

# Memorandum

<b>Attention:</b>	Rob Hillis	<b>File No.:</b>	A25-018
<b>Organization:</b>	City of West Kelowna	<b>Project:</b>	Gellatly Road Corridor Speeds
<b>Phone:</b>		<b>Date:</b>	March 11, 2025
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**RE: Gellatly Road Corridor Speeds**

## 1 Introduction

Align Engineering Ltd. (ALIGN) was retained by the City of West Kelowna to conduct an evaluation and provide recommendations for speed limits in the Gellatly Road corridor from Boucherie Road to Gellatly Road South and considerations for Gellatly Road South from Gellatly Road to the Heritage Park.

### 1.1 Background

Gellatly Road is classified as an arterial road and connects to Boucherie Road and Gellatly Road South to form a southeast parallel route to Highway 97. These arterial functions are constrained by the aesthetics of the area, tourism, and recreational waterfront access. Arterial roads are intended to provide mobility and limited access. They typically do not provide on-street parking. In the case of Gellatly Road, on-street parking and access are essential to provide public access to the waterfront and the many parks along the roadway making Gellatly Road a through route and a destination.

Currently, the road is posted for 50 km/h. Playground Area signs with yellow Advisory Speed (30 km/h) tab signs are installed on the southbound approach to the angled parking area and northbound north of Gellatly Road South. The City of West Kelowna has traditionally used Advisory Speed tab signs for playground zones, however these should be regulatory tab signs (black on white) to be enforceable. The use of the playground zones can also be contested as they need to meet certain criteria as per the Transportation Association of Canada (TAC) *School and Playground Areas and Zones: Guidelines for Application and Implementation*. This includes discouraging playground zones on arterial roads, where fully fenced, and where located greater than 50 metres from an intersection. Playground zone speeds are also only in effect from dawn to dusk as per the BC Motor Vehicle Act below:

#### 147 Schools and playgrounds

(2) A person driving a vehicle on a highway must drive the vehicle at a rate of speed not exceeding 30 km/h when approaching or passing, between dawn and dusk, a public playground for children where signs are displayed stating a speed limit of 30 km/h, or on which the numerals "30" are prominently shown.

Gellatly Road South provides other dynamics with vehicle speeds due to constrained road geometry between Gellatly Road and the Gellatly Heritage Regional Park.

The Gellatly Road and Gellatly Road South segments are characterised below and are labeled on **FIGURE 1**. These are discussed further in the following subsections.



Figure 1: Gellatly Road Segments

## 2 Gellatly Road Characteristics

Gellatly Road from Boucherie Road to Gellatly Road South typically has 3.3-m travel lanes and 1.2-m shoulders. The 3.3-m travel lanes should encourage slower vehicle speeds. The 1.2-m shoulders are signed with a Bike Route sign from Boucherie Road. This is less than the constrained bike lane width of 1.5 m. The 1.2-m bike lane width is the absolute minimum width of a curbside bicycle bike lane that should not extend past 100 metres in constrained areas as per the BC Active Transportation Design Guide.

## 2.1 Boucherie Road to CNR Wharf

The segment of Gellatly Road from Boucherie Road to CNR Wharf includes an auxiliary lane and transition for a northbound left-turn lane to the intersection with Boucherie Road then narrowing down to the typical cross-section. There is an informal perpendicular parking area that has formed adjacent to the Boucherie Road intersection in a shallow ditch (**FIGURE 2**). There is adjacent No Parking signage south of where the curb forms, but could be added to this location to restrict parking near the intersection. The parking may be problematic with pedestrian travel to/from the beach if they are crossing the road midblock where drivers do not expect them to cross. This condition will eventually be removed with the future roundabout and can be managed with No Parking signage in the interim.



**Figure 2: Informal Parking Area in Ditch Beside Boucherie Rd intersection**

Image Source: Google Street View, July 2023

## 2.2 CNR Wharf

The CNR Wharf provides perpendicular parking on the lake side requiring leaving or arriving vehicles to reverse into the roadway. This format supports parking from vehicles approaching from either the north or the south. Curb letdowns are provided on either side and at two accessible parking stalls in between. The shoulder has a 1.2 m offset from the painted parking stalls which are 7.0-m deep to the curb. Loading activities at the rear of vehicles and backing movements into Gellatly Road present potential for conflicts with through traffic.

## 2.3 CNR Wharf to Angle Parking

The CNR Wharf to the angle parking area of Gellatly Road returns to the typical cross-section. There are generally limited conflicts in here except between motor vehicles and cyclists. A retaining wall on the south end west side of the road through a horizontal curve restricts southbound sightlines (see **FIGURE 3**) to a 40 km/h stopping sight distance entering the angle parking area. Northbound sightlines still achieve a 50 km/h stopping sight distance.



**Figure 3: Southbound Sightline Constraint Entering Angle Parking Segment**

Image Source: Google Street View, July 2023

## 2.4 Angle Parking to Angus Dr

The angle parking section is located along the east side (lake side) of the road ending to the south at the Angus Drive intersection. This parking area supports parking northbound traffic. Angle parking also creates backing movements onto Gellatly Road and there is a 1.2-m offset from the shoulder line to the parking lines which are about 6.4-m deep to facilitate a 7.5-m angled parking stall. The additional depth provides more space for loading and unloading than what is available at the CNR Wharf, however this also presents a potential for conflicts with through traffic. There is a curb drop on the south end with by the two parallel parking accessible stalls. On the west side there is one private driveway accessing Gellatly Road and Kent Park at the south end.

## 2.5 Gellatly Rd & Angus Dr

The Gellatly Road & Angus Drive intersection returns Gellatly Road to its typical cross-section and features a marked and signed pedestrian crosswalk on the south leg of Gellatly Road. The horizontal curvature of the road and aboveground utilities on the east side of the road obscure southbound sightlines to the east side of the pedestrian crosswalk (see **FIGURE 4**). Reduced posted speeds would improve the sightline. Should pedestrian traffic crossing volumes be substantial enough, then the City should consider rapid rectangular flashing beacons.



Figure 4: Crosswalk Obscured on Left Southbound Approach

## 2.6 Angus Dr to Bridge

The section of Gellatly Road from Angus Drive south to the Powers Creek bridge supports east side parallel parking fronting the lake and open access to Willow Beach (no fencing). This allows pedestrians to move freely between the beach and roadside. On the west side there is an access for boat storage and rentals and an access to a gated subdivision at the Flying Horse Drive intersection. The boat storage site (4058 & 4066 Gellatly Road) has a redevelopment application [Water Colours proposed development) that has proposed 250 multi-family units with 16,800 square feet of commercial that could attract pedestrian traffic from the multi-use pathway and beachfront. A crosswalk at Flying Horse Drive has also been recommended to be provided with this proposed development. Vehicle access would be from the Flying Horse Drive intersection.

The cross-section changes around here toward the Powers Creek bridge pinching the northbound shoulder to 0.8 m and widening the travel lanes to 3.5-3.6 m. The pinch in the shoulder width and parking lane north of the bridge is shown in **FIGURE 5**. Adjusting pavement markings to maintain a consistent 3.2-m travel lane can give more space to the shoulder and reduce the risk of bike collisions from the narrowed shoulder.

Due to the open Willow Beach area, crossing opportunities, shoulder pinch point, and potential for pedestrian traffic to grow with development; this segment is considered higher risk and speeds should be managed.



Figure 5: Shoulder & Parking Stall Alignment @ Powers Creek Bridge

## 2.7 Bridge to Boat Launch

The Gellatly Road Boat Launch section has the activity of the vehicle aligning and reversing boat trailers and exiting to the north and south for the launch and yacht club. The maneuvers typically do not cross in and out of the roadway until exiting the boat launch.

## 2.8 Boat Launch to Gellatly Road South

The segment of Gellatly Road from south of the boat launch to Gellatly Road South has on-street parking on the west side of the roadway supporting parking for vehicles with boat trailers existing from the boat launch. The entrance to the Yacht Club and boat launch are to the south of the boat launch exit. At the north side of Marina Park is a midblock marked and signed crosswalk complete with pedestrian activated rectangular rapid flashing beacons (RRFBs). Persons parked on the west side need to use the 1.2-m shoulder to walk to the crossing point. Many persons will not walk out of their way to a crossing if they have to back track unless there is heavy traffic without sufficient gap. Marina Park has some angle parking fronting the lakeside with a 1.2-m clear shoulder from the back of the parking stalls. South of Marina Park, there are numerous residential driveways along the east side of the roadway creating backing maneuvers over Gellatly Road and the Gellatly Bay Recreational Corridor.

### 3 Gellatly Road South

Gellatly Road South between Gellatly Road and the Heritage Park consists of three (3) sections outlined below.

#### 3.1 Gellatly Rd to Whitworth Rd

The segment of Gellatly Road South from Gellatly Road to Whitworth Road features two travel lanes with parallel parking on the south side with boulevard and sidewalk. The north side has power poles located in the roadway shoulder abutted by agricultural property. The parallel parking supports traffic calming for eastbound traffic. The power poles present a collision risk to westbound traffic and should be marked with TAC WA-36R Object Marker Right signs.



#### 3.2 Whitworth Rd to Glen Canyon Regional Park

The section of Gellatly Road South from Whitworth Road to Glen Canyon Regional Park is narrow and winding along Power's Creek to the north. Power poles shift to the south side of the road and remain in the roadway shoulder and clear zone. Poles can be marked with Object Marker signs while they remain a hazard. The winding road has a 30 km/h advisory sign and the City has introduced barriers and checkerboard signage at the most adverse curve between the creek and the Byland Nursery. In the eastbound direction, the initial curve warning sign is placed far back from the curve (~80m). This is too far away and should be located approximately 40 m from the curve. The sign is also aged and needs to be replaced to ensure required retroreflectivity levels are met.



Figure 6: Curve Warning with Advisory Speed Located Far from Curve

### 3.3 Glen Canyon Regional Park to Gellatly Heritage Regional Park

Gellatly Road South widens to provide bike lanes and a north side sidewalk from Glen Canyon Regional Park to the Gellatly Heritage Regional Park. The horizontal curve has a radius of about 73 m with a 2% crossfall not meeting TAC requirements for a 50 km/h road and should have a Curve Warning sign (WA-3R/L) as it is only sufficient to 40 km/h. Since tangents between curves exceed 120 m, the curve warning sign should be installed on either side of the curve 25 m in advance of the curve.



## 4 Collision Data

ICBC collision data from 2019 to 2023 is summarized in **TABLE 1**. The intersection of Gellatly Road & Boucherie Road has a high proportion of casualty collisions. There was one casualty collision between Boucherie Road and Angus Drive, but the details of which are not available at the time of this review. There were no collisions in the winding road section of Gellatly Road South adjacent to Powers Creek.

**Table 1: ICBC 2019 to 2023 Collision Data**

Location	Collisions		
	PDO	Casualty	Total
Gellatly Rd & Boucherie Rd	18	20	38
Gellatly Rd Segment 2.3 Wharf to Angular Parking	0	1	1
Gellatly Rd Segment 2.5 Angus Dr to Bridge	2	0	2
Gellatly Rd Segment 2.8 Boat Launch to Gellatly Road S	1	0	1
Gellatly Rd & Gellatly Rd S	1	0	1
Gellatly Rd S & Whitworth Rd	1	0	1

Note: PDO – Property Damage Only collision

## 5 Signage Approach

Playground areas and zones should be implemented as per the TAC Guide. Playground zones (requiring a reduction in speed) must have regulatory tab signs (black on white) to be enforceable. The TAC Guide does not account for amenities like beaches and will typically not warrant a playground zone along an arterial roadway. Therefore, any reduction in speed along Gellatly Road, should be managed with a standard regulatory posted speed limit sign.

Reducing the speed too much may not ensure compliance. Consider focusing on highest risk areas and expanding from there. Road users also expect Gellatly Road to fulfill an arterial connection, but its adjacent land uses, built form, and operations justify a lower speed limit. There are limited tools to traffic calm arterial roads and speed enforcement remains an important tool for speed compliance. The Goat's Peak development traffic will be attracted to travel through this area, particularly outside of peak recreation times.

Sections with parked vehicles and higher presence of road user activity should typically calm traffic. This is supported by relatively narrow vehicle lanes. Repeated posted speed limit signage, driver feedback signs, and enforcement should be used to reinforce the speed limit.

Potential for densification on west side of lake and bottom floor commercial to evolve in the area overtime. This could generate more pedestrian demand including midblock crossings.

## 6 Summary & Recommendations

A review of the Gellatly Road corridor from Boucherie Road to Gellatly Road South is summarized into the following points:

- The 1.2-m shoulder along Gellatly Road is insufficiently wide to support cycling or pedestrian activity. Due to the constraints in width, it is not expected for this to get wider or substantially change.
- Existing sightlines are constrained for 50 km/h in certain areas, however they meet a 40 km/h posted speed limit.
- Reducing the posted speed limit on Gellatly Road would support:
  - Narrow shoulders used for biking, pedestrians (in some areas), and loading activities from parked vehicles.
  - Reversing manoeuvres from parking stalls and driveways.
  - Pedestrian crosswalks.
  - Uncontrolled midblock pedestrian crossings between west side parking stalls and water front.
  - Gellatly boat launch activity.
  - Restricted sight lines by Angus Drive and the retaining wall north of the angle parking.
  - Future higher density and commercial development on the far side of the lake.
- The future roundabout at Boucherie Road & Gellatly Road would provide a traffic calmed gateway into the Gellatly Road corridor, further supporting reduced speeds entering the road segment.

The review of Gellatly Road South from Gellatly Road to the Gellatly Heritage Regional Park is summarized into the following points:

- Power poles by the road side should be signed with retroreflective WA-36R object markers. Some of these are inline with the vehicle path through the winding alignment.
- The tight horizontal curve between the Glen Canyon Regional Park access should relocate and replace the initial eastbound Curve Warning and Advisory Speed tab closer to the curve.
- The horizontal curve between Glen Canyon Regional Park and Gellatly Heritage Regional Park needs a Curve Warning sign as its horizontal radius is not sufficient to 50 km/h.

It is recommended that the City:

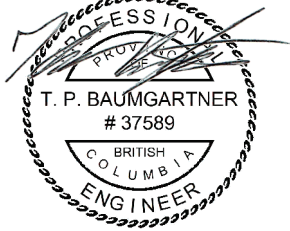
- 1) Reduce posted speed limits to 40 km/h on Gellatly Road from Boucherie Road to Gellatly Road South.
- 2) If considering lower speed sections on Gellatly Road of 30 km/h, prioritize the following based on risk and activity:
  - a) Boat Launch to Gellatly Road S due to midblock pedestrian movements, driveways, Marina Park, etc.
  - b) Angus Drive to Boat Launch considering open Willow Beach access to roadside. Consider supplemental markings of 30 km/h similar to Peachland Beach Avenue.
- 3) Repeat posted speed limits north and south of Angus Drive by Willow Beach.
- 4) Restrict parking in informal area adjacent to Boucherie Road intersection.

- 5) Repaint longitudinal lines in the vicinity of the Powers Creek bridge to narrow the travel lanes to be consistent with the 3.2-m lanes throughout and add width to shoulders to maintain the minimum of 1.2-m provided throughout.
- 6) Install WA-36R Object Marker signs on Gellatly Road South power poles
- 7) Replace eastbound Gellatly Road South Curve Warning (WA-3R/L) and Advisory Speed (WA-7S [30]) tab sign approaching the tight horizontal curve after the Glen Canyon Regional Park access about 40 m from the start of the curve.
- 8) Install Curve Warning (WA-3R/L) signs on Gellatly Road South for the horizontal curve between Glen Canyon Regional Park and Gellatly Heritage Regional Park.

Please contact me at 250-870-3865 if there are any questions or comments. Thank you.

Sincerely,

**Align Engineering Ltd**



2025-03-11  
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Permit to Practice Number: 1000340