**Semi-integral Abutment Construction Procedure**

1. Place footing, abutment stem, and pedestals.
2. Sawcut abutment stem to 50 mm below the bridge seat elevation. No backfill of the abutment stem is allowed until the abutments have cured for 1 day.
3. Erect girders and install all diaphragms.
4. Place concrete for suspended backwall.
5. Sawcut abutment backwall to 60 mm below the bridge seat elevation. No backfill of the abutment stem is allowed until the abutments have cured for 7 days. Backfilling shall be conducted such that the maximum differential in fill height between the top and bottom of the recess is not more than 60 mm. In addition, the fill height behind any single semi-integral abutments does not exceed 600 mm. In addition, the fill height behind any single semi-integral abutments does not exceed 600 mm.
6. Backfill abutment backwall. No backfilling of the abutment is allowed until backwalls have cured for 7 days. Backfilling shall be conducted such that the maximum differential in fill height between the top and bottom of the recess is not more than 60 mm.
7. Backfill approach slab.

**Design Notes:**

- The layout between the abutment stem and backwall shall be set on a bearing of 50 mm plus the expected movement for steel structures for a temperature fall from 25°C to -35°C (upstate) or -18°C (regions 10 and 11) rounded to the nearest 5 mm or twice the expected expansion plus the expected contraction.
- Every bay shall have an intermediate damper installed at the centerline of bearings for each abutment, for typical installation details, see the 32-50 series.
- Topping reinforcement in slab needs to be checked for structural capacity demands from backwall and approach slab.
- Steel stirrup details and reinforcement details for semi-integral abutments are generally the same as for conventional abutments.
- Use the manufacturer's recommended joint material, silicon sealant, from the manufacturer.
- Silicone joint reinforcement for steel deck and concrete shown. For conventional deck reinforcement, see BD-SS6 & 7.
- epoxy-coated bars are shown. Other corrosion protection systems are available. Refer to Section 15.12 of the bridge manual.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.
- Joint recess detail is form to a depth of 150 mm (min.) EMB.