

## CULVERT SECTIONS PROVIDE SAFE PASSAGE, PRIMARILY FOR MOOSE, AS WELL AS OTHER WILDLIFE

Scientists have discovered that in order for a moose to enter the culvert, there has to be a particular openness ratio. In short – it needs to be big. In fact, these culverts are so huge you could drive a tractor trailer through them. The **openness ratio** is determined by factoring the length, height, and span of the structure. If you stand at one end of the structure, it is basically the size of the square of light at the other end. The span, rise, and lengths of these culverts are based on these wildlife crossing standards that state the openness ratio of 1 or greater must be maintained.

In 2007, in anticipation of growth in the box culvert business, Shaw Pipe purchased a new Cleco box culvert form that is designed to adjust to a wide range of different sizes, including both three sided and four sided culvert sections. Shaw Pipe has the current

ability to produce sections as small as 900mm x 900mm, up to and including the 4300mm x 4100mm box sections profiled here.

A very special corbel on a select few of the box culverts was required to be cast monolithically on these special sections. The purpose of these corbels was to support the six precast approach slabs required at each crossing to support the road surface at finished grade at each culvert installation. Shaw Pipe of course also supplied these precast panels to the project.

The wing walls at the ends of the box culverts were constructed with our T-Wall retaining wall units. Produced under license from the Neel Company in Springfield, Virginia.

Each culvert end required a minimum off 100 units covering an area of approximately 125m<sup>2</sup>.



### IN THE SPRING OF 2008 SHAW PIPE SUPPLIED THE LARGEST PRECAST BOXES EVER MANUFACTURED AND INSTALLED ANYWHERE IN ATLANTIC CANADA.



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PIPE

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# NEWSUPDATE

PROVIDING THE RIGHT SOLUTIONS.



## Large precast BOX Culvert solves a problem and saves lives

In the Spring of 2008 Shaw Pipe supplied the largest precast boxes ever manufactured and installed in Atlantic Canada. The total supplied length was 160 meters of 4100mm span x 4300mm rise box culverts at five individual culvert crossings for the New Brunswick Department of Transportation on both Route 7 and Route 8. These large sections have a lay length of 1500mm and weigh over 19,000 kgs each.

The New Brunswick government became concerned with the potential for accidents between motorists and moose and embarked on a program to make it safer to travel through these sections of New Brunswick. The purpose of the culvert sections is to provide safe passage, primarily for moose, as well as other wildlife, to cross under these roads so as not to interfere with vehicular traffic. The elimination of wildlife collisions is the ultimate objective.

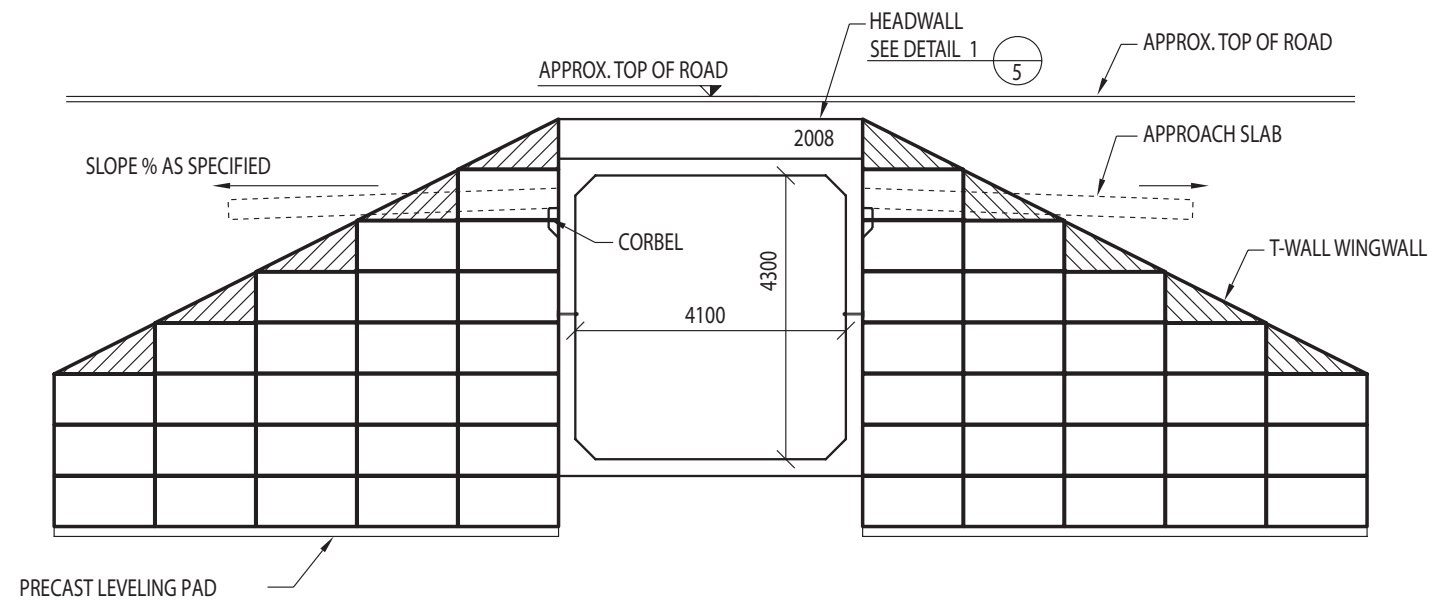
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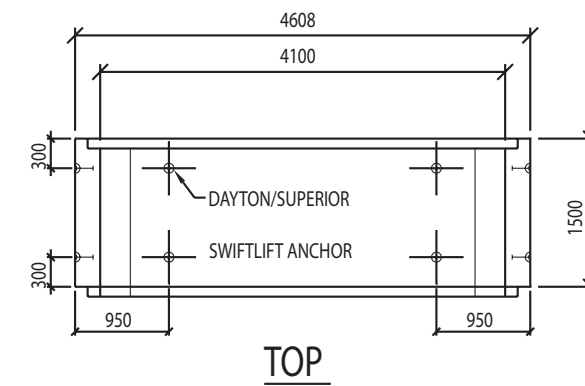
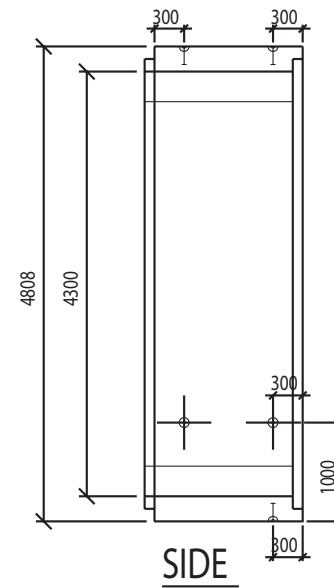
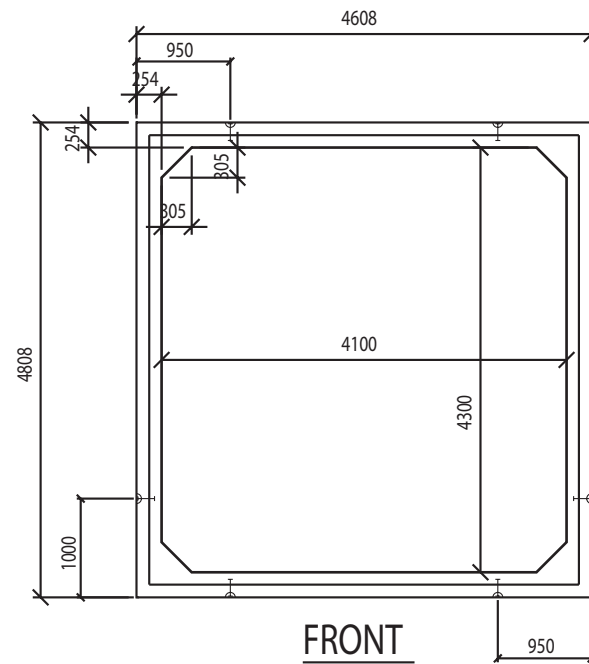
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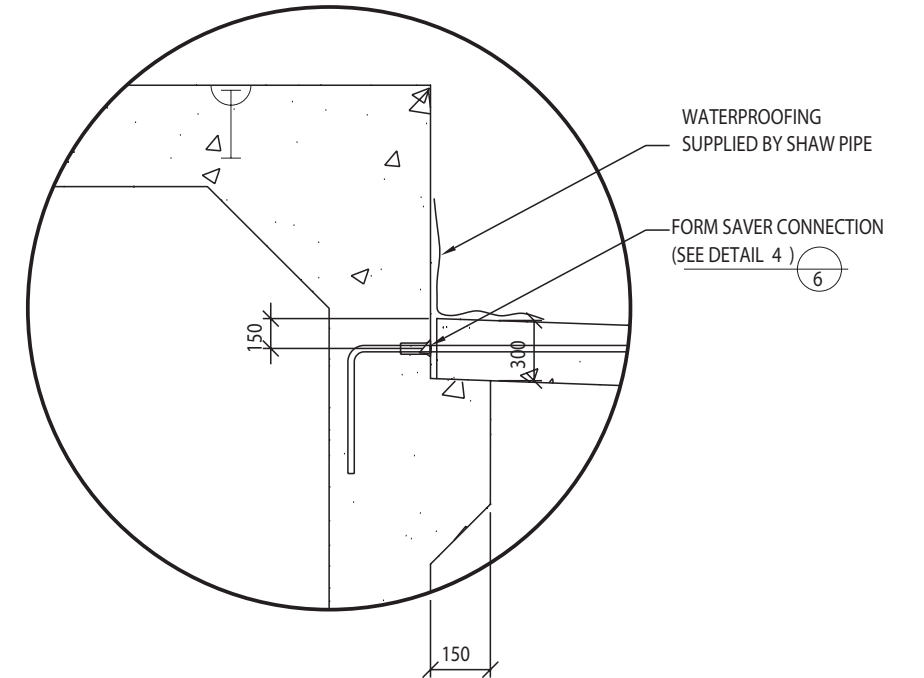




WEST DEVELOPED END ELEVATION  
SCALE = 1:100



STANDARD BOX CULVERT UNIT - GEOMETRY



CORBEL - CONNECTION DETAIL

