

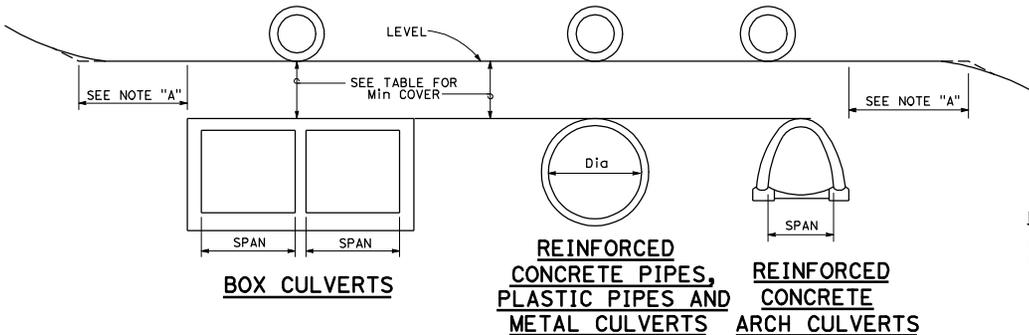
TABLE OF MINIMUM COVER AND STRUTTING REQUIREMENTS FOR CONSTRUCTION LOADS

TYPE	18-50 k AXLE				50-75 k AXLE		75-110 k AXLE		110-150 k AXLE			
	MAXIMUM DESIGN FILL	SPAN	CELLS	Min COVER	STRUTS REQUIRED	STRUT SIZE AND SPACING	STRUTS REQUIRED	STRUT SIZE AND SPACING	STRUTS REQUIRED	STRUT SIZE AND SPACING	STRUTS REQUIRED	STRUT SIZE AND SPACING
BOX CULVERTS	10'-0" AND 20'-0"	4'-0" TO 8'-0"	SINGLE AND MULTIPLE	5'-0"	---	---	---	---	---	---	---	---
	10'-0"	10'-0" TO 14'-0"	SINGLE AND MULTIPLE	5'-0"	---	---	1/3 Points	STRUTS 6" x 6" @ 3'-6" SILLS 6" x 8"	1/3 Points	STRUTS 6" x 8" @ 3'-6" SILLS 6" x 8"	1/3 Points	STRUTS 6" x 8" @ 3'-6" SILLS 6" x 8"
	20'-0"	10'-0" TO 14'-0"	SINGLE AND MULTIPLE	5'-0"	---	---	---	---	---	---	---	---

TABLE OF MINIMUM COVER FOR CONSTRUCTION LOADS

TYPE	Dia OR SPAN	18-50 k AXLE	50-75 k AXLE	75-110 k AXLE	110-150 k AXLE	
REINFORCED CONCRETE CULVERTS	PIPES	Dia 12" TO 39"	2'-0"	3'-0"	3'-0"	
		Dia 42" TO 108"	$\frac{Dia}{1.75}$ OR 3'-0"	$\frac{Dia}{1.75}$ OR 3'-0"	$\frac{Dia}{1.75}$ OR 3'-0"	$\frac{Dia}{1.75}$ OR 3'-0"
	ARCHES	SPANS TO 14'-0"	$\frac{SPAN}{2.5}$ OR 4'-0"	$\frac{SPAN}{2.5}$ OR 4'-0"	$\frac{SPAN}{2.5}$ OR 4'-0"	$\frac{SPAN}{2.5}$ OR 4'-0"
		SPANS 15'-0" TO 22'-0"	$\frac{SPAN}{3.5}$ OR 6'-0"	$\frac{SPAN}{3.5}$ OR 6'-0"	$\frac{SPAN}{3.5}$ OR 6'-0"	$\frac{SPAN}{3.5}$ OR 6'-0"
METAL CULVERTS	PIPES	Dia TO 120"	$\frac{Dia}{1.75}$ OR 4'-0"	$\frac{Dia}{1.75}$ OR 4'-0"	$\frac{Dia}{1.75}$ OR 4'-0"	$\frac{Dia}{1.75}$ OR 4'-0"
		Dia OVER 120"	$\frac{Dia}{3}$ OR 6'-0"	$\frac{Dia}{3}$ OR 6'-0"	$\frac{Dia}{3}$ OR 6'-0"	$\frac{Dia}{3}$ OR 6'-0"
	PIPE ARCHES	All Spans	$\frac{SPAN}{3}$ OR 4'-0"	$\frac{SPAN}{3}$ OR 4'-0"	$\frac{SPAN}{3}$ OR 4'-0"	$\frac{SPAN}{3}$ OR 4'-0"
	STRUCTURAL PLATE PIPE, ARCHES AND VEHICULAR UNDERCROSSINGS	ALL SPANS	$\frac{SPAN}{3}$ OR 5'-0"	$\frac{SPAN}{3}$ OR 5'-0"	$\frac{SPAN}{3}$ OR 5'-0"	$\frac{SPAN}{3}$ OR 5'-0"
	PLASTIC PIPE	Dia 12" TO 60"	$\frac{Dia}{1.75}$ OR 4'-0"	$\frac{Dia}{1.75}$ OR 4'-0"	$\frac{Dia}{1.75}$ OR 4'-0"	$\frac{Dia}{1.75}$ OR 4'-0"

NOTE: Minimum cover shall be the greater value of alternatives shown. The diameter and spans shown in the table to calculate the minimum cover (Example: $\frac{Dia}{1.75}$) is the diameter or span of the facility expressed in number of feet.

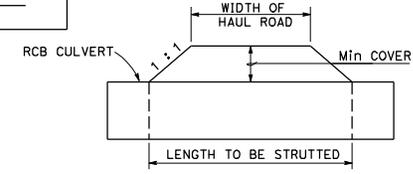


NOTE "A"
Minimum distance equals 3 times the span or 3 times the diameter.

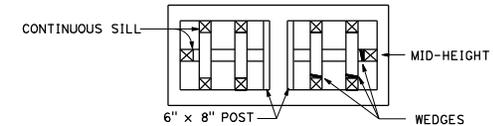
D16+	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

Daniel Forester
 REGISTERED CIVIL ENGINEER
 No. C37265
 Exp. 12-31-12
 CIVIL
 STATE OF CALIFORNIA

May 20, 2011
 PLANS APPROVAL DATE
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MINIMUM LENGTH OF STRUTTING



RCB STRUTTING DETAILS

NOTES:

Length of strutting to be determined by the Engineer, but shall not be less than as shown in the sketch above.

- Assumed tire patterns:
- 50 k axle 2'-0" x 1'-6"
 - 75 k axle 3'-0" x 2'-0"
 - 110 k axle 3'-0" x 2'-5"
 - 150 k axle 3'-0" x 3'-0"

Impact = 10%

Sills to be glue-laminated or solid timber.

For strutting requirements of Structural Steel Plate Vehicular Undercrossing, Structural Steel Plate Arches and Structural Steel Plate Pipes during construction, see Standard Plans D88A.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONSTRUCTION LOADS
ON CULVERTS**

NO SCALE

D88