INNOVATIONS **Benefit Constructability and** Reduce Cost on P3 Projects



AECOM has participated in all 4 of Alberta Transportation's P3 projects and has been a strong advocate of innovative designs that improve the function and/or constructability of systems interchanges. On Northwest Anthony Henday Drive (NWAHD), AECOM prepared a number of design alternatives for the systems interchanges on Anthony Henday Drive (AHD) at Yellowhead Trail (Hwy 16) and at Manning Drive (Hwy 15).

Yellowhead Trail (Highway 16)/AHD:

The functional plan required two third level bridges across the centre point of this interchange to provide freeflow westbound to southbound and eastbound to northbound. Constructing 3-level bridges at the centre point would have created a congested construction site with significant constructability issues. Our innovation moved the 2 ramps out, lowering all bridges to second level, and removing the complex problems at the centre point. This allowed for simultaneous construction of the structures and connecting roadways, greatly reducing the risk of a schedule overrun.



Manning Drive (Highway 15)/AHD:

The functional plan required a third level bridge through this interchange, and a traffic signal controlled intersection on Manning Drive (Freeway) north of AHD. Our innovation moved the 2 ramps out, allowing all bridges to be built as second level bridges and removing the traffic signal controlled intersection on the freeway while maintaining required levels of service.

These innovations reduced bridge construction costs, contributing to a capital cost reduction of \$15-20 million, by cutting deck areas and moving the bridge construction as much as possible outside the existing traffic areas. The innovations also demonstrate how merging engineering and construction knowledge and experience can lead to a more economical design.

Design innovations to these systems interchanges on NWAHD are benefitting Albertans, particularly those from Edmonton and the surrounding area, by making daily commuting faster and easier and improving the movement of goods and services around the province.





Wayne Tomlinson P.Eng., Manager, Major Projects, Transportation, AECOM

Wayne Tomlinson, P.Eng., is the Manager of Major Projects Transportation for AECOM in Northern Alberta. He has over 37 years experience and has been with AECOM for the past 19. Wayne was Design Manager for Northwest Anthony Henday Drive, leading the design team through the pursuit, detailed design and construction.

Contact Information

17007 – 107th Avenue Edmonton, AB, Canada T5S 1G3 780.486.7667 F 780.486.7070 Email wayne.tomlinson@aecom.com www.aecom.com