

MEMORANDUM

Date: February 1, 2017

Project #: 19252

To: Jabra Khasho, PE, & Ken Rencher, City of Beaverton
Dan Grimberg, West Hills
Mike Peebles, PE, OTAK

From: Julia Kuhn, PE

Project: Lolich/Bellairs Property

Subject: Estimated Volumes for Streets B, C and D

West Hills Land Development (herein referred to as “West Hills”) is proposing to develop up to 110 single family homes and up to 200 multifamily units on the Lolich/Bellairs property, located northeast of the SW Scholls Ferry Road/SW Strobel Road/SW Vandermost Road intersection. One existing home on the property will remain in-place after neighborhood development. Construction, completion, and occupancy of the single family homes is scheduled for 2018 but development of the 200 multifamily units will occur at a later date. A Planned Unit Development (PUD) application is being submitted for both the single family homes and multifamily dwellings at this time.

As part of development of the single family home portion of the PUD, West Hills is proposing to construct Street B, Street C and Street D consistent with the City of Beaverton’s L2 Local Street Standard (as shown in Drawing 103 of the City’s *Engineering Design Manual and Standard Drawings*). The L2 cross-section is applicable for streets anticipated to carry less than 500 vehicles per day. As such, the enclosed memorandum provides an estimate of the average daily traffic on these three roadways and demonstrates that the use of an L2 standard is appropriate for all three.

Street Context

Attachment “A” illustrates the streets proposed to serve the homes proposed within the PUD area. For reference purposes, the attachment also illustrates a conceptual development plan for the property immediately to the west (bounded by SW Tile Flat Road and SW Scholls Ferry Road).

We've addressed the traffic impacts associated with the Lolich/Bellairs property area in a report submitted to City of Beaverton and Washington County staff in February 2017. Per this report, all access to the PUD will occur via the SW Strobel Road/SW Vandermost Road/SW Scholls Ferry Road intersection until such time that the planned east-west collector is extended from the eastern Lolich/Bellairs property to SW Scholls Ferry Road to the east of Mountainside High School. The traffic volumes on some of the segments of Streets B, C and D may slightly decrease (compared to interim initial full build-out conditions) when the collector is extended to the east. The potential volume reduction is anticipated because Streets B, C and D connect to both SW Strobel Road and the east-west collector and site trips are likely to distribute more evenly between the two east-west connections for access to SW Scholls Ferry Road. Therefore, for the purposes of estimating ADTs, the interim access configuration represents the most conservative estimate of ADT on Streets B, C and D.

Although no development is proposed at this time, OTAK, on behalf of West Hills has prepared a conceptual development plan for the Bierly Property immediately to the west. Per this plan, the property could include 787 single family and 236 multifamily homes. Per the South Cooper Mountain Plan (SCM), this property would include a series of streets that connect to SW Tile Flat Road and SW Strobel Road. In addition, per the SCM Plan, the neighborhood route and east-west collector that will be constructed as part of the Lolich/Bellairs property development will extend through the Bierly property as well.

Traffic Volume Estimates

The estimated trip generation for the two neighborhoods is shown in Table 1. The trip generation calculations are based on the rates included in the *Trip Generation Manual*, 9th Edition (Institute of Transportation Engineers, 2012).

Table 1. Estimated Neighborhood Trip Generation

	ITE Code	Dwelling Units	Total Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total Trips	In	Out	Total Trips	In	Out
<i>Lolich/Bellairs Property</i>									
Single Family	210	110	1,048	83	21	62	110	69	41
Multi-Family	220	200	1,330	102	20	82	124	81	43
Total		310	2,378	185	41	144	234	150	84
<i>Bierly Property</i>									
Single Family	210	787	7,492	590	148	442	787	496	291
Multi-Family	220	236	1,570	120	24	96	146	95	51
Total		1,023	9,062	710	172	538	933	591	342
<i>Total Both Neighborhoods</i>									
Total		1,333	11,440	895	213	682	1,167	741	426

Estimated Average Daily Traffic (ADT)

Based on the estimated trip generation and the potential street systems that will be constructed within the neighborhoods, we estimate that the traffic volumes for Streets B, C and D within the Lolich/Bellairs property as follows:

- *Street B* – eight of the proposed homes on site will have driveway access to Street B while additional homes to the south will connect to the roadway via alley loading to the south and/or street connections to the east. It is estimated that Street B will provide direct access to approximately 20 single family homes with connections to both SW Strobel Road and Street A. Street B will extend west into the Bierly Property but will not extend east of Street A. Given this easterly terminus, no traffic from the Bierly Property would reasonably use this segment of the street. Assuming all 20 homes use SW Strobel Road to access SW Scholls Ferry Road via Street B, the daily traffic volumes would be 190 vehicles per day (20 homes * 9.52 trips per home) just east of SW Strobel Road. As such, Street B meets the City of Beaverton's L2 Local Street Standard (as shown in Drawing 103 of the City's *Engineering Design Manual and Standard Drawings*) ADT criteria (i.e., less than 500 vehicles per day).
- *Street C* – this street will provide direct driveway access to approximately 14 single family homes along Street C as well as potentially 5 – 6 homes on Street A. Like Street B, Street C will extend west into the Bierly Property but will not extend east of Street A. Given this easterly terminus, no traffic from the Bierly Property would reasonably use this segment of the street. Assuming 20 homes use SW Strobel Road to access SW Scholls Ferry Road via Street C, the daily traffic volumes would be 190 vehicles per day (20 homes * 9.52 trips per home) just east of SW Strobel Road. As such, Street C meets the City of Beaverton's L2 Local Street Standard (as shown in Drawing 103 of the City's *Engineering Design Manual and Standard Drawings*) ADT criteria (i.e., less than 500 vehicles per day).
- *Street D* – this street will provide direct driveway access to approximately 35 single family homes with connections to both SW Strobel Road and Street A. Street D is not anticipated to extend west into the Bierly Property and will terminate in a cul-de-sac on the east end. Therefore, no traffic from the Bierly Property would reasonably use Street D. Assuming all 35 homes use SW Strobel Road to access SW Scholls Ferry Road via Street D, the daily traffic volumes would be 334 vehicles per day (35 homes * 9.52 trips per home) just east of SW Strobel Road. As such, Street D also meets the City of Beaverton's L2 Local Street Standard (as shown in Drawing 103 of the City's *Engineering Design Manual and Standard Drawings*) ADT criteria (i.e., less than 500 vehicles per day).

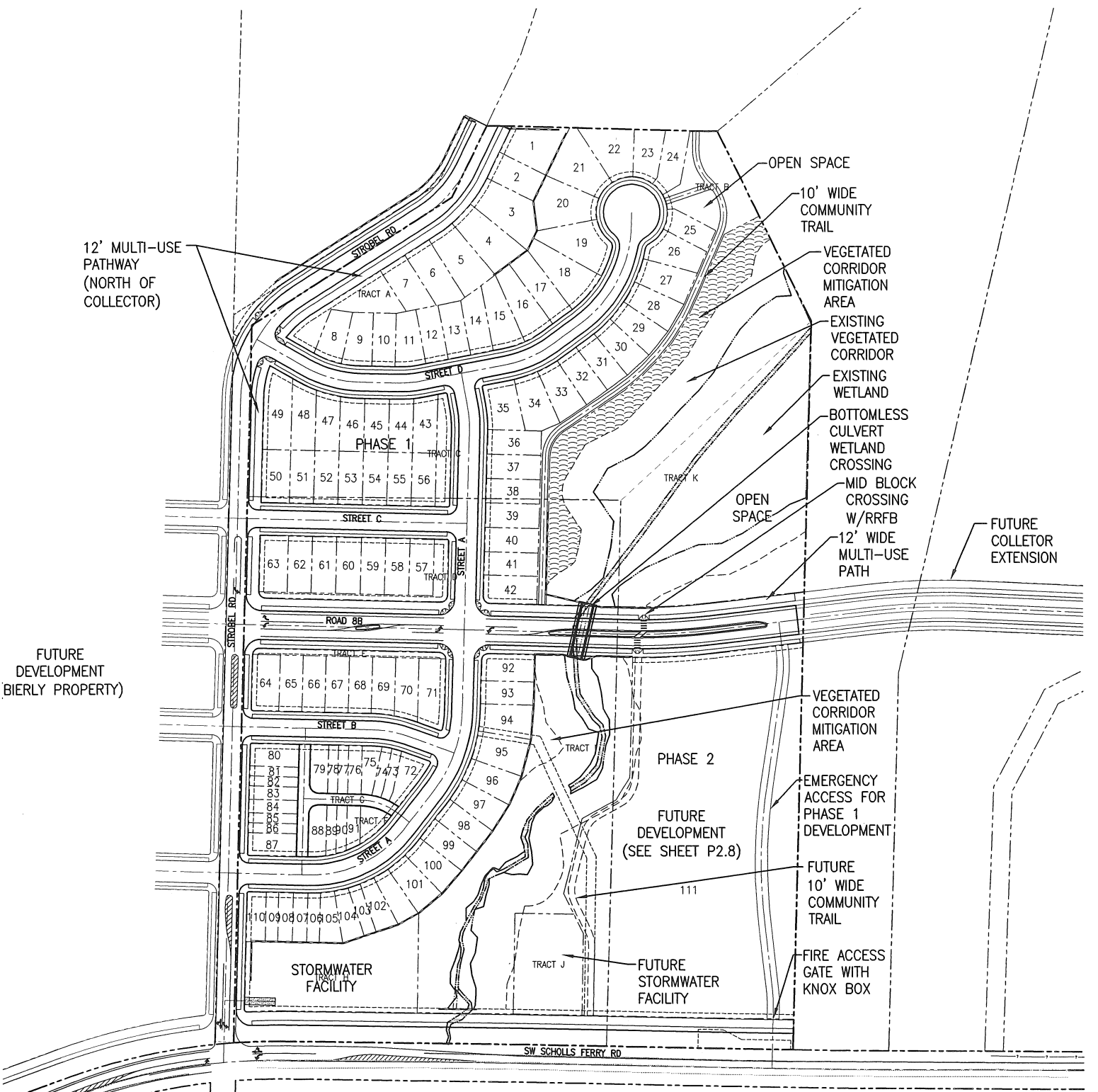
Conclusions

Based on the above analysis, Streets B, C and D within the Lolich/Bellairs property meet the City of Beaverton's L2 Local Street Standard (as shown in Drawing 103 of the City's *Engineering Design Manual and Standard Drawings*) ADT criteria (i.e., less than 500 vehicles per day). Please let us know if you have any additional questions.

Attachments

Appendix A: Lolich/Bellairs Site Plan
Conceptual Development Plan for the future Bierly Property development

Appendix A Site Plans



12' MULTI-USE PATHWAY (NORTH OF COLLECTOR)

FUTURE DEVELOPMENT (BIERLY PROPERTY)

OPEN SPACE

10' WIDE COMMUNITY TRAIL

VEGETATED CORRIDOR MITIGATION AREA

EXISTING VEGETATED CORRIDOR

EXISTING WETLAND

BOTTOMLESS CULVERT WETLAND CROSSING

OPEN SPACE

MID BLOCK CROSSING W/RRFB

12' WIDE MULTI-USE PATH

FUTURE COLLECTOR EXTENSION

VEGETATED CORRIDOR MITIGATION AREA

EMERGENCY ACCESS FOR PHASE 1 DEVELOPMENT

FUTURE 10' WIDE COMMUNITY TRAIL

FIRE ACCESS GATE WITH KNOX BOX

PHASE 2

FUTURE DEVELOPMENT (SEE SHEET P2.8)

STORMWATER FACILITY

FUTURE STORMWATER FACILITY

SW SCHOLLS FERRY RD

