6. SPLICING OF REINFORCEMENT IS ACCEPTABLE PROVIDED THAT A MINIMUM 21" SPLICE LENGTH IS USED.
7. APPROPRIATE SIZING AND LOCATIONS OF THE LIFTING INSERTS WILL BE THE RESPONSIBILITY OF INFRASTRUCTURE PRECAST, INC.
8. LIFTING INSERT POCKETS SHALL BE GROUTED ON SITE BY THE CONTRACTOR AFTER THE ENDWALL IS SET AS PER TDOT REQUIREMENTS.
9. DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 5-3.
10. 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".
11. TOE WALL BACK SLOPE MAY BE CONSTRUCTED VARIABLE FROM VERTICAL UP TO 15°.

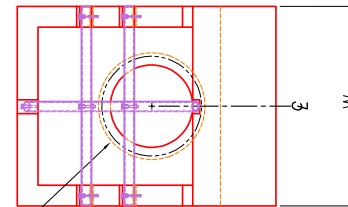
Customer: Rinker Underground
Project: TDOT EW's
TDOT PIN#: 207036.00
State Project#: 79LPLM-F3-034



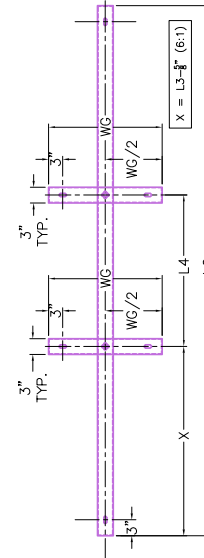
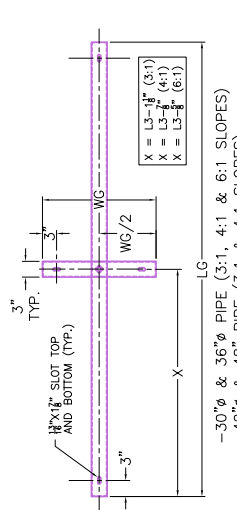
PLAN VIEW



SECTION A-A



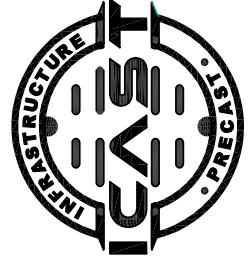
ELEVATION B-B



STEEL PIPE GRATE PLAN VIEWS

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

*Pipe grates supplied by others



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

DIMENSIONS & QUANTITIES FOR ONE ENDWALL 4:1									
PIPE DIA. (D)	CONCRETE ENDWALL DIMENSIONS				GRATE DISPLACEMENT DIMENSIONS				WEIGHT
	H	W	L1	L2	L3	L4	STRUCT. STEEL	WEIGHT	
15"	2'-11"	2'-8"	8'-0"	8'-3"	N/A	N/A	LBS.	LBS.	
18"	3'-2"	2'-11"	8'-8"	8'-11"	N/A	N/A	N/A	N/A	3,484
24"	3'-9"	3'-6"	11'-0"	11'-4"	N/A	N/A	N/A	N/A	4,228
30"	4'-5"	4'-1"	13'-8"	14'-1"	N/A	N/A	N/A	N/A	6,303
36"	5'-0"	4'-8"	16'-0"	16'-3"	N/A	N/A	N/A	N/A	9,083
42"	5'-6"	5'-3"	18'-0"	18'-6"	N/A	N/A	N/A	N/A	12,058
48"	6'-1"	5'-10"	20'-4"	20'-11"	N/A	N/A	N/A	N/A	15,073
									203
									13,910

DIMENSIONS & QUANTITIES FOR ONE ENDWALL 3:1									
PIPE DIA. (D)	CONCRETE ENDWALL DIMENSIONS				GRATE DISPLACEMENT DIMENSIONS				WEIGHT
	H	W	L1	L2	L3	L4	STRUCT. STEEL	WEIGHT	
15"	2'-11"	2'-8"	6'-0"	6'-3"	N/A	N/A	LBS.	LBS.	
18"	3'-2"	2'-11"	6'-8"	7'-0"	N/A	N/A	N/A	N/A	2,819
24"	3'-9"	3'-6"	8'-5"	8'-10"	N/A	N/A	N/A	N/A	3,406
30"	4'-5"	4'-1"	10'-5"	10'-11"	N/A	N/A	N/A	N/A	5,011
36"	5'-0"	4'-8"	12'-2"	12'-9"	N/A	N/A	N/A	N/A	7,204
42"	5'-6"	5'-3"	13'-8"	14'-4"	N/A	N/A	N/A	N/A	9,513
48"	6'-1"	5'-10"	15'-5"	16'-3"	N/A	N/A	N/A	N/A	11,863
									14,838
									167

STEEL PIPE GRATE DIMENSIONS									
PIPE DIA.	ALL SLOPES				CONCRETE ENDWALL DIMENSIONS				WEIGHT
	H	W	L1	L2	L3	L4	STRUCT. STEEL	WEIGHT	
15"	2'-11"	2'-8"	8'-0"	8'-3"	N/A	N/A	LBS.	LBS.	
18"	3'-2"	2'-11"	8'-8"	8'-11"	N/A	N/A	N/A	N/A	3,484
24"	3'-9"	3'-6"	11'-0"	11'-4"	N/A	N/A	N/A	N/A	4,228
30"	4'-5"	4'-1"	13'-8"	14'-1"	N/A	N/A	N/A	N/A	6,303
36"	5'-0"	4'-8"	16'-0"	16'-3"	N/A	N/A	N/A	N/A	9,083
42"	5'-6"	5'-3"	18'-0"	18'-6"	N/A	N/A	N/A	N/A	12,058
48"	6'-1"	5'-10"	20'-4"	20'-11"	N/A	N/A	N/A	N/A	15,073

DIMENSIONS & QUANTITIES FOR ONE ENDWALL 6:1									
PIPE DIA. (D)	CONCRETE ENDWALL DIMENSIONS				GRATE DISPLACEMENT DIMENSIONS				WEIGHT
	H	W	L1	L2	L3	L4	STRUCT. STEEL	WEIGHT	
15"	2'-11"	2'-8"	11'-2"	11'-3"	N/A	N/A	LBS.	LBS.	
18"	3'-2"	2'-11"	12'-8"	12'-10"	N/A	N/A	N/A	N/A	4,737
24"	3'-9"	3'-6"	16'-2"	16'-4"	N/A	N/A	N/A	N/A	5,833
30"	4'-5"	4'-1"	20'-2"	20'-5"	N/A	N/A	N/A	N/A	8,848
36"	5'-0"	4'-8"	23'-8"	23'-11"	N/A	N/A	N/A	N/A	12,880
42"	5'-6"	5'-3"	26'-8"	27'-0"	N/A	N/A	N/A	N/A	17,186
48"	6'-1"	5'-10"	30'-2"	30'-7"	N/A	N/A	N/A	N/A	21,532
									27,092
									320