

Key elements of Kenaston Overpass in Winnipeg reinforced with stainless steel rebar

<u>The Kenaston Overpass</u> in the southwest corner of Winnipeg, Manitoba has been constructed as part of the Waverly West Arterial Roads Project (WWARP). The overpass extends Kenaston Boulevard from Bishop Grandin Boulevard to the Perimeter Highway (PTH 100). The new portion of Kenaston Boulevard will connect the residential areas of Waverly West and serve as the principal route for traffic in southwest Winnipeg.

The Kenaston Overpass is a two-lane structure (single direction) with two spans and a length of 104 metres. The substructure consists of reinforced concrete abutments and piers which are supported on steel H piles to bedrock. The superstructure consists of two trapezoidal box girders with a 225mm reinforced concrete deck and 90mm asphalt wearing surface. The overpass has mechanically stabilized earth (MSE) walls on either side for accommodating the extension of Bishop Grandin Boulevard to the Perimeter Highway.



Two-lane overpass with two spans and a length of 104 metres.

The City of Winnipeg Public Works Department specified stainless steel rebar reinforcement because of the heavy volume of traffic that would use the overpass, and to minimize long-term downtime of the structure for road repair. <u>Salit Specialty Rebar (SSR)</u> supplied close to 400,000 pounds of stainless steel type <u>2304 rebar</u> which was used in the road deck, barrier walls, approach slabs and abutments. SSR supplied steel according to <u>ASTM A955</u>-14 - *deformed and plain stainless steel bars for concrete reinforcement proposed to be used in applications requiring corrosion resistance or controlled magnetic permeability.*

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Project Quick Notes

- Winnipeg, MB Canada
- Winnipeg Public Works
- Concrete overpass
- Stainless steel and carbon steel reinforcement
- 400,000 pounds of stainless steel 2304 rebar
- Stainless steel for road deck, barrier walls, approach slabs, and abutments
- ASTM A955-14
- M.D. Steele
 Construction Limited
- Cowin Steel Co. Ltd.



400,000 pounds of stainless steel type 2304 rebar used in the road deck, barrier walls, approach slabs and abutments

Construction challenges included a tight schedule to align completion of the overpass with the other contracts of the WWARP project, poor subsurface soil conditions requiring removal/replacement prior to MSE wall construction, use of lightweight cellular concrete to further reduce ground bearing pressures under the MSE walls, and significant road closure related restrictions, due to the high volume of traffic in the area. The General Contractor was <u>M.D. Steele Construction Limited</u>. <u>Cowin Steel Co. Ltd.</u> of Winnipeg contracted with SSR to supply the stainless steel, and supplied the remaining steel reinforcement for the project.





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