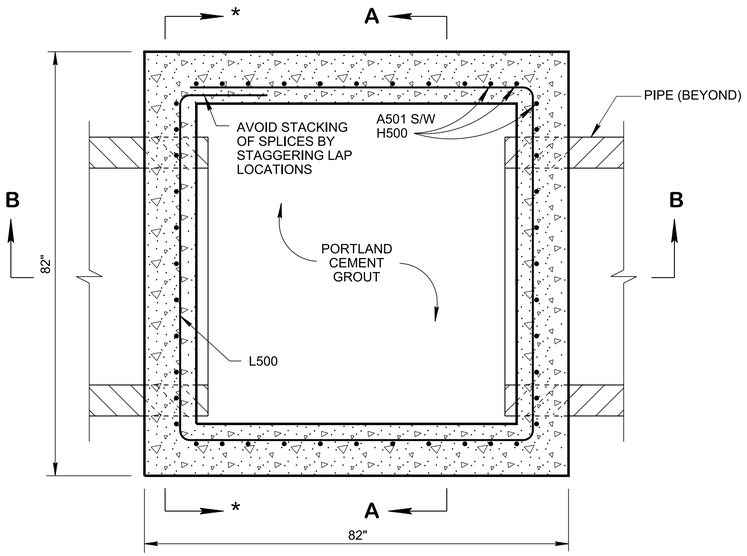
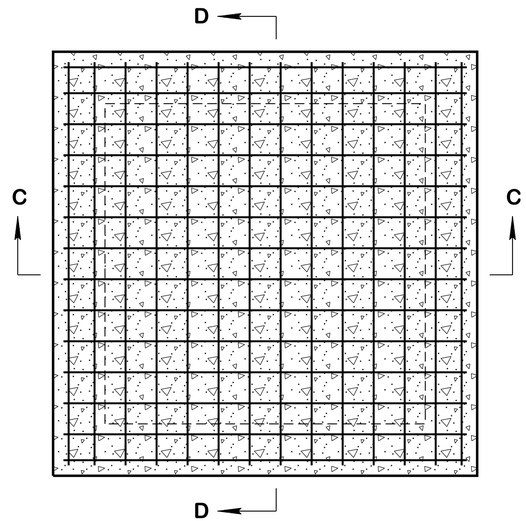
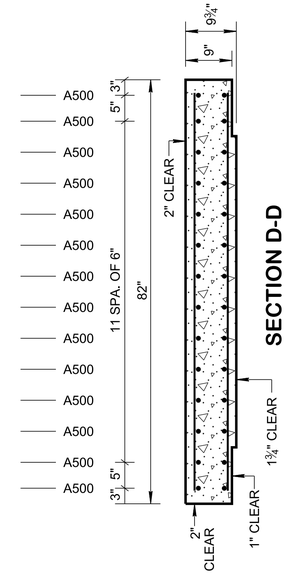


SECTION E-E



LID REINFORCING



SECTION D-D

JUNCTION BOX DIMENSIONS				FOR DESIGN USE ONLY JUNCTION BOX MINIMUM DESIGN DEPTH (FEET)
INSIDE DIAMETER (D) OF PIPE (INCHES)	PIPE WALL THICKNESS (INCHES)	DIAMETER OF CUT-OUT HOLES (INCHES)	BOX SECTION MINIMUM HEIGHTS (INCHES)	
18	2½	25	56	3.63
24	3	32	63	4.17
30	3½	39	70	4.71
36	4	46	77	5.25
42	4½	53	84	5.79
48	5	60	91	6.33

(1) CUT-OUT HOLES BASED ON REINFORCED CONCRETE PIPE WITH WALL TYPE "B".

(2) ALL FLEXIBLE PIPE MATERIALS REQUIRE GASKET. SEE STANDARD DRAWING D-PB-2.

(3) CUT-OUT HOLES FOR PRECAST STRUCTURES TO BE FORMED IN ORDER TO OBTAIN A SMOOTH EDGED HOLE. SCORED OR ETCHED HOLES WITH REINFORCING STEEL LEFT UNCUT WILL NOT BE PERMITTED.

REV. 7-29-02: CHANGED ASTM SPECIFICATION IN GENERAL NOTE (C).

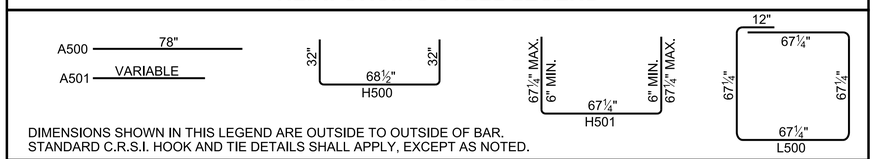
REV. 9-11-02: CHANGED REINFORCING STEEL IN BASE SECTION.

REV. 6-10-01: CHANGED PAY ITEM IN GENERAL NOTE (J) TO 611-02.12.

☐ REV. 8-01-12: REVISED JUNCTION BOX FOR COMPLIANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION WITH INTERIMS. REVISED REINFORCING, GENERAL NOTES, LEGEND AND ADDITIONAL MISC. DRAFTING EDITS.

REV. 02-20-2020: ADDED GENERAL NOTE NO. (N). REDREW SHEET.

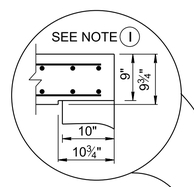
REINFORCING STEEL LEGEND

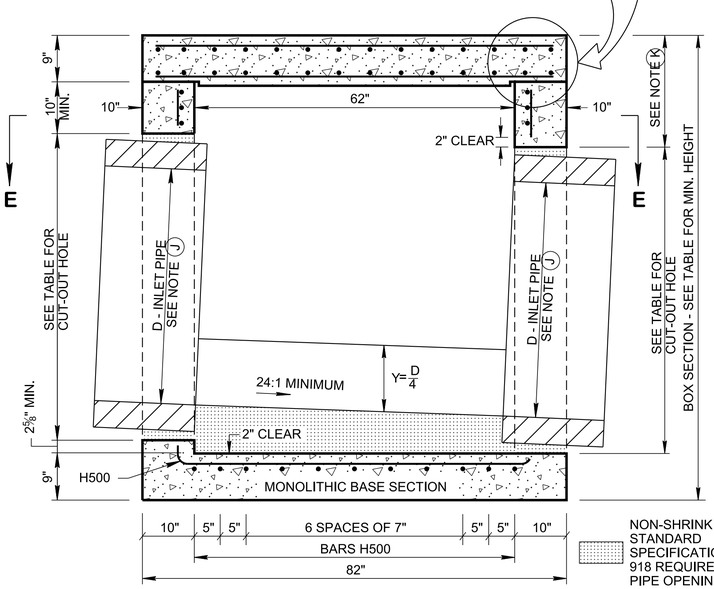


DIMENSIONS SHOWN IN THIS LEGEND ARE OUTSIDE TO OUTSIDE OF BAR.
STANDARD C.R.S.I. HOOK AND TIE DETAILS SHALL APPLY, EXCEPT AS NOTED.

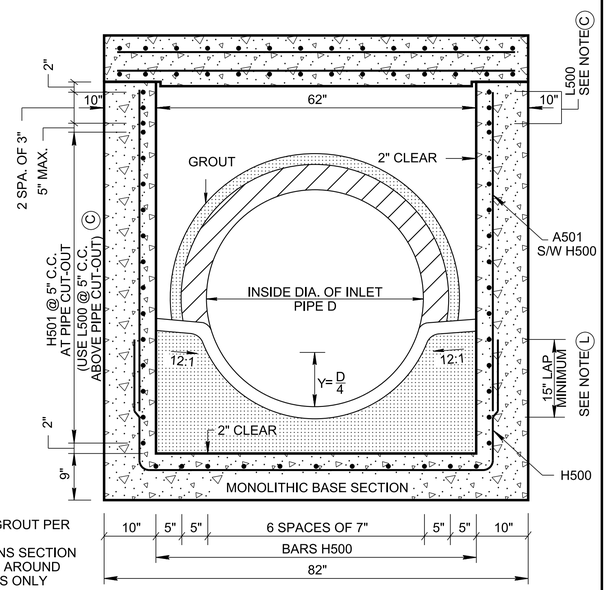
SECTION *-*

ELEV. VIEW IS PROVIDED ON STANDARD DRAWING D-CB-99 SHOWING REINFORCEMENT REQUIREMENTS AROUND PIPE OPENINGS





SECTION A-A



SECTION B-B

NON-SHRINK GROUT PER STANDARD SPECIFICATIONS SECTION 918 REQUIRED AROUND PIPE OPENINGS ONLY

GENERAL NOTES

(A) DRAWING TO BE USED FOR ALL CAST-IN-PLACE NO. 3 CONCRETE JUNCTION BOXES AND ALL PRECAST NO. 3 CONCRETE JUNCTION BOXES. SEE STANDARD DRAWING D-CB-99 FOR ADDITIONAL CONSTRUCTION NOTES & DETAILS.

(B) EMBANKMENT OVER THIS STRUCTURE MAY BE PLACED AT A DEPTH UP TO 50 FEET. IF STRUCTURE IS LOCATED WITHIN THE CLEAR ZONE, A MINIMUM COVER OF 2 FEET IS REQUIRED.

(C) THIS DRAWING DEPICTS THE MINIMUM HORIZONTAL REINFORCING AT THE TOP OF JUNCTION BOX WALLS. SEE ADDITIONAL DETAILS ON STANDARD DRAWING D-CB-99 FOR TALLER SECTIONS AND STEEL PLACEMENT ABOVE PIPE OPENINGS.

(D) CAST-IN-PLACE CONCRETE JUNCTION BOXES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 611 AND/OR SPECIAL PROVISIONS UNLESS SUPERSEDED BY THIS DRAWING. THE CONTRACTOR MAY, WITH PERMISSION FROM THE ENGINEER, SUBSTITUTE PRECAST JUNCTION BOXES FOR CAST-IN-PLACE JUNCTION BOXES PROVIDED THAT ALL PRECAST ELEMENTS MEET ASTM C913 (CURRENT EDITION) UNLESS SUPERSEDED BY THIS DRAWING.

(E) THE FOLLOWING MATERIAL PROPERTIES ARE REQUIRED FOR BOTH CAST-IN-PLACE AND PRECAST STRUCTURES:

CONCRETE: f'_C = 4,000 POUNDS PER SQUARE INCH AT 28 DAYS
REINFORCING STEEL: ASTM A615, F_y = 60,000 POUNDS PER SQUARE INCH
ALL REINFORCING IS TO BE INSTALLED AS DETAILED ON THIS DRAWING.

(F) PRECAST JUNCTION BOX UNITS WHICH ARE DAMAGED DURING SHIPMENT OR INSTALLATION WILL BE REJECTED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE DAMAGED JUNCTION BOX UNITS AT THEIR OWN EXPENSE.

(G) APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR.

(H) THE CONTRACTOR IS TO PATCH ALL LIFTING DEVICE HOLES WITH GROUT AND PLACE A MINIMUM OF ONE (1) INCH OF COVER OVER THE HARDWARE OF THESE DEVICES ON BOTH TOP AND BOTTOM SURFACES.

(I) ALTERNATIVE JOINT DETAILS MAY BE ACCEPTABLE. SEE STANDARD DRAWING D-CB-99 FOR ADDITIONAL DETAILS.

(J) SEE ROADWAY PLANS DRAINAGE TABULATION FOR PIPE INLET AND OUTLET ELEVATIONS. IF NEEDED, INVERT ELEVATIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER IN ORDER TO ACCOMMODATE INLET AND OUTLET PIPES.

(K) FOR CASES WHERE THE OUTLET PIPE DIAMETER IS LARGER THAN THE INLET PIPE DIAMETER, A MINIMUM 19 INCH DEPTH SHALL BE MAINTAINED ABOVE THE OUTLET PIPE.

(L) THE CONTRACTOR MAY ELIMINATE THE A501 BARS BY LENGTHENING THE VERTICAL LEG OF THE H500 BARS SO THAT 1½ INCHES OF CLEAR COVER IS PROVIDED AT THE TOP OF THE STRUCTURE.

(M) PAYMENT FOR JUNCTION BOX WILL BE MADE UNDER ITEM NUMBER:
611-02.12, JUNCTION BOX, TYPE 3, EACH.

(N) A ROUND JUNCTION BOX IS AN ACCEPTABLE ALTERNATIVE TO THIS SQUARE JUNCTION BOX. REFER TO STANDARD DRAWING D-CB-99RB.

☐ APPROVED BY FHWA
(ALL OTHERS APPROVED BY TDOT)

STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 3 JUCTION BOX

04-01-1998 | D-JBS-3

NOT TO SCALE

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