

Technical Memorandum

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Date: April 21, 2016

Attention: Mr. Grant Schaffer, C.E.T.
Director, Project Management
City of Fort Saskatchewan

From: Corry Broks, P.Eng.

Re: Addendum to Transportation Study
for the Southfort Area Structure Plan
in the City of Fort Saskatchewan

File: 1412-03

This Addendum to the Transportation Study for the Southfort Area Structure Plan in the City of Fort Saskatchewan has been prepared to address concerns expressed during presentation of the final report to City Council on January 12, 2016. The Addendum should be read in conjunction with the original report, and is intended to specifically address the issues and policies of the community, as expressed by City Council, and which are not reflected in the technical findings of the study and report. Specifically, the requested changes include the following.

1. *Change the designation of the south end of Southfort Drive between Southfort Boulevard and Southridge Boulevard from a collector roadway to an arterial roadway, with traffic signals at both intersections.*

This change was requested because the Southridge Boulevard intersection at Southfort Drive had previously been constructed to a 4-lane divided arterial configuration. In addition, 2 lanes of the ultimate 4 lane roadway exist for the south leg of Southfort Drive to Southfort Boulevard, and the required right-of-way to accommodate the arterial had been protected.

The collector designation was assigned to the south leg of Southfort Drive in the report based on modeling results for the long term, or build out of the Southfort Area. Our projected volumes of approximately 4000 vehicles per day would typically be accommodated by a collector roadway, with one lane of traffic in each direction. Roundabout intersection control at the Southfort Boulevard and Southridge Boulevard intersections would provide superior operations to a signalized intersection.

The City has indicated a desire to maintain consistency along the Southfort Drive corridor to Southridge Boulevard, and accordingly, we have prepared an exhibit (**Exhibit ES-A1**), identifying Southfort Drive as an arterial roadway throughout the Southfort Area.

2. *Designate the roundabout intersections along 94 Street as intersection control to be reviewed at the time of construction.*

We understand this change was requested due to concerns that roundabout intersection control may not be well accepted by the public and that projected traffic volumes on 94 Street could be much higher if lands to the south are annexed and developed in the future.

The build out model developed for Southfort estimates that traffic volumes on 94 Street and Southridge Boulevard, south of the proposed Sienna Boulevard, are well below the threshold for a 4-lane arterial road, and could readily be accommodated by a collector road with one lane in each direction. 94 Street /

Southridge Boulevard will not likely warrant traffic signals at intersecting collectors, and would function well as stop-controlled for the minor collector roads entering 94 Street / Southridge Boulevard. It was concluded during the study that 94 Street / Southridge Boulevard operating as a free flow, wide collector would promote speeding and safety concerns due to the alignment proposed in the Area Structure Plan (long, straight sections and generous curves). Roundabout intersection control on this roadway would provide traffic calming, while allowing free-flow, which is considered highly desirable and context sensitive for this roadway through a primarily low density residential area.

We have also re-examined the potential for significant increased traffic on 94 Street / Southridge Boulevard if annexation and significant development occurs in the future, south of the Southfort Area. This is unlikely to occur due to the primarily residential nature of the land use along 94 Street, not being conducive to attracting traffic to this area. It could be argued that by providing roundabout intersection control and a 2-lane roadway for 94 Street, shortcutting through the neighbourhood would be discouraged, which would be highly desirable.

Exhibit ES-A1 has been revised to show that roundabout intersections along 94 Street / Southridge Boulevard should be reviewed at the time of implementation to confirm their suitability. We also suggest that this corridor be reviewed during the Transportation Master Plan update.

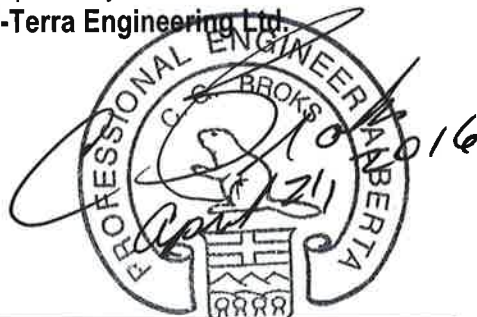
3. *Develop a revised cross-section for 94 Street / Southridge Boulevard based on a 28m wide right-of-way that would allow widening the carriage way to a 4-lane undivided standard.*

The proposed cross-section is shown on **Exhibit A1**, and is based on initially constructing to the City's 12.0m wide collector roadway, in accordance with the recommendations in the original report, and then, if required in the future, widening to 14.5m to provide a 4-lane undivided roadway. Careful consideration for locating infrastructure outside of the widened area as shown would provide the most cost effective approach.

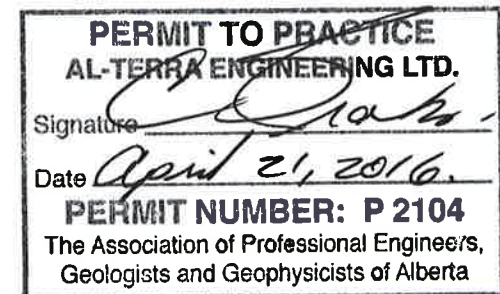
This Addendum to the Transportation Study for the Southfort Area Structure Plan in the City of Fort Saskatchewan as prepared at the direction of Fort Saskatchewan City Council, and provides specific changes to the final report where the wishes and policies of the community do not align with the technical findings of the engineering study and report. As this Addendum covers only a small part of the original study, it should be read and considered in conjunction with the original study.

Prepared by:

Al-Terra Engineering Ltd.



Corry Brooks, P.Eng.

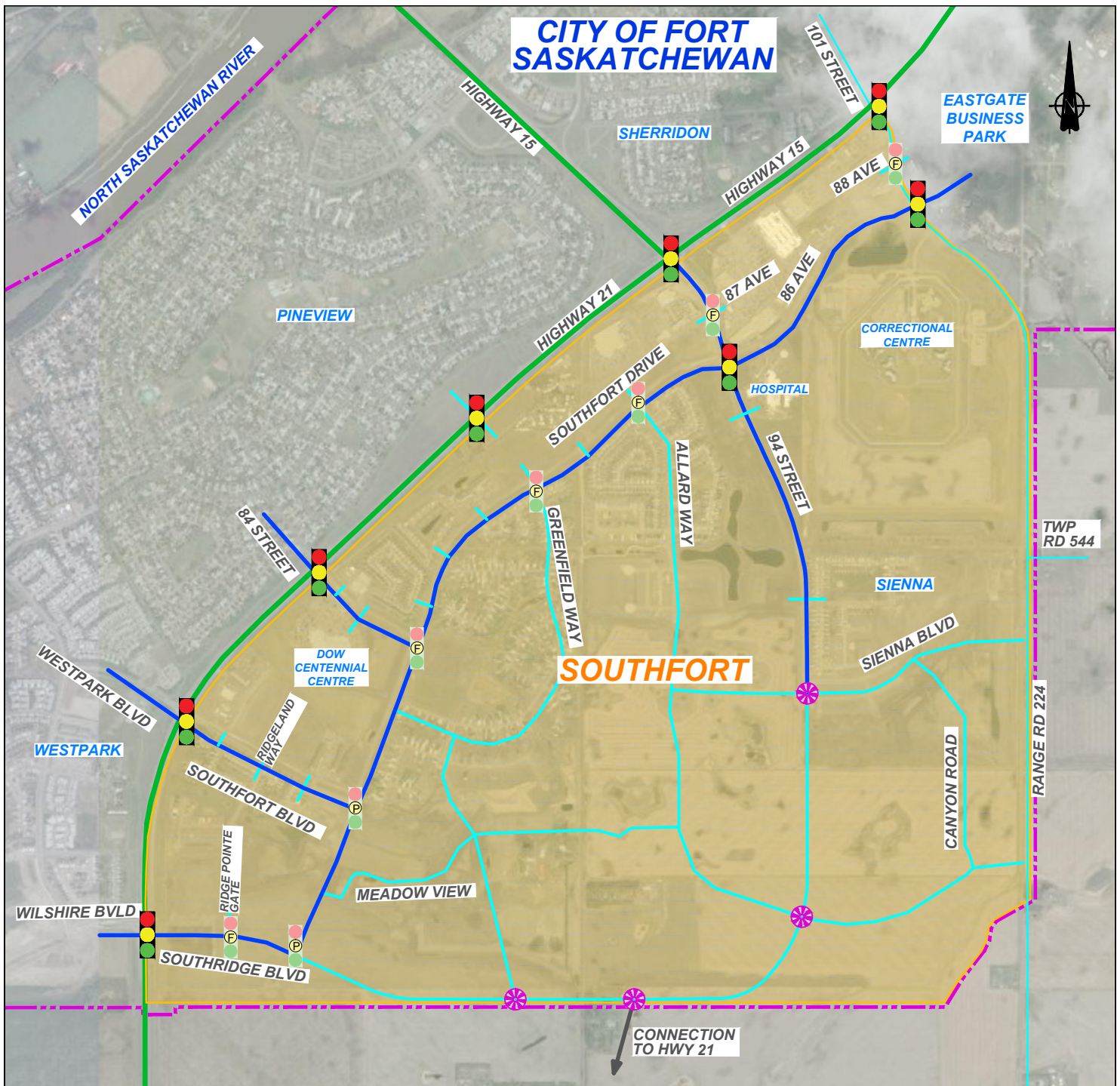


Permit to Practice

/jl

Enclosures:

- ◆ Exhibit ES-A1 – Intersection Controls, Full Development of Southfort
- ◆ Exhibit A1 – Proposed Collector Typical Cross-Section



- CITY BOUNDARY
- STUDY AREA
- ALBERTA HIGHWAY
- ARTERIAL ROAD
- COLLECTOR ROAD

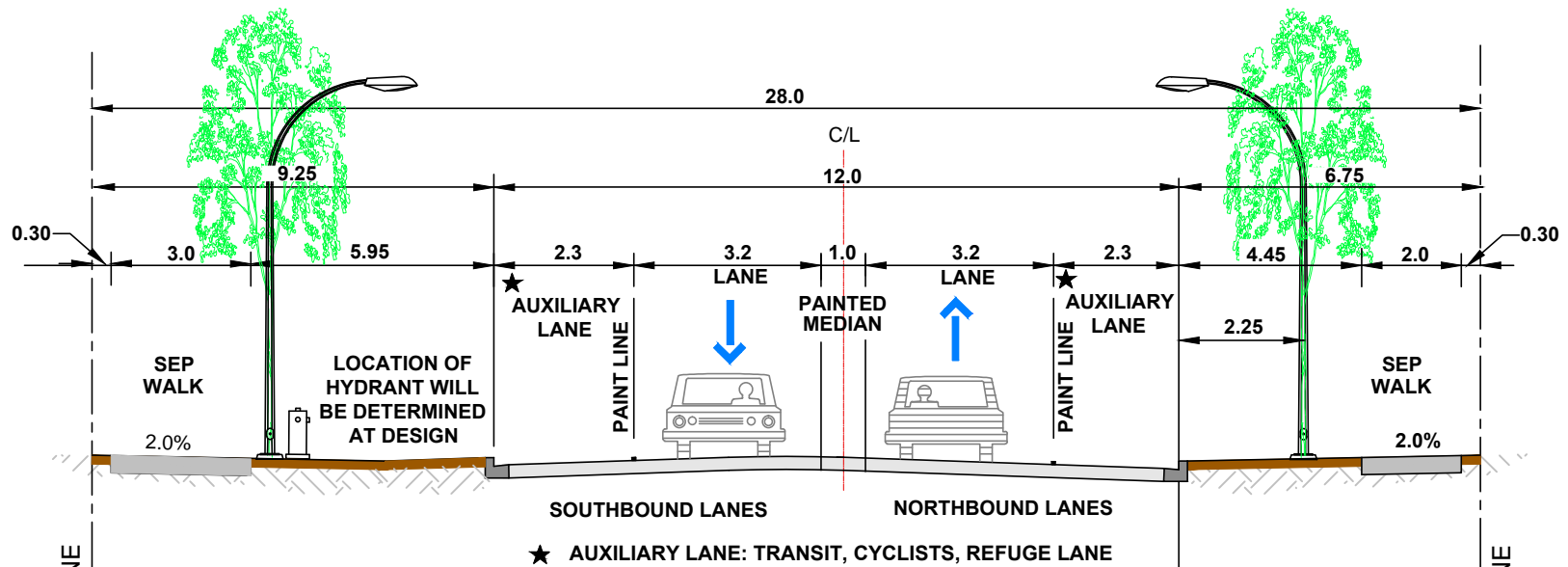
- ✱ INTERSECTION CONTROL TO BE REVIEWED PRIOR TO CONSTRUCTION
- ● ● EXISTING SIGNAL
- Ⓟ Ⓟ Ⓟ PROPOSED SIGNAL
- Ⓟ Ⓟ Ⓟ POTENTIAL SIGNAL

**CITY OF FORT SASKATCHEWAN
SOUTHFORT TRANSPORTATION STUDY - ADDENDUM
INTERSECTION CONTROLS -
FULL DEVELOPMENT OF SOUTHFORT**

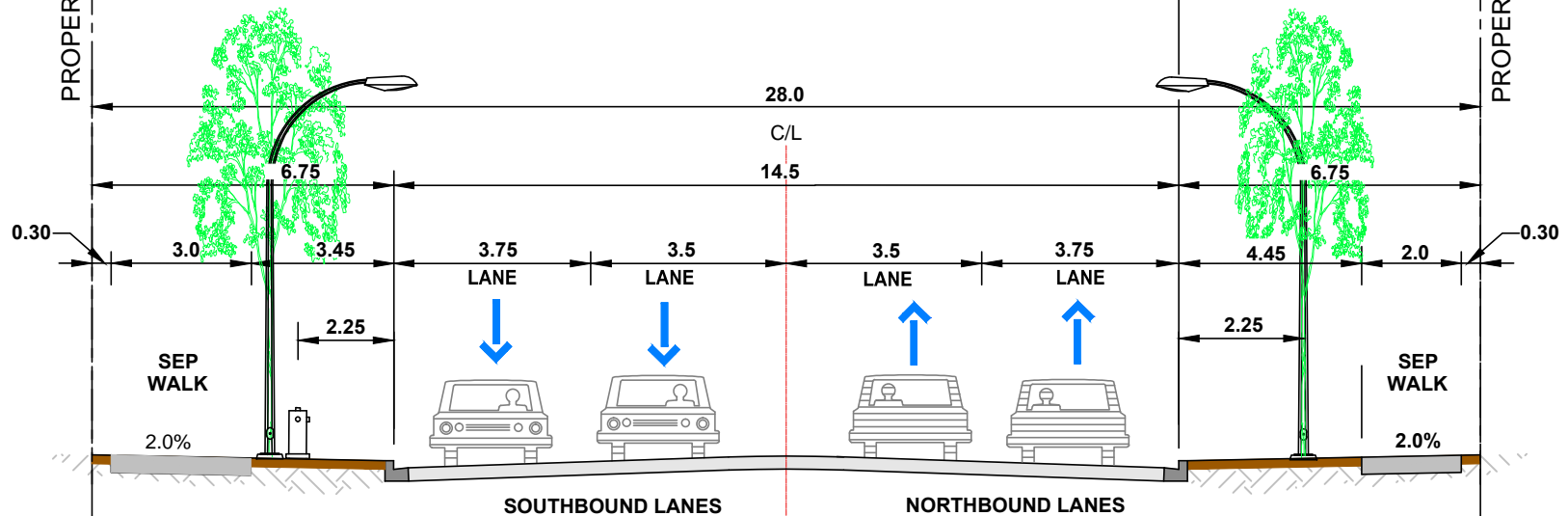
N.T.S.

DATE: APRIL, 2016

EXHIBIT ES-A1



COLLECTOR TYPICAL CROSS-SECTION - ROUNDABOUT OPTION



FOUR LANE COLLECTOR - TYPICAL CROSS-SECTION