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PROJECT REFERENCE NO.	SHEET NO.
R-2707D	2C-6

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH

12" THRU 72" PIPE

SHEET 1 OF 2 — 840d17

GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL GRATED DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.66.

CONSTRUCT WITH PIPE CROWNS MATCHING.

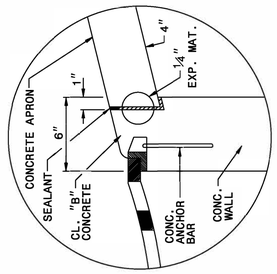
USE STANDARD FRAMES AND GRATES 840.22 (SHOWN), 840.24(SHOWN), 840.20 (NOT SHOWN) OR 840.29 (NOT SHOWN).

SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.

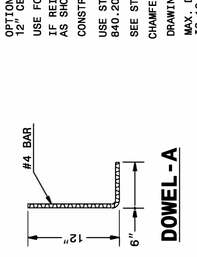
CHAMFER ALL EXPOSED CORNERS 1".

DRAWING NOT TO SCALE.

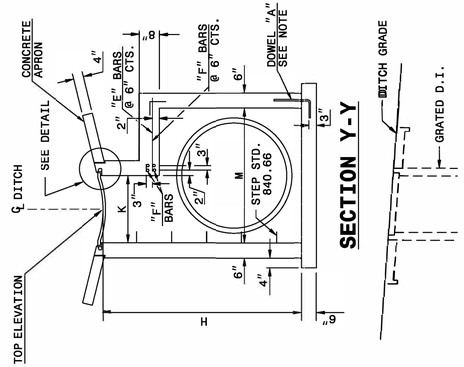
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.



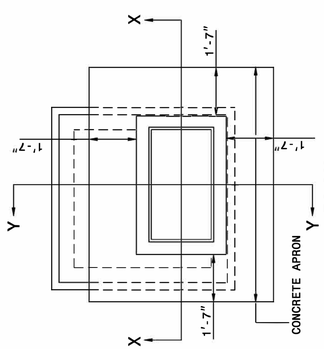
DETAIL
(APRON SUPPORT NOTCH)

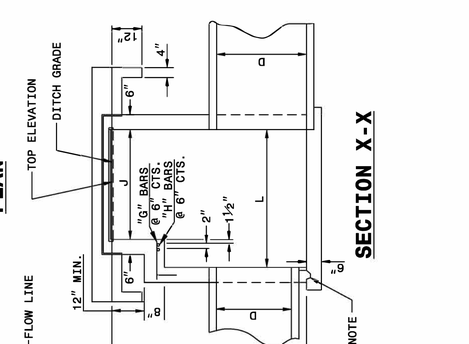


DOWEL-A



SECTION Y-Y





SECTION X-X

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR **CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH** 12" THRU 72" PIPE	SHEET 1 OF 2 — 840d17

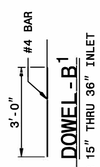
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

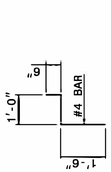
CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH

12" THRU 72" PIPE

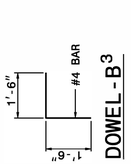
SHEET 2 OF 2 — 840d17



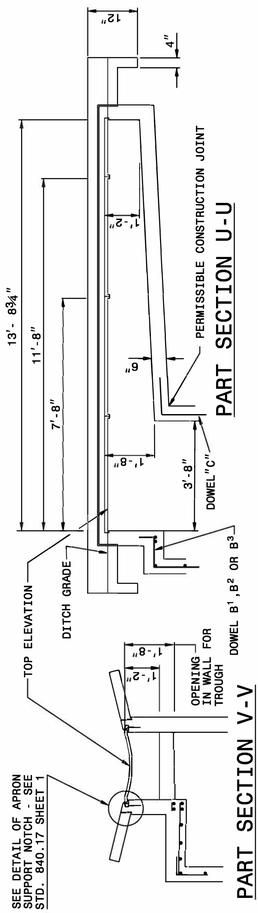
DOWEL-B¹
FOR 15" THRU 36" INLET



DOWEL-B²
FOR 42" INLET

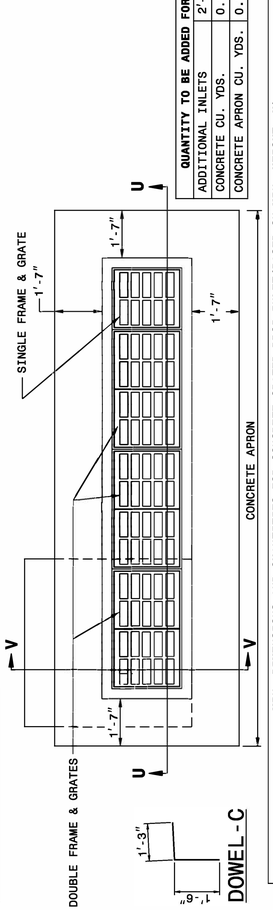


DOWEL-B³



PART SECTION U-U

PART SECTION V-V



DOWEL-C

QUANTITY TO BE ADDED FOR EACH 2' INCREMENT INLET OPENING

	2'-0"	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"
ADDITIONAL INLETS						
CONCRETE CU. YDS.	0.191	0.417	0.665	0.897	1.145	1.380
CONCRETE APRON CU. YDS.	0.074	0.148	0.222	0.296	0.370	0.444

MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE GRATED DROP INLET(BASED ON MIN. HEIGHT, H)

DIMENSIONS OF BOX AND PIPE						REINFORCING STEEL - NO. 4 BARS								CU YDS CONC. IN BOX			DEDUCTIONS FOR ONE PIPE	
PIPE	SPAN	WIDTH	WIDTH	HEIGHT		BARS E		BARS F		BARS G		BARS H		TOTAL BOTTOM SLAB	H TOTAL	H PER FT HT	APRON	TOTAL	C.S.	R.C.
D	J	K	M	H		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	TOTAL LBS.						
12"	3'-8"	2'-0"	3'-8"	2'-3"		—	—	—	—	—	—	—	—	—	0.362	0.926	0.247	0.395	1.683	0.015	0.024
15"	3'-8"	2'-0"	3'-8"	2'-5"		—	—	—	—	—	—	—	—	—	0.362	0.988	0.247	0.395	1.745	0.023	0.036
18"			2'-0"	2'-8"		—	—	—	—	—	—	—	—	—	0.362	1.050	0.247		1.807	0.033	0.049
24"			2'-10"	3'-8"		8	1'-5"	6	4'-9"	—	—	—	—	—	0.444	1.362	0.278		2.201	0.059	0.085
30"			3'-8"	3'-5"	3'-10"	8	2'-0"	7	4'-9"	—	—	—	—	33	0.502	1.644	0.288		2.541	0.092	0.127
36"			4'-0"	4'-0"	4'-4"	8	2'-5"	8	4'-11"	4	0'-9"	2	4'-11"	47	0.560	1.931	0.321		2.920	0.132	0.178
42"			4'-10"	4'-10"	5'-0"	10	3'-1"	9	5'-7"	4	1'-5"	3	5'-7"	67	0.704	2.500	0.370		3.677	0.180	0.243
48"			5'-4"	5'-4"	5'-6"	11	3'-7"	10	6'-1"	4	1'-11"	4	6'-1"	87	0.823	3.013	0.407		4.315	0.235	0.317
54"			6'-0"	6'-0"	6'-0"	12	4'-1"	11	6'-7"		2'-5"	5	6'-7"	107	0.951	3.589	0.444		5.072	0.297	0.401
60"			6'-6"	6'-6"	6'-7"	13	4'-9"	12	7'-3"		3'-1"	6	7'-3"	135	1.311	4.539	0.494		6.170	0.367	0.495
66"			7'-2"	7'-2"	7'-1"	14	5'-4"	14	7'-10"		3'-7"	7	7'-10"	168	1.136	5.061	0.537		6.901	0.444	0.599
72"	3'-8"	2'-0"	7'-8"	7'-8"	7'-8"	15	5'-11"	15	8'-5"	4	4'-3"	8	8'-5"	199	1.500	5.860	0.580	0.395	7.868	0.528	0.713

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR **CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH** 12" THRU 72" PIPE	SHEET 2 OF 2 — 840d17

LOCATION: C:\Contracts\Contracts\Special Details\jhowerton\840d17 Minimum Depth Type A.dgn
jhowerton
11:55
SEP-2017

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