Riverlea District Centre

Access Options Feasibility Review

2 June 2021 – S195500

GTAconsultants

now

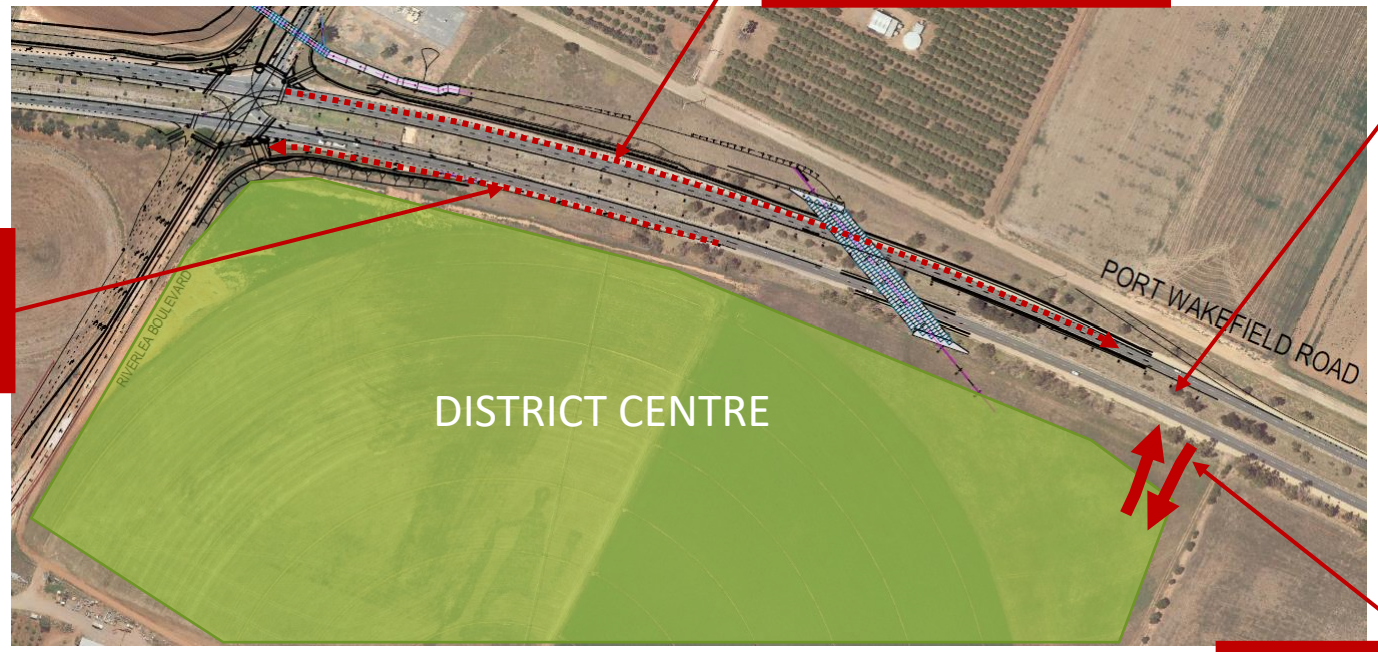
Stantec

At-Grade Intersection (under construction) and District Centre

PW Rd Third Lane
600 metre long
(acceleration and merge)

Port Wakefield Road
speed limit to be reduced
to 90km/h

Left Turn Lane
320 metre long
(inc Deceleration &
Queue Storage)

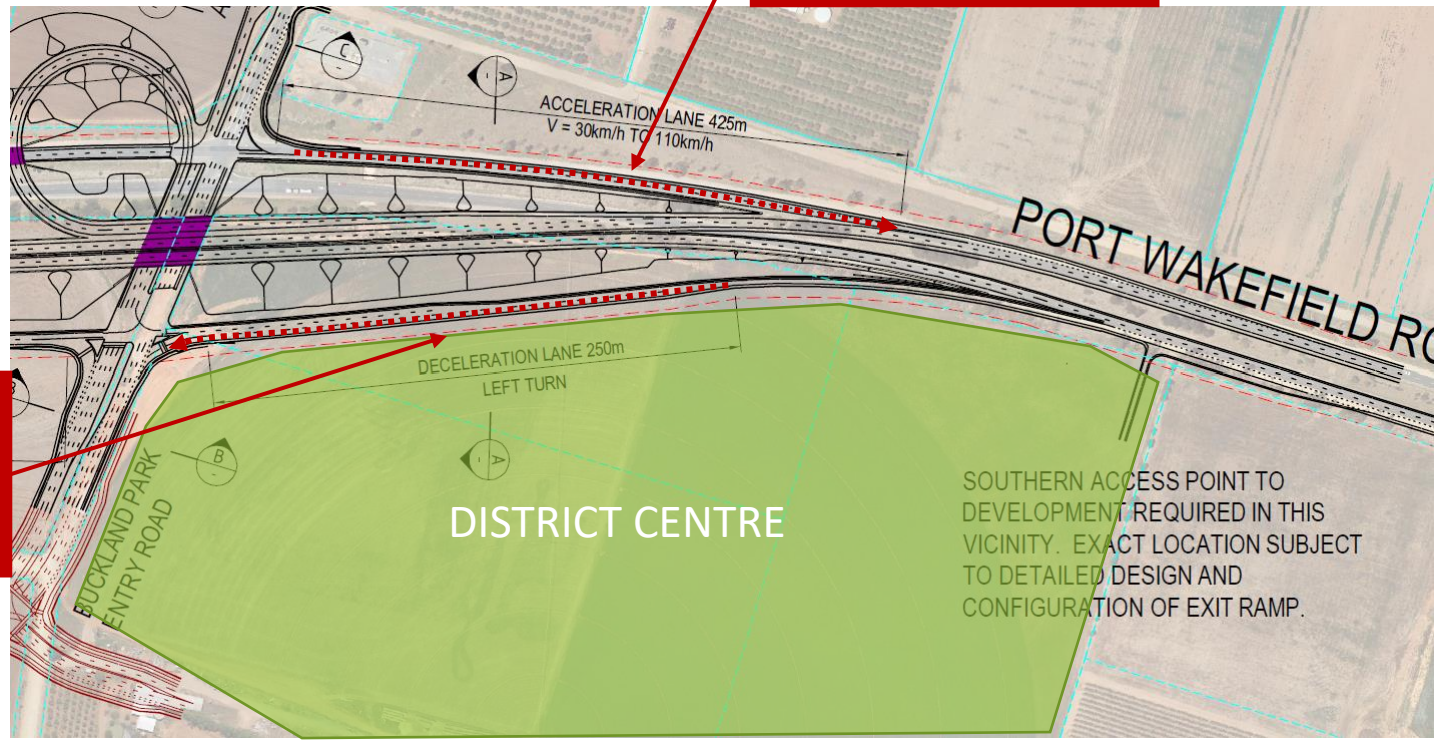


Southern Access Point
required in this vicinity –
exact location subject to
detailed design

Proposed Grade Separated Intersection (Future)

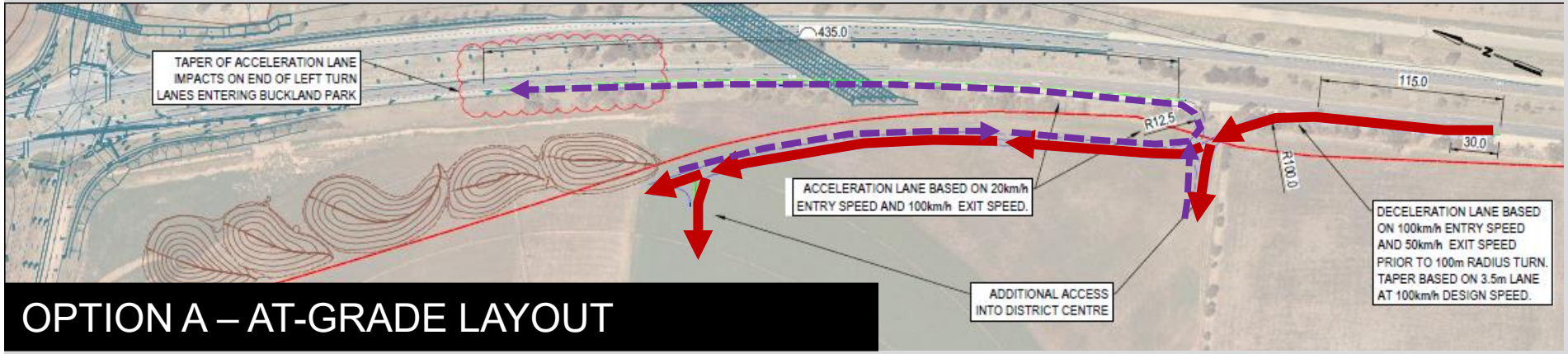
Ramp acceleration length
425 metres
(plus ramp merge)

Left Turn Lane
250 metres long
(inc Deceleration & Queue Storage) plus ramp exit length (200 metres)



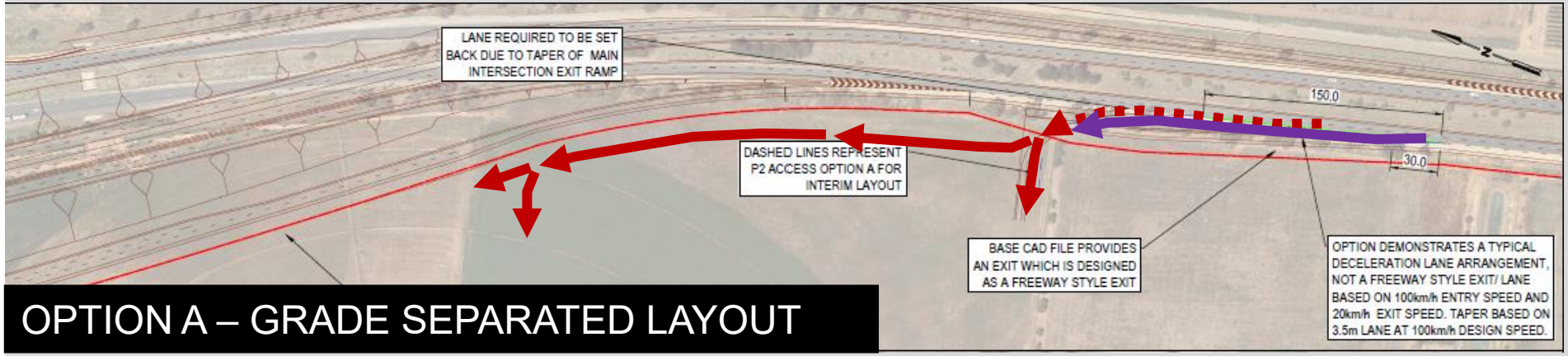
Feasibility – Option A – Southern Access with Service Road

Port Wakefield Road speed limit to be reduced to 90km/h



OPTION A – AT-GRADE LAYOUT

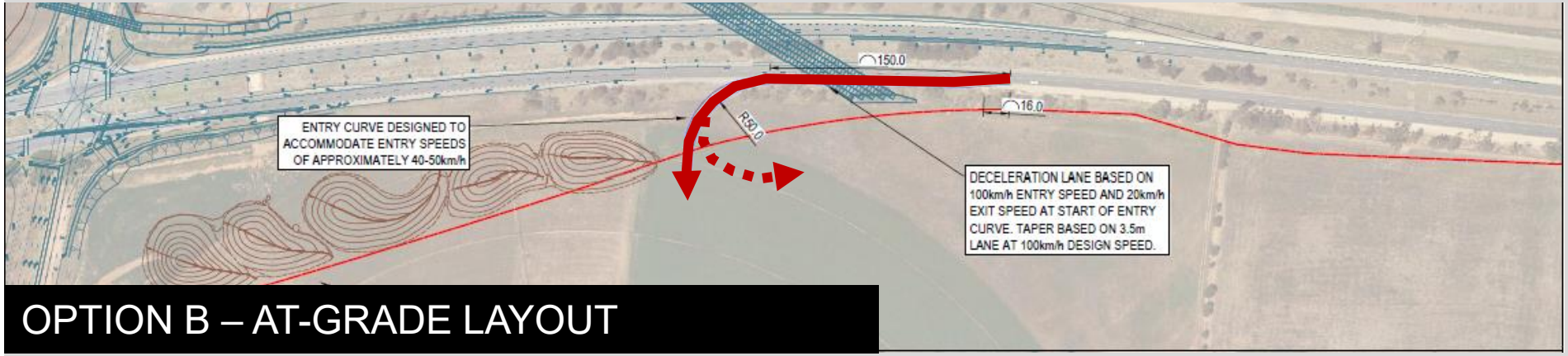
- Entry from PWRd based on standard deceleration lane requirements
- Options for multiple internal access with service road connectivity
- Can avoid earth mounds as required
- Exit to PwRd will conflict with intersection left turn lane if full acceleration lane is required (subject to DIT agreement)



OPTION A – GRADE SEPARATED LAYOUT

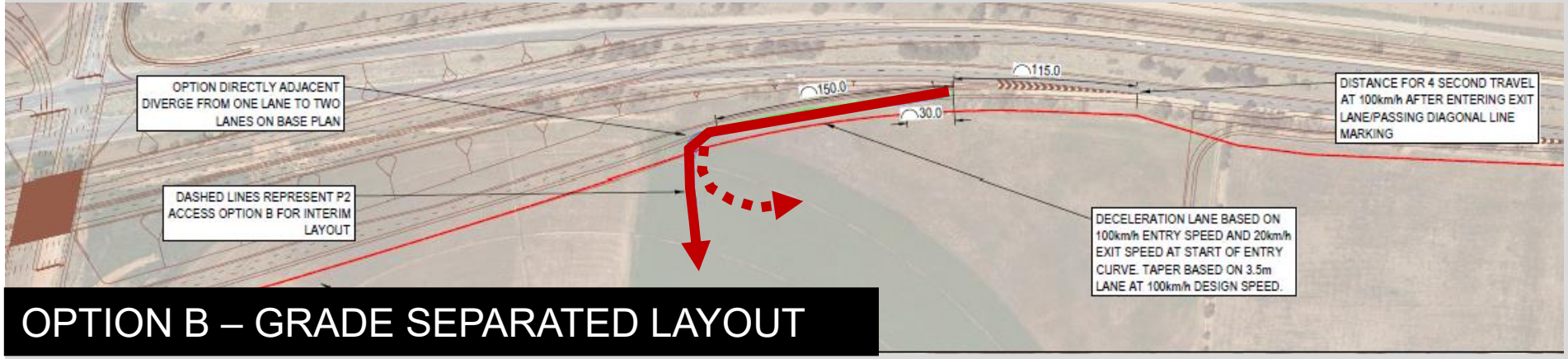
- Similar entry from PWRd based on standard deceleration lane requirements as per at-grade above
- However – entry deceleration lane different to at-grade version due to grade separated lane design
- Opportunity to coordinate design to minimise future changes
- Options for single or dual internal access with service road connectivity as per above

Feasibility – Option B – Mid-block access



OPTION B – AT-GRADE LAYOUT

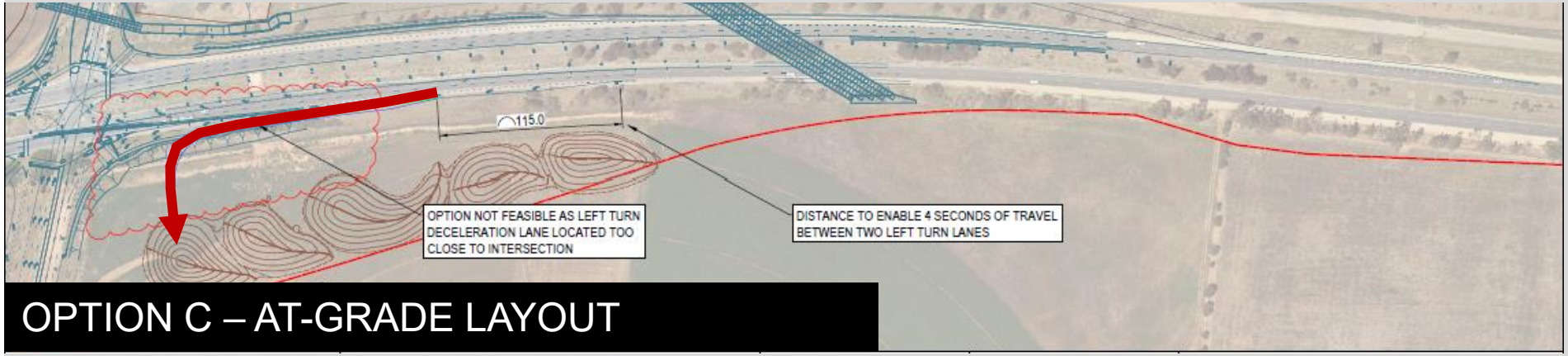
- Entry from PWRd based on standard deceleration lane requirements
- Single access point with internal connectivity (subject to design)
- Can avoid earth mounds as required
- Location constrained by need to be prior to left turn lane at main intersection to north.
- Can move to south if required (subject to culvert location)
- Opportunity for additional connectivity internally as shown



OPTION B – GRADE SEPARATED LAYOUT

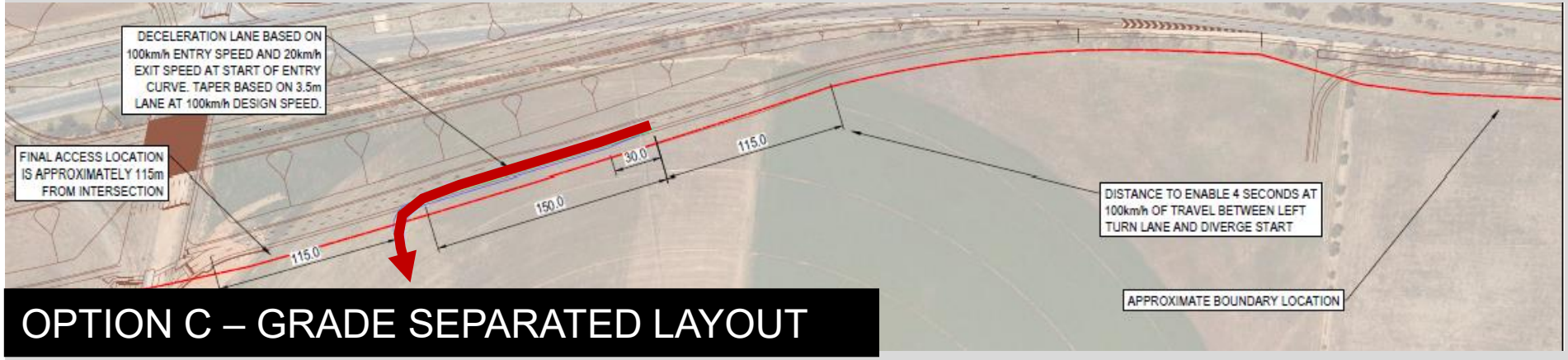
- Similar entry from PWRd based on standard deceleration lane requirements as per at-grade above
- Location constrained by exit ramp arrangement and cannot be moved from location shown
- Coordination with at-grade layout possible to maintain access point into the site
- Opportunity for additional connectivity internally as shown

Feasibility – Option C – Northern Access



OPTION C – AT-GRADE LAYOUT

- Entry from PWRd based on standard deceleration lane requirements
- Single access point with lane based on spacing from start of intersection left turn lane
- Earth mounds will be impacted by access point
- Location constrained by location of left turn lane for intersection



OPTION C – GRADE SEPARATED LAYOUT

- Entry from PWRd based on standard deceleration lane requirements
- Single access point with lane based on spacing from start of intersection left turn lane
- Location constrained by location of left turn lane for intersection
- Coordination with at-grade layout not possible due to grade separation ramp location

Conclusions

OPTION A

SOUTHERN ACCESS WITH SERVICE ROAD

- Entry from PWRd based on standard deceleration lane requirements
- Options for multiple internal access with service road connectivity
- Can avoid earth mounds as required
- Exit to PWRd will conflict with intersection left turn lane if full acceleration lane is required (subject to DIT agreement
- At-grade layout access point location can be coordinated with grade separated layout to minimise impacts

PREFERRED OPTION

OPTION B

MID-BLOCK ACCESS

- Entry from PWRd based on standard deceleration lane requirements
- Single access point with internal connectivity (subject to design)
- Can avoid earth mounds as required
- Location constrained by need to be prior to left turn lane at main intersection to north.
- Can move to south if required (subject to culvert location)
- Opportunity for additional connectivity internally as shown
- At-grade access point location can be coordinated with future grade separated option

FEASIBLE

OPTION C

NORTHERN ACCESS

- Entry from PWRd based on standard deceleration lane requirements
- Single access point with lane based on spacing from start of intersection left turn lane
- Earth mounds will be impacted by access point
- Location constrained by location of left turn lane for intersection
- At-grade access point cannot be coordinated with future grade separated layout due to ramp design

NOT FEASIBLE