LSC TRANSPORTATION CONSULTANTS, INC.

1889 York Street
Denver, CO 80206
(303) 333-1105
FAX (303) 333-1107
E-mail: lsc@lscdenver.com

April 2, 2020

Mr. Bryan Bylar
Pacific North Enterprises, LLC
900 Castleton Road, Suite 118
Castle Rock, CO 80109

Re: Argenta 2
Trip Generation
Compliance Letter
Aurora, CO
LSC #170201

Dear Mr. Bylar:

Per your request, we have completed this trip generation compliance letter for the proposed Argenta 2 development in Aurora, Colorado. This site was previously studied in the April, 2019 *Argenta Traffic Impact Analysis* (TIA) by LSC. The location of the site is shown in Figure 1.

**INTRODUCTION**

The purpose of this letter is to estimate the trip generation potential for the currently proposed land use for comparison to the approved land use from the TIA and to discuss traffic circulation.

**LAND USE AND ACCESS**

The current plan includes 182 apartment units, 86 townhome units, and 35,500 square feet of retail space as shown in the site plan in Figure 2. The proposed access points are consistent with the TIA.

**TRIP GENERATION**

Table 1 shows the estimated average weekday, morning peak-hour, and afternoon peak-hour trip generation for the proposed site based on the rates from Trip Generation, 10th Edition, 2017 by the Institute of Transportation Engineers (ITE) for the proposed land use.

The site is projected to generate about 652 additional vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 29 fewer vehicles would enter and about 6 fewer vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:30 p.m., about 33 additional vehicles would enter and about 24 additional vehicles would exit the site. About 34 percent of these trips are expected to be pass-by trips based on the *ITE Trip Generation Handbook,* 3rd Edition.

**SITE CIRCULATION**

Figure 3 shows the proposed circulation plan.

**PEDESTRIAN CONNECTIVITY**

Figure 2 shows the main north/south and east/west roadways through the site have on-street parking sheltered by bump-outs to reduce the pedestrian crossing distance. The planned traffic signal at Havana Street/E. 4th Way will include pedestrian crossings of both streets to connect the proposed retail uses with the properties east of Havana Street.

**IMPACT OF TRIP GENERATION POTENTIAL**

The proposed full movement access aligning with E. 4th Way is planned to be signalized which will accommodate the increase in daily and afternoon peak-hour trips. The TIA identified the most sensitive characteristic of the proposed traffic signal is the projected afternoon peak-hour queue back into the site from the eastbound left-turn movement. The TIA findings resulted in a redesign of the west leg of the traffic signal to reduce the likelihood of queuing issues. The increase in afternoon peak-hour trip generation of about 24 vehicles will result in the eastbound left-turn peak-hour volume increasing from about 75 vehicles to about 86 vehicles. This will result in one additional vehicle making the eastbound left-turn movement every second or third traffic signal cycle. This is expected to have minimal impact on the operations identified in the TIA.

**CONCLUSION**

The impact of the proposed Argenta 2 development can be accommodated by the existing roadway network with the recommendations of the TIA.

* * *

We trust this information will assist you in planning for the proposed Argenta 2 development.

Respectfully submitted,

LSC Transportation Consultants, Inc.

COLORADO LICENSED CHRISTOPHER S. McGRANAHAN 39018 PROFESSIONAL ENGINEER

By:_____
Christopher S. McGranahan, P.E., PTOE

CSM/wc

4-2-20

Enclosures: Table 1
Figures 1 - 3

W:\LSC\Projects\2017\170201-ArgentaPhase2\Report\Argenta-040220.wpd

# Table 1
# ESTIMATED TRAFFIC GENERATION COMPARISON
# Argenta 2
# Aurora, CO
# LSC #170201; April, 2020

| | | | Trip Generation Rates[1] | | | | | Vehicle-Trips Generated | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Average | AM Peak-Hour | | PM Peak-Hour | | Average | AM Peak-Hour | | PM Peak-Hour | |
| Trip Generating Category | Quantity | | Weekday | In | Out | In | Out | Weekday | In | Out | In | Out |
| **LAND USE APPROVED WITH APRIL, 2019 TIA BY LSC** | | | | | | | | | | | | |
| | | | | | | | Total Trips = | 3,950 | 77 | 101 | 170 | 158 |
| | | | | | | | Primary Trips = | 3,266 | 74 | 98 | 142 | 130 |
| **CURRENTLY APPROVED OR PROPOSED LAND USE** | | | | | | | | | | | | |
| **Phase I** | | | | | | | | | | | | |
| Townhomes [2] | 86 | DU [3] | 7.15 | 0.110 | 0.367 | 0.372 | 0.219 | 615 | 9 | 32 | 32 | 19 |
| **Phase II** | | | | | | | | | | | | |
| Apartments [4] | 168 | DU | 5.44 | 0.094 | 0.266 | 0.268 | 0.172 | 914 | 16 | 45 | 45 | 29 |
| **Phase III** | | | | | | | | | | | | |
| Apartments [2] | 14 | DU | 7.15 | 0.110 | 0.367 | 0.372 | 0.219 | 100 | 2 | 5 | 5 | 3 |
| Shopping Center [5] | 35.50 | KSF [6] | 83.74 | 0.583 | 0.357 | 3.414 | 3.699 | 2,973 | 21 | 13 | 121 | 131 |
| | | | | | | | Total Phase III = | 3,073 | 23 | 18 | 126 | 134 |
| | | | | | | | **Total =** | **4,602** | **48** | **95** | **203** | **182** |
| | | | | | | | **Pass-By Trips [7] =** | **1,011** | **6** | **6** | **43** | **43** |
| | | | | | | | **Primary Trips =** | **3,591** | **42** | **89** | **160** | **139** |
| | | | | | | | **Net Increase in Total Trips =** | **652** | **-29** | **-6** | **33** | **24** |
| | | | | | | | **Net Increase in Primary Trips =** | **325** | **-32** | **-9** | **18** | **9** |

Notes:

(1) Source: *Trip Generation*, Institute of Transportation Engineers, 10th Edition, 2017.
(2) ITE Land Use No. 220 - Multifamily Housing (Low-Rise) - formula rates based on 100 dwelling units
(3) DU = Dwelling Unit
(4) ITE Land Use No. 221 - Multifamily Housing (Mid-Rise) - formula rates for daily trips and average rates for peak hour trips
(5) ITE Land Use No. 820 - Shopping Center - formula rates for daily trips and PM peak hour, average rates for AM peak hour
(6) KSF = 1,000 square feet
(7) Pass-by trip percentages are based on the *Trip Generation Handbook* with 34% assumed for Shopping Center use.


Figure 1

# Vicinity Map

Argenta Phase 2 (LSC #170201)

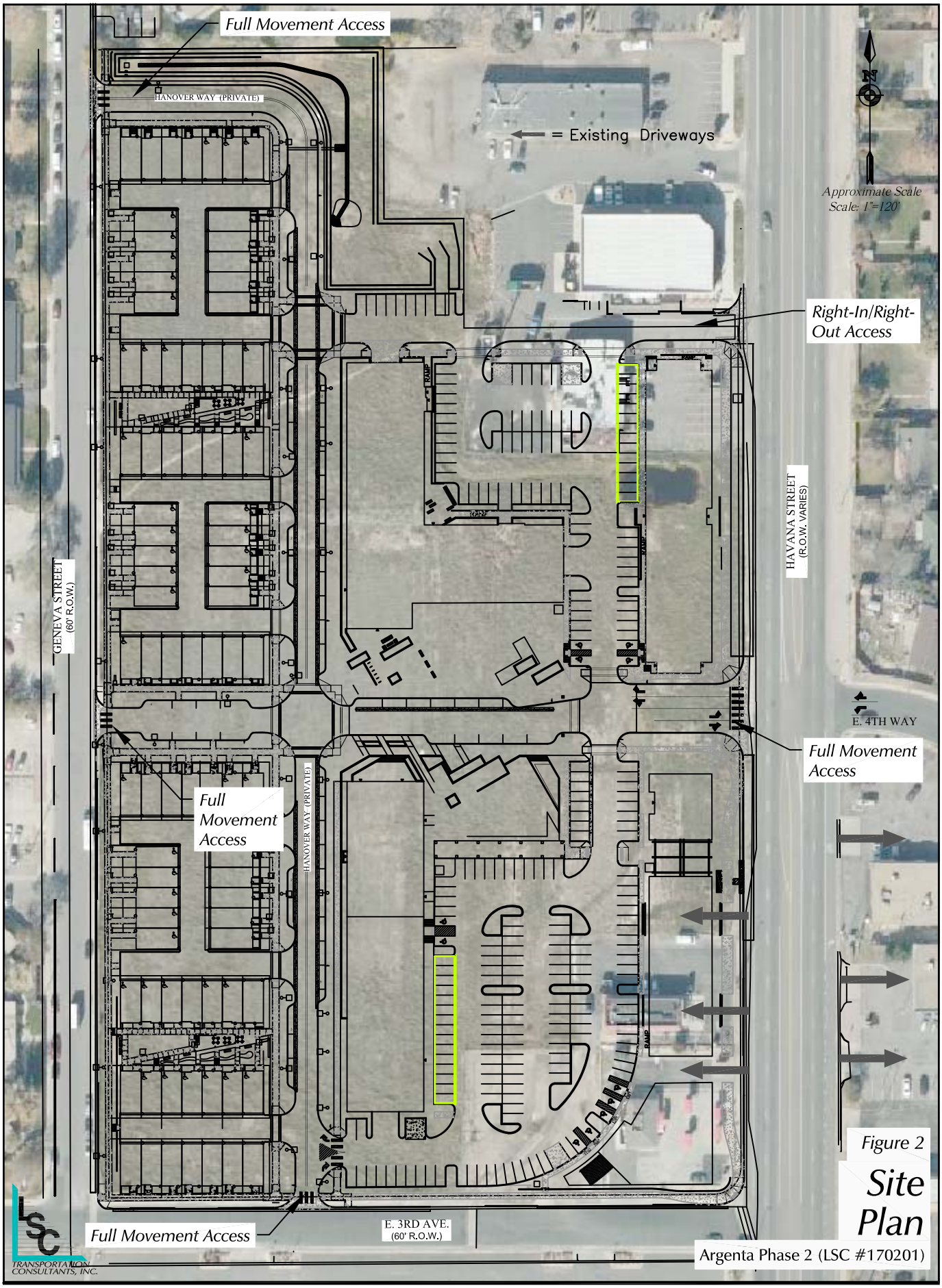
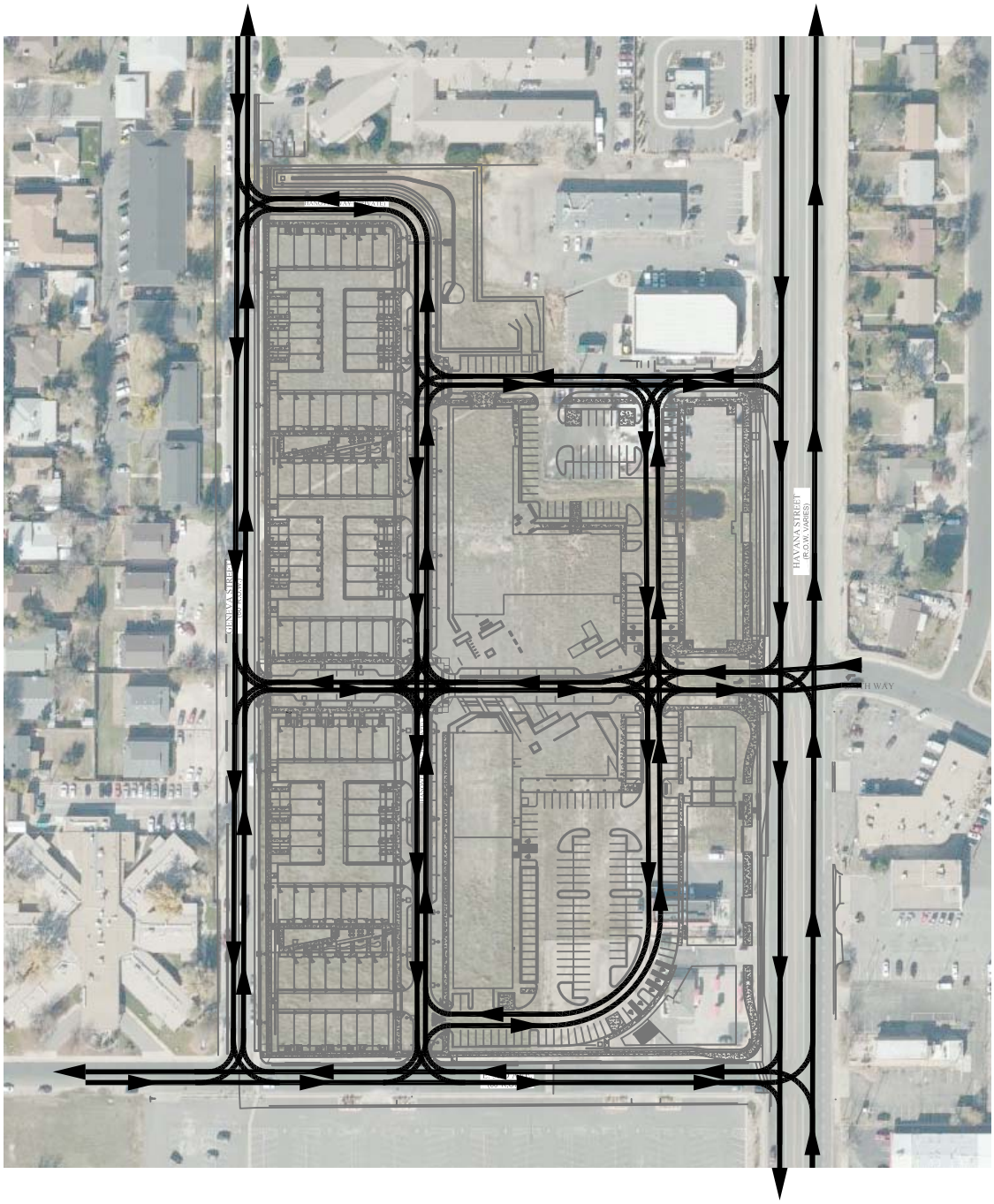



Figure 2

# Site Plan

Argenta Phase 2 (LSC #170201)




*Approximate Scale*
*Scale: 1"=200'*

*Figure 3*

# *Circulation Plan*

Argenta Phase 2 (LSC #170201)

LSC TRANSPORTATION CONSULTANTS, INC.