PLANNING AND ZONING COMMISSION COMMUNICATION
City of Longmont, Colorado

Project Title: Barrett/Utility Sales & Service, Inc./Clarke Annexation Concept Plan Amendment (PZR 2021-6)

Date of Meeting: July 21, 2021

Staff Planner: Ava Pecherzewski, Principal Planner, (303) 651-8735, ava.pecherzewski@longmontcolorado.gov
Glen Van Nimwegen, Director, Planning & Development Services, (303) 651-8710, glen.vannimwegen@longmontcolorado.gov

GENERAL INFORMATION

Proposal: An application has been submitted to the City requesting to amend the approved annexation concept plan for this property to change the proposed development from a big-box retail building with small retail buildings to an apartment complex on the north side of the property and commercial buildings on the south side of the property.
Location: Northeast corner of Highway 66 and Erfert Street
Area: 36 acres
Existing Use: Residential home and undeveloped property
Zoning: MU-R (Mixed-Use Regional Center)

SURROUNDING LAND USES AND ZONING

North: Agricultural land zoned AG in Unincorporated Boulder County
South: Residential homes zoned R-MN (Residential Mixed Neighborhood)
East: Agricultural land zoned AG in Unincorporated Boulder County
West: Walmart Supercenter zoned MU-R (Mixed-Use Regional Center)

COMPREHENSIVE PLAN DESIGNATIONS

The "Envision Longmont" Comprehensive Plan designates this property as Regional Center. Highway 66 is a designated Regional Arterial street and Erfert Street is designated as a local street in the comprehensive plan.

Property Owner: Stan Barrett, Inc.

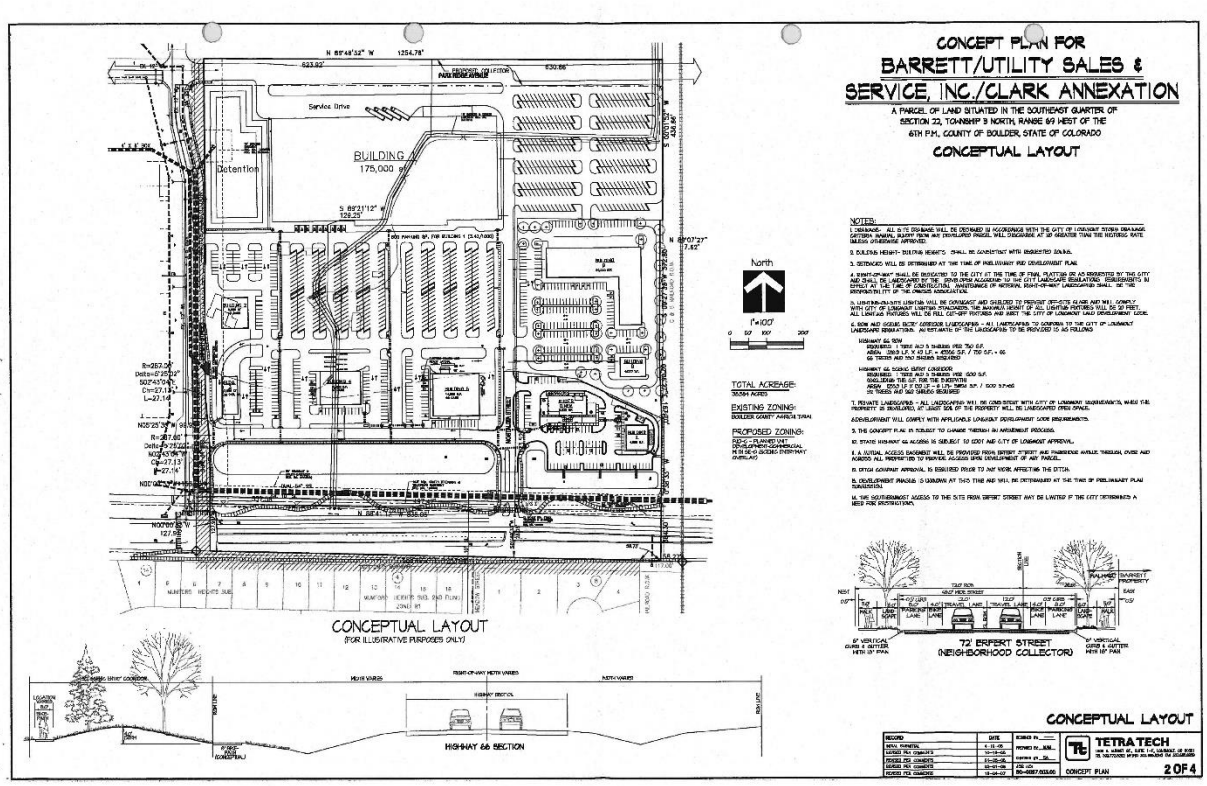
Applicant: Watermark Residential
Applicant Contact: Jessica Tuttle
Company: Watermark Residential

Phone: (317) 853-5459
Email: jtuttle@watermarkapartments.com

APPLICATION DESCRIPTION

An application has been filed by Watermark Residential to amend a previously approved annexation concept plan for the 36-acre property located at the northeast corner of Highway 66 and Erfert Street. The property is bounded by State Highway 66 on the south, Park Ridge Avenue on the north, Erfert Street on the west and the BNSF Railroad tracks on the east. The property abuts a Walmart Supercenter on the west, agricultural land in Unincorporated Boulder County on the north and east, and the Mumford Heights residential neighborhood south of Highway 66. A vicinity map is below:

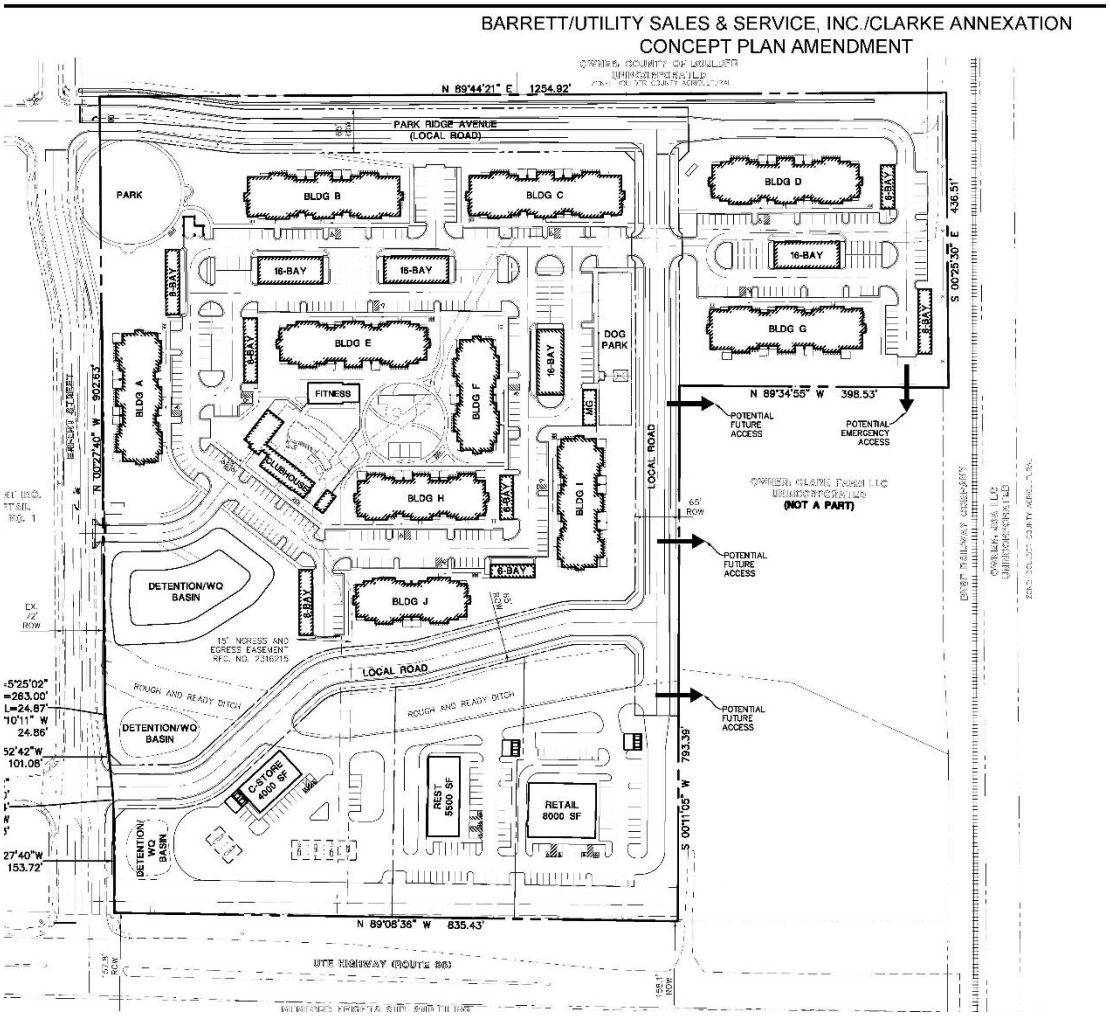
In 2008, the City Council annexed this property with a concept plan which described the future development on the property to include a 175,000 square-foot big-box retail building and eight retail buildings of varying sizes throughout the property. The concept plan also proposed a new north-south local street with access from State Highway 66. The 2008 annexation concept plan is shown below:



The property was annexed in 2008 with a zoning designation of PUD-C (Commercial Planned Unit Development) and in 2018 the City Council rezoned many PUD properties into general zoning districts – this property was rezoned to MU-R (Mixed-Use Regional). The property owner has been unable to find buyers or tenants to construct retail buildings since the 2008 annexation. In 2020, the City received a development application for site plan review to develop the northern half of the site (21 acres) with a 336-unit apartment complex. The zoning for this property allows multifamily residential development as a secondary use in the MU-R zone. Given that the adjacent 28 acres to the west is also zoned MU-R and is developed with retail commercial uses, the apartment project meets the criteria for a secondary use with approval of a site plan. However, the apartment complex was not a contemplated land use in the 2008 annexation concept plan. Review Criteria 1 of the Land Development Code (Section 15.02.055) for approval of site plans states, previously approved concept plan…"

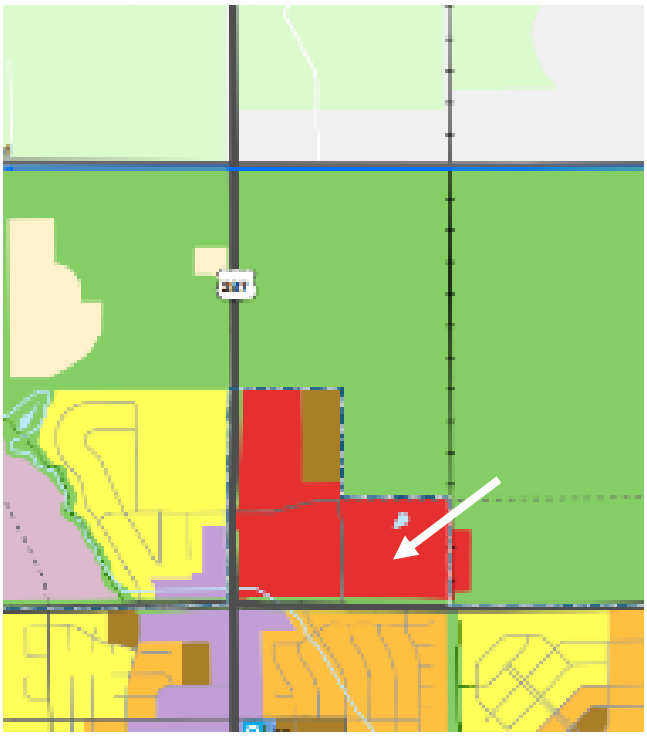
The applicant is thus requesting an amendment to the previously approved annexation concept plan for the Barrett/Utility Sales & Service, Inc./Clarke Annexation and the requested concept plan includes the proposed apartment complex on the north with an 8,000 square-foot retail building, a 5,000 square foot restaurant, and a gas station on the south side of the property adjacent to Highway 66. The applicant proposes no particular development for the southeastern side of the property. While a retail and restaurant use are permitted uses by-right in this zone, gas stations within 250-feet of a

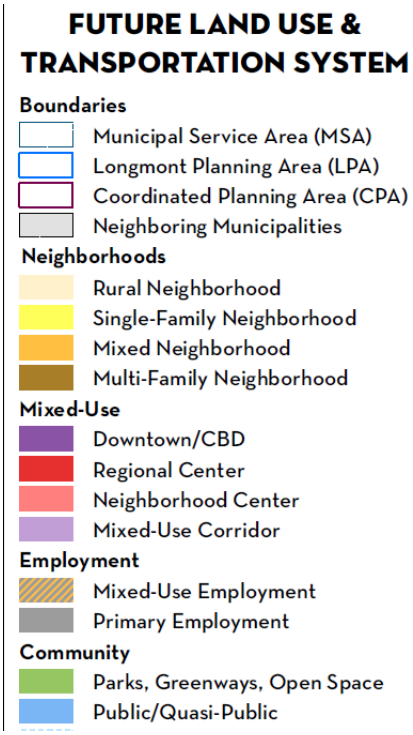
residential use and drive-through restaurants are conditional uses which would be required to obtain approval from the Planning & Zoning Commission at time of development application. The proposed Concept Plan is below:



Alignment with the Envision Longmont Multimodal & Comprehensive Plan

The "Envision Longmont" Comprehensive Plan designates the property as Regional Center. The Regional Center designation "serves the commercial and retail needs of the City and region, *while also providing high density housing* and employment options in close proximity to transit and other services." A range of commercial and residential uses are permitted in this land use designation, including large format retailers, restaurants, and entertainment uses that attract regional visitors. Allowable secondary uses in this land use designation include offices, high density apartments, medical and other employment businesses, and public facilities. The proposed land uses in this development align with the property's comp land use designation. The property's relation with the sur Comprehensive Plan is shown below:





DEVELOPMENT REVIEW COMMITTEE PROCESS

The DRC initiated review of this application in February of 2021 after staff had begun reviewing an administrative site plan application for an apartment complex and determined that, although the zoning allowed it, the proposed apartments were not consistent with the approved annexation concept plan in 2008.

The applicant submitted the proposed concept plan amendment in February 2021 with a proposal for apartments on the north side, commercial on the south side, and no development on the east side. During DRC review, Public Works staff requested changes to the proposed vehicular access points. The original annexation concept plan proposed a north-south street accessed from State Highway 66 (see original concept plan above). The current intergovernmental agreement between the City and CDOT (Colorado Department of Transportation) prohibits new driveway accesses off of Highway 66. Public Works staff recommended that the applicant redesign the concept plan to remove that access point from Highway 66 and instead add another local street access from Erfert Street that would run west-east. Also, in order not to landlock the adjacent property to the east, the Fire Department and Public Works Departments recommended the concept plan provide a second north-south public street starting at Park Ridge Avenue and connecting to the new west-east street. This new street connection provides the required two points of access for both the apartment complex and the commercial to the south, as well as provides an access point for the portion of property to the east that is not proposed for any development at this time but could in the future.

A Species and Habitat Assessment was prepared for this property in August 2020 (see Attachment 6). The report concluded that the property does not provide habitat for any federally or state-listed threatened, endangered or candidate plants or wildlife species. The 2020 report also noted that a jurisdictional determination was sought from the Army Corps of Engineers as to whether the various irrigation ditches on the property, and their adjacent wetlands, are considered a Waters of the U.S. In August 2019, the Army Corps issued a letter of jurisdictional determination, confirming that the Corps does not identify the five irrigation ditches on the property as jurisdictional and that a 404 Permit will not be required. Finally, the August 2020 report noted that they did not observe any migratory bird nests on the subject property, however, they have recommended that a bird nesting survey be completed and submitted to the City at least one week before any construction activities are to begin (see Attachment 6). This can be added as a recommended condition of approval, however, staff does require the bird nest survey as a requirement regardless, at least one week prior to the start of construction activities. Natural Resources staff have also reviewed the Species & Habitat Assessment and concur with its findings, although they recommend that the bird nesting survey include a 0.5-mile radius outside the project site, and not just on the subject property.

A Phase One Environmental Site Assessment was prepared for this property in June of 2020. The property had been historically used for farming, grazing and agricultural purposes. There are currently two homes on the property, one constructed in 1929 on the east side and one constructed in 1975 on the west side. There are also associated storage sheds (a barn burned down in 2019). The report concluded that there was no evidence of recognized environmental conditions (RECs) on this property. It is possible that the existing farmhouse built in 1929 contains asbestos and mitigation measures will be required at time of demolition in conjunction with a demolition permit application through the Building Department. City staff reviewed the Phase One report and concurred with its findings.

The traffic study provided by the applicant's consultant engineering based their calculations on a full buildout that includes up to 336 multifamily dwelling units, a 5,500 square-foot fast-food restaurant, an 8,000 square-foot retail building and a gas station with 4,000 square-foot convenience store. The traffic study estimated that at full buildout, approximately 2,468 weekday trips are expected for the residential component, and 7,019 weekday trips are expected for the commercial component. The traffic study examined current traffic levels at street intersections immediately adjacent to the subject property, including the intersection of Hwy 66 & Erfert Street, Erfert Street & Park Ridge Avenue, and Hwy 66 & Main Street.

The current level of service (LOS) at the signalized intersection of Hwy 66 and Erfert Street and the unsignalized (but four-way stop sign) intersection of Erfert Street and Park Ridge Avenue are both currently operating at LOS "D" in both AM and PM peak hours, and the study expects this level of service to maintain at this level through 2040. The current LOS at the signalized intersection of Hwy 66 & Main is "D" in the AM peak hours and is expected to worsen to LOS "E" in the PM pe

LOS "F" by 2040 whether or This is primarily due to regional development traffic growth on Highway 287 and State Highway 66 driven by growth of suburban housing to the north and east. Major capacity improvements at this intersection will require partnerships with CDOT, Boulder County, and the City of Longmont. A copy of the traffic study is located in Attachment 7. The traffic study makes the following recommendations as mitigation measures (to be completed by 2030):

- At time of residential development: Install a 100-foot long westbound left turn lane with a 100-foot transition taper along Park Ridge Avenue approaching Erfert Street.
- At time of residential development: Install a 100-foot long southbound left turn lane with a 100-foot transition taper along Erfert Street approaching the residential site access.
- At time of commercial development: Increase the length of the eastbound left turn and westbound right turn lanes on Hwy 66 approaching the Erfert Street intersection at the time of commercial development.
- At time of commercial development: Create a second left-turn lane for southbound Erfert Street at the Hwy 66 signal.
- At time of commercial development: Provide a 100-foot long southbound left turn lane with a 100-foot transition taper on Erfert as it approaches the commercial property street entrance/intersection for the proposed new west-east street to serve the commercial properties.

Public Works Traffic Engineering staff concur with these traffic mitigation recommendations and will require these installations to be designed and constructed at time of Public Improvement Plan submittal.

During DRC review, outside referral agencies were sent application materials to comment on. The following entities were sent referral letters regarding this annexation:

- Century Link (telecom)
- Comcast (cable tv)
- Xcel Energy (gas)
- BNSF Railroad
- Rough & Ready Ditch Company
- CDOT
- U.S. Fish & Wildlife Service
- Neighborhood Group Leaders via City
- Historic Preservation Commission
- Boulder County Land Use Dept.
- Boulder County Open Space Dept.
- St. Vrain Valley School District
- Colorado Parks & Wildlife
- Army Corps of Engineers

Comments were received from the School District, BNSF Railroad, Xcel Energy, Rough & Ready Ditch Company, the Historic Preservation liaison and Boulder County Open Space (see Attachment 3). The school district stated that they estimated a total of 89 students would be generated from the residential apartment development, and concluded that the adjacent feeder schools (Timberline Elementary, Timberline Middle and Skyline High) could accommodate the additional student capacity. Xcel Energy did not express conflicts or concerns with this development plan. Boulder County Open Space expressed concern regarding an existing access easement from this property to their agricultural

property to the north and requested that the access be maintained in either its existing location or in a new location with County review and approval. The County would also like the developer to inform potential tenants in writing that agricultural property exists to the north which many have noise and odor impacts associated with agricultural grazing. Staff is working with the developer through the site plan review to provide the necessary access to the County property to the north.

BNSF Railroad indicated that they would like to review any drainage reports, and any fencing or landscape plans for any planting near their tracks. The ditch company noted that the plans did not adequately depict the potential impacts to the ditch very well and requested to review more detailed construction plans. Staff will continue to forward site plans to the ditch company for the apartments site plan which is a separate application from this one. The city's Historic Preservation Commission reviewed the existing homes on this property at their July 8, 2021 meeting and determined that overall the property has little historical integrity, and therefore is not eligible for local or state historic designation. The commission recommended that the developer recycle or reuse as much building material during the demolition process. Copies of all correspondence received is in Attachment 3.

NEIGHBORHOOD INPUT – NOTIFICATIONS AND SIGN POSTING

Notice Type	Date Sign Posted	Date Mailed/Postmarked
Neighborhood Meeting	December 21, 2020	December 16, 2020
Notice of Application Submittal	February 19, 2021	February 11, 2021
Public Hearing Notice	July 7, 2021	July 6, 2021

A virtual neighborhood meeting was held on January 6, 2021. Notices for the meeting were mailed out to all property owners within a 1,000-foot radius of the subject property and signs were posted on the property at least two weeks prior to the meeting. There were approximately five attendees at the meeting, not including staff and applicant city staff. The applicant discussed their proposed concept plan change and staff explained the entitlement process. Issues identified at the neighborhood meeting include:

- Question about where the main street access points will be (Erfert Street).
- Question about when construction will begin (late 2021/early 2022).
- Question about whether the existing homes on the property will be demolished (yes).
- Concerns raised about pedestrians crossing Highway 66.
- Question about whether City, CDOT and Boulder County will do any improvements to Highway 66.
- Adjacent property owner inquired as to whether any utility infrastructure improvements would encroach onto his land.

A copy of the neighborhood meeting minutes is located in Attachment 3.

A notice of application was mailed to all property owners within a 1,000-foot radius on February 11, 2021 and signs were posted on the property on February 19, 2021 notifying the public that an application had been formally submitted. The city did not receive any phone calls or correspondence from the public with specific opinions regarding this application. In full disclosure, the City did receive written comments from an adjacent property owner, however, they were general questions seeking a copy of the utility infrastructure plans for the apartment complex. A copy of the public comments is located in Attachment 3.

Notices of public hearing were mailed out to a 1,000-foot radius on July 6, 2021. Signs giving notice of the public hearing were posted on the site as of July 7, 2021. Legal notice was published in the Times-Call newspaper. As of the date packets went out, staff had not received any phone calls or written comments regarding the proposal. Any additional correspondence received after packets are sent to the Commission will be emailed to the Commissioners prior to the start of the meeting.

CRITERIA EVALUATION

In order to recommend approval of an Annexation Concept Plan Amendment, Planning & Zoning must find the application meets the following core review criteria in Land Development Code Section 15.02.055:

A. The application is consistent with the comprehensive plan and the purpose of the code and zoning district; conforms to any previously approved concept plan, preliminary plat, or PUD overall development plan; and complies with all applicable statutes, codes, ordinances and regulations.

The requested annexation concept plan amendment is consistent with the following goals, policies and strategies in the Envision Longmont Comprehensive Plan:

- Goal 1.1: Embrace a compact and efficient pattern of growth.
- Goal 1.2: Promote a sustainable mix of land uses.
- Policy 1.2A: Strive for a balanced mix of residential, employment, retail, commercial, recreational, and other uses that allow residents to live, work, play, learn, and conduct much of their daily business within the City and increase the self-sufficiency of the community.
- Policy 1.2F: Support the incorporation of higher density housing types, such as townhomes, multifamily apartments and condominiums, live-work options- and housing for special populations such as seniors or people with specialized needs- in centers, corridors, Downtown and Mixed-Use Employment Areas where transit and a range of services, employment opportunities, and amenities are accessible today, or are planned for the future.

The site has a previously-approved annexation concept plan from 2008 and the proposed concept plan amendment is generally consistent with the layout of the concept plan other than the request to provide multifamily housing on the north half of the property. However, the applicant has provided sufficient justification to amend the concept plan and has provided alternative road access in the concept Plan. The proposed concept plan also complies with all applicable statutes, codes, ordinances and regulations.

B. The application complies with applicable city standards, including for street and utility design and layout, and adequate utilities are available or will be provided for appropriate urban-level services.

The concept plan submitted by the applicant appears to provide street layouts and utility designs that meet city standards and are acceptable to Public Works Engineering. Two new public streets are proposed in the concept plan that would provide access to the proposed commercial uses on the south side of the property and will provide access to the yet-undetermined development to the east. An administrative site plan for the apartments is in review in conjunction with this request and Public Works acknowledges that there are sufficient utilities available to provide appropriate urban-level services.

C. The application proposes development compatible with surrounding properties in terms of land use, site and building layout and design, and access.

The proposed concept plan proposes development in alignment with the surrounding properties and is consistent with the property in Envision Longmont as Regional Center. Allowable uses in this zone include a variety of The Regional Center designation "serves the needs of the City and region, while also providing high density housing and employment options in close proximity to Longmont, Page 110). A range of commercial and residential uses are permitted in this land use designation, including large format retailers, restaurants, and entertainment uses that attract regional visitors. Allowable secondary uses in this land use designation include offices, high density apartments, medical and other employment businesses, and public facilities. The proposed land uses in this development align with the property's comp

D. The application will not adversely affect surrounding properties, the natural environment, existing or planned city transportation, or utility services or facilities, or the adverse impacts of the use will be mitigated to the maximum extent feasible.

The proposed concept plan does not adversely affect surrounding properties. There is an existing Walmart Supercenter to the west of this property which can serve as a supporting business to the proposed land uses in the concept plan. There is another apartment complex to the northwest of this property which is a comparable land use. Properties to the north and east are agricultural grazing areas in Boulder County which can provide quiet open space abutting the proposed apartments. Due to the volume of traffic on Highway 66 and its accompanying noise levels, it is not likely that development on this site will have noise impacts to the Mumford Heights neighborhood beyond what is currently being experienced. It appears that the proposed commercial uses will require conditional use approval at time of development, and the Mumford Heights neighbors will have an opportunity at that time, as well as the Planning & Zoning Commission, to require conditions on development to mitigate any potential noise and lighting impacts.

A Species and Habitat Assessment was prepared for this property in August 2020 (see Attachment 6). The report concluded that the property does not provide habitat for any federally or state-listed threatened, endangered or candidate plants or wildlife species. The 2020 report also noted that a jurisdictional determination was sought from the Army Corps of Engineers as to whether the various irrigation ditches on the property, and their adjacent wetlands, are considered a Waters of the U.S. In August 2019, the Army Corps issued a letter of jurisdictional determination, confirming that the Corps does not identify the five irrigation ditches on the property as jurisdictional and that a 404 Permit will not be required. Finally, the August 2020 report noted that they did not observe any migratory bird nests on the subject property, however, they have recommended that a bird nesting survey be completed and submitted to the City at least one week before any construction activities are to begin (see Attachment 6). This can be added as a recommended condition of approval, however, staff does require the bird nest survey as a requirement regardless, at least one week prior to the start of construction activities. Natural Resources staff have also reviewed the Species & Habitat Assessment and concur with its findings, although they recommend that the bird nesting survey include a 0.5-mile radius outside the project site, and not just on the subject property.

A Phase One Environmental Site Assessment was prepared for this property in June of 2020. The property had been historically used for farming, grazing and agricultural purposes. There are currently two homes on the property, one constructed in 1929 on the east side and one constructed in 1975 on the west side. There are also associated storage sheds (a barn burned down in 2019). The report concluded that there was no evidence of recognized environmental conditions (RECs) on this property. It is possible that the existing farmhouse built in 1929 contains asbestos and mitigation measures will be required at time of demolition in conjunction with a demolition permit application through the Building

Department. City staff reviewed the Phase One report and concurred with its findings.

The proposed annexation and concept plan does not adversely affect streets or utilities. Public Works acknowledges that there are sufficient utilities available to provide appropriate urban-level services. The traffic study provided by the applicant's consultant and accepted by Ci calculations on a full buildout that includes up to 336 multifamily dwelling units, a 5,500 square-foot fast-food restaurant, an 8,000 square-foot retail building and a gas station with 4,000 square-foot convenience store. The traffic study estimated that at full buildout, approximately 2,468 weekday trips are expected for the residential component, and 7,019 weekday trips are expected for the commercial component. The traffic study examined current traffic levels at street intersections immediately adjacent to the subject property, including the intersection of Hwy 66 & Erfert Street, Erfert Street & Park Ridge Avenue, and Hwy 66 & Main Street.

The current level of service (LOS) at the signalized intersection of Hwy 66 and Erfert Street and the unsignalized (but four-way stop sign) intersection of Erfert Street and Park Ridge Avenue are both currently operating at a AM and PM peak hours, and the study expects this level of service to maintain at this level through 2040. The current LOS at the signalized intersection of Hwy 66 & Hwy 287 is operating at an LOS of "C" LOS "D" peak hours, and is expected to worsen to development is built. This is primarily due to regional traffic growth on Highway 287 and State Highway 66 driven by growth of suburban housing to the north and east. Major capacity improvements at this intersection will require partnerships with CDOT, Boulder County, and the City of Longmont. A copy of the traffic study is located in Attachment 7. The traffic study makes the following recommendations as mitigation measures (to be completed by 2030):

- At time of residential development: Install a 100-foot long westbound left turn lane with a 100-foot transition taper along Park Ridge Avenue approaching Erfert Street.
- At time of residential development: Install a 100-foot long southbound left turn lane with a 100-foot transition taper along Erfert Street approaching the residential site access.
- At time of commercial development: Increase the length of the eastbound left turn and westbound right turn lanes on Hwy 66 approaching the Erfert Street intersection at the time of commercial development.
- At time of commercial development: Create a second left-turn lane for southbound Erfert Street at the Hwy 66 signal.
- At time of commercial development: Provide a 100-foot long southbound left turn lane with a 100-foot transition taper on Erfert as it approaches the commercial property street entrance/intersection for the proposed new west-east street to serve the commercial properties.

Public Works Traffic Engineering staff concur with these traffic mitigation recommendations and will require these installations to be designed and constructed at time of Public Improvement Plan submittal.

E. The application, where required, complies with the sustainability evaluation system requirements to mitigate impacts of development within the City's riparian areas, and as applicable to other projects as determined by separate agreement.

The subject property is not adjacent to any city-designated riparian habitats that would need to comply with sustainability evaluation system requirements.

F. The application includes an appropriate transportation plan, including multi-modal transportation access, and is integrated and connected, where appropriate, with adjacent development through street connections, sidewalks, trails and similar features.

The proposed annexation concept plan provides an appropriate multi-modal transportation plan, showing two planned public streets, including a west-east local street from Erfert Street and a north-south local street from Park Ridge Avenue. This will provide pedestrian and vehicular access to the planned commercial lots to the south adjacent to Highway 66 as well as to the yet-undetermined development of the property on the east side.

Planning and Zoning Commission Options

The Planning and Zoning Commission may consider the following options when reviewing the Barrett/Sales & Utility Services, Inc./Clarke Annexation Concept Plan Amendment application:

1. Recommend approval of the Barrett/Sales & Utility Services, Inc./Clarke Annexation Concept Plan Amendment application to City Council, finding that the review criteria have been met, as reflected in PZR-2021-6A.

2. Recommend approval of the Barrett/Sales & Utility Services, Inc./Clarke Annexation Concept Plan Amendment application to City Council, finding that the review criteria have been met, with conditions, as reflected in PZR-2021-6B.

3. Recommend denial of the Barrett/Sales & Utility Services, Inc./Clarke Annexation Concept Plan Amendment application to City Council, finding that the review criteria have not been met, as reflected in PZR-2021-6C.

Recommendation

Staff recommends that the Planning and Zoning Commission recommend approval of the Barrett/Sales & Utility Services, Inc./Clarke Annexation Concept Plan Amendment application to City Council, finding that the review criteria have been met, as reflected in PZR-2021-5A.

Attachments

1. Resolutions
2. Applicant's submittal materials
3. Neighborhood Meeting Minutes, Correspondence from Referrals and the Public, Certifications of Mailing and Sign Posting
4. Original Annexation Concept Plan
5. Amended Annexation Concept Plan
6. Species & Habitat Report
7. Traffic Study

Project file number: 3427

Thompson Thrift Development, Inc.
d/b/a Watermark
111 Monument Circle, Suite 1600
Indianapolis, IN 46204
317-853-5459
jtuttle@watermarkapartments.com

June 23, 2021

City of Longmont Planning and Zoning Commissioners
350 Kimbark Street
Longmont, Co 80501

Dear Commissioners:

Thompson Thrift Development, Inc. d/b/a Watermark, respectfully requests an amendment to the Concept Plan for Barrett/Utility Sales & Services, Inc./Clark Annexation (2008). The previous concept plan allows for the uses in the proposed amended concept plan, but the bubble diagram is being updated to match the proposed Site Plan. The property was also zoned by a City wide rezoning in 2017 to MU-R. The proposed amended concept plan is consistent with the MU-R zoning and the comprehensive plan. All fees and requirements from the 2008 annexation will be paid and met by the Developer. The previous concept plan would require variances of code for access onto Ute Highway but the proposed concept plan meets City and State code. **No variances of code are requested for the proposed amended concept plan.**

The proposed plan meets the review criteria analysis as shown below.

Per City of Longmont Land Development Code Section 15.02.055

1. *The application is consistent with the comprehensive plan and the purpose of the code and zoning district; conforms to any previously approved concept plan, preliminary plat, or PUD overall development plan; and complies with all applicable statutes, codes, ordinances and regulations.*
   RESPONSE: Notch66 by Watermark proposes multifamily residential use within existing MU-R zoning. Multifamily is an allowable secondary use within MU-R, and MU-R is consistent with the comprehensive plan. At this time, no variances of code are proposed with the development. Multifamily is a permitted use by conditional use approval per the concept plan when the site was annexed into the City of Longmont. A revised concept plan layout is being submitted.

2. *The application complies with applicable city standards, including for street and utility design and layout, and adequate utilities are available or will be provided for appropriate urban-level services.*
   RESPONSE: At this time, no variances of code are proposed with the development. Will-serve commitments have been obtained for all wet and dry utilities subject to compliance with applicable city standards.

3. *The application proposes development compatible with surrounding properties in terms of land use, site and building layout and design, and access.*
   RESPONSE: Multifamily land use in MU-R zoning supports other primary land uses within the zoning area and therefore compliments the surrounding retail developments. This application also preserves the portion of the subject property that fronts Ute Hwy for future development, leaving additional opportunity for additional primary uses in the area. The development also proposes an extension of Park Ridge Avenue along the northern edge of the property and preserves space for potential interparcel access/utilities throughout the block.

4. *The application will not adversely affect surrounding properties, the natural environment, existing or planned city transportation, or utility services or facilities, or the adverse impacts of the use will be mitigated to the maximum extent feasible.*
   RESPONSE: Supplemental environmental, geotechnical, ecological, and traffic studies are included with the application that outline existing site conditions and any anticipated impacts of the development. Recommendations within these reports to mitigate any impacts will be followed. At this time it is anticipated that the existing utility system surrounding the development is adequately sized for development of this property.

5. *The application, where required, complies with the sustainability evaluation system requirements to mitigate impacts of development within the city's riparian areas, and as applicable to other projects as determined by separate agreement.*
   RESPONSE: Based upon the best available information and field reconnaissance of the site by licensed environmental professionals, we don't believe the site contains riparian areas.

6. *The application includes an appropriate transportation plan, including multi-modal transportation access, and is integrated and connected, where appropriate, with adjacent development through street connections, sidewalks, trails and similar features.*
   RESPONSE: This application includes a multi-modal transportation plan. Pedestrian and vehicular access is proposed to both Erfert St and the proposed Park Ridge Avenue extension. Land area is being preserved for potential interparcel access to adjacent properties for if they develop in the future.

<u>Per City of Longmont Land Development Code Section 15.02.060.E</u>

1. *The subdivision will not limit the ability to integrate surrounding land into the city or cause variances or exceptions to be granted if the adjacent land is annexed or developed;*
   RESPONSE: The development proposes an extension of Park Ridge Avenue along the northern edge of the property and preserves space for potential interparcel access/utilities throughout the block. No variances or exceptions will be forced upon future adjacent development with this development.

2. *The subdivision will not create lots that are undevelopable or burdened with costs that would preclude development from occurring on other property; and*
   RESPONSE: The development proposes an extension of Park Ridge Avenue along the northern edge of the property and preserves space for potential interparcel access/utilities throughout the block. These improvements may require some reimbursements from future adjacent developments, but should not inhibit future development.

3. *The proposed phasing plan for development of the subdivision is rational in terms of available infrastructure capacity and adequate public facility standards.*
   RESPONSE: Notch66 by Watermark will be constructed as a single phase development as it is currently proposed. All infrastructure capacity studies will reflect demand from the entire development. The retail outlots will be developed as a separate phase but utilities and access are being designed during the multifamily Notch 66 project.

Per City of Longmont Land Development Code Section 15.04.030.A.1.c

1. *The secondary use as proposed is of a scale and design and in a location that is compatible with surrounding uses and potential adverse impacts of the use will be mitigated to the maximum extent feasible.*
   RESPONSE: Secondary uses within the surrounding contiguous MU-R zone, including this one proposed, are scaled appropriately per zoning code versus primary uses. Any potential adverse impacts will be addressed with staff during the review process.

2. *The secondary use as proposed is consistent with the comprehensive plan and the purpose and intent of the code and underlying zoning district.*
   RESPONSE: Notch66 by Watermark proposes multifamily residential use within existing MU-R zoning. Multifamily is an allowable secondary use within MU-R, and MU-R is consistent with the comprehensive plan. At this time, no variances of code are proposed with the development.

3. *The secondary use as proposed will not substantially diminish the availability of land within the underlying zoning district for primary uses, or reduce the availability of land for primary uses below a minimum level necessary to meet the intent of the district.*
   RESPONSE: Multifamily land use in MU-R zoning supports other primary land uses within the zoning area and therefore compliments the surrounding retail developments. This application also preserves the portion of the subject property that fronts Ute Hwy for future development, leaving additional opportunity for additional primary uses in the area. The development also proposes an extension of Park Ridge Avenue along the northern edge of the property and preserves space for potential interparcel access/utilities throughout the block. The total available land remaining within the contiguous MU-R zoning is still above the code minimum with the inclusion of this development.

Sincerely,

Jessica Tuttle
Vice President of Development

Notch66 – Concept Plan Amendment - Neighborhood Meeting – Meeting Minutes

Erin Fosdick gave brief presentation on process, zoning, meeting agenda, question and answers, etc.

Jessica Tuttle gave presentation regarding company background, history, design techniques, proposed site plan, and elevations of the proposed product.

Erin Fosdick gave brief presentation on existing uses, zoning, annexation, process for approvals, notices, public hearings, etc.

Questions and Comments:

- Sharon Reimer – 10 Mumford Place – Longmont
    - What roadway will be your main entrance?
        - Jessica Tuttle specified that each use will likely use Erfert Street for their main entrance. Based upon CDOT studies, there will be no additional accesses on SH66.
        - Erin Fosdick gave clarification that the PEL through CDOT has been in process with the City.
- Jeff Patterson – 10937?
    - When do you expect that the start date will be for this project?
        - Jessica Tuttle specified that the entitlement process early this year, and construction will begin October-November of this year. She also specified that is a 2-year construction timeline. She specified the site work can be done in approximately 4 months, and the buildings will take 21-23 months.
        - Erin Fosdick clarified that the Applicant will need to setup public hearings and go through the City's process, and stated it might be an elongated timeline due to the entitlements.
    - What were you planning on doing with the existing structures on the property?
        - Jessica Tuttle specified that an environmental engineer is working on the project and verifying there is no historical significance to the existing structures and the structures will be razed.
- Rob Burt – 3 Burtcell Place – Mumford Heights
    - Concerns are with the City of Longmont with people crossing Highway 66 and safe passages, including Main Street.
        - Erin Fosdick provided information and conversation with the Transportation and Planning Manager regarding ways to increase safety. She re-iterated the CDOT PEL plan. Erin discussed the City moving forward with possible safety measures on both Highway 66 and Main Street. Erin discussed funding methods working with Boulder County to obtain funding for such improvements. Erin discussed the CDOT PEL for this area, all the way east to I25. Erin told the neighbor that she will put him in contact with the transportation department and send information regarding the improvements. Erin discussed the development will require a traffic study and will go through a review, and improvements could be tied to the development.

    - Neighbor discussed that CDOT and Boulder County have discussed no improvements, and moving traffic to 119 rather than 66.
        - Erin re-iterated the City's goal to be proactive rather than reactive and getting improvements done in the area.
- Mike Arias – 11055 Ute Highway – Adjacent Land Owner and Clark Farm
    - Mike had questions regarding developing infrastructure on his property and how that would work with possibly developing his parcel.
        - Jessica discussed the roadway configuration on-site and the infrastructure that will be constructed.
            - Chris Shandor discussed the sanitary and watermain infrastructure that is currently proposed to the adjacent site.
        - Erin Fosdick discussed the City not paying for infrastructure, and that the property owner could reach out to Watermark directly to discuss the proposed plans.
        - Jessica Tuttle mentioned getting in contact with the land owner.
- Caller asked about getting the Applicants contact information, and Applicant gave email address.
- Erin discussed additional ways of getting in contact with the City's Planning Department and the Applicant if they need to.

Meeting was adjourned.

From:	Alyssa Rivas
To:	Ava Pecherzewski
Subject:	Fw: City of Longmont Development Referral
Date:	Monday, November 16, 2020 12:15:22 PM
Attachments:	image002.jpg

Alyssa Rivas
Planning Contractor
Planning & Development Services Department | City of Longmont

OFFICE 303-651-8439 **MAIN** 303-651-8330
385 Kimbark Street | Longmont, Colorado 80501

longmontcolorado.gov

From: Stoffels, Amber <Amber.Stoffels@BNSF.com>
Sent: Friday, November 6, 2020 10:56 AM
To: Alyssa Rivas <Alyssa.Rivas@longmontcolorado.gov>; Breden, Allan <allan.breden@bnsf.com>
Subject: [External] RE: City of Longmont Development Referral

BNSF Railway has reviewed these submittals. BNSF has not reviewed any design details or calculations for structural integrity or engineering accuracy. BNSF accepts no responsibility for errors or omissions in the design or execution of the project. If a contractor needs to work within 25 feet of BNSF track or within BNSF property, the contractor must contact BNSF Real Estate/Permitting consultant, Jones Lang LaSalle (JLL) for a permit. Their contact information can be found on our website at www.bnsf.com. If any changes are made to the plans affecting BNSF property, plans must be resubmitted for review.

Here are our general comments:

- BNSF will need to review the drainage plan if current drainage might be altered near tracks
- Fencing plan will need to be reviewed by BNSF to ensure it complies with BNSF standards for
- If grading on BNSF property is required grading plan will need to be reviewed by BNSF and permits will be required to occupy BNSF property as well as a BNSF supplied flagger will be required and paid for by agency or contractor
- If access to BNSF property is required an agreement with BNSF will be required as well as safety badging for all employees on BNSF property
- Traffic study and increased pedestrian traffic would need to be reviewed by BNSF at nearby railroad crossings
- Ensure no trees planted in a way that would interfere with BNSF property (i.e. foliage)
- Future driveway next to the property line will need to be reviewed.

Thank you,

Amber Stoffels
BNSF Railway | Manager Public Projects – CO, NM, WY
3700 Globeville Rd. Denver, CO 80216
Email amber.stoffels@bnsf.com
Office (303) 480-6584, Cell (817) 565-8234

From: Alyssa Rivas [mailto:Alyssa.Rivas@longmontcolorado.gov]

Boulder County

Parks & Open Space

5201 St. Vrain Road • Longmont, Colorado 80503
303.678.6200 • Fax: 303.678.6177 • **www.bouldercounty.org**

Alyssa Rivas
City of Longmont Planning and Development Services
Development Services Center
Longmont, CO 80501
alyssa.rivas@longmontcolorado.gov

November 12, 2020

Via email to: alyssa.rivas@longmontcolorado.gov

RE: Notch 66 Apartments by Watermark Site Plan and Final Plat

Dear Alyssa,

Boulder County Parks & Open Space (BCPOS) owns the parcel directly north of the proposed Notch 66 development (Barrett 2 Open Space). The proposed final plat for the Notch 66 Apartments identifies an access easement to be vacated by separate document, but this access easement provides BCPOS its only access to the Barrett 2 property. The easement (recorded in the real estate records of Boulder County, Colorado on August 8, 2002 at reception # 2316215 and attached to this letter) is granted by Stan Barrett, Inc., in favor of Boulder County.

BCPOS will support the proposed development (and final plat) and release the access easement under the condition that the applicant (Watermark Apartments) provide alternative access to the Barrett 2 Open Space from Park Ridge Avenue at a location that is acceptable to BCPOS.

BCPOS also has additional concerns related to the proximity of the proposed development to the Rough and Ready Ditch, whether any of the site improvements occur on BCPOS property, and with the future residents' understanding of the agricultural uses that occur on the adjacent Barrett 2 property.

Therefore, please include the following condition of approval and comments if the City of Longmont approves the Notch 66 Apartments by Watermark development application:

1. Please require Watermark Apartments/applicant to provide Boulder County access to its Barrett 2 open space property via Park Ridge Avenue at a location that is acceptable to Boulder County Parks & Open Space in exchange for Boulder County releasing its existing access easement. The new access must be constructed to Boulder County Parks & Open Space's satisfaction before Boulder County will release the existing access easement.

2. The City and applicant shall inform future residents of this development that the adjacent open space land to the north is owned by Boulder County. Due to an on-going agricultural

lease, this land is not open to the public for use per Parks and Open Space policy and rules and regulations. In addition, since the property is under active agricultural use, intensive management and farming activities should be anticipated by the residents of this development. Uses such as livestock pasturing, aerial and surface irrigation, pesticide applications, mowing and other heavy equipment operations can be expected to occur on the open space site. Like many land management activities, these uses can cause dust and debris. Finally, agricultural operations may occur on the open space site at any time of day or night.

3. Please confirm that the applicant has referred this proposal to the Rough and Ready Ditch company and that they approve of the proposal since the development appears to come up to the northern bank of this important irrigation ditch and that it is located in Tract A of the final plat.

4. Please confirm that none of the proposed site improvements will occur on county open space. It appears from the drawings that the very western part of the Park Ridge Drive includes some of the street cross section, such as the sidewalk and associated grading, occurring on the county's property.

Thank you,

Tina Burghardt, Senior Land Officer
kburghardt@bouldercounty.org
720.864.6533

2316215
Page: 1 of 5
08/06/2002 01:50P
Boulder County Clerk, CO E R 0.00 D 0.00

ACCESS EASEMENT

1933622

This Access Easement ("Easement") is granted this 1 day of 8 2002, by **STAN BARRETT, INC.**, a Colorado corporation ("Grantor"), to the **COUNTY OF BOULDER**, a body corporate and politic, whose legal address is P.O. Box 471, Boulder, CO 80306 ("Grantee").

Grantor owns the real property legally described on EXHIBIT A attached hereto and incorporated herein by this reference ("Easement Property").

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by Grantor, Grantor hereby quitclaims to Grantee a non-exclusive perpetual access easement over and across the Easement Property for the benefit of properties owned by Grantee. The Easement shall be limited to agricultural, ranching, maintenance, patrol, enforcement, fire-protection, emergency access, and other purposes associated with management and maintenance of properties owned by Grantee. This Easement shall not be used by Grantee for utilities or for the transportation of sand or gravel extracted from properties served by this Easement.

Grantor reserves the right to use and occupy the Easement Property for any lawful purpose consistent with the rights and privileges granted herein which shall include the right to grant additional access rights in the Easement Property to third parties.

Each party shall be responsible for any repairs or maintenance and the costs thereof necessary for its use of the road over the Easement Property and for any damage that party causes to the road. No party shall be obligated to the other party for maintaining or repairing said road. Joint repairs or maintenance may be performed by separate agreement between the parties.

This Easement and the covenants as set forth herein shall run with the land, shall remain an easement in perpetuity, and shall benefit and be binding upon all parties hereto, their heirs, successors, representatives and assigns.

This Easement may be executed in any number of counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same agreement.

This Easement shall be recorded in the office of the Clerk and Recorder of Boulder County, Colorado.

IN WITNESS WHEREOF, the parties have caused this instrument to be duly executed this 1 day of 8, 2002.

GRANTOR:

STAN BARRETT, INC., a Colorado Corporation

By: Stanley A. Barrett
Stanley A. Barrett, President

STATE OF COLORADO)
) ss.
COUNTY OF BOULDER)

The foregoing instrument was acknowledged before me this 1st day of August 2002, by Stanley A. Barrett, as president of Stan Barrett Inc., a Colorado corporation.

Witness my hand and official seal.

(S E A L)

Marlene Shannon
Notary Public

My Commission Expires: 5-24-04

COUNTY OF BOULDER,
a body corporate and politic

By: Jana L. Mendez
Jana L. Mendez, Chair

By: Paul D. Danish
Paul D. Danish, Vice-Chair

By: Ronald K. Stewart
Ronald K. Stewart, Commissioner

STATE OF COLORADO)
) ss.
COUNTY OF BOULDER)

The foregoing instrument was acknowledged before me this 30 day of July, 2002, by Jana L. Mendez, Chair, Paul D. Danish, Vice-Chair, and Ronald K. Stewart, Commissioner, of the Board of County Commissioners of Boulder County.

Witness my hand and official seal.

(S E A L) SUSAN M. ASHCRAFT NOTARY PUBLIC STATE OF COLORADO
My Commission Expires 10/17/2005

Susan M. Ashcraft
Notary Public
My Commission Expires: 10/17/2005

Exhibit A
Easement Property

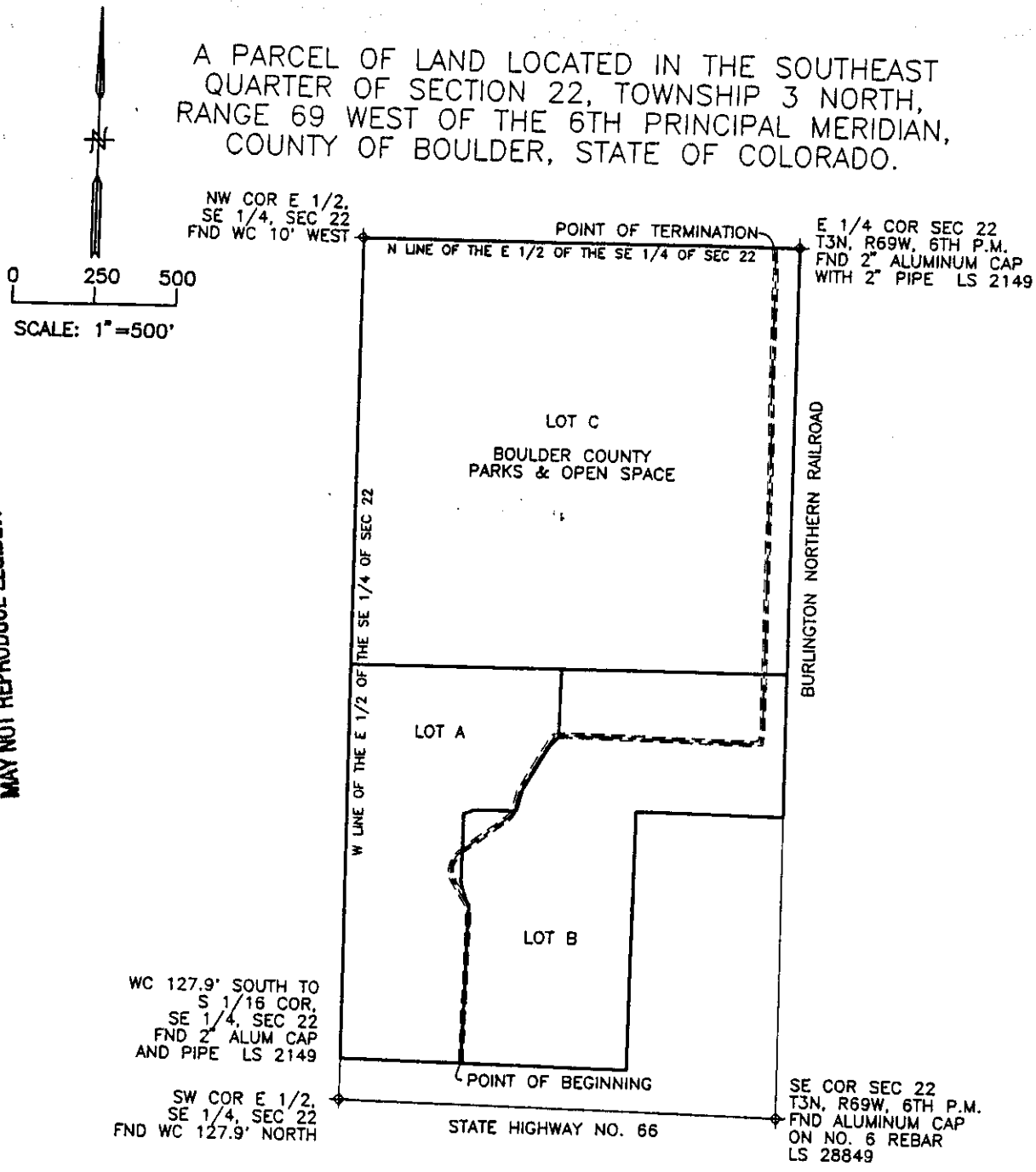
A 15.00 FEET WIDE INGRESS & EGRESS EASEMENT SITUATED IN THE EAST ONE-HALF OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO LYING 7.5 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE SOUTHWEST CORNER OF THE EAST ONE-HALF OF THE SOUTHEAST QUARTER OF SECTION 22, WHENCE THE SOUTHEAST CORNER OF SECTION 22 BEARS SOUTH 88°40'27" EAST 1330.18 FEET; THENCE ALONG THE WEST LINE OF THE EAST ONE-HALF OF THE SOUTHEAST QUARTER OF SECTION 22 NORTH 00°00'33" WEST 127.90 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF STATE HIGHWAY NO. 66; THENCE ALONG SAID RIGHT-OF-WAY LINE SOUTH 88°41'12" EAST 375.60 FEET TO THE POINT OF BEGINNING; THENCE ALONG THE CENTERLINE OF SAID 15.00 FEET WIDE INGRESS & EGRESS EASEMENT THE FOLLOWING 19 COURSES:

1) NORTH 01°24'48" EAST 459.86 FEET;
2) NORTH 06°59'35" WEST 27.76 FEET;
3) NORTH 32°11'58" WEST 65.28 FEET;
4) NORTH 29°50'03" WEST 36.68 FEET;
5) NORTH 02°12'09" WEST 29.24 FEET;
6) ALONG THE ARC OF A CURVE TO THE RIGHT (SAID ARC HAVING A RADIUS OF 104.91 FEET, A CENTRAL ANGLE OF 34°26'54", CHORD OF SAID ARC BEARS NORTH 35°18'44" EAST 62.13 FEET) A DISTANCE OF 63.08 FEET;
7) NORTH 53°30'30" EAST 162.96 FEET;
8) ALONG THE ARC OF A CURVE TO THE LEFT (SAID ARC HAVING A RADIUS OF 60.70 FEET, A CENTRAL ANGLE OF 51°30'13", CHORD OF SAID ARC BEARS NORTH 29°45'19" EAST 52.75 FEET) A DISTANCE OF 54.56 FEET;
9) NORTH 15°38'33" EAST 42.44 FEET;
10) NORTH 29°48'50" EAST 157.72 FEET;
11) NORTH 33°13'47" EAST 41.32 FEET;
12) NORTH 83°52'50" EAST 27.69 FEET;
13) SOUTH 88°34'00" EAST 562.56 FEET;
14) NORTH 84°09'47" EAST 30.74 FEET;
15) NORTH 07°25'25" EAST 36.10 FEET;
16) NORTH 00°06'39" EAST 867.49 FEET;
17) NORTH 01°22'57" WEST 179.71 FEET;
18) NORTH 00°14'55" EAST 363.02 FEET;
19) NORTH 04°20'47" WEST 74.40 FEET TO A POINT ON THE NORTH LINE OF THE EAST ONE-HALF OF THE SOUTHEAST QUARTER OF SECTION 22 AND THE POINT OF TERMINATION OF SAID EASEMENT.

2316215
Page: 5 of 5
09/06/2002 01:50P
Boulder County Clerk, CO E R 0.00 D 0.00

A PARCEL OF LAND LOCATED IN THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO.



RECORDER'S NOTE:
PORTION OF RECORDED DOCUMENT
MAY NOT REPRODUCE LEGIBLY.

From:	Alyssa Rivas
To:	Ava Pecherzewski
Subject:	Fw: [External] Followup on notice of application #3427-3, 3a
Date:	Monday, November 16, 2020 12:14:35 PM

Alyssa Rivas
Planning Contractor
Planning & Development Services Department | City of Longmont

OFFICE 303-651-8439 **MAIN** 303-651-8330
385 Kimbark Street | Longmont, Colorado 80501

longmontcolorado.gov

From: Patrick Arias <parias@sprynet.com>
Sent: Tuesday, November 10, 2020 12:57 PM
To: Alyssa Rivas <Alyssa.Rivas@longmontcolorado.gov>
Subject: [External] Followup on notice of application #3427-3, 3a

Hello Alyssa, let me start by introducing myself my name is Patrick Arias and I received the notice of application for project file #3427-3, 3a. I'm one of the owners of Ute Cottonwood LLC as well as Clark Farm LLC properties just to the east of this project. I'm interested in getting as mush information on this project as I can and all of the infrastructure requirements of the city for this project. At this point my partner and I have been waiting for something to move on the forty acres that was annexed into the city many years ago. Great time for us to look at our requirements as well! Please give me a call or let's get a meeting scheduled in person are virtual.

Look forward to the next step.

Patrick Arias
C 303-589-2088

From:	Alyssa Rivas
To:	Ava Pecherzewski
Subject:	Fw: Development referral - Notch 66 - Rough & Ready Irrigating Ditch Company
Date:	Monday, November 16, 2020 12:15:01 PM
Attachments:	image002.jpg

Alyssa Rivas
Planning Contractor
Planning & Development Services Department | City of Longmont

OFFICE 303-651-8439 **MAIN** 303-651-8330
385 Kimbark Street | Longmont, Colorado 80501

longmontcolorado.gov

From: Kevin Boden <Kevin.Boden@longmontcolorado.gov>
Sent: Monday, November 9, 2020 10:49 AM
To: Alyssa Rivas <Alyssa.Rivas@longmontcolorado.gov>
Cc: Branden Effland <branden.effland@summitwatereng.com>
Subject: FW: Development referral - Notch 66 - Rough & Ready Irrigating Ditch Company

Alyssa,
Can you also add the following to your comments:

- The current plans do not depict the impacts to the Rough & Ready Ditch very well. In order to do a proper review, the company's engineer will at a minimum require any future plans submitted to the company to have the Rough & Ready Ditch clearly shown with elevations for top of bank, tow of the slope, property lines in relation to the ditch, and the locations of any improvements in relation to the ditch.

Thanks.

Kevin Boden
OFFICE 303-774-4516 | cell **303-774-9981**

From: Kevin Boden
Sent: Monday, November 9, 2020 9:25 AM
To: Alyssa Rivas <Alyssa.Rivas@longmontcolorado.gov>
Cc: Angie Swanson (angie@dangrantbookkeeping.com) <angie@dangrantbookkeeping.com>; Branden Effland <branden.effland@summitwatereng.com>
Subject: Development referral - Notch 66 - Rough & Ready Irrigating Ditch Company

Alyssa,
On behalf of the Rough and Ready Irrigation Company please include the following comments in your response:

- Any modifications to the Rough and Ready Irrigation Ditch and or its historic prescriptive maintenance easement will require written approval from the Rough & Ready Ditch Company. This includes but is not limited to; utility crossings, trails along the ditch, grading modifications, landscaping modifications, drainage modifications, road and trail crossings etc…

- In order for the Ditch Company to review plans for this development, the developer must agree to reimburse the ditch company for all reasonable engineering and attorney fees. Please contact Angie Swanson, ditch company secretary, (copied above) in order to get a reimbursement agreement started. It should be noted that ditch company will have its engineer review the plans for this development (this includes landscaping plans). This will be a separate review from the City of Longmont's review.

- The final plat shows a 15' drainage easement for the Rough & Ready ditch. The ditch company has historically used more than 15' to maintain this section of ditch. The company will require a larger easement in order to maintain the Rough and Ready Ditch.

- In planning for this development the ditch Company will require a minimum of 30 days to review plans for modifications to the ditch. Once plans are approved, a legal agreement will require additional time. In addition, the ditch will be in operation from April 1 – October 31 for irrigation deliveries and will not be able to be shut down. Please plan accordingly.

Kevin Boden
President
Rough & Ready Irrigation Company
303-774-4516

From: Alyssa Rivas <Alyssa.Rivas@longmontcolorado.gov>
Sent: Thursday, October 29, 2020 12:36 PM
To: Kragerud_ryan@svvsd.org; marina.gridinskaya1@centurylink.com; donna.l.george@xcelenergy.com; john_hamburg@cable.comcast.com; jason.duetsch@state.co.us; coloradoes@fws.gov; kiel.g.downing@usace.army.mil; Gloria.hice-idler@state.co.us; Timothy.bilobran@state.co.us; manal.bishr@bnsf.com; Kevin Boden <Kevin.Boden@longmontcolorado.gov>; nwobus@bouldercounty.org; jwhisman@bouldercounty.org; Wayne Tomac <Wayne.Tomac@longmontcolorado.gov>
Subject: City of Longmont Development Referral

Dear Referral Agencies,

Please see the link below for a new development project in Longmont. This is for a 336 unit apartment complex at the corner of Hwy 66 and Erfert Street. Please email comments to me no later than November 13, 2020.

https://www.dropbox.com/sh/v3ymw9gi6ddcmr7/AADDUJCyLGCD3k9LsrDDgeTqa?dl=0

ST. VRAIN VALLEY SCHOOLS
academic excellence by design

6/24/21

Ava Pecherzewski, Planner

Development Services

351 Kimbark Street

Longmont CO 80501

RE: Notch 66 Apartments

Dear Ava

Thank you for referring the Notch 66 Apartments referral to the School District. The District has reviewed the development proposal in terms of (1) available school capacity, (2) required land dedications and/or cash-in-lieu fees and (3) transportation/access considerations. After reviewing the above proposal, **the School District finds** , Timberline **and** Skyline High School Won't **exceed the benchmark.**

General Comments:

See CIL information on the next page. Please bring one copy of this letter when paying cash-in-lieu.

None of the schools serving this development are projected to exceed the benchmark.

The calculations were based on the proposed 336 units.

Detailed information on the specific capacity issues, the land dedication requirements and transportation impacts for this proposal follow in Attachment A. The recommendation of the District noted above applies to the attendance boundaries current as of the date of this letter. These attendance boundaries may change in the future as new facilities are constructed and opened. If you have any further questions or concerns regarding this referral, please feel free to contact me via e-mail at kragerud_ryan@svvsd.org or at the number below.

Sincerely,

Ryan Kragerud, AICP
Planning/GIS

Enc.: Attachment A – Specific Project Analysis
Cash-in-lieu chart

ATTACHMENT A - Specific Project Analysis

PROJECT: Notch 66 Apartments

(1) SCHOOL CAPACITY

The Board of Education has established a District-wide policy of reviewing new development projects in terms of the impact on existing and approved school facilities within the applicable feeder system. Any residential project within the applicable feeder that causes the 125% school benchmark capacity to be exceeded within 5 years would not be supported. This determination includes both existing facilities and planned facilities from a voter-approved bond. The building capacity, including existing and new facilities, along with the impact of this proposal and all other approved development projects for this feeder are noted in the chart below.

Timberline K8														
CAPACITY INFORMATION				CAPACITY BENCHMARK * (includes projected students, plus development's student impact)										
School	Building	Stdts.	Stdt.	2020-21		2021-22		2022-23		2023-24		2024-25	
Level	Capacity	Oct-18	Impact	Stdts	Cap.	Stdts	Cap.	Stdts	Cap.	Stdts	Cap.	Stdts	Cap.
Timberline k5	750	469	49	464	62%	478	64%	489	65%	509	68%	523	70%
Timberline 68	450	295	19	312	69%	324	72%	340	76%	353	78%	366	81%
High (SHS)	1680	1520	21	1534	91%	1550	92%	1563	93%	1581	94%	1599	95%
Total	3217		89	2310		2352		2392		2443		2488	

Specific comments concerning this proposal regarding School Capacity are as follows:

Specific Impact - This application will add 336 additional residential units and yield 89 additional students in the Skyline High School **feeder.**

Benchmark Determination – the affected schools won't exceed the benchmark within 5 years.

Mitigation Options - na

Phasing Plan – na

(2) LAND DEDICATIONS AND CASH IN-LIEU FEES

The implementation of the Intergovernmental Agreement (IGA) Concerning Fair Contributions for Public School Sites by the City of Longmont requires that the applicant either dedicate land directly to the School District along with provision of the adjacent infrastructure and/or pay cash-in-lieu (CIL) fees based on the student yield of the development. CIL fees provide funds for land acquisition and water rights acquisition, which is only a small component of providing additional school capacity for a feeder. Specific comments regarding land dedications and CIL fees for this referral are as follows:

Dedication and/or Cash-in-lieu Requirements –A land dedication isn't required. Cash-in-lieu payments will be required for all 336 residential units. Please see the attachments for additional information.

Cash-in-Lieu per unit payment by housing type: Longmont

Housing type:	Cash in lieu payment	Units proposed	Cost
Single Family Unit	$1,489		
Duplex/Triplex Unit	$1,031		
Multi-Family Unit	$714	336	$239,904
*Condo/TH Unit	$434		
Mobile Home Unit	$960		
			Total = $239,904

*TH = Townhouse

Dedication/Cash-in-lieu Procedures – Additional Cash in Lieu payment information can be found on the attached page. If discrepancies exist please call 303-682-7229. Payments can be made at the time of building permit in the St. Vrain Valley School District Business Office – 395 S. Pratt Parkway, Longmont.

3) TRANSPORTATION/ACCESS

Transportation considerations for a project deal with bussing and pedestrian access to and from the project. Pedestrian access, in particular, is an important goal of the School District in order to facilitate community connection to schools and to minimize transportation costs. Specific comments for this application are as follows:

Provision of Busing - The SVVSD will provide busing to students living in this area, based on current busing policy.

Pedestrian/Access Issues –

School Planning Standards And Calculation of Land Dedication Requirements

Multi-Family

School Planning Standards

	Number Of Units	Projected Student Yield	Student Facility Standard	Site Size Standard Acres	Acres of Land Contribution	Developed Land Value	Cash-in-lieu Contribution
Elementary	336	0.15	525	10	0.92800	$100,092	
		48.7	*Number of Students = No. of Units * Student Yield*				
	Equation:	*(Number of Students/Elem. Student Facility Size) * Elem. Site Size Standard = Acres of Land Contribution*					
Middle Level	336	0.06	750	25	0.61600	$100,092	
		18.5	*Number of Students = No. of Units * Student Yield*				
	Equation:	*(Number of Students/Middle Student Facility Size) * Middle Site Size Standard = Acres of Land Contribution*					
High School	336	0.06	1200	50	0.85400	$100,092	
		20.5	*Number of Students = No. of Units * Student Yield*				
	Equation:	*(Number of Students/High School Student Facility Size) * High School Site Size Standard = Acres of Land Contribution*					
Total	336	87.70			2.39800	$100,092	$240,021
	Equation:	*Elem. Acreage + Middle Acreage + High School Acreage = Total Acres of Land Contribution*					
Multi-Family Student Yield is .261							$714 Per Unit

CITY OF LONGMONT | Historic Preservation Commission

MEMORANDUM

TO: Ava Pecherzewski, Principal Planner

FROM: Jade Krueger, Historic Preservation Commission Liaison

DATE: July 13, 2021

SUBJECT: **Erfert-Gregory Farm**

Summary

The Historic Preservation Commission reviewed the cultural resource survey and proposal for the Erfert-Gregory residence at the July 8, 2021 Historic Preservation Commission Meeting. The property overall has little historical integrity, and therefore the Erfert-Gregory Farm is not eligible for local designation or listing on the State and National Register of Historic Places.

We are glad to have collected the historic information on the property but have no recommendations on use or designations other than recycling and repurposing as much of the materials as possible. If there are any questions, please feel free to reach out to me jade.krueger@longmontcolorado.gov.

Sincerely,

JK

Jade Krueger
Associate Planner/ Historic Preservation Commission Liaison

Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303. 571. 3284
donna.l.george@xcelenergy.com

November 16, 2020

City of Longmont Planning and Development Services
385 Kimbark Street - PO Box 1348
Longmont, CO 80501

Attn: Alyssa Rivas

Re: Notch66 Apartments By Watermark, Case #s 3427-3, 3a

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has reviewed the documentation for **Notch66 Apartments By Watermark** and has no issues provided that the 30-foot wide utility easement is also dedicated for use by dry utilities with all necessary clearances provided. If not, PSCo requests an additional 10-feet added to this utility easement.

Please be aware PSCo owns and operates existing natural gas and electric distribution facilities within the proposed project area. The property owner/developer/contractor must complete the application process for any new natural gas or electric service, or *modification* to existing facilities including relocation and/or removal via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details. Additional easements may need to be acquired by separate document for new facilities.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center by dialing 811 for utility locates prior to construction.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com

CITY OF LONGMONT | Planning Division

CERTIFICATE OF PROPERTY POSTING

I, Erin Fosdick, certify that 2 sign(s) was posted pursuant to
Please Print Name
the provisions of the City of Longmont Land Development Code, for the application identified as

Watermark Apartments (Notch 66) Concept Plan Amendment for a:
Project Name

X Neighborhood Meeting

_____ Notice of Application

_____ Planning and Zoning Commission Public Hearing to be held on _____

_____ City Council Public Hearing to be held on _____

On the subject property located at

10937 Ute Road (State Highway 66) – north of SH66 and east of Erfert St.
Site Address or Location Description

Attach photos of posting:

Erfert St.

Highway

I certify that the foregoing information is true and correct.

Erin Fosdick, 12/21/2020 Erin Fosdick

CITY OF LONGMONT | Planning Division

CERTIFICATE OF MAILING

I, Erin Fosdick, certify that Letters of notification were
Please Print Name

mailed in accordance with Section 15.02 of the City of Longmont Land Development Code for a:

X Neighborhood Meeting

_____ Notice of Application

_____ Planning and Zoning Commission Public Hearing to be held on _____

_____ City Council Public Hearing to be held on _____

for the application identified as

Watermark Apartments at Highway 66 & Erfert St. (Notch 66 Apartments)
Project Name

On the subject property located at

10937 Ute Road (State Highway 66) – north of SH66 and east of Erfert St.
Site Address or Location Description

The letter was sent on: 12/16/2020
Date of Mailing

A copy of the letter and list of recipients is attached.

I certify that the foregoing information is true and correct.

Erin Fosdick

_____ Erin Fosdick 12/16/2020
Signature *Printed Name* *Date*

CITY OF LONGMONT | Planning Division

December 17, 2020

Notice of Neighborhood Meeting

If you need interpretation, accommodations, or other special assistance in order to participate in a meeting, please contact the Planning Division at 303-651-8330 or longmont.planning@longmontcolorado.gov, at least 48 hours prior to the meeting to make arrangements.

Si necesita interpretación , servicios especiales u otra asistencia adicional para participar en alguna reunión, comuníquese con 48 horas de anticipación al Departamento de Planificación Urbana al 303-651-8330 o escríbanos a longmont.planning@longmontcolorado.gov, para así hacer los pertinentes arreglos.

Watermark Apartments at Highway 66 & Erfert St. (Notch 66 Apartments)

Proposal: A concept plan amendment for a residential development of 396 multifamily dwellings on part of 28 acres. The remainder of the property fronting Highway 66 will be mixed use.

Project Location: 10937 Ute Road (State Highway 66) – north of SH66 and east of Erfert St.

When: January 6, 2021 at 6:00 pm

Where: This neighborhood meeting is being held remotely. Watch the meeting livestream at:

https://bit.ly/LongmontYoutubeLive

Questions and comments will be taken during the meeting. Anyone wishing to speak during the meeting will need to watch the livestream of the meeting for instructions about how to call in to participate at the appropriate times. Instructions will be given during the meeting and displayed on the screen when it is time to call in to provide comments or ask questions. Speakers will be asked to state their name and address for the record prior to proceeding with their comments. (Please remember to mute the livestream when you are called upon to speak.)

If you want to provide comments or questions prior to the meeting, please send those to the Planning Division: longmont.planning@longmontcolorado.gov.

Property Owner: Stan Barrett Inc

Applicant: Watermark Residential

Background: These properties were annexed to the City of Longmont in 2008 as part of the Barrett/Utility Sales & Service, Inc. – Clark Annexation. They are currently zoned Mixed-Use Regional Center (MU-R). A variety of residential uses, including multi-family uses, are permitted secondary uses in the MU-R. In order for these types of units to be built on these lots, an amendment to the approved concept plan is required.

Future Meetings:

The City Council is the decision making body on concept plan amendment applications; the Planning & Zoning Commission provides a recommendation on these types of applications. If this project submits an application and goes through the full development review process, public hearings with the Planning & Zoning Commission and City Council, will take place.

Additional notification of public hearings before the Planning & Zoning Commission and City Council will be provided, as required by City regulations. If you have questions regarding the neighborhood meeting, the development review process, code requirements, or other specific items, please reach out to the contacts identified below.

Applicant Contact(s):
Jessica Tuttle
Watermark Residential
317-853-5459
jtuttle@watermarkapartments.com

City Staff Contact:
Erin Fosdick, Principal Planner
City of Longmont, Planning Division
303-651-8336
erin.fosdick@longmontcolorado.gov

Project Map

Report an issue

Property Search

Enter search term... Clear Additional Actions

CSV

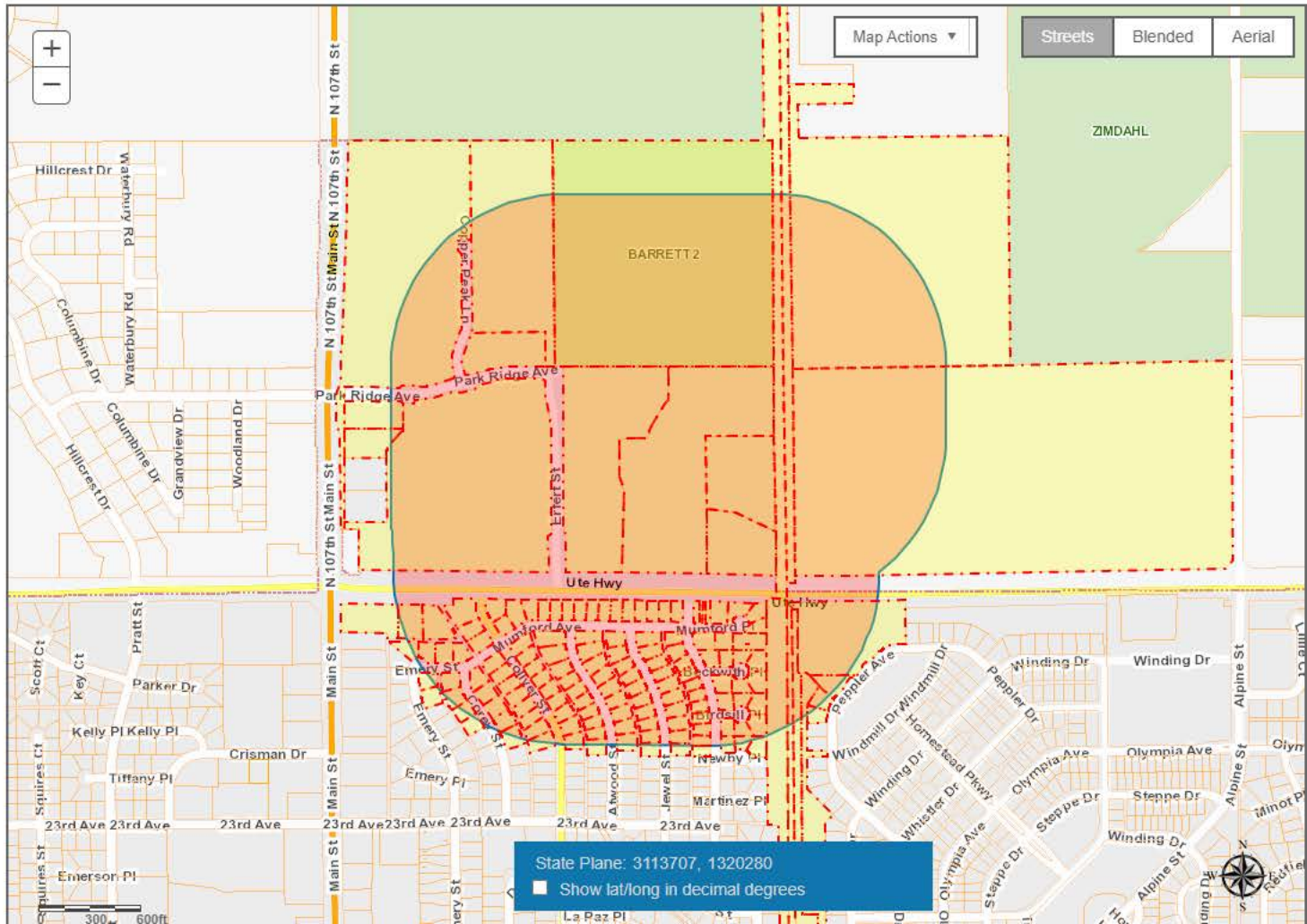
Double-clicking a row or clicking the select arrow will display the property information.

For large datasets, it will take time to prepare the csv download. The download button will appear when the download is ready. Please be patient.

Click row to select properties to include in your report.

Report	Select	Account	Address	Owner
		R0048378	2470 COLLYER ST	DILL SHANE
		R0049082	2341 JEWEL ST	DUNEMAN STANLEY D & MYRNA L
		R0066948	18 NEWBY PL	EMERY STREET LLC
		R0066948	20 NEWBY PL	EMERY STREET LLC
		R0047945	2336 COREY ST	ERNST DEANNA H & LARRY M
		P0405654	2514 MAIN ST	FEDEX OFFICE AND PRINT SERVICES INC
		R0049118	2 MUMFORD PL	FELDMAN GREGORY
		R0049092	2418 JEWEL ST	FITZPATRICK DARRELL & DANIEL KAPAUN
		R0049046	2349 ATWOOD ST	FREDERICK ROY D & JANE A TRUSTEES OF
		R0124535	7 MUMFORD PL C	FRENETTE ROBERT E

1 2 3 4 5 6 7 8 9 10 ... 49 - 60 of 188 items



2401 ATWOOD LLC
421 21ST AVE SUITE 14
LONGMONT, CO 80501

300 MUMFORD AVE LLC
4277 N 109TH ST
LAFAYETTE, CO 80026

AKER TRAVIS L & REBECCA J
2348 ATWOOD ST
LONGMONT, CO 80501

ALEXANDER GEORGE W & S A THOMAS
2471 COLLYER ST
LONGMONT, CO 80501

ALLINGTON GAIL R & ANITA S MILLER
2418 COLLYER ST
LONGMONT, CO 80501

ALTSCHULER STEVE
19 MUMFORD PL
LONGMONT, CO 80501-1230

ARMSTRONG JUDITH C & BEVERLY J
2334 JEWEL ST
LONGMONT, CO 80501

BABCOCK DAVID & JEANETTE J
605 LUCIA CT
BERTHOUD, CO 80513

BAKER NATALIE C
130 MUMFORD AVE
LONGMONT, CO 80501

BARRY DAVID ALEXANDER III
2420 ATWOOD ST
LONGMONT, CO 80501-1207

BATES AGNES D
850 HILLSIDE CT
LONGMONT, CO 80501

BAUER MARY RUTH
2431 JEWEL ST
LONGMONT, CO 80501

BECHARD MICHAEL L
157 PEPPLER DR
LONGMONT, CO 80504

BECKER STEVEN C
2444 ATWOOD ST
LONGMONT, CO 80501-1207

BELILE MARK & SHERYLE
2423 MEADOW ST
LONGMONT, CO 80501

BERGLAND EARL R
13930 ELMORE RD
LONGMONT, CO 80504

BNSF RAILWAY COMPANY
2500 LOU MENK DR
FORT WORTH, TX 76161-2828

BOB & BARBARA RIDNOUR LVNG TRST
2481 COLLYER ST
LONGMONT, CO 80501-1244

BOLTON DANIEL R & LAURA J
2416 EMERY ST
LONGMONT, CO 80501

BOUMEESTER RYAN S & JEAN L GOODMAN
124 MUMFORD AVE
LONGMONT, CO 80501

BOX JEFFREY
2431 COREY ST
LONGMONT, CO 80501

BURKE PAUL B
2417 MEADOW ST
LONGMONT, CO 80501

BURTON DEREK & JENNIFER
2425 JEWEL ST
LONGMONT, CO 80501

CARLSON OSCAR T FAMILY TRUST U/A
15312 N 107TH ST
LONGMONT, CO 80504

CHACON HERIBERTO SILVA
2351 MEADOW ST
LONGMONT, CO 80501

CITY OF LONGMONT
350 KIMBARK ST
LONGMONT, CO 80501-5500

CLARK FARM LLC
9771 NIWOT RD
LONGMONT, CO 80504

CLARK JEFF & SARAH
2340 JEWEL ST
LONGMONT, CO 80501

CLETCHER JOHN LAUN
20 MUMFORD PL
LONGMONT, CO 80501

COPPER PEAK APARTMENTS LLC
120 W CATALDO AVE STE 100
SPOKANE, WA 99201

COUNTY OF BOULDER
5201 ST VRAIN RD BLDG 1
LONGMONT, CO 80503

DICKE RICHARD P & TRACI M
2434 ATWOOD ST
LONGMONT, CO 80501

DUNEMAN STANLEY D & MYRNA L
2341 JEWEL ST
LONGMONT, CO 80501

FELDMAN GREGORY
PO BOX 6414
LONGMONT, CO 80501-2079

FRENETTE ROBERT E
7 MUMFORD PLACE UNIT C
LONGMONT, CO 80501

GEDDES DONALD & SANDRA N
2447 MEADOW ST
LONGMONT, CO 80501-1229

GOMEZ RAYMOND PAUL & YANINA M
4 BECKWITH PL
LONGMONT, CO 80501

GUTIERREZ CLAUDIA
2436 COLLYER ST
LONGMONT, CO 80501

HALLET STACIA LEGNER & TODD J
2460 COLLYER ST
LONGMONT, CO 80501

HICKEY MARC & LAURA ELLEN HICKEY
2430 MEADOW ST
LONGMONT, CO 80501

CROSSMAN C P & ADRIANA & HAYLEY
2342 COLLYER ST
LONGMONT, CO 80501

DICKEY CHRISTOPHER
18 BECKWITH PL
LONGMONT, CO 80501

EMERY STREET LLC
1639 GENEVA CIR
LONGMONT, CO 80503

FITZPATRICK DARRELL & DANIEL KAPAUN
2418 JEWEL ST
LONGMONT, CO 80501

FRY JUDY ANN
2430 COLLYER ST
LONGMONT, CO 80501-1213

GILDERSLEEVE EVAN & KRYSTAL K
10 BECKWITH PL
LONGMONT, CO 80501

GOSSETT JUDY LEE
2405 COLLYER ST
LONGMONT, CO 80501-1212

HAAKENSON EVAN SPECIAL NEEDS TRUST
317 MCCONNELL DR
LYONS, CO 80540

HART KARINA C & MIGUEL C SULLCA
7 MUMFORD PLACE UNIT E
LONGMONT, CO 80501

HOBSON DARRYL & DEBORAH BELOTE
6644 BIRD CLIFF WAY
NIWOT, CO 80503

DEMIGUEL JUANITA
306 MUMFORD AV
LONGMONT, CO 80501

DILL SHANE
2470 COLLYER ST
LONGMONT, CO 80501

ERNST DEANNA H & LARRY M
2336 COREY ST
LONGMONT, CO 80501-1215

FREDERICK ROY D & JANE A TRUSTEES
2349 ATWOOD ST
LONGMONT, CO 80501

FULLER BRADLEY C & PAMELA L
2408 EMERY ST
LONGMONT, CO 80501

GKC VENTURES LLC
5266 GODDING HOLLOW PKWY
LONGMONT, CO 80501

GRECO BRIAN A & VANESSA MARTINEZ
2441 MEADOW ST
LONGMONT, CO 80501

HAEMER JEFFREY
2430 COREY ST
LONGMONT, CO 80501

HAYWOOD JONATHAN
7 MUMFORD PL UNIT B
LONGMONT, CO 80501

HOWERZYL JAMES J & EILEEN J
2439 ATWOOD ST
LONGMONT, CO 80501

HUGHES LOU J
2412 24TH AVE
LONGMONT, CO 80503

JENNETT MATTHEW J & VALERIE K
2433 ATWOOD ST
LONGMONT, CO 80501-1206

JPMORGAN CHASE BANK
PO BOX 810490
DALLAS, TX 75381

KEIM DOUG W II
324 MUMFORD AVE
LONGMONT, CO 80501

KRATKY DAVID & JENEANE
2424 COLLYER ST
LONGMONT, CO 80501-1213

LEINWAND IAN
2429 COLLYER ST
LONGMONT, CO 80501

MARVIN DAVID J
2430 JEWEL ST
LONGMONT, CO 80501

MEADOW 3 2446 LLC
1200 E 4TH AVE
LONGMONT, CO 80504

MYERS DOYLE L & MARCELLA
2343 COLLYER ST
LONGMONT, CO 80501

PATTERSON MATTHEW S
2345 MEADOW ST
LONGMONT, CO 80501

HUMPHREY CHRISTOPHER W JEROME
2412 ATWOOD ST
LONGMONT, CO 80501

JIVERY EDWINA
340 MUMFORD AVE
LONGMONT, CO 80501

KAAN-ONDRIEZEK JENNIFER A
2407 JEWEL ST
LONGMONT, CO 80501-1222

KERR CAROLYN L
212 MUMFORD AVE
LONGMONT, CO 80501-1232

LECHUGA Y & J LECHUGA MORADO
200 MUMFORD AVE
LONGMONT, CO 80501-1232

LONGMONT DRAINAGE LLC
120 W CATALDO AVE STE 100
SPOKANE, WA 99201

MCBRIDE JAMES T & DEBORAH J
2411 MEADOW ST
LONGMONT, CO 80501

MEDINA FAMILY REVOCABLE TRUST
4932 W 13TH ST
GREELEY, CO 80634

NAKAYAMA NINA K
400 MUMFORD AVE
LONGMONT, CO 80501-1106

PEPPLER VERNON & CAROL LIVING TRUST
11196 UTE HWY
LONGMONT, CO 80501

JDA LLC
9059 UTE HWY
LONGMONT, CO 80503-9233

JOHNSON ROGER D & RUBY M
4 BIRDSILL PL
LONGMONT, CO 80501-1209

KANKIEWICZ THOMAS G & DEBRA L
408 MUMFORD AVE
LONGMONT, CO 80501

KINZLE DONALD RICHARD & PAMELA KAY
2414 COREY ST
LONGMONT, CO 80501-1217

LEDEZMA GUSTAVO VARELA
118 MUMFORD AVE
LONGMONT, CO 80501-1231

LOVATOS P J CASTANEDA & M CASTANEDA
10 BIRDSILL PL
LONGMONT, CO 80501

MCKINNEY FLORENCE & FRANCIS
2444 PRATT APT 233
LONGMONT, CO 80501-1172

MOUNTAIN GATE INVESTMENTS LLC
14491 WELD COUNTY RD 5
LONGMONT, CO 80504-9642

PANTOJA RAFAEL & LEONARDO CHAVEZ
2420 MEADOW ST
LONGMONT, CO 80501

PEREZ JOSE F & JENNIFER M
2341 ATWOOD ST
LONGMONT, CO 80501-1204

POPE PATRICIA A
2457 MEADOW ST
LONGMONT, CO 80501

PORTER JOHN & JERRI REVOCABLE TRUST
2442 JEWEL ST
LONGMONT, CO 80501

POTTEBAUM BRIAN M
206 MUNFORD AVE
LONGMONT, CO 80501

PRAIRIE VILLAGE OWNERS ASSOC INC
PO BOX 17490
BOULDER, CO 80308

PRIEBE AARON
2340 ATWOOD ST
LONGMONT, CO 80501

PUBLIC SERVICE CO
PO BOX 1979
DENVER, CO 80201-1979

QUEZADA ADAN SALVADOR FLORES
2448 JEWEL ST
LONGMONT, CO 80501-1223

REAMER SHARON E
10 MUMFORD PL
LONGMONT, CO 80501

RECEN MEREDITH
2400 ATWOOD ST
LONGMONT, CO 80501

REIMER LOREN M
PO BOX 882784
STEAMBOAT SPGS, CO 80488

RILEY SEAN C & CAROLYN M
2428 ATWOOD ST
LONGMONT, CO 80501

ROAN ROBERT D & TERRY L
218 MUMFORD AVE
LONGMONT, CO 80501

RUCKMAN SUSAN
2415 COREY ST
LONGMONT, CO 80501

SALAZAR JANICE RUTH
2412 JEWEL ST
LONGMONT, CO 80501

SALAZAR VICTOR S & REBECCA S SALAZAR
2413 JEWEL ST
LONGMONT, CO 80501

SALOMON LUIS ESTEBAN & L TENA DIAZ
2441 COLLYER ST
LONGMONT, CO 80501

SCHMITT DONNA K & HERMAN C III TRUST
2443 JEWEL ST
LONGMONT, CO 80501

SFL LLC
5856 CORPORATE AVE STE 200
CYPRESS, CA 90630

SHRESTHA MOHAN KAJI & RESHU
7 MUMFORD PL UNIT A
LONGMONT, CO 80501

SHUTES FAMILY TRUST
1819 ASHFORD CIR
LONGMONT, CO 80504

SMITH LEONARD F & DONNA J
112 MUMFORD AVE
LONGMONT, CO 80501-1231

SMITH THOMAS A
2442 COLLYER ST
LONGMONT, CO 80501-1213

SORENSON PHALAR OUN & JOHN B
7 MUMFORD PL UNIT D
LONGMONT, CO 80501

SPONG ESTATE REVOCABLE TRUST
15735 W 67TH PL
ARVADA, CO 80007

STAFFORD ANTHONY LOUIS
2435 MEADOW ST
LONGMONT, CO 80501

STAMELOS MICHAEL A
2423 COLLYER ST
LONGMONT, CO 80501-1212

STAN BARRETT INC
P O BOX 88
LONGMONT, CO 80502

STENGEL KELLY D & LESLIE R
2406 ATWOOD ST
LONGMONT, CO 80501-1207

STEPHENS MICHELE L
318 MUMFORD AVE
LONGMONT, CO 80501

STERKEL DUANE G & DARLENE D
2419 ATWOOD ST
LONGMONT, CO 80501-1206

STEWART KATHLEEN
416 MUMFORD AVE
LONGMONT, CO 80501

SULLCA MIGUEL C & KARINA C HART
7 MUMFORD PL #F
LONGMONT, CO 80501-1236

TEBO STEPHEN D
PO BOX T
BOULDER, CO 80306

THOMAS JENNIFER MARIE
2449 JEWEL ST
LONGMONT, CO 80501

THOMAS-BIRT JULIE A
3 BIRDSILL PL
LONGMONT, CO 80501

TISINAI RICHARD J
2437 JEWEL ST
LONGMONT, CO 80501

TREVARTON JANICE E
303 MUMFORD AVE
LONGMONT, CO 80501

TUCKER & SOCHHEATH VANCOMER
1492 SERENITY CIR
LONGMONT, CO 80504

TUN ALICIA
2400 COLLYER ST
LONGMONT, CO 80501

UTE COTTONWOODS IVP LLC
9771 NIWOT RD
LONGMONT, CO 80504

WAGONER MICHAEL C & KAREN M
2406 COREY ST
LONGMONT, CO 80501-1217

WALLACE MICHAEL J ET AL
2335 JEWEL ST
LONGMONT, CO 80501-1220

WALLACE RANDY K & EVELYN J
2435 COLLYER ST
LONGMONT, CO 80501-1212

WAL-MART STORES INC
PO BOX 8050 MS0555
BENTONVILLE, AR 72712-8050

WALTER JERRY L & KARLA M
2406 JEWEL ST
LONGMONT, CO 80501

WATSON REX D & KAY M
2411 COLLYER ST
LONGMONT, CO 80501-1212

WAWRO NORMA J
2439 COREY ST
LONGMONT, CO 80501-1216

WEISE CHAD
2422 COREY ST
LONGMONT, CO 80501

WIDLACK TIMOTHY D & KASSANDRA B
2436 JEWEL ST
LONGMONT, CO 80501-1223

WILBER JAMES L & N J FAM REV TRST
2417 COLLYER ST
LONGMONT, CO 80501

WILKINSON STEVEN D & DONA R
2424 JEWEL ST
LONGMONT, CO 80501-1223

WINKELMAN PAULINE M
2423 COREY ST
LONGMONT, CO 80501

YANOSKI CHARLES J & CAROLYN S
20 BIRDSILL PL
LONGMONT, CO 80501-1209

YOST MARIA R & TATE A
3 BECKWITH PL
LONGMONT, CO 80501-1208

ZAKAVEC DAVID & ROBYN ALBERTSON
161 PEPPLER DR
LONGMONT, CO 80504

ZAVALA ROGELIO BLANCARTE
424 MUMFORD AVE
LONGMONT, CO 80501-1106

ZUNIGA MERCEDES R Q & F QUIROZ
2429 MEADOW ST
LONGMONT, CO 80501

CERTIFICATE OF PROPERTY POSTING

I, Ava Pecherzewski, certify that
Please Print Name

2 signs were posted pursuant to the provisions of the City of Longmont Land Development Code, for the application identified as

Notch66 Annexation Concept Plan Amendment
Project Name

for a

_____ Neighborhood Meeting

__X__ Notice of Application

_____ Planning and Zoning Commission Public Hearing to be held on _____

_____ City Council Public Hearing to be held on _____

On the subject property located at

Northeast corner of Hwy 66 & Erfert Street
Site Address or Location Description

SEE ATTACHED

Attach photos of posting:

Highway 66, north side, east of Erfert St.

East side of Erfert Street, North of Hwy 66

I certify that the foregoing information is true and correct.

Ava Pecherzewski — *Signature*

February 19, 2021 — *Date*

CERTIFICATE OF MAILING

I, Ava Pecherzewski, certify that
Please Print Name

Letters of notification were mailed in accordance with Section 15.02 of the City of Longmont Land Development Code for a

_____Neighborhood Meeting

__X__Notice of Application

_____Planning and Zoning Commission Public Hearing to be held on _____

_____City Council Public Hearing to be held on _____

for the application identified as

Barrett-Utility Sales Service, Inc-Clark Annexation Concept Plan Amendment
Project Name

On the subject property located at

Northeast corner of Highway 66 & Erfert Street
Site Address or Location Description

The letter was sent on: February 11, 2021

A copy of the letter and list of recipients is attached.

I certify that the foregoing information is true and correct.

Ava Pecherzewski — February 11, 2021
Signature — *Date*

City of Longmont Planning and Development Services, 385 Kimbark Street, Longmont, CO 80501, telephone 303-651-8330, fax 303-651-8696, email: Longmont.planning@longmontcolorado.gov website: http://www.longmontcolorado.gov

CITY OF LONGMONT | Planning Division

February 11, 2021

Notice of Application

Barrett-Utility Sales Service Inc.-Clark Annexation Concept Plan

(Project File #3427)

Proposal: Request to amend the Barrett-Utility Sales Service Inc.-Clark Annexation Concept Plan. The original annexation concept plan envisioned a commercial development on the 28-acres of this property. The applicant requests to amend the annexation concept plan to development a 336-unit apartment complex within 10 buildings and a clubhouse/leasing office on 21 acres and commercial pads on the 7 acres facing Highway 66.

Project Location: Northeast corner of Highway 66 & Erfert Street (immediately east of the Walmart store)

Property Owner: Barrett Investments, Inc.

Applicant: Thompson Thrift Development, Inc.

Any person having an interest in the above application may call or email the Planning Division for more information and to obtain electronic copies of the application materials. With an appointment, any interested party may review the paper application materials on file at the Planning Division, City of Longmont, Development Services Center, 385 Kimbark Street, Longmont, CO 80501.

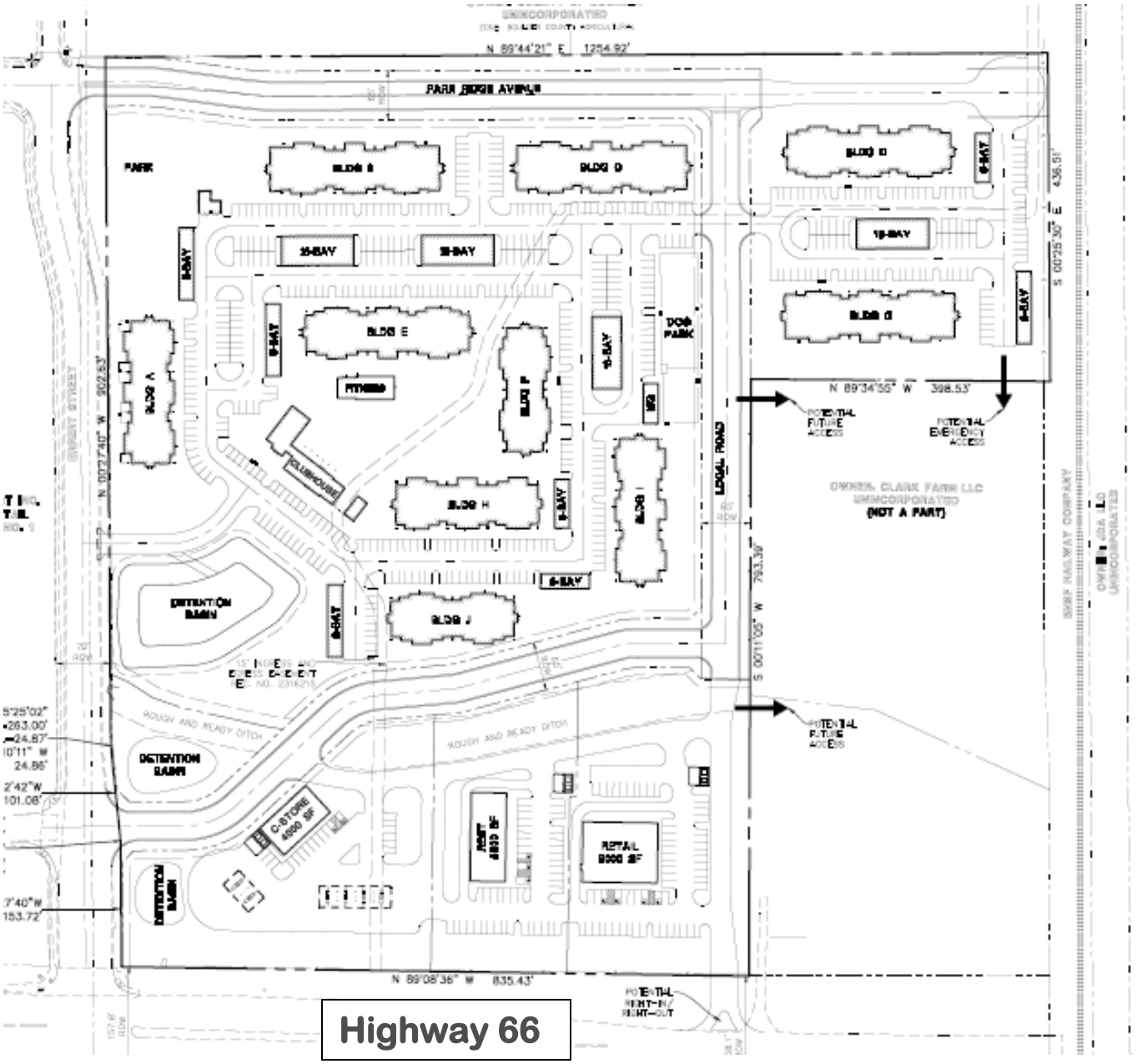
If you are interested in submitting written comments to the City for consideration, we ask that you kindly submit written comments no later than Friday, November 13, 2020 so that city staff can review comments and feedback prior to completing an analysis of this application.

Applicant Contact:
Jessica Tuttle
Watermark Apartments
317-853-5459
jtuttle@watermarkapartments.com

City Staff Contact:
Alyssa Rivas, Project Planner
City of Longmont, Planning Division
303-651-8439
alyssa.rivas@longmontcolorado.gov

The development review team at the City is currently reviewing the application against city standards. No public hearings are required for this type of application unless the applicant needs to request a variance or if a design issue cannot be resolved. If you have questions regarding the application materials, the development review process, code requirements, or other specific items, please contact the staff member identified above.

Proposed Annexation Concept Plan



Report an issue

Property Search

Enter search term... Clear Additional Actions

CSV

Double-clicking a row or clicking the select arrow will display the property information.

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Click row to select properties to include in your report.

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		R0049082	2341 JEWEL ST	DUNEMAN STANLEY D & MYRNA L
		R0066948	18 NEWBY PL	EMERY STREET LLC
		R0066948	20 NEWBY PL	EMERY STREET LLC
		R0047945	2336 COREY ST	ERNST DEANNA H & LARRY M
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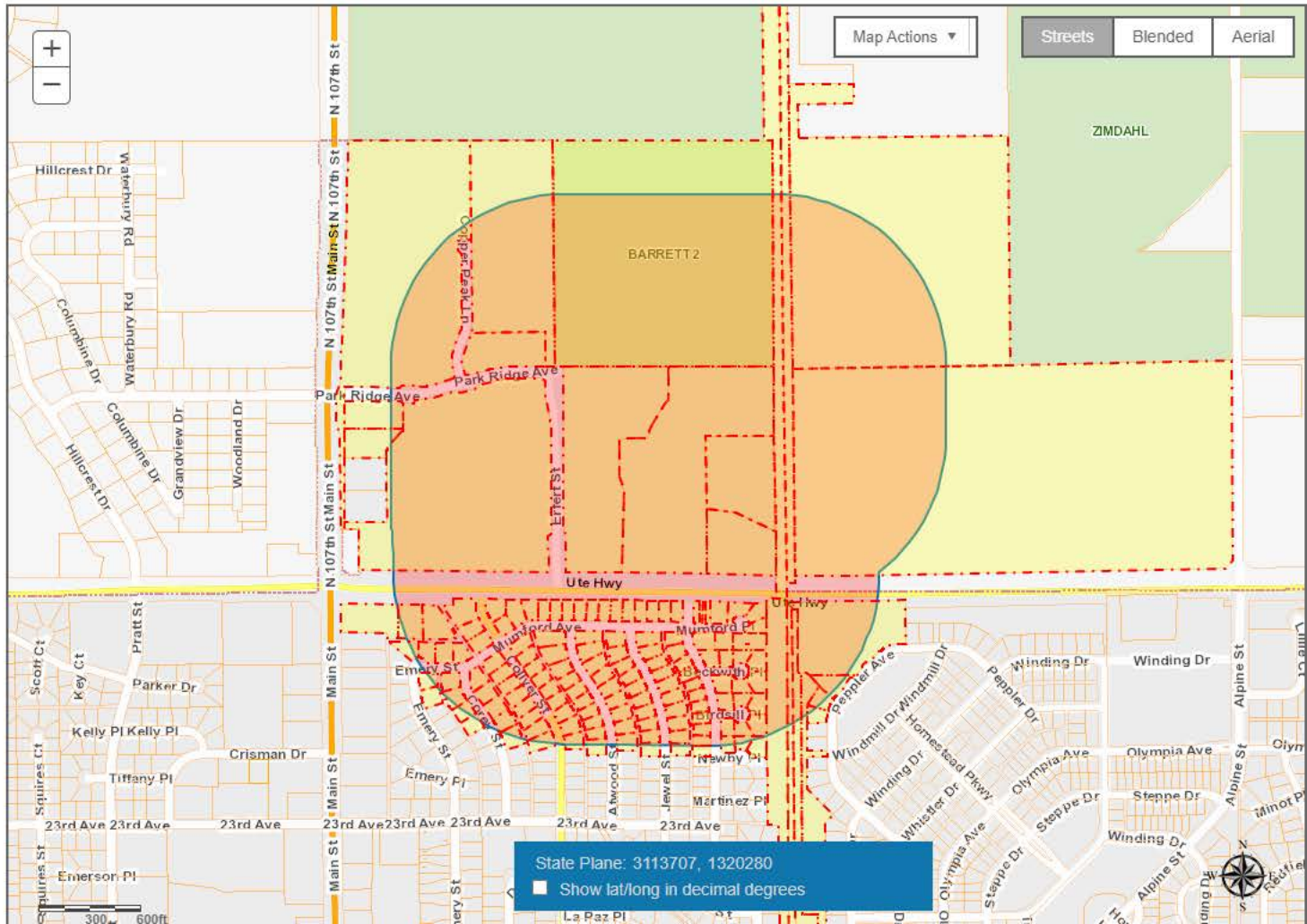
		R0124535	7 MUMFORD PL C	FRENETTE ROBERT E

1 2 3 4 5 6 7 8 9 10 ... 49 - 60 of 188 items



2401 ATWOOD LLC
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FRY JUDY ANN
2430 COLLYER ST
LONGMONT, CO 80501-1213

GILDERSLEEVE EVAN & KRYSTAL K
10 BECKWITH PL
LONGMONT, CO 80501

GOSSETT JUDY LEE
2405 COLLYER ST
LONGMONT, CO 80501-1212

HAAKENSON EVAN SPECIAL NEEDS TRUST
317 MCCONNELL DR
LYONS, CO 80540

HART KARINA C & MIGUEL C SULLCA
7 MUMFORD PLACE UNIT E
LONGMONT, CO 80501

HOBSON DARRYL & DEBORAH BELOTE
6644 BIRD CLIFF WAY
NIWOT, CO 80503

DEMIGUEL JUANITA
306 MUMFORD AV
LONGMONT, CO 80501

DILL SHANE
2470 COLLYER ST
LONGMONT, CO 80501

ERNST DEANNA H & LARRY M
2336 COREY ST
LONGMONT, CO 80501-1215

FREDERICK ROY D & JANE A TRUSTEES
2349 ATWOOD ST
LONGMONT, CO 80501

FULLER BRADLEY C & PAMELA L
2408 EMERY ST
LONGMONT, CO 80501

GKC VENTURES LLC
5266 GODDING HOLLOW PKWY
LONGMONT, CO 80501

GRECO BRIAN A & VANESSA MARTINEZ
2441 MEADOW ST
LONGMONT, CO 80501

HAEMER JEFFREY
2430 COREY ST
LONGMONT, CO 80501

HAYWOOD JONATHAN
7 MUMFORD PL UNIT B
LONGMONT, CO 80501

HOWERZYL JAMES J & EILEEN J
2439 ATWOOD ST
LONGMONT, CO 80501

HUGHES LOU J
2412 24TH AVE
LONGMONT, CO 80503

JENNETT MATTHEW J & VALERIE K
2433 ATWOOD ST
LONGMONT, CO 80501-1206

JPMORGAN CHASE BANK
PO BOX 810490
DALLAS, TX 75381

KEIM DOUG W II
324 MUMFORD AVE
LONGMONT, CO 80501

KRATKY DAVID & JENEANE
2424 COLLYER ST
LONGMONT, CO 80501-1213

LEINWAND IAN
2429 COLLYER ST
LONGMONT, CO 80501

MARVIN DAVID J
2430 JEWEL ST
LONGMONT, CO 80501

MEADOW 3 2446 LLC
1200 E 4TH AVE
LONGMONT, CO 80504

MYERS DOYLE L & MARCELLA
2343 COLLYER ST
LONGMONT, CO 80501

PATTERSON MATTHEW S
2345 MEADOW ST
LONGMONT, CO 80501

HUMPHREY CHRISTOPHER W JEROME
2412 ATWOOD ST
LONGMONT, CO 80501

JIVERY EDWINA
340 MUMFORD AVE
LONGMONT, CO 80501

KAAN-ONDRIEZEK JENNIFER A
2407 JEWEL ST
LONGMONT, CO 80501-1222

KERR CAROLYN L
212 MUMFORD AVE
LONGMONT, CO 80501-1232

LECHUGA Y & J LECHUGA MORADO
200 MUMFORD AVE
LONGMONT, CO 80501-1232

LONGMONT DRAINAGE LLC
120 W CATALDO AVE STE 100
SPOKANE, WA 99201

MCBRIDE JAMES T & DEBORAH J
2411 MEADOW ST
LONGMONT, CO 80501

MEDINA FAMILY REVOCABLE TRUST
4932 W 13TH ST
GREELEY, CO 80634

NAKAYAMA NINA K
400 MUMFORD AVE
LONGMONT, CO 80501-1106

PEPPLER VERNON & CAROL LIVING TRUST
11196 UTE HWY
LONGMONT, CO 80501

JDA LLC
9059 UTE HWY
LONGMONT, CO 80503-9233

JOHNSON ROGER D & RUBY M
4 BIRDSILL PL
LONGMONT, CO 80501-1209

KANKIEWICZ THOMAS G & DEBRA L
408 MUMFORD AVE
LONGMONT, CO 80501

KINZLE DONALD RICHARD & PAMELA KAY
2414 COREY ST
LONGMONT, CO 80501-1217

LEDEZMA GUSTAVO VARELA
118 MUMFORD AVE
LONGMONT, CO 80501-1231

LOVATOS P J CASTANEDA & M CASTANEDA
10 BIRDSILL PL
LONGMONT, CO 80501

MCKINNEY FLORENCE & FRANCIS
2444 PRATT APT 233
LONGMONT, CO 80501-1172

MOUNTAIN GATE INVESTMENTS LLC
14491 WELD COUNTY RD 5
LONGMONT, CO 80504-9642

PANTOJA RAFAEL & LEONARDO CHAVEZ
2420 MEADOW ST
LONGMONT, CO 80501

PEREZ JOSE F & JENNIFER M
2341 ATWOOD ST
LONGMONT, CO 80501-1204

POPE PATRICIA A
2457 MEADOW ST
LONGMONT, CO 80501

PORTER JOHN & JERRI REVOCABLE TRUST
2442 JEWEL ST
LONGMONT, CO 80501

POTTEBAUM BRIAN M
206 MUNFORD AVE
LONGMONT, CO 80501

PRAIRIE VILLAGE OWNERS ASSOC INC
PO BOX 17490
BOULDER, CO 80308

PRIEBE AARON
2340 ATWOOD ST
LONGMONT, CO 80501

PUBLIC SERVICE CO
PO BOX 1979
DENVER, CO 80201-1979

QUEZADA ADAN SALVADOR FLORES
2448 JEWEL ST
LONGMONT, CO 80501-1223

REAMER SHARON E
10 MUMFORD PL
LONGMONT, CO 80501

RECEN MEREDITH
2400 ATWOOD ST
LONGMONT, CO 80501

REIMER LOREN M
PO BOX 882784
STEAMBOAT SPGS, CO 80488

RILEY SEAN C & CAROLYN M
2428 ATWOOD ST
LONGMONT, CO 80501

ROAN ROBERT D & TERRY L
218 MUMFORD AVE
LONGMONT, CO 80501

RUCKMAN SUSAN
2415 COREY ST
LONGMONT, CO 80501

SALAZAR JANICE RUTH
2412 JEWEL ST
LONGMONT, CO 80501

SALAZAR VICTOR S & REBECCA S SALAZAR
2413 JEWEL ST
LONGMONT, CO 80501

SALOMON LUIS ESTEBAN & L TENA DIAZ
2441 COLLYER ST
LONGMONT, CO 80501

SCHMITT DONNA K & HERMAN C III TRUST
2443 JEWEL ST
LONGMONT, CO 80501

SFL LLC
5856 CORPORATE AVE STE 200
CYPRESS, CA 90630

SHRESTHA MOHAN KAJI & RESHU
7 MUMFORD PL UNIT A
LONGMONT, CO 80501

SHUTES FAMILY TRUST
1819 ASHFORD CIR
LONGMONT, CO 80504

SMITH LEONARD F & DONNA J
112 MUMFORD AVE
LONGMONT, CO 80501-1231

SMITH THOMAS A
2442 COLLYER ST
LONGMONT, CO 80501-1213

SORENSON PHALAR OUN & JOHN B
7 MUMFORD PL UNIT D
LONGMONT, CO 80501

SPONG ESTATE REVOCABLE TRUST
15735 W 67TH PL
ARVADA, CO 80007

STAFFORD ANTHONY LOUIS
2435 MEADOW ST
LONGMONT, CO 80501

STAMELOS MICHAEL A
2423 COLLYER ST
LONGMONT, CO 80501-1212

STAN BARRETT INC
P O BOX 88
LONGMONT, CO 80502

STENGEL KELLY D & LESLIE R
2406 ATWOOD ST
LONGMONT, CO 80501-1207

STEPHENS MICHELE L
318 MUMFORD AVE
LONGMONT, CO 80501

STERKEL DUANE G & DARLENE D
2419 ATWOOD ST
LONGMONT, CO 80501-1206

STEWART KATHLEEN
416 MUMFORD AVE
LONGMONT, CO 80501

SULLCA MIGUEL C & KARINA C HART
7 MUMFORD PL #F
LONGMONT, CO 80501-1236

TEBO STEPHEN D
PO BOX T
BOULDER, CO 80306

THOMAS JENNIFER MARIE
2449 JEWEL ST
LONGMONT, CO 80501

THOMAS-BIRT JULIE A
3 BIRDSILL PL
LONGMONT, CO 80501

TISINAI RICHARD J
2437 JEWEL ST
LONGMONT, CO 80501

TREVARTON JANICE E
303 MUMFORD AVE
LONGMONT, CO 80501

TUCKER & SOCHHEATH VANCOMER
1492 SERENITY CIR
LONGMONT, CO 80504

TUN ALICIA
2400 COLLYER ST
LONGMONT, CO 80501

UTE COTTONWOODS IVP LLC
9771 NIWOT RD
LONGMONT, CO 80504

WAGONER MICHAEL C & KAREN M
2406 COREY ST
LONGMONT, CO 80501-1217

WALLACE MICHAEL J ET AL
2335 JEWEL ST
LONGMONT, CO 80501-1220

WALLACE RANDY K & EVELYN J
2435 COLLYER ST
LONGMONT, CO 80501-1212

WAL-MART STORES INC
PO BOX 8050 MS0555
BENTONVILLE, AR 72712-8050

WALTER JERRY L & KARLA M
2406 JEWEL ST
LONGMONT, CO 80501

WATSON REX D & KAY M
2411 COLLYER ST
LONGMONT, CO 80501-1212

WAWRO NORMA J
2439 COREY ST
LONGMONT, CO 80501-1216

WEISE CHAD
2422 COREY ST
LONGMONT, CO 80501

WIDLACK TIMOTHY D & KASSANDRA B
2436 JEWEL ST
LONGMONT, CO 80501-1223

WILBER JAMES L & N J FAM REV TRST
2417 COLLYER ST
LONGMONT, CO 80501

WILKINSON STEVEN D & DONA R
2424 JEWEL ST
LONGMONT, CO 80501-1223

WINKELMAN PAULINE M
2423 COREY ST
LONGMONT, CO 80501

YANOSKI CHARLES J & CAROLYN S
20 BIRDSILL PL
LONGMONT, CO 80501-1209

YOST MARIA R & TATE A
3 BECKWITH PL
LONGMONT, CO 80501-1208

ZAKAVEC DAVID & ROBYN ALBERTSON
161 PEPPLER DR
LONGMONT, CO 80504

ZAVALA ROGELIO BLANCARTE
424 MUMFORD AVE
LONGMONT, CO 80501-1106

ZUNIGA MERCEDES R Q & F QUIROZ
2429 MEADOW ST
LONGMONT, CO 80501

CITY OF LONGMONT | Planning Division

Certificate of Property Posting

I, Ava Pecherzewski, certify that 2 sign(s) was/were posted pursuant to the provisions of the City of Longmont Land Development Code, for the application identified as

Barrett/Utility Sales & Service, Inc./Clarke Annexation Concept Plan Amendment

Project Name

for a

_____Neighborhood Meeting

_____Notice of Application

X Planning and Zoning Commission Public Hearing to be held on July 21, 2021

_____City Council Public Hearing to be held on _____

On the subject property located at

Northeast corner of State Highway 66 & Erfert Street

Site Address or Location Description

Attach photo(s) of posting on second page below (use additional pages if necessary):

Erfert Street Frontage

Erfert Street Frontage

Highway 66 Frontage

Highway 66 Frontage

I certify that the foregoing information is true and correct.

Ava Pecherzewski

Signature

July 6, 2021

Date

CITY OF LONGMONT | Planning Division

Certificate of Mailing

I, Ava Pecherzewski, certify that letters of notification were mailed in accordance with Section 15.02 of the City of Longmont Land Development Code for a

_____Neighborhood Meeting

_____Notice of Application

__X__Planning and Zoning Commission Public Hearing to be held on July 21, 2021

_____City Council Public Hearing to be held on _____

for the application identified as

Barrett/Utility Sales & Service, Inc./Clarke Annexation Concept Plan Amendment

Project Name

On the subject property located at

Northeast corner of State Hwy 66 & Erfert Street

Site Address or Location Description

The letter(s) was/were sent on July 6, 2021

A copy of the letter and list of recipients is attached.

I certify that the foregoing information is true and correct.

Ava Pecherzewski — *Signature*

July 6, 2021 — *Date*

July 6, 2021

Notice of Public Hearing

Longmont Planning & Zoning Commission Public Hearing

Barrett/Utility Sales & Service, Inc. /Clarke Annexation Concept Plan Amendment

If you need interpretation, accommodations, or other special assistance in order to participate in a meeting, please contact the Planning Division at 303-651-8330 or longmont.planning@longmontcolorado.gov, at least 48 hours prior to the meeting to make arrangements.

Si necesita interpretación , servicios especiales u otra asistencia adicional para participar en alguna reunión, comuníquese con 48 horas de anticipación al Departamento de Planificación Urbana al 303-651-8330 o escríbanos a longmont.planning@longmontcolorado.gov, para así hacer los pertinentes arreglos.

Date/Time: July 21, 2021 at 7:00 p.m.

Proposal/Background: In 2008, the City Council annexed the property currently located at the northeast corner of Hwy 66 and Erfert Street. The annexation request included a Concept Plan which described the future development of the property. The original Concept Plan showed a large big-box retail store with several small retail buildings. An application has been submitted to the City requesting to amend the approved annexation concept plan for this property to change the proposed development to an apartment complex on the north side of the property and commercial buildings on the south side of the property***. *Please see the back side of this sheet for a copy of the proposed Concept Plan.***

Location: Northeast corner of Hwy 66 & Erfert Street (east of the Walmart Supercenter at Hwy 287 & Hwy 66).

How to Participate: Any person having an interest in the above proceeding is invited to submit written comments to the staff person listed below either via email or US Mail. Any comments received prior to 5:00 PM on July 21st will be forwarded to the Planning & Zoning Commission.

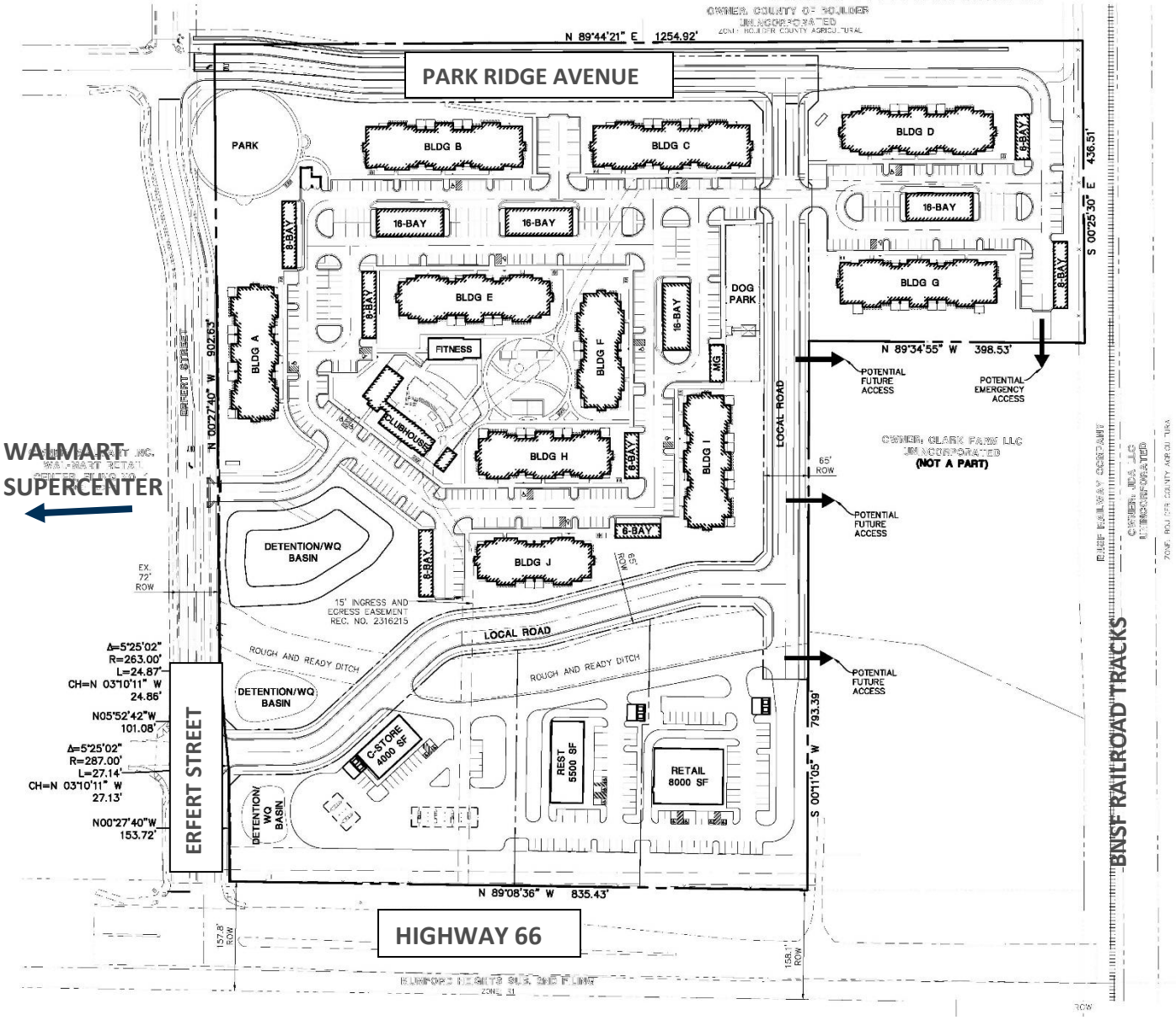
Due to the Covid-19 situation, the meeting will be livestreamed. In order to protect residents, staff, and elected officials due to the novel COVID-19 virus, Longmont residents are urged to view the public hearing and provide public comment from the comfort and safety of their homes by watching the meeting via livestream on the City of Longmont's YouTube page and calling in to provide public comment. Information will be displayed and announced during the live meeting directing the public on how and when to call in to the meeting.

Information on this hearing item, including the staff report, plans and drawings, or how to livestream the public hearing and how to provide public comment either via email or phone call-in can be found on the City's webpage at: https://www.longmontcolorado.gov/departments/boards-committees-and-commissions/directory-of-boards-committees-and-commissions/planning-and-zoning-commission A copy of the staff report and the project plans can be obtained from this website after July 15th.

City Planning Staff Contact: Ava Pecherzewski, Principal Planner

ava.pecherzewski@longmontcolorado.gov or (303) 651-8735

BARRETT/UTILITY SALES & SERVICE, INC./CLARKE ANNEXATION
CONCEPT PLAN AMENDMENT



Report an issue

Property Search

Enter search term... Clear Additional Actions

CSV

Double-clicking a row or clicking the select arrow will display the property information.

For large datasets, it will take time to prepare the csv download. The download button will appear when the download is ready. Please be patient.

Click row to select properties to include in your report.

Report	Select	Account	Address	Owner
		R0048378	2470 COLLYER ST	DILL SHANE
		R0049082	2341 JEWEL ST	DUNEMAN STANLEY D & MYRNA L
		R0066948	18 NEWBY PL	EMERY STREET LLC
		R0066948	20 NEWBY PL	EMERY STREET LLC
		R0047945	2336 COREY ST	ERNST DEANNA H & LARRY M
		P0405654	2514 MAIN ST	FEDEX OFFICE AND PRINT SERVICES INC
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		R0049092	2418 JEWEL ST	FITZPATRICK DARRELL & DANIEL KAPAUN
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		R0124535	7 MUMFORD PL C	FRENETTE ROBERT E

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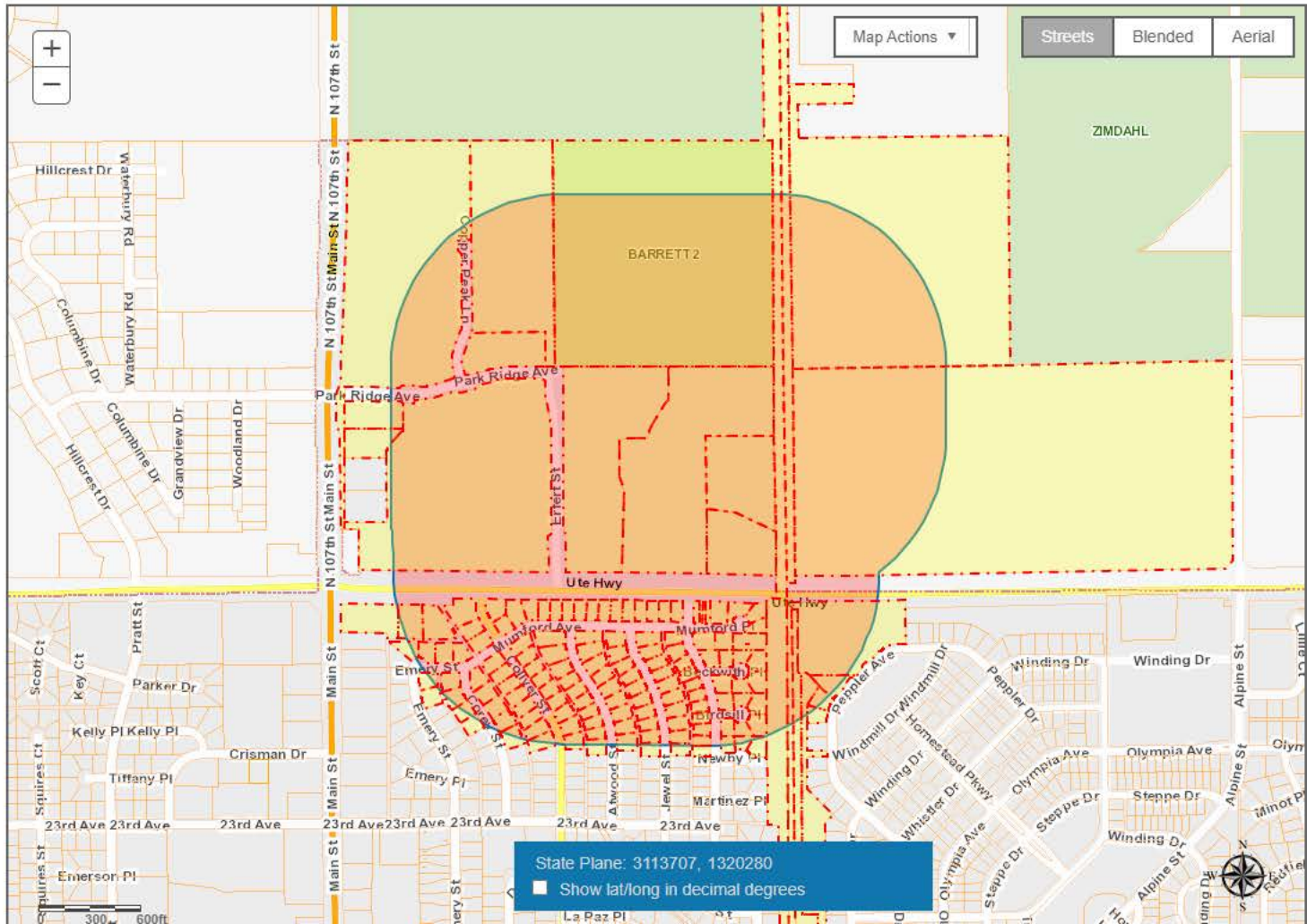

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LONGMONT, CO 80501

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CROSSMAN C P & ADRIANA & HAYLEY
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DICKEY CHRISTOPHER
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1639 GENEVA CIR
LONGMONT, CO 80503

FITZPATRICK DARRELL & DANIEL KAPAUN
2418 JEWEL ST
LONGMONT, CO 80501

FRY JUDY ANN
2430 COLLYER ST
LONGMONT, CO 80501-1213

GILDERSLEEVE EVAN & KRYSTAL K
10 BECKWITH PL
LONGMONT, CO 80501

GOSSETT JUDY LEE
2405 COLLYER ST
LONGMONT, CO 80501-1212

HAAKENSON EVAN SPECIAL NEEDS TRUST
317 MCCONNELL DR
LYONS, CO 80540

HART KARINA C & MIGUEL C SULLCA
7 MUMFORD PLACE UNIT E
LONGMONT, CO 80501

HOBSON DARRYL & DEBORAH BELOTE
6644 BIRD CLIFF WAY
NIWOT, CO 80503

DEMIGUEL JUANITA
306 MUMFORD AV
LONGMONT, CO 80501

DILL SHANE
2470 COLLYER ST
LONGMONT, CO 80501

ERNST DEANNA H & LARRY M
2336 COREY ST
LONGMONT, CO 80501-1215

FREDERICK ROY D & JANE A TRUSTEES
2349 ATWOOD ST
LONGMONT, CO 80501

FULLER BRADLEY C & PAMELA L
2408 EMERY ST
LONGMONT, CO 80501

GKC VENTURES LLC
5266 GODDING HOLLOW PKWY
LONGMONT, CO 80501

GRECO BRIAN A & VANESSA MARTINEZ
2441 MEADOW ST
LONGMONT, CO 80501

HAEMER JEFFREY
2430 COREY ST
LONGMONT, CO 80501

HAYWOOD JONATHAN
7 MUMFORD PL UNIT B
LONGMONT, CO 80501

HOWERZYL JAMES J & EILEEN J
2439 ATWOOD ST
LONGMONT, CO 80501

HUGHES LOU J
2412 24TH AVE
LONGMONT, CO 80503

JENNETT MATTHEW J & VALERIE K
2433 ATWOOD ST
LONGMONT, CO 80501-1206

JPMORGAN CHASE BANK
PO BOX 810490
DALLAS, TX 75381

KEIM DOUG W II
324 MUMFORD AVE
LONGMONT, CO 80501

KRATKY DAVID & JENEANE
2424 COLLYER ST
LONGMONT, CO 80501-1213

LEINWAND IAN
2429 COLLYER ST
LONGMONT, CO 80501

MARVIN DAVID J
2430 JEWEL ST
LONGMONT, CO 80501

MEADOW 3 2446 LLC
1200 E 4TH AVE
LONGMONT, CO 80504

MYERS DOYLE L & MARCELLA
2343 COLLYER ST
LONGMONT, CO 80501

PATTERSON MATTHEW S
2345 MEADOW ST
LONGMONT, CO 80501

HUMPHREY CHRISTOPHER W JEROME
2412 ATWOOD ST
LONGMONT, CO 80501

JIVERY EDWINA
340 MUMFORD AVE
LONGMONT, CO 80501

KAAN-ONDRIEZEK JENNIFER A
2407 JEWEL ST
LONGMONT, CO 80501-1222

KERR CAROLYN L
212 MUMFORD AVE
LONGMONT, CO 80501-1232

LECHUGA Y & J LECHUGA MORADO
200 MUMFORD AVE
LONGMONT, CO 80501-1232

LONGMONT DRAINAGE LLC
120 W CATALDO AVE STE 100
SPOKANE, WA 99201

MCBRIDE JAMES T & DEBORAH J
2411 MEADOW ST
LONGMONT, CO 80501

MEDINA FAMILY REVOCABLE TRUST
4932 W 13TH ST
GREELEY, CO 80634

NAKAYAMA NINA K
400 MUMFORD AVE
LONGMONT, CO 80501-1106

PEPPLER VERNON & CAROL LIVING TRUST
11196 UTE HWY
LONGMONT, CO 80501

JDA LLC
9059 UTE HWY
LONGMONT, CO 80503-9233

JOHNSON ROGER D & RUBY M
4 BIRDSILL PL
LONGMONT, CO 80501-1209

KANKIEWICZ THOMAS G & DEBRA L
408 MUMFORD AVE
LONGMONT, CO 80501

KINZLE DONALD RICHARD & PAMELA KAY
2414 COREY ST
LONGMONT, CO 80501-1217

LEDEZMA GUSTAVO VARELA
118 MUMFORD AVE
LONGMONT, CO 80501-1231

LOVATOS P J CASTANEDA & M CASTANEDA
10 BIRDSILL PL
LONGMONT, CO 80501

MCKINNEY FLORENCE & FRANCIS
2444 PRATT APT 233
LONGMONT, CO 80501-1172

MOUNTAIN GATE INVESTMENTS LLC
14491 WELD COUNTY RD 5
LONGMONT, CO 80504-9642

PANTOJA RAFAEL & LEONARDO CHAVEZ
2420 MEADOW ST
LONGMONT, CO 80501

PEREZ JOSE F & JENNIFER M
2341 ATWOOD ST
LONGMONT, CO 80501-1204

POPE PATRICIA A
2457 MEADOW ST
LONGMONT, CO 80501

PORTER JOHN & JERRI REVOCABLE TRUST
2442 JEWEL ST
LONGMONT, CO 80501

POTTEBAUM BRIAN M
206 MUNFORD AVE
LONGMONT, CO 80501

PRAIRIE VILLAGE OWNERS ASSOC INC
PO BOX 17490
BOULDER, CO 80308

PRIEBE AARON
2340 ATWOOD ST
LONGMONT, CO 80501

PUBLIC SERVICE CO
PO BOX 1979
DENVER, CO 80201-1979

QUEZADA ADAN SALVADOR FLORES
2448 JEWEL ST
LONGMONT, CO 80501-1223

REAMER SHARON E
10 MUMFORD PL
LONGMONT, CO 80501

RECEN MEREDITH
2400 ATWOOD ST
LONGMONT, CO 80501

REIMER LOREN M
PO BOX 882784
STEAMBOAT SPGS, CO 80488

RILEY SEAN C & CAROLYN M
2428 ATWOOD ST
LONGMONT, CO 80501

ROAN ROBERT D & TERRY L
218 MUMFORD AVE
LONGMONT, CO 80501

RUCKMAN SUSAN
2415 COREY ST
LONGMONT, CO 80501

SALAZAR JANICE RUTH
2412 JEWEL ST
LONGMONT, CO 80501

SALAZAR VICTOR S & REBECCA S SALAZAR
2413 JEWEL ST
LONGMONT, CO 80501

SALOMON LUIS ESTEBAN & L TENA DIAZ
2441 COLLYER ST
LONGMONT, CO 80501

SCHMITT DONNA K & HERMAN C III TRUST
2443 JEWEL ST
LONGMONT, CO 80501

SFL LLC
5856 CORPORATE AVE STE 200
CYPRESS, CA 90630

SHRESTHA MOHAN KAJI & RESHU
7 MUMFORD PL UNIT A
LONGMONT, CO 80501

SHUTES FAMILY TRUST
1819 ASHFORD CIR
LONGMONT, CO 80504

SMITH LEONARD F & DONNA J
112 MUMFORD AVE
LONGMONT, CO 80501-1231

SMITH THOMAS A
2442 COLLYER ST
LONGMONT, CO 80501-1213

SORENSON PHALAR OUN & JOHN B
7 MUMFORD PL UNIT D
LONGMONT, CO 80501

SPONG ESTATE REVOCABLE TRUST
15735 W 67TH PL
ARVADA, CO 80007

STAFFORD ANTHONY LOUIS
2435 MEADOW ST
LONGMONT, CO 80501

STAMELOS MICHAEL A
2423 COLLYER ST
LONGMONT, CO 80501-1212

STAN BARRETT INC
P O BOX 88
LONGMONT, CO 80502

STENGEL KELLY D & LESLIE R
2406 ATWOOD ST
LONGMONT, CO 80501-1207

STEPHENS MICHELE L
318 MUMFORD AVE
LONGMONT, CO 80501

STERKEL DUANE G & DARLENE D
2419 ATWOOD ST
LONGMONT, CO 80501-1206

STEWART KATHLEEN
416 MUMFORD AVE
LONGMONT, CO 80501

SULLCA MIGUEL C & KARINA C HART
7 MUMFORD PL #F
LONGMONT, CO 80501-1236

TEBO STEPHEN D
PO BOX T
BOULDER, CO 80306

THOMAS JENNIFER MARIE
2449 JEWEL ST
LONGMONT, CO 80501

THOMAS-BIRT JULIE A
3 BIRDSILL PL
LONGMONT, CO 80501

TISINAI RICHARD J
2437 JEWEL ST
LONGMONT, CO 80501

TREVARTON JANICE E
303 MUMFORD AVE
LONGMONT, CO 80501

TUCKER & SOCHHEATH VANCOMER
1492 SERENITY CIR
LONGMONT, CO 80504

TUN ALICIA
2400 COLLYER ST
LONGMONT, CO 80501

UTE COTTONWOODS IVP LLC
9771 NIWOT RD
LONGMONT, CO 80504

WAGONER MICHAEL C & KAREN M
2406 COREY ST
LONGMONT, CO 80501-1217

WALLACE MICHAEL J ET AL
2335 JEWEL ST
LONGMONT, CO 80501-1220

WALLACE RANDY K & EVELYN J
2435 COLLYER ST
LONGMONT, CO 80501-1212

WAL-MART STORES INC
PO BOX 8050 MS0555
BENTONVILLE, AR 72712-8050

WALTER JERRY L & KARLA M
2406 JEWEL ST
LONGMONT, CO 80501

WATSON REX D & KAY M
2411 COLLYER ST
LONGMONT, CO 80501-1212

WAWRO NORMA J
2439 COREY ST
LONGMONT, CO 80501-1216

WEISE CHAD
2422 COREY ST
LONGMONT, CO 80501

WIDLACK TIMOTHY D & KASSANDRA B
2436 JEWEL ST
LONGMONT, CO 80501-1223

WILBER JAMES L & N J FAM REV TRST
2417 COLLYER ST
LONGMONT, CO 80501

WILKINSON STEVEN D & DONA R
2424 JEWEL ST
LONGMONT, CO 80501-1223

WINKELMAN PAULINE M
2423 COREY ST
LONGMONT, CO 80501

YANOSKI CHARLES J & CAROLYN S
20 BIRDSILL PL
LONGMONT, CO 80501-1209

YOST MARIA R & TATE A
3 BECKWITH PL
LONGMONT, CO 80501-1208

ZAKAVEC DAVID & ROBYN ALBERTSON
161 PEPPLER DR
LONGMONT, CO 80504

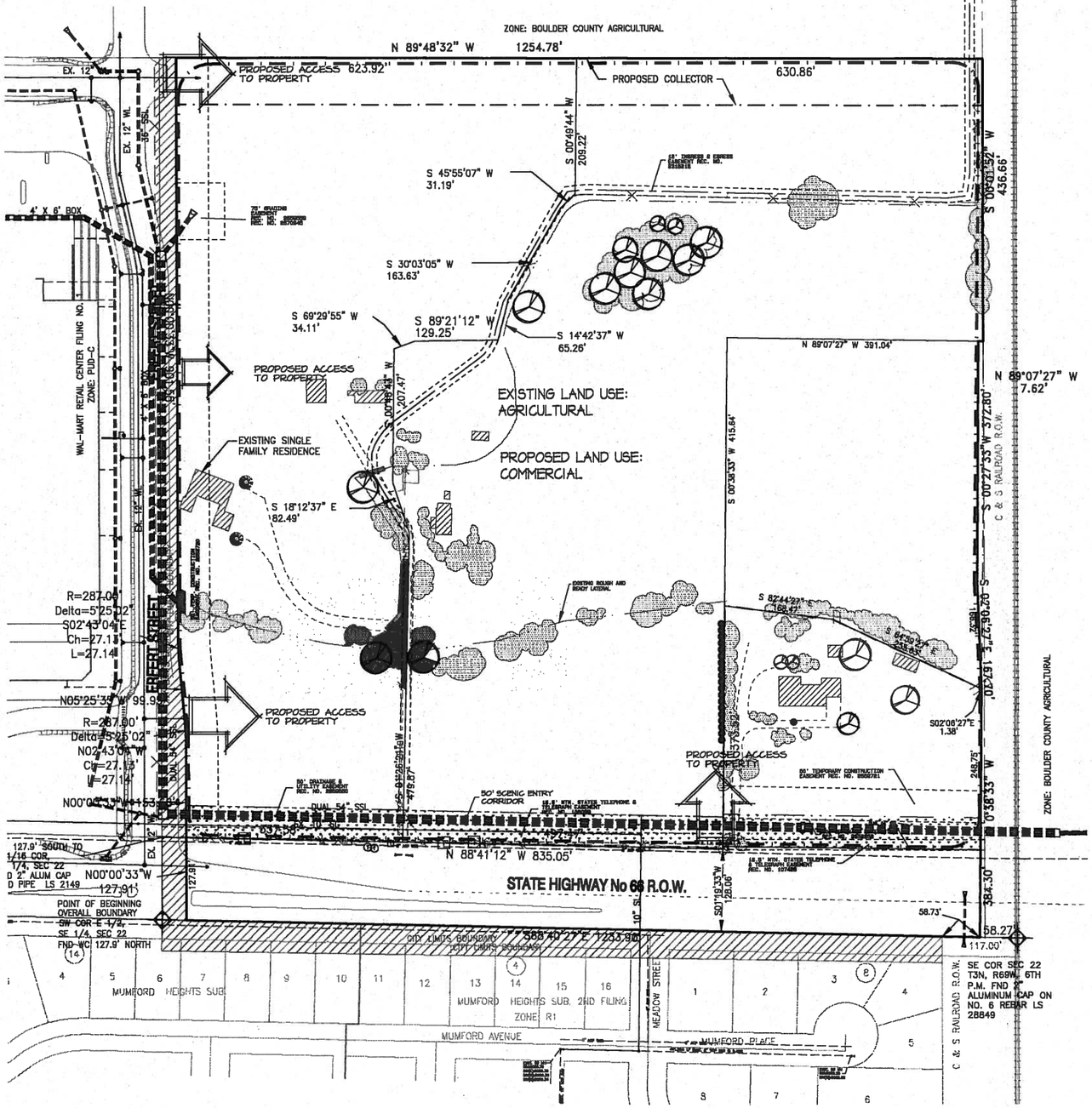
ZAVALA ROGELIO BLANCARTE
424 MUMFORD AVE
LONGMONT, CO 80501-1106

ZUNIGA MERCEDES R Q & F QUIROZ
2429 MEADOW ST
LONGMONT, CO 80501

CONCEPT PLAN FOR
BARRETT/UTILITY SALES & SERVICE, INC./CLARK ANNEXATION

A PARCEL OF LAND SITUATED IN THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

EXISTING CONDITIONS



OWNERS:

STAN BARRETT INC.
811 MAIN STREET,
LONGMONT, COLORADO 80501

UTILITY SALES & SERVICE, INC.
11055 UTE HIGHWAY
LONGMONT, COLORADO 80504

C. H. AND MARY LOU CLARK
14744 WCR 66
GREELEY, COLORADO 80631

BASIS OF BEARINGS:

THE SOUTH LINE OF THE SOUTHEAST ONE-QUARTER OF SECTION 22 AS BEARING SOUTH 88°40'27" EAST AND BEING MONUMENTED AS SHOWN.

FLOODPLAIN INFORMATION:

FLOODPLAIN INFORMATION: THIS PROPERTY LIES WITHIN FLOOD ZONE "X" (AREAS OUTSIDE OF THE 500-YEAR FLOODPLAIN) ACCORDING TO FLOOD INSURANCE RATE MAP NO. 08013C0300F, PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, DATED JUNE 2, 1995 (PANEL NOT IN PRINT).

TOTAL ACREAGE:

38.584 ACRES

EXISTING ZONING:

BOULDER COUNTY AGRICULTURAL

PROPOSED ZONING:

PUD-C - PLANNED UNIT DEVELOPMENT-COMMERCIAL WITH SE-O (SCENIC ENTRYWAY OVERLAY)

OVERALL LEGAL DESCRIPTION:

A PARCEL OF LAND SITUATED IN THE EAST ONE-HALF OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

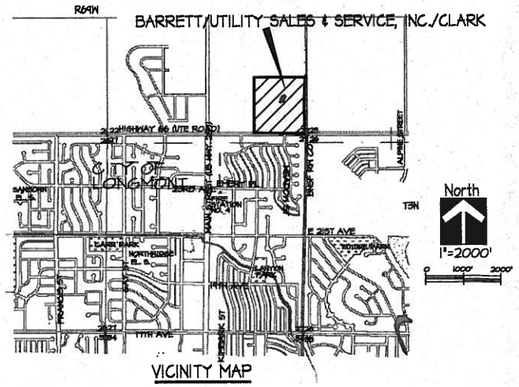
COMMENCING AT THE SOUTHWEST CORNER OF THE EAST ONE-HALF OF THE SOUTHEAST QUARTER OF SECTION 22, WHENCE THE SOUTHEAST CORNER OF SECTION 22 BEARS SOUTH 88°40'27" EAST 1330.18 FEET, SAID LINE FORMING THE BASIS OF BEARINGS FOR THIS DESCRIPTION; THENCE ALONG SAID LINE SOUTH 88°40'27" EAST 38.01 FEET TO THE TRUE POINT OF BEGINNING;

THENCE NORTH 00°00'33" WEST 281.54 FEET; THENCE ALONG THE ARC OF A CURVE TO THE LEFT (SAID CURVE HAVING A RADIUS OF 287.00 FEET, A CENTRAL ANGLE OF 5°25'02" AND A CHORD WHICH BEARS NORTH 2°43'04" WEST 27.13 FEET) A DISTANCE OF 27.14 FEET; THENCE NORTH 5°25'35" WEST 99.45 FEET; THENCE ALONG THE ARC OF A CURVE TO THE RIGHT (SAID CURVE HAVING AN RADIUS OF 287.00 FEET, A CENTRAL ANGLE OF 5°25'02", AND A CHORD WHICH BEARS NORTH 2°43'04" WEST 27.13 FEET) A DISTANCE OF 27.14 FEET; THENCE NORTH 00°00'33" WEST 901.55 FEET; THENCE SOUTH 84°48'32" EAST 1254.78 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF THE COLORADO AND SOUTHERN RAILROAD; THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE, SOUTH 00°01'52" WEST 436.66 FEET; THENCE NORTH 89°07'27" WEST 7.62 FEET; THENCE SOUTH 00°27'33" WEST 372.80 FEET; THENCE SOUTH 02°08'27" EAST 167.70 FEET; THENCE SOUTH 00°38'33" WEST 384.30 FEET; THENCE NORTH 88°40'27" WEST 1233.90 FEET TO THE TRUE POINT OF BEGINNING. CONTAINING 38.584 ACRES MORE OR LESS.

North

1"=100'

0 50' 100' 200'



VICINITY MAP

LEGEND:

- SECTION OR CONTROL MONUMENT AS NOTED
- EXISTING DITCH CENTERLINE
- EXISTING WATER LINE
- —OHE— EXISTING OVERHEAD ELECTRIC LINE
- EXISTING SAN. SEWER
- EXISTING STORM SEWER
- PARCEL BOUNDARY
- 50' SCENIC ENTRY CORRIDOR

SHEET INDEX:

SHEET 1	EXISTING CONDITIONS
SHEET 2	CONCEPTUAL LAYOUT AND NOTES
SHEET 3	TREE PRESERVATION PLAN
SHEET 4	ARCHITECTURAL NOTES

EXISTING CONDITIONS

RECORD	DATE
INITIAL SUBMITTAL	4-19-05
REVISED PER COMMENTS	10-18-05
REVISED PER COMMENTS	01-25-06
REVISED PER COMMENTS	03-01-06
REVISED PER COMMENTS	12-04-07

DESIGNED BY: ——
PREPARED BY: MAM
CHECKED BY: SA
JOB NO: 80-0697.003.00

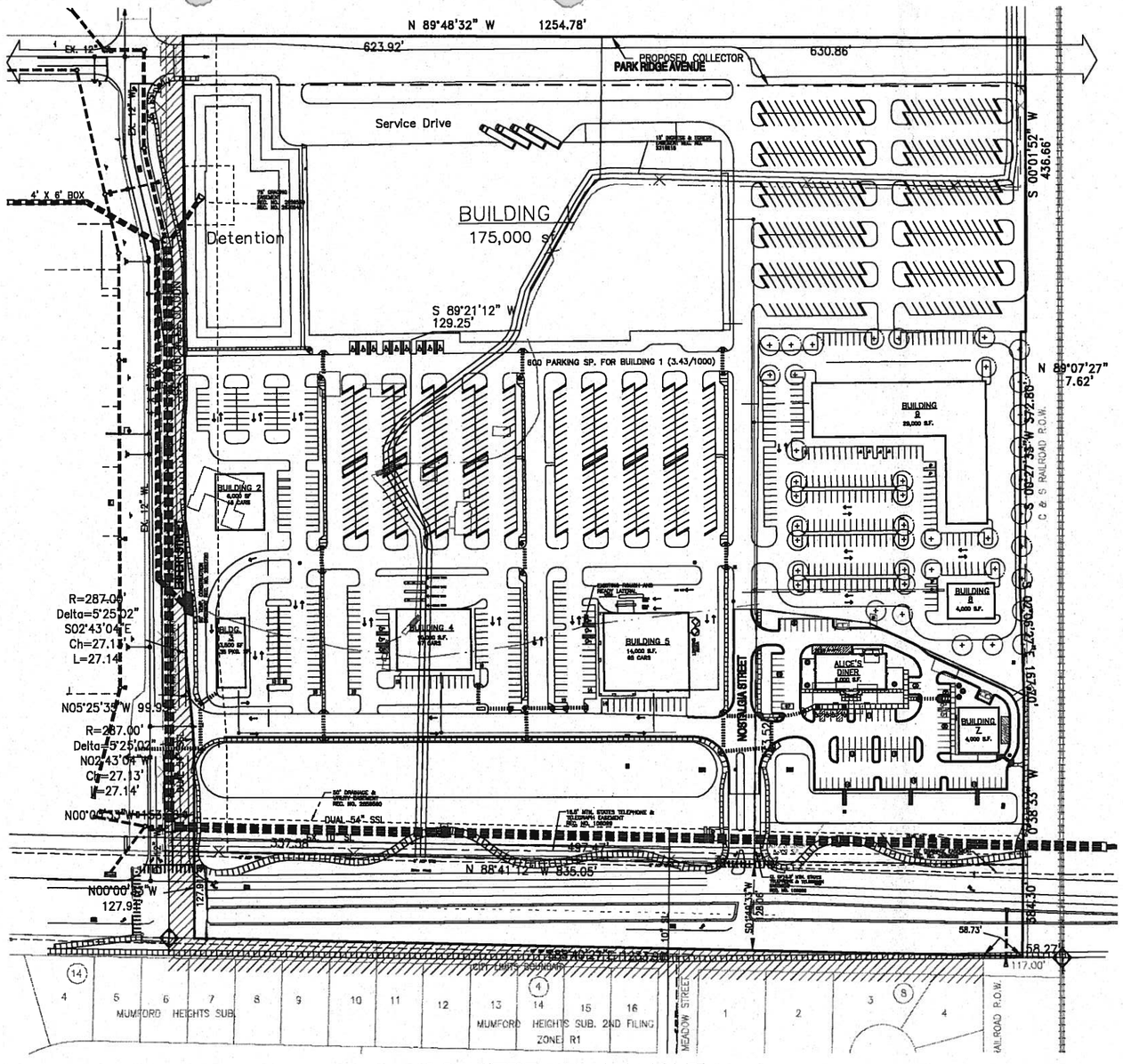
TETRA TECH
1900 S. SUNSET ST., SUITE 1-F, LONGMONT, CO 80501
TEL 303.772.5282 METRO 303.665.8283 FAX 303.665.6859

EXISTING CONDITIONS

CONCEPT PLAN FOR
BARRETT/UTILITY SALES & SERVICE, INC./CLARK ANNEXATION

A PARCEL OF LAND SITUATED IN THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

CONCEPTUAL LAYOUT



CONCEPTUAL LAYOUT
(FOR ILLUSTRATIVE PURPOSES ONLY)

North

1"=100'

0 50' 100' 200'

TOTAL ACREAGE:
38.584 ACRES

EXISTING ZONING:
BOULDER COUNTY AGRICULTURAL

PROPOSED ZONING:
PUD-C - PLANNED UNIT DEVELOPMENT-COMMERCIAL WITH SE-O (SCENIC ENTRYWAY OVERLAY)

NOTES:

1. DRAINAGE- ALL SITE DRAINAGE WILL BE DESIGNED IN ACCORDANCE WITH THE CITY OF LONGMONT STORM DRAINAGE CRITERIA MANUAL. RUNOFF FROM ANY DEVELOPED PARCEL WILL DISCHARGE AT NO GREATER THAN THE HISTORIC RATE UNLESS OTHERWISE APPROVED.

2. BUILDING HEIGHT- BUILDING HEIGHTS SHALL BE CONSISTENT WITH REQUESTED ZONING.

3. SETBACKS WILL BE DETERMINED AT THE TIME OF PRELIMINARY PUD DEVELOPMENT PLAN.

4. RIGHT-OF-WAY SHALL BE DEDICATED TO THE CITY AT THE TIME OF FINAL PLATTING OR AS REQUESTED BY THE CITY AND SHALL BE LANDSCAPED BY THE DEVELOPER ACCORDING TO THE CITY LANDSCAPE REGULATIONS REQUIREMENTS IN EFFECT AT THE TIME OF CONSTRUCTION. MAINTENANCE OF ARTERIAL RIGHT-OF-WAY LANDSCAPING SHALL BE THE RESPONSIBILITY OF THE OWNERS ASSOCIATION.

5. LIGHTING-ON-SITE LIGHTING WILL BE DOWNCAST AND SHIELDED TO PREVENT OFF-SITE GLARE AND WILL COMPLY WITH CITY OF LONGMONT LIGHTING STANDARDS. THE MAXIMUM HEIGHT OF ALL LIGHTING FIXTURES WILL BE 20 FEET. ALL LIGHTING FIXTURES WILL BE FULL CUT-OFF FIXTURES AND MEET THE CITY OF LONGMONT LAND DEVELOPMENT CODE.

6. ROW AND SCENIC ENTRY CORRIDOR LANDSCAPING - ALL LANDSCAPING TO CONFORM TO THE CITY OF LONGMONT LANDSCAPE REGULATIONS. AN ESTIMATE OF THE LANDSCAPING TO BE PROVIDED IS AS FOLLOWS:

   HIGHWAY 66 ROW
   REQUIRED: 1 TREE AND 5 SHRUBS PER 750 S.F.
   AREA: 1283.5 L.F. X 40 L.F. = 43356 S.F. / 750 S.F. = 66
   66 TREES AND 330 SHRUBS REQUIRED

   HIGHWAY 66 SCENIC ENTRY CORRIDOR
   REQUIRED: 1 TREE AND 5 SHRUBS PER 1000 S.F.
   (EXCLUDING THE S.F. FOR THE BIKEPATH)
   AREA: 1283.5 LF X 150 LF - 8 LF= 51824 S.F. / 1000 S.F.=52
   52 TREES AND 260 SHRUBS REQUIRED

7. PRIVATE LANDSCAPING - ALL LANDSCAPING WILL BE CONSISTENT WITH CITY OF LONGMONT REQUIREMENTS, WHEN THE PROPERTY IS DEVELOPED, AT LEAST 20% OF THE PROPERTY WILL BE LANDSCAPED OPEN SPACE.

8. DEVELOPMENT WILL COMPLY WITH APPLICABLE LONGMONT DEVELOPMENT CODE REQUIREMENTS.

9. THE CONCEPT PLAN IS SUBJECT TO CHANGE THROUGH AN AMENDMENT PROCESS.

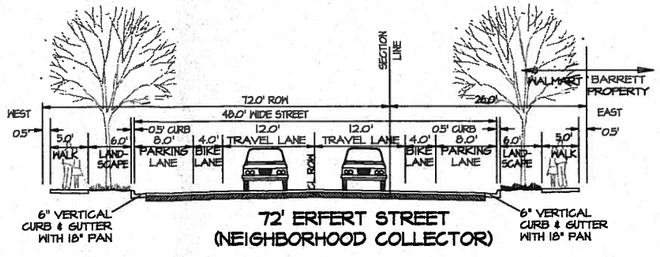
10. STATE HIGHWAY 66 ACCESS IS SUBJECT TO CDOT AND CITY OF LONGMONT APPROVAL.

11. A MUTUAL ACCESS EASEMENT WILL BE PROVIDED FROM ERFERT STREET AND PARKRIDGE AVENUE THROUGH, OVER AND ACROSS ALL PROPERTIES TO PROVIDE ACCESS UPON DEVELOPMENT OF ANY PARCEL.

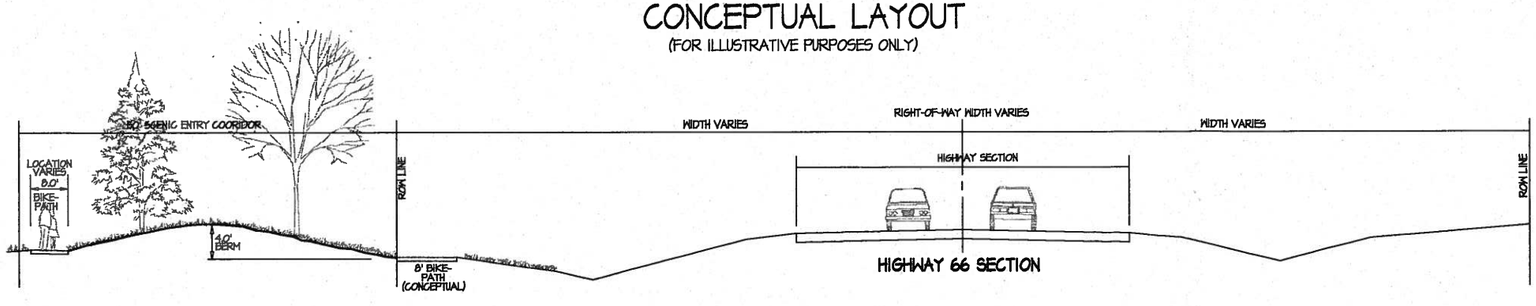
12. DITCH COMPANY APPROVAL IS REQUIRED PRIOR TO ANY WORK AFFECTING THE DITCH.

13. DEVELOPMENT PHASING IS UNKNOWN AT THIS TIME AND WILL BE DETERMINED AT THE TIME OF PRELIMINARY PLAN SUBMISSION.

14. THE SOUTHERNMOST ACCESS TO THE SITE FROM ERFERT STREET MAY BE LIMITED IF THE CITY DETERMINES A NEED FOR RESTRICTIONS.



72' ERFERT STREET
(NEIGHBORHOOD COLLECTOR)



HIGHWAY 66 SECTION

CONCEPTUAL LAYOUT

RECORD	DATE
INITIAL SUBMITTAL	4-19-05
REVISED PER COMMENTS	10-18-05
REVISED PER COMMENTS	01-25-06
REVISED PER COMMENTS	03-01-06
REVISED PER COMMENTS	12-04-07

DESIGNED BY: ----
PREPARED BY: MAM
CHECKED BY: SA
JOB NO: 80-0697.003.00

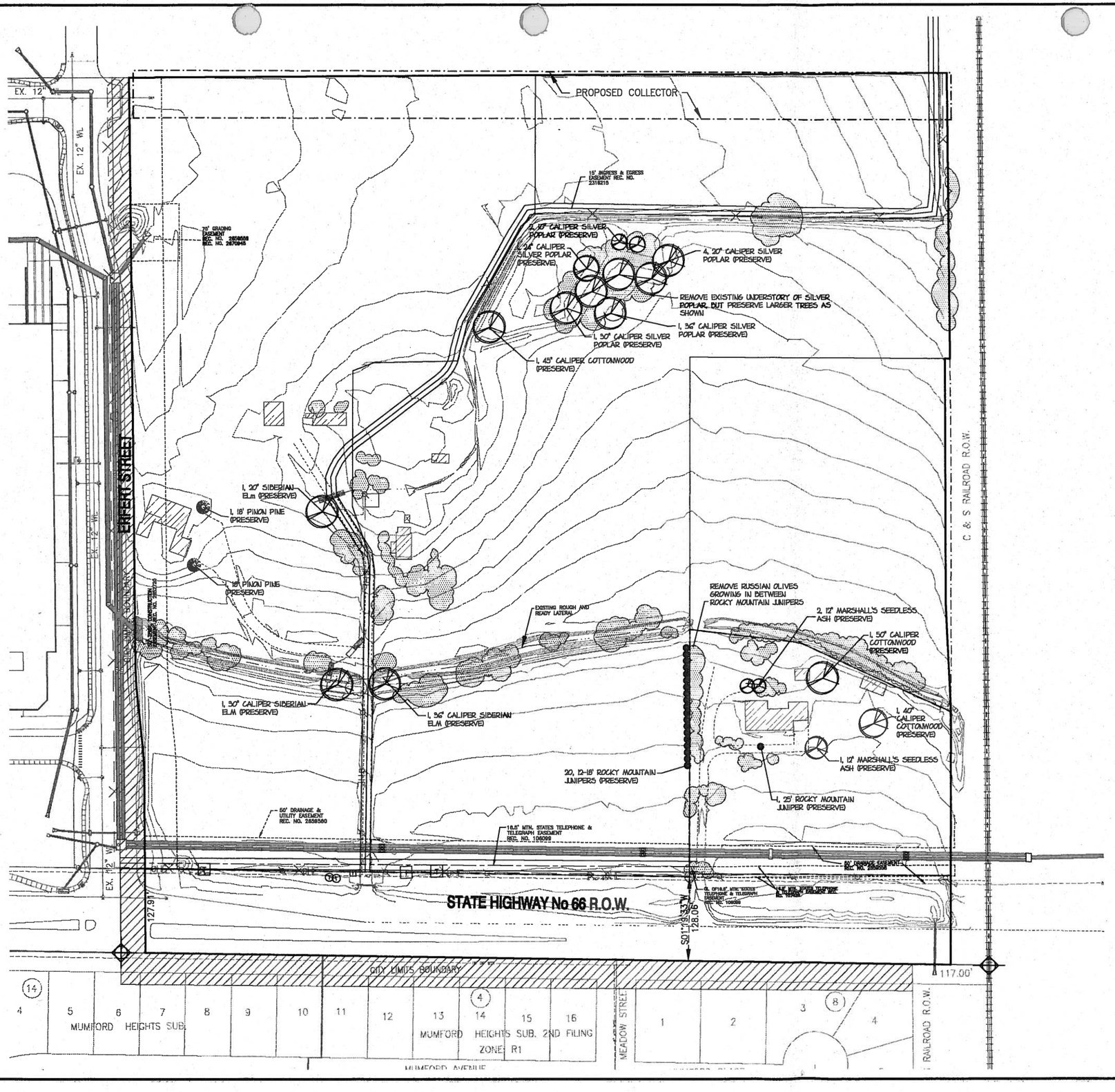
TETRA TECH
1900 S. SUNSET ST., SUITE 1-F, LONGMONT, CO 80501
TEL 303.772.5282 METRO 303.665.8283 FAX 303.665.8259

CONCEPT PLAN

TREE PRESERVATION PLAN

BARRETT/UTILITY SALES & SERVICE, INC./CLARK ANNEXATION

A PARCEL OF LAND SITUATED IN THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



NOTES:

1. ALL TREES WERE EVALUATED AS TO CONDITION AND HEALTH BY THE CITY FORESTER. THESE TREES WERE EVALUATED AS PART OF THE TREE PRESERVATION PLAN. HOWEVER, LONG TERM PRESERVATION IS THE RESPONSIBILITY OF THE LAND OWNER ON WHOSE PROPERTY THE TREES ARE GROWING.

2. PRIOR TO ANY GRADING OR CONSTRUCTION COMMENCING ON THIS SITE, ALL TREES IDENTIFIED AS "PRESERVE" ON THE TREE PRESERVATION PLAN WILL HAVE A SNOW FENCE ERECTED AROUND THEM. THIS FENCE WILL BE SET AROUND THE EXISTING TREES AT THE PERIMETER OF THE DRIP LINE. IN NO CASE WILL STOCKPILING OF MATERIALS OR SOILS BE PERMITTED WITHIN A DRIP LINE OF AN EXISTING TREE. ALL REQUIRED GRADING AND DIGGING WITHIN THE DRIP LINE WILL BE DONE BY HAND SO AS TO REDUCE THE AMOUNT OF COMPACTION OVER THE ROOT ZONE OF THE TREES. NO WORK MAY BEGIN ON THE SITE UNTIL THE FENCING IS INSTALLED.

3. MINIMIZE GRADE CHANGE WITHIN THE DRIPLINE, FOR TREES THAT ARE TO BE PRESERVED. PROTECT FROM DAMAGE DURING CONSTRUCTION WITHIN TREE PROTECTION ZONE PER CITY STANDARDS.

4. ALL TREES DESIGNATED ON THIS PLAN AS "TREES TO BE PRESERVED PER CITY FORESTER DIRECTION" WILL BE SAVED OR MITIGATED PER CITY REQUIREMENTS.

5. ALL AREAS OF TREES DESIGNATED ON THIS PLAN AS "TREES TO BE REMOVED" HAVE BEEN CLASSIFIED AS TRASH TREES BY THE CITY FORESTER, THE LOCATION AND QUANTITIES ARE APPROXIMATE.

TREES TO BE PRESERVED, PER CITY FORESTER DIRECTION

COTTONWOODS, WILLOWS, RUSSIAN OLIVES, SILVER POPLARS AND SIBERIAN ELMS TO BE REMOVED PER CITY FORESTER DIRECTION

EXISTING BUILDINGS

EXISTING DITCH

North

0 40' 80' 160'

SCALE: 1"=80'

TOTAL ACREAGE:
38.584 ACRES

EXISTING ZONING:
BOULDER COUNTY AGRICULTURAL

PROPOSED ZONING:
PUD-G - PLANNED UNIT DEVELOPMENT-COMMERCIAL, WITH SE-O (SCENIC ENTRYWAY OVERLAY)

RECORD	
DESCRIPTION:	DATE:
SUBMITAL	4-19-05
REVISED PER COMMENTS	10-18-05
REVISED PER COMMENTS	01-25-06
REVISED PER COMMENTS	03-01-06

DESIGNED BY: RM
PREPARED BY: RM
CHECKED BY: SA
JOB NO: 80-0637.003.00

TETRA TECH
1900 S. SUNSET ST., SUITE 1-F, LONGMONT, CO 80501
TEL 303.772.5282 METRO 303.665.6263 FAX 303.665.8059

TREE PRESERVATION PLAN

I. Purpose.

A. Intent. These Retail Center Guidelines (hereafter referred to as (Guidelines) and this Overall Conceptual PUD Site Plan.

1. Assist in ensuring the Project develops into a viable, high-quality commercial retail center.
2. Provide flexibility and encourage creativity while ensuring consistent quality and design.
3. Where flexibility is specifically provided for in these design guidelines, the City Planning Director shall have the authority to interpret or make judgments as to the necessity and extent of the same. An applicant may appeal such decision to Planning Commission and the City Council.

B. Governing documents. The Project shall comply with the following requirements (hereafter referred to as the Governing Documents), listed in descending order (that is, an item in the following list takes precedence over any item below it in the list).

These Design Guidelines.
The Final PUD Site Plan for Barrett/Flores/Clark PUD
City of Longmont regulations, ordinances, codes and other requirements.

II. Site Elements

A. Site Elements Overall Objectives

1. Develop the site in an organized and logical fashion by careful placement of buildings, roadways, parking and pedestrian areas.
2. Promote ease of use from both vehicular and pedestrian levels.
3. Provide way finding throughout the site.
4. Allow for various landscape opportunities and pedestrian areas.
5. Encourage cross-site pedestrian traffic.
6. Provide hierarchy of internal roadways and drive aisles.
7. Locate buildings adjacent to each other to maximize efficiency of site and increase pedestrian movement from one building to another.
8. Vary facade locations both in height and depth.
9. Consider special requirements of tenants for daily operations.
10. Respect utility and other site conflicts.

B. Site Element-Frontage

1. Create an appealing project perimeter.
2. Reinforce the project architectural theme elements in site elements.
3. Define views into the site.
4. Minimize impact of large building elevations and parking areas from frontage areas.
5. Vary building sizes along site perimeter.

C. Site Element-Vehicular Circulation and Parking

1. Provide easy and safe access within the site.
2. Define progression through the site.
3. Minimize conflicts with other vehicles and pedestrians.
4. Minimize conflicts with service area traffic.
5. Minimize visual impact of parking areas.
6. Simplify alignments of internal roadways.
7. Minimize number of access points into and out of parking areas onto primary internal roadways.

D. Site Element-Pedestrian Areas and Circulation

1. Provide safe pedestrian crossings at vehicular interface areas.
2. Provide users with alternative methods of traveling between tenants.
3. Create passive use outdoor pedestrian spaces throughout the site.
4. Minimize the number of pedestrian crossings by providing sidewalks adjacent to large parking areas.
5. Define pedestrian crossings with pavement markings, signage and/or differentiation of paving materials.
6. Enhance outdoor pedestrian areas with enhanced paving materials, plant material and site furnishings.
7. Provide site furnishings such as benches, trash receptacles and bike racks to encourage use of the site by pedestrians.
8. Provide pedestrian connectivity where safe and practical along certain circulation corridors, through parking lot islands and along buildings.
9. Provide for planter walls with sidewalk grates where practical.
10. Locate major pedestrian crossings where vehicular traffic is required to stop.

E. Site Element-Views and Visibility

1. Promote recognition of tenants while approaching and upon arrival to the site.
2. Provide visibility of tenant identification across the site from within.
3. Minimize views of service area and mechanical equipment related elements.
4. Maintain view corridors where possible.
5. Maximize appealing views from outdoor pedestrian areas and minimize or buffer negative views.
6. Screen service area related elements from frontage and critical locations with architectural elements or plant material.
7. Create openings in perimeter landscape buffers to maintain view corridors.

III. Landscape Treatment

A. Landscape Architectural Elements Objectives

1. Utilize streetscape elements, such as signage, lighting and site furnishings coupled with landscape elements to assist in unifying the design character of the project as a whole.
2. Promote water-wise landscape improvements while providing a unique, high-quality image for the project.
3. Enhance definition of vehicular and pedestrian routes
4. Minimize negative effects of runoff and erosion material.
5. Provide ample, comfortable outdoor spaces for public gathering and circulation.
6. Enhance hierarchy of circulation through developing a hierarchy of plant materials.

B. Site Furnishings and Fixtures

1. Provide project-specific, high-quality site furnishings (such as benches, trash receptacles and bicycle racks) throughout the project for use by pedestrians.
2. Provide site furnishings and lighting that are integrated with or complement the architecture and other site improvements.
3. Building facade and outdoor areas should include a greater number of site furnishing items than vehicular routes and parking areas.
4. All site furnishings throughout ther project shall utilize a consistent standard style and color. See Table A-1 for approved material and finish.
5. All similar site furnishing items, i.e. benches, bicycle racks, shall be of the same style, finish and color and provided from one manufacturer for each item type.
6. Flexibility may be considered on a case-by-case basis to allow for specific tenant requirements.

C. Site Lighting

1. Provide a hierarchy of project-specific, high quality site lighting throughout the project.
2. Provide a safe environment for moving through the public areas of the site during nighttime hours.
3. Limit the impact of site lighting on adjacent properties.
4. See Table A-1 for approved site lighting fixtures and accessories.
5. Building facades and vehicular routes may incorporate both parking area and pedestrian lighting types into their site specific design.
6. The primary circulation route shall incorporate regular spacing of pedestrian lights within the tree lawn.
7. Outdoor pedestrian areas may incorporate only pedestrian and pathway/bollard lighting types into their site-specific design.
8. All site lighting throughout the site shall utilize the same standard style and color as that used for the site furnishings.
9. All similar lighting types, i.e. parking area, pedestrian and pathway/bollard shall be of the same style, finish and color and be provided from one manufacturer.
10. Parking area light fixtures shall have a maximum mounting height of 20 feet, and pedestrian light fixtures shall have a maximum mounting height of 12 feet.
11. All parking area lighting shall utilize cutoff type or shielded fixtures.
12. All parking area and pedestrian light fixtures shall be metal halide.
13. Flexibility may be considered on a case-by-case basis to allow for specific tenant requirements.
14. Up-lighting of buildings or landscaping is discouraged.

D. Site Signage

1. Provide project signage and other identification elements visible from Hwy. 66 as landmark features. Provide one or more primary vehicular entries into the site, marked by major project identification signage, leading directly into the center of the project.
2. Provide a unified hierarchy of signage that serves to identify the the project and its tenants from both outside and within the site. Utilize high-quality building materials for signage and monumentation elements that correlate to the characteristic architecture of the primary buildings within the project and allow for individual tenant identity.
3. Develop a consistent project nomenclature and material palette to be used on sign types of similar uses and sizes that will allow for tenant logo and individual identity.
4. All site signage shall be in accordance with the City of Longmont and Colorado Department of Transportation regulations and ordinances, where applicable, and these design guidelines. All signage shall be submitted to the City of Longmont for approval prior to installation.
5. Lighting of signage shall be integral to the structure of the sign or from an otherwise concealed source.
6. Painting of signs on buildings, walls, doors, windows, equipment, monuments, etc. is not permitted.
7. Single Tenant Monument Signs shall be allowed for individual pad users, and shall be approved by the City of Longmont.
8. Flexibility may be considered on a case-by-case basis to allow for specific tenant requirements.

E. Building signage

1. Regulate the use and display of signage to promote aesthetics and ensure an orderly and consistent appearance while providing for tenants trademark identity.
2. All signage shall be in accordance with the City of Longmont, and Colorado Department of Transportation regulations and ordinances, where applicable, and these design guidelines.
3. All signage shall be submitted to the City of Longmont for approval prior to installation.
4. No building signs shall be painted upon the building façade, doors or windows. Decals are not permitted on doors or windows except to notice store days/hours of operation.
5. Flashing, blinking, moving exposed light, iridescent colors, fluorescent materials, animated or audible signs, banners, streamers, balloons, searchlights, exposed neon and glass tubing signs including fiber optics are prohibited.
6. Billboard signs are prohibited.
7. No identification sign shall be placed on any roof or canopy roof, upon or extended above the building roof or placed so as to project above the parapet, eave or top of building wall or roofline. Rooftop signs of any type shall be prohibited.
8. Tenant signage should complement the project architecture and consistent throughout while providing for individual tenant identity.

Architectural Design Standards and Guidelines

I. Purpose

The standards and guidelines shall provide for high quality design and compatibility throughout the development. The purpose is to create a cohesive development that blends with the fabric of the surrounding community providing an attractive destination oriented shopping experience.

II. Character

A. The design theme is representative of a mid American "Main Street" where compatibility is found through a variety of storefront styles, timeless detailing, and high quality building materials. The theme is to reflective of the historic district of Longmont as well as other historic mainstreet districts in the Colorado front range.
B. The "Main Street" design theme shall establish the vernacular that shall become the basis for actual design applications and standards.
C. The buildings should vary according to user requirements but maintain the character established for the community including building massing, scale, orientation and exterior materials.
D. The image being *one that evolved over time combining a varied mix of* styles, materials, storefronts, and detailing from periods ranging from turn of the century to present day.

III. Architectural Massing and Scale

A. Buildings shall be classified by square footage into one of the following groups:
   1. Large User – Buildings or attached building groups comprising a total of 65,000 square feet or more with one or more tenants.
   2. Medium User – Building or attached building groups comprising a total of 20,000 square feet to 64,999 square feet with one or more tenants.
   3. Shops – Building comprising less than 20,000 square feet with multiple tenants.
   4. Pad User – Building comprising less than 20,000 square feet with a single tenant.
B. Building massing and scale shall be reflective of the historic district of Longmont as well as other Colorado historic mainstreet sites.
C. All sides of the building visible from a public Right-of-way or an abutting lot outside of the PUD shall incorporate fenestration, materials and design detailing to that of the primary facade.
D. Buildings shall incorporate a traditional tri-part design comprised of a base, middle and top.
E. Buildings shall incorporate a variety of architectural design features, building materials, and colors on all building facades.
F. Building shall incorporate human scale elements and detailing.
G. Primary public entries shall be emphasized through a change in horizontal plane, vertical plane, material and change of roof plane. Incorporation of sloped roof at entries is encouraged.
H. Facades shall incorporate a minimum of the following facade elements based on building size; Large Users shall incorporate a minimum of five (5) features listed below; Medium Users shall incorporate a minimum of four (4) features listed below; Shops and Pad Users shall incorporate a minimum of three (3) features listed below:
   1. Windows treated as vision lights or spandrel glass.
   2. Receding or projecting patterns such as pilasters with a depth of no less than 8 inches.
   3. Repeating horizontal or vertical pattern of color or material.
   4. Stepping of parapets to reflect building massing.
   5. Sloped roof element continuous for a minimum of one bay.
   6. Arcades.
   7. Representation of the building's structural grid or an application of its bay spacing by utilizing receding or projecting pilasters with a depth of no less than 8 inches and/or by a colonnade.
   8. Canopies and awnings.
   9. Changes in material or color to emphasize the building massing.
I. Additional requirements for Large User buildings:
   1. Facades greater than 100 feet in length shall incorporate wall projections or recesses having a depth of at least 2% of the length of the façade and extending at least 20% the length of the façade.
   2. No uninterrupted length of any façade shall exceed 100 horizontal feet.
   3. The City may approve alternative designs that feature innovative use of high-quality building materials to break up building facades longer than 100 feet.
   4. Where the primary façade exceeds 18 feet in height at least 40% of the length of that primary façade shall reflect the appearance of a two story building.
   5. The ground floor of the primary façade shall incorporate the following elements: arcades, display windows, entry areas, and awnings along at least 60% of its length.
J. Additional requirements for Medium User buildings:
   1. Facades greater than 60 feet in length shall incorporate wall projections or recesses having a depth of at least 2% of the length of the façade and extending at least 20% the length of the façade.
   2. No uninterrupted length of any façade shall exceed 60 horizontal feet.
   3. The City may approve alternative designs that feature innovative use of high-quality building materials to break up building facades longer than 60 feet.
   4. The ground floor of the primary façade shall incorporate the following elements: arcades, display windows, entry areas, awnings along at least 75% of its length.
K. Additional requirements for Shops and Pad User building:
   1. The ground floor of the primary façade shall incorporate the following elements: arcades, display windows, entry areas, awnings along at least 80% of its length.
   2. At least one secondary façade shall incorporate the following elements: arcades, display windows, awnings along at least 30% of its length.
L. Primary facades shall be defined to include all facades facing onto a public street and any facades where public entrances are located.

IV. Building Placement and Orientation

A. Building placement and orientation shall take into consideration the site characteristics including topography, scenic views, solar orientation and the prevailing wind direction or this region.
B. Facades and entrances shall be located along major pedestrian pathways.
C. Loading docks, outdoor storage, service areas and accessory uses shall be placed away from public streets where possible and be separated from pedestrian traffic. All docks, outdoor storage, service areas shall be screened from view. The screens shall be constructed of materials compatible to and be proportional with the primary sturcture.
D. Any loading dock, outdoor storage, and service area shall be fully enclosed if adjacent to a public R.O.W.

V. Exterior Materials

A. Exterior materials and colors shall be reflective of the historic district of Longmont.
B. Primary exterior building materials shall include brick, sandstone, dimensionally cut stone and stone tile as comparable to that used historically in Downtown Longmont.
C. Primary exterior building materials shall comprise at least 80% of the building's primary facade.
D. Secondary exterior building materials shall include integrally colored concrete masonry, decorative architectural tile, stucco or synthetic stucco, glass, decorative metal panel or other comparable material.
E. Secondary exterior building materials in combination shall comprise no more than 20% of a building facade and no one secondary building material shall comprise more than 10% of a building facade. Exception: Primary facade display windows are exempt from the 10% limit.
F. Large User buildings shall incorporate a minimum of three (3) secondary materials on each facade.
G. Medium User buildings, Shops and Pads shall incorporate a minimum of two (2) secondary building materials on each facade.
H. Prohibited exterior building materials include plain metal panels, painted concrete masonry, T-111 siding,
I. exposed concrete panels, chain link fencing with or w/o slats, plain or painted plywood or strand board. Sloped roofs shall be surfaced in concrete tile, slate tile, or decorative seamed metal.
J. Exterior colors shall be representative of the traditional downtown mainstreet vocabulary.
K. Bright or fluorescent colors shall not be used as predominant color of any façade or roof. They may be used in limited areas for accent only and shall not constitute more than 10% of each façade or roof area of a building. This does not include permitted sign areas.
L. Stucco or synthetic stucco shall not be used as a building base material to a height of four feet above walk or grade.
M. Stucco or synthetic stucco shall have a textured or troweled finish appearance.
N. Exterior materials should enhance and define the massing of the building.
O. Exterior materials shall be appropriate to the scale of the building.
P. Designers are encouraged to use detailing reflective of different architectural periods.
Q. Detailing and accent materials are encouraged to add creativity and are not limited to a material palette. An example of these accent materials could include granite, wrought iron, slate, glass, tile, marble, metal and others as appropriate.
R. The backs of any visible parapet walls shall be surfaced in a colored roof membrane or finished in a compatible material with the sides and front said parapet.
S. Additional requirements for Large User buildings:
   1. At least 30% of the primary façade shall be surfaced in brick or stone.
   2. At least 15% of any secondary façade shall be surfaced in brick or stone.
   3. No more than 25% of any façade shall be surfaced in stucco or synthetic stucco.
   4. The balance of the building may be surfaced in integrally colored concrete masonry.
T. Additional requirements for Medium User buildings:
   1. At least 50% of the primary façade shall be surfaced in brick or stone.
   2. At least 25% of any secondary façade shall be surfaced in brick or stone.
   3. No more than 25% of any façade shall be surfaced in stucco or synthetic stucco.
   4. The balance of the building may be surfaced in integrally colored concrete masonry.
U. Additional requirements for Shops and Pad User buildings:
   1. At least 60% any façade shall be surfaced in brick or stone.
   2. No more than 20% of any façade shall be surfaced in stucco or synthetic stucco.
   3. The balance of the building may be surfaced in integrally colored concrete masonry.

VI. Windows and Glazing

A. Storefront system shall be prefinished in Bronze, Clear or Black finish.
B. Glazing shall be clear. Gray tinting will be allowed if required to achieve energy code compliance.
C. Spandrel panels shall have a blue cast to mimic sky reflection.
D. To maintain the historic theme of the center, the following items are encouraged:
   1. Minimum 10 inch riser at the bottom to prevent storefront from going to the slab.
   2. Decorative infill panel in the lower section of the window. Plain or colored flat metal panel infills are not acceptable.
   3. Brick, stone or tile knee wall in place of the lower section of the window.
   4. Multi-part mullion profile.
   5. Additional mullions or muntins to mimic historic designs.
   6. The use of clerestory or transoms.

VII. Accessory structures and equipment

A. All accessory structures such as trash enclosures and screen walls shall be constructed of a material compatible with the primary structure.
B. All roof mounted equipment shall be screened by use of an extended parapet wall. The wall shall be as high as the equipment it is screening. If, due to structural hardship, the parapet can not be extended to achieve the required height then roof mounted screens of compatible material and color can be utilized at the approval of the city.
C. Building mounted equipment such as electrical equipment, gas meters, panels, etc. shall be screened from view by the use of a wall constructed of compatible material to the primary structure or the equipment shall be painted to match the building and screened with landscaping of appropriate height and density.
D. Pad mounted equipment shall be screened from view by the use of a wall constructed of compatible material to the primary structure or the equipment shall be painted, where allowed by the service provider, to match the building and screened with landscaping of appropriate height and density.
E. Trash dumpsters shall be completely contained within an enclosed structure. The structure shall be at least 12 inches higher than the dumpster.
F. All service areas and truck docks shall be screened from view by a wall constructed of material compatible with the primary structure.

VIII. MATERIAL PALETTE and SPECIFICATIONS, TABLE A-1

A. Site Lighting
   1. All exterior lighting shall be Metal Halide
   2. Manufacturer: Equal to Antique Street Lamps, An Acuity Brands Company
   3. Pole height: 20'-0" Maximum
   4. Finish color : black
   5. Fixture : Equal to Eurotique, Series EM25Rt, 250 watt
   6. Lens : GCF, Glass, clear flat
   7. Average illumination allowed for each lot: 2.0 foot-candles maximum.
B. Pre-Site Furnishings
   1. Bike Rack – Equal to Victor Stanley Inc. – City Sites Series – CR-18, Black powder coating
   2. Trash Receptacle – Equal to Victor Stanley Inc. – Economy Series – ES-342, Black powder coating
   3. Bench – Equal to Victor Stanley Inc. – City Sites Series – CR-18, Black powder coating

PERMITTED USES BY RIGHT

1. Boarding, Rooming Houses
2. Group-care homes
3. Group-care institutions
4. Bed and Breakfast establishments
5. Copy shops and printing services, including typesetting
6. Day-care centers
7. Financial institutions – Automatic teller machines (ATMs)
8. Funeral Homes
9. Hardware, building materials, retail nursery or garden stores less than 25,000 sf gross floor area (gfa)
10. Hotels, motels
11. Motor vehicle repair and maintenance
12. Medical or dental offices and clinics, 15,000 sf or less
13. Professional Offices
14. Personal service shops
15. Rental of small equipment, trailers, party goods and other items excluding heavy equipment
16. Retail Sales – General, building less than 25,000 sf gfa
17. Retail Sales, rental, and repair of medical drugs, supplies, aids, or devices, including pharmacies
18. Retail Sales with installation of motor vehicle parts or accessories (e.g., tires, mufflers)
19. Veterinary clinics
20. Business service establishments
21. Catering establishments
22. Data, radio, TV or other broadcasting studios and facilities with no outdoor transmission or receiving facilities
23. General administrative offices
24. Freestanding Telecommunication facility co-locating on existing telecommunication facility
25. Micro-cell telecommunication facility or repeater telecommunication facility
26. Building wall- or roof-mounted telecommunication facility extending 10 ft. or less above the existing building or structure height
27. Libraries, museums, or art centers, including accessory educational facilities
28. Performing arts centers, auditoriums, and other places of assembly
29. Places of religious assembly, including churches, synagogues, temples, or other: with accessory schools, day care center, recreational facilities, offices for other than administration of the principal use, or commercial activities (e.g. retail stores); and/or with seating capacity of greater than 500 persons in the sanctuary or main activity area
30. Schools for kindergarten, elementary, or secondary education that meet all applicable prescribed Colorado state standards: Public
31. Special schools such as martial arts, dance, or other similar personal skill instruction
32. Trade or vocational schools
33. Bars, nightclubs without outdoor seating or activity area
34. Commercial recreation facilities, indoor; excluding indoor shooting ranges
35. Live entertainment establishments without outdoor seating or activity area
36. Movie theaters
37. Private membership clubs for health, recreation, and athletic activities
38. Public open space
39. Public parks and playgrounds
40. Public play fields, courts, recreation center, and other public recreation facilities
41. Reception/banquet halls
42. Restaurants, with outside eating areas, and/or with drive-in facilities
43. Social, fraternal clubs and lodges
44. Parking lots to serve other principal uses within the district
45. Emergency services, rescue squad/ambulance services
46. Essential municipal and public utility uses, facilities, services and structures
47. Government administrative and service offices
48. Hospitals

PERMITTED USES BY CONDITIONAL USE APPROVAL

1. Halfway Houses
2. Multi-family dwellings (5 or more dwelling units)
3. Residential Rehabilitation facility
4. Urban dwelling units: more than 25/du acre
5. Financial institutions – off-site, drive-up facility not located on same lot as principal use
6. Motor vehicle sales and rental (outdoor display of merchandise permitted), passenger automobiles & light trucks (SUVs, vans) and/or larger vehicles (RVs, trucks, UHauls, etc.)
7. Medical of dental offices and clinics 15,000 sf or more
8. Rental of small equipment, trailers, party goods and other items excluding heavy equipment, with outdoor storage or display
9. Retail sales – Large (buildings 25,000 sf or more of gross floor area)
10. Retail sales – Outdoor
11. Data, radio, TV or other broadcasting studios and facilities: with outdoor transmission or receiving facilities
12. Special trade contractors' shops, including limited fabrications
13. Freestanding Telecommunication facility
14. Building wall- or roof-mounted telecommunication facility: extending more than 10 feet above the existing building or structure height
15. Schools for kindergarten, elementary, or secondary education that meet all applicable prescribed Colorado state standards: Private
16. Bars and nightclubs with outdoor seating or activity area
17. Commercial recreation facilities, outdoor
18. Live entertainment establishment with outdoor seating or activity area
19. Bus, railroad, public transit terminal
20. Self-storage warehouses
21. Oil and gas well facilities
22. Cemeteries
23. Electrical substations, water storage sheds
24. Other community uses, services, and facilities, operated by a government or non-profit organization and not permitted elsewhere in this table

PERMITTED USES BY LIMITED REVIEW APPROVAL

1. Affordable Housing
2. Urban dwelling units: 25 du/acre or less
3. Automobile service station
4. Car wash
5. Gasoline sales in conjunction with other uses
6. Retail sales: Ambulatory vendor
7. Retail sales: Vendor cart
8. Colleges, universities
9. Convention and conference centers
10. Parking garages

ARCHITECTURAL NOTES

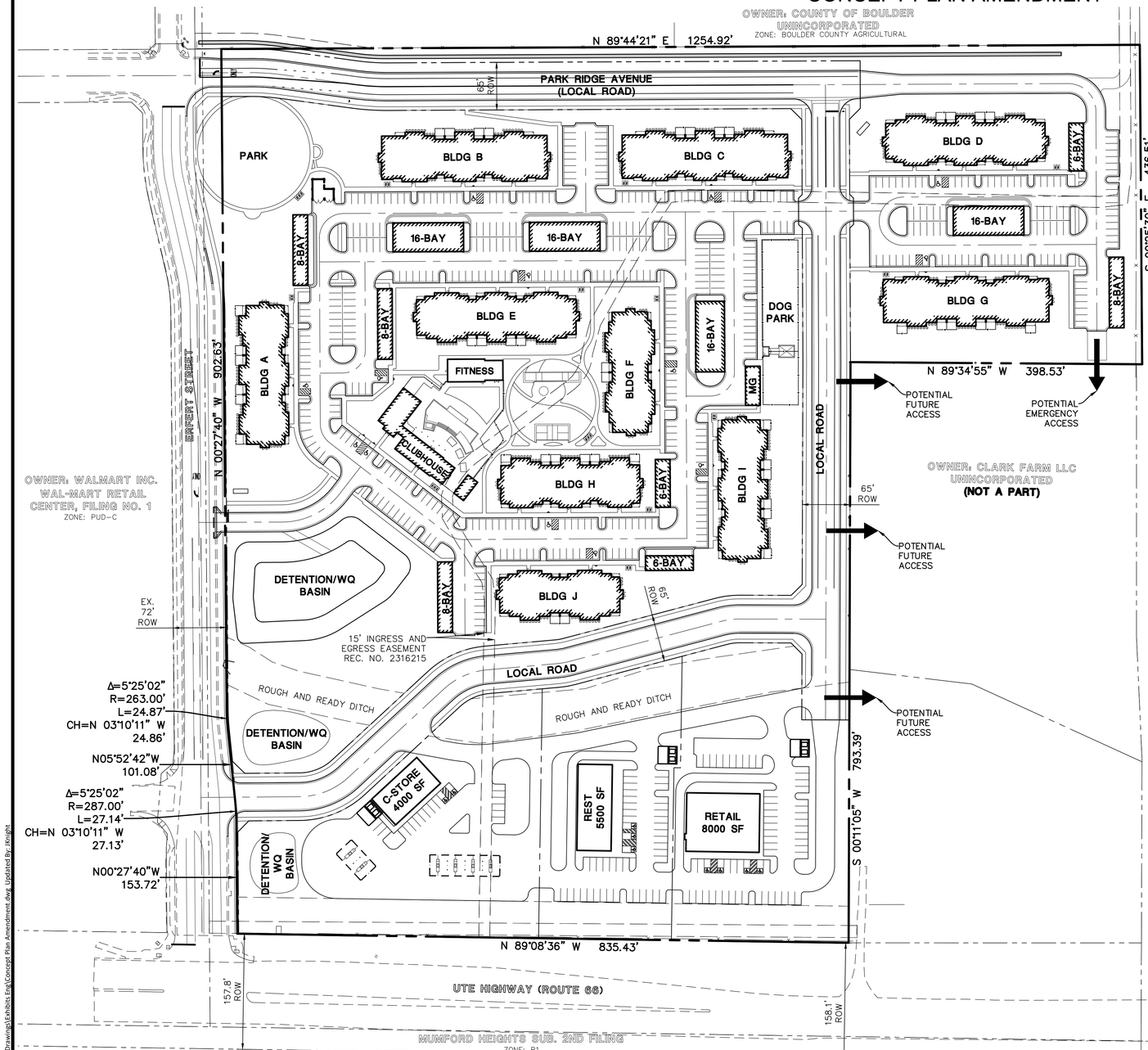
RECORD	DATE
INITIAL SUBMITTAL	4-19-05
REVISED PER COMMENTS	10-18-05
REVISED PER COMMENTS	01-25-06
REVISED PER COMMENTS	03-01-06
REVISED PER COMMENTS	12-04-07

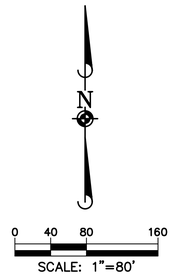
DESIGNED BY: ——
PREPARED BY: MAM
CHECKED BY: SA
JOB NO: 80-0697.003.00

TETRA TECH RMC
1900 S. SUNSET ST., SUITE 1-F, LONGMONT, CO 80501
TEL 303.772.5282 METRO 303.666.6283 FAX 303.682.8909

ARCHITECTURAL NOTES

BARRETT/UTILITY SALES & SERVICE, INC./CLARKE ANNEXATION
CONCEPT PLAN AMENDMENT





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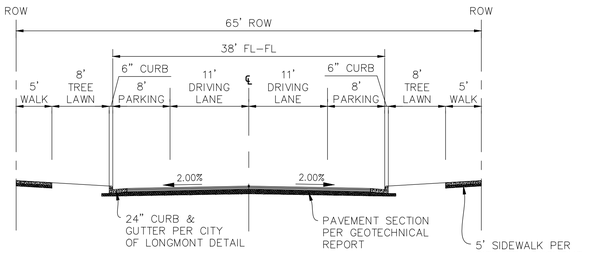
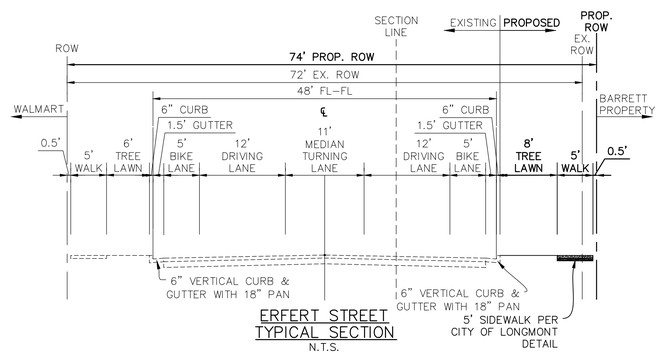
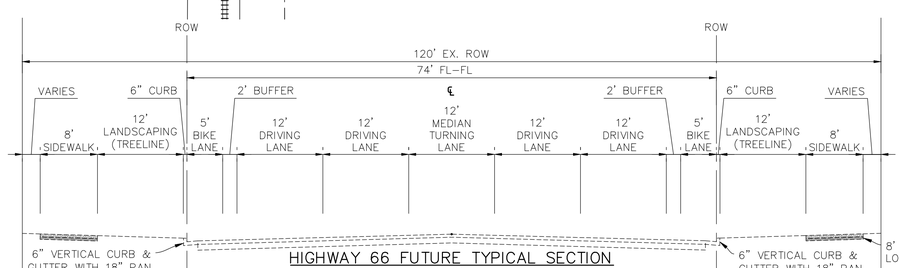
ZONING: MU-R



LOCAL ROAD
PROPOSED TYPICAL SECTION
N.T.S.



ERFERT STREET
TYPICAL SECTION
N.T.S.



HIGHWAY 66 FUTURE TYPICAL SECTION
N.T.S.

DRAWN BY	REVISIONS	DATE
CAS	REVISED PER CITY COMMENTS	05-19-2021
TJK	REVISED PER CITY COMMENTS	04-14-2021

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Civil Engineering | Surveying | Water Resource Management | Construction Management

BARRETT/UTILITY SALES & SERVICE, INC./CLARKE ANNEXATION
CITY OF LONGMONT, COLORADO
CONCEPT PLAN AMENDMENT

PROJ. MGR.: CAS
PROJ. ASSOC.: PRF
DRAWN BY: KRK
DATE: 01-21-2021

SHEET
1 OF 1
WMR.LMCO01

Plotted: 5/19/2021 8:06 AM Dwg Name: P:\Wmrlmco01\dwg\Eng\Final Drawings\Exhibits Eng\Concept Plan Amendment.dwg Updated By: jknight

ERO

Consultants in Natural Resources and the Environment

Natural Resources Assessment
Watermark at Longmont
Northeast of Ute Highway and Erfert Street
Longmont, Colorado

Prepared for—

Thompson Thrift Development, Inc.
901 Wabash Avenue, Suite 300
Terre Haute, Indiana 47807

Prepared by—

ERO Resources Corporation
1842 Clarkson Street
Denver, Colorado 80218
(303) 830-1188
ERO Project #20_50

August 5, 2020

Contents

Executive Summary ..... **ii**

Introduction **1**

Project Area Location **1**

Project Area Description **4**

Wetlands and Other Waters of the U.S. **4**
Background 4
Site Conditions and Regulations 6
Recommendations 8

Threatened, Endangered, and Candidate Species **8**
Preble's Meadow Jumping Mouse 10
Ute Ladies'-Tresses Orchid 11

State Threatened, Endangered, and Species of Concern **12**
Common Garter Snake 14
Northern Leopard Frog 17
Black-Tailed Prairie Dog ..... **Error! Bookmark not defined.**
Western Burrowing Owl ..... **Error! Bookmark not defined.**
Raptors and Migratory Birds 17

Other Wildlife **18**

References **19**

Tables

Table 1. Federally threatened, endangered, and candidate species potentially found in Boulder County or potentially affected by projects in Boulder County. 9

Table 2. CPW threatened, endangered, and species of concern potentially occurring in Boulder County. 12

Figures

Figure 1. Vicinity Map 2

Figure 2. Existing Conditions 3

Appendices

Appendix A Photo Log

Appendix B Routine Determination Forms

Executive Summary

Thompson Thrift Development, Inc. (Thompson Thrift) retained ERO Resources Corporation (ERO) to provide a natural resources assessment for the Watermark at Longmont property northeast of Ute Highway and Erfert Street in Longmont, Boulder County, Colorado (project area). ERO assessed the project area for potential wetlands and other waters of the U.S., threatened and endangered species habitat, and general wildlife use. Below is a summary of the resources found at the project area and recommendations or future actions necessary based on the current site conditions and federal, state, and local regulations.

The natural resources and associated regulations described in this report are valid as of the date of this report and may be relied upon for the specific use for which it was prepared by ERO under contract to Thompson Thrift. Because of their dynamic natures, site conditions and regulations should be reconfirmed by a qualified consultant before relying on this report for a use other than that for which ERO was contracted. In addition, this report complies with the City of Longmont Municipal Code Title 15 (City of Longmont 2020).

Wetlands and Other Waters of the U.S. – Multiple unnamed irrigation laterals that are supplied by stormwater runoff and the Rough and Ready Ditch occur in the project area. A jurisdictional determination was requested from the U.S. Army Corps of Engineers (Corps). The Corps has determined that Ditches 1 through 5 and their adjacent wetlands are considered nonjurisdictional (Corps File No. NWO-2020-00953-DEN) and work planned within these areas does not require a Section 404 permit for the placement of dredged or fill material below the OHWM. No further action is necessary. In addition, the ditches in the project area would not be subject to protection under the City of Longmont Municipal Code because they fall under the definition of "irrigation ditches that do not contribute to the preservation and enhancement of fisheries or wildlife" (City of Longmont 2020). ERO believes that the wetlands in the project area may be subject to reduced setback standards because they appear to be supported by stormwater and irrigation ditches and they provide little wildlife habitat.

Threatened and Endangered Species – The project area does not contain habitat for any federally listed threatened or endangered species. A viable population of Preble's meadow jumping mouse (Preble's) is unlikely to exist in the project area because the project area lacks riparian shrub habitat and the project area is extremely fragmented and continuously disturbed by human activity. The project area is not conducive to the establishment of Ute ladies'-tresses orchid (ULTO) because the wetlands that occur within the project area are dominated by species not usually associated with ULTO and the project area lacks the mesic vegetation communities typically associated with ULTO. If any of the drainages would be impacted by project activities, ERO recommends submitting a habitat assessment to the U.S. Fish and Wildlife Service (Service) requesting confirmation that the project area lacks habitat for Preble's and ULTO and a presence/absence survey would not be required.

State Threatened, Endangered, and Species of Concern – The project area contains limited suitable habitat and low-quality habitat for two Colorado state-listed threatened and endangered species, the common garter snake and northern leopard frog. Neither of these species were observed during the 2020 site visits. Any work planned within the ditches or wetlands within the project area may affect the common garter snake or northern leopard due to displacement from suitable habitat during construction. Colorado Parks and Wildlife (CPW) does not currently enforce restrictive measures if a common garter snake or northern leopard frog is encountered during construction and corrective

measures are voluntary. However, if Thompson Thrift Development, Inc. chooses to limit impacts to the common gartner snake or northern leopard frog, ERO recommends activities cease within a 30-foot buffer of where the animal was seen and a qualified biologist be brought on to the site to correctly identify and, if possible, relocate the animal to suitable habitat outside the construction limits.

Prairie Dogs – The project area contains inactive black-tailed prairie burrows. If prairie dogs move into the project area and removal becomes necessary, ***CPW recommends removing them in a humane manner before any earthwork or construction takes place***. Currently, Boulder County follows the Prairie Dog Habitat Element of the Grassland and Shrubland Management Policy (Boulder County Parks and Open Space 2016) and the City of Longmont follows Chapter 7.06 of the Longmont Municipal Code (City of Longmont 2020) for prairie dog management.

Burrowing Owls – Burrowing owls could be impacted by the project if work would occur within the CPW-recommended ⅛-mile (660-foot) buffer of any prairie dog burrows visually located from within the project area (CPW 2020). ***If work would occur within the recommended buffer of any burrow during the breeding season (March through October), a burrowing owl survey should be conducted***. If owls are present in the project area, activities should be restricted within 660 feet of nest burrows until the owls have migrated from the site, which can be determined through monitoring.

Migratory Birds – No bird nests were observed during the 2020 site visits; however, trees, shrubs, and upland grasslands in the project area provide potential nesting habitat. The Denver Field Office of the Service (2009) and Colorado Department of Transportation (2011) have identified the primary nesting season for migratory birds in eastern Colorado as occurring from April 1 through August 31. However, some birds, such as the red-tailed hawk and great horned owl, can nest as early as February or March. Because of variability in the breeding seasons of various bird species, ***ERO recommends a nest survey be conducted within one week prior to construction*** to determine if any active nests are present in the project area so they can be avoided. If active nests are found, any work that would destroy the nests should not be conducted until the birds have vacated the nests.

Other Wildlife – No sensitive wildlife species were observed in the project area during the 2020 site visits. Additionally, the project area does not fall within any critical wildlife habitat and migration corridors or natural landmarks and natural areas mapped as part of the Boulder County Comprehensive Plan (Boulder County 2018). Overall, surrounding and continuing development contributes to a decline in the number and diversity of wildlife species nearby and to a change in species composition.

Natural Resources Assessment
Watermark at Longmont
Northeast of Ute Highway and Erfert Street
Longmont, Colorado

August 5, 2020

Introduction

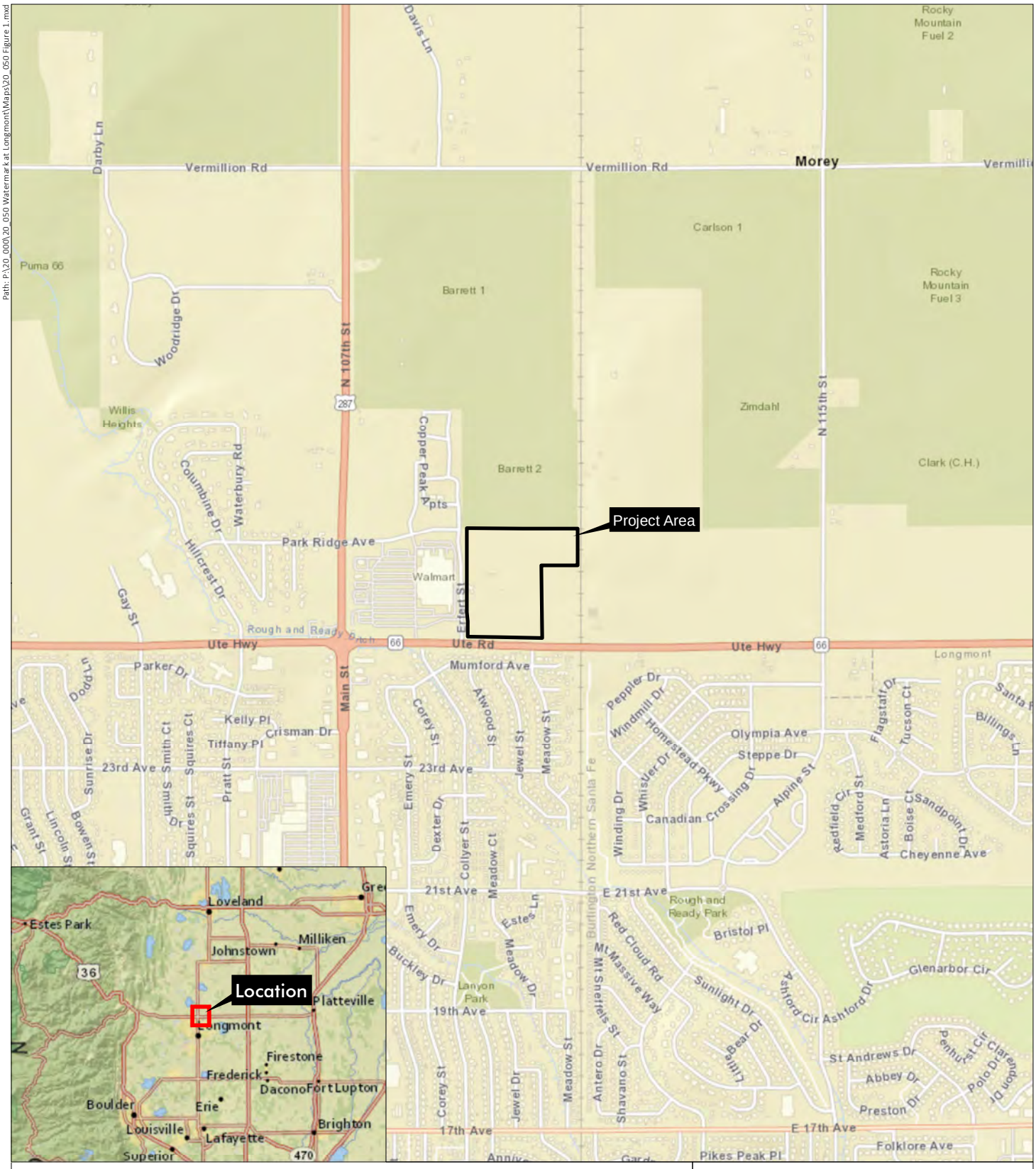
Thompson Thrift Development, Inc. (Thompson Thrift) retained ERO Resources Corporation (ERO) to provide a natural resources assessment for the Watermark at Longmont property northeast of Ute Highway and Erfert Street in Longmont, Boulder County, Colorado (project area; Figure 1). This report is being prepared in compliance with Municipal Code Title 15 (City of Longmont 2020).

On June 17, 2020, Anna Hennage, a biologist with ERO, assessed the project area for natural resources. In addition, a formal wetland delineation was performed on March 6, 2020 (2020 site visits). During these assessments, activities included a review of potential wetlands and other waters of the U.S., identification of potential federally threatened and endangered species habitat, and identification of other natural resources. This report provides information on existing site conditions and resources, as well as current regulatory guidelines related to those resources. ERO assumes the landowner is responsible for obtaining all federal, state, and local permits for construction of the project.

The natural resources and associated regulations described in this report are valid as of the date of this report and may be relied upon for the specific use for which it was prepared by ERO under contract to Thompson Thrift. Because of their dynamic natures, site conditions and regulations should be reconfirmed by a qualified consultant before relying on this report for a use other than that for which ERO was contracted.

Project Area Location

The project area is in Section 22, Township 3 North, Range 69 West of the 6th Principal Meridian in Boulder County, Colorado (Figure 1). The UTM coordinates for the approximate center of the project area are 491844mE, 4450548mN, Zone 13 North. The longitude/latitude of the project area is 105.095839°W/40.205299°N. The elevation of the project area is approximately 5,080 feet above sea level. Photo points of the project area are shown on Figure 2, and the photo log is in Appendix A.



Watermark at Longmont

Section 22, T3N, R69W; 6th PM

UTM NAD 83: Zone 13N; 491844mE, 4450548mN

Longitude 105.095839°W, Latitude 40.205299°N

USGS Longmont, CO Quadrangle

Boulder County, Colorado

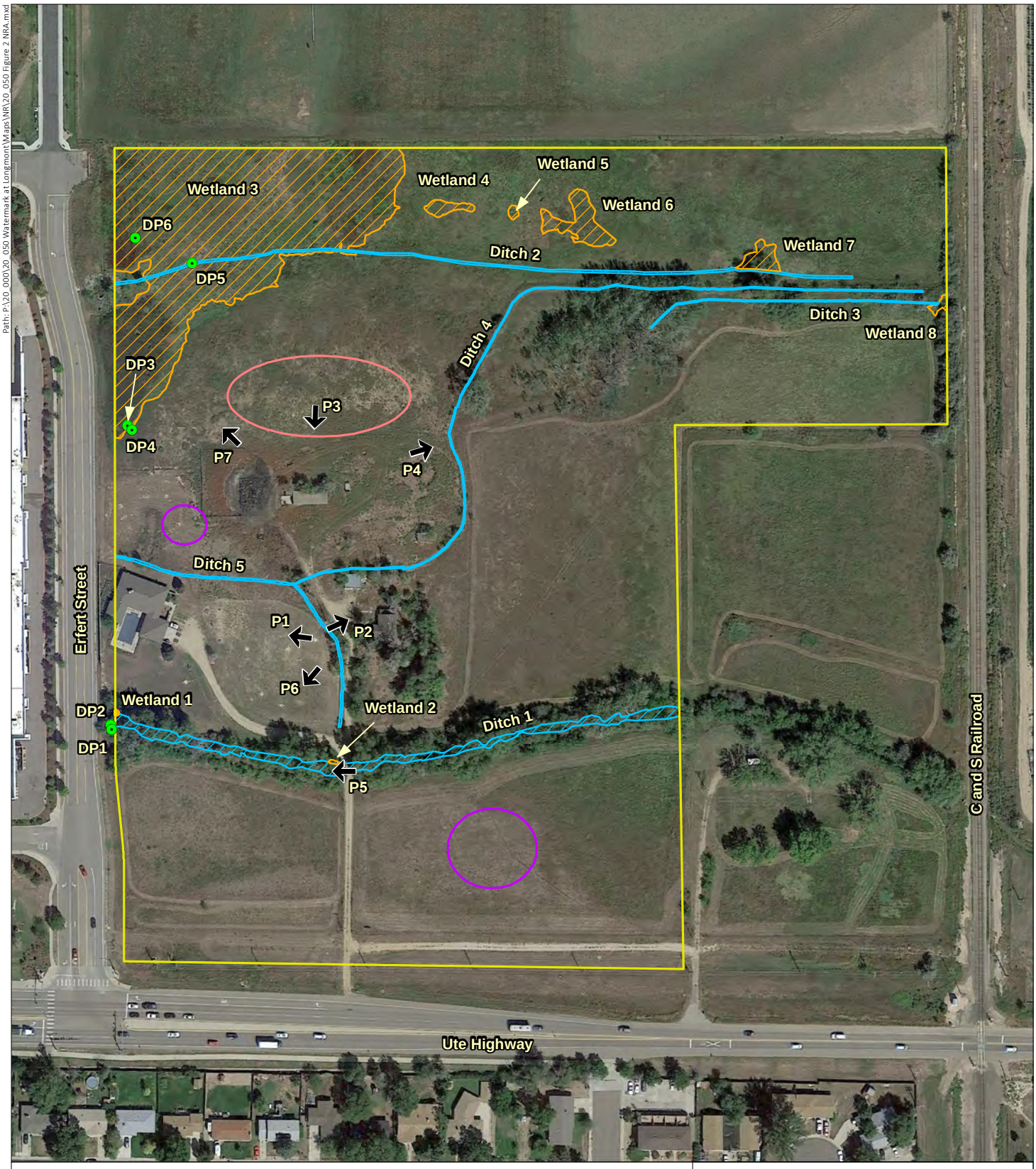
0 750 1,500 Feet

N

Figure 1
Vicinity Map

Prepared for: Thompson Thrift Development, Inc.
File: 20_050 Figure 1.mxd (GS)
March 4, 2020

ERO Resources Corp.



Watermark at Longmont

- Data Point
- Photo Point
- Ordinary High Water Mark (0.407 ac)
- Wetland (2.274 ac)
- Inactive Prairie Dog Burrows
- Musk Thistle
- Project Area Boundary

0 100 200 Feet

N

Figure 2
Existing Conditions

Image Source: Google Earth©, September 2019

Prepared for: Thompson Thrift Development, Inc.
File: 20_050 Figure 2 NRA.mxd (GS)
June 29, 2020

ERO Resources Corp.

Project Area Description

The project area is bounded by a commercial property and Erfert Street to the west, agricultural fields to the north, a railroad to the east, and Ute Highway to the south (Figure 2). The project area consists of disturbed uplands, a residential property, and dilapidated buildings in the central portion of the project area (Figure 2; Photos 1 and 2).

The project area is mainly old agricultural/farmland with several irrigation ditches running through the property. The vegetation in the majority of the project area is dominated by nonnative upland grassland species including smooth brome (*Bromus inermis*), cheatgrass (*Bromus tectorum*), prickly lettuce (*Lactuca serriola*), curly dock (*Rumex crispus*), field bindweed (*Convolvulus arvensis*), and musk thistle (*Carduus nutans*), a Colorado List B noxious weed (Photo 3; Figure 2). Mesic forest habitat occurs in the northeast part of the project area and is dominated by Siberian elm and white poplar (*Populus alba*) (Photo 4).

Multiple unnamed irrigation laterals (Ditches 1 through 5) occur within the project area and are supplied by stormwater and the Rough and Ready Ditch, which is southwest of the project area. One large ditch (Ditch 1) occurs in the southern part of the project area and generally flows west to east (Figure 2). Ditch 1 contained water at the time of the June 2020 site visit, and wetlands dominated by Emory's sedge (*Carex emoryi*) and broadleaf cattail (*Typha latifolia*) have formed sparse fringes along the banks of Ditch 1 and near the culvert at Erfert Street (Photo 5). Ditch 1 was also bordered by riparian habitat dominated by American plum (*Prunus americana*), Siberian elm (*Ulmus pumila*), and plains cottonwood (*Populus deltoides*) (Photo 6).

Ditches 2 through 5 consist of intermittent channels that meander through the project area (Figure 2). Wetlands dominated by broadleaf cattail, reed canarygrass (*Phalaris arundinacea*), and spikerush (*Eleocharis palustris*) occur in the northwestern part of the project area abutting Ditch 2 (Photo 7). In addition, a small wetland dominated by reed canarygrass occurs on the northeastern part of the project area and feeds water to Ditch 3.

Several inactive prairie dog burrows were observed in the western and southern parts of the project area during the 2020 site visits (Figure 2).

Wetlands and Other Waters of the U.S.

Background

The Clean Water Act (CWA) protects the chemical, physical, and biological quality of waters of the U.S. The U.S. Army Corps of Engineers' (Corps) Regulatory Program administers and enforces Section 404 of the CWA. Under Section 404, a Corps permit is required for the discharge of dredged or fill material into wetlands and other waters of the U.S. (streams, ponds, and other waterbodies). On June 22, 2020, the Environmental Protection Agency and Corps Navigable Waters Protection Rule: Definition of "Waters of the United States" became effective in 49 states and in all U.S. territories. A preliminary

injunction has been granted for Colorado. Until further notice, jurisdiction of wetlands and other potential waters of the U.S. in Colorado will be determined using 2008 Rapanos guidance.

Under the Rapanos guidelines, the Corps considers traditionally navigable waters (TNWs), wetlands adjacent to a TNW, and tributaries to TNWs that are relatively permanent waters (RPWs) and their abutting wetlands jurisdictional waters. Other wetlands and waters that are not TNWs or RPWs will require a significant nexus evaluation to determine their jurisdiction. A significant nexus evaluation assesses the flow characteristics and functions of a tributary and its adjacent wetlands to determine if they significantly affect the chemical, physical, or biological integrity of downstream TNWs.

ERO followed the methods for routine on-site wetland determinations as described in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987). ERO used methods in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) (Corps 2010) to record data on vegetation, soils, and hydrology on routine determination forms (Appendix B). Wetlands were determined based on the presence of three wetland indicators: hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundaries were determined by a visible change in vegetation community, topographic changes, and other visible distinctions between wetlands and uplands.

The wetland indicator status of plant species was identified using the National Wetland Plant List (Lichvar et al. 2016), taxonomy was determined using Colorado Flora: Eastern Slope (Weber and Wittmann 2012), and nomenclature was determined using the PLANTS Database (U.S. Department of Agriculture, Natural Resources Conservation Service (USDA, NRCS) 2020a). Wetlands were classified according to the U.S. Fish and Wildlife Service's (Service) Cowardin classification system (Cowardin et al. 1979) combined with a hydrogeomorphic approach (Brinson 1993). Hydric soils were identified using field observation for hydric soil indicators accepted by the Corps. A Munsell soil color chart was used to determine soil color. Wetland locations and classifications were supported by USGS topographic maps, aerial photography, and the soil survey (USDA, NRCS 2020b).

Intermittent, ephemeral, and perennial drainages with characteristics of a defined streambed, streambank, ordinary high water mark (OHWM), and other erosional features also were identified. The Corps defines "stream bed" as "the substrate of the stream channel between the OHWMs. The substrate may be bedrock or inorganic particles that range in size from clay to boulders." The Corps defines "ordinary high water mark" as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the soil character, destruction of terrestrial vegetation, presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 Code of Federal Regulations (CFR) 328.3(e)).

The dimensions of drainages with these characteristics and the boundaries of identified wetlands either were drawn onto aerial photographs or mapped using a Global Positioning System (GPS) unit. GPS data were differentially corrected using the CompassCom base station. All differential correction was

completed using Trimble Pathfinder Office 5.9 software. GPS data were incorporated using ESRI ArcGIS Desktop software.

To assist the Corps in making a preliminary jurisdictional determination, ERO reviewed the proximity and potential surface water connection of wetlands to known jurisdictional waters of the U.S. using aerial photo interpretation, landowner information, and information from the wetland survey. Potential waters of the U.S., including wetlands, identified in the project area are shown on Figure 2. Data were collected in the project area to document the characteristics of uplands and potential wetlands. ERO applied the routine method by determining the plant community types within the project area and completed data forms for representative data points (DPs) within each community type. Wetland determination data forms from the Regional Supplement were completed for each representative DP to determine which community types were wetlands (Appendix B). Where wetlands bordered uplands, data were collected from a set of upland and wetland DPs, which determined indicators of the boundary between wetlands and nonwetlands. Each DP was assigned a unique label. Six DPs were completed in the wetland delineation area and were given labels that correspond to a location shown on Figure 2 and a routine wetland determination form (Appendix B).

Site Conditions and Regulations

During the 2020 site visits, ERO assessed the project area for potential isolated wetlands, jurisdictional wetlands, and other waters of the U.S. Prior to the 2020 site visits, ERO reviewed U.S. Geological Survey (USGS) quadrangle topographic maps and aerial photography to identify mapped streams and areas of open water that could indicate wetlands or waters of the U.S.

During the 2020 site visits, ERO identified five ditches and eight wetlands in the project area. Based on the National Hydrography Dataset (NHD) (Figure 1) and Google Earth Imagery (Google Earth Pro 2020), water from the Rough and Ready Ditch enters Ditch 1 from a culvert below Erfert Street on the southwestern part of the project area and continues to flow east, outside of the project area. Ditch 1 appears to end within an irrigation field east of the project area and does not appear to have a surface connection to any waters of the U.S. Ditches 2, 3, 4, and 5 appear to be laterals formed on the project area for irrigation when the property was initially developed and have no surface connections to any waters of the U.S. Ditches 1 through 5 are not shown as occurring within the project area on the NHD or the National Wetland Inventory (NWI; Service 2020a).

The wetlands within the project area also appear to be isolated with no surface connection to waters of the U.S. During the 2020 site visits, ERO mapped a total of 2.274 acres of wetlands and 0.407 acre of OHWM within the project area (Figure 2).

Wetlands

During the 2020 site visits, eight wetlands were mapped within the project area. Wetlands 1 through 8 are not shown on the NHD or on the USGS Longmont topographic map. Wetlands 1 and 2 occur along Ditch 1 as narrow fringes. Wetlands 3 through 7 occur in the northwestern portion of the project area

and are surrounded by uplands. Wetland 8 is located on the eastern boundary of the project area and connects to Ditch 3.

Vegetation

The dominant species in Wetlands 1 and 2 consisted of broadleaf cattail (obligate [OBL]) and Emory's sedge (OBL) (DP1). The dominant species in Wetlands 3, 4, 5, 6, and 7 were broadleaf cattail (OBL), reed canarygrass (facultative wetland [FACW]), curly dock (facultative [FAC]), curlytop knotweed (*Rumex crispus* [OBL]), and spikerush (OBL) (DP3, DP5, and DP6). The vegetation at DP1, DP3, DP5, and DP6 met the dominance test for hydrophytic vegetation. The dominant species in the uplands consisted of smooth brome (upland [UPL]) (DP2 and DP3). Vegetation at DP2 and DP3 did not meet the dominance test for hydrophytic vegetation.

Soils

Data were collected from six locations in the project area – four within wetlands (DP1, DP3, DP5, and DP6) and two within uplands (DP2 and DP4). Soils at DP1 had a matrix color of 10YR3/2 from 0 to 10 inches with 5 percent redox concentrations of 10YR 4/6 from 5 to 10 inches. DP1 met the redox dark surface soil indicator. Soils at DP3 had a matrix color of 10YR 4/3 with 3 percent redox concentrations and 10YR 2/1 from the ground surface to a depth of 4 inches. From 4 to 10 inches, DP3 had a matrix color of 10YR 4/3 with 10 percent redox concentrations of 7.5YR 4/6 and, from 10 to 14 inches, the soil matrix was 10YR 4/3 and 10YR 5/4 with 40 percent redox concentrations of 7.5YR 4/6. DP3 met the redox dark surface hydric soil indicator. Soils at DP5 had a matrix of 10YR 3/2 with 5 percent redox concentrations of 7.5YR 4/6 from 0 to 10 inches. DP5 met the redox dark surface hydric soil indicator. Soils at DP6 had a matrix of 10YR 2/2 from 0 to 2 inches and a matrix of 10YR 3/2 from 2 to 12 inches with 15 percent redox concentrations of 7.5YR 3/4. DP6 met the redox dark surface hydric soil indicator. Soils within the uplands of the project area (DP2 and DP4) were assumed nonhydric due to the lack of hydrophytic vegetation and wetland hydrology indicators.

Hydrology

Hydrology indicators were observed at DP1, DP3, DP5, and DP6. Primary hydrologic indicators included saturation within 12 inches of the soil surface and drift deposits. Secondary hydrologic indicators included a successful FAC Neutral Test and geomorphic position. ERO did not observe any primary or secondary hydrology indicators within the uplands of the project area (DP2 and DP4).

City of Longmont Municipal Code Protection of Rivers, Streams, Wetlands, and Riparian Areas

The City of Longmont Municipal Code (2020) requires compliance with applicable federal wetland laws or regulations. Per Chapter 15.05 of the City of Longmont Municipal Code (2020), the boundary of mapped wetlands shall be established by reference to the Boulder County Wetlands Survey (Boulder County 2020); however, if a wetland has not been mapped, or its boundaries not clearly established, or if either the city of Longmont or applicant dispute the existing boundaries, the applicant shall retain a qualified person with demonstrated expertise in the field to delineate the boundaries of the wetland according to professional standards approved by the city of Longmont. All wetland boundary

delineations are subject to the city of Longmont's approval. On the Boulder County Comprehensive Plan Wetlands and Riparian Areas map (Boulder County 2014), a pond is shown within the project area; however, its boundaries are not clearly established and does not correspond with the on-site conditions observed during the 2020 site visits. No wetlands are shown in the project area on the Boulder County Wetlands Survey (Boulder County 2020). The City of Longmont Municipal Code (2020) has minimum setbacks for wetlands of at least 100 feet from the delineated edge of wetlands.

Recommendations

Based on a review of Google Earth (Google Earth Pro 2020) aerial imagery and NWI (Service 2020a), Ditches 1 through 5 are not perennial and do not have continuous hydrologic connections to any potential or known waters of the U.S. Ditches 1 through 5 are irrigation ditches excavated on dry land with no downstream surface connections to waters of the U.S. For these reasons, ERO believes Ditches 1 through 5 are preamble waters that serve to convey irrigation waters and, therefore, ERO believes Ditches 1 through 5 and their associated wetlands are nonjurisdictional. The wetlands within the project area also appear to be isolated with no downstream surface connections to waters of the U.S.

On May 14, 2020, on behalf of Thompson Thrift, ERO submitted a request to the Corps for an approved Jurisdictional Determination for Ditches 1 through 5 and the associated wetlands in the project area. The Corps has determined that Ditches 1 through 5 and their adjacent wetlands are not considered jurisdictional (Corps File No. NWO-2020-00953-DEN) and work planned within these areas does not require a Section 404 permit for the placement of dredged or fill material below the OHWM. No further action is necessary.

Based on the 2020 site visits, the ditches in the project area would not be subject to protection under the City of Longmont Municipal Code because they fall under the definition of "irrigation ditches that do not contribute to the preservation and enhancement of fisheries or wildlife" (City of Longmont 2020). Additionally, ERO believes that the wetlands in the project area may be subject to reduced setback standards because they appear to be supported by stormwater and the lateral irrigation ditches and they provide little wildlife habitat.

Threatened, Endangered, and Candidate Species

ERO assessed the project area for potential habitat for threatened, endangered, and candidate species under the Endangered Species Act (ESA). Federally threatened and endangered species are protected under the ESA of 1973, as amended (16 United States Code 1531 et seq.). Significant adverse effects on a federally listed species or its habitat require consultation with the Service under Section 7 or 10 of the ESA. The Service lists several threatened and endangered species with potential habitat in Boulder County, or that would be potentially affected by projects in Boulder County (Table 1).

Table 1. Federally threatened, endangered, and candidate species potentially found in Boulder County or potentially affected by projects in Boulder County.

Common Name	Scientific Name	Status*	Habitat	Habitat Present or Potential to be Affected by Project
Mammals				
Canada lynx	*Lynx canadensis*	T	Climax boreal forest with a dense understory of thickets and windfalls	No
Preble's meadow jumping mouse	*Zapus hudsonius preblei*	T	Shrub riparian/wet meadows	No
Birds				
Interior least tern**	*Sterna antillarum athalassos*	E	Sandy/pebble beaches on lakes, reservoirs, and rivers	No habitat and no depletions anticipated
Mexican spotted owl	*Strix occidentalis*	T	Closed canopy forests in steep canyons	No
Piping plover**	*Charadrius melodus*	T	Sandy lakeshore beaches and river sandbars	No habitat and no depletions anticipated
Whooping crane**	*Grus americana*	E	Mudflats around reservoirs and in agricultural areas	No habitat and no depletions anticipated
Fish				
Bonytail chub	*Gila elegans*	E	Backwaters with rocky or muddy bottoms and flowing pools	No
Colorado pikeminnow	*Ptychocheilus Lucius*	E	Warm rivers that have large snowmelt runoff and lower, relatively stable base flows	No
Greenback cutthroat trout	*Oncorhynchus clarki stomias*	T	Clear, swift-flowing mountain streams with cover such as overhanging banks and vegetation and mountain lakes	No
Humpback chub	*Gila cypha*	E	Pools with substrates of silt, sand, boulder, or bedrock	No
Pallid sturgeon**	*Scaphirhynchus albus*	E	Large, turbid, free-flowing rivers with a strong current and gravel or sandy substrate	No habitat and no depletions anticipated
Razorback sucker	*Xyrauchen texanus*	E	Large river species in areas with strong current and backwaters	No
Plants				
Ute ladies'-tresses orchid	*Spiranthes diluvialis*	T	Moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes below 7,800 feet in elevation	No
Western prairie fringed orchid**	*Platanthera praeclara*	T	Moist to wet prairies and meadows	No habitat and no depletions anticipated

*T = Federally Threatened Species, E = Federally Endangered Species.
**Water depletions in the South Platte River may affect the species and/or critical habitat in downstream reaches in other counties or states.
Source: Service 2020b.

The proposed project would not directly affect the Canada Lynx, Mexican spotted owl, bonytail chub, Colorado pikeminnow, greenback cutthroat trout, humpback chub, or razorback sucker because of the lack of habitat in the project area. The interior least tern, piping plover, whooping crane, pallid sturgeon, and western prairie fringed orchid are species that are affected by depletions to the Platte River system. Based on ERO's knowledge of the types of activities likely to be implemented as part of the development of the project area, there would be no depletions to the South Platte River. If the project includes activities that deplete water in the South Platte River, such as diverting water from a stream or developing new water supplies, these species could be affected by the project and consultation with the Service may be required.

Potential habitat for Preble's meadow jumping mouse (Preble's) and Ute ladies'-tresses orchid (ULTO) is generally more prevalent in areas across the Front Range. Because these species are more likely to be addressed by counties and regulatory agencies such as the Corps, a more detailed discussion is provided below.

Preble's Meadow Jumping Mouse

Species Background

Preble's was listed as a threatened species on May 13, 1998. Several petitions to delist Preble's have been filed with the Service since 2011. On March 29, 2017, a petition to delist Preble's was filed; the Service found that the petition did not present substantial scientific or commercial information indicating that delisting Preble's may be warranted (83 Federal Register (FR) 16819). The Service refers to this finding as a "not substantial" petition finding (83 FR 16819). On August 10, 2018, the Service announced the initiation of a 5-year status review for Preble's (83 FR 39771). Until the completion of this 5-year finding, Preble's remains protected under the ESA. Preble's is found along the foothills of southeastern Wyoming and southward along the eastern edge of the Colorado Front Range to Colorado Springs (Clark and Stromberg 1987; Fitzgerald 1994). The semiarid climate in southeastern Wyoming and eastern Colorado limits the extent of riparian corridors and, therefore, restricts Preble's range, which is associated with these corridors.

Along Colorado's Front Range, Preble's is found below 7,800 feet in elevation, generally in lowlands with medium to high moisture along permanent or intermittent streams. Preble's prefer riparian areas featuring well-developed, multistoried, and horizontal cover with an understory of grasses and forbs (Bakeman 1997; Bakeman and Deans 1997). Preble's typically inhabits areas characterized by plains riparian vegetation with relatively undisturbed grassland and a water source nearby (Armstrong et al. 2011). High-use areas for Preble's tend to be close to creeks and are associated with a high percentage of shrubs, grasses, and woody debris (Trainor et al. 2007). Previous studies have suggested that Preble's may have a wider ecological tolerance than previously thought and that the requirement for diverse vegetation and well-developed cover can be met under a variety of circumstances (Meaney et al. 1997). Radio-tracking studies conducted by the Colorado Parks and Wildlife (CPW) have documented Preble's using upland habitat adjacent to wetlands and riparian areas (Shenk and Sivert 1999). Additional research by CPW has suggested that habitat quality for Preble's can be predicted by the amount of

shrub cover available at a site (White and Shenk 2000). Mountain riparian sites may be surrounded by dense forest vegetation (such as ponderosa pine in Colorado), and sites on the plains have less woody vegetation.

Potential Habitat and Effects

During the 2020 site visits, ERO assessed the project area for potential Preble's habitat. The project area primarily consists of old agricultural/farmland dominated by a variety nonnative upland vegetation species. The narrow riparian corridor along Ditch 1 lacks the multilayered shrub cover typically associated with known Preble's habitat and consists of only sparse herbaceous understory that would not provide the foraging and cover that Preble's requires. In addition, the nearest known Preble's capture location is approximately 4.8 miles southwest of the project area along St. Vrain Creek (Boulder County Parks and Open Space (BCPOS) 2014). Because of the development and habitat fragmentation surrounding the project area, it is unlikely the project area supports a population of Preble's or that Preble's have potential to move into the site.

Recommendations

Under existing regulations, either a habitat assessment or a full presence/absence survey for Preble's is required for any habitat-disturbing activity within areas determined to be potential Preble's habitat (generally riparian habitat along streams and ditches along the Colorado Front Range). Because of the lack of adequate shrub cover and the distance of the closest Preble's capture site, ERO determined that Preble's is unlikely to be present in the project area. ERO recommends submitting a habitat assessment to the Service requesting concurrence that the project area is not habitat for Preble's and that the proposed project would not adversely affect the continued existence of Preble's.

Ute Ladies'-Tresses Orchid

Species Background

ULTO is federally listed as threatened. ULTO occurs at elevations below 7,800 feet in moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes where the soil is seasonally saturated within 18 inches of the surface (Colorado Natural Heritage Program 2014; Service 1992a). This species has also been found along irrigation canals, irrigated meadows, gravel pits, and other human-modified wetlands (Service 2018). Once thought to be fairly common in low-elevation riparian areas in the interior western United States, ULTO is now rare (Service 1992a). The species' known range is from Nevada to British Columbia. The largest known populations occur in Utah, followed by Colorado (NatureServe 2020).

In Colorado, the Service requires surveys in suitable habitat within the 100-year floodplain segments of the South Platte River, Fountain Creek, and Yampa River and their perennial tributaries, or in any area with suitable habitat in Boulder and Jefferson Counties. Since the protocols were submitted in 1992, ULTO has been found along the Roaring Fork River. Therefore, surveys should be conducted within suitable habitat in the floodplain of the Roaring Fork River and its tributaries. ULTO does not bloom

until late July to early September (depending on the year) and timing of surveys must be synchronized with blooming (Service 1992b).

Potential Habitat and Effects

During the 2020 site visits, ERO assessed the project area for potential ULTO habitat and no suitable habitat was found. The wetland vegetation found within the project area is dominated by broadleaf cattail, spikerush, curly dock, curlytop knotweed, and reed canarygrass, species not usually associated with ULTO. The soils in the project area consist primarily of clay, which is typically not associated with ULTO. In addition, there is an abrupt transition from wetlands to uplands within the project area and the project area lacks the mesic vegetation communities typically associated with ULTO.

Recommendations

The project area falls within the survey guidelines for potential ULTO habitat because of the presence of wetland vegetation and its location in Boulder County. If any work is planned within the wetlands (Figure 2), ERO recommends submitting a habitat assessment to the Service requesting the site be cleared from a presence/absence survey for ULTO due to the lack of suitable habitat. If the Service clears the site from a presence/absence survey, or no work is planned within the wetlands, no further consultation would be needed for ULTO.

State Threatened, Endangered, and Species of Concern

Numerous species that potentially occur in Boulder County are considered threatened, endangered, or species of concern by the state of Colorado (Table 2). According to Colorado law (Colo. Rev. Stat. Ann. §§ 33-2-102-106), the state must maintain a list of species determined to be threatened or endangered within the state. State-listed wildlife species that are not already protected under the ESA are protected under State Statute 33, which is regulated by Colorado Parks and Wildlife (CPW).

The habitat affinities, presence of potential habitat in the project area, and impacts on these species or habitats are provided in the following discussion. No regulations currently exist for state species of concern. However, if any species were to be listed during construction, state regulations could be enforced.

Table 2. CPW threatened, endangered, and species of concern potentially occurring in Boulder County.

Common Name	Scientific Name (Status*)	General Colorado Range	Suitable Habitat Present
Mammals			
Black-tailed prairie dog	*Cynomys ludovicianus (SC)*	Eastern plains/urban areas	Yes
Northern pocket gopher	*Thomomys talpoides macrotis*	Meadows or along streams; most often in mountains	No
Northern river otter	*Lutra canadensis (ST)*	Riverine and riparian areas	No
Swift fox	*Vulpes velox (SC)*	Eastern Colorado	No
Townsend's big-eared bat	*Corynorhinus townsendii pallescens (SC)*	Mines, caves, and large rock cavities to elevations above 9,500 feet	No

Common Name	Scientific Name (Status*)	General Colorado Range	Suitable Habitat Present
Birds			
American peregrine falcon	*Falco peregrinus (SC)*	Statewide except far east counties – cliffs/canyons	No
Bald eagle	*Haliaeetus leucocephalus (ST)*	Near reservoirs, perennial rivers	No
Ferruginous hawk	*Buteo regalis (SC)*	Open grasslands, northwestern and eastern Colorado	No
Greater sandhill crane	*Grus canadensis tabida (SC)*	Eastern Colorado; Grand Valley	No
Long-billed curlew	*Numenius americanus (SC)*	Shortgrass prairie of northwestern and eastern Colorado; mountain parklands	No
Mountain plover	*Charadrius montanus (SC)*	Shortgrass in eastern plains and mountain valleys	No
Western burrowing owl	*Athene cunicularia (ST)*	Grassland, shrublands, and deserts with ground squirrels	Yes
Western snowy plover	*Charadrius alexandrinus (SC)*	Southeastern Colorado, South Park	No
Fish			
Brassy minnow	*Hybognathus hankinsoni (ST)*	Cool, clear water with abundant aquatic vegetation and a gravel substrate overlaid by organic sediment	No
Common shiner	*Luxilus cornutus (ST)*	Moderate gradient streams with cool, clear, gravel-bottomed water with overhanging shade	No
Iowa darter	*Etheostoma exile (SC)*	Cool, clear water over a sand or organic matter substrate, Poudre River, ponds	No
Plains minnow	*Hybognathus placitus (SE)*	Mainstream channels of eastern plains rivers	No
Stonecat	*Noturus flavus (SC)*	Fast water riffles and runs of streams, hiding under rocks, woody debris, St. Vrain River	No
Suckermouth minnow	*Phenacobius mirabilis (SE)*	Deeper habitats in river and tributary streams with low to moderate currents, preferably with gravel bottoms – South Platte River east of Fort Morgan	No
Amphibians and Reptiles			
Boreal toad	*Bufo boreas boreas (SE)*	Mountain lakes, ponds, meadows, and wetlands in subalpine forest	No
Common garter snake	*Thamnophis sirtalis (SC)*	Marshes, ponds, and stream edges	No
Northern leopard frog	*Rana pipiens (SC)*	Eastern Colorado wetlands	No

*SE = Colorado Endangered Species, ST = Colorado Threatened Species, SC = Colorado Species of Special Concern.
Source: CPW 2020.

It is highly unlikely for the proposed project to directly affect the northern pocket gopher, northern river otter, swift fox, Townsend's big-eared bat, American peregrine falcon, bald eagle, ferruginous hawk, greater sandhill crane, long-billed curlew, mountain plover, or western snowy plover because of the lack of suitable habitat in the project area. The project area is outside the range of the swift fox (Natural Diversity Information Source (NDIS) 2020). The wetland and aquatic areas in the project area do not provide suitable habitat for the brassy minnow, common shiner, Iowa darter, plains minnow, stonecat,

suckermouth minnow, or boreal toad. Potentially suitable habitat is more likely to occur for the species discussed in more detail below.

Black-Tailed Prairie Dog

Species Background

The black-tailed prairie dog is a Colorado species of special concern (CPW 2020). Black-tailed prairie dogs are important components of the short and mesic grasslands systems. Threats to this species include habitat loss and degradation, habitat fragmentation, disease (sylvatic plague), and lethal control activities. Typically, areas occupied by prairie dogs have greater cover and abundance of perennial grasses and annual forbs compared with unoccupied sites (Whicker and Detling 1988; Witmer et al. 2002).

Black-tailed prairie dogs are commonly considered a "keystone" species because their activities (burrowing and intense grazing) provide food and shelter for many other grassland species and have a large effect on community structure and ecosystem function (Power et al. 1996). Prairie dogs can contribute to overall landscape heterogeneity, affect nutrient cycling, and provide nest sites and shelter for wildlife (Whicker and Detling 1988). Species such as black-footed ferret, burrowing owl, prairie rattlesnake, and mountain plover are closely linked to prairie dog burrow systems for food and cover. Prairie dogs also provide an important prey resource for numerous predators including American badger, coyote, red fox, bald eagle, golden eagle, ferruginous hawk, and other raptors. Prairie dogs also can denude the surface by clipping aboveground vegetation and contributing to exposed bare ground by digging up roots (Kuford 1958; Smith 1967).

Potential Habitat and Effects

ERO observed a few inactive black-tailed prairie dog burrows along the central and southern portions of the project area during the 2020 site visits (Figure 2). Although prairie dogs are not protected under the ESA, if prairie dogs move into the project area and removal becomes necessary, CPW recommends attempting to remove or exterminate prairie dogs prior to bulldozing an active prairie dog town for humane reasons. Currently, Boulder County follows the Prairie Dog Habitat Element of the Grassland and Shrubland Management Policy (BCPOS 2016) to preserve, protect, and enhance viable prairie dog populations on suitable grassland habitat. All tenant control of prairie dogs will follow BCPOS accepted practices and will receive direct oversight by BCPOS wildlife and agricultural staff. The protocol for tenant removal of prairie dogs will be developed by wildlife staff and repercussions up to and including lease termination, for improper or unauthorized implementation, will be clearly outlined. Additionally, all new lease agreements will include language regarding consequences for unauthorized treatment of prairie dogs (BCPOS 2016).

In addition, the city of Longmont requires that before the approval of any development application that would authorize construction, grading, or paving on any land carrying any prairie dogs as defined in Chapter 7.06 of the Longmont Municipal Code (City of Longmont 2020), the applicant must also secure a

prairie dog management permit under that chapter. No person shall undertake any construction, grading, or paving on any land which, at such time, carries any prairie dogs.

Recommendations

If prairie dogs must be removed for any proposed activities, two options typically exist: relocation and extermination. Currently, relocation to other parts of Colorado is not an option due to limited resources for new populations, and CPW requires permits to move prairie dogs. Private companies can be hired to relocate prairie dogs, although relocation sites are difficult to secure. If extermination of prairie dogs is the only option, several independent companies provide treatments for prairie dog control. Prior to any work that would disturb a colony between March 1 and October 31, colonies should be surveyed for western burrowing owls. CPW recommends attempting to remove or exterminate prairie dogs prior to bulldozing an active prairie dog town for humane reasons.

Western Burrowing Owl

Species Background

The western burrowing owl (burrowing owl) is a small migrant owl listed by the state of Colorado as a threatened species and is federally protected under the Migratory Bird Treaty Act (MBTA). Primary threats to the burrowing owl include habitat loss and fragmentation, anthropogenic sources of mortality such as vehicular collisions, and loss of wintering grounds, largely in Mexico (McDonald et al. 2004).

In general, burrowing owls are found in grasslands with vegetation less than 4 inches high and a relatively large proportion of bare ground (Gillihan and Hutchings 2000). In Colorado, burrowing owls are usually associated with black-tailed prairie dog colonies (Kingery 1998; Andrews and Righter 1992). More than 70 percent of sightings reported in Colorado Breeding Bird Atlases were in prairie dog colonies (Kingery 1998).

Burrowing owls usually arrive on their breeding grounds around mid-March to early April and remain until September (Haug and Oliphant 1990). Burrowing owls are typically present in Colorado between March 15 and October 31, with breeding from mid-April to early/mid-August (Andrews and Righter 1992; Kingery 1998). CPW suggests conducting burrowing owl clearance surveys in prairie dog towns that are subject to poisoning and/or construction projects during the period from March 15 through October 31 (CPW 2020).

Potential Habitat and Effects

The prairie dog burrows within and adjacent to the project area are potential habitat for burrowing owls. Inadvertent killing of burrowing owls could occur during prairie dog poisoning, construction, or earthmoving projects during the breeding period. CPW has a recommended buffer of ⅛ mile (660 feet) surrounding active burrowing owl nests (CPW 2020). Burrowing owls could be impacted by the project if work would occur within CPW's recommended 660-foot buffer of any burrows.

Recommendations

If work would occur within the recommended buffer of any burrow (visually located from within the project area), a burrowing owl survey should be conducted during the breeding season (March 15 through October 31). If owls are observed within 660 feet of the project area, activities should be restricted until the owls have migrated from the site, which can be determined through monitoring. Additionally, CPW recommends conducting burrowing owl clearance surveys in prairie dog towns that are subject to poisoning and/or construction projects during the period from March 15 through October 31 (CPW 2020). Construction occurring between November 1 and March 14 would not require clearance surveys.

Common Garter Snake

Species Background

The common garter snake is listed as a Colorado species of special concern (CPW 2020). The subspecies of the common garter snake that occurs in Colorado has black and red sides with a pale yellow to white stripe down the center of the back. In Colorado, this species is found from northern Jefferson County and southern Boulder County northeast through Nebraska and Wyoming (Hammerson 1999). The common garter snake inhabits the margins of streams, irrigation ditches, natural and artificial ponds, as well as open areas that are surprisingly far from water.

Potential Habitat and Possible Effects

The project area occurs within the range of the common garter snake (NDIS 2020). No common garter snakes were observed during the 2020 site visits. The project area contains very limited suitable habitat for this species; however, the proposed project could potentially affect common garter snakes if work is conducted within the wetland areas, primarily due to displacement from suitable habitat during construction.

Recommendations

CPW does not currently enforce restrictive measures if a common garter snake is encountered during construction and corrective measures are voluntary. However, if Thompson Thrift Development, Inc. chooses to limit impacts to the common gartner snake, ERO recommends activities cease within a 30-foot buffer of where the animal was seen and a qualified biologist be brought on to the site to correctly identify the animal and, if possible, relocate the animal to suitable habitat outside the construction limits. After completion of construction activities, any temporary fill and construction debris should be removed and, wherever feasible, disturbed areas should be restored to pre-project conditions. If no activities would occur within the wetland areas, the proposed project would not likely adversely affect the common garter snake because suitable habitat would not be impacted.

Northern Leopard Frog

Species Background

The northern leopard frog is listed as a Colorado species of special concern (CPW 2020). This species typically inhabits the banks and shallow portions of wetlands, ponds, lakes, streams, and other permanent water bodies. The northern leopard frog occurs at elevations from 3,500 to 11,000 feet in Colorado (Hammerson 1999).

Potential Habitat and Possible Effects

Ditch 1 and the wetlands may provide low-quality habitat for the northern leopard frog. No leopard frogs were observed during the 2020 site visits. Similar to the common garter snake, the proposed project could have potential short-term impacts on the northern leopard frog if construction activities occur within Ditch 1 and the wetland areas.

Recommendations

CPW does not currently enforce restrictive measures if a northern leopard frog is encountered during construction and corrective measures are voluntary. However, if Thompson Thrift Development, Inc. chooses to limit impacts to the northern leopard frog, ERO recommends activities cease within a 30-foot buffer of where the animal was seen and a qualified biologist be brought on to the site to correctly identify the animals and, if possible, relocate the animal to suitable habitat outside the construction limits. If no activities would occur within Ditch 1 or the wetland areas (Figure 2), the proposed project would not likely adversely affect leopard frogs because suitable habitat would not be impacted.

Raptors and Migratory Birds

Migratory birds, as well as their eggs and nests, are protected under the MBTA. The MBTA does not contain any prohibition that applies to the destruction of a bird nest alone (without birds or eggs), provided that no possession occurs during the destruction. While destruction of a nest by itself is not prohibited under the MBTA, nest destruction that results in the unpermitted take of migratory birds or their eggs is illegal and fully prosecutable under the MBTA (Service 2003). The regulatory definition of a take means to pursue, hunt, shoot, wound, kill, trap, capture, or collect; or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect (50 CFR 10.12).

Under the MBTA, the Service may issue nest depredation permits, which allow a permittee to remove an active nest. The Service, however, issues few permits and only under specific circumstances, usually related to human health and safety. Obtaining a nest depredation permit is unlikely and involves a process that takes, at a minimum, 8 to 12 weeks. The best way to avoid a violation of the MBTA is to remove vegetation outside of the active breeding season, which typically falls between March and August, depending on the species. MBTA enforcement actions are typically the result of a concerned member of the community reporting a violation.

Potential Habitat and Effects

A wide variety of bird species use different habitat types in the project area for shelter, breeding, wintering, and foraging at various times during the year. Riparian vegetation, wetlands, and upland grasslands within and adjacent to the project area are potential nesting habitat for migratory birds. ERO did not observe any active or inactive migratory bird nests, including potential raptor nests, in or near the project area during the 2020 site visits.

Recommendations

Although no nests were observed during the 2020 site visits, ground-nesting bird and arboreal nests are difficult to detect and may be present in the grasslands and trees in the project area. To avoid destruction of potential migratory bird nests, vegetation removal should be conducted outside of the April 1 through August 31 breeding season.

Both the Denver Field Office of the Service (2009) and the Colorado Department of Transportation (2011) have identified the primary nesting season for migratory birds in eastern Colorado as occurring from April 1 through August 31. However, a few species such as bald eagles, great horned owls, and red-tailed hawks can nest as early as December (eagles) or late February (owls and red-tailed hawks). Because of variability in the breeding seasons, ERO recommends that a nest survey be conducted within one week prior to construction to determine if any active nests are present in the project area so that they can be avoided. Additional nest surveys within the nesting season may also be warranted to identify active nesting species that may present additional development timing restrictions (e.g., eagles or red-tailed hawks).

If active nests are identified within or near the project area, activities that would directly affect the nests should be restricted. Habitat-disturbing activities (e.g., tree removal, grading, scraping, and grubbing) should be conducted in the nonbreeding season to avoid disturbing active nests, or to avoid a “take” of the migratory bird nests within the project area. Nests can be removed during the nonbreeding season, September 1 through March 31, to preclude future nesting and avoid violations of the MBTA. There is no process for removing nests during the nonbreeding season; however, nests may not be collected under MBTA regulations. If the construction schedule does not allow vegetation removal outside of the breeding season, a nest survey should be conducted immediately prior to vegetation removal to determine if the nests are active and by which species. If active nests are found, any work that would destroy the nests or cause the birds to abandon young in the nest could not be conducted until the birds have vacated the nests.

Other Wildlife

The project area consists of old farmland, and the surrounding areas have been significantly disturbed by human development, including agricultural fields and construction of commercial properties and roads. Development expansion into the project area may degrade the existing wetland, riparian, and grassland communities; however, within the project area, these communities are marginal and are

dominated by nonnative species, which diminish the functional and structural components of these habitats.

The project area and neighboring undeveloped land provides habitat for a variety of small mammals such as cottontail rabbits (*Sylvilagus* sp.), deer mice (*Peromyscus maniculatus*), voles (*Microtus* sp.), and pocket gophers (*Geomys* sp.). Grassland habitat likely provides breeding habitat for numerous ground-nesting prairie bird species, and riparian ecosystems typically support many more species of native birds than surrounding grassland or shrubland communities (Knopf and Samson 1994).

Carnivores such as coyote (*Canis latrans*), raccoon (*Procyon lotor*), red fox *(Vulpes vulpes*), grey fox *(Urocyon cinereoargenteus*), and striped skunk (*Mephitis mephitis*) are also likely to occur in the project area. These species are typically observed in open grasslands and close to riparian corridors. Additionally, the project area is within the overall range of black bear (*Ursa americanus*), ring-necked pheasant (*Phasianus colchicus*), mule deer (*Odocoileus hemionus*), and white-tailed deer (*Odocoileus virginianus*) (NDIS 2020). No designated wildlife corridors were mapped in the project area. In addition, the project area does not fall within any critical wildlife habitat and migration corridors or natural landmarks and natural areas mapped as part of the Boulder County Comprehensive Plan (Boulder County 2018).

As with any human development, wildlife species sensitive to human disturbance are likely to decline in abundance or abandon the area, while other wildlife species adapted to development are likely to increase in abundance. Species likely to increase include red fox, raccoon, and great horned owl. Overall, surrounding and continuing development contributes to a decline in the number and diversity of wildlife species nearby and to a change in species composition to favor species that adapt better to human disturbance.

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Photo Log
Natural Resources Assessment
Watermark at Longmont
Boulder County, Colorado
March 6 and June 17, 2020

Photo 1 - Overview of disturbed uplands and residential property in the western part of the project area. View is to the west.

Photo 2 - Overview of dilapidated buildings in the central part of the project area. View is to the northeast.

Photo 3 - Overview of mesic grassland habitat in the northern part of the project area. View is to the south.

Photo 4 - Overview of mesic forest habitat in the northeastern part of the project area. View is to the northeast.

Photo 5 - Overview of Ditch 1 in the southern part of the project area. View is to the west.

Photo 6 - Overview of riparian habitat along Ditch 1 in the southern part of the project area. View is to the southwest.

Photo 7 - Overview of wetlands in the northwestern part of the project area. View is to the northwest.

Appendix B Routine Determination Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Watermark at Longmont City/County: Boulder County Sampling Date: March 6, 2020

Applicant/Owner: Thompson Thrift Development, Inc. State: CO Sampling Point: DP1

Investigator(s): A. Hennage and J. Snieder Section, Township, Range: Section 22, T3N, R69W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 4

Subregion (LRR): G Lat: 40.204471 Long: -105.097657 Datum: NAD 83

Soil Map Unit Name: Colby silty clay loam, 1 to 3 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 X 5)			
1. Carex emoryi	10	Y	OBL
2. Typha latifolia	30	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	40 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100					SiCl	
5-10	10YR 3/2	95	10YR 4/6	5	C	M	SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR F**)
- ☐ 1 cm Muck (A9) (**LRR F, G, H**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☒ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Watermark at Longmont City/County: Boulder County Sampling Date: March 6, 2020

Applicant/Owner: Thompson Thrift Development, Inc. State: CO Sampling Point: DP2

Investigator(s): A. Hennage and J. Snieder Section, Township, Range: Section 22, T3N, R69W

Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 4

Subregion (LRR): G Lat: 40.204454 Long: -105.097652 Datum: NAD 83

Soil Map Unit Name: Colby silty clay loam, 1 to 3 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒
Hydric Soil Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 X 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix fragilis	30	Y	FAC
2. Populus deltoides	40	Y	UPL
3. Ulmus pumila	5	N	UPL
4.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 X 15)			
1. Prunus americana	20	Y	UPL
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 X 5)			
1. Bromus inermis	80	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:		(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL

Sampling Point: DP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR F**)
- ☐ 1 cm Muck (A9) (**LRR F, G, H**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Did not dig due to abrupt transition to uplands and prevalence of non hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Watermark at Longmont City/County: Boulder County Sampling Date: March 6, 2020

Applicant/Owner: Thompson Thrift Development, Inc. State: CO Sampling Point: DP3

Investigator(s): A. Hennage and J. Snieder Section, Township, Range: Section 22, T3N, R69W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR): G Lat: 40.205680 Long: -105.097562 Datum: NAD 83

Soil Map Unit Name: Nunn clay loam, 0 to 1 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 X 5)			
1. Rumex crispus	10	N	FAC
2. Typha latifolia	80	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOIL

Sampling Point: DP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/3	17	7.5YR 4/6	3	C	PL	SiCl	
0-4	10YR 2/1	80					SiCl	
4-10	10YR 4/3	90	7.5YR 4/6	10	C	PL	SiCl	
10-14	10YR 4/3	50					SiCl	
10-14	10YR 5/4	40	7.5YR 4/6	10	C	PL	SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR F**)
- ☐ 1 cm Muck (A9) (**LRR F, G, H**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Watermark at Longmont City/County: Boulder County Sampling Date: March 6, 2020

Applicant/Owner: Thompson Thrift Development, Inc. State: CO Sampling Point: DP4

Investigator(s): A. Hennage and J. Snieder Section, Township, Range: Section 22, T3N, R69W

Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2

Subregion (LRR): G Lat: 40.205660 Long: -105.097537 Datum: NAD 83

Soil Map Unit Name: Colby silty clay loam, 1 to 3 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒
Hydric Soil Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 X 5)			
1. Bromus inermis	60	Y	UPL
2. Rumex crispus	5	N	FAC
3. Lactuca serriola	10	N	FAC
4. Cirsium arvense	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	80 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0[1]

☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL

Sampling Point: DP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR F**)
- ☐ 1 cm Muck (A9) (**LRR F, G, H**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Did not dig due to abrupt transition to uplands and prevalence of non hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Watermark at Longmont City/County: Boulder County Sampling Date: March 6, 2020

Applicant/Owner: Thompson Thrift Development, Inc. State: CO Sampling Point: DP5

Investigator(s): A. Hennage and J. Snieder Section, Township, Range: Section 22, T3N, R69W

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 4

Subregion (LRR): G Lat: 40.206331 Long: -105.097219 Datum: NAD 83

Soil Map Unit Name: Nunn clay loam, 0 to 1 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [x] No [ ] (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes [x] No [ ]

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes [x] No [ ]	**Is the Sampled Area within a Wetland?** Yes [x] No [ ]
Hydric Soil Present?	Yes [x] No [ ]	
Wetland Hydrology Present?	Yes [x] No [ ]	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 X 5)			
1. Phalaris arundinacea	100	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [ ] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes [x] No [ ]

Remarks:

SOIL

Sampling Point: DP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	95	7.5YR 4/6	5	C	M	SiClLo	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR F**)
- ☐ 1 cm Muck (A9) (**LRR F, G, H**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Watermark at Longmont City/County: Boulder County Sampling Date: March 6, 2020

Applicant/Owner: Thompson Thrift Development, Inc. State: CO Sampling Point: DP6

Investigator(s): A. Hennage and J. Snieder Section, Township, Range: Section 22, T3N, R69W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR): G Lat: 40.206434 Long: -105.097516 Datum: NAD 83

Soil Map Unit Name: Nunn clay loam, 0 to 1 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 X 5)			
1. Rumex crispus	10	N	FAC
2. Typha latifolia	5	N	OBL
3. Phalaris arundinacea	20	Y	FACW
4. Persicaria lapathifolia	15	N	OBL
5. Eleocharis palustris	50	Y	OBL
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 100

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOIL

Sampling Point: DP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					SiCl	
2-12	10YR 3/2	85	7.5YR 3/4	15	C	M	SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR F**)
- ☐ 1 cm Muck (A9) (**LRR F, G, H**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

LSC TRANSPORTATION CONSULTANTS, INC.

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

TRANSPORTATION
CONSULTANTS, INC.

February 23, 2021

Ms. Jessica Tuttle
Watermark Residential
111 Monument Circle, Suite 1500
Indianapolis, IN 46204

Re: Watermark Notch 66
Longmont, CO
LSC #200340

Dear Ms. Tuttle:

In response to your request, LSC Transportation Consultants, Inc. has prepared this updated traffic impact analysis for the proposed Watermark Notch 66 development to address City comments. As shown on Figure 1, the site is located east of Erfert Street and north of Ute Highway (SH 66) in Longmont, Colorado.

REPORT CONTENTS

The report contains the following: the existing roadway and traffic conditions in the vicinity of the site including the lane geometries, traffic controls, posted speed limits, etc.; the existing weekday peak-hour traffic volumes; the existing daily traffic volumes in the area; the typical weekday site-generated traffic volume projections for the site; the assignment of the projected traffic volumes to the area roadways; the projected long-term background and resulting total traffic volumes on the area roadways; the site's projected traffic impacts; and any recommended roadway improvements to mitigate the site's traffic impacts or the impacts from growth in background traffic. The scope of work is based on the attached scoping form approved by City staff.

LAND USE AND ACCESS

The residential portion of the site is proposed to include about 336 apartment units. The commercial portion of the site is proposed to include a 4,000 square-foot convenience store with 12 vehicle fueling positions, a 5,500 square-foot fast-food restaurant with drive-through service, and 8,000 square feet of inline retail space. Access is proposed from Erfert Street and Park Ridge Avenue. Figure 2 shows the conceptual site plan. The site was previously planned as a big box anchored shopping center.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The major roadways in the site's vicinity are shown on Figure 1 and are described below.

- **Main Street (US 287)** is a north-south, four-lane regional arterial west of the site. The intersections with Ute Highway and Park Ridge Avenue are signalized with auxiliary turn lanes. The posted speed limit in the vicinity of the site is 55 mph south of Park Ridge Avenue and 65 mph north of Park Ridge Avenue. The *SH 66 PEL Study* recommends grade separation at the Main Street/Ute Valley intersection by 2040.

- **Ute Highway (SH 66)** is an east-west, four-lane regional arterial roadway south of the site. The intersections with Main Street and Erfert Street are signalized with auxiliary lanes. The posted speed limit in the vicinity of the site is 55 mph. The *SH 66 PEL Study* recommends grade separation at the Main Street/Ute Valley intersection by 2040.

- **Erfert Street** is a north-south, three-lane roadway west of the site. The intersection with Ute Highway is signalized and the intersection with Park Ridge Avenue is all-way stop controlled. The posted speed limit in the vicinity of the site is 30 mph.

- **Park Ridge Avenue** is an east-west, three-lane roadway north of the site. The intersection with Main Street is signalized with auxiliary turn lanes and the intersection with Erfert Street is all-way stop controlled. The posted speed limit in the vicinity of the site is 30 mph.

Existing Traffic Conditions

Figure 3 shows the existing lane geometries, traffic controls, posted speed limits, and traffic volumes in the site's vicinity on a typical weekday. The weekday peak-hour traffic volumes and daily traffic counts are from the attached traffic counts conducted by Counter Measures in June, 2020.

2023 and 2040 Background Traffic

Figure 4 shows the estimated 2023 background traffic and Figure 5 shows the estimated 2040 background traffic. The 2023 background traffic is based on an annual growth rate of four percent to maintain a conservative analysis. The 2040 background traffic is based on the projected 2040 traffic volumes in Figure 6 of the *SH 66 Access Control Plan* which assumes the existing right-in/right-out access to the west of Erfert Street is closed.

Existing, 2023, and 2040 Background Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay and LOS F is indicative of a high level of congestion or delay. Attached are specific level of service definitions for signalized and unsignalized intersections.

The intersections in Figures 3, 4, and 5 were analyzed as appropriate to determine the existing, 2023 background, and 2040 background levels of service using Synchro. Table 1 shows the level of service analysis results. The level of service reports are attached.

- **Main Street (US 287)/Park Ridge Avenue:** This signalized intersection currently operates at an overall LOS "A" during the morning peak-hour and LOS "B" during the afternoon peak-hour and is expected to do so through 2023. By 2040, the morning peak-hour is ex-

pected to operate at LOS "B" and the afternoon peak-hour is expected to operate at LOS "C".

- **Park Ridge Avenue/Erfert Street/Copper Peak Apartments:** This all-way stop controlled intersection currently operates at an overall LOS "A" during both morning and afternoon peak-hours and is expected to do so through 2040.

- **Erfert Street/Walmart Access:** All movements at this unsignalized intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours through 2040.

- **Main Street (US 287)/Ute Highway (SH 66):** This signalized intersection currently operates at an overall LOS "C" during the morning peak-hour and LOS "D" during the afternoon peak-hour and is expected to do so through 2023. By 2040, both peak-hours are expected to operate at LOS "F". The *SH 66 PEL Study* recommends grade separation by 2040.

- **Ute Highway (SH 66)/Erfert Street:** This signalized intersection currently operates at an overall LOS "A" during both morning and afternoon peak-hours and is expected to do so through 2040.

TRIP GENERATION

Table 2 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).

The residential portion of the site is projected to generate about 2,460 vehicle-trips on the average weekday, with about half entering and half exiting 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 40 vehicles would enter and about 132 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:00 p.m., about 146 vehicles would enter and about 86 vehicles would exit.

The commercial portion of the site is projected to generate about 7,019 vehicle-trips on the average weekday, with about half entering and half exiting 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 284 vehicles would enter and about 277 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:00 p.m., about 272 vehicles would enter and about 269 vehicles would exit. These estimates will be reduced by passby trips as shown in Table 2.

Table 2 also shows the currently proposed land uses are expected to generate considerably fewer trips than the previously planned big box anchored shopping center land use.

TRIP DISTRIBUTION

Figure 6 shows the estimated directional distribution of the site-generated traffic volumes on the area roadways. The estimates were based on the location of the site with respect to the re-

gional population, employment, and activity centers; the site's proposed land use; and coordination with City staff.

TRIP ASSIGNMENT

Figure 7a shows the estimated residential site-generated traffic volumes based on the residential trip generation estimate (from Table 2) and the directional distribution in Figure 6 assuming only the residential portion of the site is developed.

Figure 7b shows the estimated residential site-generated traffic volumes based on the residential trip generation estimate (from Table 2) and the directional distribution in Figure 6 assuming the overall site is developed.

Figure 7c shows the estimated commercial primary site-generated traffic volumes based on the commercial primary trip generation estimate (from Table 2) and the directional distribution in Figure 6.

Figure 7d shows the estimated passby commercial site-generated traffic volumes based on the commercial passby trip generation estimate (from Table 2).

2023 AND 2040 TOTAL TRAFFIC

Figure 8a shows the 2023 total traffic with only residential development which is the sum of 2023 background traffic volumes (from Figure 4) and the residential site-generated traffic volumes (from Figure 7a). Figure 8b shows the recommended lane geometry and traffic control.

Figure 8c shows the 2023 total traffic with full site development which is the sum of 2023 background traffic volumes (from Figure 4) and the site-generated traffic volumes (from Figures 7b, 7c, and 7d). Figure 8d shows the recommended lane geometry and traffic control.

Figure 9a shows the 2040 total traffic which is the sum of 2040 background traffic volumes (from Figure 5) and the site-generated traffic volumes (from Figures 7b, 7c, and 7d). Figure 9b shows the 2040 recommended lane geometry and traffic control.

PROJECTED LEVELS OF SERVICE

The intersections in Figures 8a through 9b were analyzed to determine the 2023 and 2040 total traffic levels of service. Table 1 shows the level of service analysis results. The level of service reports are attached.

- **Main Street (US 287)/Park Ridge Avenue:** This signalized intersection is expected to operate at an overall LOS "C" or better during both morning and afternoon peak-hours through 2040.

- **Park Ridge Avenue/Erfert Street/Copper Peak Apartments:** All movements at this all-way stop-sign controlled intersection are expected to operate at LOS "A" during both morning and afternoon peak-hours through 2040.

- **Park Ridge Avenue/Site Access:** All movements at stop-sign controlled intersection are expected to operate at LOS "A" during both morning and afternoon peak-hours through 2040.

- **Erfert Street/Residential Site Access:** All movements at stop-sign controlled intersection are expected to operate at LOS "A" during both morning and afternoon peak-hours through 2040.

- **Erfert Street/Walmart Access/Commercial Site Access:** All movements at this stop-sign controlled intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours in 2023 with only residential development. The westbound approach is expected to operate at LOS "E" with commercial development in 2023 and LOS "F" with commercial development in 2040. This could likely be mitigated by the addition of a right-in/right-out access on SH 66 east of Erfert Street or roundabout control at the subject intersection.

- **Main Street (US 287)/Ute Highway (SH 66):** In 2023, this signalized intersection is expected to operate at an overall LOS "C" during the morning peak-hour and LOS "D" during the afternoon peak-hour. In 2040, both peak-hours are expected to operate at LOS "F". The *SH 66 PEL Study* recommends grade separation by 2040.

- **Ute Highway (SH 66)/Erfert Street:** This signalized intersection is expected to operate at an overall LOS "B" or better during both morning and afternoon peak-hours through 2040.

QUEUING ANALYSIS

Table 3 shows the estimated 95th percentile queue lengths at the signalized intersections. It also shows the existing and proposed turn lane lengths at these intersections.

RECOMMENDED IMPROVEMENTS FOR RESIDENTIAL PORTION OF THE SITE

The following improvements are recommended by 2023 within the study area:

1. A 100-foot westbound left-turn lane with a 100-foot transition taper is recommended on Park Ridge Avenue approaching Erfert Street.

2. A 100-foot southbound left-turn lane with a 100-foot transition taper is recommended on Erfert Street approaching the residential site access.

3. The eastbound left-turn lane and westbound right-turn lane at the Ute Highway (SH 66)/ Erfert Street intersection are substandard in length but will accommodate the additional residential trips. These lanes are recommended to be lengthened with commercial development.

RECOMMENDED IMPROVEMENTS FOR COMMERCIAL PORTION OF THE SITE

4. The existing westbound right-turn lane on Ute Highway (SH 66) should be lengthened from 300 feet to 380 feet plus a 220-foot transition taper by 2040 to meet the length requirement in the *State Highway Access Code*.

5. The existing eastbound left-turn lane on Ute Highway (SH 66) approaching Erfert Street is long enough to store the proposed residential queue length through 2040 and the commercial queue length through 2023 but does not meet the deceleration length requirements of the *State Highway Access Code*. This lane is back-to-back with the westbound left-turn lane to the west so cannot easily be lengthened. It may be possible to lengthen this lane by shifting/reconstructing the back-to-back raised median. The full length can likely be provided once the Main Street (US 287)/Ute Highway (SH 66) intersection to the west is grade-separated per the *SH 66 Access Control Plan*.

6. The southbound left-turn movement from Erfert Street to Ute Highway (SH 66) is expected to exceed the available queue length with commercial development. A dual left-turn lane is recommended with commercial development. This may require modifications to the existing traffic signal.

7. A 100-foot southbound left-turn lane with a 100-foot transition taper is recommended on Erfert Street approaching the commercial site access.

RECOMMENDED IMPROVEMENTS BY OTHERS (CITY AND/OR CDOT)

8. The Main Street (US 287)/Ute Highway (SH 66) intersection is planned to be grade-separated by others by 2040 per the *SH 66 Access Control Plan*. Depending on the timing of grade-separation it may be necessary to expand the northbound and southbound left-turn movements from single to dual left-turn lanes as shown in Figures 5 and 9b. The residential and commercial site-generated trips are expected to comprise only about 1.7 percent and 2.5 percent respectively of the 2040 total traffic at this intersection.

9. The right-in/right-out access on Ute Highway (SH 66) to the west of Erfert Street is assumed to be closed by others by 2040 per the *SH 66 Access Control Plan*.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

1. The residential portion of the site is projected to generate about 2,460 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, about 40 vehicles would enter and about 132 vehicles would exit the site. During the afternoon peak-hour, about 146 vehicles would enter and about 86 vehicles would exit.

2. The commercial portion of the site is projected to generate about 7,019 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, about 284 vehicles would enter and about 277 vehicles would exit the site. During the afternoon peak-hour, about 272 vehicles would enter and

about 269 vehicles would exit. These estimates will be reduced by passby trips as shown in Table 2.

Projected Levels of Service

3. The signalized intersections analyzed are expected to operate at an overall LOS "D" or better during both morning and afternoon peak-hours through 2040 with the following exception: The Main Street/Ute Highway intersection is expected to operate at LOS "F" in both peak-hours by 2040 with or without the addition of site traffic. The *SH 66 PEL Study* recommends grade separation by 2040.

4. All movements at the unsignalized controlled intersections are expected to operate at LOS "D" or better through 2040 with the following exception: The westbound approach at the Erfert Street/Walmart Access/Commercial Site Access intersection will likely operate at LOS "E" in 2023 and LOS "F" by 2040 with full commercial development. This can likely be mitigated by the addition of a right-in/right-out access on SH 66 east of Erfert Street or roundabout control at the subject intersection.

Recommendations

5. The recommended improvements are described above and shown in Figures 8b, 8d, and 9b and in Table 3.

* * * * *

We trust our findings will assist you in gaining approval of the proposed Watermark Notch 66 development. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By_____
Christopher S. McGranahan, PE, PTOE
Principal

2-23-21

CSM/wc

Enclosures: Tables 1 - 3
Figures 1 - 9b
Scoping Form
Traffic Count Reports
Level of Service Definitions
Level of Service Reports
Queuing Reports

Table 1 (Page 1 of 2)
Intersection Levels of Service Analysis
Watermark Notch 66
Longmont, CO
LSC #200340; February, 2021

Intersection Location	Traffic Control	Existing Traffic Level of Service AM	Existing Traffic Level of Service PM	2023 Background Traffic Level of Service AM	2023 Background Traffic Level of Service PM	2023 Total Traffic Residential Only Level of Service AM	2023 Total Traffic Residential Only Level of Service PM	2023 Total Traffic Full Buildout Level of Service AM	2023 Total Traffic Full Buildout Level of Service PM	2040 Background Traffic Level of Service AM	2040 Background Traffic Level of Service PM	2040 Total Traffic Level of Service AM	2040 Total Traffic Level of Service PM
Main Street/Park Ridge Avenue	Signalized												
EB Left		D	C	C	C	C	C	C	C	D	C	D	C
EB Through/Right		A	C	C	C	C	C	C	C	C	C	C	C
WB Left		D	D	D	D	D	D	D	D	D	D	D	D
WB Through/Right		A	B	B	B	B	B	B	B	B	B	B	B
NB Left		A	A	A	A	A	A	A	A	A	A	A	A
NB Through		A	B	A	B	B	C	B	C	B	D	B	D
NB Right		A	A	A	A	A	A	A	A	A	A	A	A
SB Left		A	A	A	A	A	B	A	B	A	A	A	B
SB Through		A	A	A	A	A	A	A	A	B	B	B	B
SB Right		A	A	A	A	A	A	A	A	A	A	A	A
Entire Intersection Delay (sec /veh)		8.4	14.9	9.4	15.5	10.2	16.9	10.5	17.2	14.9	29.1	15.4	33.6
Entire Intersection LOS		A	B	A	B	B	B	B	B	B	C	B	C
Park Ridge Avenue/Erfert Street/Copper Peak Apartments	AWSC												
NB Left		A	A	A	A	A	A	A	A	A	A	A	A
NB Through or Through/Right		A	A	A	A	A	A	A	A	A	A	A	A
EB Left		A	A	A	A	A	A	A	A	A	A	A	A
EB Right or Through/Right		A	A	A	A	A	A	A	A	A	A	A	A
WB Left		--	--	--	--	A	A	A	A	A	A	A	A
WB Through/Right		--	--	--	--	A	A	A	A	A	A	A	A
SB Approach		A	A	A	A	A	A	A	A	A	A	A	A
Entire Intersection Delay (sec /veh)		7.3	7.5	7.5	7.5	7.7	7.9	7.7	7.9	7.6	7.8	7.9	8.2
Entire Intersection LOS		A	A	A	A	A	A	A	A	A	A	A	A
Park Ridge Avenue/Site Access	TWSC												
NB Approach		--	--	--	--	A	A	A	A	--	--	A	A
SB Approach		--	--	--	--	--	--	--	--	--	--	A	A
Critical Movement Delay		--	--	--	--	8.8	8.8	8.8	8.8	--	--	9.5	9.8
Erfert Street/Residential Site Access	TWSC												
WB Approach		--	--	--	--	A	A	A	A	--	--	A	B
SB Left		--	--	--	--	A	A	A	A	--	--	A	A
Critical Movement Delay		--	--	--	--	9.3	9.8	9.2	9.7	--	--	9.6	10.0

Table 1 (Page 2 of 2)
Intersection Levels of Service Analysis
Watermark Notch 66
Longmont, CO
LSC #200340; February, 2021

Intersection Location	Traffic Control	Existing Traffic Level of Service AM	Existing Traffic Level of Service PM	2023 Background Traffic Level of Service AM	2023 Background Traffic Level of Service PM	2023 Total Traffic Residential Only Level of Service AM	2023 Total Traffic Residential Only Level of Service PM	2023 Total Traffic Full Buildout Level of Service AM	2023 Total Traffic Full Buildout Level of Service PM	2040 Background Traffic Level of Service AM	2040 Background Traffic Level of Service PM	2040 Total Traffic Level of Service AM	2040 Total Traffic Level of Service PM
Erfert Street/Walmart Access/Commercial Site Access	TWSC												
NB Left		A	A	A	A	A	A	A	A	A	A	A	A
EB Approach		A	A	A	A	A	A	B	B	A	B	B	B
WB Approach		--	--	--	--	--	--	C	E	--	--	E	F
SB Left		--	--	--	--	--	--	A	A	--	--	A	A
Critical Movement Delay		8.4	8.5	8.7	9.0	9.2	9.4	22.8	47.7	9.3	10.3	37.3	143.6
Main Street/Ute Highway	Signalized												
EB Left		D	D	D	E	D	E	D	E	F	F	F	F
EB Through		D	D	C	D	C	D	C	D	D	D	D	D
EB Right		A	A	A	A	A	A	A	A	A	A	A	A
WB Left		D	D	D	E	D	E	E	E	D	F	E	F
WB Through		D	D	D	D	D	D	D	D	D	D	D	D
WB Right		A	A	A	A	A	A	A	A	A	A	A	A
NB Left		B	C	B	C	B	C	B	C	D	D	D	D
NB Through		C	D	C	D	C	D	C	D	C	D	C	D
NB Right		A	A	A	A	A	A	A	A	A	A	A	A
SB Left		B	D	C	E	C	E	C	E	D	E	D	E
SB Through		C	C	C	C	D	C	D	C	D	D	D	D
SB Right		A	A	A	A	A	A	A	A	A	A	A	A
Entire Intersection Delay (sec /veh)		27.6	36.4	28.4	41.0	29.2	42.5	30.1	43.1	83.4	154.6	83.0	163.0
Entire Intersection LOS		C	D	C	D	C	D	C	D	F	F	F	F
Ute Highway/Erfert Street	Signalized												
EB Left		A	A	A	A	A	A	A	A	A	A	A	B
EB Through		A	A	A	A	A	A	A	A	A	A	A	A
WB Through		A	A	A	A	A	B	A	B	A	B	B	B
WB Right		A	A	A	A	A	A	A	A	A	A	A	A
SB Left		D	D	D	D	D	D	D	D	D	D	D	D
SB Right		A	A	A	A	A	A	A	A	A	A	A	A
Entire Intersection Delay (sec /veh)		4.1	7.1	4.8	7.5	6.1	8.7	7.9	9.0	5.1	8.4	8.9	12.2
Entire Intersection LOS		A	A	A	A	A	A	A	A	A	A	A	B

Table 2
ESTIMATED TRAFFIC GENERATION
Watermark Notch 66
Longmont, CO
LSC #200340; February, 2021

		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
PREVIOUSLY PROPOSED LAND USE											
Shopping Center	230.0 KSF	46.05	0.583	0.357	2.100	2.275	10,592	134	82	483	523
Super Convenience Market/Gas Station	4 KSF	837.58	41.570	41.570	34.640	34.640	3,350	166	166	139	139
Fast-Food Restaurant w/ Drive-Through	5.5 KSF	470.95	20.497	19.693	16.988	15.682	2,590	113	108	93	86
						Total =	**16,532**	**413**	**356**	**715**	**748**
CURRENTLY PROPOSED LAND USE											
Apartments [2]	336 DU [3]	7.32	0.118	0.394	0.435	0.256	2,460	40	132	146	86
Super Convenience Market/Gas Station [4]	4 KSF [5]	837.58	41.570	41.570	34.640	34.640	3,350	166	166	139	139
Fast-Food Restaurant w/ Drive-Through [6]	5.5 KSF [5]	470.95	20.497	19.693	16.988	15.682	2,590	113	108	93	86
Retail [7]	8.0 DU [3]	134.91	0.583	0.357	5.030	5.449	1,079	5	3	40	44
						Total =	**9,479**	**324**	**409**	**418**	**355**
						Passby Trips [8] =	**3,646**	**155**	**155**	**142**	**142**
						Primary Trips =	**5,833**	**169**	**254**	**276**	**213**

Notes:
(1) Source: *Trip Generation*, Institute of Transportation Engineers, 10th Edition, 2017.
(2) ITE Land Use No. 220 - Multi-family Housing (Low-Rise)
(3) DU - Dwelling Units
(4) ITE Land Use No. 960 - Super Convenience Market/Gas Station
(5) KSF = 1,000 square feet
(6) ITE Land Use No. 934 - Fast-Food Restaurant with Drive-Through
(7) ITE Land Use No. 820 - Shopping Center - formula rate for daily and PM peak-hour rates
(8) Passby trips are assumed to be 60% for gas station, 49% for fast-food restaurant, and 34% for retail.

Table 3
95th Percentile Queue Lengths
Watermark Notch 66
Longmont, CO
LSC #200340; February, 2021

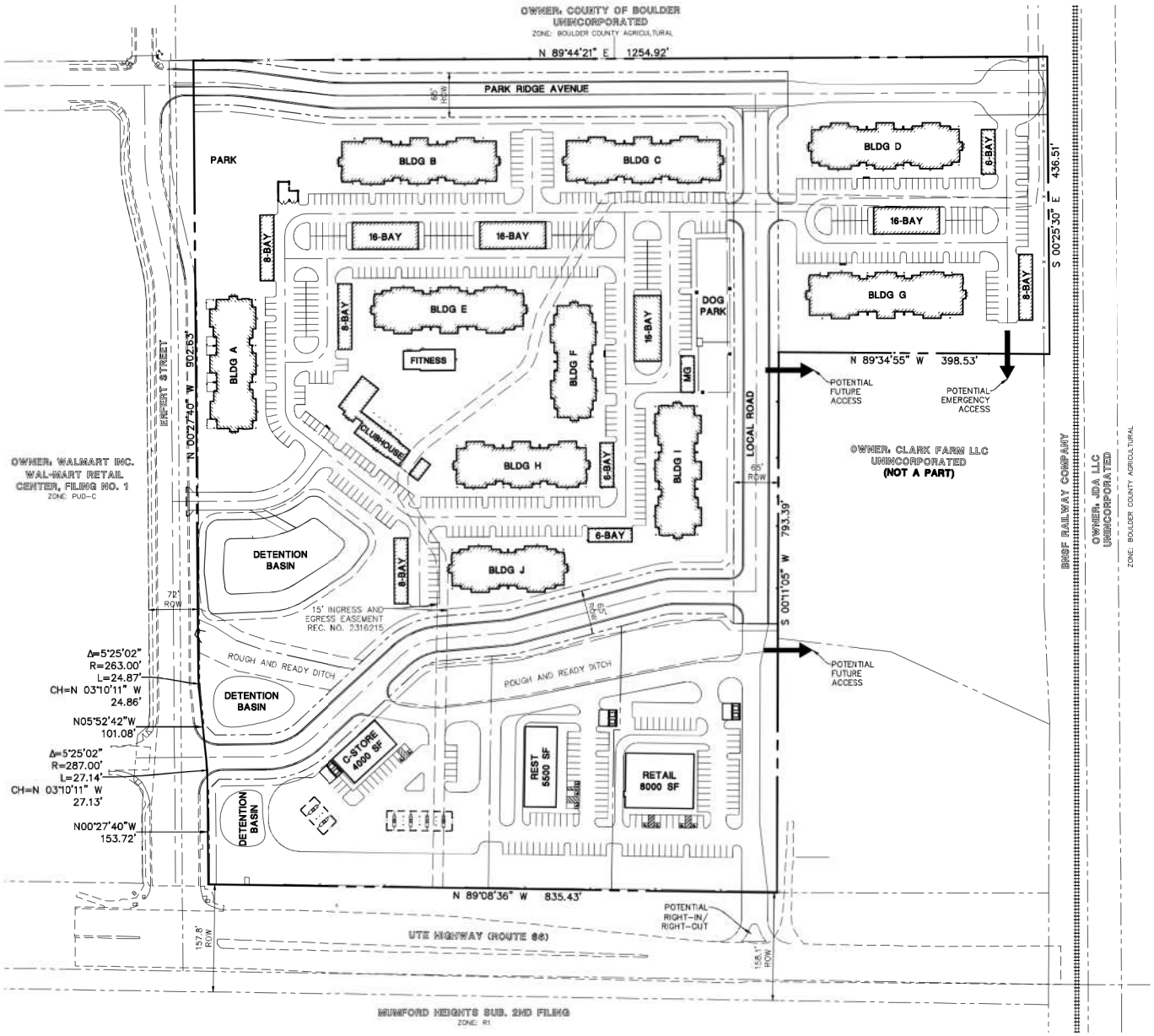
Intersection No. & Location	Turn Lane Lengths		Existing Traffic		2023 Background		2023 Total Residential Only		2023 Total Full Buildout		2040 Background		2040 Total	
	Existing (feet)	Proposed (feet)	AM Peak (feet)	PM Peak (feet)	AM Peak (feet)	PM Peak (feet)	AM Peak (feet)	PM Peak (feet)	AM Peak (feet)	PM Peak (feet)	AM Peak (feet)	PM Peak (feet)	AM Peak (feet)	PM Peak (feet)
Main Street/Park Ridge Avenue														
EB Left	70	70	8	7	8	7	8	7	8	7	13	12	13	12
EB Through/Right	--	--	0	28	21	28	21	28	21	28	28	32	27	32
WB Left	2 @ 140	2 @ 140	48	87	53	97	63	104	63	104	64	109	74	115
WB Through/Right	--	--	0	41	25	44	37	49	38	50	36	51	46	56
NB Left	135	135	m6	m6	m6	m5	m6	m5	m6	m5	m5	m5	m5	m6
NB Through	--	--	152	m619	176	m668	186	m661	199	m665	m309	m678	m313	m693
NB Right	Continuous	Continuous	47	m97	52	m102	56	m104	56	m103	m11	m29	m11	m35
SB Left	515	515	11	18	14	19	16	43	18	48	18	30	23	62
SB Through	--	--	272	202	333	232	333	232	337	235	1035	446	1051	452
SB Right	Continuous	Continuous	0	0	0	0	0	0	0	0	0	0	0	0
Main Street/Ute Highway														
EB Left	1 @ 450 1 @ 610	1 @ 450 1 @ 610	106	236	119	317	119	319	119	319	459	910	460	894
EB Through	--	--	95	165	102	185	103	194	112	208	232	491	248	501
EB Right	Continuous	Continuous	0	0	0	0	0	0	0	0	0	0	0	0
WB Left	1 @ 230 1 @ 650	1 @ 230 1 @ 650	127	168	142	221	161	241	208	274	165	327	240	378
WB Through	--	--	203	198	223	222	229	227	237	240	341	257	368	265
WB Right	Continuous	Continuous	0	0	0	0	0	0	0	0	0	0	0	0
NB Left	265	2 @ 265 (1)	72	98	85	102	86	102	87	102	166	201	166	194
NB Through	--	--	126	417	142	467	144	485	144	485	144	547	146	536
NB Right	Continuous	Continuous	0	0	0	0	0	0	0	0	0	0	0	0
SB Left	570	2 @ 570 (1)	122	291	141	314	140	314	149	318	m74	157	m78	157
SB Through	--	--	244	221	273	241	276	242	277	242	468	400	480	388
SB Right	Continuous	Continuous	0	0	0	0	0	0	0	0	351	0	362	0
Ute Highway/Erfert Street														
EB Left	105	650 (2)	7	19	8	21	13	36	43	66	10	24	45	157
EB Through	--	--	42	108	47	128	54	137	49	115	78	247	82	221
WB Through	--	--	132	180	157	214	173	234	169	220	247	316	294	345
WB Right	300	380 (3)	10	15	11	16	13	21	26	32	13	23	30	39
SB Left	150	2 @ 150 (4)	50	96	51	101	76	114	75	91	56	110	77	95
SB Right	150	150	0	0	0	0	0	0	0	0	0	0	0	0

Notes:
m = metered by adjacent signals
(1) A second northbound and southbound left-turn lane will likely be needed over time if the planned grade-separation does not occur.
(2) This lane is sufficient to accommodate the existing and 2023 total traffic queue lengths but does not meet the deceleration lane requirement of the State Highway Access Code. The lane is back-to-back with the WB left-turn lane at Main Street/Ute Highway. The lane will likely need to be lengthened for commercial development or when the grade-separation to the west occurs.
(3) The deceleration lane length required for 55 mph is 380 feet plus a 220-foot transition taper so this lane will need to be extended over time. The lengthening is recommended to occur with commercial development.
(4) This lane is sufficient to accommodate the projected 2023 total traffic residential only queue lengths but will likely need to be converted to a dual left-turn lane with commercial development.

Figure 1

Vicinity Map

Watermark Longmont (LSC #200340)



Approximate Scale
Scale: NTS

Figure 2

Site Plan

Watermark Longmont (LSC #200340)

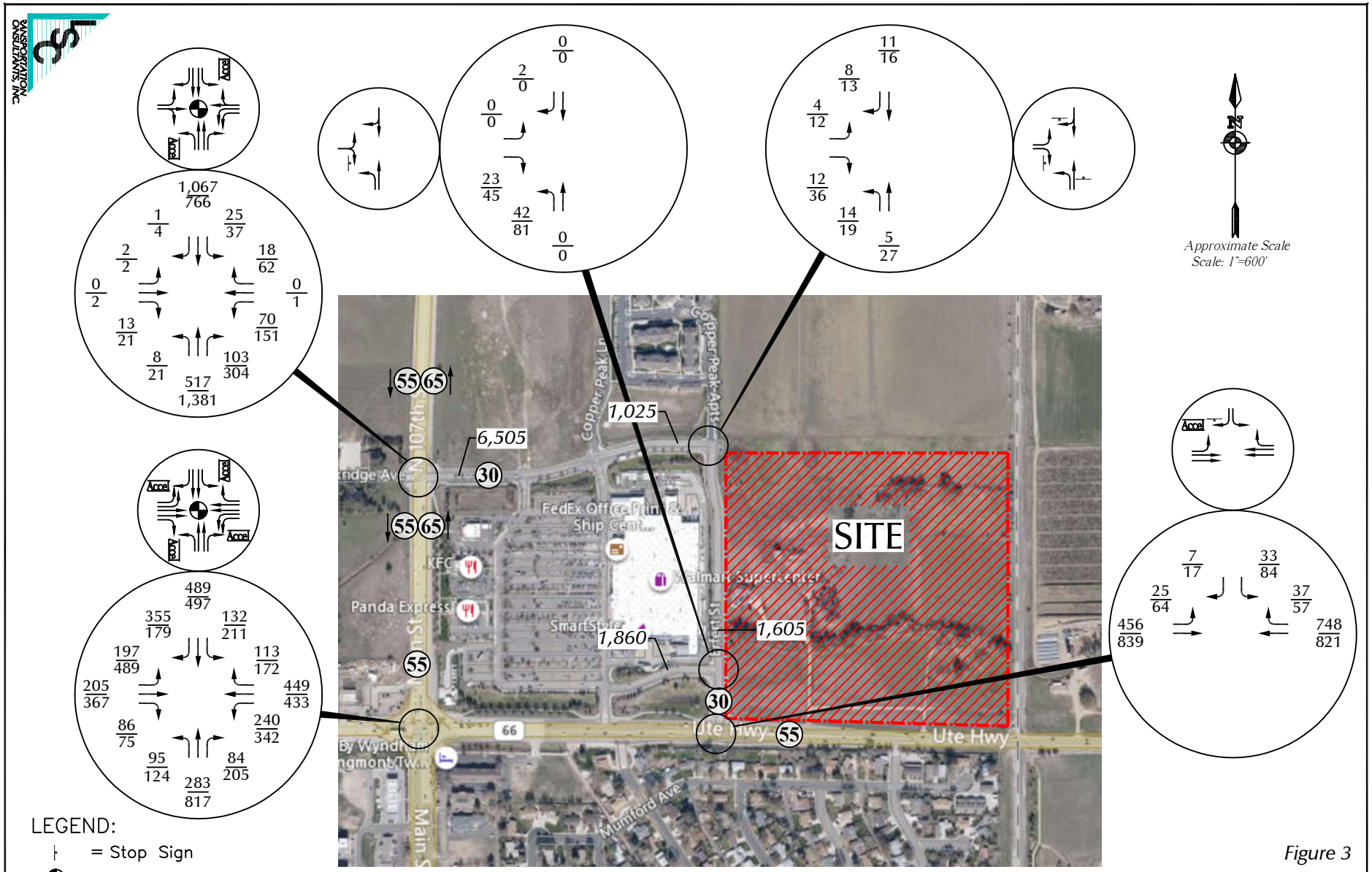
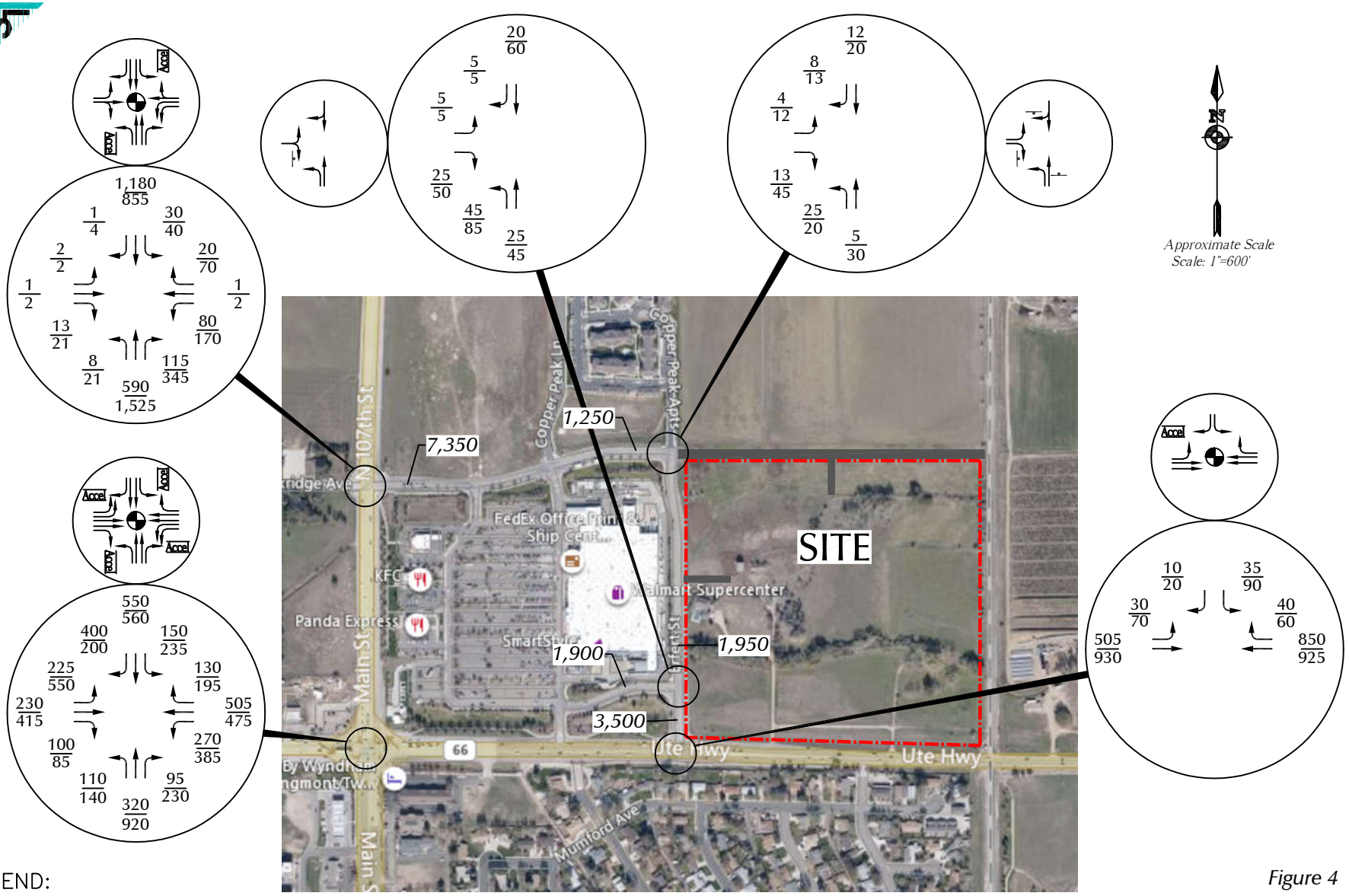


Figure 3

Existing Traffic, Lane Geometry and Traffic Control

Watermark Longmont (LSC #200340)



LEGEND:

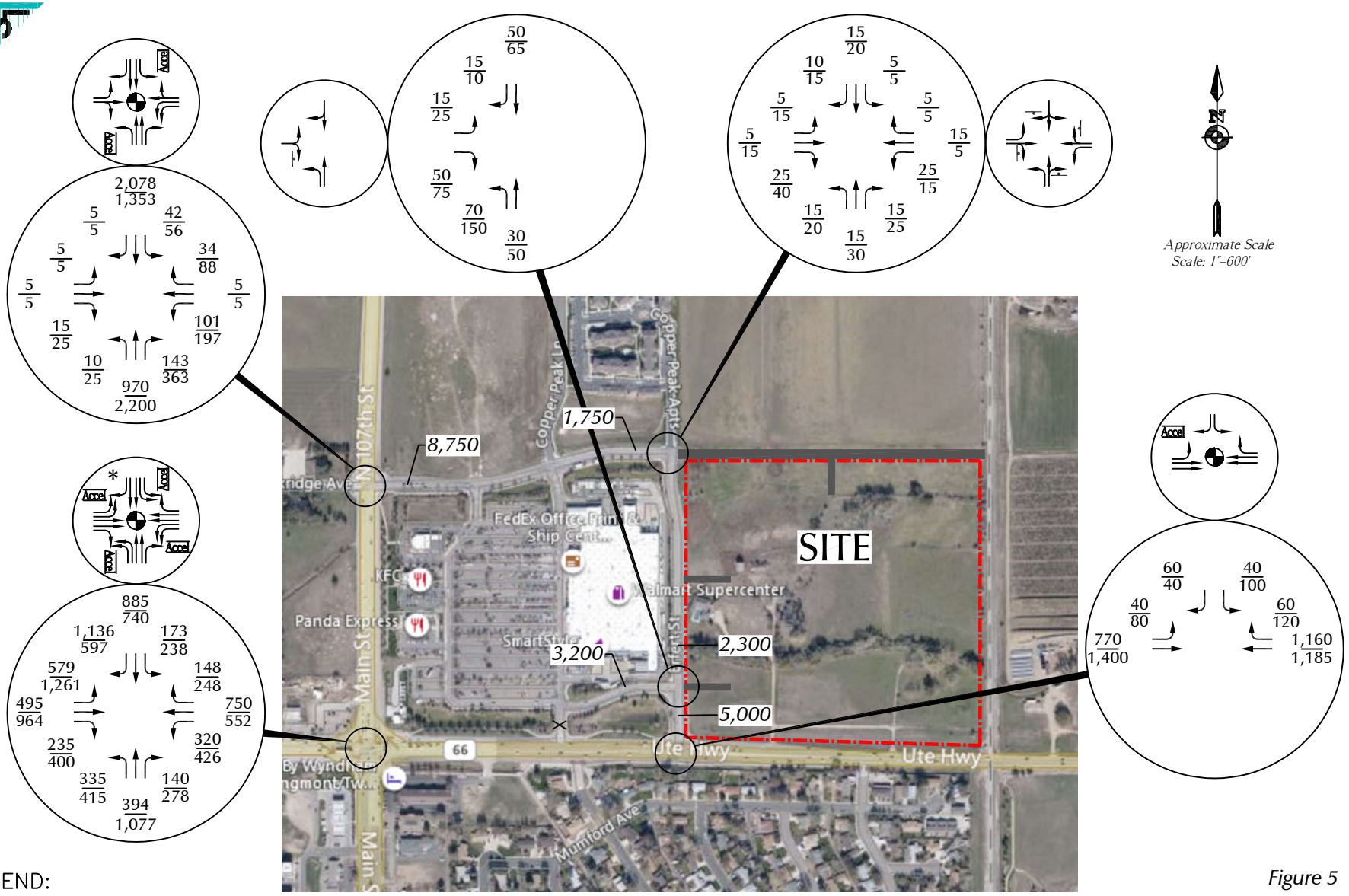
- = Stop Sign
- = Traffic Signal
- 26/35 = AM Peak Hour Traffic / PM Peak Hour Traffic
- 1,000 = Average Daily Traffic

Note: Assumes three years of growth at an annual rate of four percent to maintain a conservative analysis.

Figure 4

Year 2023 Background Traffic, Lane Geometry and Traffic Control

Watermark Longmont (LSC #200340)



LEGEND:

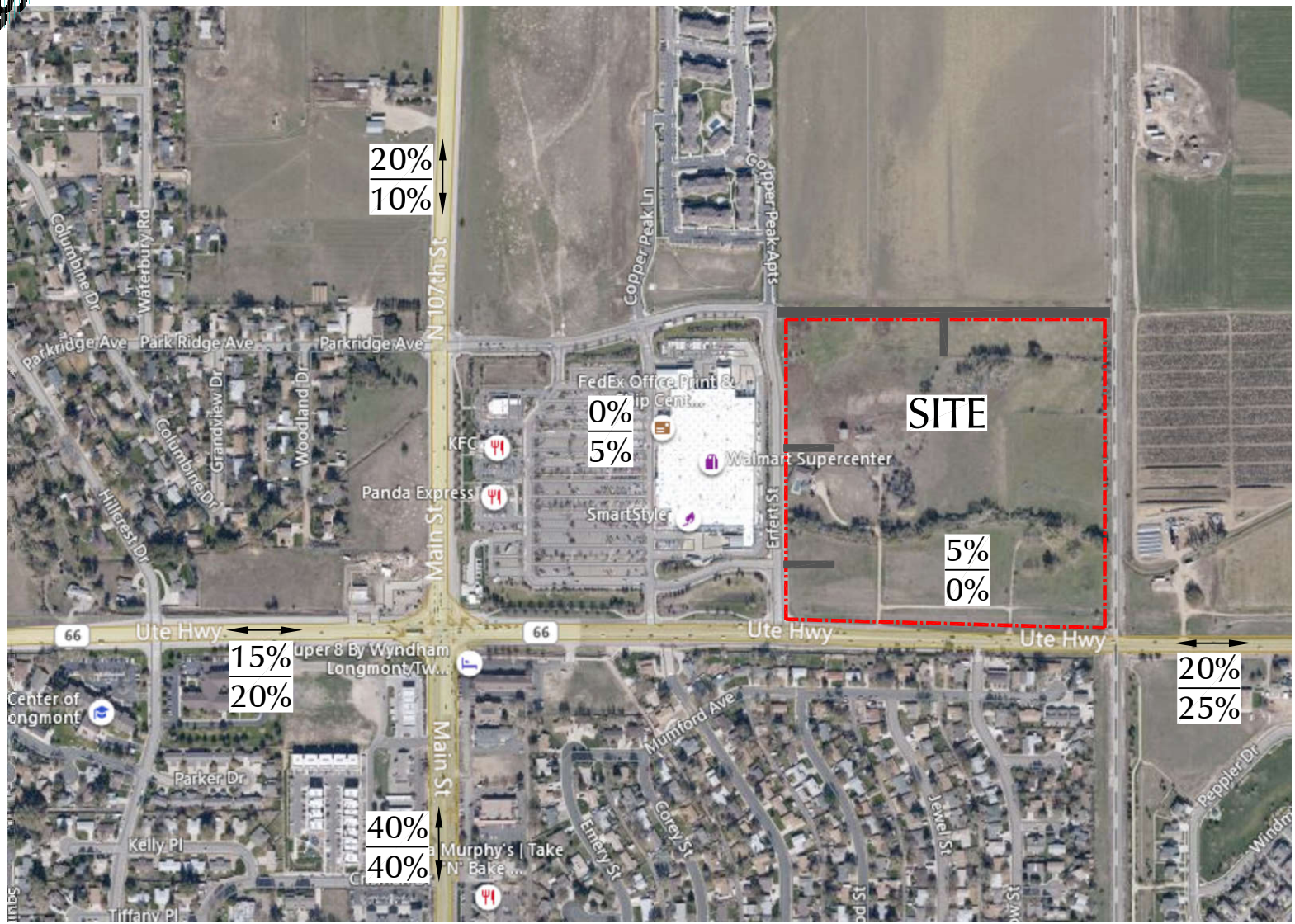
- ⊦ = Stop Sign
- ◒ = Traffic Signal
- 26/35 = AM Peak Hour Traffic / PM Peak Hour Traffic
- 1,000 = Average Daily Traffic

* The CDOT SH 66 PEL Study recommends grade separation by 2040.

Figure 5

Year 2040 Background Traffic, Lane Geometry and Traffic Control

Watermark Longmont (LSC #200340)



Approximate Scale
Scale: 1"=600'

LEGEND:

5% / 5% = Residential Percent Directional Distribution / Commercial Percent Directional Distribution

Figure 6

Directional Distribution of Site-Generated Traffic

Watermark Longmont (LSC #200340)

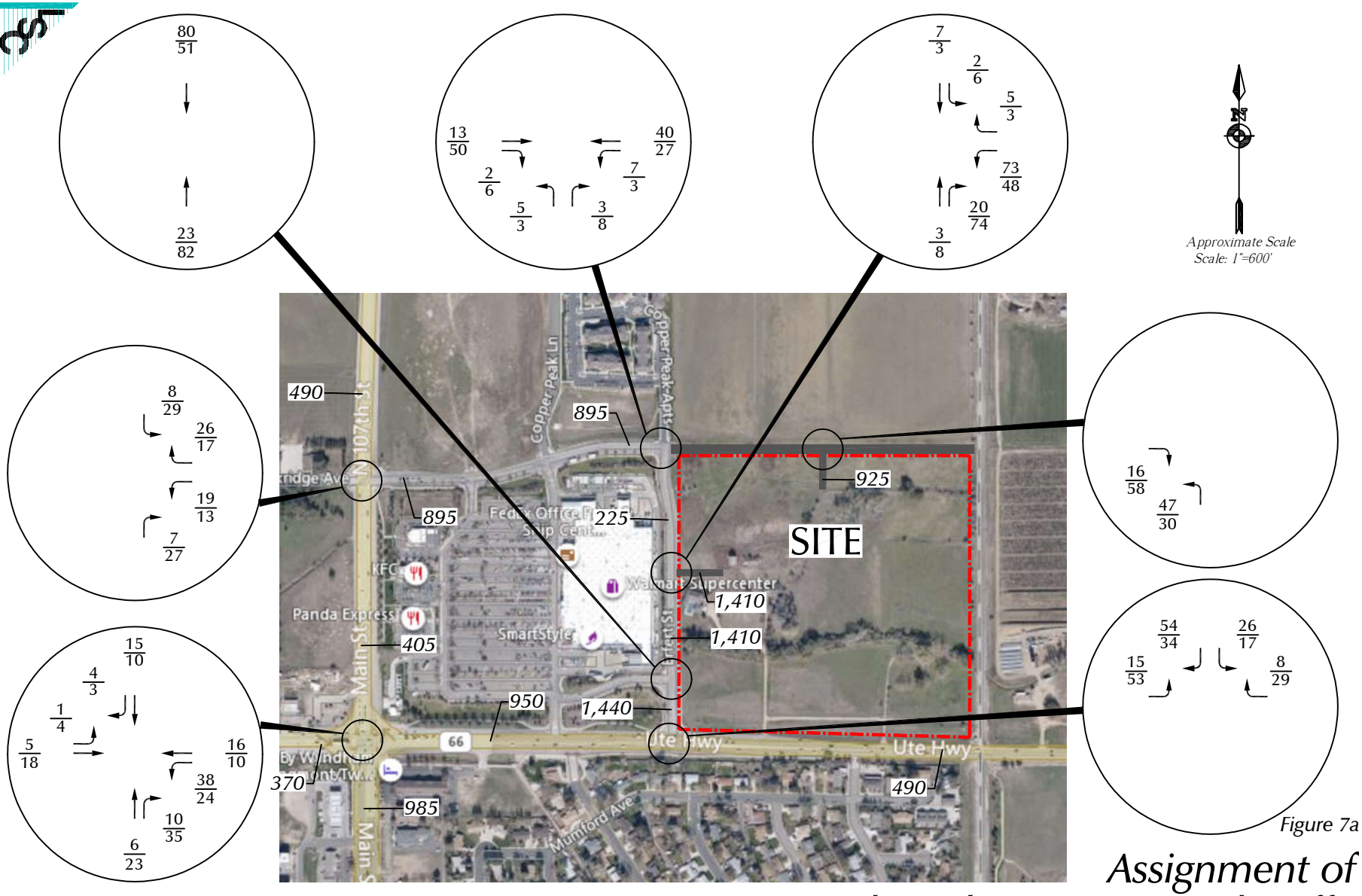


Figure 7a

Assignment of Residential Site-Generated Traffic without Commercial Development

Watermark Longmont (LSC #200340)

LEGEND:

$\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

1,000 = Average Daily Traffic

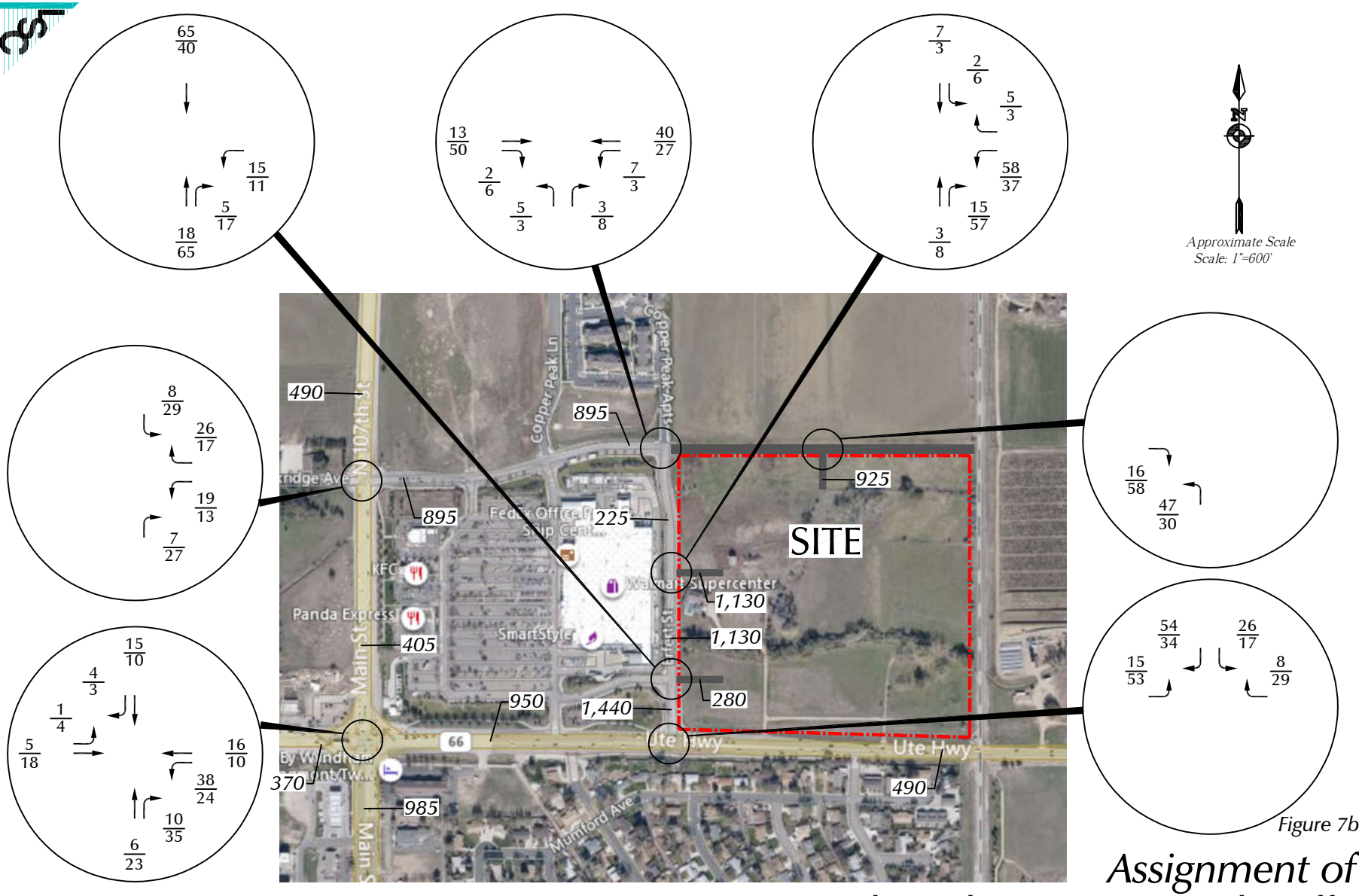


Figure 7b

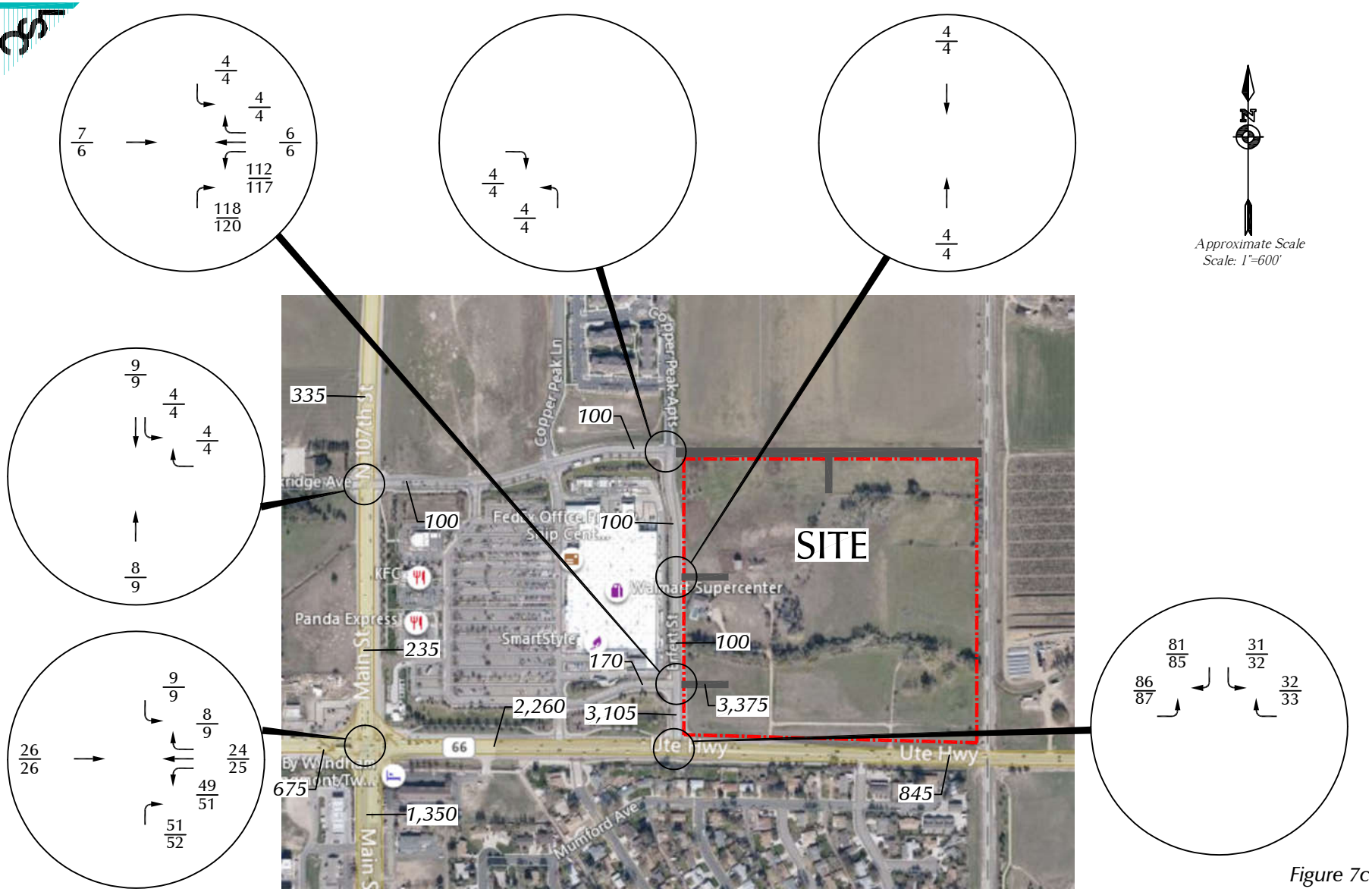
Assignment of Residential Site-Generated Traffic with Commercial Development

Watermark Longmont (LSC #200340)

LEGEND:

$\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

1,000 = Average Daily Traffic



LEGEND:

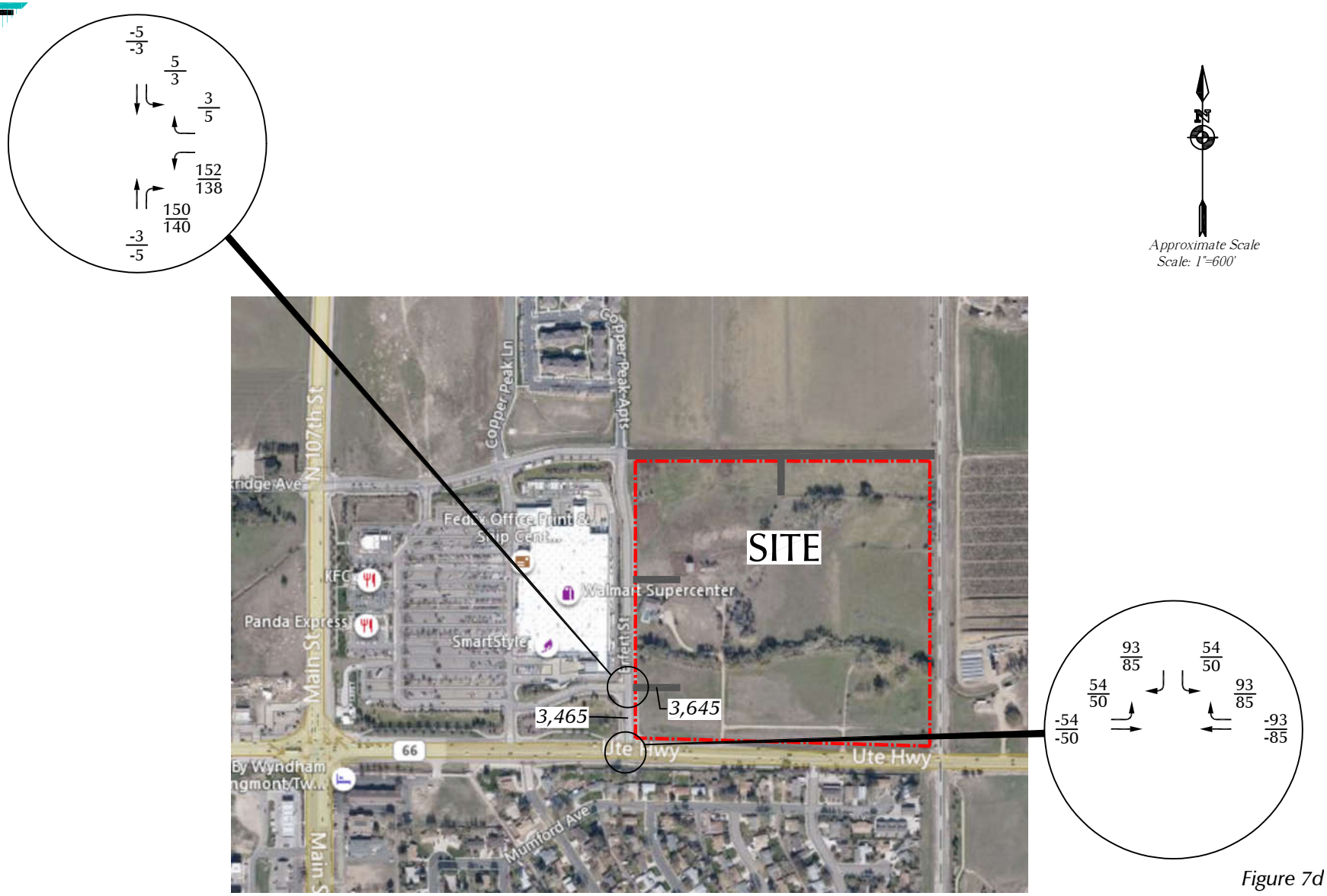
$\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

1,000 = Average Daily Traffic

Figure 7c

Assignment of Primary Commercial Site-Generated Traffic

Watermark Longmont (LSC #200340)



Note: Assumes 60% are right-in/right-out trips from SH 66, 35% are left-in/left-out trips from SH 66 and 5% are from Erfert Street.

LEGEND:

$\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

1,000 = Average Daily Traffic

Figure 7d

Assignment of Passby Commercial Site-Generated Traffic

Watermark Longmont (LSC #200340)

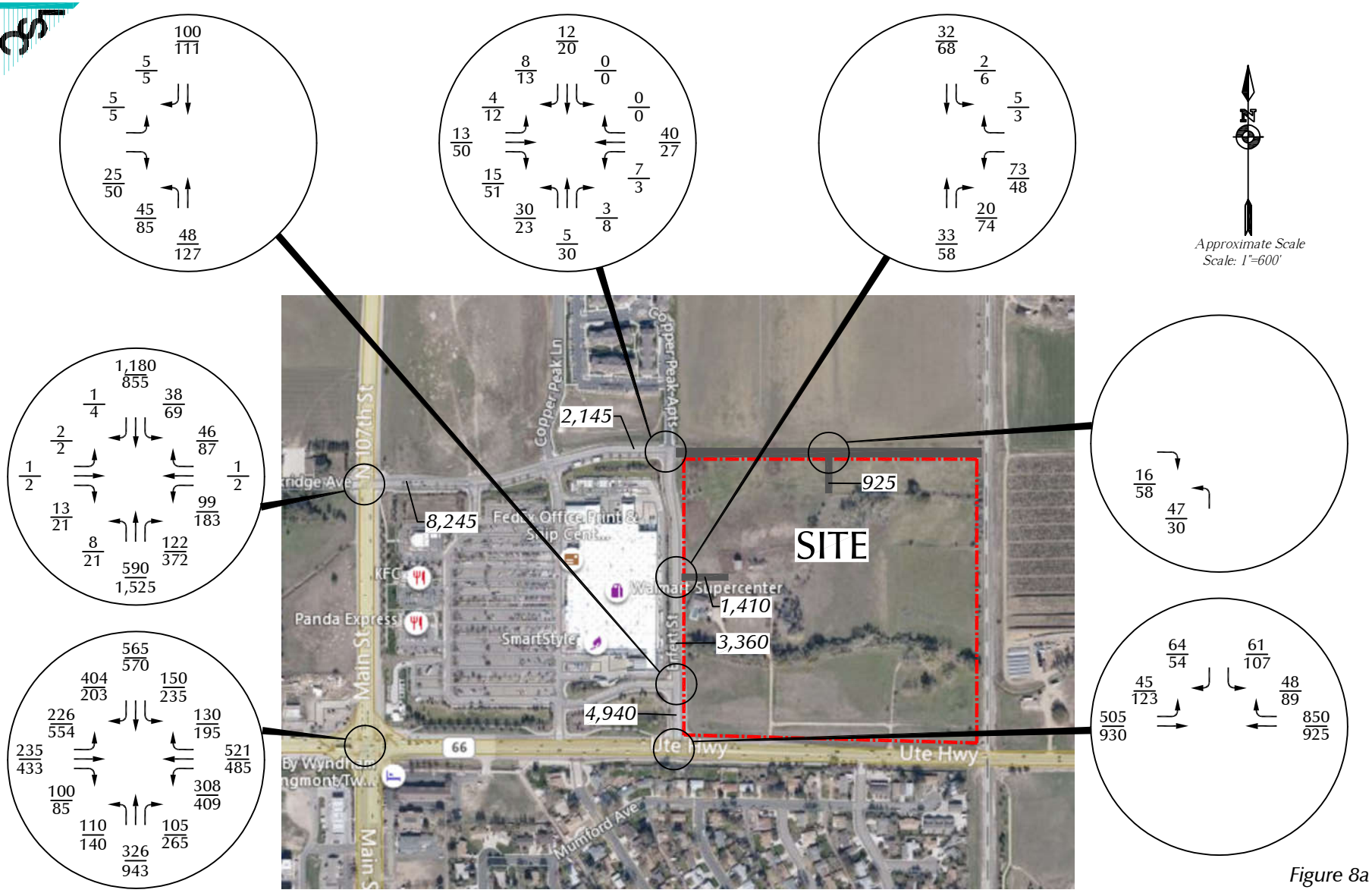


Figure 8a

Note: These volumes are the sum of the volumes in Figure 4 and Figure 7a.

LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic

1,000 = Average Daily Traffic

Year 2023 Total Traffic w/ Only Residential Portion of Site

Watermark Longmont (LSC #200340)

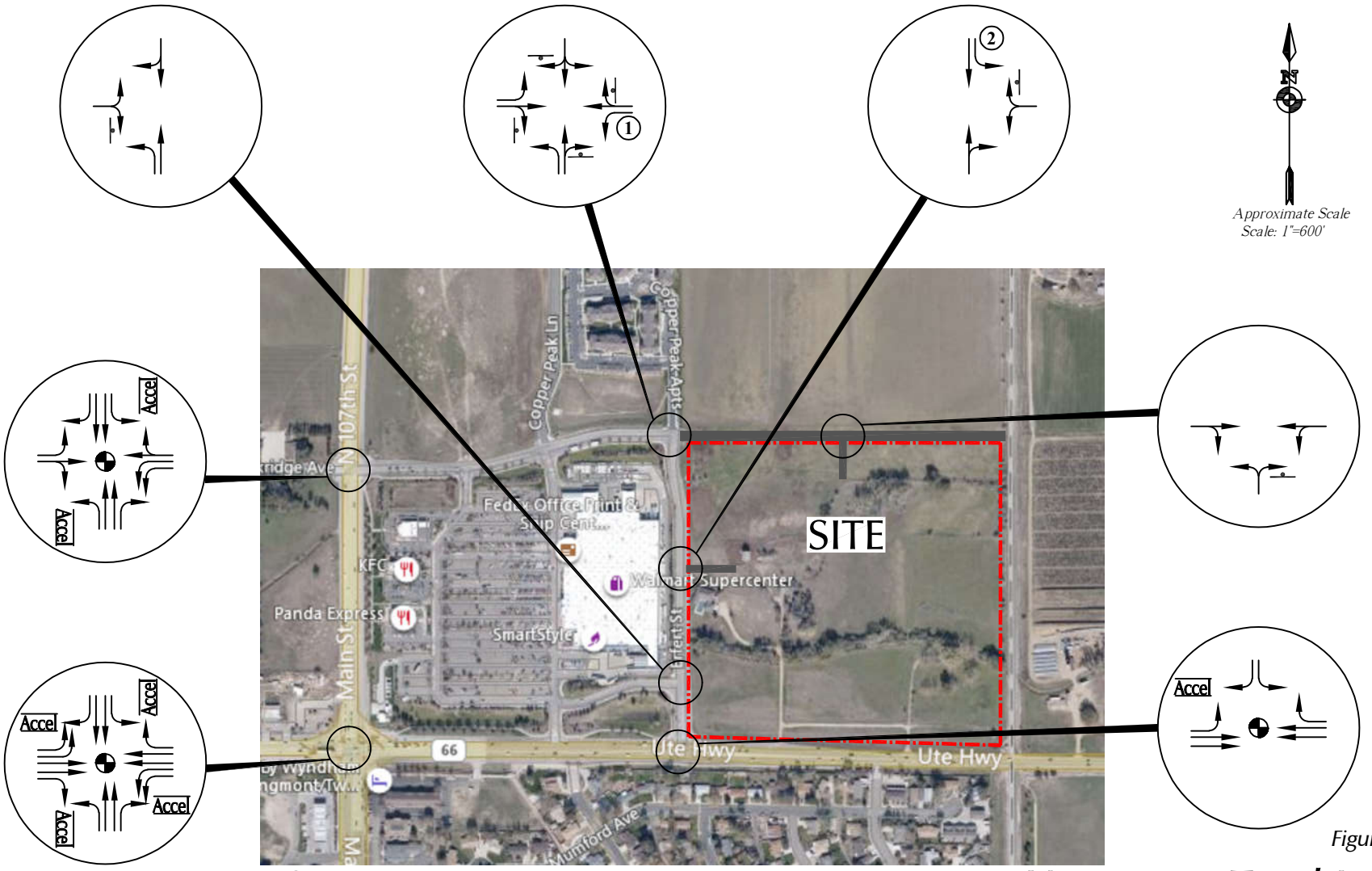


Figure 8b

Year 2023 Total Lane Geometry and Traffic Control w/ Only Residential Portion of Site

Watermark Longmont (LSC #200340)

① WB LT = 100 feet + 100-foot taper

② SB LT = 100 feet + 100-foot taper

LEGEND:

= Stop Sign

= Traffic Signal

Note: Erfert Street is an existing three-lane section so the recommended southbound left turn lanes at the site access can be provided by restriping Erfert Street

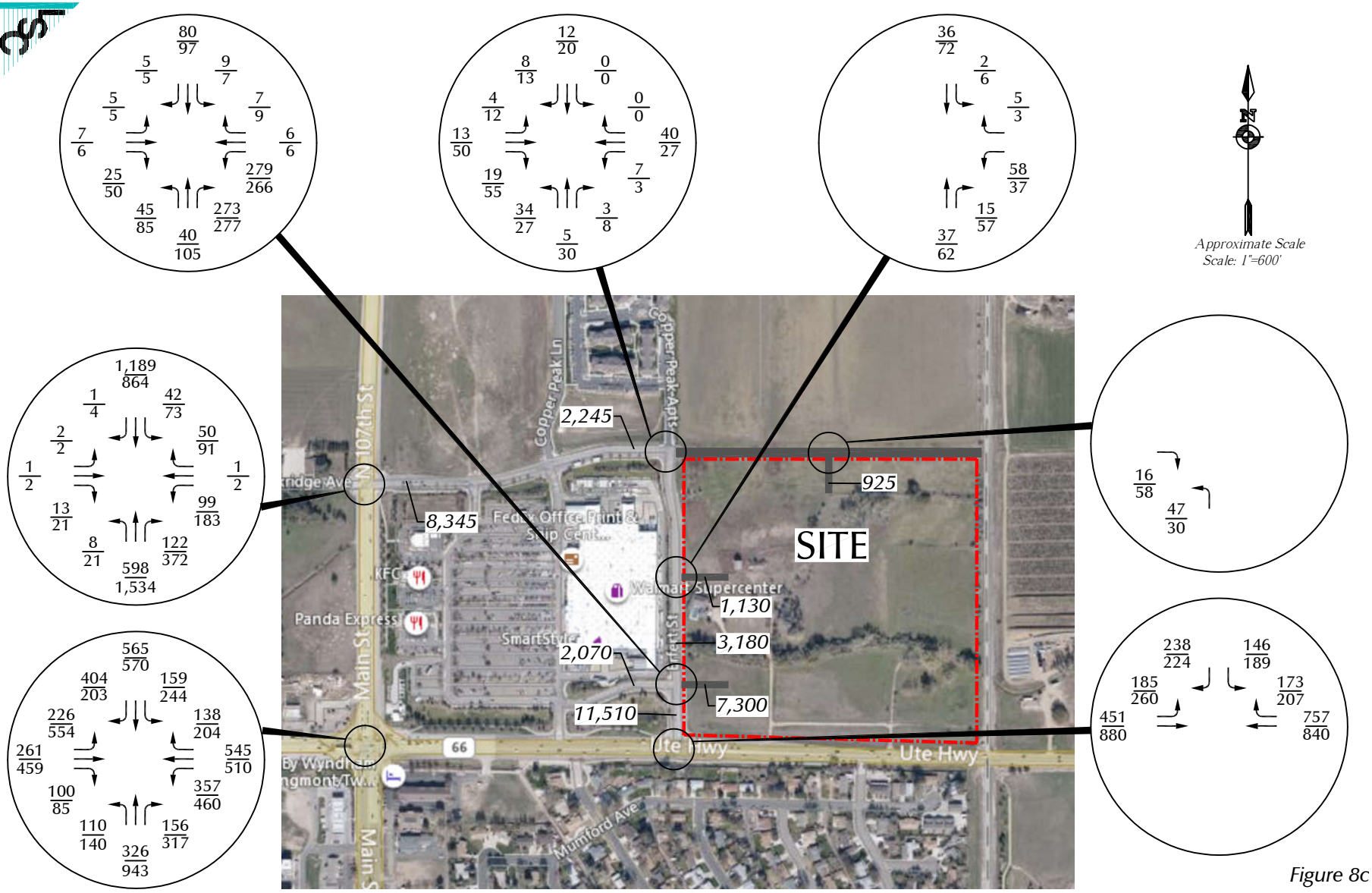


Figure 8c

Note: These volumes are the sum of the volumes in Figure 4, Figure 7b, Figure 7c and Figure 7d.

LEGEND:

$\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

1,000 = Average Daily Traffic

Year 2023 Total Traffic w/ Full Site Buildout

Watermark Longmont (LSC #200340)

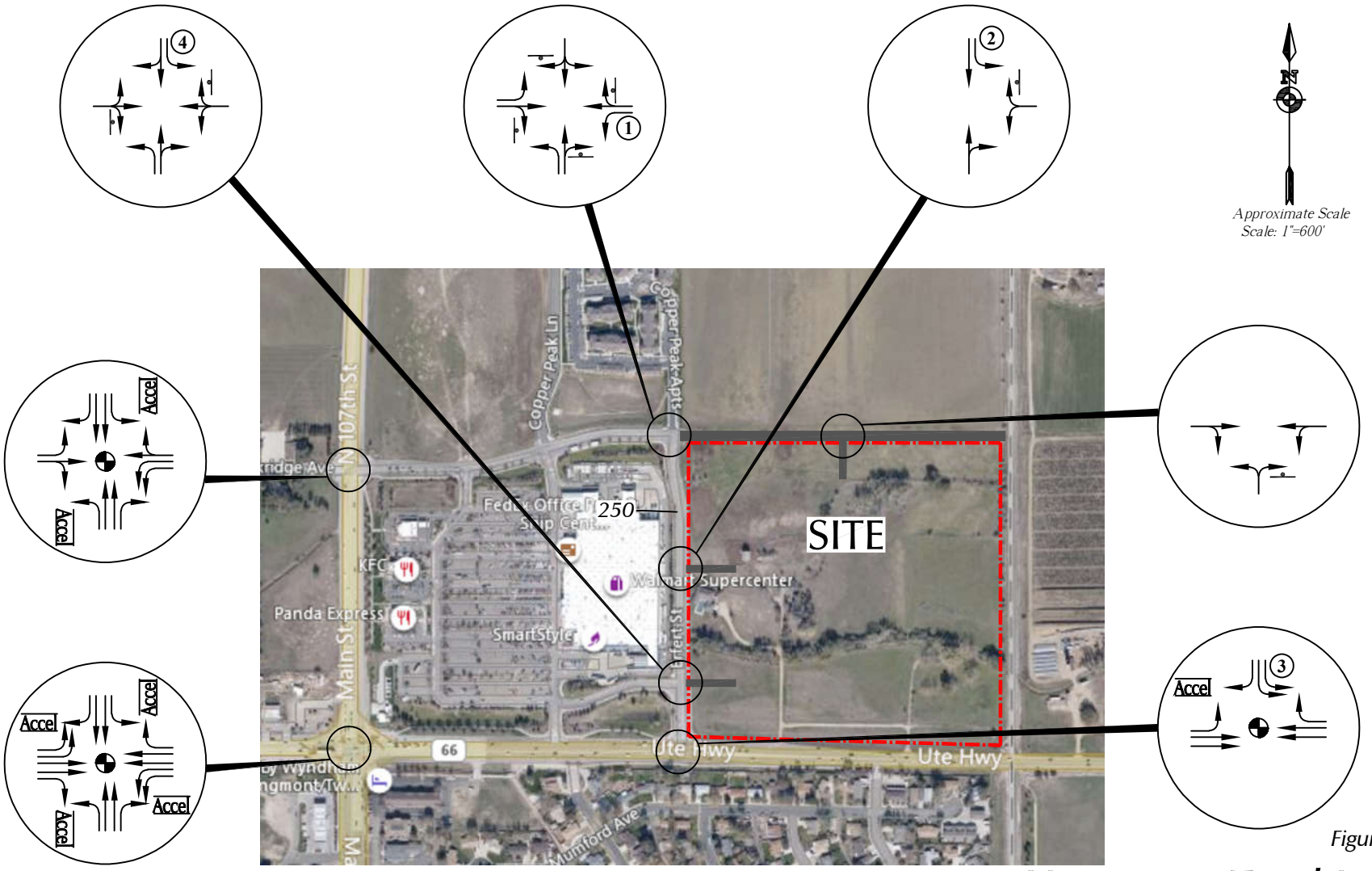


Figure 8d

Year 2023 Total Lane Geometry and Traffic Control w/ Full Site Buildout

Watermark Longmont (LSC #200340)

LEGEND:

= Stop Sign

= Traffic Signal

(1) WB LT = 100 feet + 100-foot taper

(2) SB LT = 100 feet + 100-foot taper

(3) Second SB LT Lane

(4) SB LT = 100 feet + 100-foot taper

Note: Erfert Street is an existing three-lane section so the recommended southbound left turn lanes at the site accesses can be provided by restriping Erfert Street

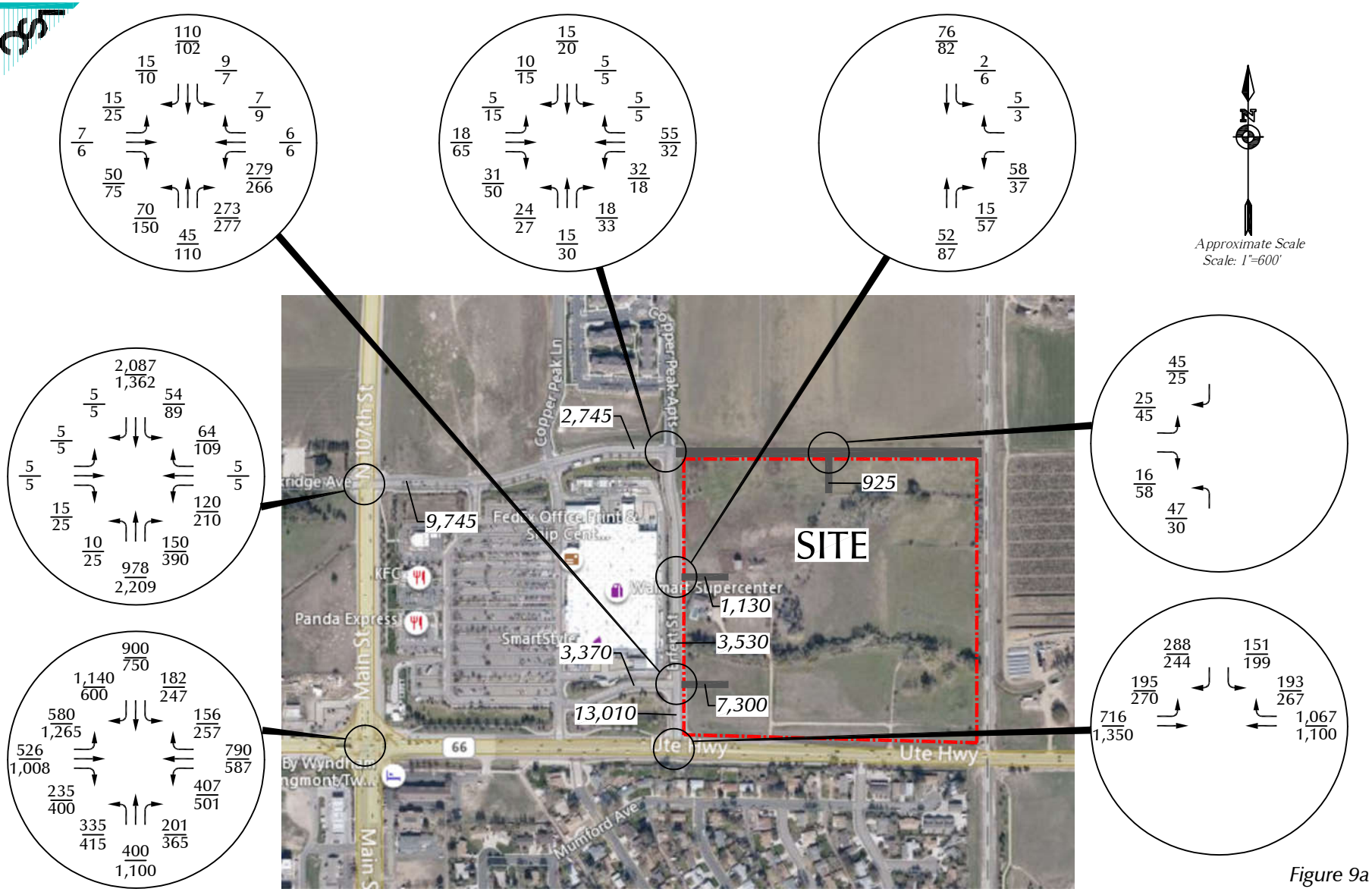


Figure 9a

Note: These volumes are the sum of the volumes in Figure 5, Figure 7b, Figure 7c and Figure 7d.

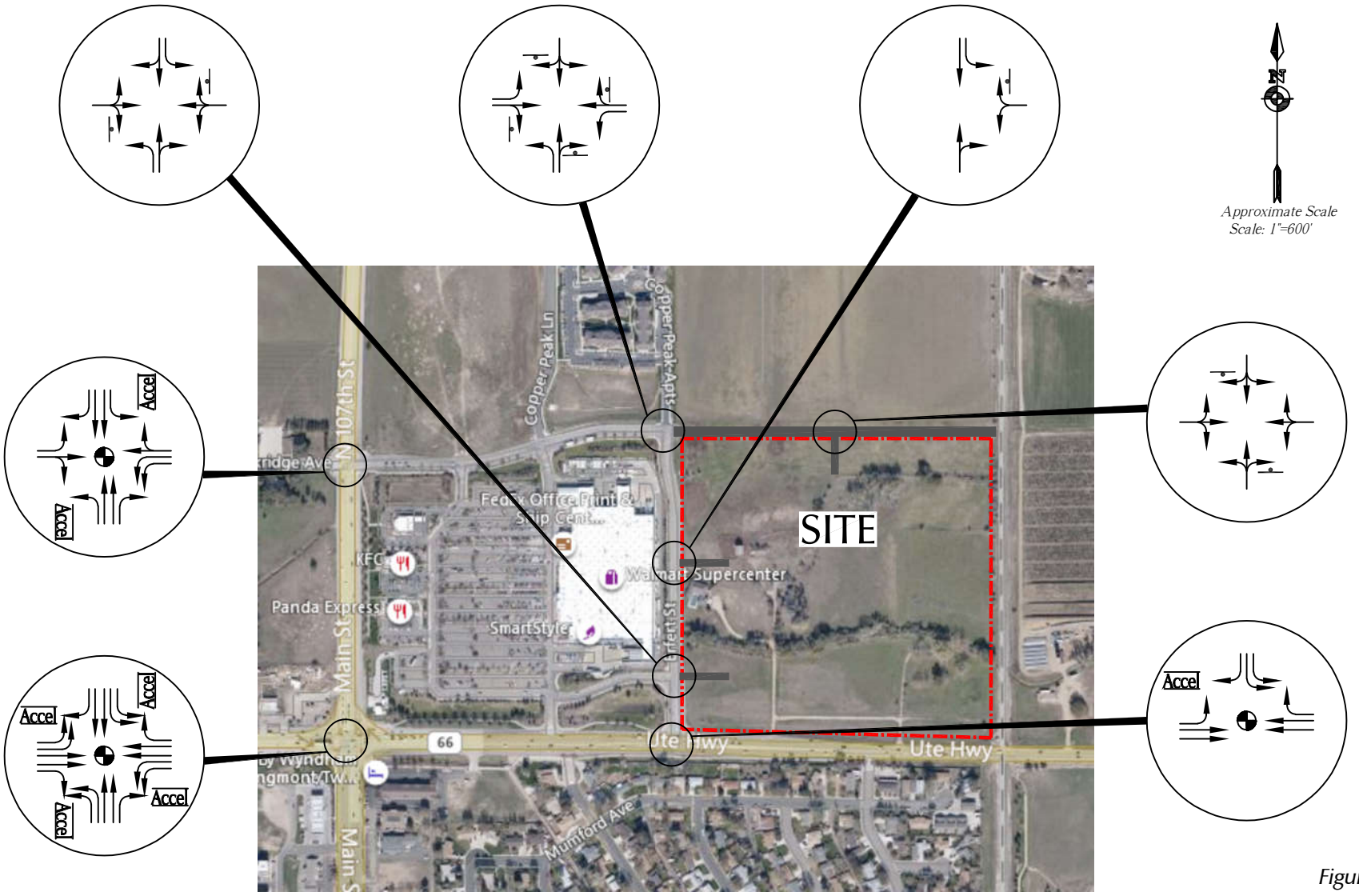
LEGEND:

$\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

1,000 = Average Daily Traffic

Year 2040 Total Traffic w/ Full Site Buildout

Watermark Longmont (LSC #200340)



LEGEND:

= Stop Sign

= Traffic Signal

Figure 9b

Year 2040 Total Lane Geometry and Traffic Control

Watermark Longmont (LSC #200340)

TRAFFIC IMPACT STUDY (TIS)

Scoping Form

The applicant is responsible for completing and submitting this form to the City of Longmont at least three (3) business days prior to the scoping meeting. If a completed form is not received by this deadline, the scoping meeting may be postponed. If traffic study is submitted more than 6 months after the scoping meeting is held, City staff may require another scoping meeting.

Contact Information	
Consultant Name: Tele: E-mail:	LSC Transportation Consultants, Inc. - Chris McGranahan 303-333-1105 chris@lsctrans.com
Developer/Owner Name:	Watermark Residential/Patrick Smith

Project Information	***(Attach proposed Site Plan)***				
Project Name:	Watermark Longmont				
Project Location:	Northeast of Ute Highway (SH 66)/Erfert Street intersection				
Project Description: Application type (rezoning, subdivision), acreage, new or re-development, etc.	About 396 apartment dwelling units.				
~~Existing~~ / Proposed Land Uses	ITE Code	#units or Size	Existing / Proposed Land Uses	ITE Code	#units or Size
Apartments	220	396			
Please attach Trip Generation Summary table for large or mixed use projects					

Assumptions			
Study Horizons	Current Year: 2020	Build-out : 2023	Long Term : 2040
Study Area Boundaries *(Attach map if needed)*	North: Park Ridge Avenue	South: Ute Highway (SH 66)	
	East: Erfert Street	West: Main Street (US 287)	
Intersections and Road Segments to be Evaluated *(Attach map if needed)*	1. All Site entrances	5. Erfert Street/Park Ridge Avenue	
	2. Main Street (US 287)/Ute Highway (SH 66)	6.	
	3. Main Street (US 287/Park Ridge Avenue	7.	
	4. Ute Highway (SH 66)/Erfert Street	8.	
Trip Distribution	*See Attached Sketch* Residential: 20% north; 15% west; 20% east; 45% south		

Assumptions (continued)				
Trip Reductions *(include in Trip Generation table if provided)*	Internal Capture	Use: N/A _____% Use: N/A _____%	Pass By	Use: N/A _____% Use: N/A _____%
Anticipated Future Traffic Growth Rates (*Describe methodology)*	Consistent with the 2040 projections in the June, 2016 City Transportation Plan	Study Time Periods *(circle all that apply)*	AM (7-9) PM (4-6) SAT (noon) Other	
Other Factors proposed/assumed transp. improvements, other studies, nearby proposed developments, etc.				
Analysis Methods & Issues *(check all that apply)*	☒ Synchro ☐ HCS ☐ aaSidra or Rodel ☒ Intersections ☐ Roadway Sections ☐ Signal Warrants ☐ Safety/Sight Distance ☒ Queuing & Storage ☐ CDOT (Access Permit, other) ☑ Identify Bicycle, Pedestrian & Transit Accommodations ☐ TDM ☐ Neighborhood Impacts ☐ Other _____			

ATTACHMENTS, NOTES, & other ASSUMPTIONS:

TIS will follow methodology and parameters described in City of Longmont *Traffic Impact Study Requirements*.

Applicant will submit electronic copy all analysis data files (HCS, Synchro .syn, etc.). (such as PDF) of TIS report, and

Short-term analysis will assume RIRO access west of Erfert Street will remain and no extension of Park Ridge Avenue east across the RR tracks.

Long-term analysis will assume closure of RIRO access and no extension of Park Ridge Avenue east across the RR tracks.

SIGNED: _____
Applicant or Consultant

PRINT NAME: Christopher S. McGranahan
Applicant or Consultant

DATE: May 26, 2020

City of Longmont Contacts:

Transportation Planner: 303-651-8335
Civil Engineer (Traffic): 303-651-8737
Transportation Engineer: 303-651-8323

COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: ERFERTS ST
E/W STREET: ACCESS RD
CITY: LONGMONT
COUNTY: BOULDER

File Name : ACCERFER
Site Code : 00000016
Start Date : 6/11/2020
Page No : 1

Groups Printed- VEHICLES

	ERFERTS ST Southbound				Westbound				ERFERTS ST Northbound				ACCESS RD Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	0	0	0	0	0	0	0	5	0	0	0	0	0	2	0	7
07:15 AM	0	0	0	0	0	0	0	0	10	0	0	0	0	0	2	0	12
07:30 AM	0	0	1	0	0	0	0	0	7	0	0	0	0	0	6	0	14
07:45 AM	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2	0	13
Total	0	0	1	0	0	0	0	0	33	0	0	0	0	0	12	0	46
08:00 AM	0	0	0	0	0	0	0	0	12	0	0	0	0	0	4	0	16
08:15 AM	0	0	0	0	0	0	0	0	9	0	0	0	0	0	7	0	16
08:30 AM	0	0	2	0	0	0	0	0	10	0	0	0	0	0	10	0	22
08:45 AM	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2	0	13
Total	0	0	2	0	0	0	0	0	42	0	0	0	0	0	23	0	67
04:00 PM	0	0	0	0	0	0	0	0	23	0	0	0	1	0	17	0	41
04:15 PM	0	0	2	0	0	0	0	0	24	0	0	0	0	0	14	0	40
04:30 PM	0	0	0	0	0	0	0	0	24	0	0	0	0	0	7	0	31
04:45 PM	0	0	0	0	0	0	0	0	17	0	0	0	0	0	11	0	28
Total	0	0	2	0	0	0	0	0	88	0	0	0	1	0	49	0	140
05:00 PM	0	0	0	0	0	0	0	0	21	0	0	0	0	0	13	0	34
05:15 PM	0	0	0	0	0	0	0	0	19	0	0	0	0	0	14	0	33
05:30 PM	0	0	0	0	0	0	0	0	22	0	0	0	0	0	13	0	35
05:45 PM	0	0	0	0	0	0	0	0	16	0	0	0	0	0	17	0	33
Total	0	0	0	0	0	0	0	0	78	0	0	0	0	0	57	0	135
Grand Total	0	0	5	0	0	0	0	0	241	0	0	0	1	0	141	0	388
Apprch %	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.7	0.0	99.3	0.0	
Total %	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	62.1	0.0	0.0	0.0	0.3	0.0	36.3	0.0	

COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
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N/S STREET: ERFERTS ST
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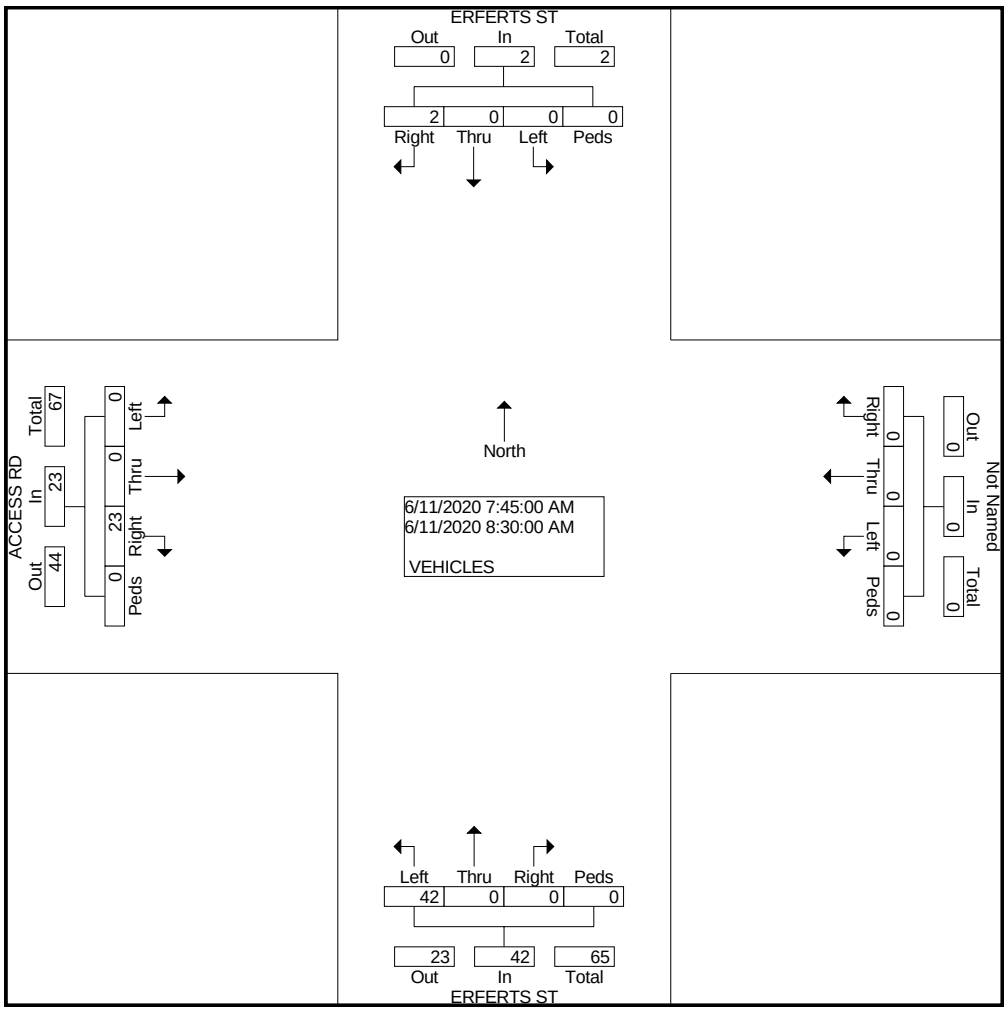
CITY: LONGMONT
COUNTY: BOULDER

File Name : ACCERFER
Site Code : 00000016
Start Date : 6/11/2020
Page No : 2

	ERFERTS ST Southbound					Westbound					ERFERTS ST Northbound					ACCESS RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:45 AM to 08:30 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	0	0	2	0	2	0	0	0	0	0	42	0	0	0	42	0	0	23	0	23	67
Percent	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
08:30 Volume	0	0	2	0	2	0	0	0	0	0	10	0	0	0	10	0	0	10	0	10	22
Peak Factor																					0.761
High Int.	08:30 AM										08:00 AM					08:30 AM					
Volume	0	0	2	0	2	0	0	0	0	0	12	0	0	0	12	0	0	10	0	10	
Peak Factor					0.250										0.875					0.575	



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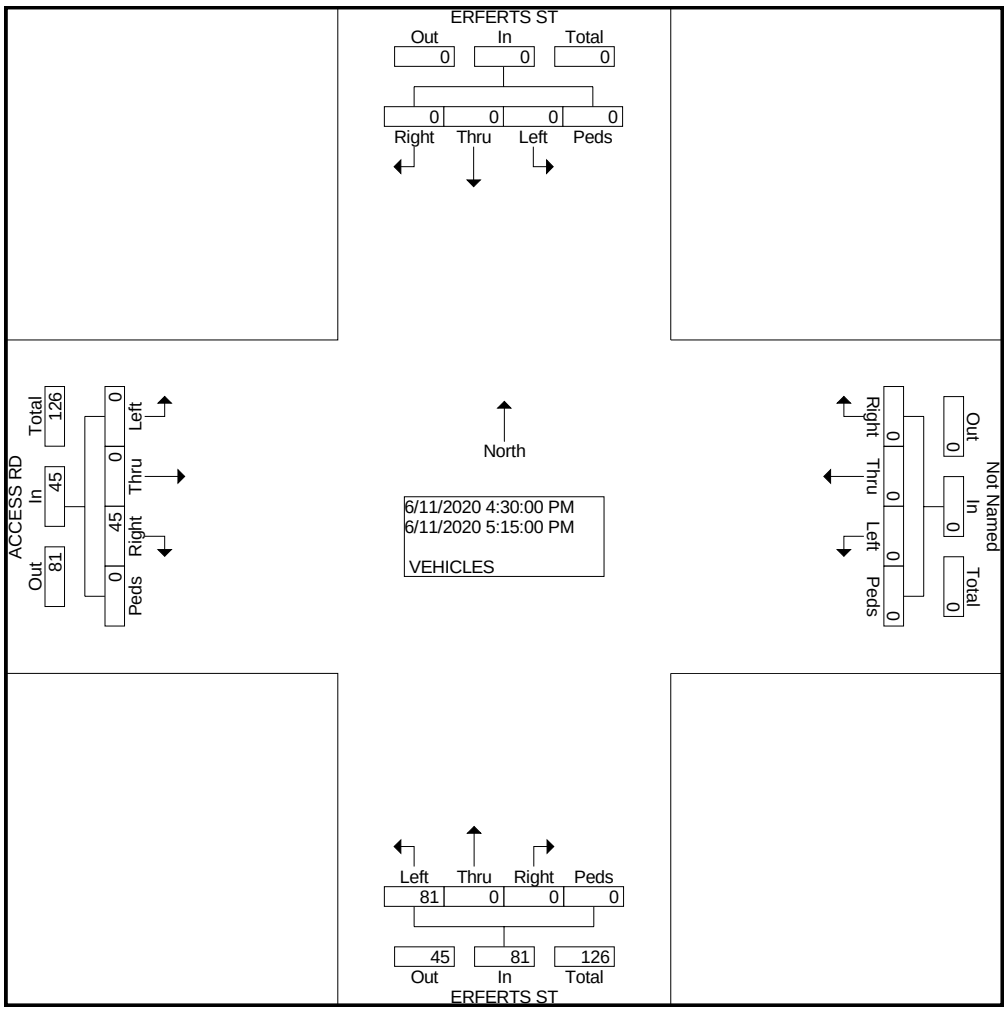
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: ERFERTS ST
E/W STREET: ACCESS RD
CITY: LONGMONT
COUNTY: BOULDER

File Name : ACCERFER
Site Code : 00000016
Start Date : 6/11/2020
Page No : 2

	ERFERTS ST Southbound					Westbound					ERFERTS ST Northbound					ACCESS RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:30 PM to 05:15 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	0	0	0	0	0	0	0	0	0	0	81	0	0	0	81	0	0	45	0	45	126
Percent	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
05:00 Volume	0	0	0	0	0	0	0	0	0	0	21	0	0	0	21	0	0	13	0	13	34
Peak Factor																					0.926
High Int.											04:30 PM					05:15 PM					
Volume	0	0	0	0	0	0	0	0	0	0	24	0	0	0	24	0	0	14	0	14	
Peak Factor															0.844					0.804	



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: ERFERTS ST
E/W STREET: PARK RIDGE AVE
CITY: LONGMONT
COUNTY: BOULDER

File Name : ERFERTSPARKRIDGE
Site Code : 00000008
Start Date : 6/11/2020
Page No : 1

Groups Printed- VEHICLES

	ERFERTS ST Southbound				PARK RIDGE AVE Westbound				ERFERTS ST Northbound				PARK RIDGE AVE Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	5	0	0	0	0	0	0	5	0	0	0	1	0	1	0	12
07:15 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:30 AM	0	4	0	0	0	0	0	0	0	1	0	0	0	0	4	0	9
07:45 AM	0	6	1	0	0	0	0	0	4	0	0	0	2	0	2	0	15
Total	0	18	2	0	0	0	0	0	9	1	0	0	3	0	7	0	40
08:00 AM	0	3	3	0	0	0	0	0	3	4	0	0	0	0	3	0	16
08:15 AM	0	1	1	0	0	0	0	0	3	0	0	0	1	0	2	0	8
08:30 AM	0	1	3	0	0	0	0	0	4	1	0	0	1	0	5	0	15
08:45 AM	0	2	3	1	0	0	0	0	0	2	0	0	2	0	7	0	17
Total	0	7	10	1	0	0	0	0	10	7	0	0	4	0	17	0	56
04:00 PM	0	4	4	1	0	0	0	0	5	3	0	0	3	0	13	0	33
04:15 PM	0	8	3	2	0	0	0	0	7	6	0	0	8	0	11	0	45
04:30 PM	0	6	2	0	0	0	0	0	5	6	0	0	2	0	5	0	26
04:45 PM	0	1	2	0	0	0	0	0	4	5	0	0	2	0	8	0	22
Total	0	19	11	3	0	0	0	0	21	20	0	0	15	0	37	0	126
05:00 PM	0	2	2	0	0	0	0	1	6	8	0	2	2	0	10	0	33
05:15 PM	0	7	7	0	0	0	0	0	4	8	0	0	6	0	13	0	45
05:30 PM	0	2	3	0	0	0	0	0	4	3	0	0	2	0	6	0	20
05:45 PM	0	5	2	0	0	0	0	0	4	7	0	0	1	0	8	0	27
Total	0	16	14	0	0	0	0	1	18	26	0	2	11	0	37	0	125
Grand Total	0	60	37	4	0	0	0	1	58	54	0	2	33	0	98	0	347
Apprch %	0.0	59.4	36.6	4.0	0.0	0.0	0.0	100.0	50.9	47.4	0.0	1.8	25.2	0.0	74.8	0.0	
Total %	0.0	17.3	10.7	1.2	0.0	0.0	0.0	0.3	16.7	15.6	0.0	0.6	9.5	0.0	28.2	0.0	

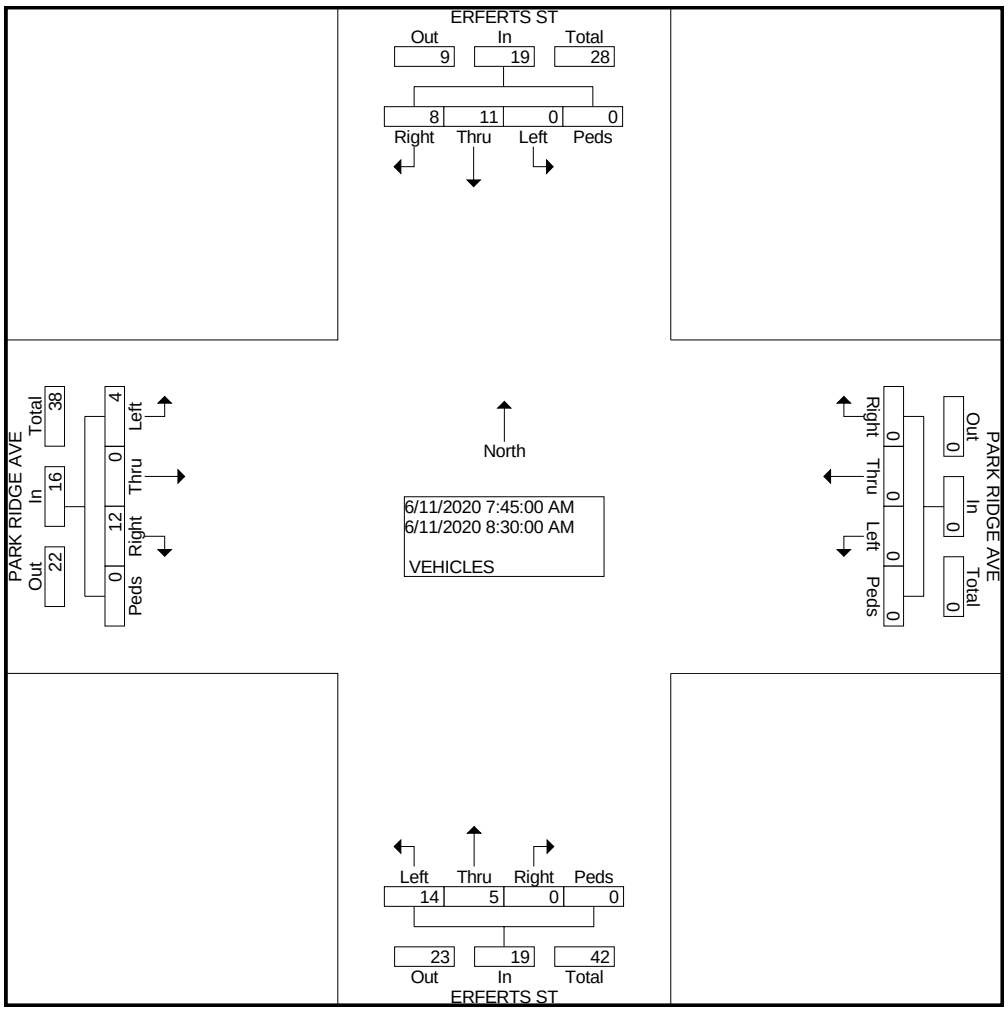
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: ERFERTS ST
E/W STREET: PARK RIDGE AVE
CITY: LONGMONT
COUNTY: BOULDER

File Name : ERFERTSPARKRIDGE
Site Code : 00000008
Start Date : 6/11/2020
Page No : 2

	ERFERTS ST Southbound					PARK RIDGE AVE Westbound					ERFERTS ST Northbound					PARK RIDGE AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:45 AM to 08:30 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	0	11	8	0	19	0	0	0	0	0	14	5	0	0	19	4	0	12	0	16	54
Percent	0.0	57.9	42.1	0.0		0.0	0.0	0.0	0.0		73.7	26.3	0.0	0.0		25.0	0.0	75.0	0.0		
08:00 Volume	0	3	3	0	6	0	0	0	0	0	3	4	0	0	7	0	0	3	0	3	16
Peak Factor																					0.844
High Int.	07:45 AM										08:00 AM					08:30 AM					
Volume	0	6	1	0	7	0	0	0	0	0	3	4	0	0	7	1	0	5	0	6	
Peak Factor					0.679										0.679					0.667	



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1889 YORK STREET
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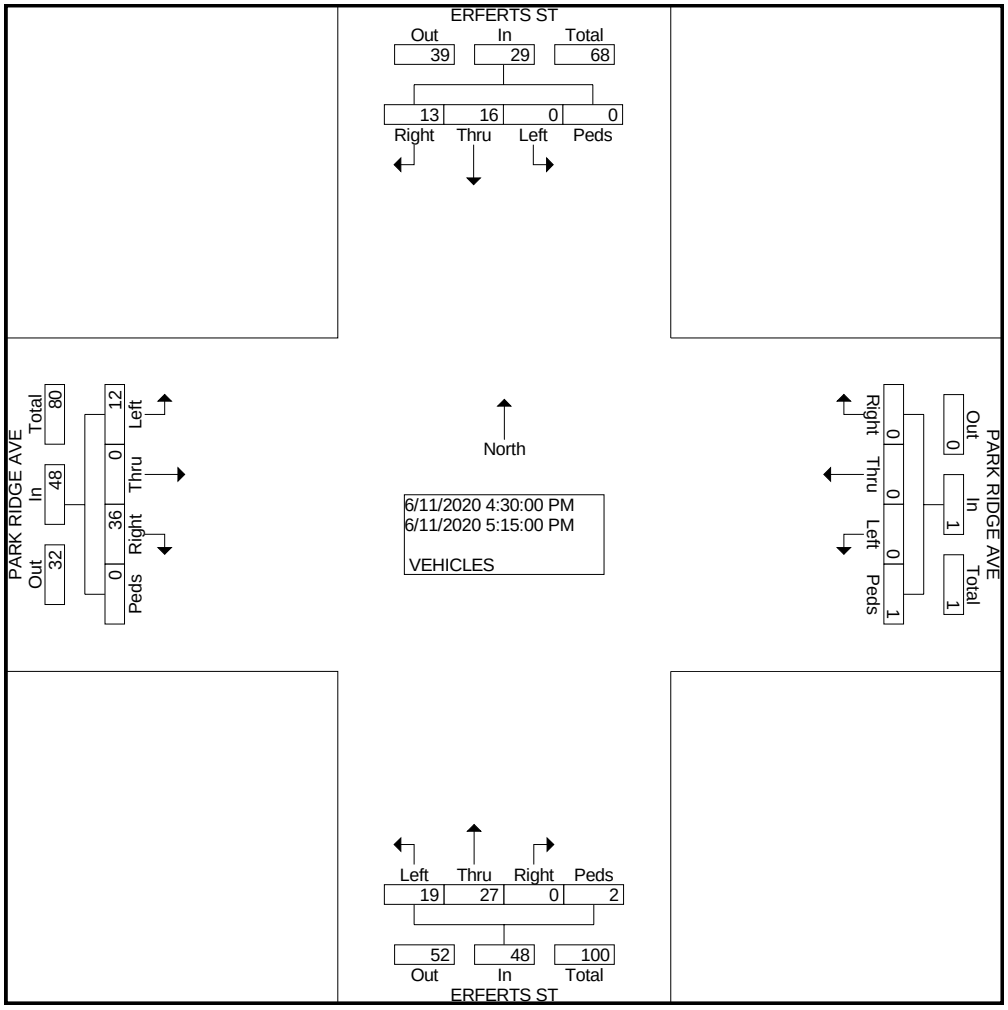
303-333-7409

N/S STREET: ERFERTS ST
E/W STREET: PARK RIDGE AVE
CITY: LONGMONT
COUNTY: BOULDER

File Name : ERFERTSPARKRIDGE
Site Code : 00000008
Start Date : 6/11/2020
Page No : 2

	ERFERTS ST Southbound					PARK RIDGE AVE Westbound					ERFERTS ST Northbound					PARK RIDGE AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:30 PM to 05:15 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	0	16	13	0	29	0	0	0	1	1	19	27	0	2	48	12	0	36	0	48	126
Percent	0.0	55.2	44.8	0.0		0.0	0.0	0.0	100.0		39.6	56.3	0.0	4.2		25.0	0.0	75.0	0.0		
05:15 Volume	0	7	7	0	14	0	0	0	0	0	4	8	0	0	12	6	0	13	0	19	45
Peak Factor																					0.700
High Int.	05:15 PM					05:00 PM					05:00 PM					05:15 PM					
Volume	0	7	7	0	14	0	0	0	1	1	6	8	0	2	16	6	0	13	0	19	
Peak Factor					0.518					0.250					0.750					0.632	



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: ERFERTS ST
E/W STREET: UTE HWY
CITY: LONGMONT
COUNTY: BOULDER

File Name : ERFERTSUTEHWY
Site Code : 00000015
Start Date : 6/11/2020
Page No : 1

Groups Printed- VEHICLES

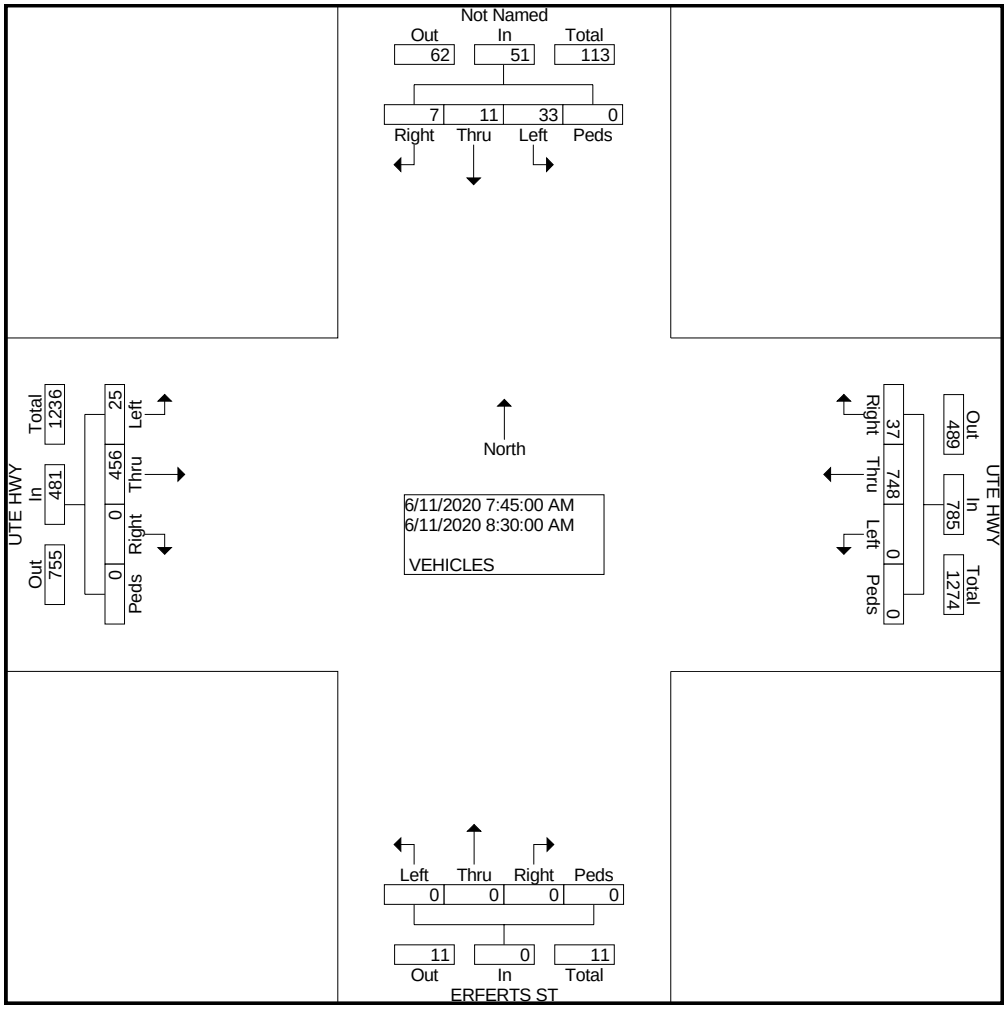
	Southbound				UTE HWY Westbound				ERFERTS ST Northbound				UTE HWY Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	7	0	1	0	0	118	6	0	0	0	0	0	3	128	0	0	263
07:15 AM	3	0	1	0	0	148	5	0	0	0	0	0	5	123	0	0	285
07:30 AM	13	0	0	0	0	155	4	0	0	0	0	0	4	147	0	0	323
07:45 AM	5	11	2	0	0	226	12	0	0	0	0	0	4	116	0	0	376
Total	28	11	4	0	0	647	27	0	0	0	0	0	16	514	0	0	1247
08:00 AM	6	0	3	0	0	177	12	0	0	0	0	0	6	113	0	0	317
08:15 AM	10	0	1	0	0	172	4	0	0	0	0	0	8	116	0	0	311
08:30 AM	12	0	1	0	0	173	9	0	0	0	0	0	7	111	0	0	313
08:45 AM	7	6	5	0	0	146	8	0	0	0	0	0	6	136	1	0	315
Total	35	6	10	0	0	668	33	0	0	0	0	0	27	476	1	0	1256
04:00 PM	21	0	5	0	0	176	16	0	0	0	0	0	20	191	0	0	429
04:15 PM	31	0	7	1	0	214	25	0	0	0	0	0	13	245	0	0	536
04:30 PM	20	10	5	0	0	190	9	0	0	0	0	0	21	199	0	0	454
04:45 PM	15	0	3	0	0	211	13	0	0	0	0	0	12	215	0	0	469
Total	87	10	20	1	0	791	63	0	0	0	0	0	66	850	0	0	1888
05:00 PM	28	0	2	0	0	217	19	0	0	0	0	0	17	216	0	0	499
05:15 PM	21	0	7	0	0	203	16	0	0	0	0	0	14	209	0	0	470
05:30 PM	18	0	2	0	0	187	19	0	0	0	0	0	9	213	0	0	448
05:45 PM	23	0	3	0	0	172	20	0	0	0	0	0	7	191	0	0	416
Total	90	0	14	0	0	779	74	0	0	0	0	0	47	829	0	0	1833
Grand Total	240	27	48	1	0	2885	197	0	0	0	0	0	156	2669	1	0	6224
Apprch %	75.9	8.5	15.2	0.3	0.0	93.6	6.4	0.0	0.0	0.0	0.0	0.0	5.5	94.4	0.0	0.0	
Total %	3.9	0.4	0.8	0.0	0.0	46.4	3.2	0.0	0.0	0.0	0.0	0.0	2.5	42.9	0.0	0.0	

COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: ERFERTS ST
E/W STREET: UTE HWY
CITY: LONGMONT
COUNTY: BOULDER

File Name : ERFERTSUTEHWY
Site Code : 00000015
Start Date : 6/11/2020
Page No : 2

	Southbound					UTE HWY Westbound					ERFERTS ST Northbound					UTE HWY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:45 AM to 08:30 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	33	11	7	0	51	0	748	37	0	785	0	0	0	0	0	25	456	0	0	481	1317
Percent	64.7	21.6	13.7	0.0		0.0	95.3	4.7	0.0		0.0	0.0	0.0	0.0		5.2	94.8	0.0	0.0		
07:45 Volume	5	11	2	0	18	0	226	12	0	238	0	0	0	0	0	4	116	0	0	120	376
Peak Factor																					0.876
High Int.	07:45 AM					07:45 AM										08:15 AM					
Volume	5	11	2	0	18	0	226	12	0	238	0	0	0	0	0	8	116	0	0	124	
Peak Factor					0.708					0.825										0.970	

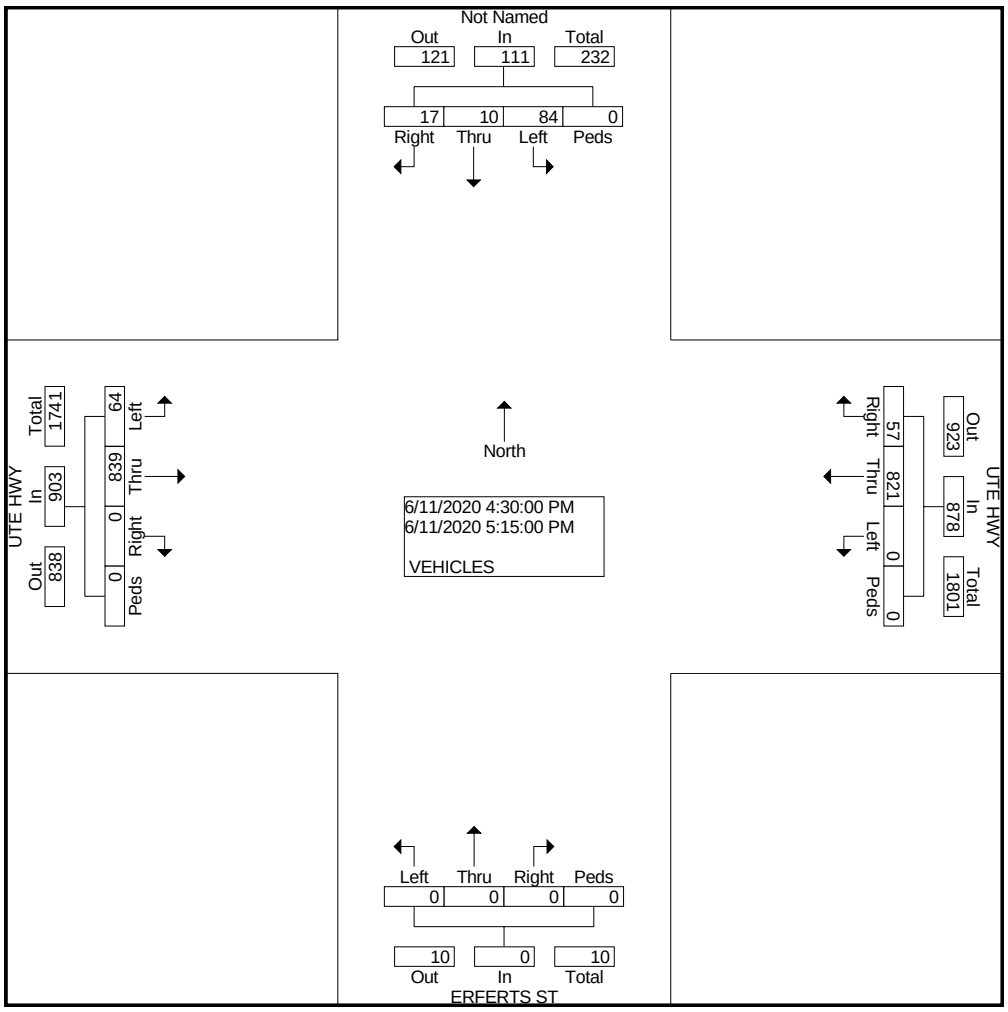


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: ERFERTS ST
E/W STREET: UTE HWY
CITY: LONGMONT
COUNTY: BOULDER

File Name : ERFERTSUTEHWY
Site Code : 00000015
Start Date : 6/11/2020
Page No : 2

	Southbound					UTE HWY Westbound					ERFERTS ST Northbound					UTE HWY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:30 PM to 05:15 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	84	10	17	0	111	0	821	57	0	878	0	0	0	0	0	64	839	0	0	903	1892
Percent	75.7	9.0	15.3	0.0		0.0	93.5	6.5	0.0		0.0	0.0	0.0	0.0		7.1	92.9	0.0	0.0		
05:00 Volume	28	0	2	0	30	0	217	19	0	236	0	0	0	0	0	17	216	0	0	233	499
Peak Factor																					0.948
High Int.	04:30 PM					05:00 PM										05:00 PM					
Volume	20	10	5	0	35	0	217	19	0	236	0	0	0	0	0	17	216	0	0	233	
Peak Factor					0.793					0.930										0.969	



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: US 287
E/W STREET: UTE HWY
CITY: LONGMONT
COUNTY: BOULDER

File Name : US 287 UTE HWY
Site Code : 00000025
Start Date : 6/11/2020
Page No : 1

Groups Printed- VEHICLES

	US 287 Southbound				UTE HWY Westbound				US 287 Northbound				UTE HWY Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	26	123	82	1	30	65	16	1	26	61	34	1	53	66	12	1	598
07:15 AM	33	130	90	8	38	93	28	0	24	69	37	0	58	51	8	3	670
07:30 AM	39	154	124	2	23	88	22	0	20	85	24	0	45	65	19	1	711
07:45 AM	39	121	108	0	72	124	33	0	22	55	18	1	51	56	27	2	729
Total	137	528	404	11	163	370	99	1	92	270	113	2	207	238	66	7	2708
08:00 AM	21	140	91	4	66	112	24	0	29	75	23	1	61	58	30	4	739
08:15 AM	28	114	86	6	46	106	32	0	16	67	21	0	48	49	14	0	633
08:30 AM	44	114	70	0	56	107	24	0	28	86	22	0	37	42	15	1	646
08:45 AM	37	137	57	0	53	86	28	0	24	92	32	1	52	37	24	2	662
Total	130	505	304	10	221	411	108	0	97	320	98	2	198	186	83	7	2680
04:00 PM	41	103	27	6	71	95	35	3	35	164	50	3	161	82	19	2	897
04:15 PM	52	118	55	0	104	115	40	2	31	178	54	1	130	90	31	2	1003
04:30 PM	51	98	59	5	98	109	41	0	35	183	61	3	118	78	18	3	960
04:45 PM	74	139	35	1	81	110	55	0	25	205	46	0	109	63	21	0	964
Total	218	458	176	12	354	429	171	5	126	730	211	7	518	313	89	7	3824
05:00 PM	46	110	42	3	90	102	40	3	32	201	50	2	136	111	16	0	984
05:15 PM	40	150	43	0	73	112	36	0	33	228	48	4	126	115	20	2	1030
05:30 PM	33	142	36	0	86	103	32	0	33	219	26	2	110	89	25	1	937
05:45 PM	31	128	41	0	80	108	28	1	26	169	42	1	103	98	9	1	866
Total	150	530	162	3	329	425	136	4	124	817	166	9	475	413	70	4	3817
Grand Total	635	2021	1046	36	1067	1635	514	10	439	2137	588	20	1398	1150	308	25	13029
Apprch %	17.0	54.1	28.0	1.0	33.1	50.7	15.9	0.3	13.8	67.1	18.5	0.6	48.5	39.9	10.7	0.9	
Total %	4.9	15.5	8.0	0.3	8.2	12.5	3.9	0.1	3.4	16.4	4.5	0.2	10.7	8.8	2.4	0.2	

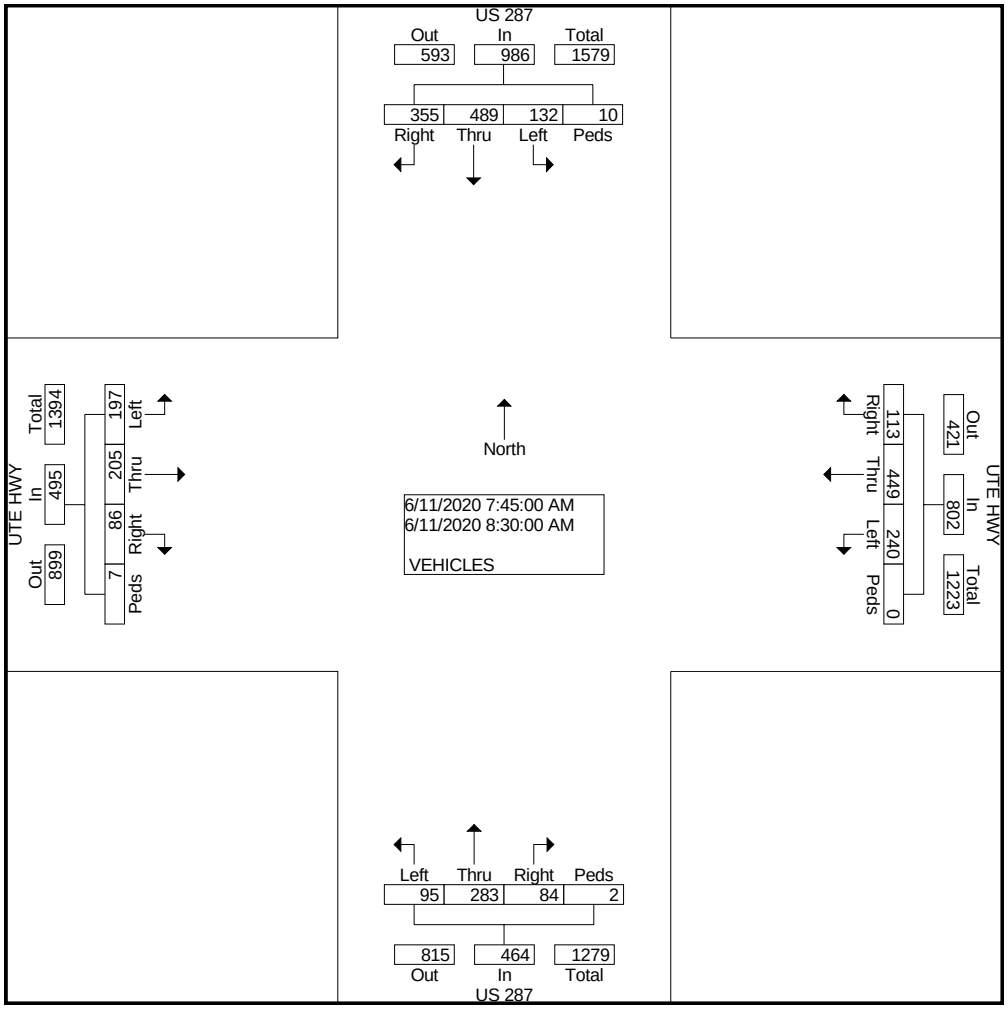
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: US 287
E/W STREET: UTE HWY
CITY: LONGMONT
COUNTY: BOULDER

File Name : US 287 UTE HWY
Site Code : 00000025
Start Date : 6/11/2020
Page No : 2

	US 287 Southbound					UTE HWY Westbound					US 287 Northbound					UTE HWY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:45 AM to 08:30 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	132	489	355	10	986	240	449	113	0	802	95	283	84	2	464	197	205	86	7	495	2747
Percent	13.4	49.6	36.0	1.0		29.9	56.0	14.1	0.0		20.5	61.0	18.1	0.4		39.8	41.4	17.4	1.4		
08:00 Volume	21	140	91	4	256	66	112	24	0	202	29	75	23	1	128	61	58	30	4	153	739
Peak Factor																					0.929
High Int.	07:45 AM					07:45 AM					08:30 AM					08:00 AM					
Volume	39	121	108	0	268	72	124	33	0	229	28	86	22	0	136	61	58	30	4	153	
Peak Factor					0.920					0.876					0.853					0.809	



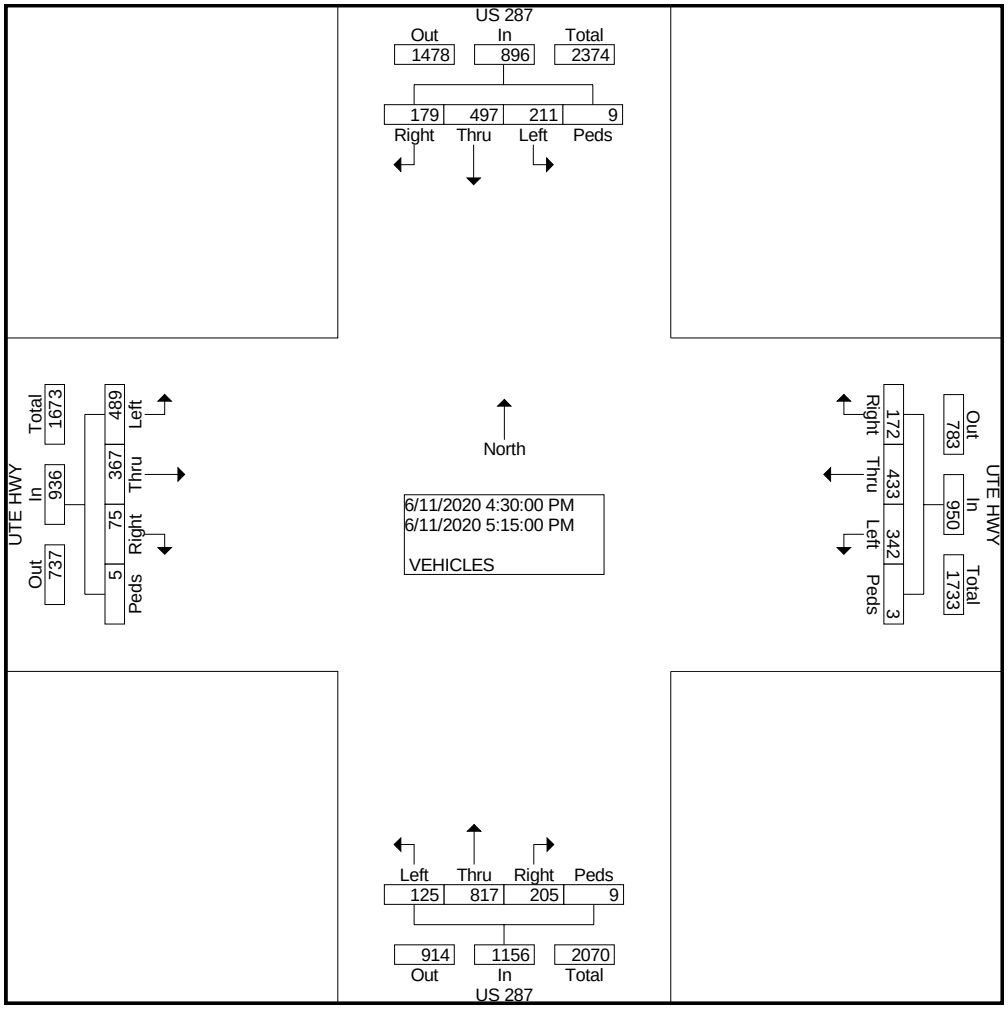
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: US 287
E/W STREET: UTE HWY
CITY: LONGMONT
COUNTY: BOULDER

File Name : US 287 UTE HWY
Site Code : 00000025
Start Date : 6/11/2020
Page No : 2

	US 287 Southbound					UTE HWY Westbound					US 287 Northbound					UTE HWY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:30 PM to 05:15 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	211	497	179	9	896	342	433	172	3	950	125	817	205	9	1156	489	367	75	5	936	3938
Percent	23.5	55.5	20.0	1.0		36.0	45.6	18.1	0.3		10.8	70.7	17.7	0.8		52.2	39.2	8.0	0.5		
05:15 Volume	40	150	43	0	233	73	112	36	0	221	33	228	48	4	313	126	115	20	2	263	1030
Peak Factor																					0.956
High Int.	04:45 PM					04:30 PM					05:15 PM					05:00 PM					
Volume	74	139	35	1	249	98	109	41	0	248	33	228	48	4	313	136	111	16	0	263	
Peak Factor					0.900					0.958					0.923					0.890	



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: US 287
E/W STREET: PARK RIDGE AVE
CITY: LONGMONT
COUNTY: BOULDER

File Name : US287PARK
Site Code : 00000022
Start Date : 6/11/2020
Page No : 1

Groups Printed- VEHICLES

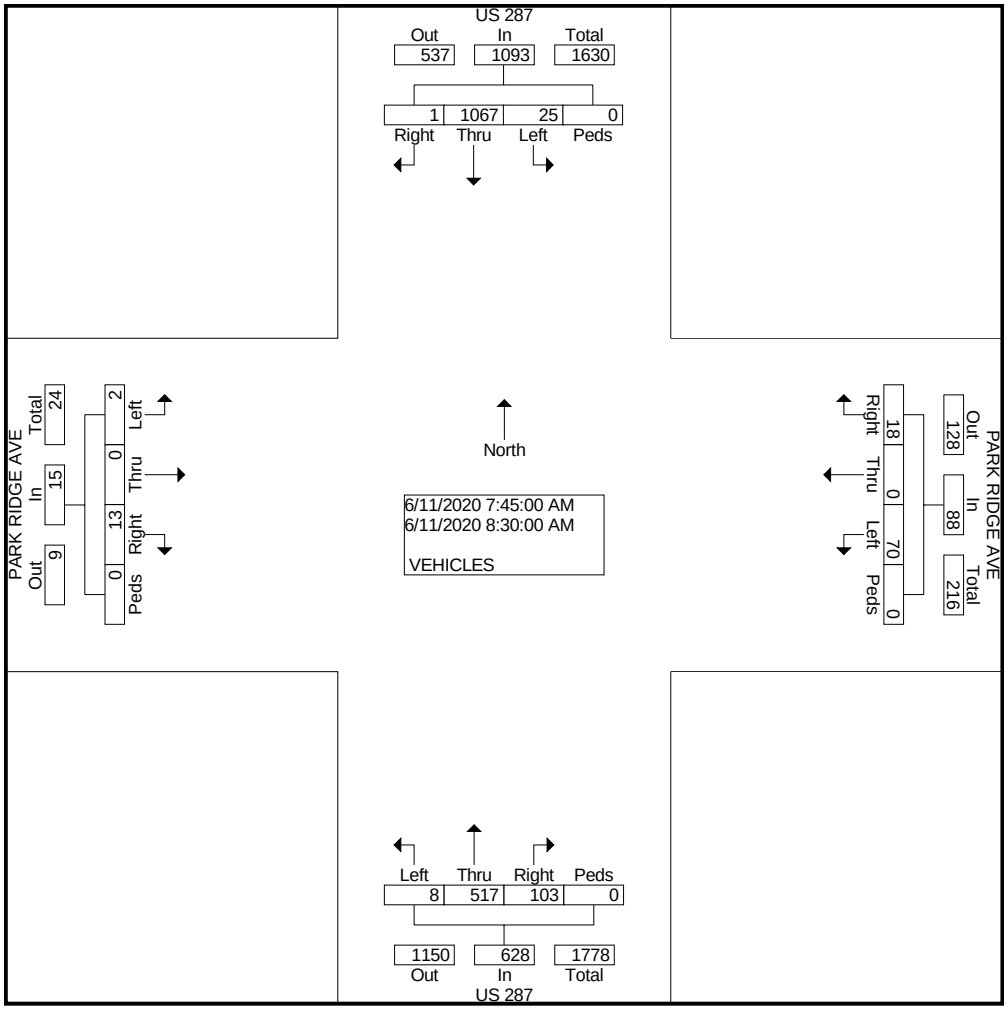
	US 287 Southbound				PARK RIDGE AVE Westbound				US 287 Northbound				PARK RIDGE AVE Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	5	230	0	0	7	0	3	0	0	109	14	0	0	0	4	0	372
07:15 AM	7	305	0	0	5	0	2	0	3	138	14	0	0	0	3	0	477
07:30 AM	7	322	0	0	12	0	5	0	1	157	25	0	1	0	5	0	535
07:45 AM	6	307	0	0	17	0	2	0	2	121	18	0	0	0	5	0	478
Total	25	1164	0	0	41	0	12	0	6	525	71	0	1	0	17	0	1862
08:00 AM	7	245	0	0	15	0	4	0	1	140	27	0	1	0	2	0	442
08:15 AM	6	263	0	0	18	0	8	0	0	132	25	0	1	0	5	0	458
08:30 AM	6	252	1	0	20	0	4	0	5	124	33	0	0	0	1	0	446
08:45 AM	5	213	1	0	21	1	6	0	1	143	42	0	0	0	5	0	438
Total	24	973	2	0	74	1	22	0	7	539	127	0	2	0	13	0	1784
04:00 PM	11	184	3	0	48	1	14	0	5	340	66	1	0	0	8	0	681
04:15 PM	11	206	1	0	48	0	15	0	1	333	67	0	2	0	4	0	688
04:30 PM	13	206	1	0	43	0	17	0	4	335	77	0	2	2	6	0	706
04:45 PM	10	189	1	2	40	1	12	0	5	326	75	1	0	0	1	2	665
Total	45	785	6	2	179	2	58	0	15	1334	285	2	4	2	19	2	2740
05:00 PM	5	178	1	0	34	0	24	0	2	359	75	0	0	0	5	4	687
05:15 PM	9	193	1	0	34	0	9	0	10	361	77	0	0	0	9	0	703
05:30 PM	8	212	0	0	43	0	25	0	9	308	77	0	0	0	12	0	694
05:45 PM	14	216	1	0	42	4	16	0	8	284	73	0	0	0	6	0	664
Total	36	799	3	0	153	4	74	0	29	1312	302	0	0	0	32	4	2748
Grand Total	130	3721	11	2	447	7	166	0	57	3710	785	2	7	2	81	6	9134
Apprch %	3.4	96.3	0.3	0.1	72.1	1.1	26.8	0.0	1.3	81.5	17.2	0.0	7.3	2.1	84.4	6.3	
Total %	1.4	40.7	0.1	0.0	4.9	0.1	1.8	0.0	0.6	40.6	8.6	0.0	0.1	0.0	0.9	0.1	

COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: US 287
E/W STREET: PARK RIDGE AVE
CITY: LONGMONT
COUNTY: BOULDER

File Name : US287PARK
Site Code : 00000022
Start Date : 6/11/2020
Page No : 2

	US 287 Southbound					PARK RIDGE AVE Westbound					US 287 Northbound					PARK RIDGE AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:45 AM to 08:30 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	25	1067	1	0	1093	70	0	18	0	88	8	517	103	0	628	2	0	13	0	15	1824
Percent	2.3	97.6	0.1	0.0		79.5	0.0	20.5	0.0		1.3	82.3	16.4	0.0		13.3	0.0	86.7	0.0		
07:45 Volume	6	307	0	0	313	17	0	2	0	19	2	121	18	0	141	0	0	5	0	5	478
Peak Factor																					0.954
High Int.	07:45 AM					08:15 AM					08:00 AM					08:15 AM					
Volume	6	307	0	0	313	18	0	8	0	26	1	140	27	0	168	1	0	5	0	6	
Peak Factor					0.873					0.846					0.935					0.625	

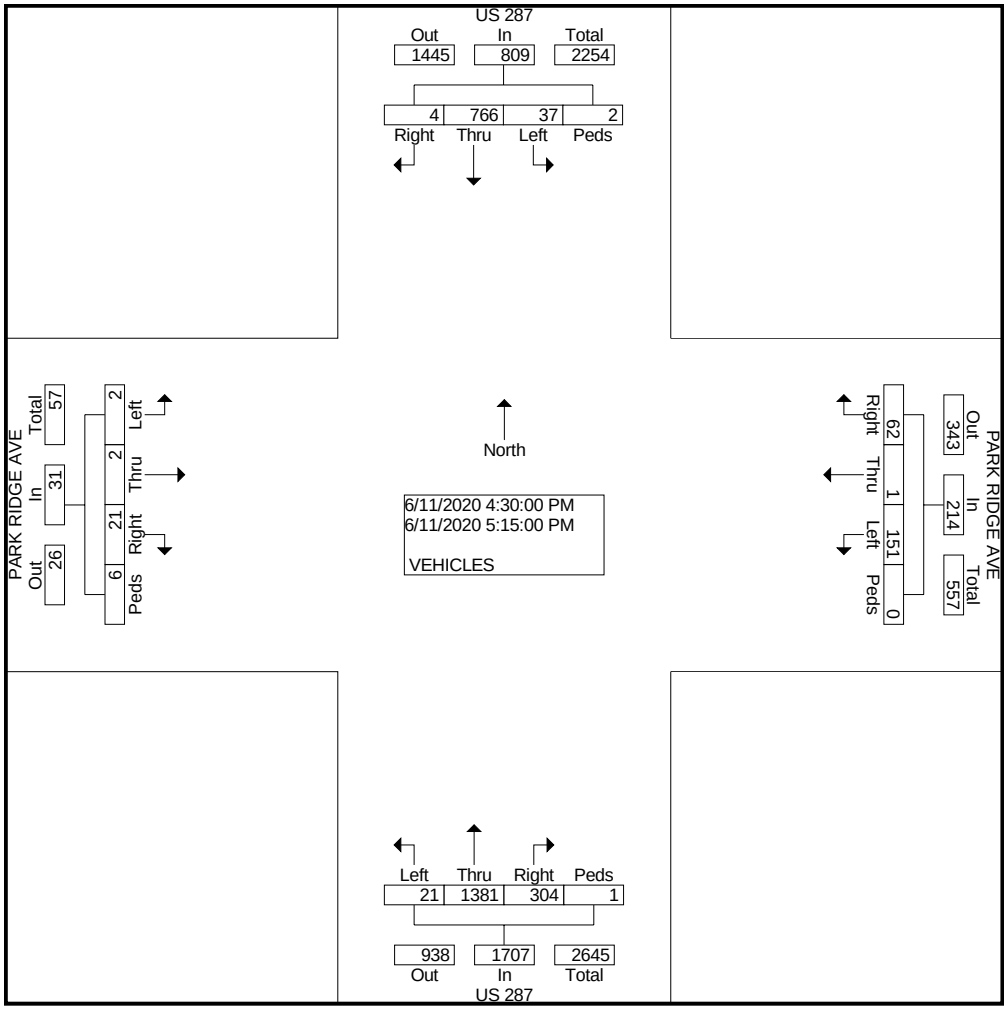


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: US 287
E/W STREET: PARK RIDGE AVE
CITY: LONGMONT
COUNTY: BOULDER

File Name : US287PARK
Site Code : 00000022
Start Date : 6/11/2020
Page No : 2

	US 287 Southbound					PARK RIDGE AVE Westbound					US 287 Northbound					PARK RIDGE AVE Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:30 PM to 05:15 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	37	766	4	2	809	151	1	62	0	214	21	1381	304	1	1707	2	2	21	6	31	2761
Percent	4.6	94.7	0.5	0.2		70.6	0.5	29.0	0.0		1.2	80.9	17.8	0.1		6.5	6.5	67.7	19.4		
04:30 Volume	13	206	1	0	220	43	0	17	0	60	4	335	77	0	416	2	2	6	0	10	706
Peak Factor																					0.978
High Int.	04:30 PM					04:30 PM					05:15 PM					04:30 PM					
Volume	13	206	1	0	220	43	0	17	0	60	10	361	77	0	448	2	2	6	0	10	
Peak Factor					0.919					0.892					0.953					0.775	



COUNTER MEASURES INC.

1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: ACC RD W-O ERFERTS ST
City:LONGMONT
County: BOULDER
Direction: EAST/WEST

Site Code: 200906
Station ID: 200906

Start	08-Jun-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EASTBOU	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB
12:00 AM	*	*	*	*	2	4	*	*	*	*	*	*	*	*	2	4
01:00	*	*	*	*	2	1	*	*	*	*	*	*	*	*	2	1
02:00	*	*	*	*	1	1	*	*	*	*	*	*	*	*	1	1
03:00	*	*	*	*	2	3	*	*	*	*	*	*	*	*	2	3
04:00	*	*	*	*	1	7	*	*	*	*	*	*	*	*	1	7
05:00	*	*	*	*	2	2	*	*	*	*	*	*	*	*	2	2
06:00	*	*	*	*	6	15	*	*	*	*	*	*	*	*	6	15
07:00	*	*	*	*	12	21	*	*	*	*	*	*	*	*	12	21
08:00	*	*	*	*	25	39	*	*	*	*	*	*	*	*	25	39
09:00	*	*	*	*	23	54	*	*	*	*	*	*	*	*	23	54
10:00	*	*	*	*	30	63	*	*	*	*	*	*	*	*	30	63
11:00	*	*	*	*	**58**	**103**	*	*	*	*	*	*	*	*	**58**	**103**
12:00 PM	*	*	*	*	66	**114**	*	*	*	*	*	*	*	*	66	**114**
01:00	*	*	*	*	67	97	*	*	*	*	*	*	*	*	67	97
02:00	*	*	*	*	62	91	*	*	*	*	*	*	*	*	62	91
03:00	*	*	*	*	63	90	*	*	*	*	*	*	*	*	63	90
04:00	*	*	*	*	**73**	90	*	*	*	*	*	*	*	*	**73**	90
05:00	*	*	*	*	68	98	*	*	*	*	*	*	*	*	68	98
06:00	*	*	*	*	61	99	*	*	*	*	*	*	*	*	61	99
07:00	*	*	*	*	59	79	*	*	*	*	*	*	*	*	59	79
08:00	*	*	*	*	26	40	*	*	*	*	*	*	*	*	26	40
09:00	*	*	*	*	14	15	*	*	*	*	*	*	*	*	14	15
10:00	*	*	*	*	4	4	*	*	*	*	*	*	*	*	4	4
11:00	*	*	*	*	3	2	*	*	*	*	*	*	*	*	3	2
Lane	0	0	0	0	730	1132	0	0	0	0	0	0	0	0	730	1132
Day	0		0		1862		0		0		0		0		1862	
AM Peak	-	-	-	-	11:00	11:00	-	-	-	-	-	-	-	-	11:00	11:00
Vol.	-	-	-	-	58	103	-	-	-	-	-	-	-	-	58	103
PM Peak	-	-	-	-	16:00	12:00	-	-	-	-	-	-	-	-	16:00	12:00
Vol.	-	-	-	-	73	114	-	-	-	-	-	-	-	-	73	114

Comb. Total	0		0		1862		0		0		0		0		1862	

ADT ADT 1,862 AADT 1,862

COUNTER MEASURES INC.

1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: ERFERTS ST N/O HWY 66
City: LONGMONT
County: BOULDER
Direction: NORTHBOUND/SOUTHBOUND

Site Code: 200907
Station ID: 200907

Start	08-Jun-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	Direction 1	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction
12:00 AM	*	*	*	*	0	7	*	*	*	*	*	*	*	*	0	7
01:00	*	*	*	*	1	4	*	*	*	*	*	*	*	*	1	4
02:00	*	*	*	*	0	2	*	*	*	*	*	*	*	*	0	2
03:00	*	*	*	*	0	3	*	*	*	*	*	*	*	*	0	3
04:00	*	*	*	*	0	4	*	*	*	*	*	*	*	*	0	4
05:00	*	*	*	*	0	18	*	*	*	*	*	*	*	*	0	18
06:00	*	*	*	*	0	27	*	*	*	*	*	*	*	*	0	27
07:00	*	*	*	*	0	31	*	*	*	*	*	*	*	*	0	31
08:00	*	*	*	*	2	42	*	*	*	*	*	*	*	*	2	42
09:00	*	*	*	*	0	42	*	*	*	*	*	*	*	*	0	42
10:00	*	*	*	*	2	**61**	*	*	*	*	*	*	*	*	2	**61**
11:00	*	*	*	*	**4**	55	*	*	*	*	*	*	*	*	**4**	55
12:00 PM	*	*	*	*	3	86	*	*	*	*	*	*	*	*	3	86
01:00	*	*	*	*	3	74	*	*	*	*	*	*	*	*	3	74
02:00	*	*	*	*	3	74	*	*	*	*	*	*	*	*	3	74
03:00	*	*	*	*	2	78	*	*	*	*	*	*	*	*	2	78
04:00	*	*	*	*	1	88	*	*	*	*	*	*	*	*	1	88
05:00	*	*	*	*	**4**	**107**	*	*	*	*	*	*	*	*	**4**	**107**
06:00	*	*	*	*	0	74	*	*	*	*	*	*	*	*	0	74
07:00	*	*	*	*	0	38	*	*	*	*	*	*	*	*	0	38
08:00	*	*	*	*	0	47	*	*	*	*	*	*	*	*	0	47
09:00	*	*	*	*	0	47	*	*	*	*	*	*	*	*	0	47
10:00	*	*	*	*	0	18	*	*	*	*	*	*	*	*	0	18
11:00	*	*	*	*	1	14	*	*	*	*	*	*	*	*	1	14
Lane	0	0	0	0	26	1041	0	0	0	0	0	0	0	0	26	1041
Day	0		0		1067		0		0		0		0		1067	
AM Peak	-	-	-	-	11:00	10:00	-	-	-	-	-	-	-	-	11:00	10:00
Vol.	-	-	-	-	4	61	-	-	-	-	-	-	-	-	4	61
PM Peak	-	-	-	-	17:00	17:00	-	-	-	-	-	-	-	-	17:00	17:00
Vol.	-	-	-	-	4	107	-	-	-	-	-	-	-	-	4	107

Comb. Total	0	0	1067	0	0	0	0	1067

ADT ADT 1,067 AADT 1,067

COUNTER MEASURES INC.

1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: PARK RIDGE AVE E/O US 287
City: LONGMONT
County: BOULDER
Direction: EASTBOUND/WESTBOUND

Site Code: 200914
Station ID: 200914

Start	08-Jun-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EASTBOU	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB
12:00 AM	*	*	*	*	0	7	*	*	*	*	*	*	*	*	0	7
01:00	*	*	*	*	4	8	*	*	*	*	*	*	*	*	4	8
02:00	*	*	*	*	4	9	*	*	*	*	*	*	*	*	4	9
03:00	*	*	*	*	0	11	*	*	*	*	*	*	*	*	0	11
04:00	*	*	*	*	10	25	*	*	*	*	*	*	*	*	10	25
05:00	*	*	*	*	11	63	*	*	*	*	*	*	*	*	11	63
06:00	*	*	*	*	30	107	*	*	*	*	*	*	*	*	30	107
07:00	*	*	*	*	69	151	*	*	*	*	*	*	*	*	69	151
08:00	*	*	*	*	84	197	*	*	*	*	*	*	*	*	84	197
09:00	*	*	*	*	146	238	*	*	*	*	*	*	*	*	146	238
10:00	*	*	*	*	176	280	*	*	*	*	*	*	*	*	176	280
11:00	*	*	*	*	**261**	**300**	*	*	*	*	*	*	*	*	**261**	**300**
12:00 PM	*	*	*	*	273	278	*	*	*	*	*	*	*	*	273	278
01:00	*	*	*	*	297	280	*	*	*	*	*	*	*	*	297	280
02:00	*	*	*	*	248	270	*	*	*	*	*	*	*	*	248	270
03:00	*	*	*	*	**306**	284	*	*	*	*	*	*	*	*	**306**	284
04:00	*	*	*	*	273	279	*	*	*	*	*	*	*	*	273	279
05:00	*	*	*	*	252	**298**	*	*	*	*	*	*	*	*	252	**298**
06:00	*	*	*	*	221	205	*	*	*	*	*	*	*	*	221	205
07:00	*	*	*	*	102	200	*	*	*	*	*	*	*	*	102	200
08:00	*	*	*	*	43	88	*	*	*	*	*	*	*	*	43	88
09:00	*	*	*	*	17	69	*	*	*	*	*	*	*	*	17	69
10:00	*	*	*	*	5	19	*	*	*	*	*	*	*	*	5	19
11:00	*	*	*	*	1	7	*	*	*	*	*	*	*	*	1	7
Lane	0	0	0	0	2833	3673	0	0	0	0	0	0	0	0	2833	3673
Day	0		0		6506		0		0		0		0		6506	
AM Peak	-	-	-	-	11:00	11:00	-	-	-	-	-	-	-	-	11:00	11:00
Vol.	-	-	-	-	261	300	-	-	-	-	-	-	-	-	261	300
PM Peak	-	-	-	-	15:00	17:00	-	-	-	-	-	-	-	-	15:00	17:00
Vol.	-	-	-	-	306	298	-	-	-	-	-	-	-	-	306	298

Comb. Total	0	0	6506	0	0	0	0	6506

ADT ADT 6,506 AADT 6,506

COUNTER MEASURES INC.

1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: PARK RIDGE AVE W/O ERFERTS ST
City: LONGMONT
County: BOULDER
Direction: EASTBOUND/WESTBOUND

Site Code: 200916
Station ID: 200916

Start	08-Jun-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EASTBOU	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB	EASTBO	WESTB
12:00 AM	*	*	*	*	1	1	*	*	*	*	*	*	*	*	1	1
01:00	*	*	*	*	1	2	*	*	*	*	*	*	*	*	1	2
02:00	*	*	*	*	2	2	*	*	*	*	*	*	*	*	2	2
03:00	*	*	*	*	1	3	*	*	*	*	*	*	*	*	1	3
04:00	*	*	*	*	2	1	*	*	*	*	*	*	*	*	2	1
05:00	*	*	*	*	4	7	*	*	*	*	*	*	*	*	4	7
06:00	*	*	*	*	11	17	*	*	*	*	*	*	*	*	11	17
07:00	*	*	*	*	13	9	*	*	*	*	*	*	*	*	13	9
08:00	*	*	*	*	25	20	*	*	*	*	*	*	*	*	25	20
09:00	*	*	*	*	23	19	*	*	*	*	*	*	*	*	23	19
10:00	*	*	*	*	25	22	*	*	*	*	*	*	*	*	25	22
11:00	*	*	*	*	**44**	**25**	*	*	*	*	*	*	*	*	**44**	**25**
12:00 PM	*	*	*	*	54	25	*	*	*	*	*	*	*	*	54	25
01:00	*	*	*	*	53	29	*	*	*	*	*	*	*	*	53	29
02:00	*	*	*	*	56	**33**	*	*	*	*	*	*	*	*	56	**33**
03:00	*	*	*	*	54	32	*	*	*	*	*	*	*	*	54	32
04:00	*	*	*	*	63	28	*	*	*	*	*	*	*	*	63	28
05:00	*	*	*	*	**72**	32	*	*	*	*	*	*	*	*	**72**	32
06:00	*	*	*	*	44	19	*	*	*	*	*	*	*	*	44	19
07:00	*	*	*	*	35	18	*	*	*	*	*	*	*	*	35	18
08:00	*	*	*	*	30	15	*	*	*	*	*	*	*	*	30	15
09:00	*	*	*	*	17	9	*	*	*	*	*	*	*	*	17	9
10:00	*	*	*	*	12	8	*	*	*	*	*	*	*	*	12	8
11:00	*	*	*	*	7	2	*	*	*	*	*	*	*	*	7	2
Lane	0	0	0	0	649	378	0	0	0	0	0	0	0	0	649	378
Day	0		0		1027		0		0		0		0		1027	
AM Peak	-	-	-	-	11:00	11:00	-	-	-	-	-	-	-	-	11:00	11:00
Vol.	-	-	-	-	44	25	-	-	-	-	-	-	-	-	44	25
PM Peak	-	-	-	-	17:00	14:00	-	-	-	-	-	-	-	-	17:00	14:00
Vol.	-	-	-	-	72	33	-	-	-	-	-	-	-	-	72	33

Comb. Total	0	0	1027	0	0	0	0	1027

ADT ADT 1,027 AADT 1,027

LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual*, Transportation Research Board, 2016, 6th Edition

SIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

LOS	Average Vehicle Delay sec/vehicle	Operational Characteristics
A	<10 seconds	Describes operations with low control delay, up to 10 sec/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
B	10 to 20 seconds	Describes operations with control delay greater than 10 seconds and up to 20 sec/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
C	20 to 35 seconds	Describes operations with control delay greater than 20 and up to 35 sec/veh. These higher delays may result from only fair progression, longer cycle length, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	35 to 55 seconds	Describes operations with control delay greater than 35 and up to 55 sec/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	55 to 80 seconds	Describes operations with control delay greater than 55 and up to 80 sec/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.
F	>80 seconds	Describes operations with control delay in excess of 80 sec/veh. This level, considered unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual*, Transportation Research Board, 2016, 6th Edition

UNSIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

Applicable to Two-Way Stop Control, All-Way Stop Control, and Roundabouts

LOS	Average Vehicle Control Delay	Operational Characteristics
A	<10 seconds	Normally, vehicles on the stop-controlled approach only have to wait up to 10 seconds before being able to clear the intersection. Left-turning vehicles on the uncontrolled street do not have to wait to make their turn.
B	10 to 15 seconds	Vehicles on the stop-controlled approach will experience delays before being able to clear the intersection. The delay could be up to 15 seconds. Left-turning vehicles on the uncontrolled street may have to wait to make their turn.
C	15 to 25 seconds	Vehicles on the stop-controlled approach can expect delays in the range of 15 to 25 seconds before clearing the intersection. Motorists may begin to take chances due to the long delays, thereby posing a safety risk to through traffic. Left-turning vehicles on the uncontrolled street will now be required to wait to make their turn causing a queue to be created in the turn lane.
D	25 to 35 seconds	This is the point at which a traffic signal may be warranted for this intersection. The delays for the stop-controlled intersection are not considered to be excessive. The length of the queue may begin to block other public and private access points.
E	35 to 50 seconds	The delays for all critical traffic movements are considered to be unacceptable. The length of the queues for the stop-controlled approaches as well as the left-turn movements are extremely long. There is a high probability that this intersection will meet traffic signal warrants. The ability to install a traffic signal is affected by the location of other existing traffic signals. Consideration may be given to restricting the accesses by eliminating the left-turn movements from and to the stop-controlled approach.
F	>50 seconds	The delay for the critical traffic movements are probably in excess of 100 seconds. The length of the queues are extremely long. Motorists are selecting alternative routes due to the long delays. The only remedy for these long delays is installing a traffic signal or restricting the accesses. The potential for accidents at this intersection are extremely high due to motorist taking more risky chances. If the median permits, motorists begin making two-stage left-turns.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	0	70	0	8	517	103	25	1067	1
Future Volume (vph)	2	0	70	0	8	517	103	25	1067	1
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	13.0	27.0	13.0	27.0	12.0	53.0	53.0	12.0	53.0	53.0
Total Split (%)	12.4%	25.7%	12.4%	25.7%	11.4%	50.5%	50.5%	11.4%	50.5%	50.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	9.3	6.5	8.3	10.2	82.9	79.3	79.3	85.1	84.0	84.0
Actuated g/C Ratio	0.09	0.06	0.08	0.10	0.79	0.76	0.76	0.81	0.80	0.80
v/c Ratio	0.01	0.05	0.28	0.04	0.02	0.21	0.09	0.04	0.41	0.00
Control Delay	36.5	0.4	48.0	0.1	4.2	9.7	5.5	3.4	5.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	0.4	48.0	0.1	4.2	9.7	5.5	3.4	5.8	0.0
LOS	D	A	D	A	A	A	A	A	A	A
Approach Delay		4.9		38.1		9.0			5.8	
Approach LOS		A		D		A			A	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 46.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	12	14	5	11	8
Future Vol, veh/h	4	12	14	5	11	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	13	15	5	12	9
Number of Lanes	1	1	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	7	7.7	7.2
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	58%
Vol Right, %	0%	0%	0%	100%	42%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	5	4	12	19
LT Vol	14	0	4	0	0
Through Vol	0	5	0	0	11
RT Vol	0	0	0	12	8
Lane Flow Rate	15	5	4	13	21
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.021	0.007	0.006	0.014	0.024
Departure Headway (Hd)	5.075	4.575	5.105	3.905	4.128
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	708	785	701	915	869
Service Time	2.787	2.286	2.834	1.634	2.144
HCM Lane V/C Ratio	0.021	0.006	0.006	0.014	0.024
HCM Control Delay	7.9	7.3	7.9	6.7	7.2
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0	0	0	0.1

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	23	42	0	0	2
Future Vol, veh/h	0	23	42	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	25	46	0	0	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	93	1	2	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	92	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	907	1084	1620	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	932	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	882	1084	1620	-	-	-
Mov Cap-2 Maneuver	882	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	932	-	-	-	-	-

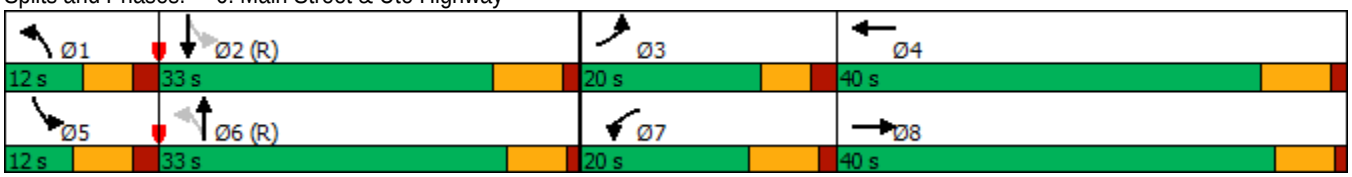
Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1620	-	1084	-	-
HCM Lane V/C Ratio	0.028	-	0.023	-	-
HCM Control Delay (s)	7.3	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	205	86	240	449	113	95	283	84	132	489	355
Future Volume (vph)	197	205	86	240	449	113	95	283	84	132	489	355
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free	6		Free	2		Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	20.0	40.0		20.0	40.0		12.0	33.0		12.0	33.0	
Total Split (%)	19.0%	38.1%		19.0%	38.1%		11.4%	31.4%		11.4%	31.4%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.9	4.8		5.8	5.8		4.9	4.8		5.7	5.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	12.6	20.5	105.0	13.2	21.0	105.0	48.9	39.3	105.0	51.2	40.2	105.0
Actuated g/C Ratio	0.12	0.20	1.00	0.13	0.20	1.00	0.47	0.37	1.00	0.49	0.38	1.00
v/c Ratio	0.52	0.32	0.06	0.61	0.69	0.08	0.23	0.23	0.06	0.26	0.39	0.24
Control Delay	47.7	36.5	0.1	49.6	44.0	0.1	15.6	25.2	0.1	18.9	31.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	36.5	0.1	49.6	44.0	0.1	15.6	25.2	0.1	18.9	31.5	0.3
LOS	D	D	A	D	D	A	B	C	A	B	C	A
Approach Delay		34.6			39.5			18.6			18.5	
Approach LOS		C			D			B			B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 27.6	Intersection LOS: C
Intersection Capacity Utilization 54.6%	ICU Level of Service A
Analysis Period (min) 15	

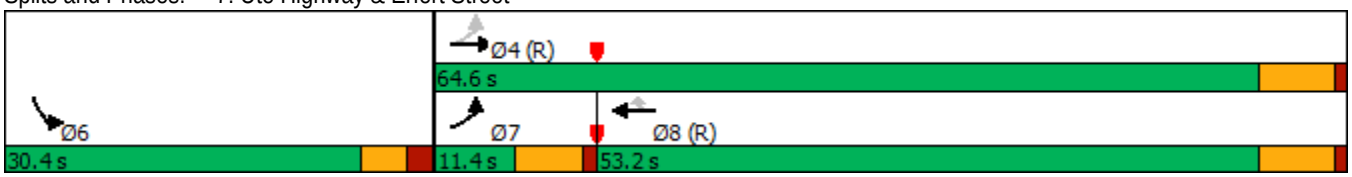
Splits and Phases: 6: Main Street & Ute Highway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	456	748	37	33	7
Future Volume (vph)	25	456	748	37	33	7
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	82.1	83.6	78.9	78.9	8.4	95.0
Actuated g/C Ratio	0.86	0.88	0.83	0.83	0.09	1.00
v/c Ratio	0.05	0.16	0.28	0.03	0.23	0.01
Control Delay	1.9	1.7	4.1	1.9	43.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.9	1.7	4.1	1.9	43.1	0.0
LOS	A	A	A	A	D	A
Approach Delay		1.8	4.0		35.3	
Approach LOS		A	A		D	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 4.1	Intersection LOS: A
Intersection Capacity Utilization 32.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	2	151	1	21	1381	304	37	766	4
Future Volume (vph)	2	2	151	1	21	1381	304	37	766	4
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	15.0	25.0	15.0	25.0	12.0	53.0	53.0	12.0	53.0	53.0
Total Split (%)	14.3%	23.8%	14.3%	23.8%	11.4%	50.5%	50.5%	11.4%	50.5%	50.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.3	7.2	10.3	15.2	75.9	70.9	70.9	77.2	73.4	73.4
Actuated g/C Ratio	0.11	0.07	0.10	0.14	0.72	0.68	0.68	0.74	0.70	0.70
v/c Ratio	0.01	0.19	0.49	0.24	0.05	0.63	0.28	0.16	0.34	0.00
Control Delay	32.5	22.5	49.8	12.3	3.4	17.3	4.6	6.2	8.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	22.5	49.8	12.3	3.4	17.3	4.6	6.2	8.5	0.0
LOS	C	C	D	B	A	B	A	A	A	A
Approach Delay		23.3		38.8		14.9			8.4	
Approach LOS		C		D		B			A	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	36	19	27	16	13
Future Vol, veh/h	12	36	19	27	16	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	39	21	29	17	14
Number of Lanes	1	1	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	7.2	7.8	7.4
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	55%
Vol Right, %	0%	0%	0%	100%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	27	12	36	29
LT Vol	19	0	12	0	0
Through Vol	0	27	0	0	16
RT Vol	0	0	0	36	13
Lane Flow Rate	21	29	13	39	32
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.029	0.038	0.019	0.043	0.037
Departure Headway (Hd)	5.142	4.641	5.172	3.971	4.193
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	696	770	688	894	849
Service Time	2.877	2.376	2.933	1.731	2.241
HCM Lane V/C Ratio	0.03	0.038	0.019	0.044	0.038
HCM Control Delay	8	7.6	8	6.9	7.4
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1	0.1	0.1

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	45	81	0	0	0
Future Vol, veh/h	0	45	81	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	49	88	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	177	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	176	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	813	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	769	1084	1622	-	-	-
Mov Cap-2 Maneuver	769	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	855	-	-	-	-	-

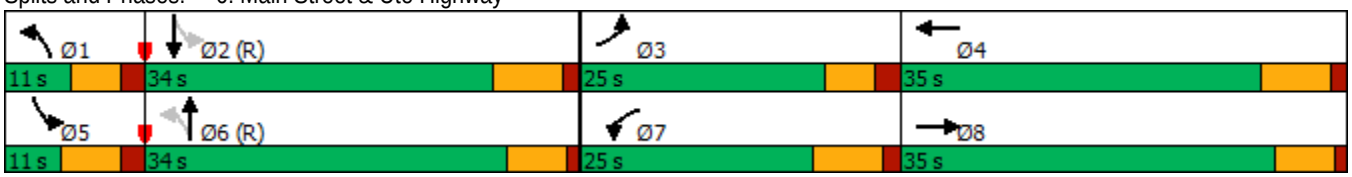
Approach	EB	NB	SB
HCM Control Delay, s	8.5	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.054	-	0.045	-	-
HCM Control Delay (s)	7.3	-	8.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	489	367	75	342	433	172	124	817	205	211	497	179
Future Volume (vph)	489	367	75	342	433	172	124	817	205	211	497	179
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free	6		Free	2		Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	25.0	35.0		25.0	35.0		11.0	34.0		11.0	34.0	
Total Split (%)	23.8%	33.3%		23.8%	33.3%		10.5%	32.4%		10.5%	32.4%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-2.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	3.9	4.8		5.8	5.8		4.9	4.8		5.7	5.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	20.5	23.1	105.0	17.0	20.4	105.0	39.2	29.2	105.0	46.1	33.5	105.0
Actuated g/C Ratio	0.20	0.22	1.00	0.16	0.19	1.00	0.37	0.28	1.00	0.44	0.32	1.00
v/c Ratio	0.79	0.51	0.05	0.67	0.69	0.12	0.35	0.90	0.14	0.73	0.48	0.12
Control Delay	49.8	38.3	0.1	47.5	44.4	0.2	20.4	50.2	0.2	40.4	33.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.8	38.3	0.1	47.5	44.4	0.2	20.4	50.2	0.2	40.4	33.1	0.2
LOS	D	D	A	D	D	A	C	D	A	D	C	A
Approach Delay		41.2			37.5			38.0			28.2	
Approach LOS		D			D			D			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 36.4	Intersection LOS: D
Intersection Capacity Utilization 77.1%	ICU Level of Service D
Analysis Period (min) 15	

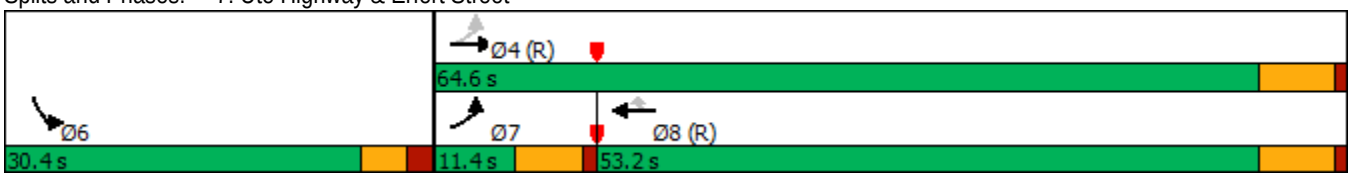
Splits and Phases: 6: Main Street & Ute Highway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	64	839	821	57	84	17
Future Volume (vph)	64	839	821	57	84	17
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	77.2	77.5	67.7	67.7	11.2	95.0
Actuated g/C Ratio	0.81	0.82	0.71	0.71	0.12	1.00
v/c Ratio	0.14	0.32	0.35	0.05	0.44	0.01
Control Delay	3.2	3.4	7.8	2.2	44.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	3.4	7.8	2.2	44.6	0.0
LOS	A	A	A	A	D	A
Approach Delay		3.4	7.5		37.3	
Approach LOS		A	A		D	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 43.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	1	80	1	8	590	115	30	1180	1
Future Volume (vph)	2	1	80	1	8	590	115	30	1180	1
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	13.0	27.0	13.0	27.0	12.0	53.0	53.0	12.0	53.0	53.0
Total Split (%)	12.4%	25.7%	12.4%	25.7%	11.4%	50.5%	50.5%	11.4%	50.5%	50.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	9.8	7.0	8.4	10.9	82.2	78.5	78.5	84.5	83.4	83.4
Actuated g/C Ratio	0.09	0.07	0.08	0.10	0.78	0.75	0.75	0.80	0.79	0.79
v/c Ratio	0.01	0.12	0.32	0.12	0.03	0.24	0.10	0.05	0.46	0.00
Control Delay	35.0	24.6	48.5	18.7	4.0	10.0	5.6	3.7	6.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	24.6	48.5	18.7	4.0	10.0	5.6	3.7	6.6	0.0
LOS	C	C	D	B	A	A	A	A	A	A
Approach Delay		25.8		42.3		9.2			6.6	
Approach LOS		C		D		A			A	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 49.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	13	25	5	12	8
Future Vol, veh/h	4	13	25	5	12	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	14	27	5	13	9
Number of Lanes	1	1	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	7	7.9	7.3
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	60%
Vol Right, %	0%	0%	0%	100%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	25	5	4	13	20
LT Vol	25	0	4	0	0
Through Vol	0	5	0	0	12
RT Vol	0	0	0	13	8
Lane Flow Rate	27	5	4	14	22
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.038	0.007	0.006	0.015	0.025
Departure Headway (Hd)	5.078	4.578	5.127	3.926	4.151
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	708	785	697	907	863
Service Time	2.789	2.289	2.869	1.668	2.172
HCM Lane V/C Ratio	0.038	0.006	0.006	0.015	0.025
HCM Control Delay	8	7.3	7.9	6.7	7.3
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0	0	0	0.1

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	25	45	25	20	5
Future Vol, veh/h	5	25	45	25	20	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	27	49	27	22	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	150	25	27	0	-	0
Stage 1	25	-	-	-	-	-
Stage 2	125	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	842	1051	1587	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	816	1051	1587	-	-	-
Mov Cap-2 Maneuver	816	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	901	-	-	-	-	-

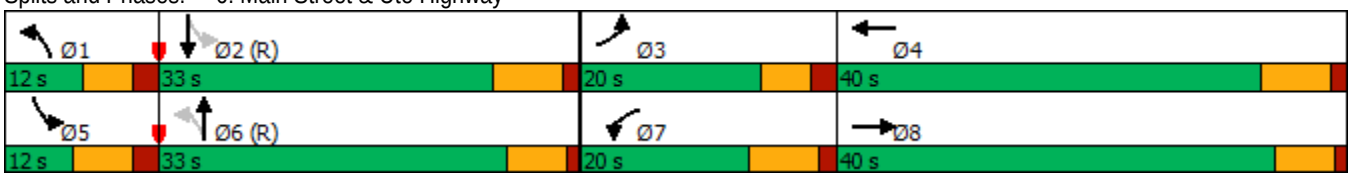
Approach	EB	NB	SB
HCM Control Delay, s	8.7	4.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1587	-	1003	-	-
HCM Lane V/C Ratio	0.031	-	0.033	-	-
HCM Control Delay (s)	7.3	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	230	100	270	505	130	110	320	95	150	550	400
Future Volume (vph)	225	230	100	270	505	130	110	320	95	150	550	400
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free	6		Free	2		Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	20.0	40.0		20.0	40.0		12.0	33.0		12.0	33.0	
Total Split (%)	19.0%	38.1%		19.0%	38.1%		11.4%	31.4%		11.4%	31.4%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.9	4.8		5.8	5.8		4.9	4.8		5.7	5.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	13.3	22.8	105.0	13.5	23.0	105.0	46.5	36.4	105.0	48.4	37.1	105.0
Actuated g/C Ratio	0.13	0.22	1.00	0.13	0.22	1.00	0.44	0.35	1.00	0.46	0.35	1.00
v/c Ratio	0.56	0.33	0.07	0.66	0.71	0.09	0.30	0.28	0.07	0.33	0.48	0.27
Control Delay	48.1	34.7	0.1	51.3	42.9	0.1	17.9	27.5	0.1	20.9	34.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	34.7	0.1	51.3	42.9	0.1	17.9	27.5	0.1	20.9	34.9	0.4
LOS	D	C	A	D	D	A	B	C	A	C	C	A
Approach Delay		33.9			39.3			20.5			20.5	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 28.4	Intersection LOS: C
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

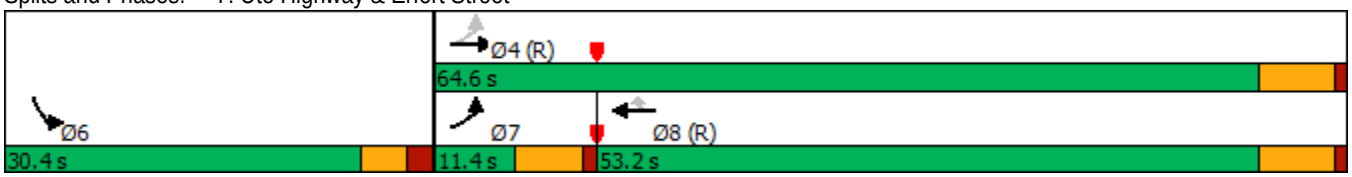
Splits and Phases: 6: Main Street & Ute Highway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	505	850	40	35	10
Future Volume (vph)	30	505	850	40	35	10
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	82.0	83.5	76.4	76.4	8.6	95.0
Actuated g/C Ratio	0.86	0.88	0.80	0.80	0.09	1.00
v/c Ratio	0.06	0.18	0.32	0.03	0.24	0.01
Control Delay	2.0	1.8	5.2	1.9	43.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.0	1.8	5.2	1.9	43.2	0.0
LOS	A	A	A	A	D	A
Approach Delay		1.8	5.1		33.5	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 4.8	Intersection LOS: A
Intersection Capacity Utilization 37.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	2	170	2	21	1525	345	40	855	4
Future Volume (vph)	2	2	170	2	21	1525	345	40	855	4
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	15.0	25.0	15.0	25.0	12.0	53.0	53.0	12.0	53.0	53.0
Total Split (%)	14.3%	23.8%	14.3%	23.8%	11.4%	50.5%	50.5%	11.4%	50.5%	50.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.3	7.2	10.5	15.3	75.6	70.6	70.6	77.1	73.2	73.2
Actuated g/C Ratio	0.11	0.07	0.10	0.15	0.72	0.67	0.67	0.73	0.70	0.70
v/c Ratio	0.01	0.19	0.54	0.26	0.05	0.70	0.32	0.20	0.38	0.00
Control Delay	32.5	22.5	51.0	12.1	3.2	18.1	4.5	7.0	8.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	22.5	51.0	12.1	3.2	18.1	4.5	7.0	8.9	0.0
LOS	C	C	D	B	A	B	A	A	A	A
Approach Delay		23.3		39.5		15.4			8.8	
Approach LOS		C		D		B			A	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 61.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	45	20	30	20	13
Future Vol, veh/h	12	45	20	30	20	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	49	22	33	22	14
Number of Lanes	1	1	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	7.2	7.8	7.5
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	61%
Vol Right, %	0%	0%	0%	100%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	30	12	45	33
LT Vol	20	0	12	0	0
Through Vol	0	30	0	0	20
RT Vol	0	0	0	45	13
Lane Flow Rate	22	33	13	49	36
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.031	0.042	0.019	0.054	0.042
Departure Headway (Hd)	5.16	4.659	5.188	3.986	4.245
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	693	766	685	889	838
Service Time	2.901	2.4	2.954	1.752	2.3
HCM Lane V/C Ratio	0.032	0.043	0.019	0.055	0.043
HCM Control Delay	8.1	7.6	8.1	7	7.5
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1	0.2	0.1

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	50	85	45	60	5
Future Vol, veh/h	5	50	85	45	60	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	54	92	49	65	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	301	68	70	0	-	0
Stage 1	68	-	-	-	-	-
Stage 2	233	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	691	995	1531	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	650	995	1531	-	-	-
Mov Cap-2 Maneuver	650	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	806	-	-	-	-	-

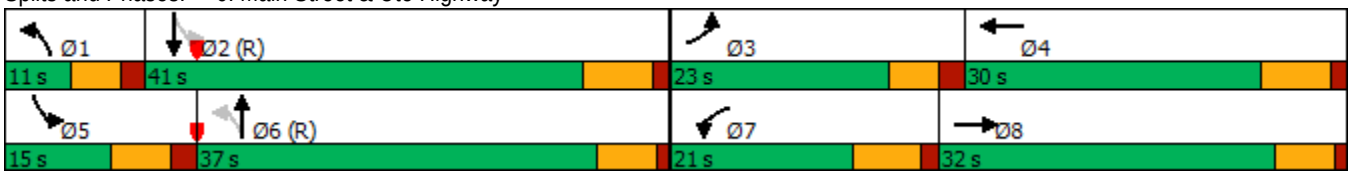
Approach	EB	NB	SB
HCM Control Delay, s	9	4.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1531	-	949	-	-
HCM Lane V/C Ratio	0.06	-	0.063	-	-
HCM Control Delay (s)	7.5	-	9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	550	415	85	385	475	195	140	920	230	235	560	200
Future Volume (vph)	550	415	85	385	475	195	140	920	230	235	560	200
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free	6		Free	2		Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	23.0	32.0		21.0	30.0		11.0	37.0		15.0	41.0	
Total Split (%)	21.9%	30.5%		20.0%	28.6%		10.5%	35.2%		14.3%	39.0%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-2.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	3.9	4.8		5.8	5.8		4.9	4.8		5.7	5.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	19.1	24.0	105.0	15.1	21.0	105.0	40.1	32.2	105.0	48.3	36.5	105.0
Actuated g/C Ratio	0.18	0.23	1.00	0.14	0.20	1.00	0.38	0.31	1.00	0.46	0.35	1.00
v/c Ratio	0.96	0.56	0.06	0.85	0.73	0.13	0.44	0.92	0.16	0.91	0.50	0.14
Control Delay	70.5	38.3	0.1	60.6	45.6	0.2	22.2	49.8	0.2	62.3	30.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.5	38.3	0.1	60.6	45.6	0.2	22.2	49.8	0.2	62.3	30.0	0.2
LOS	E	D	A	E	D	A	C	D	A	E	C	A
Approach Delay		52.1			42.7			38.0			31.7	
Approach LOS		D			D			D			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 41.0	Intersection LOS: D
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

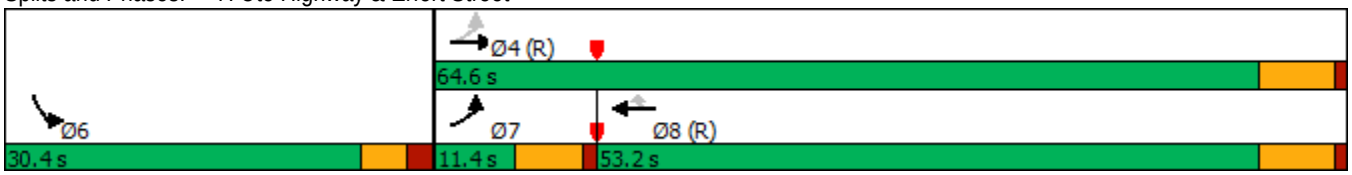
Splits and Phases: 6: Main Street & Ute Highway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	70	930	925	60	90	20
Future Volume (vph)	70	930	925	60	90	20
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	76.8	77.2	67.3	67.3	11.6	95.0
Actuated g/C Ratio	0.81	0.81	0.71	0.71	0.12	1.00
v/c Ratio	0.17	0.35	0.40	0.06	0.45	0.01
Control Delay	3.6	3.7	8.5	2.2	44.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.6	3.7	8.5	2.2	44.7	0.0
LOS	A	A	A	A	D	A
Approach Delay		3.7	8.1		36.5	
Approach LOS		A	A		D	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 7.5	Intersection LOS: A
Intersection Capacity Utilization 46.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	1	99	1	8	590	122	38	1180	1
Future Volume (vph)	2	1	99	1	8	590	122	38	1180	1
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	13.0	27.0	13.0	27.0	12.0	53.0	53.0	12.0	53.0	53.0
Total Split (%)	12.4%	25.7%	12.4%	25.7%	11.4%	50.5%	50.5%	11.4%	50.5%	50.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	9.8	7.0	8.6	11.1	79.7	75.0	75.0	82.2	79.9	79.9
Actuated g/C Ratio	0.09	0.07	0.08	0.11	0.76	0.71	0.71	0.78	0.76	0.76
v/c Ratio	0.01	0.12	0.38	0.24	0.03	0.25	0.11	0.07	0.48	0.00
Control Delay	35.0	24.6	49.7	15.4	4.0	10.5	5.7	3.8	7.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	24.6	49.7	15.4	4.0	10.5	5.7	3.8	7.0	0.0
LOS	C	C	D	B	A	B	A	A	A	A
Approach Delay		25.8		38.7		9.6			6.9	
Approach LOS		C		D		A			A	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 49.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	13	15	7	40	0	30	5	3	0	12	8
Future Vol, veh/h	4	13	15	7	40	0	30	5	3	0	12	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	14	16	8	43	0	33	5	3	0	13	9
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	7.3	7.7	8	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	62%	0%	46%	0%	100%	60%
Vol Right, %	0%	38%	0%	54%	0%	0%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	8	4	28	7	40	20
LT Vol	30	0	4	0	7	0	0
Through Vol	0	5	0	13	0	40	12
RT Vol	0	3	0	15	0	0	8
Lane Flow Rate	33	9	4	30	8	43	22
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.047	0.011	0.006	0.036	0.011	0.056	0.027
Departure Headway (Hd)	5.192	4.429	5.17	4.294	5.161	4.66	4.472
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	685	801	687	826	689	763	791
Service Time	2.957	2.194	2.939	2.063	2.924	2.424	2.551
HCM Lane V/C Ratio	0.048	0.011	0.006	0.036	0.012	0.056	0.028
HCM Control Delay	8.2	7.2	8	7.2	8	7.7	7.7
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0	0	0.1	0	0.2	0.1

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	16	0	0	0	47	0	0	0	0	0
Future Vol, veh/h	0	0	16	0	0	0	47	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	17	0	0	0	51	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	0	17	0	0	10	10	9
Stage 1	-	-	-	-	-	-	9	9	-
Stage 2	-	-	-	-	-	-	1	1	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1600	-	0	1010	885	1073
Stage 1	0	-	-	-	-	0	1014	888	-
Stage 2	0	-	-	-	-	0	1022	895	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1600	-	-	1010	0	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	1010	0	-
Stage 1	-	-	-	-	-	-	1014	0	-
Stage 2	-	-	-	-	-	-	1022	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1010	-	-	1600	-
HCM Lane V/C Ratio	0.051	-	-	-	-
HCM Control Delay (s)	8.8	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	4.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	73	5	33	20	2	32
Future Vol, veh/h	73	5	33	20	2	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	5	36	22	2	35

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	86	47	0	0	58	0
Stage 1	47	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	915	1022	-	-	1546	-
Stage 1	975	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	914	1022	-	-	1546	-
Mov Cap-2 Maneuver	914	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	982	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	920	1546	-
HCM Lane V/C Ratio	-	-	0.092	0.001	-
HCM Control Delay (s)	-	-	9.3	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	25	45	48	100	5
Future Vol, veh/h	5	25	45	48	100	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	27	49	52	109	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	262	112	114	0	-	0
Stage 1	112	-	-	-	-	-
Stage 2	150	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	727	941	1475	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	703	941	1475	-	-	-
Mov Cap-2 Maneuver	703	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	878	-	-	-	-	-

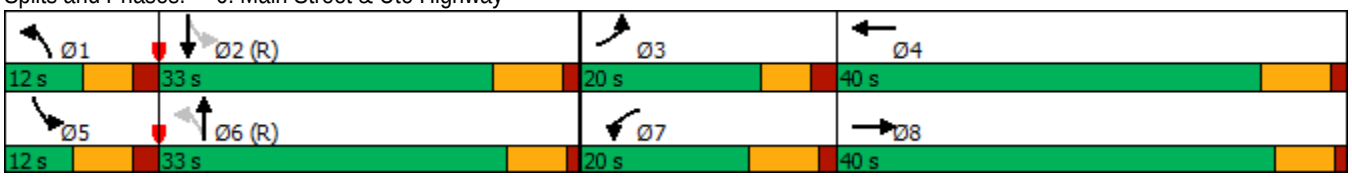
Approach	EB	NB	SB
HCM Control Delay, s	9.2	3.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1475	-	891	-	-
HCM Lane V/C Ratio	0.033	-	0.037	-	-
HCM Control Delay (s)	7.5	-	9.2	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	235	100	308	521	130	110	326	105	150	565	404
Future Volume (vph)	226	235	100	308	521	130	110	326	105	150	565	404
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free	6		Free	2		Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	20.0	40.0		20.0	40.0		12.0	33.0		12.0	33.0	
Total Split (%)	19.0%	38.1%		19.0%	38.1%		11.4%	31.4%		11.4%	31.4%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.9	4.8		5.8	5.8		4.9	4.8		5.7	5.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	13.3	23.0	105.0	13.8	23.5	105.0	45.9	35.9	105.0	47.9	36.7	105.0
Actuated g/C Ratio	0.13	0.22	1.00	0.13	0.22	1.00	0.44	0.34	1.00	0.46	0.35	1.00
v/c Ratio	0.57	0.33	0.07	0.74	0.72	0.09	0.31	0.29	0.07	0.33	0.50	0.28
Control Delay	48.2	34.5	0.1	54.6	42.7	0.1	18.3	27.9	0.1	21.4	35.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	34.5	0.1	54.6	42.7	0.1	18.3	27.9	0.1	21.4	35.9	0.4
LOS	D	C	A	D	D	A	B	C	A	C	D	A
Approach Delay		33.9			40.8			20.5			21.1	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 29.2	Intersection LOS: C
Intersection Capacity Utilization 60.4%	ICU Level of Service B
Analysis Period (min) 15	

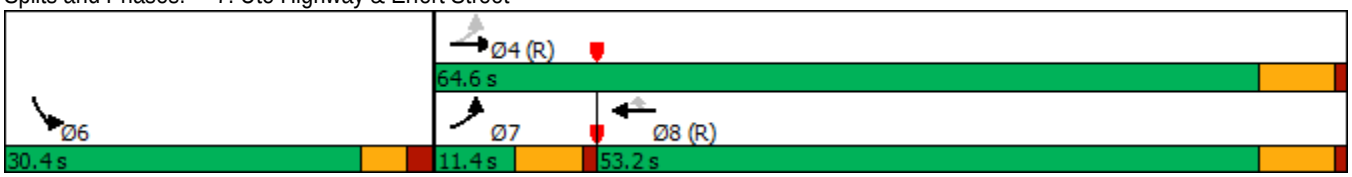
Splits and Phases: 6: Main Street & Ute Highway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	45	505	850	48	61	64
Future Volume (vph)	45	505	850	48	61	64
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	78.3	78.7	71.5	71.5	9.9	95.0
Actuated g/C Ratio	0.82	0.83	0.75	0.75	0.10	1.00
v/c Ratio	0.10	0.19	0.35	0.04	0.36	0.04
Control Delay	2.7	2.5	6.4	2.0	44.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.7	2.5	6.4	2.0	44.2	0.0
LOS	A	A	A	A	D	A
Approach Delay		2.5	6.2		21.5	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 6.1	Intersection LOS: A
Intersection Capacity Utilization 43.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	2	183	2	21	1525	372	69	855	4
Future Volume (vph)	2	2	183	2	21	1525	372	69	855	4
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	15.0	25.0	15.0	25.0	12.0	53.0	53.0	12.0	53.0	53.0
Total Split (%)	14.3%	23.8%	14.3%	23.8%	11.4%	50.5%	50.5%	11.4%	50.5%	50.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.3	7.2	10.6	15.5	73.8	67.5	67.5	77.5	73.1	73.1
Actuated g/C Ratio	0.11	0.07	0.10	0.15	0.70	0.64	0.64	0.74	0.70	0.70
v/c Ratio	0.01	0.19	0.57	0.31	0.05	0.73	0.35	0.36	0.38	0.00
Control Delay	32.5	22.5	51.9	11.5	3.4	20.7	5.4	12.6	9.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	22.5	51.9	11.5	3.4	20.7	5.4	12.6	9.0	0.0
LOS	C	C	D	B	A	C	A	B	A	A
Approach Delay		23.3		38.7		17.5			9.2	
Approach LOS		C		D		B			A	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 70.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	50	51	3	27	0	23	30	8	0	20	13
Future Vol, veh/h	12	50	51	3	27	0	23	30	8	0	20	13
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	54	55	3	29	0	25	33	9	0	22	14
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	7.9	7.8	8	8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	79%	0%	50%	0%	100%	61%
Vol Right, %	0%	21%	0%	50%	0%	0%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	38	12	101	3	27	33
LT Vol	23	0	12	0	3	0	0
Through Vol	0	30	0	50	0	27	20
RT Vol	0	8	0	51	0	0	13
Lane Flow Rate	25	41	13	110	3	29	36
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.038	0.055	0.019	0.137	0.005	0.04	0.047
Departure Headway (Hd)	5.435	4.786	5.332	4.477	5.395	4.893	4.748
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	662	751	675	806	666	735	757
Service Time	3.145	2.496	3.032	2.177	3.104	2.602	2.759
HCM Lane V/C Ratio	0.038	0.055	0.019	0.136	0.005	0.039	0.048
HCM Control Delay	8.4	7.8	8.1	7.9	8.1	7.8	8
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.1	0.5	0	0.1	0.1

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	58	0	0	0	30	0	0	0	0	0
Future Vol, veh/h	0	0	58	0	0	0	30	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	63	0	0	0	33	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	0	63	0	0	33	33	32
Stage 1	-	-	-	-	-	-	32	32	-
Stage 2	-	-	-	-	-	-	1	1	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1540	-	0	980	860	1042
Stage 1	0	-	-	-	-	0	991	868	-
Stage 2	0	-	-	-	-	0	1022	895	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1540	-	-	980	0	1042
Mov Cap-2 Maneuver	-	-	-	-	-	-	980	0	-
Stage 1	-	-	-	-	-	-	991	0	-
Stage 2	-	-	-	-	-	-	1022	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	980	-	-	1540	-
HCM Lane V/C Ratio	0.033	-	-	-	-
HCM Control Delay (s)	8.8	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	3	58	74	6	68
Future Vol, veh/h	48	3	58	74	6	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	3	63	80	7	74

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	191	103	0	0	143	0
Stage 1	103	-	-	-	-	-
Stage 2	88	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	798	952	-	-	1440	-
Stage 1	921	-	-	-	-	-
Stage 2	935	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	794	952	-	-	1440	-
Mov Cap-2 Maneuver	794	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	930	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	802	1440	-
HCM Lane V/C Ratio	-	-	0.069	0.005	-
HCM Control Delay (s)	-	-	9.8	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	50	85	127	111	5
Future Vol, veh/h	5	50	85	127	111	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	54	92	138	121	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	446	124	126	0	-	0
Stage 1	124	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	570	927	1460	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	534	927	1460	-	-	-
Mov Cap-2 Maneuver	534	-	-	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	735	-	-	-	-	-

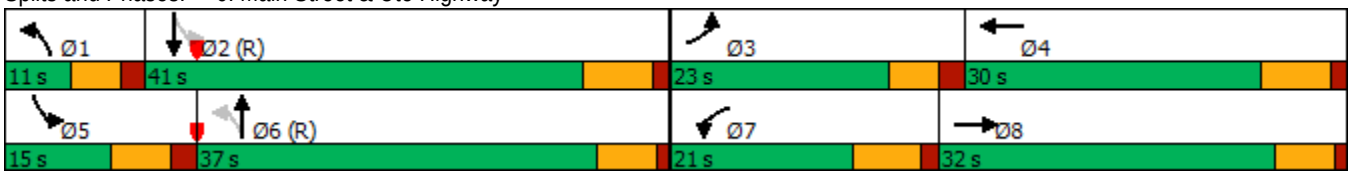
Approach	EB	NB	SB
HCM Control Delay, s	9.4	3.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1460	-	869	-	-
HCM Lane V/C Ratio	0.063	-	0.069	-	-
HCM Control Delay (s)	7.6	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	554	433	85	409	485	195	140	943	265	235	570	203
Future Volume (vph)	554	433	85	409	485	195	140	943	265	235	570	203
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free	6		Free	2		Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	23.0	32.0		21.0	30.0		11.0	37.0		15.0	41.0	
Total Split (%)	21.9%	30.5%		20.0%	28.6%		10.5%	35.2%		14.3%	39.0%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-2.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	3.9	4.8		5.8	5.8		4.9	4.8		5.7	5.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	19.1	24.3	105.0	15.2	21.3	105.0	39.9	32.2	105.0	47.9	36.4	105.0
Actuated g/C Ratio	0.18	0.23	1.00	0.14	0.20	1.00	0.38	0.31	1.00	0.46	0.35	1.00
v/c Ratio	0.96	0.58	0.06	0.90	0.73	0.13	0.45	0.94	0.18	0.93	0.51	0.14
Control Delay	71.7	38.4	0.1	66.4	45.5	0.2	23.0	53.1	0.3	67.0	30.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.7	38.4	0.1	66.4	45.5	0.2	23.0	53.1	0.3	67.0	30.1	0.2
LOS	E	D	A	E	D	A	C	D	A	E	C	A
Approach Delay		52.6			45.3			39.6			32.6	
Approach LOS		D			D			D			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 42.5	Intersection LOS: D
Intersection Capacity Utilization 85.2%	ICU Level of Service E
Analysis Period (min) 15	

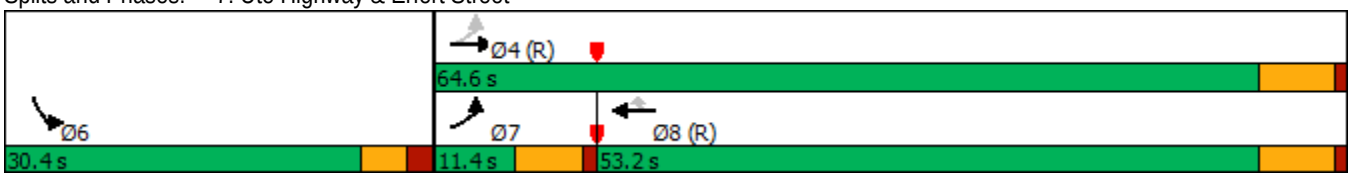
Splits and Phases: 6: Main Street & Ute Highway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	123	930	925	89	107	54
Future Volume (vph)	123	930	925	89	107	54
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	73.5	72.8	59.8	59.8	12.6	95.0
Actuated g/C Ratio	0.77	0.77	0.63	0.63	0.13	1.00
v/c Ratio	0.30	0.37	0.45	0.09	0.50	0.04
Control Delay	4.9	4.4	10.6	2.2	44.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	4.4	10.6	2.2	44.8	0.0
LOS	A	A	B	A	D	A
Approach Delay		4.4	9.9		29.7	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 50.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	1	99	1	8	598	122	42	1189	1
Future Volume (vph)	2	1	99	1	8	598	122	42	1189	1
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	13.0	27.0	13.0	27.0	12.0	53.0	53.0	12.0	53.0	53.0
Total Split (%)	12.4%	25.7%	12.4%	25.7%	11.4%	50.5%	50.5%	11.4%	50.5%	50.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	9.8	7.0	8.6	11.1	78.7	72.6	72.6	82.3	79.9	79.9
Actuated g/C Ratio	0.09	0.07	0.08	0.11	0.75	0.69	0.69	0.78	0.76	0.76
v/c Ratio	0.01	0.12	0.38	0.25	0.03	0.27	0.12	0.08	0.48	0.00
Control Delay	35.0	24.6	49.7	15.2	3.8	11.5	5.9	3.8	7.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	24.6	49.7	15.2	3.8	11.5	5.9	3.8	7.1	0.0
LOS	C	C	D	B	A	B	A	A	A	A
Approach Delay		25.8		38.1		10.4			7.0	
Approach LOS		C		D		B			A	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 52.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	13	19	7	40	0	34	5	3	0	12	8
Future Vol, veh/h	4	13	19	7	40	0	34	5	3	0	12	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	14	21	8	43	0	37	5	3	0	13	9
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	7.3	7.7	8.1	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	62%	0%	41%	0%	100%	60%
Vol Right, %	0%	38%	0%	59%	0%	0%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	34	8	4	32	7	40	20
LT Vol	34	0	4	0	7	0	0
Through Vol	0	5	0	13	0	40	12
RT Vol	0	3	0	19	0	0	8
Lane Flow Rate	37	9	4	35	8	43	22
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.053	0.011	0.006	0.041	0.011	0.056	0.027
Departure Headway (Hd)	5.199	4.436	5.178	4.261	5.171	4.671	4.483
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	684	800	686	831	687	760	789
Service Time	2.967	2.203	2.951	2.034	2.939	2.438	2.566
HCM Lane V/C Ratio	0.054	0.011	0.006	0.042	0.012	0.057	0.028
HCM Control Delay	8.3	7.3	8	7.2	8	7.7	7.7
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0	0	0.1	0	0.2	0.1

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	16	0	0	0	47	0	0	0	0	0
Future Vol, veh/h	0	0	16	0	0	0	47	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	17	0	0	0	51	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	0	17	0	0	10	10	9
Stage 1	-	-	-	-	-	-	9	9	-
Stage 2	-	-	-	-	-	-	1	1	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1600	-	0	1010	885	1073
Stage 1	0	-	-	-	-	0	1014	888	-
Stage 2	0	-	-	-	-	0	1022	895	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1600	-	-	1010	0	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	1010	0	-
Stage 1	-	-	-	-	-	-	1014	0	-
Stage 2	-	-	-	-	-	-	1022	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1010	-	-	1600	-
HCM Lane V/C Ratio	0.051	-	-	-	-
HCM Control Delay (s)	8.8	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	58	5	37	15	2	36
Future Vol, veh/h	58	5	37	15	2	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	5	40	16	2	39

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	91	48	0	0	56	0
Stage 1	48	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	909	1021	-	-	1549	-
Stage 1	974	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	908	1021	-	-	1549	-
Mov Cap-2 Maneuver	908	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	978	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1549	-
HCM Lane V/C Ratio	-	-	0.075	0.001	-
HCM Control Delay (s)	-	-	9.2	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	7	25	279	6	7	45	40	273	9	80	5
Future Vol, veh/h	5	7	25	279	6	7	45	40	273	9	80	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	8	27	303	7	8	49	43	297	10	87	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	407	548	90	417	402	192	92	0	0	340	0	0
Stage 1	110	110	-	290	290	-	-	-	-	-	-	-
Stage 2	297	438	-	127	112	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	555	444	968	546	537	850	1503	-	-	1219	-	-
Stage 1	895	804	-	718	672	-	-	-	-	-	-	-
Stage 2	712	579	-	877	803	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	528	426	968	507	515	850	1503	-	-	1219	-	-
Mov Cap-2 Maneuver	528	426	-	507	515	-	-	-	-	-	-	-
Stage 1	865	798	-	694	650	-	-	-	-	-	-	-
Stage 2	676	560	-	837	797	-	-	-	-	-	-	-

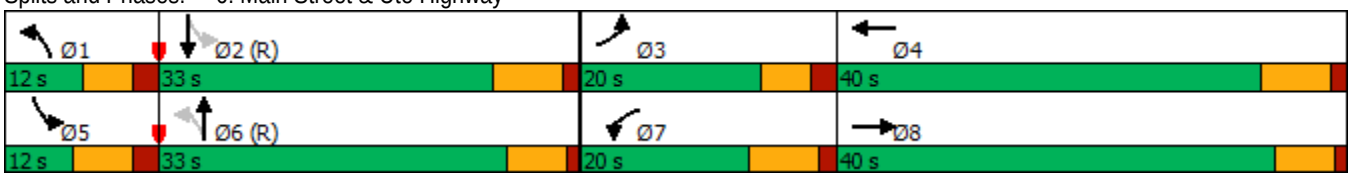
Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	22.8	0.9	0.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1503	-	-	715	512	1219	-	-
HCM Lane V/C Ratio	0.033	-	-	0.056	0.62	0.008	-	-
HCM Control Delay (s)	7.5	-	-	10.3	22.8	8	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	4.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	261	100	357	545	138	110	326	156	159	565	404
Future Volume (vph)	226	261	100	357	545	138	110	326	156	159	565	404
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free	6		Free	2		Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	20.0	40.0		20.0	40.0		12.0	33.0		12.0	33.0	
Total Split (%)	19.0%	38.1%		19.0%	38.1%		11.4%	31.4%		11.4%	31.4%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.9	4.8		5.8	5.8		4.9	4.8		5.7	5.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	13.3	23.6	105.0	14.2	24.3	105.0	45.0	35.0	105.0	47.1	35.9	105.0
Actuated g/C Ratio	0.13	0.22	1.00	0.14	0.23	1.00	0.43	0.33	1.00	0.45	0.34	1.00
v/c Ratio	0.57	0.36	0.07	0.84	0.72	0.09	0.32	0.30	0.11	0.36	0.51	0.28
Control Delay	48.2	34.4	0.1	61.1	42.2	0.1	19.0	28.5	0.1	22.8	36.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	34.4	0.1	61.1	42.2	0.1	19.0	28.5	0.1	22.8	36.6	0.4
LOS	D	C	A	E	D	A	B	C	A	C	D	A
Approach Delay		33.9			43.1			19.2			21.7	
Approach LOS		C			D			B			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 30.1	Intersection LOS: C
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

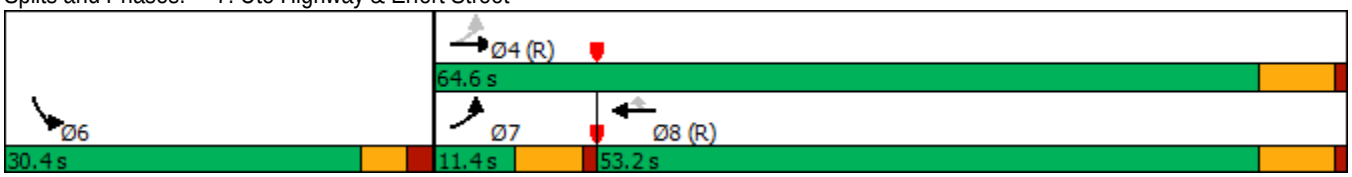
Splits and Phases: 6: Main Street & Ute Highway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	185	451	757	173	146	238
Future Volume (vph)	185	451	757	173	146	238
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	75.4	74.7	60.8	60.8	10.7	95.0
Actuated g/C Ratio	0.79	0.79	0.64	0.64	0.11	1.00
v/c Ratio	0.37	0.18	0.36	0.17	0.41	0.16
Control Delay	4.5	2.8	9.0	1.7	42.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	2.8	9.0	1.7	42.0	0.2
LOS	A	A	A	A	D	A
Approach Delay		3.3	7.6		16.1	
Approach LOS		A	A		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 47.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	2	2	183	2	21	1534	372	73	864	4
Future Volume (vph)	2	2	183	2	21	1534	372	73	864	4
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	15.0	25.0	15.0	25.0	12.0	53.0	53.0	12.0	53.0	53.0
Total Split (%)	14.3%	23.8%	14.3%	23.8%	11.4%	50.5%	50.5%	11.4%	50.5%	50.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.3	7.2	10.6	15.5	73.7	67.4	67.4	77.6	73.1	73.1
Actuated g/C Ratio	0.11	0.07	0.10	0.15	0.70	0.64	0.64	0.74	0.70	0.70
v/c Ratio	0.01	0.19	0.57	0.32	0.05	0.73	0.35	0.37	0.38	0.00
Control Delay	32.5	22.5	51.9	11.4	3.4	21.2	5.5	13.4	9.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	22.5	51.9	11.4	3.4	21.2	5.5	13.4	9.0	0.0
LOS	C	C	D	B	A	C	A	B	A	A
Approach Delay		23.3		38.3		18.0			9.3	
Approach LOS		C		D		B			A	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	50	55	3	27	0	27	30	8	0	20	13
Future Vol, veh/h	12	50	55	3	27	0	27	30	8	0	20	13
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	54	60	3	29	0	29	33	9	0	22	14
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	7.9	7.8	8	8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	79%	0%	48%	0%	100%	61%
Vol Right, %	0%	21%	0%	52%	0%	0%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	38	12	105	3	27	33
LT Vol	27	0	12	0	3	0	0
Through Vol	0	30	0	50	0	27	20
RT Vol	0	8	0	55	0	0	13
Lane Flow Rate	29	41	13	114	3	29	36
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.044	0.055	0.019	0.142	0.005	0.04	0.047
Departure Headway (Hd)	5.444	4.795	5.337	4.468	5.41	4.908	4.763
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	661	750	674	806	664	733	755
Service Time	3.154	2.505	3.044	2.175	3.119	2.617	2.774
HCM Lane V/C Ratio	0.044	0.055	0.019	0.141	0.005	0.04	0.048
HCM Control Delay	8.4	7.8	8.1	7.9	8.1	7.8	8
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.1	0.5	0	0.1	0.1

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	58	0	0	0	30	0	0	0	0	0
Future Vol, veh/h	0	0	58	0	0	0	30	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	63	0	0	0	33	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	0	63	0	0	33	33	32
Stage 1	-	-	-	-	-	-	32	32	-
Stage 2	-	-	-	-	-	-	1	1	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1540	-	0	980	860	1042
Stage 1	0	-	-	-	-	0	991	868	-
Stage 2	0	-	-	-	-	0	1022	895	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1540	-	-	980	0	1042
Mov Cap-2 Maneuver	-	-	-	-	-	-	980	0	-
Stage 1	-	-	-	-	-	-	991	0	-
Stage 2	-	-	-	-	-	-	1022	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	980	-	-	1540	-
HCM Lane V/C Ratio	0.033	-	-	-	-
HCM Control Delay (s)	8.8	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	37	3	62	57	6	72
Future Vol, veh/h	37	3	62	57	6	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	3	67	62	7	78

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	190	98	0	0	129	0
Stage 1	98	-	-	-	-	-
Stage 2	92	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	799	958	-	-	1457	-
Stage 1	926	-	-	-	-	-
Stage 2	932	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	795	958	-	-	1457	-
Mov Cap-2 Maneuver	795	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	927	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	805	1457	-
HCM Lane V/C Ratio	-	-	0.054	0.004	-
HCM Control Delay (s)	-	-	9.7	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	16.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	6	50	266	6	9	85	105	277	7	97	5
Future Vol, veh/h	5	6	50	266	6	9	85	105	277	7	97	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	7	54	289	7	10	92	114	301	8	105	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	581	723	108	603	575	265	110	0	0	415	0	0
Stage 1	124	124	-	449	449	-	-	-	-	-	-	-
Stage 2	457	599	-	154	126	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	425	352	946	411	429	774	1480	-	-	1144	-	-
Stage 1	880	793	-	589	572	-	-	-	-	-	-	-
Stage 2	583	490	-	848	792	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	393	328	946	362	399	774	1480	-	-	1144	-	-
Mov Cap-2 Maneuver	393	328	-	362	399	-	-	-	-	-	-	-
Stage 1	825	787	-	552	537	-	-	-	-	-	-	-
Stage 2	533	460	-	787	786	-	-	-	-	-	-	-

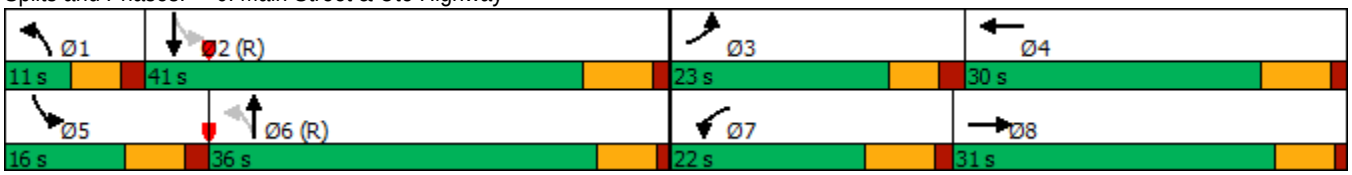
Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	47.7	1.4	0.5
HCM LOS	B	E		

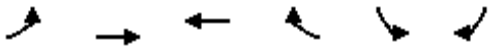
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1480	-	-	727	369	1144	-	-
HCM Lane V/C Ratio	0.062	-	-	0.091	0.828	0.007	-	-
HCM Control Delay (s)	7.6	-	-	10.4	47.7	8.2	-	-
HCM Lane LOS	A	-	-	B	E	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	7.4	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	554	459	85	460	510	204	140	943	317	244	570	203
Future Volume (vph)	554	459	85	460	510	204	140	943	317	244	570	203
Turn Type	Prot	NA	Free	Prot	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free	6		Free	2		Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	23.0	31.0		22.0	30.0		11.0	36.0		16.0	41.0	
Total Split (%)	21.9%	29.5%		21.0%	28.6%		10.5%	34.3%		15.2%	39.0%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-2.0	-1.0		-1.0	-1.0		-1.0	-2.0		-1.0	-1.0	
Total Lost Time (s)	3.9	4.8		5.8	5.8		4.9	3.8		5.7	5.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	19.1	23.8	105.0	16.2	21.8	105.0	38.7	32.2	105.0	48.2	36.1	105.0
Actuated g/C Ratio	0.18	0.23	1.00	0.15	0.21	1.00	0.37	0.31	1.00	0.46	0.34	1.00
v/c Ratio	0.96	0.62	0.06	0.95	0.76	0.14	0.46	0.94	0.22	0.93	0.51	0.14
Control Delay	71.7	40.0	0.1	72.4	46.1	0.2	23.6	53.1	0.3	66.6	30.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.7	40.0	0.1	72.4	46.1	0.2	23.6	53.1	0.3	66.6	30.5	0.2
LOS	E	D	A	E	D	A	C	D	A	E	C	A
Approach Delay		53.0			48.4			38.2			33.1	
Approach LOS		D			D			D			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 43.1	Intersection LOS: D
Intersection Capacity Utilization 85.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Main Street & Ute Highway

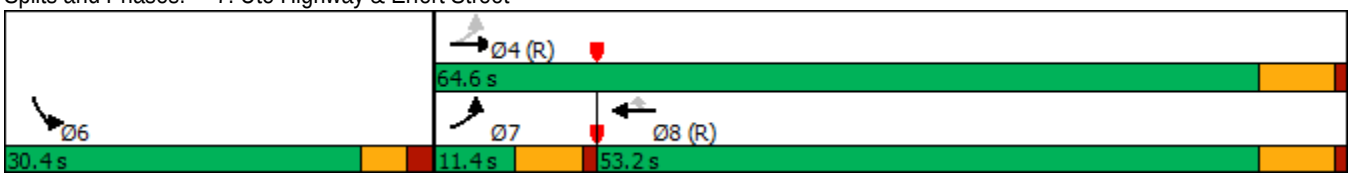




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	260	880	840	207	189	224
Future Volume (vph)	260	880	840	207	189	224
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	74.1	73.4	57.0	57.0	12.0	95.0
Actuated g/C Ratio	0.78	0.77	0.60	0.60	0.13	1.00
v/c Ratio	0.55	0.35	0.43	0.22	0.47	0.15
Control Delay	7.1	4.0	11.7	2.0	41.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.1	4.0	11.7	2.0	41.8	0.2
LOS	A	A	B	A	D	A
Approach Delay		4.7	9.8		19.2	
Approach LOS		A	A		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 54.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	5	101	5	10	970	143	42	2078	5
Future Volume (vph)	5	5	101	5	10	970	143	42	2078	5
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	13.0	27.0	13.0	27.0	12.0	53.0	53.0	12.0	53.0	53.0
Total Split (%)	12.4%	25.7%	12.4%	25.7%	11.4%	50.5%	50.5%	11.4%	50.5%	50.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.1	7.3	8.6	11.2	78.5	72.4	72.4	82.0	79.7	79.7
Actuated g/C Ratio	0.10	0.07	0.08	0.11	0.75	0.69	0.69	0.78	0.76	0.76
v/c Ratio	0.03	0.16	0.39	0.20	0.06	0.43	0.14	0.11	0.84	0.00
Control Delay	35.6	26.9	49.8	18.2	6.2	12.6	3.9	4.2	15.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	26.9	49.8	18.2	6.2	12.6	3.9	4.2	15.1	0.0
LOS	D	C	D	B	A	B	A	A	B	A
Approach Delay		28.6		41.1		11.5			14.9	
Approach LOS		C		D		B			B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 74.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	25	25	15	5	15	15	15	5	15	10
Future Vol, veh/h	5	5	25	25	15	5	15	15	15	5	15	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	27	27	16	5	16	16	16	5	16	11
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	7.2	7.8	7.6	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	100%	0%	17%
Vol Thru, %	0%	50%	0%	17%	0%	75%	50%
Vol Right, %	0%	50%	0%	83%	0%	25%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	30	5	30	25	20	30
LT Vol	15	0	5	0	25	0	5
Through Vol	0	15	0	5	0	15	15
RT Vol	0	15	0	25	0	5	10
Lane Flow Rate	16	33	5	33	27	22	33
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.024	0.039	0.008	0.037	0.039	0.027	0.041
Departure Headway (Hd)	5.197	4.347	5.199	4.115	5.194	4.518	4.55
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	683	815	682	860	685	785	778
Service Time	2.969	2.118	2.976	1.89	2.963	2.287	2.631
HCM Lane V/C Ratio	0.023	0.04	0.007	0.038	0.039	0.028	0.042
HCM Control Delay	8.1	7.3	8	7.1	8.2	7.4	7.8
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0.1	0.1	0.1	0.1

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	50	70	30	50	15
Future Vol, veh/h	15	50	70	30	50	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	54	76	33	54	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	247	62	70	0	-	0
Stage 1	62	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	741	1003	1531	-	-	-
Stage 1	961	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	704	1003	1531	-	-	-
Mov Cap-2 Maneuver	704	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	847	-	-	-	-	-

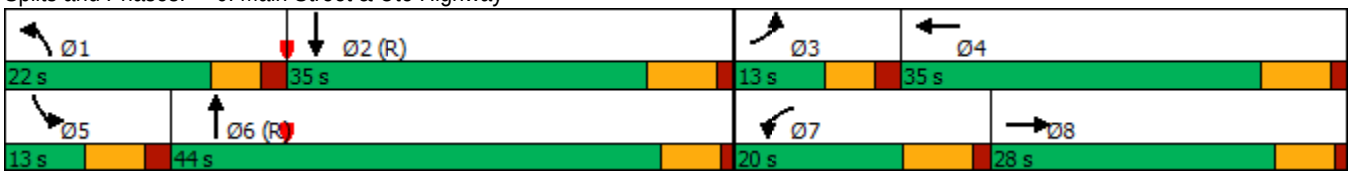
Approach	EB	NB	SB
HCM Control Delay, s	9.3	5.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1531	-	913	-	-
HCM Lane V/C Ratio	0.05	-	0.077	-	-
HCM Control Delay (s)	7.5	-	9.3	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	579	495	235	320	750	148	335	394	140	173	885	1136
Future Volume (vph)	579	495	235	320	750	148	335	394	140	173	885	1136
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free			Free			Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	13.0	28.0		20.0	35.0		22.0	44.0		13.0	35.0	
Total Split (%)	12.4%	26.7%		19.0%	33.3%		21.0%	41.9%		12.4%	33.3%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0		-2.0	-3.0	
Total Lost Time (s)	3.9	3.8		4.8	4.8		3.9	3.8		4.7	3.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	9.1	23.5	105.0	14.9	29.2	105.0	17.0	40.7	105.0	8.8	33.4	105.0
Actuated g/C Ratio	0.09	0.22	1.00	0.14	0.28	1.00	0.16	0.39	1.00	0.08	0.32	1.00
v/c Ratio	2.12	0.68	0.16	0.72	0.83	0.10	0.66	0.31	0.10	0.65	0.86	0.78
Control Delay	539.9	42.2	0.2	52.1	43.8	0.1	47.3	23.3	0.1	49.6	45.5	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	539.9	42.2	0.2	52.1	43.8	0.1	47.3	23.3	0.1	49.6	45.5	8.2
LOS	F	D	A	D	D	A	D	C	A	D	D	A
Approach Delay		254.8			40.7			28.8			26.5	
Approach LOS		F			D			C			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.12	
Intersection Signal Delay: 83.4	Intersection LOS: F
Intersection Capacity Utilization 85.3%	ICU Level of Service E
Analysis Period (min) 15	

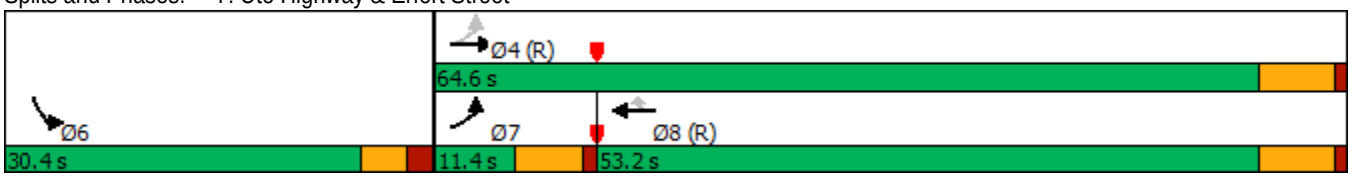
Splits and Phases: 6: Main Street & Ute Highway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	40	770	1160	60	40	60
Future Volume (vph)	40	770	1160	60	40	60
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	81.8	83.3	76.1	76.1	8.8	95.0
Actuated g/C Ratio	0.86	0.88	0.80	0.80	0.09	1.00
v/c Ratio	0.11	0.27	0.44	0.05	0.26	0.04
Control Delay	2.4	2.1	6.3	1.7	43.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.4	2.1	6.3	1.7	43.4	0.1
LOS	A	A	A	A	D	A
Approach Delay		2.1	6.1		17.3	
Approach LOS		A	A		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 45.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	5	197	5	25	2200	363	56	1353	5
Future Volume (vph)	5	5	197	5	25	2200	363	56	1353	5
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	15.0	24.0	15.0	24.0	11.0	55.0	55.0	11.0	55.0	55.0
Total Split (%)	14.3%	22.9%	14.3%	22.9%	10.5%	52.4%	52.4%	10.5%	52.4%	52.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.7	3.4	4.4	3.7	4.4	4.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.3	8.4	11.7	16.6	75.8	69.6	68.6	77.7	71.5	71.5
Actuated g/C Ratio	0.13	0.08	0.11	0.16	0.72	0.66	0.65	0.74	0.68	0.68
v/c Ratio	0.03	0.21	0.56	0.30	0.10	1.02	0.35	0.28	0.61	0.00
Control Delay	31.4	22.2	50.2	11.5	5.3	42.3	7.5	9.2	13.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	22.2	50.2	11.5	5.3	42.3	7.5	9.2	13.0	0.0
LOS	C	C	D	B	A	D	A	A	B	A
Approach Delay		23.4		37.8		37.1			12.8	
Approach LOS		C		D		D			B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 29.1	Intersection LOS: C
Intersection Capacity Utilization 79.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	15	40	15	5	5	20	30	25	5	20	15
Future Vol, veh/h	15	15	40	15	5	5	20	30	25	5	20	15
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	16	43	16	5	5	22	33	27	5	22	16
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	7.6	7.8	7.8	8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	100%	0%	12%
Vol Thru, %	0%	55%	0%	27%	0%	50%	50%
Vol Right, %	0%	45%	0%	73%	0%	50%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	55	15	55	15	10	40
LT Vol	20	0	15	0	15	0	5
Through Vol	0	30	0	15	0	5	20
RT Vol	0	25	0	40	0	5	15
Lane Flow Rate	22	60	16	60	16	11	43
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.032	0.073	0.024	0.072	0.024	0.014	0.056
Departure Headway (Hd)	5.23	4.411	5.366	4.354	5.404	4.551	4.673
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	677	800	671	827	666	791	770
Service Time	3.022	2.203	3.069	2.057	3.107	2.254	2.677
HCM Lane V/C Ratio	0.032	0.075	0.024	0.073	0.024	0.014	0.056
HCM Control Delay	8.2	7.6	8.2	7.4	8.2	7.3	8
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.1	0.2	0.1	0	0.2

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	75	150	50	65	10
Future Vol, veh/h	25	75	150	50	65	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	82	163	54	71	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	457	77	82	0	-	0
Stage 1	77	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	562	984	1515	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	501	984	1515	-	-	-
Mov Cap-2 Maneuver	501	-	-	-	-	-
Stage 1	844	-	-	-	-	-
Stage 2	691	-	-	-	-	-

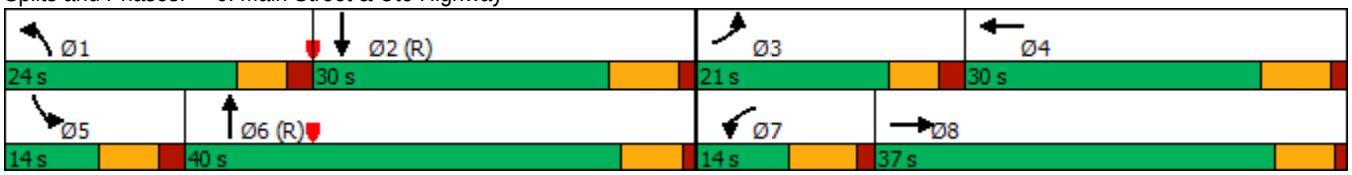
Approach	EB	NB	SB
HCM Control Delay, s	10.3	5.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1515	-	793	-	-
HCM Lane V/C Ratio	0.108	-	0.137	-	-
HCM Control Delay (s)	7.7	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.5	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1261	964	400	426	552	248	415	1077	278	238	740	597
Future Volume (vph)	1261	964	400	426	552	248	415	1077	278	238	740	597
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free			Free			Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	21.0	37.0		14.0	30.0		24.0	40.0		14.0	30.0	
Total Split (%)	20.0%	35.2%		13.3%	28.6%		22.9%	38.1%		13.3%	28.6%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-3.0	-2.0		-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	2.9	3.8		4.8	4.8		3.9	3.8		4.7	4.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	Max	Max		Max	Max		Max	C-Max		Max	C-Max	
Act Effct Green (s)	18.1	33.2	105.0	9.2	25.2	105.0	20.1	36.2	105.0	9.3	25.2	105.0
Actuated g/C Ratio	0.17	0.32	1.00	0.09	0.24	1.00	0.19	0.34	1.00	0.09	0.24	1.00
v/c Ratio	2.32	0.94	0.27	1.54	0.71	0.17	0.69	0.96	0.19	0.85	0.95	0.41
Control Delay	622.0	51.1	0.4	294.3	41.8	0.2	45.7	52.1	0.3	63.2	53.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	622.0	51.1	0.4	294.3	41.8	0.2	45.7	52.1	0.3	63.2	53.9	0.6
LOS	F	D	A	F	D	A	D	D	A	E	D	A
Approach Delay		317.6			121.1			42.5			35.1	
Approach LOS		F			F			D			D	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.32	
Intersection Signal Delay: 154.6	Intersection LOS: F
Intersection Capacity Utilization 102.4%	ICU Level of Service G
Analysis Period (min) 15	

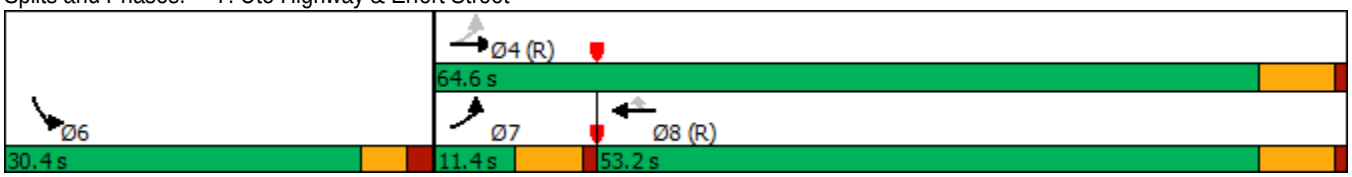
Splits and Phases: 6: Main Street & Ute Highway



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	1400	1185	120	100	40
Future Volume (vph)	80	1400	1185	120	100	40
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	76.3	76.7	66.6	66.6	12.2	95.0
Actuated g/C Ratio	0.80	0.81	0.70	0.70	0.13	1.00
v/c Ratio	0.25	0.53	0.52	0.11	0.48	0.03
Control Delay	4.6	5.2	10.3	1.8	44.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.6	5.2	10.3	1.8	44.8	0.0
LOS	A	A	B	A	D	A
Approach Delay		5.2	9.5		32.1	
Approach LOS		A	A		C	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 54.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	5	120	5	10	978	150	54	2087	5
Future Volume (vph)	5	5	120	5	10	978	150	54	2087	5
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	13.0	27.0	13.0	27.0	12.0	53.0	53.0	12.0	53.0	53.0
Total Split (%)	12.4%	25.7%	12.4%	25.7%	11.4%	50.5%	50.5%	11.4%	50.5%	50.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.3	7.4	8.8	11.5	78.0	71.9	71.9	81.9	79.4	79.4
Actuated g/C Ratio	0.10	0.07	0.08	0.11	0.74	0.68	0.68	0.78	0.76	0.76
v/c Ratio	0.03	0.16	0.45	0.32	0.06	0.44	0.14	0.15	0.85	0.00
Control Delay	35.4	26.6	51.2	15.2	6.1	13.1	4.0	4.5	15.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	26.6	51.2	15.2	6.1	13.1	4.0	4.5	15.5	0.0
LOS	D	C	D	B	A	B	A	A	B	A
Approach Delay		28.3		38.0		11.8			15.2	
Approach LOS		C		D		B			B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 75.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	18	31	32	55	5	24	15	18	5	15	10
Future Vol, veh/h	5	18	31	32	55	5	24	15	18	5	15	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	20	34	35	60	5	26	16	20	5	16	11
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	7.5	8	7.9	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	100%	0%	17%
Vol Thru, %	0%	45%	0%	37%	0%	92%	50%
Vol Right, %	0%	55%	0%	63%	0%	8%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	33	5	49	32	60	30
LT Vol	24	0	5	0	32	0	5
Through Vol	0	15	0	18	0	55	15
RT Vol	0	18	0	31	0	5	10
Lane Flow Rate	26	36	5	53	35	65	33
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.039	0.046	0.008	0.065	0.051	0.086	0.044
Departure Headway (Hd)	5.451	4.567	5.362	4.416	5.329	4.769	4.828
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	660	788	670	814	676	756	745
Service Time	3.156	2.272	3.07	2.125	3.029	2.469	2.834
HCM Lane V/C Ratio	0.039	0.046	0.007	0.065	0.052	0.086	0.044
HCM Control Delay	8.4	7.5	8.1	7.4	8.3	7.9	8.1
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0.2	0.2	0.3	0.1

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	0	16	0	0	0	47	0	0	0	0	45
Future Vol, veh/h	25	0	16	0	0	0	47	0	0	0	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	0	17	0	0	0	51	0	0	0	0	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	17	0	0	89	64	9	64	72	1
Stage 1	-	-	-	-	-	-	63	63	-	1	1	-
Stage 2	-	-	-	-	-	-	26	1	-	63	71	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1600	-	-	896	827	1073	930	818	1084
Stage 1	-	-	-	-	-	-	948	842	-	1022	895	-
Stage 2	-	-	-	-	-	-	992	895	-	948	836	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1600	-	-	844	813	1073	918	804	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	844	813	-	918	804	-
Stage 1	-	-	-	-	-	-	932	828	-	1005	895	-
Stage 2	-	-	-	-	-	-	947	895	-	932	822	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.4	0	9.5	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	844	1622	-	-	1600	-	-	1084
HCM Lane V/C Ratio	0.061	0.017	-	-	-	-	-	0.045
HCM Control Delay (s)	9.5	7.3	0	-	0	-	-	8.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	58	5	52	15	2	76
Future Vol, veh/h	58	5	52	15	2	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	5	57	16	2	83

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	152	65	0	0	73	0
Stage 1	65	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	840	999	-	-	1527	-
Stage 1	958	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	839	999	-	-	1527	-
Mov Cap-2 Maneuver	839	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	935	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	850	1527	-
HCM Lane V/C Ratio	-	-	0.081	0.001	-
HCM Control Delay (s)	-	-	9.6	7.4	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	13.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	7	50	279	6	7	70	45	273	9	110	15
Future Vol, veh/h	15	7	50	279	6	7	70	45	273	9	110	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	8	54	303	7	8	76	49	297	10	120	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	505	646	128	529	506	198	136	0	0	346	0	0
Stage 1	148	148	-	350	350	-	-	-	-	-	-	-
Stage 2	357	498	-	179	156	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	478	390	922	460	469	843	1448	-	-	1213	-	-
Stage 1	855	775	-	666	633	-	-	-	-	-	-	-
Stage 2	661	544	-	823	769	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	447	367	922	407	441	843	1448	-	-	1213	-	-
Mov Cap-2 Maneuver	447	367	-	407	441	-	-	-	-	-	-	-
Stage 1	811	769	-	631	600	-	-	-	-	-	-	-
Stage 2	614	516	-	761	763	-	-	-	-	-	-	-

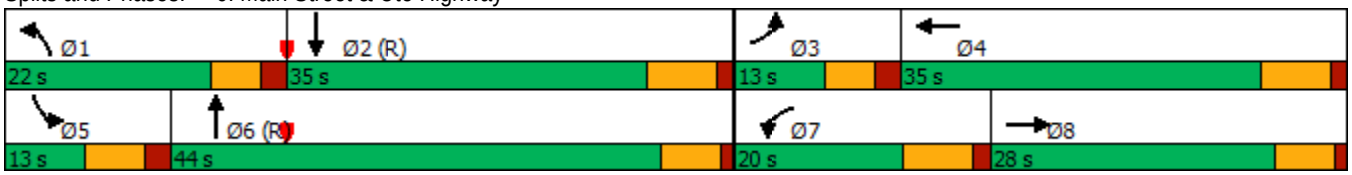
Approach	EB	WB	NB	SB
HCM Control Delay, s	11	37.3	1.4	0.5
HCM LOS	B	E		

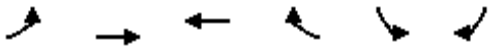
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1448	-	-	674	413	1213	-	-
HCM Lane V/C Ratio	0.053	-	-	0.116	0.769	0.008	-	-
HCM Control Delay (s)	7.6	-	-	11	37.3	8	-	-
HCM Lane LOS	A	-	-	B	E	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	6.5	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	580	526	235	407	790	156	335	400	201	182	900	1140
Future Volume (vph)	580	526	235	407	790	156	335	400	201	182	900	1140
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free			Free			Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	13.0	28.0		20.0	35.0		22.0	44.0		13.0	35.0	
Total Split (%)	12.4%	26.7%		19.0%	33.3%		21.0%	41.9%		12.4%	33.3%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0		-2.0	-3.0	
Total Lost Time (s)	3.9	3.8		4.8	4.8		3.9	3.8		4.7	3.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	9.1	23.6	105.0	15.2	29.6	105.0	17.0	40.4	105.0	8.7	32.9	105.0
Actuated g/C Ratio	0.09	0.22	1.00	0.14	0.28	1.00	0.16	0.38	1.00	0.08	0.31	1.00
v/c Ratio	2.12	0.72	0.16	0.89	0.86	0.11	0.66	0.32	0.14	0.69	0.88	0.78
Control Delay	541.4	43.4	0.2	65.6	45.8	0.1	47.3	23.6	0.2	51.4	46.8	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	541.4	43.4	0.2	65.6	45.8	0.1	47.3	23.6	0.2	51.4	46.8	8.2
LOS	F	D	A	E	D	A	D	C	A	D	D	A
Approach Delay		251.1			46.5			27.0			27.3	
Approach LOS		F			D			C			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.12	
Intersection Signal Delay: 83.0	Intersection LOS: F
Intersection Capacity Utilization 86.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Main Street & Ute Highway

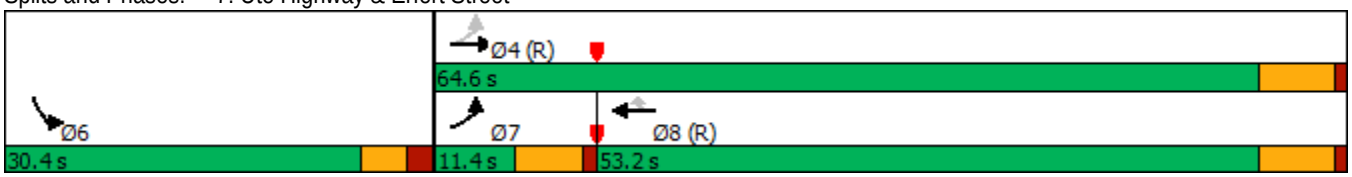




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	195	716	1067	193	151	288
Future Volume (vph)	195	716	1067	193	151	288
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	75.2	74.5	59.0	59.0	10.9	95.0
Actuated g/C Ratio	0.79	0.78	0.62	0.62	0.11	1.00
v/c Ratio	0.50	0.28	0.53	0.20	0.42	0.20
Control Delay	6.8	3.3	11.9	1.9	42.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	3.3	11.9	1.9	42.0	0.3
LOS	A	A	B	A	D	A
Approach Delay		4.0	10.4		14.6	
Approach LOS		A	B		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 8.9	Intersection LOS: A
Intersection Capacity Utilization 56.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	5	210	5	25	2209	390	89	1362	5
Future Volume (vph)	5	5	210	5	25	2209	390	89	1362	5
Turn Type	pm+pt	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4				2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.7	23.0	10.7	23.0	10.7	24.4	24.4	10.7	24.4	24.4
Total Split (s)	15.0	24.0	15.0	24.0	11.0	55.0	55.0	11.0	55.0	55.0
Total Split (%)	14.3%	22.9%	14.3%	22.9%	10.5%	52.4%	52.4%	10.5%	52.4%	52.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	4.7	5.4	5.4	4.7	5.4	5.4
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.7	3.4	4.4	3.7	4.4	4.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.3	8.4	11.8	16.7	74.6	68.4	67.4	78.5	71.4	71.4
Actuated g/C Ratio	0.13	0.08	0.11	0.16	0.71	0.65	0.64	0.75	0.68	0.68
v/c Ratio	0.03	0.21	0.59	0.35	0.10	1.04	0.38	0.41	0.62	0.00
Control Delay	31.4	22.2	51.2	11.0	6.1	51.4	8.7	15.3	13.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	22.2	51.2	11.0	6.1	51.4	8.7	15.3	13.1	0.0
LOS	C	C	D	B	A	D	A	B	B	A
Approach Delay		23.4		37.1		44.6			13.2	
Approach LOS		C		D		D			B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 33.6	Intersection LOS: C
Intersection Capacity Utilization 88.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Main Street & Park Ridge Avenue

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	65	50	18	32	5	27	30	33	5	20	15
Future Vol, veh/h	15	65	50	18	32	5	27	30	33	5	20	15
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	71	54	20	35	5	29	33	36	5	22	16
Number of Lanes	1	1	0	1	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	8.2	8.1	8.1	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	100%	0%	12%
Vol Thru, %	0%	48%	0%	57%	0%	86%	50%
Vol Right, %	0%	52%	0%	43%	0%	14%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	63	15	115	18	37	40
LT Vol	27	0	15	0	18	0	5
Through Vol	0	30	0	65	0	32	20
RT Vol	0	33	0	50	0	5	15
Lane Flow Rate	29	68	16	125	20	40	43
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.045	0.089	0.025	0.161	0.03	0.055	0.06
Departure Headway (Hd)	5.564	4.695	5.447	4.64	5.514	4.916	4.941
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	645	765	659	775	651	730	727
Service Time	3.283	2.413	3.163	2.356	3.232	2.634	2.961
HCM Lane V/C Ratio	0.045	0.089	0.024	0.161	0.031	0.055	0.059
HCM Control Delay	8.5	7.9	8.3	8.2	8.4	7.9	8.3
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.3	0.1	0.6	0.1	0.2	0.2

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	45	0	58	0	0	0	30	0	0	0	0	25
Future Vol, veh/h	45	0	58	0	0	0	30	0	0	0	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	0	63	0	0	0	33	0	0	0	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	63	0	0	145	131	32	131	162	1
Stage 1	-	-	-	-	-	-	130	130	-	1	1	-
Stage 2	-	-	-	-	-	-	15	1	-	130	161	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1540	-	-	824	760	1042	841	730	1084
Stage 1	-	-	-	-	-	-	874	789	-	1022	895	-
Stage 2	-	-	-	-	-	-	1005	895	-	874	765	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1540	-	-	784	736	1042	821	707	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	784	736	-	821	707	-
Stage 1	-	-	-	-	-	-	846	764	-	989	895	-
Stage 2	-	-	-	-	-	-	980	895	-	846	741	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0	9.8	8.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	784	1622	-	-	1540	-	-	1084
HCM Lane V/C Ratio	0.042	0.03	-	-	-	-	-	0.025
HCM Control Delay (s)	9.8	7.3	0	-	0	-	-	8.4
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	37	3	87	57	6	82
Future Vol, veh/h	37	3	87	57	6	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	3	95	62	7	89

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	229	126	0	0	157	0
Stage 1	126	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	759	924	-	-	1423	-
Stage 1	900	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	755	924	-	-	1423	-
Mov Cap-2 Maneuver	755	-	-	-	-	-
Stage 1	900	-	-	-	-	-
Stage 2	916	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	766	1423	-
HCM Lane V/C Ratio	-	-	0.057	0.005	-
HCM Control Delay (s)	-	-	10	7.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	41.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	6	75	266	6	9	150	110	277	7	102	10
Future Vol, veh/h	25	6	75	266	6	9	150	110	277	7	102	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	7	82	289	7	10	163	120	301	8	111	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	738	880	117	774	735	271	122	0	0	421	0	0
Stage 1	133	133	-	597	597	-	-	-	-	-	-	-
Stage 2	605	747	-	177	138	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	334	286	935	316	347	768	1465	-	-	1138	-	-
Stage 1	870	786	-	490	491	-	-	-	-	-	-	-
Stage 2	485	420	-	825	782	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	295	253	935	~ 258	306	768	1465	-	-	1138	-	-
Mov Cap-2 Maneuver	295	253	-	~ 258	306	-	-	-	-	-	-	-
Stage 1	773	780	-	436	436	-	-	-	-	-	-	-
Stage 2	419	373	-	742	777	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	143.6	2.2	0.5
HCM LOS	B	F		

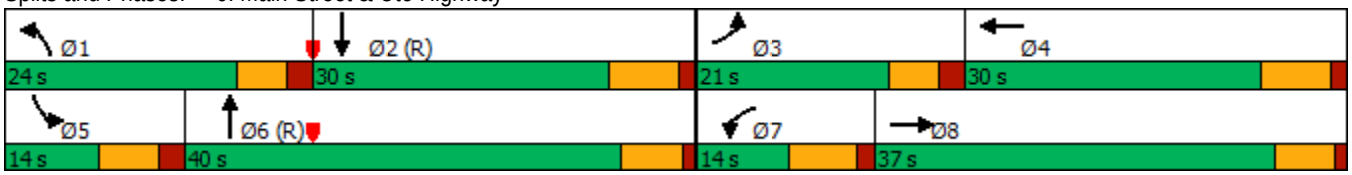
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1465	-	-	562	265	1138	-	-
HCM Lane V/C Ratio	0.111	-	-	0.205	1.153	0.007	-	-
HCM Control Delay (s)	7.8	-	-	13.1	143.6	8.2	-	-
HCM Lane LOS	A	-	-	B	F	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.8	13.5	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1265	1008	400	501	587	257	415	1100	365	247	750	600
Future Volume (vph)	1265	1008	400	501	587	257	415	1100	365	247	750	600
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			Free			Free			Free			Free
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.9	23.8		15.8	28.8		10.9	23.8		11.7	24.8	
Total Split (s)	21.0	37.0		14.0	30.0		24.0	40.0		14.0	30.0	
Total Split (%)	20.0%	35.2%		13.3%	28.6%		22.9%	38.1%		13.3%	28.6%	
Yellow Time (s)	3.9	4.7		5.4	5.4		3.9	4.7		4.7	5.4	
All-Red Time (s)	2.0	1.1		1.4	1.4		2.0	1.1		2.0	1.4	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	3.9	3.8		4.8	4.8		3.9	3.8		4.7	4.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	Max	Max		Max	Max		Max	C-Max		Max	C-Max	
Act Effct Green (s)	17.1	33.2	105.0	9.2	25.2	105.0	20.1	36.2	105.0	9.3	25.2	105.0
Actuated g/C Ratio	0.16	0.32	1.00	0.09	0.24	1.00	0.19	0.34	1.00	0.09	0.24	1.00
v/c Ratio	2.38	0.95	0.27	1.76	0.73	0.17	0.67	0.95	0.24	0.86	0.93	0.40
Control Delay	650.1	52.9	0.4	384.1	42.5	0.2	45.0	50.3	0.4	63.7	50.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	650.1	52.9	0.4	384.1	42.5	0.2	45.0	50.3	0.4	63.7	50.9	0.6
LOS	F	D	A	F	D	A	D	D	A	E	D	A
Approach Delay		327.7			161.6			39.4			34.0	
Approach LOS		F			F			D			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 53 (50%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.38	
Intersection Signal Delay: 163.0	Intersection LOS: F
Intersection Capacity Utilization 104.4%	ICU Level of Service G
Analysis Period (min) 15	

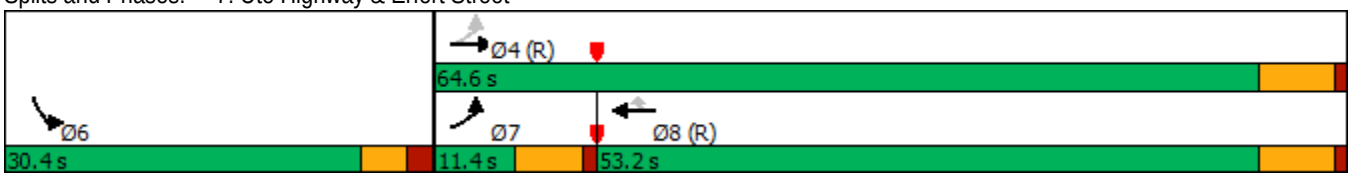
Splits and Phases: 6: Main Street & Ute Highway

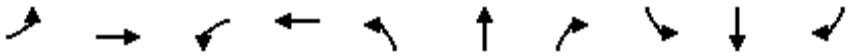


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	270	1350	1100	267	199	244
Future Volume (vph)	270	1350	1100	267	199	244
Turn Type	pm+pt	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases	4			8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.7	24.4	24.4	24.4	23.2	
Total Split (s)	11.4	64.6	53.2	53.2	30.4	
Total Split (%)	12.0%	68.0%	56.0%	56.0%	32.0%	
Yellow Time (s)	4.7	5.4	5.4	5.4	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.7	5.4	5.4	5.4	4.2	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	73.8	73.1	48.7	48.7	12.3	95.0
Actuated g/C Ratio	0.78	0.77	0.51	0.51	0.13	1.00
v/c Ratio	0.58	0.54	0.66	0.30	0.49	0.17
Control Delay	16.0	5.4	19.3	2.5	41.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	5.4	19.3	2.5	41.8	0.2
LOS	B	A	B	A	D	A
Approach Delay		7.2	16.0		18.9	
Approach LOS		A	B		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 63.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Ute Highway & Erfert Street

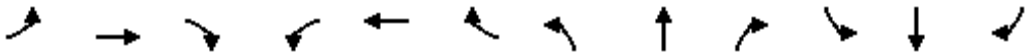




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	2	14	76	20	9	562	112	27	1160	1
v/c Ratio	0.01	0.05	0.28	0.04	0.02	0.21	0.09	0.04	0.41	0.00
Control Delay	36.5	0.4	48.0	0.1	4.2	9.7	5.5	3.4	5.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	0.4	48.0	0.1	4.2	9.7	5.5	3.4	5.8	0.0
Queue Length 50th (ft)	1	0	25	0	2	98	1	2	76	0
Queue Length 95th (ft)	8	0	48	0	m6	152	47	11	272	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	195	491	294	674	413	2671	1227	700	2831	1292
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.03	0.26	0.03	0.02	0.21	0.09	0.04	0.41	0.00

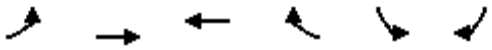
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



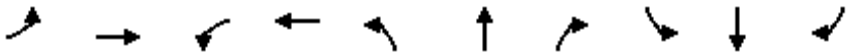
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	214	223	93	261	488	123	103	308	91	143	532	386
v/c Ratio	0.52	0.32	0.06	0.61	0.69	0.08	0.23	0.23	0.06	0.26	0.39	0.24
Control Delay	47.7	36.5	0.1	49.6	44.0	0.1	15.6	25.2	0.1	18.9	31.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	36.5	0.1	49.6	44.0	0.1	15.6	25.2	0.1	18.9	31.5	0.3
Queue Length 50th (ft)	70	68	0	85	161	0	33	73	0	62	161	0
Queue Length 95th (ft)	106	95	0	127	203	0	72	126	0	122	244	0
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	493	1186	1583	464	1152	1583	447	1323	1583	550	1356	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.19	0.06	0.56	0.42	0.08	0.23	0.23	0.06	0.26	0.39	0.24

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	27	496	813	40	36	8
v/c Ratio	0.05	0.16	0.28	0.03	0.23	0.01
Control Delay	1.9	1.7	4.1	1.9	43.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.9	1.7	4.1	1.9	43.1	0.0
Queue Length 50th (ft)	2	25	45	0	21	0
Queue Length 95th (ft)	7	42	132	10	50	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	590	3113	2937	1321	488	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.16	0.28	0.03	0.07	0.01

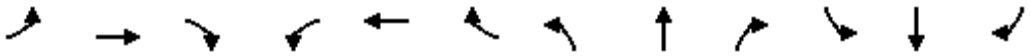
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	2	25	164	68	23	1501	330	40	833	4
v/c Ratio	0.01	0.19	0.49	0.24	0.05	0.63	0.28	0.16	0.34	0.00
Control Delay	32.5	22.5	49.8	12.3	3.4	17.3	4.6	6.2	8.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	22.5	49.8	12.3	3.4	17.3	4.6	6.2	8.5	0.0
Queue Length 50th (ft)	1	1	54	1	3	543	67	7	99	0
Queue Length 95th (ft)	7	28	87	41	m6	m619	m97	18	202	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	243	339	359	377	500	2388	1175	249	2474	1146
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.07	0.46	0.18	0.05	0.63	0.28	0.16	0.34	0.00

Intersection Summary

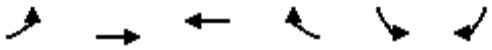
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	532	399	82	372	471	187	135	888	223	229	540	195
v/c Ratio	0.79	0.51	0.05	0.67	0.69	0.12	0.35	0.90	0.14	0.73	0.48	0.12
Control Delay	49.8	38.3	0.1	47.5	44.4	0.2	20.4	50.2	0.2	40.4	33.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.8	38.3	0.1	47.5	44.4	0.2	20.4	50.2	0.2	40.4	33.1	0.2
Queue Length 50th (ft)	175	124	0	121	156	0	51	302	0	111	163	0
Queue Length 95th (ft)	236	165	0	168	198	0	98	#417	0	#291	221	0
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	689	1017	1583	627	984	1583	386	984	1583	313	1129	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.39	0.05	0.59	0.48	0.12	0.35	0.90	0.14	0.73	0.48	0.12

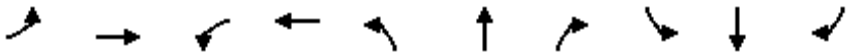
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	70	912	892	62	91	18
v/c Ratio	0.14	0.32	0.35	0.05	0.44	0.01
Control Delay	3.2	3.4	7.8	2.2	44.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	3.4	7.8	2.2	44.6	0.0
Queue Length 50th (ft)	7	66	116	0	52	0
Queue Length 95th (ft)	19	108	180	15	96	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	510	2888	2522	1145	488	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.32	0.35	0.05	0.19	0.01

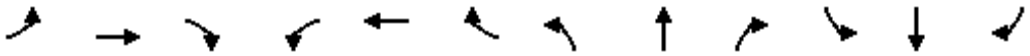
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	2	15	87	23	9	641	125	33	1283	1
v/c Ratio	0.01	0.12	0.32	0.12	0.03	0.24	0.10	0.05	0.46	0.00
Control Delay	35.0	24.6	48.5	18.7	4.0	10.0	5.6	3.7	6.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	24.6	48.5	18.7	4.0	10.0	5.6	3.7	6.6	0.0
Queue Length 50th (ft)	1	1	28	1	1	115	7	3	91	0
Queue Length 95th (ft)	8	21	53	25	m6	176	52	14	333	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	197	361	294	366	364	2645	1216	643	2809	1283
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.04	0.30	0.06	0.02	0.24	0.10	0.05	0.46	0.00

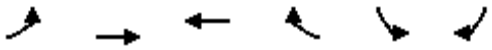
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



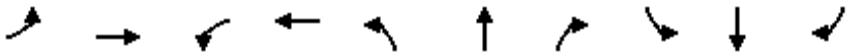
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	245	250	109	293	549	141	120	348	103	163	598	435
v/c Ratio	0.56	0.33	0.07	0.66	0.71	0.09	0.30	0.28	0.07	0.33	0.48	0.27
Control Delay	48.1	34.7	0.1	51.3	42.9	0.1	17.9	27.5	0.1	20.9	34.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	34.7	0.1	51.3	42.9	0.1	17.9	27.5	0.1	20.9	34.9	0.4
Queue Length 50th (ft)	80	75	0	97	181	0	41	89	0	75	195	0
Queue Length 95th (ft)	119	102	0	142	223	0	85	142	0	141	273	0
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	493	1186	1583	464	1152	1583	394	1225	1583	501	1251	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.21	0.07	0.63	0.48	0.09	0.30	0.28	0.07	0.33	0.48	0.27

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	33	549	924	43	38	11
v/c Ratio	0.06	0.18	0.32	0.03	0.24	0.01
Control Delay	2.0	1.8	5.2	1.9	43.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.0	1.8	5.2	1.9	43.2	0.0
Queue Length 50th (ft)	3	28	107	0	22	0
Queue Length 95th (ft)	8	47	157	11	51	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	531	3109	2846	1281	488	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.18	0.32	0.03	0.08	0.01

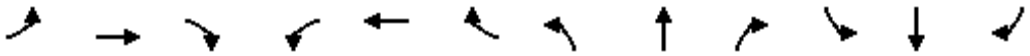
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	2	25	185	78	23	1658	375	43	929	4
v/c Ratio	0.01	0.19	0.54	0.26	0.05	0.70	0.32	0.20	0.38	0.00
Control Delay	32.5	22.5	51.0	12.1	3.2	18.1	4.5	7.0	8.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	22.5	51.0	12.1	3.2	18.1	4.5	7.0	8.9	0.0
Queue Length 50th (ft)	1	1	61	1	3	607	68	8	115	0
Queue Length 95th (ft)	7	28	97	44	m5	m668	m102	19	232	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	243	339	359	385	453	2381	1179	214	2468	1144
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.07	0.52	0.20	0.05	0.70	0.32	0.20	0.38	0.00

Intersection Summary

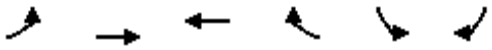
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	598	451	92	418	516	212	152	1000	250	255	609	217
v/c Ratio	0.96	0.56	0.06	0.85	0.73	0.13	0.44	0.92	0.16	0.91	0.50	0.14
Control Delay	70.5	38.3	0.1	60.6	45.6	0.2	22.2	49.8	0.2	62.3	30.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.5	38.3	0.1	60.6	45.6	0.2	22.2	49.8	0.2	62.3	30.0	0.2
Queue Length 50th (ft)	207	141	0	142	171	0	57	340	0	129	186	0
Queue Length 95th (ft)	#317	185	0	#221	222	0	102	#467	0	#314	241	0
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	624	916	1583	496	815	1583	347	1085	1583	280	1229	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.49	0.06	0.84	0.63	0.13	0.44	0.92	0.16	0.91	0.50	0.14

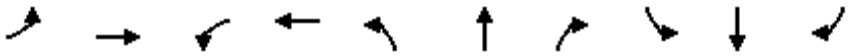
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	76	1011	1005	65	98	22
v/c Ratio	0.17	0.35	0.40	0.06	0.45	0.01
Control Delay	3.6	3.7	8.5	2.2	44.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.6	3.7	8.5	2.2	44.7	0.0
Queue Length 50th (ft)	8	78	140	0	56	0
Queue Length 95th (ft)	21	128	214	16	101	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	459	2876	2507	1140	488	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.35	0.40	0.06	0.20	0.01

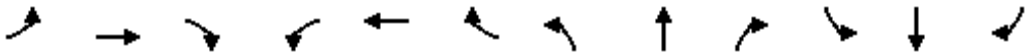
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	2	15	108	51	9	641	133	41	1283	1
v/c Ratio	0.01	0.12	0.38	0.24	0.03	0.25	0.11	0.07	0.48	0.00
Control Delay	35.0	24.6	49.7	15.4	4.0	10.5	5.7	3.8	7.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	24.6	49.7	15.4	4.0	10.5	5.7	3.8	7.0	0.0
Queue Length 50th (ft)	1	1	36	1	1	115	9	3	91	0
Queue Length 95th (ft)	8	21	63	37	m6	186	56	16	333	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	198	361	294	387	352	2526	1168	624	2693	1236
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.04	0.37	0.13	0.03	0.25	0.11	0.07	0.48	0.00

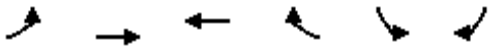
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



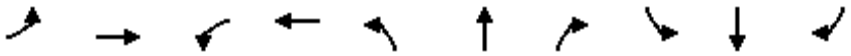
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	246	255	109	335	566	141	120	354	114	163	614	439
v/c Ratio	0.57	0.33	0.07	0.74	0.72	0.09	0.31	0.29	0.07	0.33	0.50	0.28
Control Delay	48.2	34.5	0.1	54.6	42.7	0.1	18.3	27.9	0.1	21.4	35.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	34.5	0.1	54.6	42.7	0.1	18.3	27.9	0.1	21.4	35.9	0.4
Queue Length 50th (ft)	80	76	0	112	186	0	42	92	0	75	200	0
Queue Length 95th (ft)	119	103	0	161	229	0	86	144	0	140	276	0
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	493	1186	1583	464	1152	1583	383	1210	1583	492	1236	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.22	0.07	0.72	0.49	0.09	0.31	0.29	0.07	0.33	0.50	0.28

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	49	549	924	52	66	70
v/c Ratio	0.10	0.19	0.35	0.04	0.36	0.04
Control Delay	2.7	2.5	6.4	2.0	44.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.7	2.5	6.4	2.0	44.2	0.0
Queue Length 50th (ft)	4	32	115	0	38	0
Queue Length 95th (ft)	13	54	173	13	76	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	506	2932	2662	1204	488	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.19	0.35	0.04	0.14	0.04

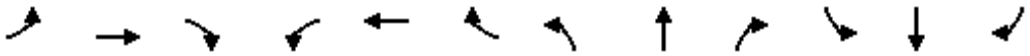
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	2	25	199	97	23	1658	404	75	929	4
v/c Ratio	0.01	0.19	0.57	0.31	0.05	0.73	0.35	0.36	0.38	0.00
Control Delay	32.5	22.5	51.9	11.5	3.4	20.7	5.4	12.6	9.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	22.5	51.9	11.5	3.4	20.7	5.4	12.6	9.0	0.0
Queue Length 50th (ft)	1	1	66	1	3	609	78	13	115	0
Queue Length 95th (ft)	7	28	104	49	m5	m661	m104	43	232	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	242	339	359	399	454	2275	1152	214	2464	1142
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.07	0.55	0.24	0.05	0.73	0.35	0.35	0.38	0.00

Intersection Summary

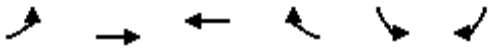
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	602	471	92	445	527	212	152	1025	288	255	620	221
v/c Ratio	0.96	0.58	0.06	0.90	0.73	0.13	0.45	0.94	0.18	0.93	0.51	0.14
Control Delay	71.7	38.4	0.1	66.4	45.5	0.2	23.0	53.1	0.3	67.0	30.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.7	38.4	0.1	66.4	45.5	0.2	23.0	53.1	0.3	67.0	30.1	0.2
Queue Length 50th (ft)	208	147	0	153	174	0	57	352	0	130	187	0
Queue Length 95th (ft)	#319	194	0	#241	227	0	102	#485	0	#314	242	0
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	624	916	1583	496	815	1583	338	1085	1583	274	1225	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.51	0.06	0.90	0.65	0.13	0.45	0.94	0.18	0.93	0.51	0.14

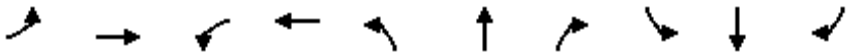
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	134	1011	1005	97	116	59
v/c Ratio	0.30	0.37	0.45	0.09	0.50	0.04
Control Delay	4.9	4.4	10.6	2.2	44.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	4.4	10.6	2.2	44.8	0.0
Queue Length 50th (ft)	16	83	149	0	66	0
Queue Length 95th (ft)	36	137	234	21	114	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	440	2712	2226	1031	488	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.37	0.45	0.09	0.24	0.04

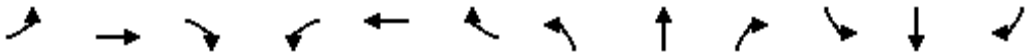
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	2	15	108	55	9	650	133	46	1292	1
v/c Ratio	0.01	0.12	0.38	0.25	0.03	0.27	0.12	0.08	0.48	0.00
Control Delay	35.0	24.6	49.7	15.2	3.8	11.5	5.9	3.8	7.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	24.6	49.7	15.2	3.8	11.5	5.9	3.8	7.1	0.0
Queue Length 50th (ft)	1	1	36	1	0	117	10	4	92	0
Queue Length 95th (ft)	8	21	63	38	m6	199	56	18	337	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	198	361	294	390	351	2447	1135	608	2693	1236
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.04	0.37	0.14	0.03	0.27	0.12	0.08	0.48	0.00

Intersection Summary

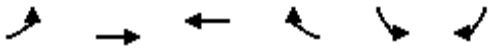
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	246	284	109	388	592	150	120	354	170	173	614	439
v/c Ratio	0.57	0.36	0.07	0.84	0.72	0.09	0.32	0.30	0.11	0.36	0.51	0.28
Control Delay	48.2	34.4	0.1	61.1	42.2	0.1	19.0	28.5	0.1	22.8	36.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	34.4	0.1	61.1	42.2	0.1	19.0	28.5	0.1	22.8	36.6	0.4
Queue Length 50th (ft)	80	84	0	132	193	0	43	95	0	82	203	0
Queue Length 95th (ft)	119	112	0	#208	237	0	87	144	0	149	277	0
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	493	1186	1583	464	1152	1583	373	1180	1583	482	1210	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.24	0.07	0.84	0.51	0.09	0.32	0.30	0.11	0.36	0.51	0.28

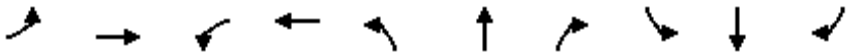
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	201	490	823	188	159	259
v/c Ratio	0.37	0.18	0.36	0.17	0.41	0.16
Control Delay	4.5	2.8	9.0	1.7	42.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	2.8	9.0	1.7	42.0	0.2
Queue Length 50th (ft)	21	30	110	0	46	0
Queue Length 95th (ft)	43	49	169	26	75	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	544	2781	2266	1081	946	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.18	0.36	0.17	0.17	0.16

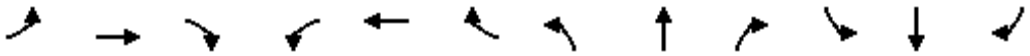
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	2	25	199	101	23	1667	404	79	939	4
v/c Ratio	0.01	0.19	0.57	0.32	0.05	0.73	0.35	0.37	0.38	0.00
Control Delay	32.5	22.5	51.9	11.4	3.4	21.2	5.5	13.4	9.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	22.5	51.9	11.4	3.4	21.2	5.5	13.4	9.0	0.0
Queue Length 50th (ft)	1	1	66	1	3	612	78	14	116	0
Queue Length 95th (ft)	7	28	104	50	m5	m665	m103	48	235	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	242	339	359	403	449	2271	1150	214	2464	1142
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.07	0.55	0.25	0.05	0.73	0.35	0.37	0.38	0.00

Intersection Summary

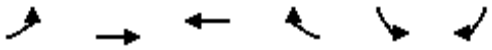
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	602	499	92	500	554	222	152	1025	345	265	620	221
v/c Ratio	0.96	0.62	0.06	0.95	0.76	0.14	0.46	0.94	0.22	0.93	0.51	0.14
Control Delay	71.7	40.0	0.1	72.4	46.1	0.2	23.6	53.1	0.3	66.6	30.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.7	40.0	0.1	72.4	46.1	0.2	23.6	53.1	0.3	66.6	30.5	0.2
Queue Length 50th (ft)	208	158	0	173	183	0	58	352	0	138	185	0
Queue Length 95th (ft)	#319	208	0	#274	240	0	102	#485	0	#318	242	0
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	624	883	1583	529	815	1583	331	1085	1583	284	1218	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.57	0.06	0.95	0.68	0.14	0.46	0.94	0.22	0.93	0.51	0.14

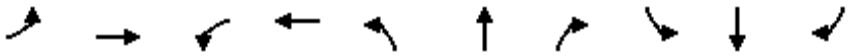
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	283	957	913	225	205	243
v/c Ratio	0.55	0.35	0.43	0.22	0.47	0.15
Control Delay	7.1	4.0	11.7	2.0	41.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.1	4.0	11.7	2.0	41.8	0.2
Queue Length 50th (ft)	35	75	143	0	60	0
Queue Length 95th (ft)	66	115	220	32	91	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	519	2734	2122	1039	946	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.35	0.43	0.22	0.22	0.15

Intersection Summary

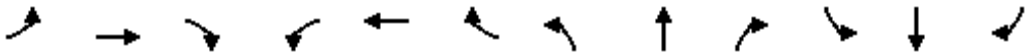


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	21	110	42	11	1054	155	46	2259	5
v/c Ratio	0.03	0.16	0.39	0.20	0.06	0.43	0.14	0.11	0.84	0.00
Control Delay	35.6	26.9	49.8	18.2	6.2	12.6	3.9	4.2	15.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	26.9	49.8	18.2	6.2	12.6	3.9	4.2	15.1	0.0
Queue Length 50th (ft)	3	3	36	3	1	141	8	4	284	0
Queue Length 95th (ft)	13	28	64	36	m5	m309	m11	18	#1035	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	199	373	294	383	198	2440	1139	408	2686	1233
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.06	0.37	0.11	0.06	0.43	0.14	0.11	0.84	0.00

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



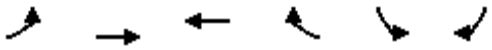
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	629	538	255	348	815	161	364	428	152	188	962	1235
v/c Ratio	2.12	0.68	0.16	0.72	0.83	0.10	0.66	0.31	0.10	0.65	0.86	0.78
Control Delay	539.9	42.2	0.2	52.1	43.8	0.1	47.3	23.3	0.1	49.6	45.5	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	539.9	42.2	0.2	52.1	43.8	0.1	47.3	23.3	0.1	49.6	45.5	8.2
Queue Length 50th (ft)	~347	173	0	115	266	0	118	104	0	64	347	35
Queue Length 95th (ft)	#459	232	0	165	341	0	166	144	0	m74	#468	351
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	297	815	1583	496	1017	1583	591	1371	1583	289	1124	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.12	0.66	0.16	0.70	0.80	0.10	0.62	0.31	0.10	0.65	0.86	0.78

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

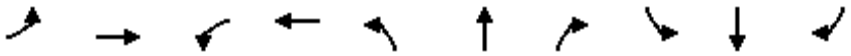
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	43	837	1261	65	43	65
v/c Ratio	0.11	0.27	0.44	0.05	0.26	0.04
Control Delay	2.4	2.1	6.3	1.7	43.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.4	2.1	6.3	1.7	43.4	0.1
Queue Length 50th (ft)	4	49	171	0	25	0
Queue Length 95th (ft)	10	78	247	13	56	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	392	3101	2835	1281	488	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.27	0.44	0.05	0.09	0.04

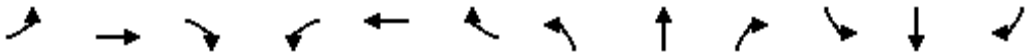
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	32	214	101	27	2391	395	61	1471	5
v/c Ratio	0.03	0.21	0.56	0.30	0.10	1.02	0.35	0.28	0.61	0.00
Control Delay	31.4	22.2	50.2	11.5	5.3	42.3	7.5	9.2	13.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	22.2	50.2	11.5	5.3	42.3	7.5	9.2	13.0	0.0
Queue Length 50th (ft)	3	3	71	3	5	~1011	62	10	330	0
Queue Length 95th (ft)	12	32	109	51	m5	m678	m29	30	446	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	269	346	392	409	267	2346	1128	219	2409	1119
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.09	0.55	0.25	0.10	1.02	0.35	0.28	0.61	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

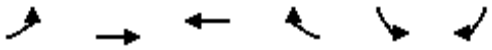


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	1371	1048	435	463	600	270	451	1171	302	259	804	649
v/c Ratio	2.32	0.94	0.27	1.54	0.71	0.17	0.69	0.96	0.19	0.85	0.95	0.41
Control Delay	622.0	51.1	0.4	294.3	41.8	0.2	45.7	52.1	0.3	63.2	53.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	622.0	51.1	0.4	294.3	41.8	0.2	45.7	52.1	0.3	63.2	53.9	0.6
Queue Length 50th (ft)	~777	358	0	~226	194	0	146	402	0	90	271	0
Queue Length 95th (ft)	#910	#491	0	#327	257	0	201	#547	0	#157	#400	0
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	591	1118	1583	300	849	1583	657	1220	1583	304	849	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.32	0.94	0.27	1.54	0.71	0.17	0.69	0.96	0.19	0.85	0.95	0.41

Intersection Summary

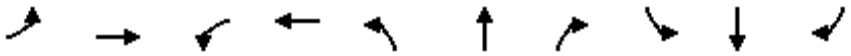
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	87	1522	1288	130	109	43
v/c Ratio	0.25	0.53	0.52	0.11	0.48	0.03
Control Delay	4.6	5.2	10.3	1.8	44.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.6	5.2	10.3	1.8	44.8	0.0
Queue Length 50th (ft)	10	154	207	0	62	0
Queue Length 95th (ft)	24	247	316	23	110	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	353	2857	2481	1148	488	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.53	0.52	0.11	0.22	0.03

Intersection Summary

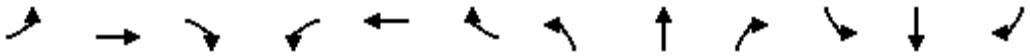


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	21	130	75	11	1063	163	59	2268	5
v/c Ratio	0.03	0.16	0.45	0.32	0.06	0.44	0.14	0.15	0.85	0.00
Control Delay	35.4	26.6	51.2	15.2	6.1	13.1	4.0	4.5	15.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	26.6	51.2	15.2	6.1	13.1	4.0	4.5	15.5	0.0
Queue Length 50th (ft)	3	3	43	3	1	144	9	5	287	0
Queue Length 95th (ft)	13	27	74	46	m5	m313	m11	23	#1051	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	200	373	294	405	198	2424	1135	404	2677	1229
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.06	0.44	0.19	0.06	0.44	0.14	0.15	0.85	0.00

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



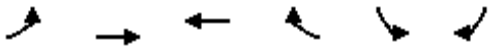
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	630	572	255	442	859	170	364	435	218	198	978	1239
v/c Ratio	2.12	0.72	0.16	0.89	0.86	0.11	0.66	0.32	0.14	0.69	0.88	0.78
Control Delay	541.4	43.4	0.2	65.6	45.8	0.1	47.3	23.6	0.2	51.4	46.8	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	541.4	43.4	0.2	65.6	45.8	0.1	47.3	23.6	0.2	51.4	46.8	8.2
Queue Length 50th (ft)	~347	186	0	152	285	0	118	106	0	68	354	33
Queue Length 95th (ft)	#460	248	0	#240	#368	0	166	146	0	m78	#480	362
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	297	815	1583	496	1017	1583	591	1359	1583	285	1109	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.12	0.70	0.16	0.89	0.84	0.11	0.62	0.32	0.14	0.69	0.88	0.78

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

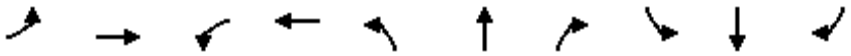
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	212	778	1160	210	164	313
v/c Ratio	0.50	0.28	0.53	0.20	0.42	0.20
Control Delay	6.8	3.3	11.9	1.9	42.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	3.3	11.9	1.9	42.0	0.3
Queue Length 50th (ft)	23	53	186	0	47	0
Queue Length 95th (ft)	45	82	294	30	77	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	424	2776	2196	1062	946	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.28	0.53	0.20	0.17	0.20

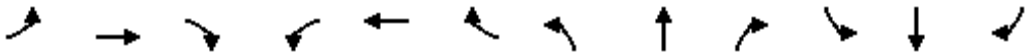
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	32	228	123	27	2401	424	97	1480	5
v/c Ratio	0.03	0.21	0.59	0.35	0.10	1.04	0.38	0.41	0.62	0.00
Control Delay	31.4	22.2	51.2	11.0	6.1	51.4	8.7	15.3	13.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	22.2	51.2	11.0	6.1	51.4	8.7	15.3	13.1	0.0
Queue Length 50th (ft)	3	3	76	3	5	~1025	68	17	333	0
Queue Length 95th (ft)	12	32	115	56	m6	m693	m35	62	452	0
Internal Link Dist (ft)		582		1384		1069			307	
Turn Bay Length (ft)	60		140		135		300	520		590
Base Capacity (vph)	267	346	392	426	265	2306	1120	238	2406	1118
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.09	0.58	0.29	0.10	1.04	0.38	0.41	0.62	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	1332	1061	421	527	618	271	437	1158	384	260	789	632
v/c Ratio	2.38	0.95	0.27	1.76	0.73	0.17	0.67	0.95	0.24	0.86	0.93	0.40
Control Delay	650.1	52.9	0.4	384.1	42.5	0.2	45.0	50.3	0.4	63.7	50.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	650.1	52.9	0.4	384.1	42.5	0.2	45.0	50.3	0.4	63.7	50.9	0.6
Queue Length 50th (ft)	~761	364	0	~272	201	0	141	395	0	90	263	0
Queue Length 95th (ft)	#894	#501	0	#378	265	0	194	#536	0	#157	#388	0
Internal Link Dist (ft)		564			1384			623			1069	
Turn Bay Length (ft)	450		450	230		480	260		260	570		350
Base Capacity (vph)	559	1118	1583	300	849	1583	657	1220	1583	304	849	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.38	0.95	0.27	1.76	0.73	0.17	0.67	0.95	0.24	0.86	0.93	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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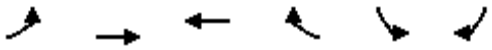
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	293	1467	1196	290	216	265
v/c Ratio	0.58	0.54	0.66	0.30	0.49	0.17
Control Delay	16.0	5.4	19.3	2.5	41.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	5.4	19.3	2.5	41.8	0.2
Queue Length 50th (ft)	61	146	258	0	63	0
Queue Length 95th (ft)	157	221	345	39	95	0
Internal Link Dist (ft)		1384	887		170	
Turn Bay Length (ft)	100			290	150	
Base Capacity (vph)	502	2723	1815	953	946	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.54	0.66	0.30	0.23	0.17

Intersection Summary