



Box Culvert

Installation Guide



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FIGURE I. STANDARD EMBANKMENT INSTALLATIONS

Overfill, Groups I, II and III

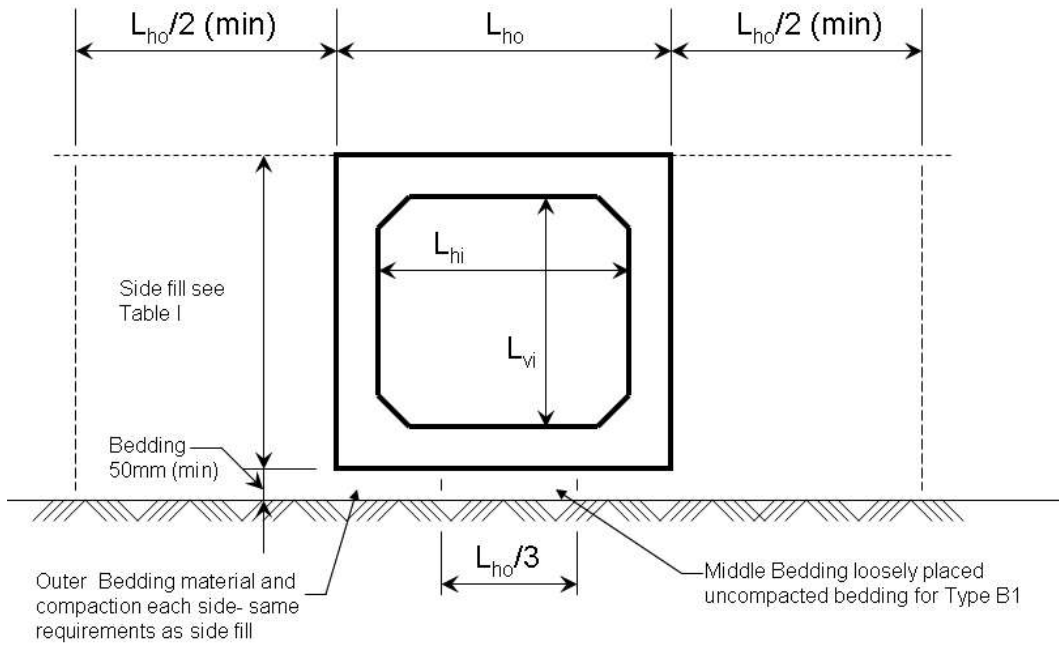


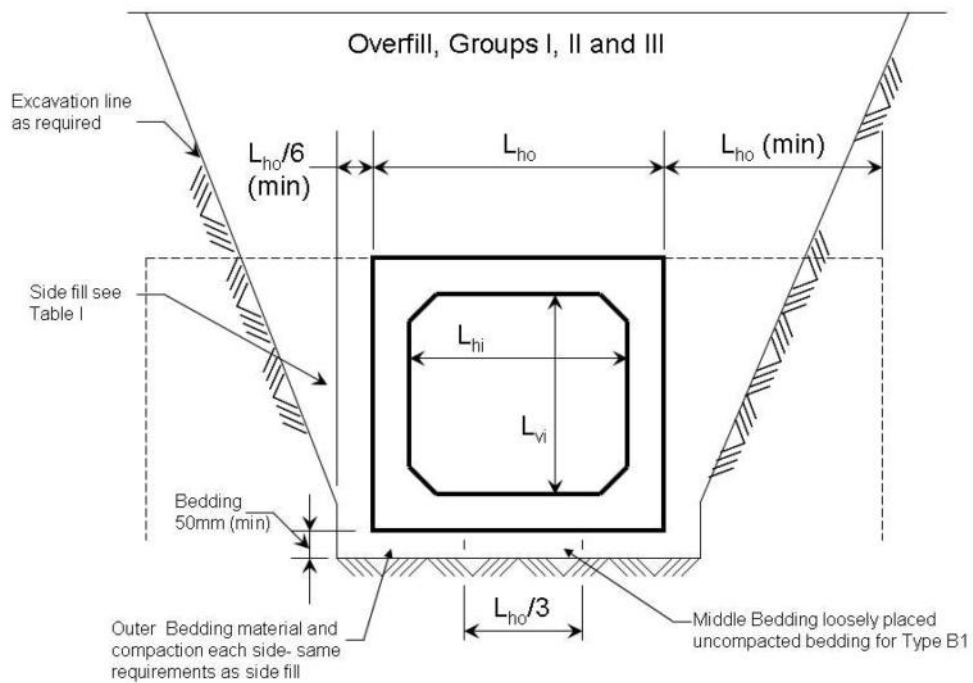
TABLE I
SOILS AND COMPACTION REQUIREMENTS

Installation Type	Soil Group	Equivalent Minimum Standard Proctor Compaction in Sidefill and Outer Bedding
B1	I	90%
	II	95%
	III	Not Permitted
B2	I	80%
	II	85%
	III	95%

TABLE 2
CLASSIFICATION OF PLACED SOILS

Soil Group	Description	USCS Symbol
I	Sand and Gravel	SW, SP, GW, GP
II	Sandy Silt	GM, SM, ML, also GC and SC with less than 20% passing #200 Sieve
III	Silty Clay	GC and SC with more than 20% passing #200 Sieve, CL, MH

FIGURE 2
STANDARD TRENCH INSTALLATIONS



INSTALLATION

Ensure Tongue, Groove and gasket are free from loose debris or foreign material.

Apply Tylox adhesive, un-diluted, to tongue circumference, to a depth equal to the inside width of the gasket.

Allow adhesive to become tacky, then snap gasket into position with:

- The fins up
- The scored base against the tongue wall
- The positioning flange firmly against the end of the spigot,

around the full joint circumference. Allow 8hrs for the adhesive to achieve it's full bond strength prior to assembling joint.

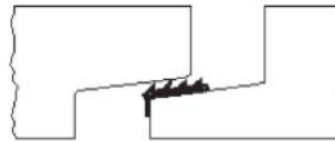
Ensure that no dirt or debris is clinging to the joint surface, or is trapped beneath the gasket's sealing fins.

Lubricate the gasket, and all sliding surfaces, with a suitable grade of Tylox pipe lubricant.

Align the tongue with the groove, ensuring that the gasket is in contact with the spigot around the complete circumference of the pipe.

Thrust groove home using suitable

T&G Straight Pipe



Type "C" Gasket Properly Positioned



Type "C" Gasket Joint Completed

T&G Offset Pipe



Type "C" Gasket Joint Completed



Guidelines For Handling Concrete Box Sections



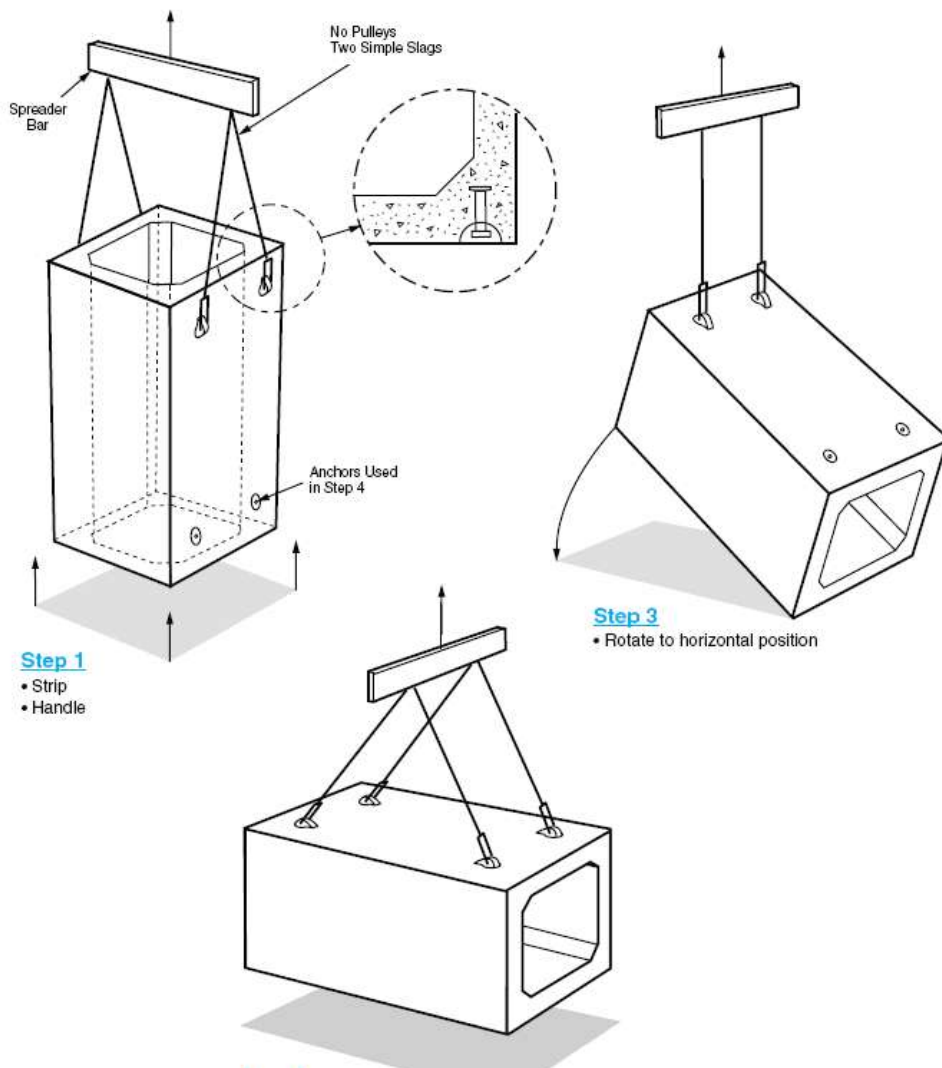
How to Handle and Set Concrete Box Sections

Step 1: Remove form to allow the attachment of lifting eyes to two anchors on each side near the top edge (four total).

Step 2: Move to desired position.

Step 3: Using two of the top edge anchors, rotate the box section to a horizontal position.

Step 4: Attach lifting eyes to the four anchors and lift and handle as required.



Guidelines For Handling and Setting Concrete Box Sections

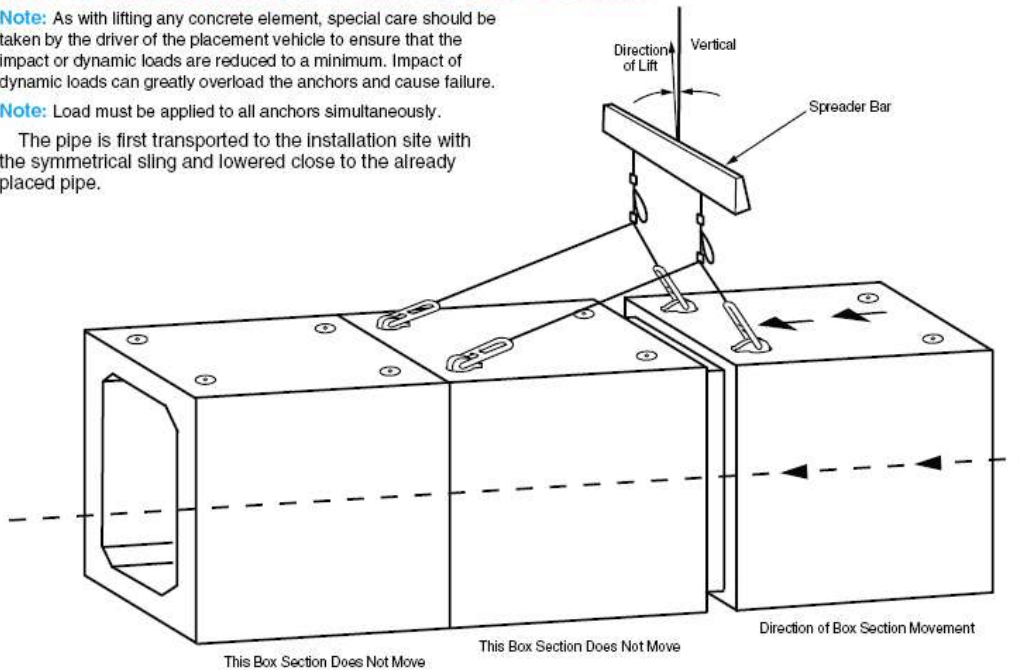


How to Handle and Set Concrete Box Sections

Note: As with lifting any concrete element, special care should be taken by the driver of the placement vehicle to ensure that the impact or dynamic loads are reduced to a minimum. Impact of dynamic loads can greatly overload the anchors and cause failure.

Note: Load must be applied to all anchors simultaneously.

The pipe is first transported to the installation site with the symmetrical sling and lowered close to the already placed pipe.



Correct Method for Pulling Box Sections Together

To pull the box section into position, the long leg of the lift sling is coupled to the previously placed box section. The free short leg is hung into the hook provided for this purpose.

It must be ensured that the top guide pulley of the crane is over the outer lifting anchor of the previously placed box section so that the direction of pull is slightly inclined towards the placed box section.

Warning: The anchors can be overloaded and fail if the crane continues to pull on the sling after the connection is complete.

