Index 21100 Strip Seal Expansion Joint

Design Criteria

AASHTO LRFD Bridge Design Specifications, 6th Edition; ***Structures Design Guidelines (SDG)***

Design Assumptions and Limitations

Use Index 21100 in accordance with the requirements of ***SDG*** 6.4.

Plan Content Requirements

Show Strip Seal Expansion Joints on Superstructure and Approach Slab detail sheets and other sheets as required. Show Sidewalk Cover Plates at all expansion joint locations along sidewalks. Include cross references to ***Design Standards*** Index 21100.

Complete the following "Strip Seal Expansion Joint Data Table Index No. 21100" using the instructions provided and include the table in the plans. See Introduction I.3 for more information regarding use of Data Tables.

Instructions:

1. Total Design Movement shall be the factored movement.
2. Dimension A (measured perpendicular to the joint) @ 70°F is normally set at 2 inches to accommodate installation of the neoprene seal and a total design movement up to 3 inches. The designer should adjust Dimension "A" when necessary to account for skews or greater design movement with the following considerations:
   a. the minimum joint opening in the Direction of Movement is ½ inch for the factored movement;
   b. the maximum joint opening in the Direction of Travel ("W" per ***SDG*** 6.4) is 4 inches for the factored movement;
3. Dimension A adjustments for 10°F shall be based on the unfactored movements.
4. See Figures 1 through 4 for determining the Direction of Movement.

STRIP SEAL EXPANSION JOINT DATA TABLE
INDEX NO. 21100

Table Date 01/01/12

LOCATION	TOTAL DESIGN MOVEMENT			MOVEMENT ANGLE α	SKEW ANGLE		DIM. A @ 70°F	DIM. A ADJUSTMENT PER 10°F
	IN DIRECTION OF MOVEMENT	PERPENDICULAR TO ℄ JOINT	PARALLEL TO ℄ JOINT		LEFT SIDE	RIGHT SIDE		

NOTE:
Dim. A adjustment per 10°F shown is measured perpendicular to ℄ Expansion Joint. For theoretical direction of movement, see Index No. 21100, Sheet 1.

Figure 1 Curved Bridge (Single Continuous Unit) with Skewed Joints

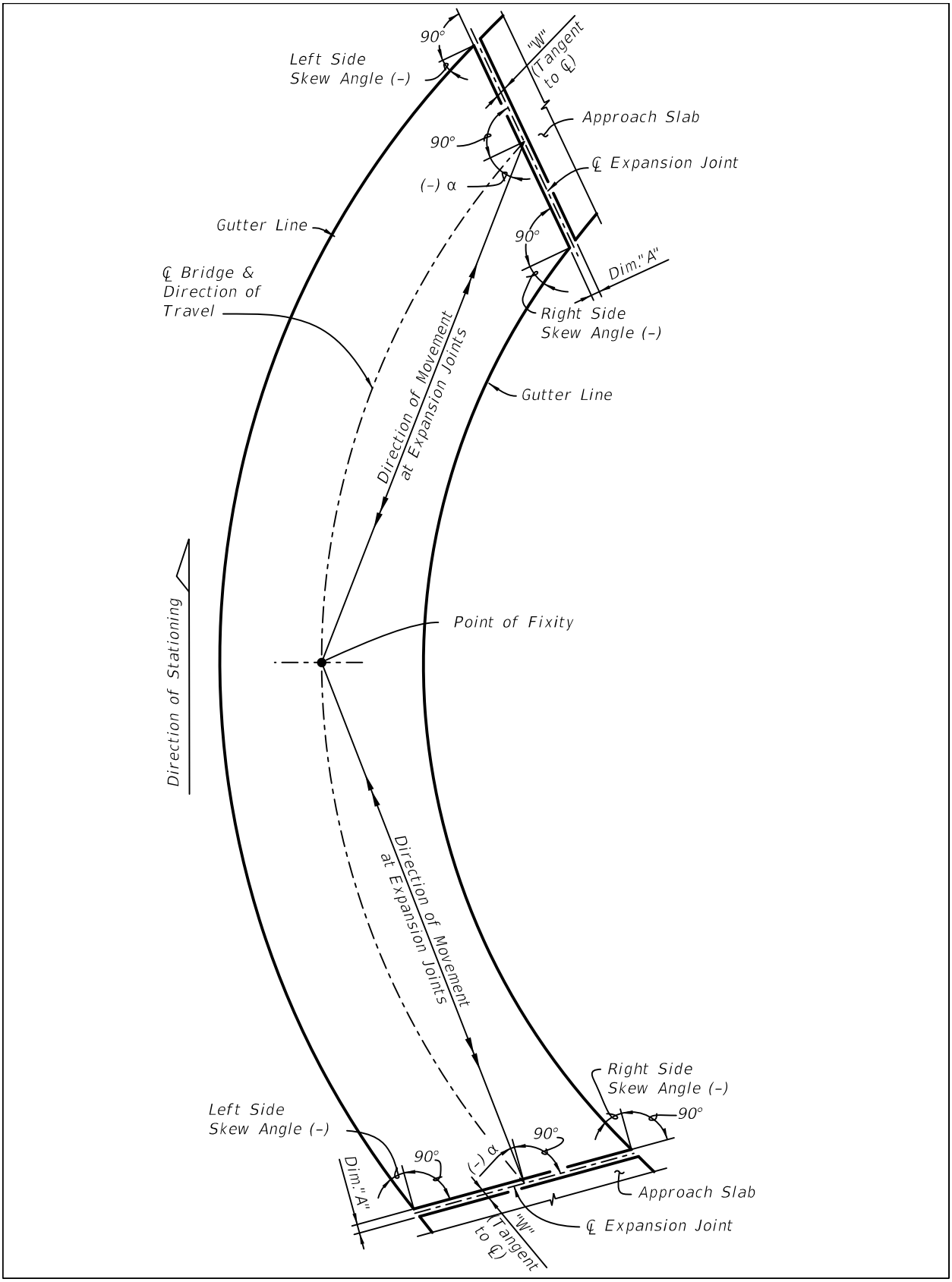


Figure 2 Curved Bridge (Single Continuous Unit) with Radial Joints

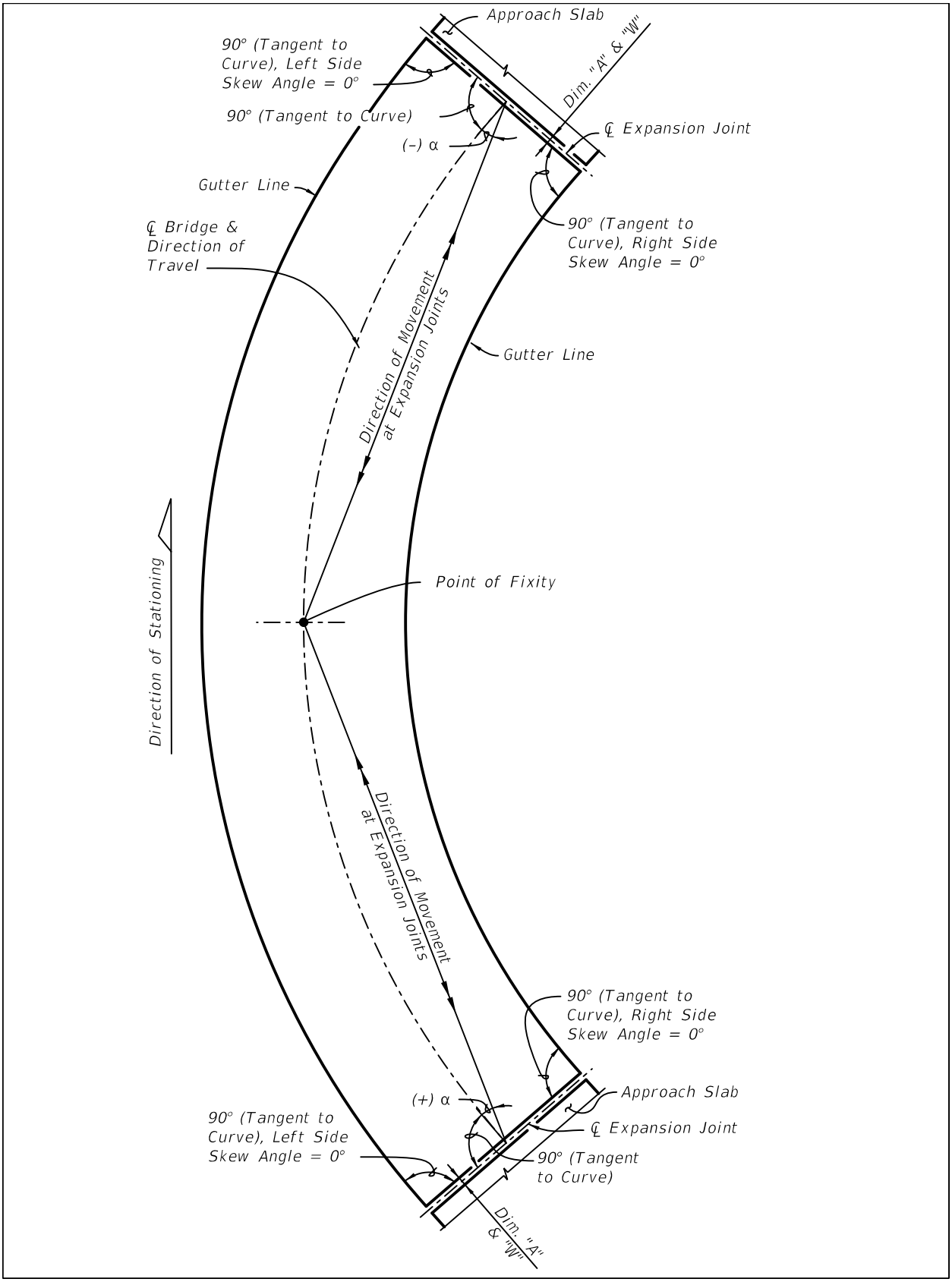


Figure 3 Curved Bridge (Multiple Continuous Units) with Radial Joints

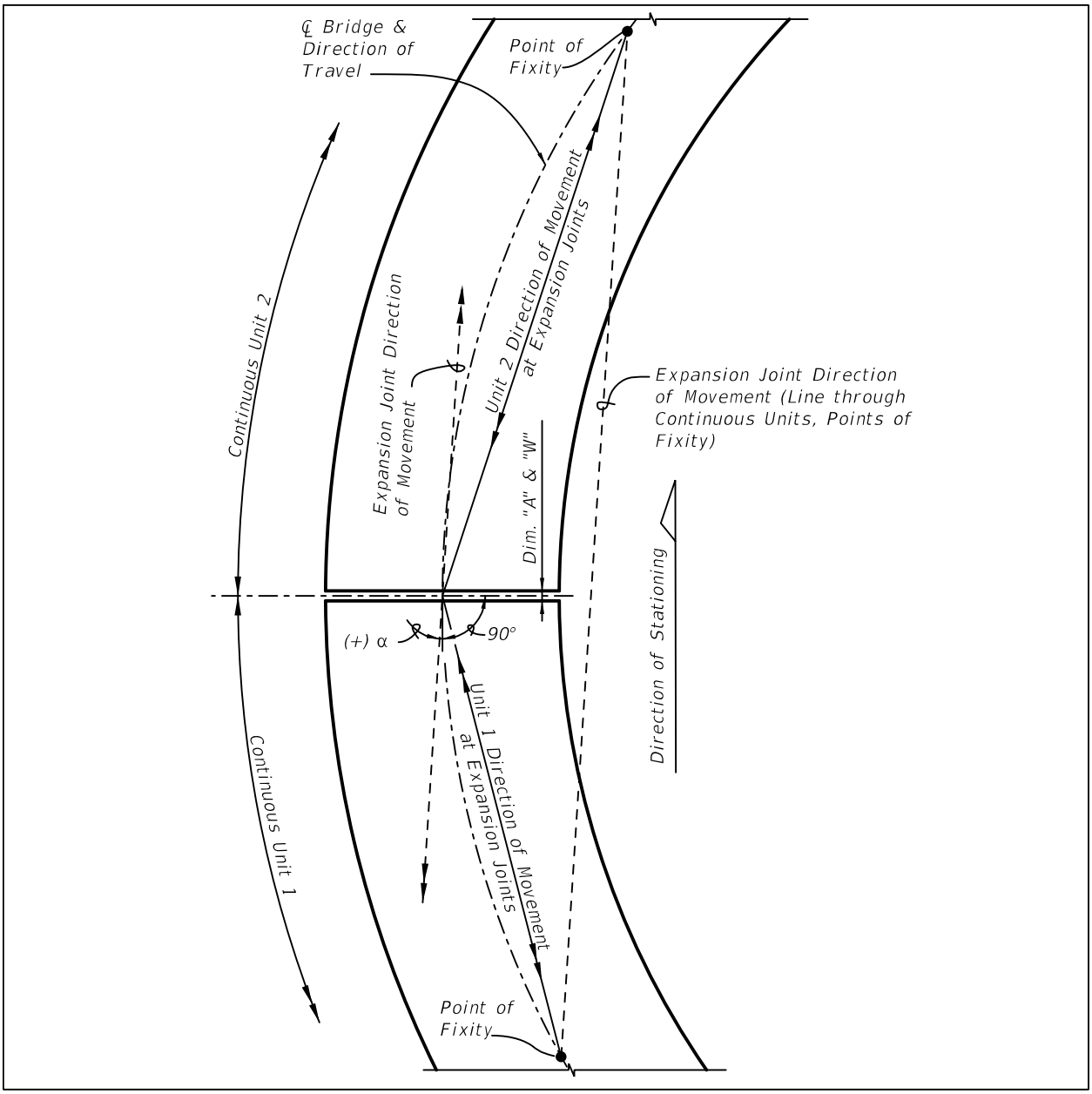
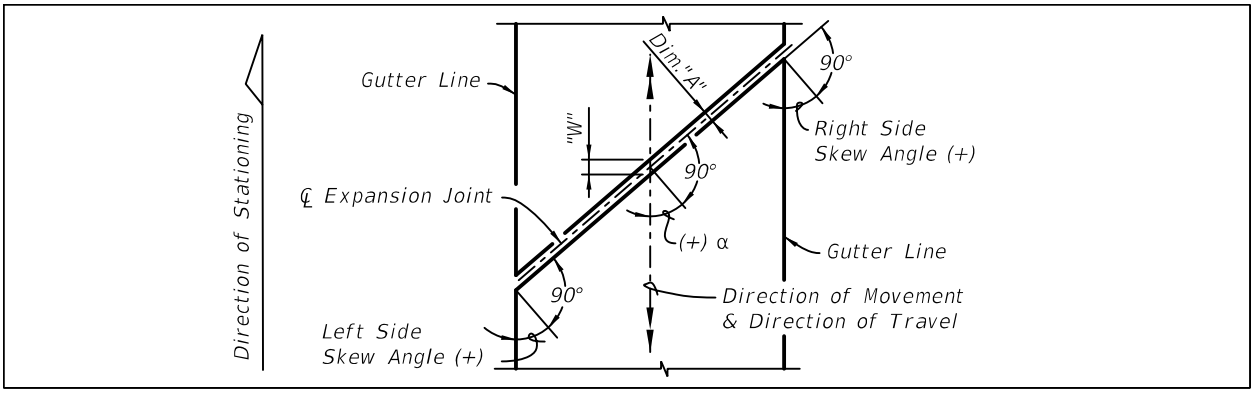


Figure 4 Straight Bridge with Skewed Joints



Payment.

Item number	Item description	Unit Measure
458-1-12	Bridge Deck Expansion Joint; New Construction - F&I; Strip Seal Joint System	LF