

137 Avenue – 215 Street Arterial Concept Planning Study

Recommendation:

That Transportation and Public Works Committee recommend to City Council:

1. That the 137 Avenue – 215 Street Concept Planning Study, as outlined in Attachments 1 and 2 of the January 25, 2011, Transportation Department report 2010TD0789rev, be approved.
2. That Administration bring forward a realigned 137 Avenue as part of a future amendment to the Big Lake Area Structure Plan.

Report Summary

This report details the proposed concept plan for the arterial road connecting 137 Avenue east of Anthony Henday Drive, to 215 Street north of Yellowhead Trail.

Previous Council/Committee Action

- At the November 16, 2010, Transportation and Public Works Committee meeting, the November 16, 2010, Transportation Department report 2010TD0789 was postponed to the January 25, 2011, Transportation and Public Works Committee meeting.
- At the June 29, 2010, Transportation and Public Works Committee meeting, the following motion was passed.

That the June 2, 2010, Transportation Department report 2010TD0789, be referred back to Administration to return to Transportation and Public Works Committee with further information including:

- financial and developmental impacts and compensation associated with providing the 150 meter top of bank offset
- additional information on the environmental impacts and associated compensation and a list of the environmental components that were considered
- a more detailed illustration of the arterial road configuration with ravines, wildlife corridors and pedestrian networks, both approved and proposed Neighbourhood Structure Plan's and connectivity of the trail system north and south of 137 Avenue accessing neighbourhoods and Lois Hole Provincial Park
- options for City Council and Committee, in providing direction for land use for Big Lake Area Structure Plan

Report

Response to additional information requested is provided in Attachment 9.

Background:

The 137 Avenue – 215 Street Concept Planning Study was undertaken to update the arterial roadway network in the vicinity of the east shoreline of Big Lake. The update was required to address changes in the transportation network and traffic demand projections in the northwest part of Edmonton and the southwest part of St. Albert that differ from those anticipated in the

original 1991 Big Lake Area Structure Plan.

As a result of recent land development interest in the Big Lake area, the Big Lake Area Structure Plan was amended in January 2008. Furthermore, Neighbourhood One in the northwest part of the Area Structure Plan area was also approved at this time. City Council's approval of the Area Structure Plan amendment acknowledged this concept planning study as pending and having an effect on the final alignment of 137 Avenue – 215 Street.

With the current construction of Anthony Henday Drive and Ray Gibbon Drive, and the planned urban development in the area, access to this area is expected to significantly increase. As a result, an urban arterial road is required to support the planned development and projected traffic demand in the area. The primary purpose of the study was to develop a final alignment and right-of-way for 137 Avenue – 215 Street to enable detailed subdivision planning and design by landowners and developers.

Since the Area Structure Plan was approved by Council in January 2008, additional concept planning has been completed and a proposed concept plan has been developed with input from stakeholders. The proposed 137 Avenue – 215 Street Concept Plan is outlined in Attachment 2.

Alignment:

The proposed corridor for the planned arterial has been identified as a continuous route joining 137 Avenue east of Anthony Henday Drive to the existing 215 Street north of Yellowhead

Trail. The existing 137 Avenue location between 184 Street and Big Lake is the boundary line between the City of Edmonton and the City of St. Albert. To serve the planned development of this area, 137 Avenue is proposed to be realigned north of the existing location, into the South Riel area of the City of St. Albert. In St. Albert, this corridor is designated as LeClair Way, and is proposed to connect south into the City of Edmonton along a route that parallels Big Lake and will connect to the existing 215 Street right-of-way north of Anthony Henday Drive.

Key Considerations:

Several factors were considered in determining the recommended alignment and design of the proposed corridor. Key considerations included:

- development identified in the Big Lake Area Structure Plan
- long-term traffic projections
- impacts to development plans in the study area
- environmental impacts and mitigation related to wildlife passage
- the ecology and terrain of the Big Lake area
- the City of Edmonton's River Valley Bylaw
- public feedback concerning development in the Big Lake area
- implementation/staging of roadway development
- planned development of Lois Hole Centennial Provincial Park
- facilities associated with this Lois Hole Centennial Provincial Park development

Traffic Forecasts and Roadway Features:

Long-term traffic projections were used to identify ultimate lane requirements, and intersection configurations. The analysis indicated a need for a section of six-lane urban roadway on 215 Street immediately north of Yellowhead Trail. The 215 Street roadway then transitions to a four-lane urban arterial cross-section north of the first neighbourhood collector road and continues to the north-end of 215 Street. The roadway then curves toward the east as 137 Avenue and reduces down to a two-lane rural arterial cross-section, continuing along a curvilinear alignment paralleling the east shoreline of Big Lake into St. Albert.

The 137 Avenue roadway has been identified as a two-lane rural arterial roadway. A rural cross-section was selected to complement the unique environmental setting in which this section of 137 Avenue is located. The rural cross-section will provide greater aesthetic appeal and will better blend into the Lois Hole Centennial Provincial Park development and the rolling terrain of the Big Lake area. For the same reasons, swale drainage is proposed to replace typical urban curb and gutter drainage.

Although two-lanes are proposed, right-of-way along 137 Avenue has been protected to accommodate a potential four-lane cross-section for the future from 199 Street eastward to the City of Edmonton/City of St. Albert boundary.

Environmental Considerations:

A thorough Environmental Assessment was completed for the 137 Avenue/215 Street/LeClair Way Corridor jointly for the City of Edmonton

and the City of St. Albert. The study addresses all environmental assessment requirements for the corridor and summarizes existing conditions, potential project impacts, and measures to mitigate potential impacts to the area.

Through the planning and environmental assessment process, including discussions with key stakeholders and members of the public, it was determined that the new roadway alignment must maintain a minimum setback of 100 metres from the surveyed top-of-bank to the north edge of the new 137 Avenue road right-of-way. This minimum setback was desired to maintain a viable wildlife movement corridor between the top-of-bank and north edge of the proposed road alignment. This area must be able to provide a movement corridor for wildlife as large as moose, as well as allow for potential park infrastructure including a trail and top-of-bank viewpoint.

In addition to maintaining a minimum 100 metre setback from the top-of-bank, wildlife movement is protected on 215 Street via a wildlife underpass located north of Yellowhead Trail.

Pedestrian Circulation and Multi-Use Trail Connectivity:

A 1.5 metre sidewalk is proposed along the west-side of 215 Street. In addition, a 3 metre multi-use trail is proposed on the east-side of 215 Street, and would continue along the south-side of 137 Avenue adjacent to planned residential development. The trail would serve as an important link to the City of Edmonton's trail system, and would be a

key inter-municipal connection between the City of Edmonton and the City of St. Albert. The proposed trail would also act as a key connection for pedestrian and bicycle access to Lois Hole Centennial Provincial Park.

Although pedestrian facilities north of 137 Avenue have yet to be defined, as part of the development of Lois Hole Centennial Provincial Park, pedestrian facilities will be provided north of the proposed 137 Avenue alignment. As a result, a sidewalk was not provided on the north-side of 137 Avenue.

Pedestrian connections between Lois Hole Centennial Provincial Park north of 137 Avenue and the trail on the southside of 137 Avenue will be provided at signalized intersections. These connections will be identified in conjunction with trail development in Lois Hole Centennial Provincial Park.

Land Use Integration:

Intersections are planned to serve local areas and would be spaced in accordance with jurisdictional standards. Intersections along 215 Street were based on the Big Lake Area Structure Plan, while intersections along 137 Avenue are conceptual only and subject to future development plans and intersection spacing requirements.

Planning Level Cost Estimate:

Based on current unit costs, the concept level estimate for the construction of this corridor is approximately \$51.5 million. This estimate includes the cost of:

- road construction and paving
- concrete work (i.e. curb and gutter, sidewalk, islands)
- landscaping

- drainage (urban, rural, and stormwater management facilities)
- signage and pavement marking
- earthwork
- street lighting and traffic signals
- engineering and contingencies

The cost estimate includes road work required for the construction of the new 137 Avenue alignment, as well as improvements/upgrades to 215 Street. For 215 Street, estimates include the initial two lanes of paving, in addition to the future widening to four lanes.

The cost estimate does not include the cost of any land acquisition that may be required for the proposed road alignment. Construction of this roadway will be the responsibility of one landowner as the area is serviced and it is expected that most of the land would be dedicated as a condition of subdivision. The roadway is included in the Arterial Roads for Development Bylaw 14380.

Public Consultation

Public consultation for this study included both individual meetings and a public open house. Individual meetings were held with land owners or their representatives, including Rohit Group of Companies and United Communities to discuss proposed urban development plans, as well as Alberta Tourism, Parks, Recreation and Culture to discuss development plans for Lois Hole Centennial Provincial Park.

A public open house was held on June 17, 2008, to provide information to area land owners or their representatives, as well as the general public. A total of 53 individuals attended the event. The primary goal of the open

house was to provide a general overview of the plan and to discuss the difference between the proposed plan and the alignment shown in the Area Structure Plan, as well as to allow attendees to provide comments and suggestions.

Public feedback showed significant support for the updated plan. Themes from the public consultation related primarily to environmental concerns such as wildlife movement corridors, minimum top-of-bank offset, stormwater quality management, traffic volumes, integration with the proposed Lois Hole Centennial Provincial Park, and recreational opportunities in the area.

The information obtained through the individual meetings and the open house helped refine the concept plan and develop appropriate mitigation measures.

Justification of Recommendation

1. The updated 137 Avenue – 215 Street Concept Plan represents the most effective arterial road alignment required to serve the area adjacent to the east shoreline of Big Lake and accommodate projected traffic demand. The plan takes into consideration many environmental constraints in the study area, as well as planned urban development, and the development of Lois Hole Centennial Provincial Park.
2. City Council will need to consider an amendment to the Big Lake Area Structure Plan in order to ensure that the Area Structure Plan is consistent with the 137 Avenue Concept Plan.

Attachments

1. Executive Summary: 137 Avenue – 215 Street Concept Planning Study
2. Recommended Concept Plan for 137 Avenue – 215 Street
3. Top-of-Bank Setback – Impacts of 100 Metres versus 150 Metres
4. Justification for Selection of VECs
5. Arterial Road Configuration
6. Recognized Ravines
7. Wildlife Corridors
8. Pedestrian/Trail Network
9. Additional Information Requested

Others Reviewing this Report

- R. G. Klassen, General Manager, Planning and Development Department
- M. Koziol, General Manager, Capital Construction Department
- M. Koziol, A/General Manager, Asset Management and Public Works Department
- D. H. Edey, General Manager, Corporate Services Department