**PROCEDURE:**

1. Determine uplift from the applicable "Overhead Sign Bridge Details" standard drawing.
2. Determine required drilled shaft diameter from standard drawing OSBT.
3. Make an initial estimate of the required embedment length (ft).
4. From Texas Cone Penetrometer Test data determine average $N$ value over the length of embedment.
5. Enter chart (for the correct shaft diameter) from the bottom of the average $N$ value.
6. Proceed vertically into chart and locate intersection with column up lift, enter points between curves as necessary.
7. From intersection point turn 90° to left and read embedment length along vertical scale.
8. If embedment length differs significantly from estimated value return to step 4 with embedment length determined in step 7.
9. Complete the required length of drilled shaft by adding 3'-0" to the required embedment length.

**GENERAL NOTES:**

These charts are to be used for Simple Span Overhead Sign Bridges with two shafts per tower. Numbers shown on curved lines are uplift in kips. Dead load of concrete in drilled shafts is included in curves. Embedment of drilled shafts is two diameters. All curves shall not be extrapolated below the $N$ value of 5 blows per foot.

Texas Department of Transportation
Traffic Operations Division

FOUNDATION EMBEDMENT SELECTION CHARTS

OSB-FD