

Separated Bicycle Facilities: legal issues

Presentation to SNUG workshop
7 November 2014

ViaStrada Ltd

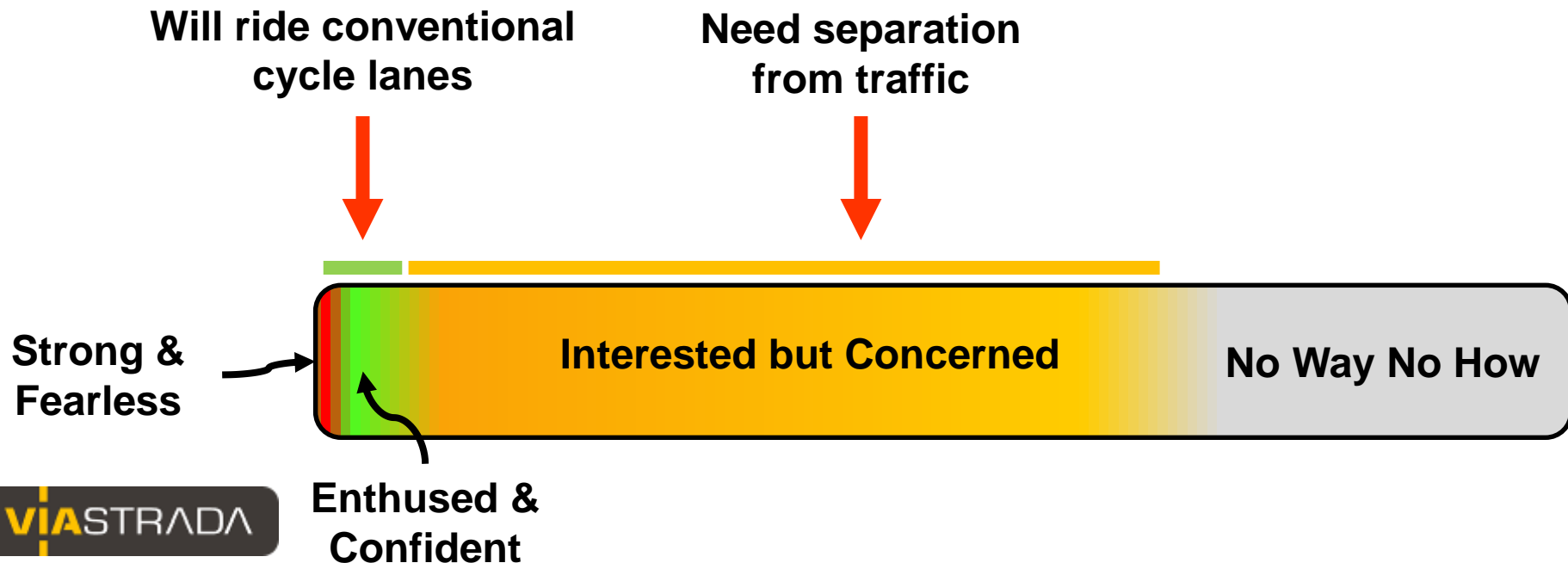
Axel Wilke

Purpose of presentation

- Make you aware of cycling facility infrastructure developments
- Legal framework needs updating
 - Road User Rule (RUR)
 - Traffic Control Devices (TCD) Rule
- Presentation covers desired outcomes of RUR and TCD Rule changes
 - Christchurch (ca 35 signalised intersections)
 - Dunedin (ca 20 signalised intersections)
 - Auckland (?)

Background

- New shift in cycle facility design aimed at catering for “*Interested but Concerned*” target audience
 - Geller, 2009



Background

- Separated Bicycle Facilities (SBFs) are a good solution to providing for *Interested but Concerned* cyclists



Background

- Separated Bicycle Facilities (SBFs) are a good solution to providing for *Interested but Concerned* cyclists
- But there are some issues with current legislation that affect operation
 - Especially at signalised intersections



Legal issues

- Definition of “roadway”
- Meaning of green cycle aspect
- Meaning of red cycle aspect
- Size of cycle traffic signals
- Placement of cycle traffic signals
- Directional meaning for cycle signals
- Barnes dances for cyclists

Definition of “roadway”

Current legislation:

- **RUR clause 1.6 interpretation:** “roadway means that portion of the road used or reasonably usable for the time being for vehicular traffic in general”
- **Common law:** Anybody entering a roadway gives way to traffic already on a roadway

Definition of “roadway”

The issues:

- Cyclists required to give way to motor traffic when entering an intersection from:
 - Pathways, SBFs, cycle lanes with flexiposts...
- Contrary to road user expectation
 - Expect turning vehicles to give way to SBF through cyclists



Definition of “roadway”

Desired outcome:

- Give way rule based on movements
- Turning traffic always gives way to straight ahead traffic



Meaning of green cycle aspect

Current legislation:

- **RUR clause 3.7 Traffic signals in form of cycle symbol:**
 - (1) While a green cycle symbol is illuminated, cyclists may proceed straight ahead, or turn left or right.

This is all that the RUR says about green cycle symbols. Compare this to...

Meaning of green cycle aspect

Current legislation (for general traffic):

- **RUR clause 3.2 Traffic signals in form of disc:**

(1) While a green signal in the form of a disc is displayed,—

(b) a driver facing the signal, including a driver turning left or right, must—

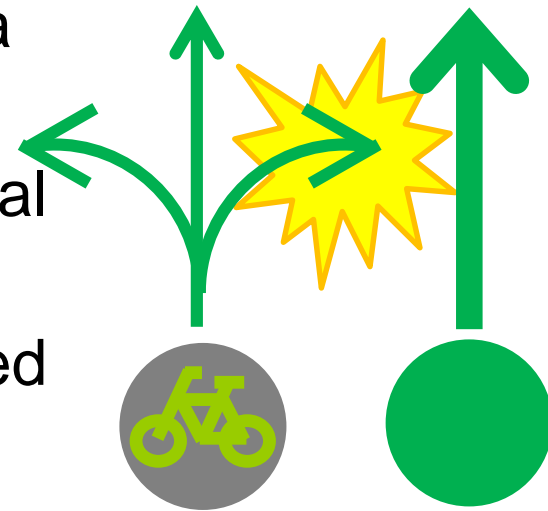
(iii) give way to motor vehicles and cycles lawfully proceeding straight ahead:

(c) a driver facing the signal and turning right must give way to vehicles approaching from the opposite direction and lawfully turning or about to turn left.”

Meaning of green cycle aspect

The issues:

- Cyclists may move in any direction when the green cycle aspect is displayed.
 - Green cycle aspect not equivalent to a green disc
 - Not understood by designers or general road users
 - Green cycle aspects are generally used in conjunction with green discs
 - Leads to a legal conflict as neither turning cyclists or through motorists are required to give way to one another



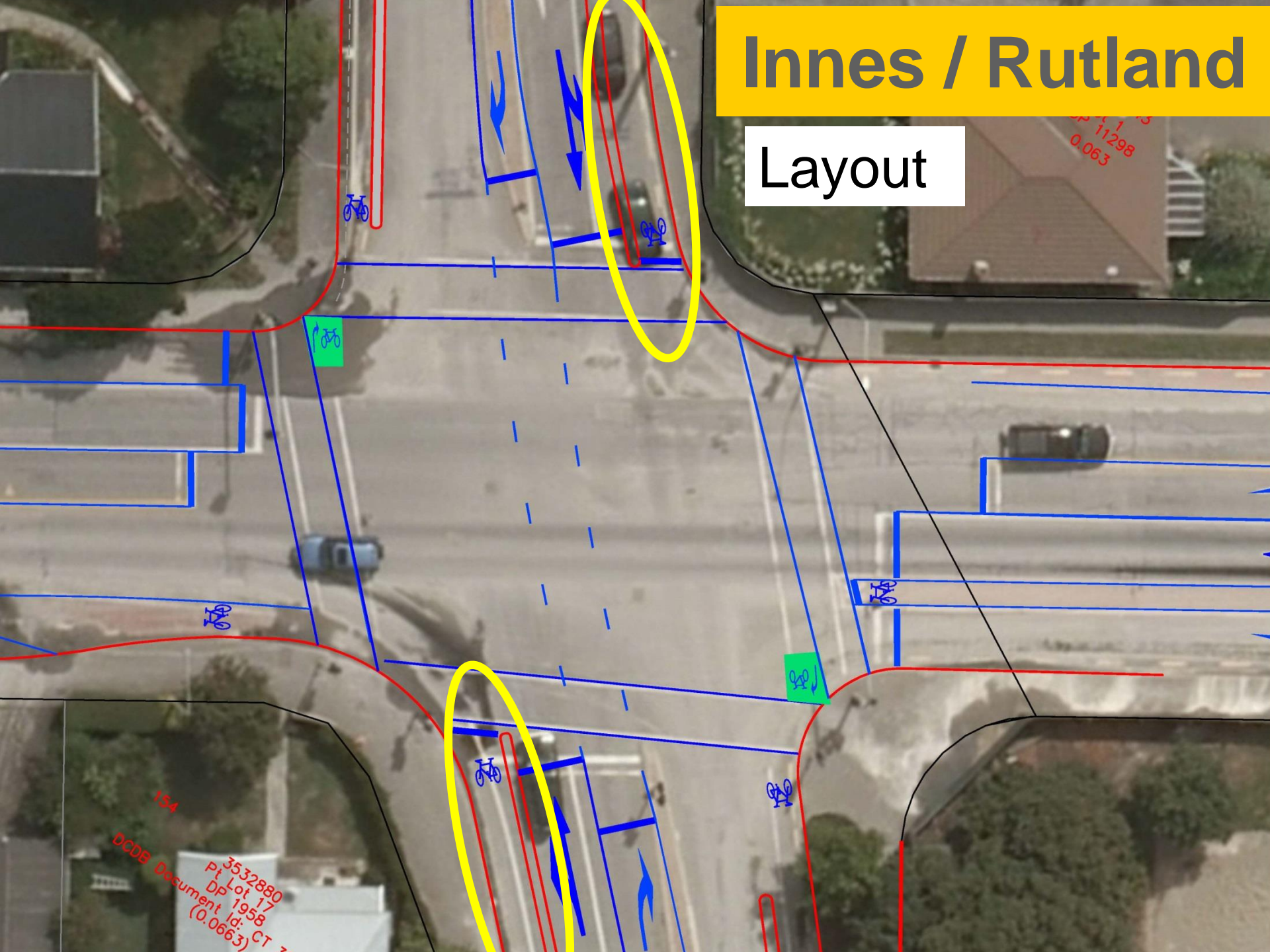
Meaning of green cycle aspect

The issues:

- Particularly relevant to kerbside SBFs where separate signals will be required for cyclists
 - e.g. Christchurch Major Cycle Route plans at Innes Road / Rutland Street:

Innes / Rutland

Layout

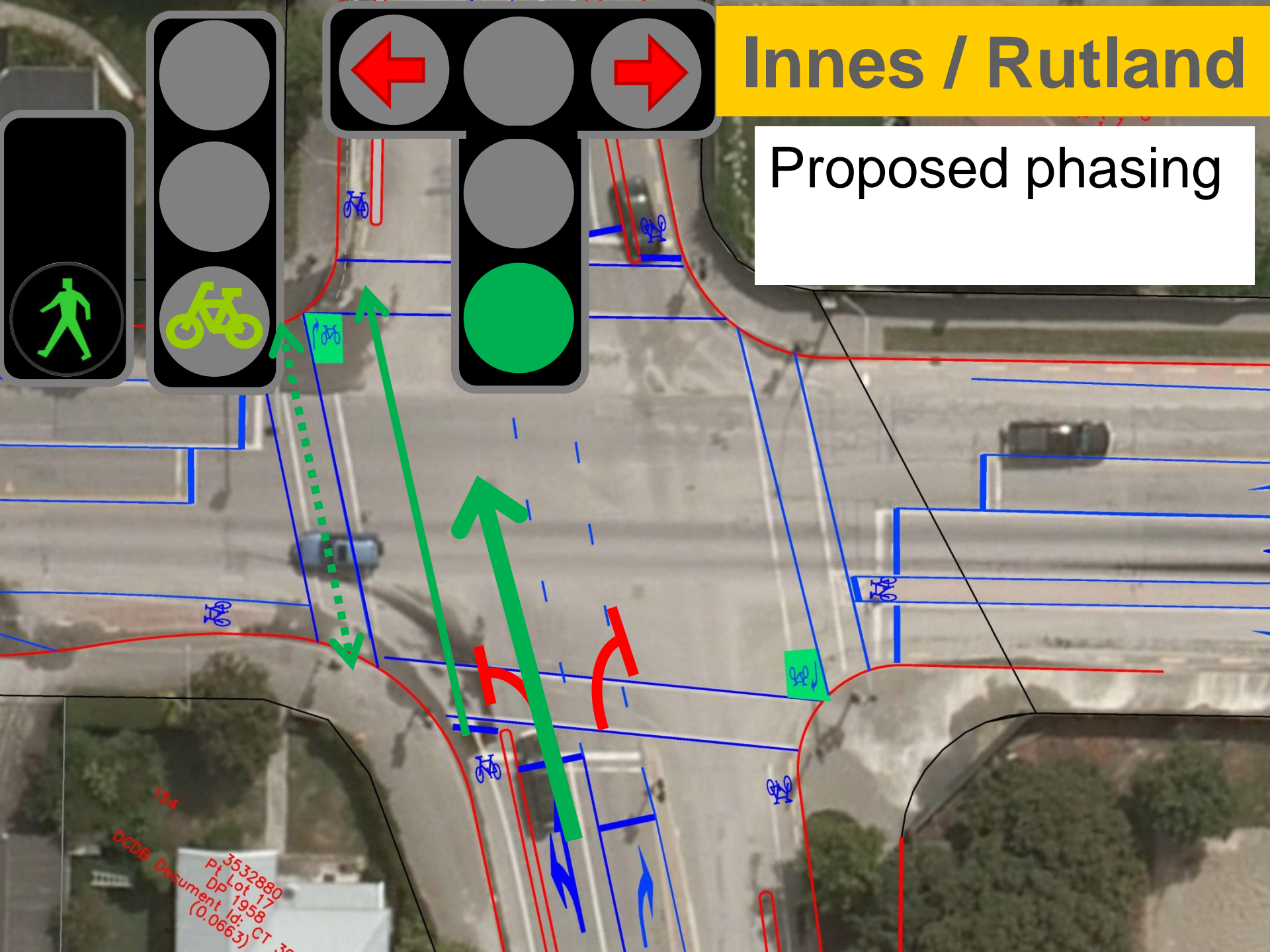


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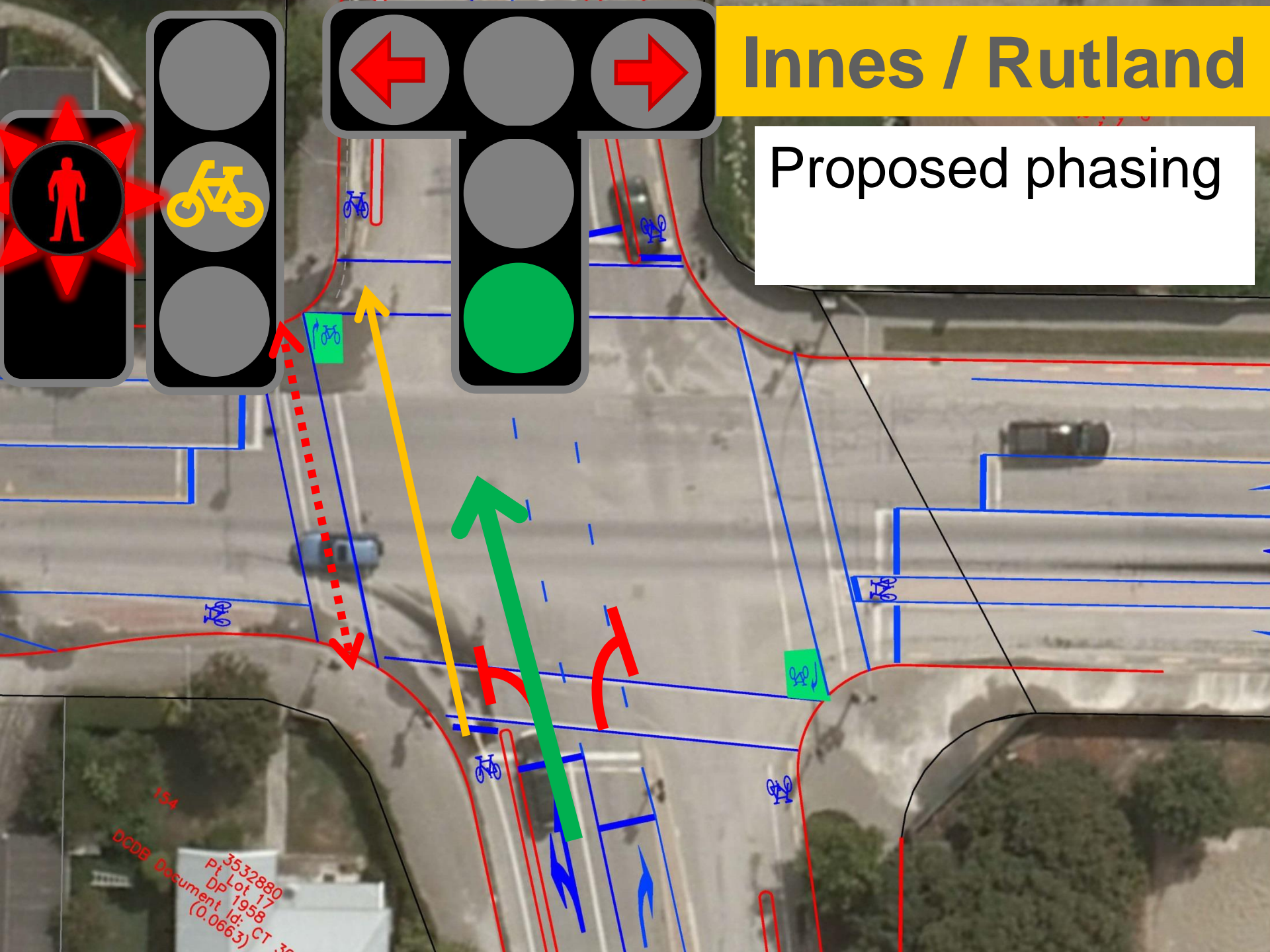
Innes / Rutland

Proposed phasing



Innes / Rutland

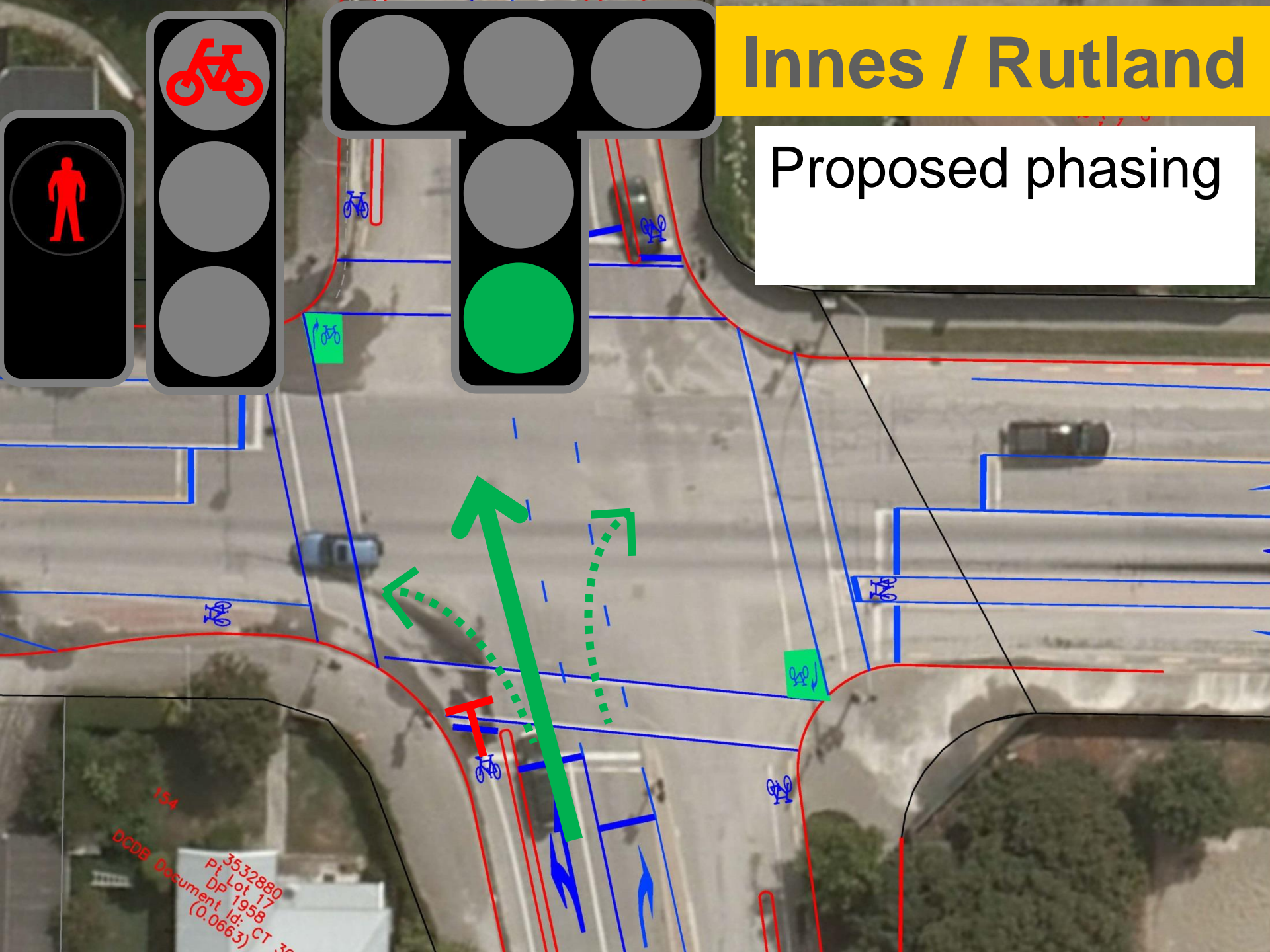
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Proposed phasing



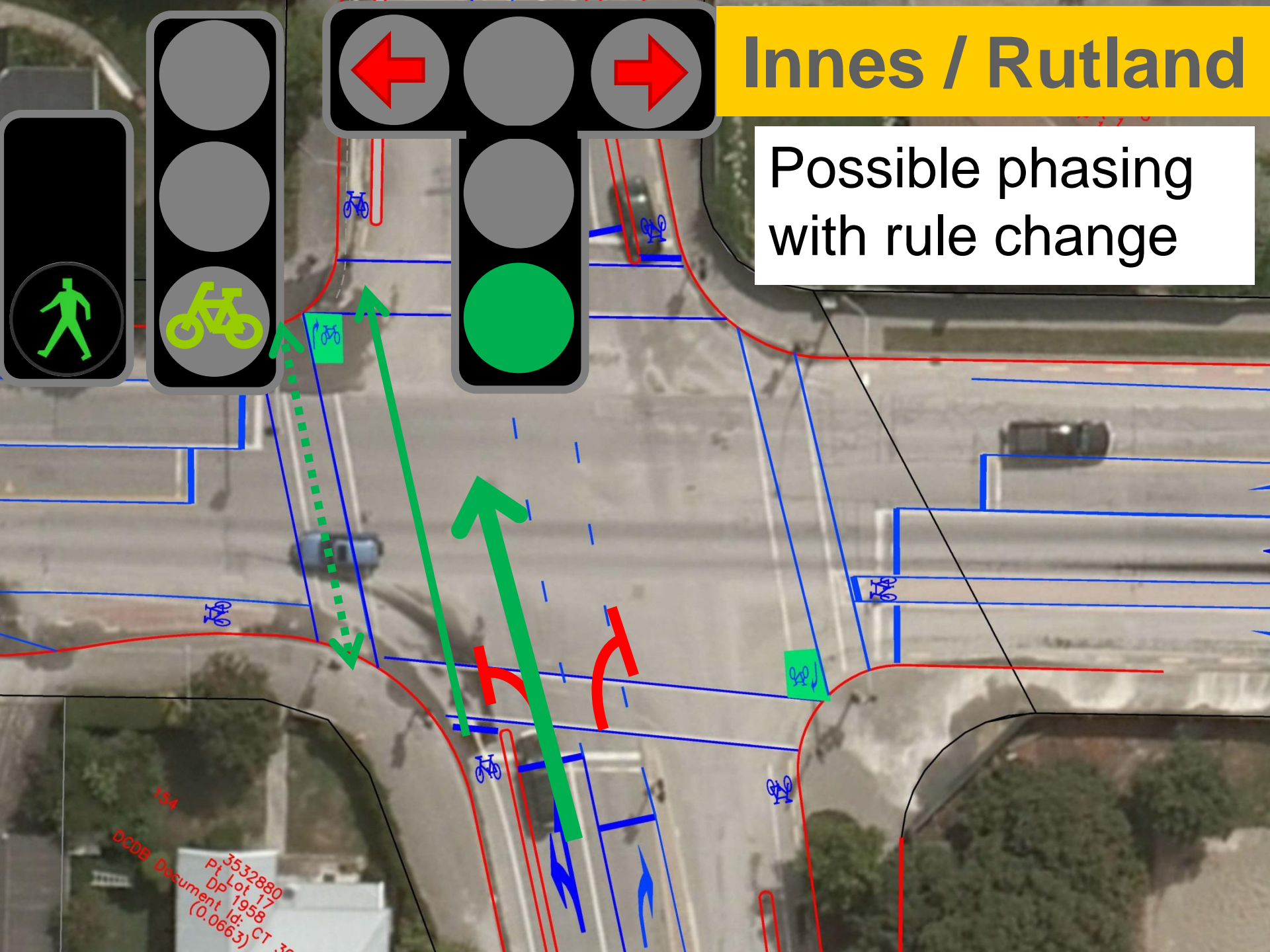
Meaning of green cycle aspect

Desired outcome:

- Definition of a green cycle aspect equivalent to that of 'full green'.
- In conjunction with redefinition of 'roadway', provide for filter turning of drivers
 - Would only be appropriate for low turning volumes
 - No experience in New Zealand what constitutes 'low'

Innes / Rutland

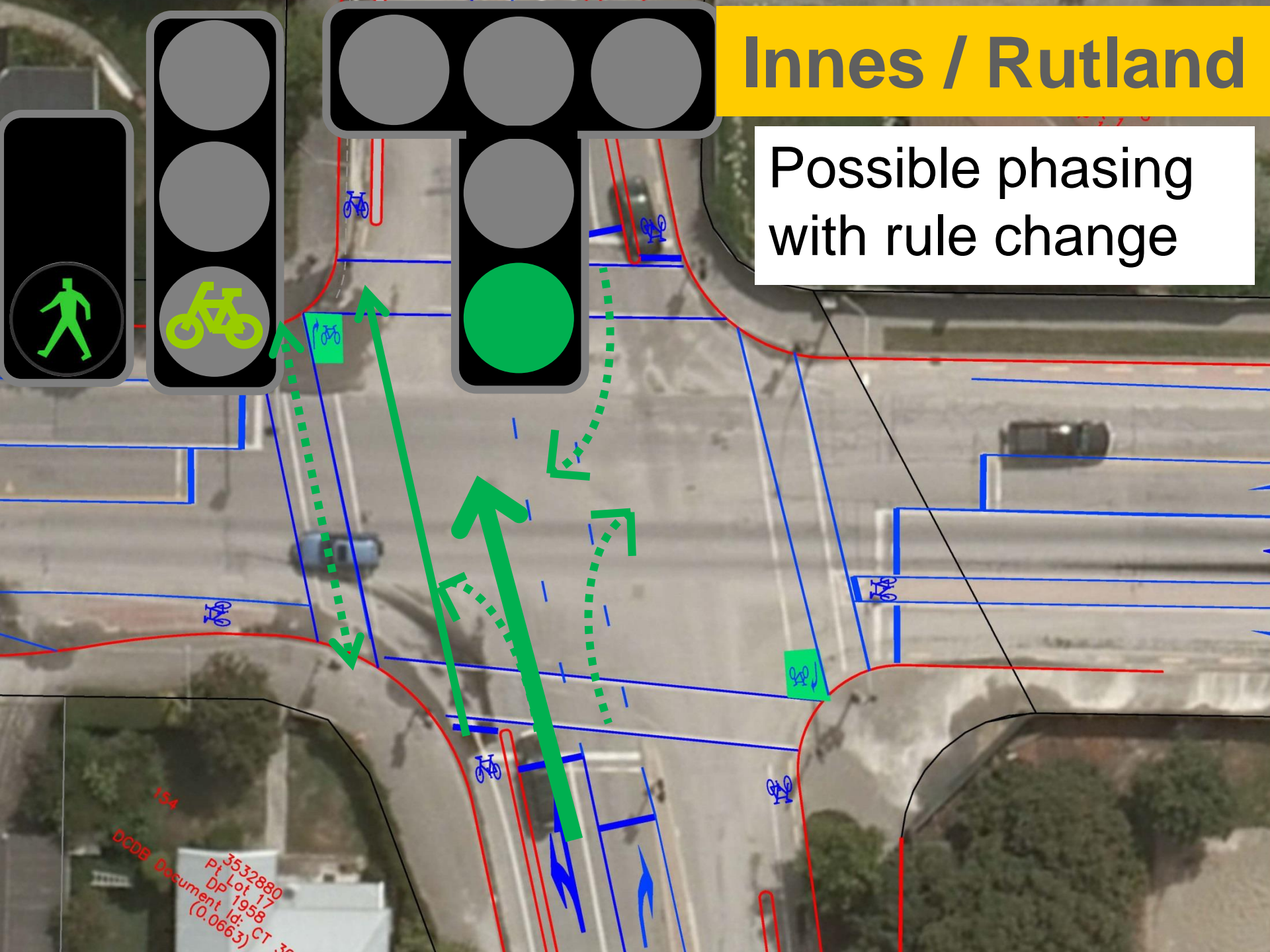
Possible phasing with rule change



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Possible phasing with rule change



Meaning of red cycle aspect

Current legislation:

- **RUR clause 3.7 Traffic signals in form of cycle symbol:**
 - (3) While a red cycle symbol is illuminated, cyclists must not enter the controlled area, but a cyclist may enter ahead of a marked vehicle limit line and stop behind a marked cycle limit line.

Meaning of red cycle aspect

The issue:

- Poor LOS to cyclists
 - Due to meaning of green cycle aspect
 - filter turning of vehicles through straight through cyclists cannot be accommodated
 - Left turning cyclists would not be in conflict
 - Other than with pedestrians
 - But still required to wait at a red light



Meaning of red cycle aspect

Desired outcome:

- Allow left turn on red for cyclists at kerbside SBFs
 - Much cheaper than physical works
 - e.g. cycle slip lanes, additional signals
 - Would legalise safe behaviour that will occur in spite of current legislation



Size of cycle signals

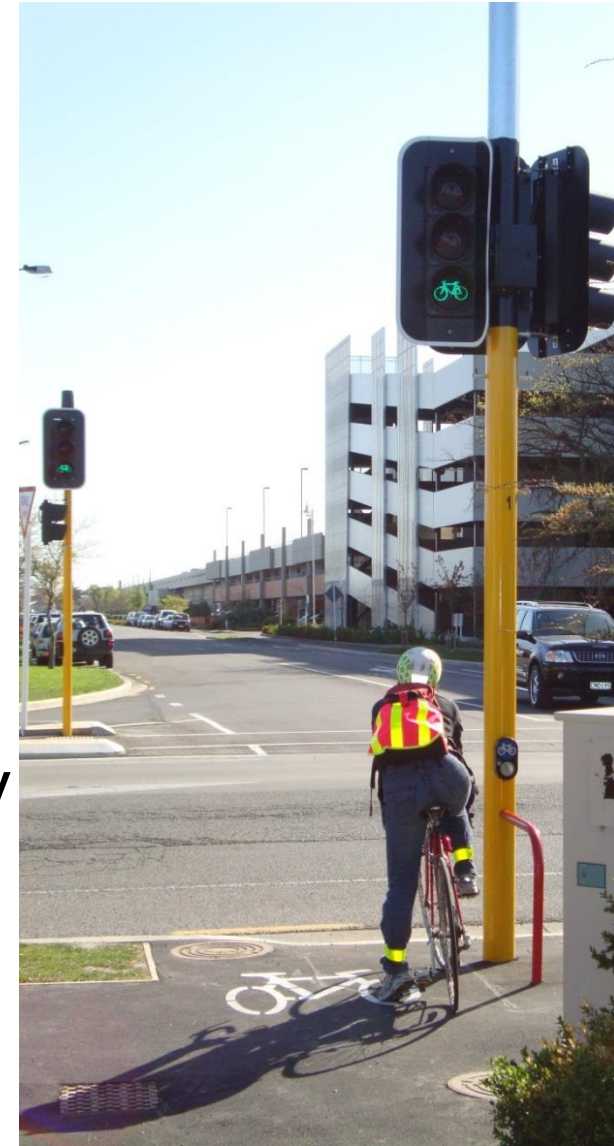
Current legislation:

- **Land Transport Rule: Traffic Control Devices Schedule 3 Traffic signals: S1 -**
Disc and arrow displays are shown to be at least 200 mm in diameter.

Size of cycle signals

The issues:

- Traffic signals for bicycles as large as signals for motorists
 - The physical size of the signals require them to be mounted above head height
 - Cannot be seen by cyclists at the limit line
 - Cyclists must look to secondary or tertiary signals



Size of cycle signals

Desired outcome:

- Flexibility of mounting small signals at eye height
 - common in European countries



Placement of cycle signals

Current legislation:

- **Land Transport Rule: Traffic Control Devices clause 6.2 Provision of traffic signals: *Mounting of signals***

(1A) For each approach, defined in 6.2(1), to the area controlled by traffic signals, the road controlling authority must install:

Placement of cycle signals

- (b) a traffic signal in a position that is visible to road users approaching the area controlled either:
- (i) adjacent to, and as close as practicable to the end of, the limit line where marked; or
 - (ii) where there is no limit line, at the point of entry to the area controlled; and
- (c) except for temporary traffic signals, at least one supplementary steady traffic signal in a position that is visible to road users stopped:
- (i) at the limit line where marked; or
 - (ii) where there is no limit line, at the point of entry to the area controlled.

Placement of cycle signals

The issues:

- Requires both primary and secondary placement
- Problems arise because the secondary cycle lanterns are visible to others.



Placement of cycle signals

Desired outcome:

- Flexibility of mounting small signals in the primary location only



Directional meaning for cycle signals

Current legislation:

- The current rules don't make any provision for this

The issue:

- There may be more than one movement available to cyclists
 - and these may apply at different times
- Need to provide a directional meaning to cycle signals

Problem example

- Diagonal crossing
 - Own phase
- Most cyclists want to continue straight ahead
 - And most do so when full green is displayed
 - Cycle aspect red at that time



Directional meaning for cycle signals

Desired outcome:

- The option of either:
 - including directional arrows in cycle aspects, or
 - mounting a supplementary arrow plate underneath or above a column of cycle aspects



Barnes dances for cyclists

Current legislation:

- **RUR clause 3.5: Traffic signals in form of standing or walking human figure**
 - (2) While a special signal for pedestrians indicates a green walking human figure symbol, pedestrians, riders of mobility devices, and riders of wheeled recreational devices may:
 - (a) if facing the signal, enter the roadway to cross towards the signal; and
 - (b) if a “Pedestrians May Cross Diagonally During Cross” sign is installed, enter the roadway to cross towards the signal or to the diagonally opposite corner of the controlled area.

Barnes dances for cyclists

The issues:

- Current legislation relating to Barnes dances applies to pedestrians only
- Bicycles are not included
 - Classed as “vehicles” under RUR



Barnes dances for cyclists

Desired outcome

- New rule to allow for cycle Barnes dances
 - Inclusion of pedestrians optional, not mandatory



Conclusions

- Multiple changes to current legislation required to enable SBF provision at signalised intersections
- Trials will be required



Thank you

- Questions & discussion please

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