Banff Pedestrian Bridge

Client:
Town of Banff

Project Team:
Prime Design/Build Contractor: StructureCraft Builders
Structural Engineers: Fast + Epp
Civil Designer/Contractor: Tritech
Geotechnical Engineer: Thurber
Landscape Architects: Phillips Farevaag Smallenberg (PFS)
Design Criteria

5. Durability – 75 year design life
Early Concept

Muskaret St. Bridge - Roof
Looking East - Lower Profile
Structural System
3D Model
1520x6.4 HSS BRACE ELEMENTS

PRE-CAST CONCRETE PILE CAP

NOTE
PRECAST PILE CAPS WITH TIE AND BRACE ELEMENTS TO BE PRE-ASSEMBLED PRIOR TO ERECTION.

GALV. STEEL PILE CAP TIE

6100 STEEL PILE

SECTION AT NORTH PIER

1:50 (SOUTH PIER SIMILAR)
NOTE:
ALL ASSY VG SCREWS TO BE COUNTERSUNK SUCH THAT 50% OF THE THREADED LENGTH IS IN EACH MEMBER.

VIEW: A
KEYSTONE TO HAUNCH CONNECTION
19Ø ROD PRESTRESSED PER ENGINEERING SPECIFICATION

10 PIECES WIDE = 980mm

NEOPRENE RUBBER WASHER
COUNTER BORE FOR NUT AND WASHER

4x6 DFIR DECKING (ON EDGE)

'5 O.D. X 20 I.D. X 12MM THK NEOPRENE RUBBER WASHER
19 Ø THREADED ROD TYP HDG C/W FULLY CONTERSUNK NUT AND WASHER

NOTCH 1/2" INTO EACH MID PANEL 4x6
HANDRAIL STANCHIONS

OUTLINES OF GLULAMS BELOW.
STRUCTURAL FLASHING

3 DECK PANEL PARTIAL PLAN
1:20
### Structural Dynamics

<table>
<thead>
<tr>
<th>Mode Description</th>
<th>Predicted Frequency (Hz)</th>
<th>Mechanism</th>
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</thead>
<tbody>
<tr>
<td>First Lateral</td>
<td>0.8</td>
<td>Walking</td>
</tr>
<tr>
<td>Second Vertical</td>
<td>1.9</td>
<td>Walking</td>
</tr>
<tr>
<td>Second Torsional</td>
<td>3.1</td>
<td>Jogging</td>
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<td>Mode Description</td>
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Acceleration Time History

Exponential Damping Curve

\[ y = 0.0332e^{-0.416x} \]