

 MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION Office of Structures <i>Guidelines and Procedures</i> <i>Memorandum</i>	PLANS
	Number: OOS-GPM-P-203 <i>(Former P-86-28(G))</i>
	Date: 08-05-2026
Geometric and Footing Layout Sheet	Approval: 

OVERVIEW

On all structure projects, a Geometric and Footing Layout Sheet shall be included in the plans. Each structure (dual bridges can be counted as one structure) shall have its own Geometric and Footing Layout Sheet. This will apply to all structures, new or existing, for which a new footing is being poured. The Geometric and Footing Layout Sheet shall immediately follow the General Plan and Elevation Sheet (except on bridges over water where it shall follow the Hydrologic and Hydraulic Data Sheet).

The purpose of this sheet is to provide a clear presentation of the structure's basic geometrics and footing layout. In many cases structures are being designed and constructed in complicated geometric situations where the layout may not be easily deduced or laid out for construction purposes.

PLAN INFORMATION

In order to provide a clear understanding of the geometric and footing layout to the contractor and field personnel, this sheet shall be prepared as indicated below. Every structure on a curve shall have a straight line (preferably a tangent to curve) established as a working line. If dual bridges are significantly different then one working line shall be provided for each bridge. All dimensions, angles etc., shall be off of this working line. All dimensions shall be in feet and decimals of a foot, to the nearest one hundredth of a foot.

The following information, where applicable, shall appear on the Geometric Layout Sheet:

1. Baseline or centerline of construction (for both the roadway on the bridge and for the roadway underneath).
2. Baseline or centerline of survey (where different than Item 1 above)
3. All horizontal alignment data (including P.C., P.T. TS, SC, etc.) for roadways on curves.
4. A working line for laying out the structure, including all pertinent stations, working points, skew angles, offsets, etc. The working line shall be listed in a table with coordinate data and shall coordinate with the centerline of bearing.
5. All centerlines of bearings and/or centerlines for all supports, including working points and skew angles.
6. Dimensions from the working line along centerline of bearing to the extremities of all footings. Dimensions from the working line to steps in footings and construction joints.

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7. Complete dimensional layout of all pier, abutment and wing wall footings to create a closed traverse around the entire unit. (No piles or rebar shall appear on this sheet.)
8. A chart showing the working points with coordinates and corresponding stations and offsets.
9. All other pertinent dimensions and angles referenced to the working line.
10. North arrow and destination arrows.
11. Benchmarks.
12. Any other pertinent data which the designer feels may be necessary to clarify the layout.

The layout shall be shown in a scale drawing on the sheet using a scale large enough to make maximum use of the sheet. A small, exaggerated view may be included to show the relationship between the baseline and the working line or to clarify a complex situation. Use of mixed scales shall not be permitted. The designer shall make liberal use of notes and comments necessary to clarify the layout.

All working points established on the layout sheet shall appear on all succeeding sheets, and from which all layouts shall be referenced.

Geometric and Footing Layout Sheet

EXAMPLE

