City of Littleton

Staff Use Only
FEE $_____
CASE NUMBER:
_____
CASE PLANNER:
_____

General Planned Development Plan
OFFICIAL APPLICATION FORM

- Applicant's submitting applications for the initial review shall submit directly to the Planning and Zoning Division in Community Development.

Project Name: Plum Valley Subdivision, Lots 7-16

Pre-application Meeting Date: 10/2/13
Property Address or General Location Plum Valley Lane and Lucent Boulevard
Parcel Number (if existing at this time) 222904004003
Size of Parcel in Acres 11.423

Applicant Information:
Name (print): Elizabeth Marie Jones Charitable Trust
Contact (if different): Ethan A. Miller
Mailing Address: PO Box 1285
City, State, Zip: Charlottesville, VA, 22902 Phone 434-979-2174
Cell: _____, Fax: 434-979-6311 E-mail: ~~ladeltafarms.com~~
eamiller@ladeltafarms.com

Signature: 

Title Trustee

Date: May 15, 2014

Is the applicant (above) the owner of the property? Yes X No_____ (Check one)
If no, please provide a typed sheet listing the property owners names with addresses and phone numbers. ATTACH a signed and notarized statement from the owner stating that there is no objection to the application and that the applicant is authorized to act on behalf of the owner with respect to the above application type as stated in the City code

Is there a mortgage on the property? Yes_____ No X (Check one)
If yes, the applicant shall mail notice to the mortgage holder (s), if any, which summarizes the proposed zoning matter and includes the name, phone number of the City employee in charge of reviewing the matter. Said notice shall be sent by registered mail, return receipt requested. A copy of the notice and the original returned receipt shall be attached to the application.

Revised
October 2012

Data and Information Sheet

Proposed Zoning Comparison Chart

Site Information: (complete where applicable)

Zoning Requirements	Existing Zoning Dist. PD-X	Proposed Zoning Dist PD-C
Use (s)		See PD Plan
Min. Unobstructed Open Space		20%
Parking Ratios		See PD Plan
Min. Bldg Setbacks		See PD Plan
Max. Bldg Height		60'
Max. F.A.R (Commercial Uses)		5:1
Max. Density (Residential Uses)		NA

	Adjacent Land Use	Adjacent Zoning
North:	Highline Canal	
South	Douglas County - Business/Industrial	
East:	Highline Canal	
West:	Highline Canal	

Proposed Development Details: Please provide on a separate sheet data showing the effects of development for both the existing zone district and the proposed zone district. Such data shall include projected population, school age population, traffic generation, additional park land required and availability of city services. Unless the application is accompanied by a PD Plan or PDO Plan, such data shall be based on the maximum potential development permitted under the applicable existing and proposed zone districts.

Note: This application may be subject to additional processing fees required by referral agencies such as Colorado Geological Survey and Denver Water. Please contact these agencies for information concerning their fees.

A complete application form must accompany the required materials on the attached check list. Submitting an incomplete application may cause a delay in processing. If you have any questions, please call the Community Development Department at 303-795-3748.

Owner Information: Elizabeth Marie Jones Charitable Trust
Name (print): Contact: Ethan A Miller, Trustee Address: P.O. Box 1285, Charlottesville, VA 22902
Phone: 434-979-2174 Fax: 434-979-6311
E-mail: [redacted] eamiller@ladeltafarms.com

Engineering Consultant:
Name (print): The Lund Partnership, Inc. Address: 12265 W. Bayaud Avenue, #130, Lakewood, CO 80228
Phone: 303-989-1461 Fax: 303-989-4094
E-mail: jovergaard@lundpartnership.net Contact: Jamie Overgaard

Architect:
Name (print): None Address:
Phone: Fax:
E-mail:

May 15, 2014

Ms. Andrea Mimnaugh
Senior Planner
City of Littleton
Community Development
2255 W. Berry Avenue
Littleton, Colorado 80120

RE: Plum Valley Subdivision, Lots 7-16 and 49 (the "Property")
General Planned Development Plan
Littleton, Colorado

Dear Ms. Mimnaugh:

The Property is owned by the Elizabeth Marie Jones Charitable Trust, (the "Trust"). The Trust supports the General Planned Development Plan application. The Trust authorizes MLATL and its consultant, the Lund Partnership, Inc., to process the application and act on behalf of the Trust regarding the General Planned Development Plan application for the Property and the rezoning of the Property from PD-X to PD-C.

Sincerely,

Elizabeth Marie Jones Charitable Trust

By: Ethan A. Miller, Trustee

State of Virginia)
)ss
County of Albemarle)

The foregoing instrument acknowledged before me this 15th day of May, 2014, by Ethan A. Miller as Trustee of the Elizabeth Marie Jones Charitable Trust.

Witness my hand and official seal:

My commission expires: 10/31/18

Notary Public

MICHAEL RUNYON
COMMONWEALTH OF VIRGINIA
REGISTRATION NO. 7221140
MY COMM. EXPIRES 10/31/18
NOTARY PUBLIC

NARRATIVE
REZONING
FOR
PLUM VALLEY LANE SUBDIVISION, LOTS 7-16

Landowner:	Elizabeth Marie Jones Charitable Trust P.O. Box 1285 Charlottesville, VA 22902 Representative: Ethan A. Miller, Trustee
Developer:	MLATL, LLP (Ralph Schomp) 1190 Plum Valley Lane Highlands Ranch, CO 80129 Representative: Mark Wallace
Authorized Representative:	The Lund Partnership, Inc. 12265 West Bayaud Avenue, Suite 130 Lakewood, CO 80228 Representative: Jamie Overgaard
Engineer:	The Lund Partnership, Inc. 12265 West Bayaud Avenue, Suite 130 Lakewood, CO 80228 Contact: Jamie Overgaard

Location: Plum Valley Subdivision, Lots 7-16, Littleton, Colorado. Located north of C-470, south of County Line Road, east of Lucent Boulevard and west of Broadway.

Site Zoning: Current Site Zoning - Planned Development X (PD-X)
Proposed Site Zoning - Planned Development Commercial (PD-C)

North – Highline Canal (City of Littleton) and Plum Valley Subdivision (Highlands Ranch, Douglas County); Zoned – Business/Industrial Park; undeveloped

West – Plum Valley Subdivision, Lot 49 (City of Littleton); Zoned - PD-X; undeveloped

East – Highline Canal (City of Littleton) and Plum Valley Subdivision (Highlands Ranch, Douglas County); Zoned – Business/Industrial Park; undeveloped

South – Highlands Ranch Filing 152, Lots 1 and 2 (Highlands Ranch, Douglas County); Planning Area 86; Zoned – Business/Industrial Park; Ralph Schomp BMW site

Source of Water and Sanitary Sewer

Water and sanitary sewer is proposed through an IGA agreement with the City of Littleton and the Highlands Ranch Metropolitan District.

Description of the Property and surrounding parcels

The subject property is located off the northeast corner of the Plum Valley Lane cul-de-sac, and is surrounded by the Highline Canal on the north, east and west and by Highlands Ranch Filing 152, on the south. The property includes Lots 7-16 of the Plum Valley Subdivision ("Property") located in the Northeast Quarter of Section 4, Township 6 South, Range 68 West of the 6th Principal Meridian, City of Littleton, Colorado, and is 11.423 acres.

The property to the north and west of the Highline Canal is located in Douglas County and is zoned as Business/Industrial Park and is mostly undeveloped. There is a caretaker's home that currently exists on the north side of the Highline Canal. The property to the south of the site is also in Douglas County and is zoned as Business/Industrial Park and is developed as a car dealership. The property to the west of the site is Lot 49 of the Plum Valley Subdivision and located is in the City of Littleton and is currently zoned as PD-X and is undeveloped.

Currently the "Property" has two possible access routes- Plum Valley Lane from the west and County Line Road from the north. An access drive from Plum Valley Lane could be constructed to the "Property" either through Highlands Ranch Filing 153, Tract A (owned by the Englewood McLellan Reservoir Foundation) or through Highlands Ranch Filing 152, Lot 1 (owned by MLATL, LLP (Ralph Schomp)). The latter is the most likely, given that MLATL, LLP holds an Option to Purchase the "Property" and is participating in the present re-zoning process. There is also an existing platted 40 foot public right-of-way that crosses the Highline Canal and property owned by Englewood McLellan Reservoir Foundation to the north and ties into County Line Road from Lot 15 of the "Property" (see attached Douglas County Resolution recorded Bk 123 PG 227 and the Plum Valley Annexation map). At some point in the past, a 10+/-foot wide bridge was constructed across the Highline Canal for vehicular access to the "Property" from County Line Road, and a gravel driveway was installed. This access route remains serviceable. Depending on the specific use proposed for the "Property" in the final site plan, this existing access right-of-way from the "Property" north to County Line Road may not be sufficient and an expanded easement from both Englewood McLellan Reservoir Foundation and the Denver Water Board would be required.

The "Property" is currently undeveloped and does not contain any existing floodplains, watercourses, retention/detention areas, wetlands, lakes, rivers, or hazard areas. Currently the "Property" slopes in a southerly to northerly direction at roughly a 10 percent slope and drains into the Highline Canal. The developed on-site flows shall be collected in an onsite storm drain system and conveyed to an existing detention/water quality pond located on Lot 49. This existing pond will need to have minor modifications made to it in order to accommodate the flows from the site. There is an existing 60-inch culvert (Highlands Ranch Metropolitan District Pipe 55) that crosses under the Highline Canal that the onsite storm drain will tie into. The 60-inch storm drain pipe outfalls into the existing detention/water quality pond located on Lot 49. No developed flows shall discharge into the Highline Canal.

The Littleton Fire Department will service this site. Access to the site will be provided by Plum Valley Lane off of Lucent Boulevard.

Purpose and Intent

The "Property" was annexed into the City of Littleton in 1993. At the time it was annexed, it was zoned to Planned Development X (PD-X) that was intended as a place holder for the zoning until such time the property was rezoned. This application requests to rezone the "Property" to Planned Development- Commercial (PD-C).

This application is further a request to establish land uses and development standards for Lots 7-16 of the Plum Valley Subdivision in the City of Littleton and promote standards of developmental quality through site planning and landscaping requirements. It is the intent of this zoning to encourage the development of businesses and industries primarily engaged in new and used automobile sales; car washes, motorized equipment sales and services, parking lots, recreational vehicle sales, services and repairs and other automobile service operations and activities relating thereto.

In order to remain sensitive to the Highline Canal, and to preserve existing large trees and shrub masses along the canal, there will be a 50' Highline Canal Open Space (HLCOS) buffer provided for the preservation and enhancement of the existing landscape along the canal route. Within the HLCOS buffer, existing trees and shrubs will be preserved and not disturbed. The Highline Canal trail is currently located on the north side of the Highline Canal, therefore, no additional trails are proposed along the Highline Canal.

The development of this property will comply with the City of Littleton's Site Development Plan process.

How this Application Meets the Declaration of Public Policy for Rezoning

MLATL, LLLP, (the "Developer") needs to use the Property for parking and ancillary uses, to serve the existing Schomp BMW dealership and the soon to-be constructed Schomp Honda and Mini-Cooper dealerships which are adjacent to the southern boundary of the Property, (the "Dealership Uses"). The Property is currently zoned Planned Development-Holding zone for newly annexed property (PD-X). Because the Property is vacant land, the PD-X zoning prohibits the Property from being used for the Dealership Uses. Thus, the Property needs to be re-zoned and the Applicant and the Developer seek to re-zone the property to Planned Development-Commercial (PD-C)

Section 10-12-1 of the City of Littleton's (the "City") Zoning Ordinance states that the official zoning map should not be amended unless the amendment is consistent with the goals and policies of the comprehensive plan and promotes the general welfare of the community. This narrative describes how re-zoning the Property to PD-C is consistent with the goals and policies of the comprehensive plan and promotes the general welfare of the community.

The Property is located south of County Line Road. The Property was not included in the boundaries of the City's COMPLAN, but it is included in the City's 2014 Citywide Plan. Figure E of the Citywide Plan depicts the Neighborhoods, Corridors and Activity Areas within the City. The Property is labeled on Figure E as an area to be included in a future small plan area, so it is not now within a

small area plan. However, the property is closest to the County Line Road Corridor. The South Neighborhood Plan is to the north of the County Line Road Corridor. A corridor plan has not yet been created for the County Line Road Corridor.

Generalized current zoning of real property in the City is shown on Figure G of the Citywide Plan. Other property on the south side of County Line Road is zoned Commercial. In addition, most of the property that is adjacent to and just north of County Line Road is zoned Commercial and Industrial, this property is within the South Neighborhood Plan. Thus, even though an area plan has not been prepared for the Property, zoning the Property to PD-C is consistent with the existing zoning of real property near the Property. Furthermore, County Line Road is a commercial corridor, so zoning the Property to PD-C is consistent with the uses along County Line Road.

Land Title Guarantee Company

CUSTOMER DISTRIBUTION

Land Title
GUARANTEE COMPANY
WWW.LTGC.COM

Date: 05-06-2014 **Our Order Number:** ABB70380517-2

Property Address:
VACANT LAND DOUGLAS

If you have any inquiries or require further assistance, please contact one of the numbers below:

For Closing Assistance:	Closer's Assistant:	For Title Assistance:
Tom Blake	**Valerie Fertig**	**Bruce Rosellen**
3033 E 1ST AVE #600	**Phone: 303-331-6213**	**Bruce Rosellen**
DENVER, CO 80206	**Fax: 303-393-4739**	**5975 GREENWOOD PLAZA BLVD**
Phone: 303-331-6237	**EMail: vfertig@ltgc.com**	**GREENWOOD VILLAGE, CO 80111**
Fax: 303-393-4959		**Phone: 303-850-4130**
EMail: tblake@ltgc.com		**Fax: 303-393-4826**
		EMail: brosellen@ltgc.com

THE ELIZABETH MARIE JONES CHARITABLE TRUST

MLATL FAMILY LIMITED LIABILITY LIMITED PARTNERSHIP
1190 PLUM VALLEY LANE
HIGHLANDS RANCH, CO 80129
Attn: AARON WALLACE
Copies: 1
Sent Via United Parcel Service 70380517*1

LAND TITLE GUARANTEE COMPANY
3033 E 1ST AVE #600
DENVER, CO 80206
Attn: Tom Blake
Phone: 303-331-6237
Fax: 303-393-4959
Copies: 1
EMail: tblake@ltgc.com

BRADLEY A LOZOW, ESQ
Attn: BRADLEY A LOZOW, ESQ
Copies: 1
EMail: apocock@lozow-lozow.com
Linked Commitment Delivery

FOSTER GRAHAM MILSTEIN AND CALISHER LLP
360 S GARFIELD 6TH FLOOR
DENVER, CO 80209
Attn: JERRI JENKINS
Phone: 303-333-9810
Fax: 303-333-9786
Copies: 1
EMail: jjenkins@fostergraham.com
Linked Commitment Delivery

Land Title Guarantee Company

Land Title
GUARANTEE COMPANY
WWW.LTGC.COM

Date: 05-06-2014

Our Order Number: ABB70380517-2

Property Address:
VACANT LAND DOUGLAS

Buyer/Borrower:
MLATL FAMILY LIMITED LIABILITY LIMITED PARTNERSHIP, A COLORADO LIMITED LIABILITY LIMITED PARTNERSHIP

Seller/Owner:
THE ELIZABETH MARIE JONES CHARITABLE TRUST, UNDER TRUST AGREEMENT DATED AUGUST 10, 2013

Wire Information: (Please note: We do not accept ACH electronic transfers.)

Bank: FIRSTBANK OF COLORADO
10403 W COLFAX AVENUE
LAKEWOOD, CO 80215
Phone: 303-237-5000
Credit: LAND TITLE GUARANTEE COMPANY
ABA No.: 107005047
Account: 2160521825
Attention: Tom Blake

****

Note: Once an original commitment has been issued, any subsequent modifications will be emphasized by underlining.

****

Need a map or directions for your upcoming closing? Check out Land Title's web site at www.ltgc.com for directions to any of our 54 office locations.

ESTIMATE OF TITLE INSURANCE FEES	
ALTA Owners Policy 06-17-06	$4,962.00
Deletion of Standard Exception(s) (Owner)	$100.00
Tax Certificate	$50.00
If Land Title Guarantee Company will be closing this transaction, above fees will be collected at that time.	
TOTAL	$5,112.00

Form CONTACT 06/04

THANK YOU FOR YOUR ORDER!

Old Republic National Title Insurance Company

ALTA COMMITMENT

Our Order No. ABB70380517-2

Schedule A **Cust. Ref.:**

Property Address:
VACANT LAND DOUGLAS

1. **Effective Date:** May 01, 2014 at 5:00 P.M.

2. **Policy to be Issued, and Proposed Insured:**

   "ALTA" Owner's Policy 06-17-06 $2,391,000.00

   Proposed Insured:
   MLATL FAMILY LIMITED LIABILITY LIMITED PARTNERSHIP, A COLORADO LIMITED LIABILITY LIMITED PARTNERSHIP

3. **The estate or interest in the land described or referred to in this Commitment and covered herein is:**

   A Fee Simple

4. **Title to the estate or interest covered herein is at the effective date hereof vested in:**

   THE ELIZABETH MARIE JONES CHARITABLE TRUST, UNDER TRUST AGREEMENT DATED AUGUST 10, 2013

5. **The Land referred to in this Commitment is described as follows:**

   SEE ATTACHED PAGE(S) FOR LEGAL DESCRIPTION

Our Order No: ABB70380517-2

LEGAL DESCRIPTION

LOTS 7 THROUGH 16, TOGETHER WITH THAT PORTION OF PLUM DRIVE WEST VACATED BY INSTRUMENT RECORDED JANUARY 25, 1958 IN BOOK 123 AT PAGE 227, AND LOT 49, TOGETHER WITH THAT PORTION OF PLUM DRIVE SOUTH VACATED BY INSTRUMENT RECORDED JANUARY 20, 1958 IN BOOK 123 AT PAGE 196, PLUM VALLEY, COUNTY OF DOUGLAS, STATE OF COLORADO

ALTA COMMITMENT

Schedule B-1

(Requirements) **Our Order No.** ABB70380517-2

The following are the requirements to be complied with:

Payment to or for the account of the grantors or mortgagors of the full consideration for the estate or interest to be insured.

Proper instrument(s) creating the estate or interest to be insured must be executed and duly filed for record, to-wit:

1. CERTIFIED COPY OF RESOLUTION OF THE GOVERNING BOARD OF THE RAINBOW FOUNDATION, A COLORADO NON-PROFIT CORPORATION (AUTHORIZING THE SALE OF THE SUBJECT PROPERTY AND THE EXECUTION OF NECESSARY DOCUMENTS) AND RECITING THAT THE BOARD HAS BEEN DULY AUTHORIZED IN THE PREMISES BY THE CONGREGATION. SAID RESOLUTION MUST BE PROPERLY CERTIFIED BY AN OFFICER OF THE CORPORATION. SAID RESOLUTION MUST BE SUBMITTED TO AND APPROVED BY LAND TITLE GUARANTEE COMPANY BUT NEED NOT BE RECORDED.

2. (ITEM INTENTIONALLY DELETED)

3. DULY EXECUTED AND ACKNOWLEDGED STATEMENT OF AUTHORITY SETTING FORTH THE NAME OF MLATL FAMILY LIMITED LIABILITY LIMITED PARTNERSHIP AS A COLORADO LIMITED LIABILITY LIMITED PARTNERSHIP. THE STATEMENT OF AUTHORITY MUST STATE UNDER WHICH LAWS THE ENTITY WAS CREATED, THE MAILING ADDRESS OF THE ENTITY, AND THE NAME AND POSITION OF THE PERSON(S) AUTHORIZED TO EXECUTE INSTRUMENTS CONVEYING, ENCUMBERING, OR OTHERWISE AFFECTING TITLE TO REAL PROPERTY ON BEHALF OF THE ENTITY AND OTHERWISE COMPLYING WITH THE PROVISIONS OF SECTION 38-30-172, CRS.

   NOTE: THE STATEMENT OF AUTHORITY MUST BE RECORDED WITH THE CLERK AND RECORDER.

4. PROVIDE LAND TITLE GUARANTEE COMPANY WITH A CURRENT ALTA/ACSM LAND TITLE SURVEY OF SUBJECT PROPERTY. UPON REVIEW, ADDITIONAL REQUIREMENTS AND/OR EXCEPTIONS MAY BE NECESSARY.

   LAND TITLE IS NOT RESPONSIBLE FOR ORDERING SAID ALTA/ACSM LAND TITLE SURVEY.

   SAID SURVEY MUST BE CERTIFIED TO LAND TITLE GUARANTEE COMPANY AND OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY.

5. WARRANTY DEED FROM THE ELIZABETH MARIE JONES CHARITABLE TRUST, UNDER TRUST AGREEMENT DATED AUGUST 10, 2013 TO MLATL FAMILY LIMITED LIABILITY LIMITED PARTNERSHIP, A COLORADO LIMITED LIABILITY LIMITED PARTNERSHIP CONVEYING

ALTA COMMITMENT

Schedule B-1

(Requirements) **Our Order No.** ABB70380517-2

Continued:

SUBJECT PROPERTY.

6. DULY EXECUTED AND ACKNOWLEDGED STATEMENT OF AUTHORITY SETTING FORTH THE NAME OF THE ELIZABETH MARIE JONES CHARITABLE TRUST, UNDER TRUST AGREEMENT DATED AUGUST 10, 2013. THE STATEMENT OF AUTHORITY MUST STATE UNDER WHICH LAWS THE ENTITY WAS CREATED, THE MAILING ADDRESS OF THE ENTITY, AND THE NAME AND POSITION OF THE PERSON(S) AUTHORIZED TO EXECUTE INSTRUMENTS CONVEYING, ENCUMBERING, OR OTHERWISE AFFECTING TITLE TO REAL PROPERTY ON BEHALF OF THE ENTITY AND OTHERWISE COMPLYING WITH THE PROVISIONS OF SECTION 38-30-172, CRS.

   NOTE: THE STATEMENT OF AUTHORITY MUST BE RECORDED WITH THE CLERK AND RECORDER.

7. RELEVANT PORTIONS OF THE FULLY EXECUTED TRUST AGREEMENT OF THE ELIZABETH MARIE JONES CHARITABLE TRUST, UNDER TRUST AGREEMENT DATED AUGUST 10, 2013, A TRUST, MUST BE FURNISHED TO LAND TITLE GUARANTEE COMPANY PRIOR TO CLOSING.

   NOTE: ADDITIONAL REQUIREMENTS MAY BE NECESSARY UPON REVIEW OF THIS DOCUMENTATION.

   NOTE: ITEMS 1-3 OF THE STANDARD EXCEPTIONS WILL BE DELETED UPON RECEIPT OF AN APPROVED SURVEY. MATTERS DISCLOSED BY SAID SURVEY MAY BE ADDED TO SCHEDULE B-2 HEREOF.

   UPON THE APPROVAL OF THE COMPANY AND THE RECEIPT OF A NOTARIZED FINAL LIEN AFFIDAVIT, ITEM NO. 4 OF THE STANDARD EXCEPTIONS ON THE OWNER'S POLICY, WILL BE AMENDED AS FOLLOWS:

   ITEM NO. 4 OF THE STANDARD EXCEPTIONS IS DELETED AS TO ANY LIENS OR FUTURE LIENS RESULTING FROM WORK OR MATERIAL FURNISHED AT THE REQUEST OF THE ELIZABETH MARIE JONES CHARITABLE TRUST, UNDER TRUST AGREEMENT DATED AUGUST 10, 2013.
   OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY SHALL HAVE NO LIABILITY FOR ANY LIENS ARISING FROM WORK OR MATERIAL FURNISHED AT THE REQUEST OF MLATL FAMILY LIMITED LIABILITY LIMITED PARTNERSHIP, A COLORADO LIMITED LIABILITY LIMITED PARTNERSHIP.

   NOTE: ITEM 5 OF THE STANDARD EXCEPTIONS WILL BE DELETED IF LAND TITLE GUARANTEE COMPANY CONDUCTS THE CLOSING OF THE CONTEMPLATED TRANSACTION(S)

Continued:

AND RECORDS THE DOCUMENTS IN CONNECTION THEREWITH.

NOTE: UPON PROOF OF PAYMENT OF 2013 TAXES, ITEM 6 WILL BE AMENDED TO READ:

TAXES AND ASSESSMENTS FOR THE YEAR 2014 AND SUBSEQUENT YEARS.

ALTA COMMITMENT

Schedule B-2

(Exceptions) **Our Order No.** ABB70380517-2

The policy or policies to be issued will contain exceptions to the following unless the same are disposed of to the satisfaction of the Company:

1. Any facts, rights, interests, or claims thereof, not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.

2. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.

3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.

4. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.

5. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this Commitment.

6. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.

7. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

8. EXISTING LEASES AND TENANCIES, IF ANY.

9. RIGHT OF PROPRIETOR OF A VEIN OR LODE TO EXTRACT AND REMOVE HIS ORE THEREFROM SHOULD THE SAME BE FOUND TO PENETRATE OR INTERSECT THE PREMISES AS RESERVED IN UNITED STATES PATENT RECORDED MARCH 31, 1881, IN BOOK K AT PAGE 455.

10. RIGHT OF WAY FOR THE HIGHLINE CANAL, AND THE RIGHT OF THE STATE OF COLORADO AND OTHERS IN AND TO ANY PORTION OF SUBJECT PROPERTY LYING WITHIN THE BED OF THE HIGHLINE CANAL.

11. THE EXISTENCE OF A LATERAL DITCH OR SUBSIDIARY CANAL AS EVIDENCED BY WATER RIGHT CONTRACT RECORDED FEBRUARY 20, 1886 IN BOOK Q AT PAGE 229.

12. RESOLUTION #201 RECORDED AUGUST 17, 1955 IN BOOK 113 AT PAGE 493. AMENDMENT TO ZONING RESOLUTION #201 RECORDED APRIL 14, 1956 IN BOOK 115 AT PAGE

ALTA COMMITMENT

Schedule B-2

(Exceptions) **Our Order No.** ABB70380517-2

The policy or policies to be issued will contain exceptions to the following unless the same are disposed of to the satisfaction of the Company:

237. AMENDMENT TO ZONING RESOLUTION #201 RECORDED APRIL 10, 1959 IN BOOK 128 AT PAGE 7. AMENDMENT RECORDED AUGUST 11, 1959 IN BOOK 129 AT PAGE 206.

13. PUBLIC RIGHT OF WAY OVER, ACROSS AND UPON THE PROPERTY AS GRANTED TO THE COUNTY OF DOUGLAS, STATE OF COLORADO IN DEEDS RECORDED DECEMBER 31, 1957 IN BOOK 123 AT PAGE 94 AND RECORDED JANUARY 23, 1958 IN BOOK 123 AT PAGE 218.

(AFFECTS LOT 49)

14. RESOLUTION AND DEDICATION RECORDED JANUARY 25, 1958 IN BOOK 123 AT PAGE 227.

15. RESOLUTION VACATING PORTIONS OF PLUM DRIVE RECORDED JANUARY 20, 1958 IN BOOK 123 AT PAGE 196.

(AFFECTS LOT 49)

16. RESTRICTIVE COVENANTS, WHICH DO NOT CONTAIN A FORFEITURE OR REVERTER CLAUSE, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW AS CONTAINED IN INSTRUMENT RECORDED JANUARY 31, 1960, IN BOOK 123 AT PAGE 258 AND AS AMENDED IN INSTRUMENT RECORDED AUGUST 10, 1960, IN BOOK 133 AT PAGE 174.

17. EASEMENTS, CONDITIONS, COVENANTS, RESTRICTIONS, RESERVATIONS AND NOTES ON THE PLAT OF PLUM VALLEY RECORDED APRIL 07, 1956 IN BOOK P AT PAGE 52.

VACATION OF CERTAIN EASEMENTS AND STREETS RECORDED AUGUST 5, 1959 IN BOOK 129 AT PAGE 187.

18. EASEMENTS AND RIGHTS OF WAY ON, OVER AND UNDER ALL LOTS IN SAID

ALTA COMMITMENT

Schedule B-2

(Exceptions) **Our Order No.** ABB70380517-2

The policy or policies to be issued will contain exceptions to the following unless the same are disposed of to the satisfaction of the Company:

SUBDIVISION, EXCEPT LOTS 27, 28 AND 30 AND LOTS 7 THROUGH 16, FOR ANY PUBLIC OR QUASI PUBLIC UTILITY SERVICE PURPOSES, TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS FOR CONSTRUCTION AND REPAIR AS RESERVED IN INSTRUMENT RECORDED JANUARY 31, 1958 IN BOOK 123 AT PAGE 258.

19. ANY TAX, LIEN, FEE, OR ASSESSMENT BY REASON OF INCLUSION OF SUBJECT PROPERTY IN THE CHERRY CREEK SOIL CONSERVATION DISTRICT AND THE WEST PLUM CREEK SOIL EROSION DISTRICT, AS EVIDENCED BY INSTRUMENT RECORDED OCTOBER 03, 1960, UNDER RECEPTION NO. 109263.

20. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN ANNEXATION AGREEMENT RECORDED OCTOBER 06, 1976 IN BOOK 296 AT PAGE 207.

21. ORDINANCE #25, SERIES OF 1981, GRANTING AN EASEMENT TO MISSION VIEJO WATER & SANITATION DISTRICT, RECORDED JULY 2, 1981 IN BOOK 415 AT PAGE 660, AND ORDINANCE #55, SERIES OF 1981 RECORDED JULY 31, 1981 IN BOOK 418 AT PAGE 403.

22. RIGHT OF WAY EASEMENT AS GRANTED TO MISSION VIEJO WATER & SANITATION DISTRICT IN INSTRUMENT RECORDED JULY 31, 1981, IN BOOK 418 AT PAGE 416.

23. RESOLUTION #R-991-111 RECORDED OCTOBER 3, 1991 IN BOOK 997 AT PAGE 259.

24. ANNEXATION MAP RECORDED MARCH 4, 1993 UNDER RECEPTION NO. 9308828 AND ORDINANCE RECORDED MARCH 4, 1993 IN BOOK 1113 AT PAGE 518.

25. ANY TAX, LIEN, FEE, OR ASSESSMENT BY REASON OF INCLUSION OF SUBJECT PROPERTY IN THE SOUTH SUBURBAN PARK AND RECREATION DISTRICT, AS EVIDENCED BY INSTRUMENT RECORDED OCTOBER 08, 1993, IN BOOK 1153 AT PAGE 1366.

26. A PERMANENT STORM WATER DRAINAGE EASEMENT AS GRANTED TO HIGHLANDS RANCH METROPOLITAN DISTRICT NO. 3 IN INSTRUMENT RECORDED MARCH 5, 1999 IN BOOK 1677 AT PAGE 1427.

27. TERMS, CONDITIONS, PROVISIONS, BURDENS, OBLIGATIONS AND EASEMENTS AS SET FORTH AND GRANTED IN GRANT OF EASEMENT RECORDED MARCH 16, 2000 IN BOOK

ALTA COMMITMENT

Schedule B-2

(Exceptions) **Our Order No.** ABB70380517-2

The policy or policies to be issued will contain exceptions to the following unless the same are disposed of to the satisfaction of the Company:

1819 AT PAGE 2354 AND RE-RECORDED JUNE 30, 2000 IN BOOK 1863 AT PAGE 2152.

28. LACK OF ACCESS TO AND FROM PUBLIC ROAD, HIGHWAY, OR STREET.

LAND TITLE GUARANTEE COMPANY and LAND TITLE GUARANTEE COMPANY - GRAND JUNCTION

DISCLOSURE STATEMENTS

Note: Pursuant to CRS 10-11-122, notice is hereby given that:
A) The subject real property may be located in a special taxing district.
B) A Certificate of Taxes Due listing each taxing jurisdiction shall be obtained from the County Treasurer or the County Treasurer's authorized agent.
C) The information regarding special districts and the boundaries of such districts may be obtained from the Board of County Commissioners, the County Clerk and Recorder, or the County Assessor.

Note: Effective September 1, 1997, CRS 30-10-406 requires that all documents received for recording or filing in the clerk and recorder's office shall contain a top margin of at least one inch and a left, right and bottom margin of at least one half of an inch. The clerk and recorder may refuse to record or file any document that does not conform, except that, the requirement for the top margin shall not apply to documents using forms on which space is provided for recording or filing information at the top margin of the document.

Note: Colorado Division of Insurance Regulation 3-5-1, Section 7L requires that "Every title entity shall be responsible for all matters which appear of record prior to the time of recording whenever the title entity conducts the closing and is responsible for recording or filing of legal documents resulting from the transaction which was closed". Provided that Land Title Guarantee Company conducts the closing of the insured transaction and is responsible for recording the legal documents from the transaction, exception number 5 will not appear on the Owner's Title Policy and the Lenders Policy when issued.

Note: Affirmative mechanic's lien protection for the Owner may be available (typically by deletion of Exception no. 4 of Schedule B, Section 2 of the Commitment from the Owner's Policy to be issued) upon compliance with the following conditions:
A) The land described in Schedule A of this commitment must be a single family residence which includes a condominium or townhouse unit.
B) No labor or materials have been furnished by mechanics or material-men for purposes of construction on the land described in Schedule A of this Commitment within the past 6 months.
C) The Company must receive an appropriate affidavit indemnifying the Company against un-filed mechanic's and material-men's liens.
D) The Company must receive payment of the appropriate premium.
E) If there has been construction, improvements or major repairs undertaken on the property to be purchased within six months prior to the Date of the Commitment, the requirements to obtain coverage for unrecorded liens will include: disclosure of certain construction information; financial information as to the seller, the builder and or the contractor; payment of the appropriate premium fully executed Indemnity Agreements satisfactory to the company, and, any additional requirements as may be necessary after an examination of the aforesaid information by the Company.

No coverage will be given under any circumstances for labor or material for which the insured has contracted for or agreed to pay.

Note: Pursuant to CRS 10-11-123, notice is hereby given:
This notice applies to owner's policy commitments containing a mineral severance instrument exception, or exceptions, in Schedule B, Section 2.
A) That there is recorded evidence that a mineral estate has been severed, leased, or otherwise conveyed from the surface estate and that there is a substantial likelihood that a third party holds some or all interest in oil, gas, other minerals, or geothermal energy in the property; and
B) That such mineral estate may include the right to enter and use the property without the surface owner's permission.

Note: Pursuant to CRS 10-1-128(6)(a), It is unlawful to knowingly provide false, incomplete, or misleading facts or information to an insurance company for the purpose of defrauding or attempting to defraud the company. Penalties may include imprisonment, fines, denial or insurance, and civil damages. Any insurance company or agent of an insurance company who knowingly provides false, incomplete, or misleading facts or information to a policyholder or claimant for the purpose of defrauding or attempting to defraud the policyholder or claimant with regard to a settlement or award payable from insurance proceeds shall be reported to the Colorado division of insurance within the department of regulatory agencies.

Nothing herein contained will be deemed to obligate the company to provide any of the coverages referred to herein unless the above conditions are fully satisfied.

JOINT NOTICE OF PRIVACY POLICY OF
LAND TITLE GUARANTEE COMPANY, LAND TITLE GUARANTEE COMPANY - GRAND JUNCTION, LAND TITLE INSURANCE CORPORATION AND OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY

This Statement is provided to you as a customer of Land Title Guarantee Company and Meridian Land Title, LLC, as agents for Land Title Insurance Corporation and Old Republic National Title Insurance Company.

We want you to know that we recognize and respect your privacy expectations and the requirements of federal and state privacy laws. Information security is one of our highest priorities. We recognize that maintaining your trust and confidence is the bedrock of our business. We maintain and regularly review internal and external safeguards against unauthorized access to non-public personal information ("Personal Information").

In the course of our business, we may collect Personal Information about you from:

* applications or other forms we receive from you, including communications sent through TMX, our web-based transaction management system;
* your transactions with, or from the services being performed by, us, our affiliates, or others;
* a consumer reporting agency, if such information is provided to us in connection with your transaction; and
* the public records maintained by governmental entities that we either obtain directly from those entities, or from our affiliates and non-affiliates.

Our policies regarding the protection of the confidentiality and security of your Personal Information are as follows:

* We restrict access to all Personal Information about you to those employees who need to know that information in order to provide products and services to you.
* We maintain physical, electronic and procedural safeguards that comply with federal standards to protect your Personal Information from unauthorized access or intrusion.
* Employees who violate our strict policies and procedures regarding privacy are subject to disciplinary action.
* We regularly assess security standards and procedures to protect against unauthorized access to Personal Information.

<u>WE DO NOT DISCLOSE ANY PERSONAL INFORMATION ABOUT YOU WITH ANYONE FOR ANY PURPOSE THAT IS NOT PERMITTED BY LAW.</u>

Consistent with applicable privacy laws, there are some situations in which Personal Information may be disclosed. We may disclose your Personal Information when you direct or give us permission; when we are required by law to do so, for example, if we are served a subpoena; or when we suspect fraudulent or criminal activities. We also may disclose your Personal Information when otherwise permitted by applicable privacy laws such as, for example, when disclosure is needed to enforce our rights arising out of any agreement, transaction or relationship with you.

Our policy regarding dispute resolution is as follows. Any controversy or claim arising out of or relating to our privacy policy, or the breach thereof, shall be settled by arbitration in accordance with the rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof.

Commitment to Insure

ALTA Commitment - 2006 Rev.

OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, a Minnesota corporation, (Company) for a valuable consideration, commits to issue its policy or policies of title insurance, as identified in Schedule A, in favor of the Proposed Insured named in Schedule A, as owner or mortgagee of the estate or interest in the land described or referred to in Schedule A, upon payment of the premiums and charges and compliance with the requirements; all subject to the provisions of Schedule A and B and to the Conditions of this Commitment.

This Commitment shall be effective only when the identity of the Proposed Insured and the amount of the policy or policies committed for have been inserted in Schedule A by the Company. All liability and obligation under this commitment shall cease and terminate six months after the Effective Date or when the policy or policies committed for shall issue, whichever first occurs, provided that the failure to issue such policy or policies is not the fault of the Company.

CONDITIONS AND STIPULATIONS

1. The term "mortgage", when used herein, shall include deed of trust, trust deed, or other security instrument.
2. If the proposed Insured has or acquires actual knowledge of any defect, lien, encumbrance, adverse claim or other matter affecting the estate or interest or mortgage thereon covered by this Commitment other than those shown in Schedule B hereof, and shall fail to disclose such knowledge to Company in writing, the Company shall be relieved from liability for any loss or damage resulting from any act of reliance hereon to the extent the Company is prejudiced by failure to so disclose such knowledge. If the proposed Insured shall disclose such knowledge to the Company, or if the Company otherwise acquires actual knowledge of any such defect, lien, encumbrance, adverse claim or other matter, the Company at its option may amend Schedule B of this Commitment accordingly, but such amendment shall not relieve the Company from liability previously incurred pursuant to paragraph 3 of these Conditions and Stipulations.
3. Liability of the Company under this Commitment shall be only to the named proposed Insured and such parties included under the definition of Insured in the form of policy or policies committed for and only for actual loss incurred in reliance hereon in undertaking in good faith (a) to comply with the requirements hereof or (b) to eliminate exceptions shown in Schedule B, or (c) to acquire or create the estate or interest or mortgage thereon covered by this Commitment. In no event shall such liability exceed the amount stated in Schedule A for the policy or policies committed for and such liability is subject to the insuring provisions and the Conditions and Stipulations and the Exclusions from Coverage of the form of policy or policies committed for in favor of the proposed Insured which are hereby incorporated by reference and are made a part of this Commitment except as expressly modified herein.
4. This commitment is a contract to issue one or more title insurance policies and is not an abstract of title or a report of the condition of title. Any action or actions or rights of action that the proposed Insured may have or may bring against the Company arising out of the status of the title to the estate or interest or the status of the mortgage thereon covered by this Commitment must be based on and are subject to the provisions of this Commitment.
5. The policy to be issued contains an arbitration clause. All arbitrable matters when the Amount of Insurance is $2,000,000 or less shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. You may review a copy of the arbitration rules at www.alta.org.

STANDARD EXCEPTIONS

In addition to the matters contained in the Conditions and Stipulations and Exclusions from Coverage above referred to, this Commitment is also subject to the following:

1. Rights or claims of parties in possession not shown by the Public Records.
2. Easements, or claims of easements, not shown by the Public Records.
3. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, and any facts which a correct survey or inspection of the Land would disclose and which are not shown by the Public Records.
4. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the Public Records.
5. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the Public Records or attaching subsequent to the effective date hereof but prior to the date the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this Commitment.

IN WITNESS WHEREOF, Old Republic National Title Insurance Company has caused its corporate name and seal to be affixed by its duly authorized officers on the date shown in Schedule A to be valid when countersigned by a validating officer or other authorized signatory.

OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
A Stock Company
400 Second Avenue South
Minneapolis, Minnesota 55401
(612) 371-1111

Authorized Signature

Mark Bilbrey
President

Rande Yeager
Secretary

AMERICAN LAND TITLE ASSOCIATION

CC.ORT.06

Plum Valley Subdivision, Lots 7-16
Rezoning Traffic Study

Prepared for:

MLATL, LLP (Ralph Schomp)

Prepared by:

TSIOUVARAS SIMMONS HOLDERNESS

CONSULTING ENGINEERS

June, 2014

Plum Valley Subdivision, Lots 7-16

Plum Valley Lane/Lucent Boulevard

Traffic Study

Prepared for:
MTATL, LLP (Ralph Schomp)

Prepared by:

TSIOUVARAS SIMMONS HOLDERNESS
CONSULTING ENGINEERS

5690 DTC Blvd.. Suite 345W
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June, 2014

For questions on this study contact:

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Transportation Engineer

TSIOUVARAS SIMMONS HOLDERNESS
CONSULTING ENGINEERS

1.0 Introduction

This traffic study documents traffic generation and associated traffic operations with the proposed expansion of the Ralph Schomp Automotive Complex in Highlands Ranch. The location of the existing Schomp BMW as well as proposed future expansions specifically addressed in this study are shown in **Figure 1-1** below.

The proposed expansion of the Schomp dealership includes the addition of two separate car dealerships adjacent to the existing Schomp BMW location on Plum Valley Lane in Highlands Ranch. The first, to the east of the existing location, includes a planned Honda dealership as well as a MINI dealership. The second, to the north of the existing location, would provide additional employee parking and inventory/vehicle storage for the BMW, Honda, and MINI dealerships to the south.

This traffic study focuses on the additional trips generated by the proposed expansion to the Schomp dealership and how the additional traffic will impact the intersections at Plum Valley Lane/Lucent Boulevard and Lucent Boulevard/County Line Road in the near-term future. The primary purpose of this traffic study was to estimate the potential timing of when a signal might be warranted at the Plum Valley Ln./Lucent Blvd. intersection.

Figure 1-1 Project Location

Aerial Base from Google-Earth

2.0 Existing Conditions

2.1 Existing Land Uses

The area surrounding the proposed Schomp expansion includes mainly existing car dealerships and vacant land. Schomp BMW and Larry Miller Nissan are located along Plum Valley Lane while Mike Ward Infiniti is located directly across Lucent Boulevard from Plum Valley Lane.

2.2 Existing Roadway Conditions

The existing roads in the study area were shown in **Figure 1-1**. Intersection turn lanes and traffic control are shown in **Figure 2-1**. The primary roadways are described further below.

Plum Valley Lane

Plum Valley Lane is a 3-lane local street that provides the existing car dealerships access to Lucent Boulevard and the surrounding roadway network. The third lane serves left turns into businesses. The Plum Valley Lane speed limit is 25 mph.

Lucent Boulevard

Lucent Boulevard is a 4-lane collector roadway with limited direct access to properties. There is a raised median with striped turn lanes at all major intersections. There is a sidewalk along both sides of Lucent Boulevard in the vicinity of the Project. The speed limit is 40 mph.

County Line Road

County Line Road is a two-lane arterial roadway in the vicinity of the project that connects Santa Fe Drive (US 85) to I-25. Major intersections have striped turn lanes however there are no turn lanes for property access driveways, simply a double-yellow line down the center of the road. The speed limit in the vicinity of the project is 50 mph.

2.3 Existing Traffic Volumes

Existing weekday AM and PM peak hour turning movement counts were collected at the County Line Rd./Lucent Blvd. and Lucent Blvd./Plum Valley Ln. by TSH in June 2014. The AM and PM peak hour turning movements at the intersections under study are shown in **Figure 2-2**. Additionally, weekend traffic volumes on Plum Valley Ln. were observed to be in the 150-200 vehicle per hour range. While these volumes are higher than the volumes experienced during the peak hours during the week, additional traffic on the roadway network is significantly less resulting in less delay at intersections in the vicinity.

2.4 Existing Traffic Operations

The traffic operations as defined by intersection level of service (LOS) were tested for the existing counts at the intersections of County Line Rd./Lucent Blvd. and Lucent Blvd./Plum Valley Ln. Existing LOS is shown in Table 5-3, included with the future LOS analysis in Section 5 of this study, along with a detailed description of LOS criteria. Details of the Highway Capacity Manual (HCM) outputs of the analysis are contained in the appendix.

Figure 2-1 Existing Intersection Turn Lanes and Traffic Control

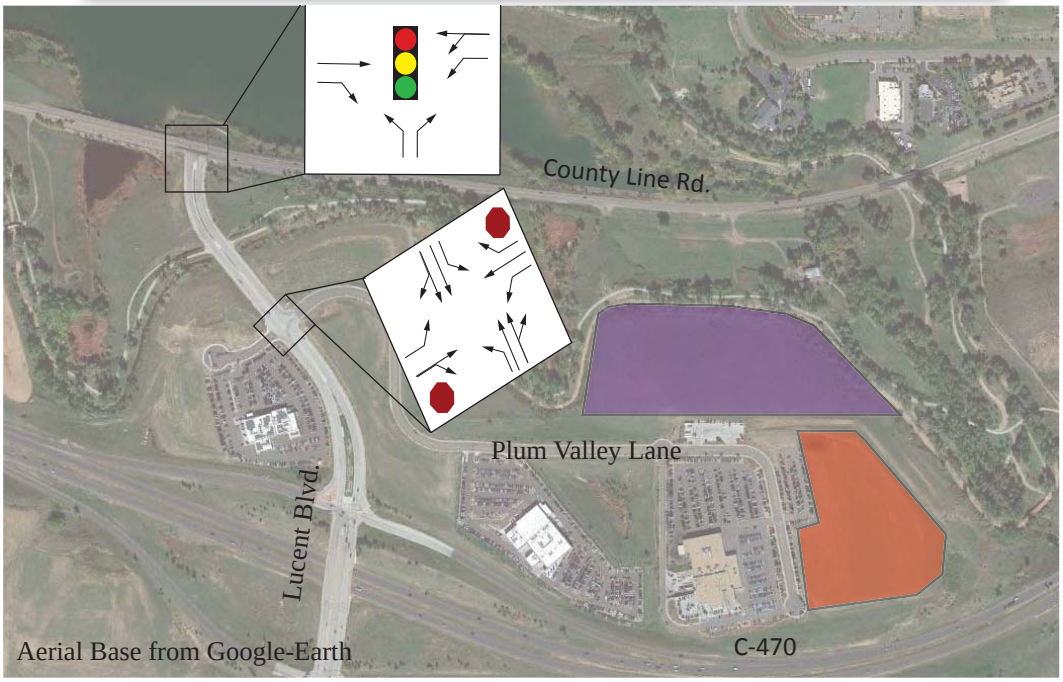
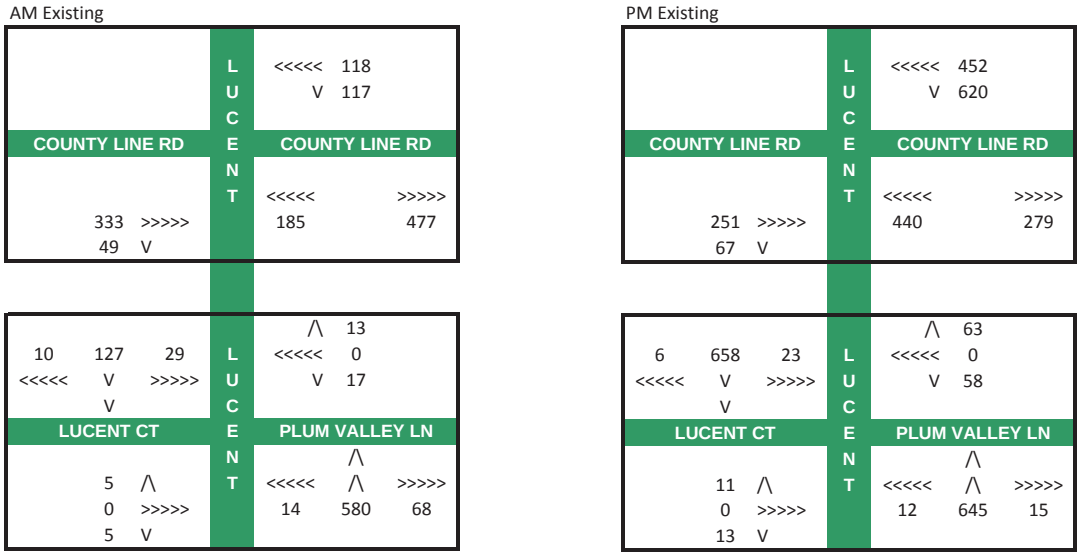


Figure 2-2 Existing Weekday AM and PM Peak Hour Turning Volumes



The existing LOS results are summarized below:

- With existing levels of development, the intersection of County Line Rd./Lucent Blvd. currently operates at Level of Service (LOS) D. However, due to the high turning volumes and unusual split phasing configuration of this particular intersection, some additional delay is experienced at this intersection.

- At the Lucent Blvd./Plum Valley Ln. intersection, the stop controlled existing outbound left turn movement operates at LOS E. This increased delay is expected for unsignalized left turns and does not negatively impact the overall operation of the intersection.

3.0 Schomp Automotive Expansion - Traffic Generation and Trip Distribution

This section of the study provides the background and calculation of traffic associated with the proposed expansion of the Schomp dealership complex.

3.1 Schomp Automotive Expansion - Land Use Description

The existing development located off of Plum Valley Lane includes two existing auto dealerships, Schomp BMW and Larry Miller Nissan. All other parcels of land in the vicinity are currently vacant. The proposed expansion of the Schomp dealership includes the development of two of these vacant parcels.

The parcel to be rezoned, Plum Valley Subdivision Lots 7-16, is located directly to the north of the existing Schomp BMW dealership and is located within the city of Littleton. The existing site plan is shown in **Figure 3-1** and includes a 979 space parking lot that will be utilized for vehicle storage for the existing and planned Ralph Schomp auto dealerships to the south. By itself the expanded parking area for the auto dealerships does not add substantial vehicle trips to the network. ITE trip generation for auto dealerships is based on building size of the dealership.

Planned expansion to the east of the existing Schomp BMW, located on Highland Ranch Filing 152, Lot 2, includes the addition of two auto dealerships, a MINI dealership (53,699 sq. ft. building) and a Honda dealership (95,498 sq. ft. building). The addition of two separate dealerships on a lot this size is feasible with the proposed vehicle storage lot on the parcel to the north.

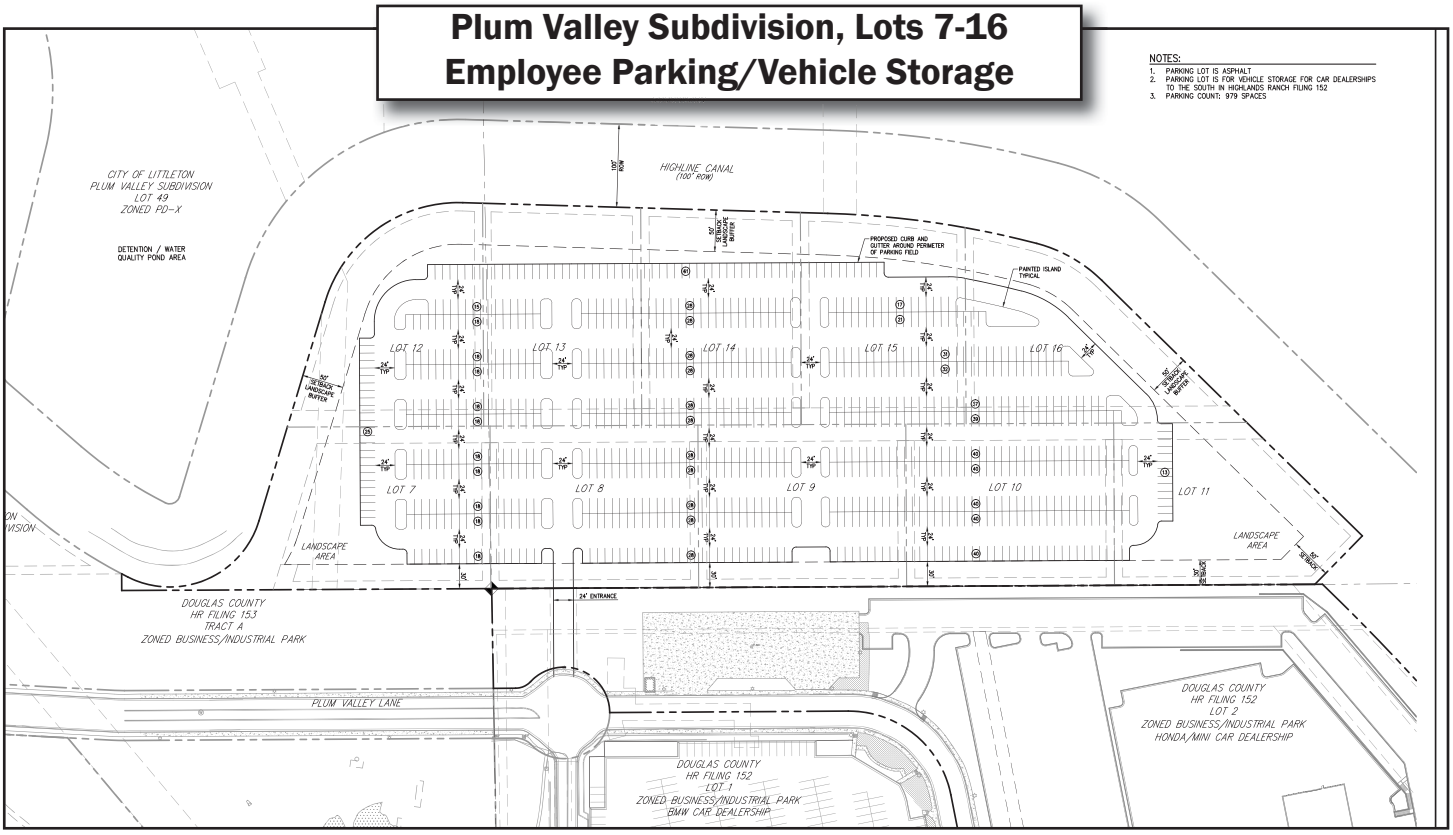
Auto dealerships generally have different peak traffic patterns than surrounding roadway network. While the existing roadway network has distinct AM and PM peak hours, auto dealerships peak traffic generation occurs on weekends, when more consumers are likely to shop for a new vehicle. This higher weekend traffic is spread throughout the day so there is no distinct weekend peak period. Traffic generated by auto dealerships during the week is focused on vehicle maintenance or other services. While the daily AM and PM peak periods are not the peak periods for the proposed expansion, these times will have the greatest impact on the surrounding roadway network.

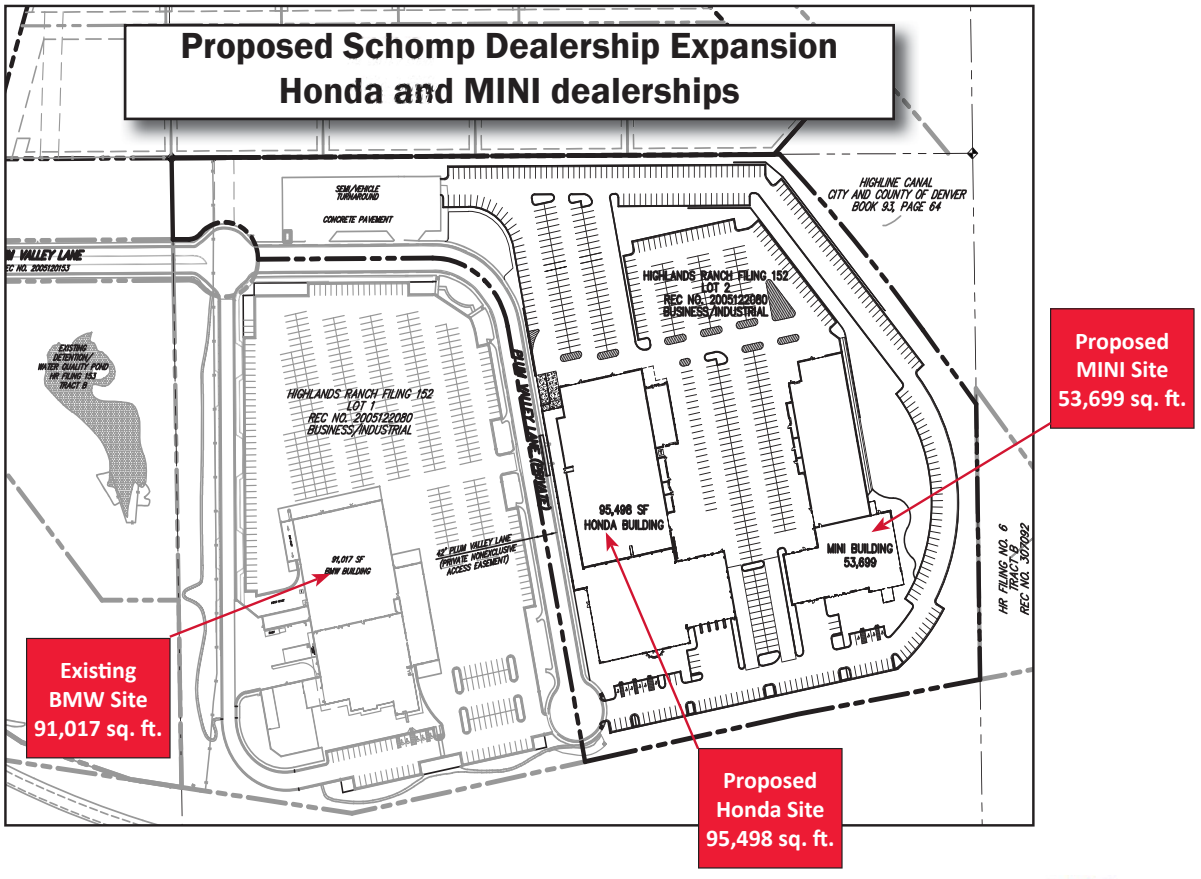
Based on the traffic counts conducted at the Lucent Blvd./Plum Valley Lane intersection, the existing peak hour traffic is approximately half of what ITE trip generation methodologies would forecast for the existing land uses based on building size during the weekday AM and PM peak hours.

3.2 Forecasted Site Traffic

The traffic generation from the site was calculated using standard Institute of Transportation Engineers

Figure 3-1 : Proposed Site Plan





TSIOUVARAS SIMMONS HOLDERNESS
CONSULTING ENGINEERS

Table 3-1 : Forecasted Site Traffic

Trip Generation Base Calculations

ITE Code	Description	Area	Unit	**Daily** Rate & Traffic	**AM** Peak Rate, trips, in/out distrib.		**PM** Peak Rate, trips, in/out distrib.		Internal Capture Reduction
					IN	OUT	IN	OUT	
				33.34	*2.03*	*2.03*	*2.59*	*2.59*	
841	New Car Sales (Honda)	96	1000 ft^2	**3184**	**178**	**50**	**96**	**151**	0%
					74%	*26%*	*39%*	*61%*	
					IN	OUT	IN	OUT	
				33.34	*2.03*	*2.03*	*2.59*	*2.59*	
841	New Car Sales (MINI)	54	1000 ft^2	**1790**	**100**	**28**	**54**	**85**	0%
					74%	*26%*	*39%*	*61%*	
	Total - Buildout of Project			**Daily**	**AM in**	**AM out**	**PM in**	**PM out**	
				4974	**279**	**79**	**151**	**236**	

(ITE) trip generating methodology. The proposed MINI and Honda dealerships are approximately the same size as the existing Nissan and BMW dealerships that exist today. While the peak hour turning movement counts conducted for this study showed significantly less traffic during the AM and PM peaks than ITE trip generation methodology, the ITE trip rates were used for the new dealerships in this study to evaluate a conservative trip generation for this site. **Table 3-1** provides the calculations of trip generation for this site.

3.3 Site Traffic Distribution and Assignment

Due to the existing auto dealership facilities located in the same area as the proposed project, the traffic distribution is anticipated to be the same as the existing conditions. Based on this existing distribution, the following trip assignment is assumed:

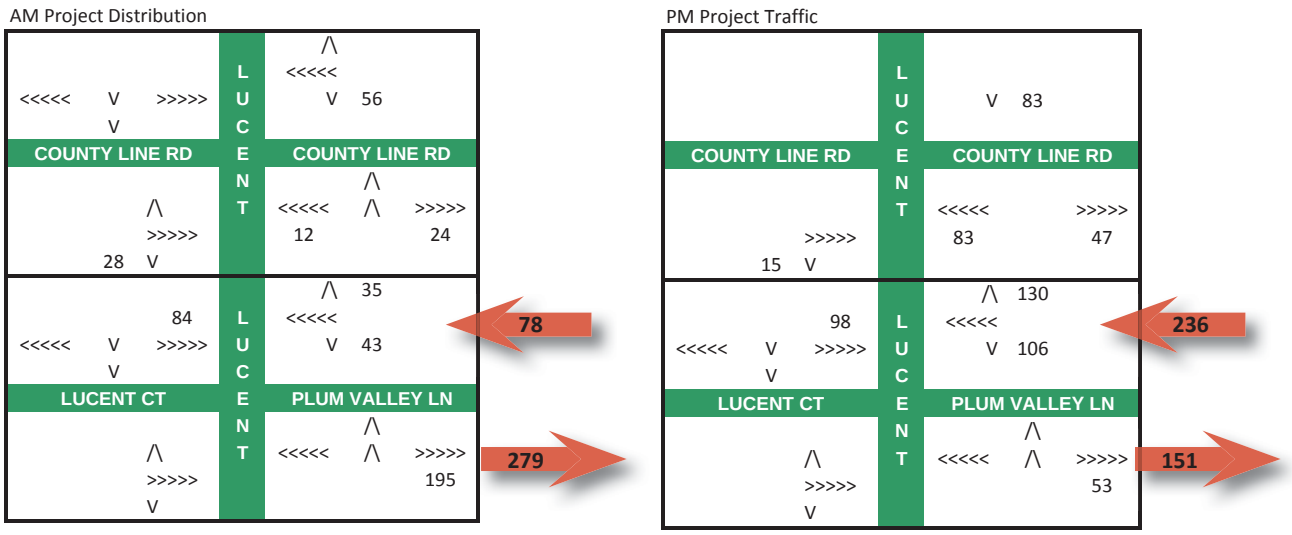
During the AM peak hours:
- 10% inbound and 15% outbound via County Line Road west
- 20% inbound and 30% outbound via County Line Road east
- 70% inbound and 55% outbound via Lucent Boulevard south

During the PM peak hour:
- 10% inbound and 35% outbound via County Line Road west
- 55% inbound and 20% outbound via County Line Road east
- 35% inbound and 45% outbound via Lucent Boulevard south

3.4 Forecasted Site Traffic Volumes

The distribution assumptions above were combined with the trip generation shown in **Table 3-1** to estimate the number of Project trips added to the intersections of Lucent Blvd./Plum Valley Lane and County Line Rd./Lucent Blvd. Forecasted site traffic volumes are shown in **Figure 3-2**.

Figure 3-2 Future Site Traffic AM and PM Peak Hour Volumes



4.0 Future Background Traffic

4.1 Future Background Peak Hour Traffic Assumptions

The future background traffic is the growth in traffic that is assumed to occur on the adjacent roadway and on adjacent vacant parcels. For this study, the following assumptions were made for future growth, and additional assumptions are described below:

- Existing traffic on Lucent Boulevard and County Line Road was forecast to grow at a rate of 2% per year in the vicinity of the Project.

- There are additional vacant parcels located along Plum Valley Lane. For analysis of this traffic study, these parcels were assumed to be developed by the horizon year of this study. In an effort to quantify the future traffic associated with these parcels, land uses were projected to be an veterinary/animal clinic, and an additional auto dealership. For this reason these volumes have not been included in the intersection analysis at for the Future Condition (2020). Their potential impact to the Plum Valley Ln./Lucent Blvd. intersection is addressed later in this analysis.

5.0 Forecasted Traffic & Operations Analysis

The previous sections in this traffic study describe the steps to determine the future peak hour intersection turning movements for use in traffic analysis on public intersections. This section describes the traffic numbers used for traffic operations and level of service (LOS) analysis for public road intersections and for the site access intersections, and the results of the analysis. The "future" time period for the purposes of this study is 2020 when the additional auto dealerships are assumed to be operating.

5.1 Traffic Volumes for Analysis

The traffic operations analysis focuses on the peak hour intersection turning movements for AM peak and PM peak hours. The following figures show the forecasted intersection Total turning movements:

- **Figure 5-1** Total future AM & PM peak hour traffic

These traffic volumes include the site traffic from the Project within the total number. Traffic volumes including the additional background traffic from the animal clinic and other future auto dealership are not included in these future traffic volumes.

5.2 Traffic Operations and Capacity Analysis

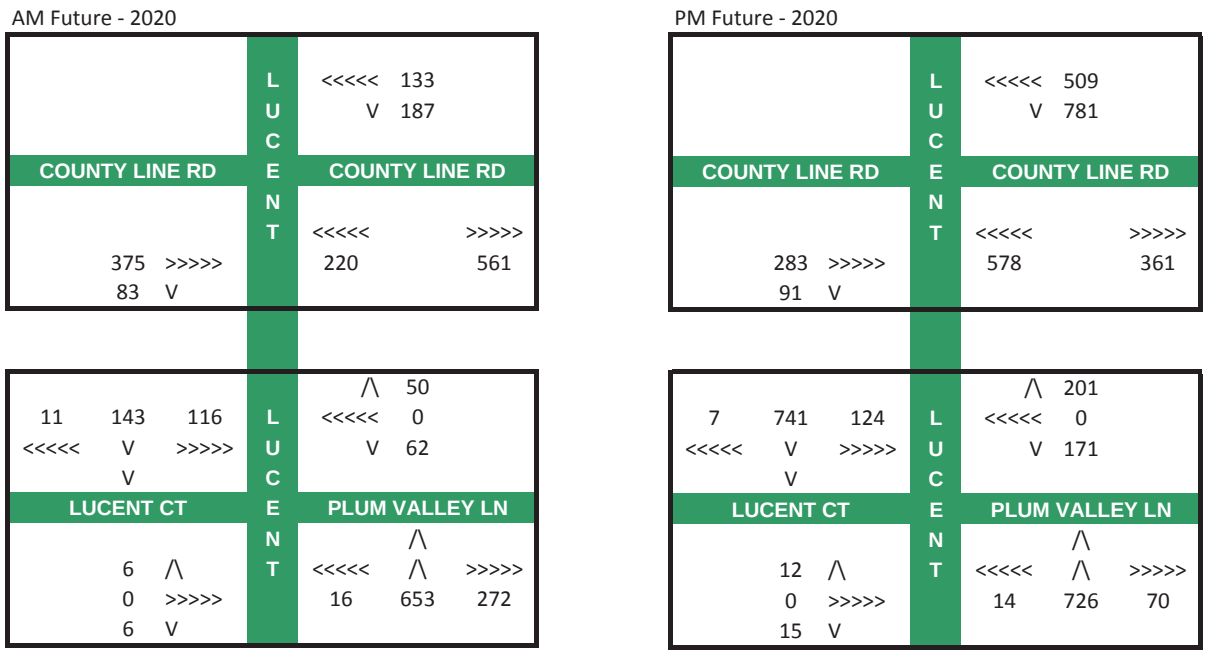
Traffic analysis for the project area was performed with the Highway Capacity Manual's software package as incorporated into the Synchro software. The roadway network surrounding the site is assumed to be the same in the future as it is today. The intersection laneage used for the analysis is shown in **Figure 2-1**. Discussion of the traffic capacity analysis methodologies and results follow.

5.2.1 Level of Service Criteria

Level of Service (LOS) calculations were performed at the key intersections in the study area. LOS "is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience." There are six LOS ratings outlined for each facility type considered, ranging from LOS A (the best) to LOS F (the worst). The goal with the LOS grading is to be able to convey traffic operations to the general population in a simplified way that makes sense to them.

The HCM defines LOS for interrupted flow facilities (such as signalized arterials) using the concept of control delay. Control delay is expressed in seconds per vehicle, and is delay encountered by motorists that can be attributed to the traffic control device (usually a signal). Methodologies are provided to quantify the delay induced by traffic control devices and additional procedures account for factors such as grades, heavy vehicles, and lane widths. When the methodologies in the HCM are applied, a control delay can be calculated and related to the LOS criteria.

Figure 5-1 - 2020 Total AM & PM Peak Hour Turning Movements



The basic LOS criteria for signalized intersections are shown in **Table 5-1**.

Table 5 -1:
Signalized Intersection LOS Criteria

LOS	Control Delay (sec)
A	≤ 10
B	>10 and ≤ 20
C	>20 and ≤ 35
D	>35 and ≤ 55
E	>55 and ≤ 80
F	> 80

Similarly, the unsignalized LOS criteria are shown in Table 5 2:

Table 5-2
Unsignalized Intersection LOS Criteria

LOS	Control Delay (sec)
A	≤ 10
B	>10 and ≤ 15
C	>15 and ≤ 25
D	>25 and ≤ 35
E	>35 and ≤ 50
F	> 50

5.2.2 Level of Service Results

The results of the LOS analysis for showing a comparison of existing LOS and 2020 LOS with the Project are shown in **Table 5-3.** For this traffic study, only the two intersections of County Line Rd./Lucent Blvd. and Lucent Blvd./Plum Valley Lane were evaluated in detail.

Future LOS Results

- Similar to the results for existing LOS, there are no existing intersection LOS issues in the project area at the Lucent Blvd./Plum Valley Lane except for delay for drivers making unsignalized left turns onto Lucent Boulevard from Plum Valley Lane. This delay for left turns from Plum Valley Lane onto Lucent Boulevard is to be expected at the minor street approach to a stop controlled intersection.

- Based on the ITE trip generation methodologies the addition of Project traffic to the intersection of County Line Road/Lucent Boulevard will be at its capacity under its existing configuration. It should be noted that based on the existing traffic counts on Plum Valley Lane, the trips forecasted for the additional development are quite aggressive based on the existing auto dealerships in the vicinity and represent a conservative scenario for this development.

Table 5-3 : Existing and Future Level of Service Results

	Existing (2014)						Future - with Development					
	AM Peak			PM Peak			AM Peak			PM Peak		
	v/c	delay	LOS	v/c	delay	LOS	v/c	delay	LOS	v/c	delay	LOS
Lucent Dr and Plum Valley												
NB Left	0.01	7.5	A	0.01	9.2	A	0.01	7.6	A	0.02	9.5	A
SB Left	0.04	9.2	A	0.03	9.2	A	0.18	11.4	B	0.17	10.6	B
EB Left	0.01	14.3	B	0.09	34.6	D	0.03	22.8	C	0.3	>100	F
WB Left	0.07	20.6	C	0.44	48.6	E	0.6	75.4	F	2.88	>100	F
County Line Road and Lucent Blvd												
NB Left	0.31	26.9	C	0.83	50.6	D	0.43	24.3	C	1	76	E
NB Right	0.43	10.2	B	0.22	4.9	A	0.57	14	B	0.3	4.6	A
WB Left	0.26	34.6	C	0.87	48.4	D	0.51	33.9	C	1.01	74.6	E
EB Thru	0.74	48	D	0.8	64.6	E	0.65	25.9	C	1.01	>100	F

Delay reported in seconds per vehicle

6.0 Summary and Findings

The existing Schomp BMW located on Plum Valley Lane is interested in planning expansion to include a MINI dealership and Honda dealership. These dealerships would be added to the east of the existing BMW dealership along with a parking lot to the north to house vehicle inventory and employee parking. The addition of these auto dealerships would effectively double the amount of auto dealership space on Plum Valley Lane resulting in additional traffic in the vicinity.

Using ITE trip generation rates to forecast future traffic generation, the additional Project trips were loaded onto the roadway network based on the existing traffic distribution at the Lucent Blvd../Plum Valley Lane and County Line Rd./Lucent Blvd.. intersections. Analysis of these intersections during the AM and PM peak hours led to the following conclusions:

- At the intersection of Lucent Blvd../Plum Valley Lane the left turn volumes onto Lucent Boulevard may experience substantial delay with the addition of the Project at the time of buildout. Delay for the minor street left turns generally does not constitute the need for the addition of a signal, however, the traffic volume forecasts for the east leg of the Plum Valley Lane intersection appear to be high enough to meet peak hour warrants for a traffic signal at this intersection. This intersection should continue to be monitored after opening of the Project to see if warrants are met.

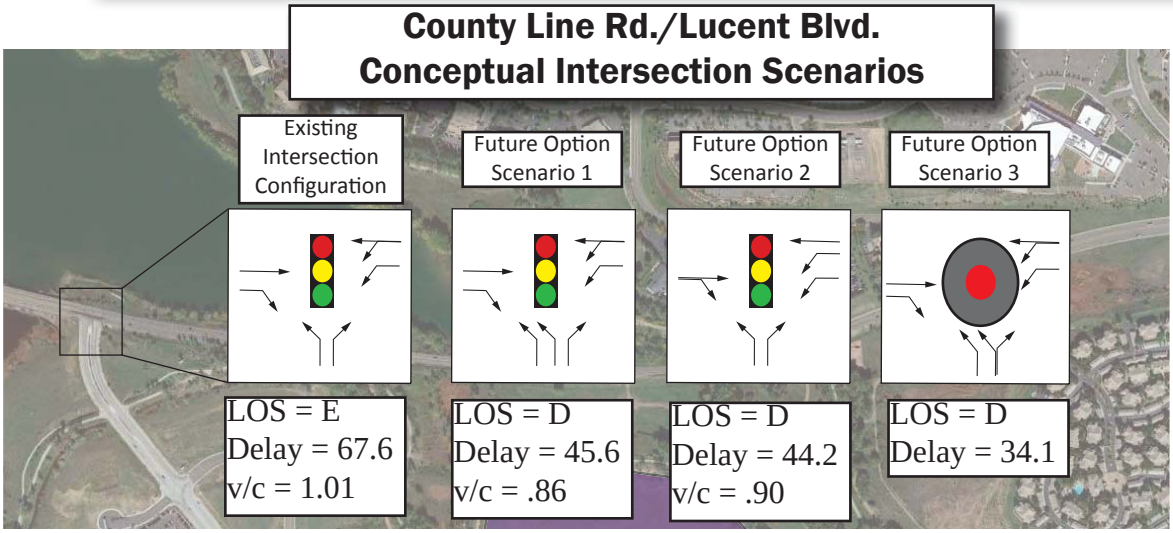
- As shown in **Table 6-1**, with the addition of future development in the area including such things as a veterinary/animal clinic and additional auto dealership, this left turn will continue to experience excessive delay and will likely require signalization. All other movements operate within their capacity.

Table 6-1 : Plum Valley Lane Buildout Comparison

	Future - with Project PM Peak			Future -w/Plum Valley Buildout PM Peak		
	v/c	delay	LOS	v/c	delay	LOS
Lucent Dr and Plum Valley						
NB Left	0.02	9.5	A	0.02	9.5	A
SB Left	0.17	10.6	B	0.21	10.9	B
EB Left	0.3	>100	F	0.4	>100	F
WB Left	2.88	>100	F	4.19	>100	F

- The intersection of County Line Rd./Lucent Blvd.. is already a very busy intersection under existing conditions. With the addition of the Project and continued background traffic growth this intersection will be at its capacity under its existing configuration. While analyzing the future Level

Figure 6-2 : County Line Rd./Lucent Blvd.



of Service for the County Line Rd./Lucent Blvd.. intersection, TSH looked at three possible future intersection improvements that could be accommodated either within the existing intersection footprint, or with minor construction improvements to the existing intersection. These scenarios are shown with their respective Level of Service in **Figure 6-2** and are outlined below:

- Scenario 1 includes the addition of a left turn lane to the Northbound approach making it a double left turn with a separate right turn lane. There is approximately 34 feet of pavement on this approach making this a feasible restriping option or the raised median could be reduced to add an additional left turn lane while maintaining the existing location of the existing turn lanes. There is currently sufficient receiving pavement in the westbound direction to add another northbound left turn lane. A merge downstream across the bridge would be necessary to reduce the westbound direction to a single lane.

- Scenario 2 includes the separation of the Westbound shared thru-left turn lane that exists today. By adding this extra lane to obtain double left turns as well as a thru lane, the eastbound approach would become a shared thru-right turn lane. All this could be done as a simple restriping effort. Alternatively, with the removal of additional curb in the southwest corner of the intersection, both of the eastbound lanes could shift south 12 feet maintaining the separate right-turn and thru movements.

- Scenario 3 includes the conversion of the existing T-intersection into an multi-lane roundabout. This scenario would require the reconstruction of the existing intersection and would have the greatest improvement in terms of delay experienced at the intersection. The roundabout conversion would be the highest construction cost and would expand the footprint of the intersection north onto the vacant land that is still outside the fenced boundary of McClellan Reservoir.

APPENDIX

- **Traffic Level of Service - HCM Output from Synchro**

Existing (2013) and Total (2020) Traffic Level of Service HCM Results

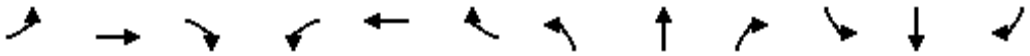
Organized by:

Analysis Year,
Intersection,
Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	333	49	117	118	185	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1583	1681	1761	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1583	1681	1761	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	362	53	127	128	201	518
RTOR Reduction (vph)	0	39	0	0	0	60
Lane Group Flow (vph)	362	14	114	141	201	458
Turn Type	NA	Perm	Split	NA	Prot	pt+ov
Protected Phases	4		3	3	5	5 3
Permitted Phases		4				
Actuated Green, G (s)	30.0	30.0	30.0	30.0	42.0	76.0
Effective Green, g (s)	30.0	30.0	30.0	30.0	42.0	76.0
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.37	0.67
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	490	416	442	463	652	1055
v/s Ratio Prot	c0.19		0.07	0.08	0.11	c0.29
v/s Ratio Perm		0.01				
v/c Ratio	0.74	0.03	0.26	0.30	0.31	0.43
Uniform Delay, d1	38.4	31.2	33.2	33.6	25.7	8.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.6	0.2	1.4	1.7	1.2	1.3
Delay (s)	48.0	31.4	34.6	35.3	26.9	10.2
Level of Service	D	C	C	D	C	B
Approach Delay (s)	45.9			35.0	14.9	
Approach LOS	D			D	B	

Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	0	5	17	0	13	14	580	68	29	127	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	5	18	0	14	15	630	74	32	138	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						7						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											848	
pX, platoon unblocked												
vC, conflicting volume	552	941	74	835	910	352	149			704		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	552	941	74	835	910	352	149			704		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	99	93	100	98	99			96		
cM capacity (veh/h)	393	250	972	250	261	644	1430			889		

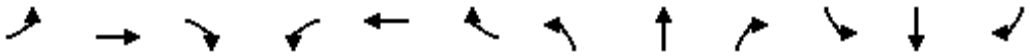
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	5	5	18	14	15	420	284	32	92	57
Volume Left	5	0	18	0	15	0	0	32	0	0
Volume Right	0	5	0	14	0	0	74	0	0	11
cSH	393	972	250	0	1430	1700	1700	889	1700	1700
Volume to Capacity	0.01	0.01	0.07	Err	0.01	0.25	0.17	0.04	0.05	0.03
Queue Length 95th (ft)	1	0	6	Err	1	0	0	3	0	0
Control Delay (s)	14.3	8.7	20.6	Err	7.5	0.0	0.0	9.2	0.0	0.0
Lane LOS	B	A	C	F	A			A		
Approach Delay (s)	11.5		Err		0.2			1.6		
Approach LOS	B		F							

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	38.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	251	67	620	452	440	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.99	0.95	1.00
Satd. Flow (prot)	1863	1583	1681	1755	1770	1583
Flt Permitted	1.00	1.00	0.95	0.99	0.95	1.00
Satd. Flow (perm)	1863	1583	1681	1755	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	273	73	674	491	478	303
RTOR Reduction (vph)	0	60	0	0	0	38
Lane Group Flow (vph)	273	13	573	592	478	265
Turn Type	NA	Perm	Split	NA	Prot	pt+ov
Protected Phases	4		3	3	5	5 3
Permitted Phases		4				
Actuated Green, G (s)	22.0	22.0	47.0	47.0	39.0	90.0
Effective Green, g (s)	22.0	22.0	47.0	47.0	39.0	90.0
Actuated g/C Ratio	0.18	0.18	0.39	0.39	0.32	0.75
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	341	290	658	687	575	1187
v/s Ratio Prot	c0.15		c0.34	0.34	c0.27	0.17
v/s Ratio Perm		0.01				
v/c Ratio	0.80	0.05	0.87	0.86	0.83	0.22
Uniform Delay, d1	46.9	40.4	33.7	33.5	37.5	4.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.7	0.3	14.7	13.4	13.1	0.4
Delay (s)	64.6	40.7	48.4	46.9	50.6	4.9
Level of Service	E	D	D	D	D	A
Approach Delay (s)	59.5			47.7	32.9	
Approach LOS	E			D	C	

Intersection Summary			
HCM 2000 Control Delay	44.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	0	13	58	0	63	12	645	15	23	658	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	0	14	63	0	68	13	701	16	25	715	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						7						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											848	
pX, platoon unblocked												
vC, conflicting volume	1145	1512	361	1157	1507	359	722			717		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1145	1512	361	1157	1507	359	722			717		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	100	98	56	100	89	99			97		
cM capacity (veh/h)	133	114	636	143	115	638	876			879		

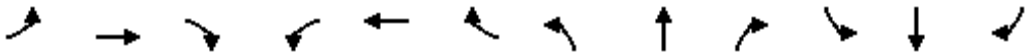
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	12	14	63	68	13	467	250	25	477	245
Volume Left	12	0	63	0	13	0	0	25	0	0
Volume Right	0	14	0	68	0	0	16	0	0	7
cSH	133	636	143	0	876	1700	1700	879	1700	1700
Volume to Capacity	0.09	0.02	0.44	Err	0.01	0.27	0.15	0.03	0.28	0.14
Queue Length 95th (ft)	7	2	49	Err	1	0	0	2	0	0
Control Delay (s)	34.6	10.8	48.6	Err	9.2	0.0	0.0	9.2	0.0	0.0
Lane LOS	D	B	E	F	A			A		
Approach Delay (s)	21.7		Err		0.2			0.3		
Approach LOS	C		F							

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	35.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	375	83	187	133	220	561
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.99	0.95	1.00
Satd. Flow (prot)	1863	1583	1681	1754	1770	1583
Flt Permitted	1.00	1.00	0.95	0.99	0.95	1.00
Satd. Flow (perm)	1863	1583	1681	1754	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	408	90	203	145	239	610
RTOR Reduction (vph)	0	60	0	0	0	98
Lane Group Flow (vph)	408	30	171	177	239	512
Turn Type	NA	Perm	Split	NA	Prot	pt+ov
Protected Phases	4		3	3	5	5 3
Permitted Phases		4				
Actuated Green, G (s)	27.0	27.0	16.0	16.0	25.0	45.0
Effective Green, g (s)	27.0	27.0	16.0	16.0	25.0	45.0
Actuated g/C Ratio	0.34	0.34	0.20	0.20	0.31	0.56
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	628	534	336	350	553	890
v/s Ratio Prot	c0.22		0.10	0.10	0.14	c0.32
v/s Ratio Perm		0.02				
v/c Ratio	0.65	0.06	0.51	0.51	0.43	0.57
Uniform Delay, d1	22.5	17.9	28.5	28.5	21.9	11.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.1	0.2	5.4	5.1	2.5	2.7
Delay (s)	27.6	18.1	33.9	33.6	24.3	14.0
Level of Service	C	B	C	C	C	B
Approach Delay (s)	25.9			33.8	16.9	
Approach LOS	C			C	B	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	0	6	62	0	50	16	653	272	116	143	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	0	7	67	0	54	17	710	296	126	155	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						7						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											848	
pX, platoon unblocked												
vC, conflicting volume	803	1454	84	1229	1312	503	167			1005		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	803	1454	84	1229	1312	503	167			1005		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	99	40	100	89	99			82		
cM capacity (veh/h)	209	104	959	113	127	514	1408			685		

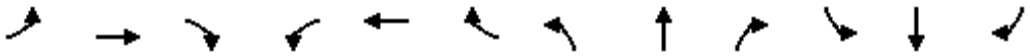
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	7	7	67	54	17	473	532	126	104	64
Volume Left	7	0	67	0	17	0	0	126	0	0
Volume Right	0	7	0	54	0	0	296	0	0	12
cSH	209	959	113	0	1408	1700	1700	685	1700	1700
Volume to Capacity	0.03	0.01	0.60	Err	0.01	0.28	0.31	0.18	0.06	0.04
Queue Length 95th (ft)	2	1	73	Err	1	0	0	17	0	0
Control Delay (s)	22.8	8.8	75.4	Err	7.6	0.0	0.0	11.4	0.0	0.0
Lane LOS	C	A	F	F	A			B		
Approach Delay (s)	15.8		Err		0.1			4.9		
Approach LOS	C		F							

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	53.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	272	90	766	489	571	356
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.99	0.95	1.00
Satd. Flow (prot)	1863	1583	1681	1749	1770	1583
Flt Permitted	1.00	1.00	0.95	0.99	0.95	1.00
Satd. Flow (perm)	1863	1583	1681	1749	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	296	98	833	532	621	387
RTOR Reduction (vph)	0	82	0	0	0	20
Lane Group Flow (vph)	296	16	666	699	621	367
Turn Type	NA	Perm	Split	NA	Prot	pt+ov
Protected Phases	4		3	3	5	5 3
Permitted Phases		4				
Actuated Green, G (s)	19.0	19.0	47.0	47.0	42.0	93.0
Effective Green, g (s)	19.0	19.0	47.0	47.0	42.0	93.0
Actuated g/C Ratio	0.16	0.16	0.39	0.39	0.35	0.78
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	294	250	658	685	619	1226
v/s Ratio Prot	c0.16		0.40	c0.40	c0.35	0.23
v/s Ratio Perm		0.01				
v/c Ratio	1.01	0.06	1.01	1.02	1.00	0.30
Uniform Delay, d1	50.5	42.9	36.5	36.5	39.0	4.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	54.2	0.5	38.1	39.6	37.0	0.6
Delay (s)	104.7	43.4	74.6	76.1	76.0	4.6
Level of Service	F	D	E	E	E	A
Approach Delay (s)	89.5			75.4	48.6	
Approach LOS	F			E	D	

Intersection Summary			
HCM 2000 Control Delay	67.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	0	15	222	0	257	14	726	78	145	741	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	0	16	241	0	279	15	789	85	158	805	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						7						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											848	
pX, platoon unblocked												
vC, conflicting volume	1549	2029	407	1596	1990	437	813			874		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1549	2029	407	1596	1990	437	813			874		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	60	100	97	0	100	51	98			79		
cM capacity (veh/h)	33	44	594	58	47	567	810			768		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	13	16	241	279	15	526	348	158	537	276
Volume Left	13	0	241	0	15	0	0	158	0	0
Volume Right	0	16	0	279	0	0	85	0	0	8
cSH	33	594	58	0	810	1700	1700	768	1700	1700
Volume to Capacity	0.40	0.03	4.19	Err	0.02	0.31	0.20	0.21	0.32	0.16
Queue Length 95th (ft)	33	2	Err	Err	1	0	0	19	0	0
Control Delay (s)	175.5	11.2	Err	Err	9.5	0.0	0.0	10.9	0.0	0.0
Lane LOS	F	B	F	F	A			B		
Approach Delay (s)	84.2		Err		0.2			1.8		
Approach LOS	F		F							

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	52.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	283	91	781	509	578	361
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	0.95	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.99	0.99	0.95	1.00
Satd. Flow (prot)	1863	1583	1750	1750	3433	1583
Flt Permitted	1.00	1.00	0.99	0.99	0.95	1.00
Satd. Flow (perm)	1863	1583	1750	1750	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	308	99	849	553	628	392
RTOR Reduction (vph)	0	81	0	0	0	33
Lane Group Flow (vph)	308	18	688	714	628	359
Turn Type	NA	Perm	Split	NA	Prot	pt+ov
Protected Phases	4		3	3	5	5 3
Permitted Phases		4				
Actuated Green, G (s)	22.0	22.0	54.0	54.0	26.0	86.0
Effective Green, g (s)	22.0	22.0	54.0	54.0	26.0	86.0
Actuated g/C Ratio	0.18	0.18	0.45	0.45	0.22	0.72
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)	341	290	787	787	743	1134
v/s Ratio Prot	c0.17		0.39	c0.41	c0.18	0.23
v/s Ratio Perm		0.01				
v/c Ratio	0.90	0.06	0.87	0.91	0.85	0.32
Uniform Delay, d1	48.0	40.5	29.9	30.7	45.1	6.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	29.4	0.4	12.9	16.1	11.4	0.7
Delay (s)	77.4	40.9	42.9	46.8	56.4	7.0
Level of Service	E	D	D	D	E	A
Approach Delay (s)	68.5			44.9	37.4	
Approach LOS	E			D	D	

Intersection Summary			
HCM 2000 Control Delay	45.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	272	90	766	489	571	356
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		0.97	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1800		3433	1863	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	1800		3433	1863	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	296	98	833	532	621	387
RTOR Reduction (vph)	10	0	0	0	0	62
Lane Group Flow (vph)	384	0	833	532	621	325
Turn Type	NA		custom	NA	Prot	pt+ov
Protected Phases	4		3	8	5	5 3
Permitted Phases			3			
Actuated Green, G (s)	28.0		31.0	63.0	49.0	84.0
Effective Green, g (s)	28.0		31.0	63.0	49.0	84.0
Actuated g/C Ratio	0.23		0.26	0.52	0.41	0.70
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	420		886	978	722	1108
v/s Ratio Prot	c0.21		c0.24	0.29	c0.35	0.21
v/s Ratio Perm						
v/c Ratio	0.91		0.94	0.54	0.86	0.29
Uniform Delay, d1	44.8		43.6	18.9	32.4	6.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	26.9		18.8	2.2	12.7	0.7
Delay (s)	71.8		62.4	21.1	45.1	7.5
Level of Service	E		E	C	D	A
Approach Delay (s)	71.8			46.3	30.7	
Approach LOS	E			D	C	

Intersection Summary			
HCM 2000 Control Delay	44.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	34.1
Intersection LOS	D

Approach	EB	WB	NB
Entry Lanes	2	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	394	1365	1008
Demand Flow Rate, veh/h	402	1393	1028
Vehicles Circulating, veh/h	850	633	302
Vehicles Exiting, veh/h	1176	697	950
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	13.1	56.3	12.2
Approach LOS	B	F	B

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	R	L	LTR	L	LTR
Assumed Moves	LT	R	L	LTR	L	LTR
RT Channelized						
Lane Util	0.751	0.249	0.530	0.470	0.530	0.470
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	302	100	738	655	545	483
Cap Entry Lane, veh/h	597	623	703	725	901	915
Entry HV Adj Factor	0.980	0.980	0.981	0.980	0.980	0.981
Flow Entry, veh/h	296	98	724	642	534	474
Cap Entry, veh/h	586	611	689	711	883	897
V/C Ratio	0.506	0.160	1.050	0.903	0.605	0.528
Control Delay, s/veh	14.8	7.8	72.4	38.1	13.1	11.1
LOS	B	A	F	E	B	B
95th %tile Queue, veh	3	1	19	12	4	3