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2.3 Design for durability

2.3.2 Durability requirements

2.3.2.5 Bridge joints

2.3.2.5.1 Expansion and/or fixed joints in decks

Add the following sentence to the end of the first paragraph:

Joints shall be designed such that they can be easily accessed for flushing, maintenance, inspection, seal replacement and repair.

Commentary: *Joint seals shall be assessed for serviceability throughout the full temperature range at the site.*

The Ministry's Recognized Products List shall be used as a reference by the Engineer and Constructor to identify potential products for bridge work which are accepted by the Ministry. The link is as follows:

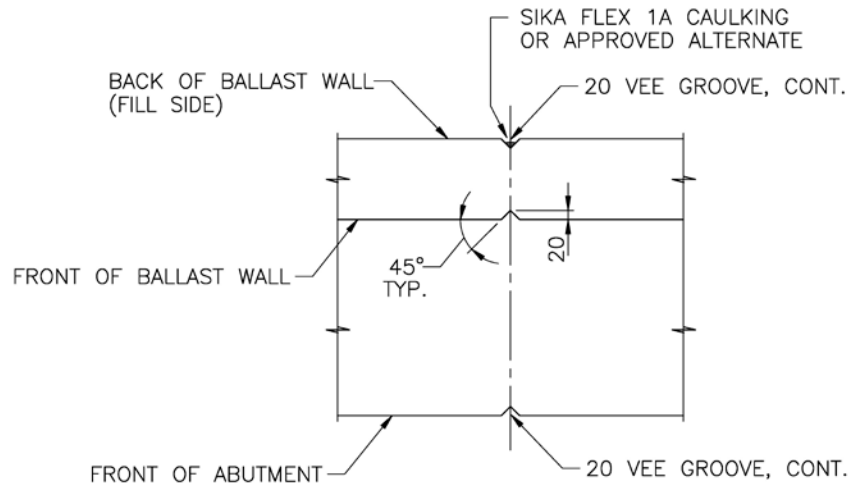
http://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/engineering-standards-and-guidelines/recognized-products-list/recognized_products_list.pdf

2.3.2.5.2 Joints in abutments, retaining walls, and buried structures

Add the following and Figure 2.3.2.5.2 after the first paragraph:

Typical details for concrete control joints are shown in Figure 2.3.2.5.2.

**Figure 2.3.2.5.2
Typical control joint**



NOTES:

1. ABUTMENT/BALLAST WALL SHOWN OTHER WALLS SIMILAR.
2. MAXIMUM SPACING OF CONTROL JOINTS = 3.0m
3. JOINTS TO BE LOCATED AT HORIZONTAL DRAINS THRU WALL AND AT ABRUPT ABUTMENT OR WALL SECTION CHANGES. INTERMEDIATE JOINTS TO BE LOCATED TO MEET MAX. SPACING OF 3.0m
4. CONTROL JOINTS (AND HORIZONTAL DRAINS) ARE TO BE LOCATED TO AVOID BEARING SEATS.
5. LOCATIONS OF CONTROL JOINTS ARE TO BE SHOWN ON ABUTMENT OR WALL ELEVATION.

2.3.2.6 Drainage

Amend the second sentence in the second paragraph as follows:

Downspouts shall extend a minimum of 500 mm below adjacent members, except where prohibited by vertical clearance requirements.

2.3.2.7 Utilities

The Ministry's "Utility Policy Manual" shall be followed for procedures and guidelines regarding the installation of utilities on or near bridges.

Commentary: *The Ministry's Utility Policy Manual can be found at the following link:*

<http://www.th.gov.bc.ca/permits/Utility%20Permit%20Manual.pdf>

2.4 Aluminum

2.4.2 Detailing for durability

2.4.2.2 Inert separators

Aluminum railing post surfaces in contact with concrete shall be coated with an alkali resistant bituminous paint, and anchor bolt projections and washers shall be coated with an aluminum impregnated caulking.

2.7 Waterproofing membranes

Add the following paragraphs after the first paragraph:

Unless otherwise consented to by the Ministry, all new bridge decks in the South Coast Region shall have waterproofing membrane and asphalt overlay.

On bridge decks with a waterproofing membrane, the asphalt overlay thickness shall be 100 mm.

The Ministry's Recognized Products List shall be used as a reference to identify potential products for bridge deck waterproofing systems which are accepted by the Ministry. The link is as follows:

http://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/engineering-standards-and-guidelines/recognized-products-list/recognized_products_list.pdf

2.8 Backfill material

Add the following paragraphs and Table:

Backfill for structures shall be Bridge End Fill meeting the material, placement and compaction requirements of SS 201.40. In addition to SS 202.04.02, where Bridge End Fill is used for MSE Wall structural fill, primary quality testing shall also include all additional testing as required to confirm that the material meets the electrochemical criteria for the wall system.

An aggregate drainage course shall be provided along the backside of all foundation and retaining walls located in cut areas with positive drainage.

The gradation of drainage course aggregate shall be as follows:

| Sieve Size (mm) | Passing Per Nominal Maximum Size |
|-----------------|----------------------------------|
| 40 | 100 |
| 20 | 0 - 100 |
| 10 | 0 |

2.9 Soil and rock anchors

Add the following paragraph:

Unless otherwise consented to by the Ministry, soil and rock anchors permanently incorporated into the structure shall be a PTI - Class 1, Double Corrosion Protection (DCP) system.

2.10 Other materials

Add the following paragraph:

An acceptable premolded joint filler for structures consists of a minimum 25 thick Evazote 50, or alternate as consented to by the Ministry. Application shall be in accordance with the manufacturer's instructions.