1. We have a drawing showing a west leg to this intersection as an interim configuration. Can be very difficult to remove an access once provided.

2. Short weaving distance between driveway and 56 Avenue.
City will need to ensure good transition at Roper Road Study Limits, including lane alignment and the continuity of the trail/sidewalk.

3. Assume 3.55m (several locations) does not include the gutter, resulting in a 3.3m left-turn lane. This narrow width could result in vehicles intruding into the adjacent lane, especially given the high proportion of trucks expected in the area.

4. Given the large footprint of the intersection, there is the potential for lane drifting during the WB-SB dual left-turn. Suggest guiding lines be considered for this movement.
5. Potentially discontinuous sidewalk. Confirm how sidewalk will be terminated.
6. There are several trail crossings of private driveways. Many of these driveways are wide, increasing the exposure of pedestrians and cyclists. In addition, motorists may not anticipate active modes crossing the driveway. Consideration should be given to providing crosswalks to increase motorist's expectation of vulnerable road users.

7. Minimal intersection spacing between driveways and 74 Avenue could result in conflicts between accelerating and decelerating vehicles.

8. Unprotected NB-WB left-turns across three lanes of opposing traffic. Impatient motorists may accept an inadequate gap. Left-turn volumes are expected to be low, but should be confirmed by the design team. Larger trucks (expected at these locations) further increase the collision risk.

9. Unprotected EB-NB left turns across three SB lanes of traffic, merging into NB traffic. Numerous conflicts to evaluate in addition to the risk of poor gap acceptance due to impatience. Larger trucks (expected at these locations) further increase the collision risk.

10. Several intersections have a single trail sidewalk ramp approaching perpendicular crosswalks, such as the one on the left. As a result some active modes, particularly wheeled users, such as wheelchairs and pedestrians with strollers, could be directed into traffic (EB in this scenario) prior to entering the crosswalk. Separate ramps, as per the example to the right, are preferred. This issue occurs at several locations throughout the corridor. This size of ramp may not provide sufficient bicycle storage for multi-use trail users who must cross 34 Street in two stages at 76 Avenue.

11. Short weaving distance between 76 Avenue and gas station driveway. Sideswipe/rear-end collision risk. Also between 74 Avenue and gas station.
13. Short weaving distance for EB traffic on 78 Avenue that wish to EB on 76 Avenue. Sideswipe/rear-end collision risk.

14. Limited separation between 34 Street and Service Road could result in conflicts on 78 Avenue. Intersection skew at Service Road intersection further contributes to the collision risk.

15. The need for an auxiliary lane between 78 Avenue and SPF should be reviewed. Now that left-turns are not permitted at 78 Avenue, the need for an auxiliary lane is likely diminished. Converting to a dedicated right-turn lane would increase the storage between 34 Street and the Service Road, reduce the number of lane changes required for WB traffic on 78 Ave to access WB SPF and reduce the likelihood of through traffic ending up in the right-turn lane.

16. In the NB direction, there are 4 lanes north of 78 Avenue. However, at the north Sherwood Park Freeway ramp intersection (400m separation), only two of these lanes continue NB. As a result, there will likely be a concentration of sudden lane changes as some NB traffic unexpectedly find themselves in a turning lane. The right most left-turn lane is of most concern as the lane has previously been a through lane for a considerable distance and motorists may not anticipate the need to turn. The right-turn lane is less of a concern given that it only extends from 78 Avenue as an auxiliary lane, so through traffic is less likely to use it.

17. WB-SB traffic may inadvertently turn into the SB-EB left-turn lanes, potentially resulting in erratic lane changes. May also result in lane departures during the turn. Guiding lines are recommended, but are not expected to completely mitigate the occurrence of these movements. Same issue applies to EB-NB turn.

18. Has queuing been reviewed to confirm if queues are expected to intrude into WB-SB lanes (potential rear-end collision risk). Motorists turning WB on 84 Avenue would be more inclined to use the left-hand lane.

19. Intersection configuration could result in right-of-way confusion for motorists approaching 84 Avenue.
21. Proposed bus stop does not connect to pedestrian facilities to the west where there is development. Crosswalk is provided to the east. However, there is currently no development to the east. Need for bus stop should be reviewed along with the need for active mode connections to the west. Crosswalk should be relocated to the south side to eliminate the need for two crossings, thus reducing exposure and eliminate the need for the small refuge area in the northwest corner.

22. Driveway access located in the middle of a signalized intersection. Turning movements into and out of driveway may not be anticipated by motorists. Motorists slowing to turn from NB/SB 34 Street (if not restricted) may not be anticipated, increasing the risk of rear-end collisions. Unclear if WB approach will have signal. If not, WB traffic will not be aware of the signal phasing and the right-of-way when entering the intersection. Is there any opportunity to relocate access to the Booster Station from the adjacent lot to the north?

23. Very flat vertical alignment. Assume cross-slope drainage into ditch (no C&G), reducing the chance of ponding?

24. Large intersection for stop-controlled left turns onto 34 Street. Risk of sideswipe and rear-end collisions.

25. Potentially large undefined space could result in motorist confusion regarding turning paths and lane alignments. Ensure good lane definition through pavement markings at the detailed design stage. Intersection skew reduces sight distance for WB-SB traffic.

26. Multi-use trail crosses railway tracks at a skewed angle, which can result in bicycle or wheelchair tires becoming wedged in the tracks. Is there sufficient space to cross closer to 90 degrees?

27. Railway crosses road on a skew. This can create a loss-of-control hazard for motorcycles.
24. Large intersection for stop-controlled left turns onto 34 Street. Risk of sideswipe and rear-end collisions.

28. Train tracks in close proximity to 34 Street. Sufficient storage for smaller vehicles between tracks and road, but not for longer trucks. As a result, trucks approaching 34 Street must either stop on the tracks or before them. Stopping prior to the tracks further increases the length of the left-turn movement, making it more difficult for trucks to find a gap that does not conflict with through traffic.

29. Driveway in very close proximity to Baseline Road. EB-SB traffic may not anticipate a vehicle slowing down to turn at the driveway, increasing the risk of rear-end collisions. The presence of a gate further increases this risk as vehicles may have to wait for the gate to open. There is also the potential that SB traffic will attempt to cross the channelized right-turn in order to access the driveway, which would also likely catch EB-SB traffic by surprise.

Discontinuous sidewalk. Strathcona County to consider future connectivity options.