CITY OF OREM
BOARD OF ADJUSTMENTS MEETING
56 North State Street, Orem, Utah
November 29, 2023

This meeting may be held electronically
to allow a Board Member to participate.

5:00 PM PRE-MEETING

6:00 PM REGULAR SESSION – CITY COUNCIL CHAMBERS

1. CALL TO ORDER
2. INVOCATION/INSPIRATIONAL THOUGHT: BY INVITATION
3. 6:00 PM SCHEDULED ITEM

   3.1 Appeal – The applicant requests the Board of Adjustment hear an appeal pertaining to the City of Orem's determination that their DRC application was incomplete for a Holiday Oil gas station and convenience store located generally at 1981 South Geneva Road in the C2 zone.

4. MINUTES REVIEW AND APPROVAL

   4.1 Review and Approve minutes from the May 24, 2023 meeting.

   4.2 Review and approve 2024 meeting calendar.

5. ADJOURN

THE PUBLIC IS INVITED TO PARTICIPATE IN ALL BOARD OF ADJUSTMENT MEETINGS.
If you need a special accommodation to participate in the Board of Adjustment Meetings and Study Sessions, please call the Development Services Office at least 3 working days prior to the meeting.
(Voice 801-229-7183)

This agenda is also available on the City's webpage at orem.org

Item #: 3.1

Prepared By:
Cheryl Vargas

Board of Adjustment
November 29 2023

Applicant: Brent Neel,
Holiday Oil

APPEAL – Applicant appeals City of Orem's staff determination that their DRC application was incomplete for a Holiday Oil gas station and convenience store located generally at 1981 South Geneva Road in the C2 zone.

NOTICES:
- Posted in 2 public places
- Posted on City webpage and City hotline
- Faxed to newspapers
- E-mailed to newspapers
- Posted at utah.gov/pmn
- Mailed 131 notices on to properties within 500 feet

SITE INFORMATION:
- General Plan Designation: **Community Commercial**
- Current Zone: **C2**
- Acreage: **2.16**
- Neighborhood: **Lakeview**

ACTION:
The Board of Adjustment shall approve or deny the applicant's appeal request

APPEAL: 22-16-2. POWERS OF BOARD:
To hear and decide appeals where it is alleged that there is error in any order, requirement, decision or determination made by the administrative official in the enforcement of the City's zoning ordinance or subdivision ordinance, except in the case of matters designated to be appealed to other bodies.

REQUEST: Applicant requests the Board of Adjustment hear an appeal pertaining to the City of Orem's determination that their DRC application was incomplete for a Holiday Oil gas station and convenience store located generally at 1981 South Geneva Road in the C2 zone.

BACKGROUND:
On December 8, 2020, the City of Orem passed O-2020-0034, amending Article 22-5-3(A) and the Zoning Map of the City of Orem, which changed the zoning of 2.16 acres from the OS5 Zone to the C2 zone at approximately 1981 South Geneva Road, Orem, Utah. A development agreement was signed between the owners of Lakeview Corner (1981 South Geneva Road) and the City of Orem. The development agreement conferred no additional development or use rights. Rather, the development agreement limited the land owner's future use and development within the C2 Zone. The agreement limited the landowner's use to a gas station, with a convenience store. The agreement further made limitations on elevations, lighting, and other conditions on the land use. The development agreement further warned of the potential of the City's ability to exercise the police power and enact new and different zoning and land use regulations. After the execution of the development agreement and enactment of O-2020-0034, no development occurred on Lakeview Corner.

The owners of Lakeview Corner eventually sold the property to Holiday Oil, which assumed the development agreement by assignment.

On June 21, 2023 Holiday Oil went before the Planning Commission to request an amended development agreement. After a public hearing, and deliberation, the Planning Commission resolved to send a negative recommendation to the City Council, opposing the amendment of the development agreement.

On August 1, 2023, after a public hearing, the City Council deliberated the proposed amendment to the development agreement and discussed the concerns surrounding the C2 Zone for the 1981 South Geneva Road property. During this discussion, in an open and public meeting, several councilmembers expressed the desire to revisit the zoning of the parcel and potential rezone it to another more appropriate land use. Ultimately, the City Council denied the request to amend the development agreement.

On August 16, 2023, the City filed an application to amend Article 22-5-3(A) and the Zoning Map to rezone the property at 1981 South Geneva Road and 868 West 2000 South from the C2 Zone to the PO (Professional Office) Zone.

On August 21, 2023, Brent Neel/Holiday Oil, submitted a site plan application and a final plat application for review. City Staff began reviewing the application, during this process City staff engaged in a red-lining process to address issues of non-compliance with the form of the application. On September 5, 2023 Mr. Neel resubmitted plans.

On September 6, 2023, the City of Orem Planning Commission held a public hearing to review the City's application to rezone the 1981 South Geneva Road and 868 West 2000 South property from the C2 Zone to the PO Zone. After the public hearing, the Planning Commission voted to forward the rezone application to the City Council with a FAVORABLE recommendation.

Even with the pending legislation, City staff continued to process and review Holiday Oil's Site Plan Application.

The Site Plan Application is governed by Orem City Code 22-14-20. As the site plan proposed development on the corner lot, where one or more of the streets is a collector or arterial, the application needed to include a traffic study. Orem City Code 22-14-20(E). City requires that the application's traffic study include:

> *(1) An analysis of the off-site traffic impacts resulting from the development of the site and a description of the mitigation measures necessary to reduce the identified impacts.*
> *(2) An analysis of internal traffic circulation patterns and their effect on ingress and egress from the site for emergency vehicles and the public.*

Orem City Code 22-14-20(E)(8).

The Holiday Oil Site Plan Application contained a document entitled "Lakeview Corner Geneva Road & 2000 South Traffic Impact Study Orem, Utah April 2020". City staff reviewed the submitted traffic study and determined that the traffic study failed to provide the required information.

In particular, City staff found that the traffic study failed to meet the requirements of Orem City Code 22-14-20(E)(1). First, the submitted traffic study failed to provide a reliable analysis of current off-site traffic impacts resulting from the development of the site. This finding was based on the fact that the traffic study was conducted almost 4 years prior to the submission of the site plan. Since the time the traffic study was prepared and the application submitted, surrounding parcels were developed and built out, traffic patterns changed, and general changes in the surrounding land use. Second, the traffic study was unable to provide reliable data and assumptions. The traffic study acknowledges that it was prepared during the COVID-19 pandemic which interfered with the ability to collect, record, and model traffic conditions. Third, the traffic study suffers from inaccurate information, including failing to provide the appropriate Safety Index score for

either Geneva Road or 2000 South. The traffic study failed to provide and analyze the appropriate roadway authority guidelines. Given these errors, the traffic impact study failed to provide appropriate and relevant mitigation measures necessary to reduce the identified impacts.

City staff further determined that the traffic study did not provide the required information, as outlined in Orem City Code 22-14-20(E)(2). The submitted traffic study wholly fails to meet this requirement. The traffic study does not include any discussion regarding internal traffic circulation patters. The study further neglects to address any impacts of the internal traffic circulation on the ingress and egress of emergency vehicles, let alone the general public.

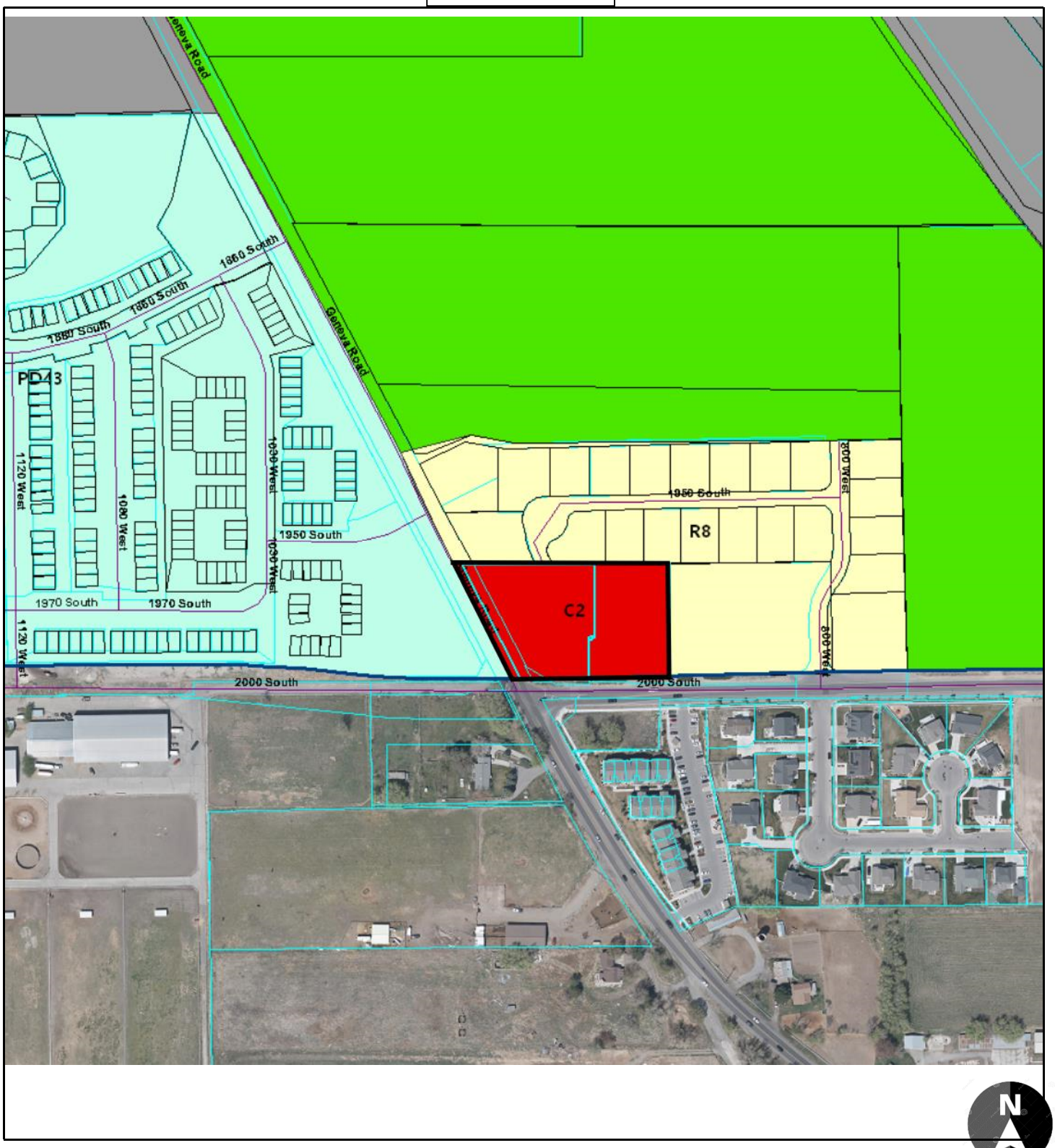
Based on the significant deficiencies of the submitted TIS, the City of Orem determined that the Site Plan Application for the Holiday Oil, at 1981 South and Geneva Road, is *incomplete.*

On September 20, 2023, the City notified Holiday Oil, in writing, of its decision that the Holiday Oil Site Plan Application was incomplete. On September 27, 2023, Holiday Oil filed its appeal of the City's Incomplete Application Determination.

RECOMMENDATION: Staff recommends the Board of Adjustment affirm and uphold City staff's determination that the Holiday Oil Site Plan Application was incomplete.


Geneva Road
1860 South
1970 South
1950 South
800 West
1080 West
2000 South
INTERSTATE
15
I-15 NB
provo

Holiday Oil



Legend

Appeal
Zone: C2
Acres: 2.16

NEIGHBORHOOD
Lakeview

1981 S Geneva Road
Parcels

To: The City of Orem Board of Adjustment
From: D. Jacob Summers, Deputy City Attorney – City of Orem
In Re: Applicant Appeal of City's Incomplete Application Determination for Site Plan Application - 1981 South Geneva Road, Orem, Utah.

SUMMARY OF FACTS

On December 8, 2020, the City of Orem passed O-2020-0034. 0-2020-0034 amended Article 22-5-3(A) and the Zoning Map of the City of Orem, which changed the zoning of 2.16 acres from the OS5 Zone to the C2 Zone at approximately 2000 South Geneva Road. (Exhibit 1). Concurrently, the City of Orem approved a development agreement with the owners of Lakeview Corner (1981 South Geneva Road). (Exhibit 2). This development agreement conferred no additional development or use rights. In opposite, the development agreement limited the land owner's future use and development within the C2 zone. (*See* Exhibit 2, at ¶¶ 1-6). The development agreement further acknowledged that "Nothing in [the] Agreement shall limit the future exercise of the police power by the City in enacting zoning, subdivision, development, transportation, environmental, open space, and related land use plans, policies, ordinances and regulations after the date of [the] Agreement". (Exhibit 2, at ¶ 8). The Agreement provided for the potential for assignment, if the rights and responsibilities are properly assigned. (Exhibit 2, at ¶ 17). No development occurred.

On March 1, 2023, Brent Neel/Holiday Oil filed an application with the City of Orem requesting the Planning Commission recommend that the City Council amend the development agreement for the property located at 1981 South Geneva Road in the C2 zone. (Exhibit 3). The City of Orem Planning Commission held a public hearing to consider the application on June 21, 2023. (*Id.*). At the conclusion of the public hearing, the City of Orem Planning Commission resolved that: "the Planning Commission hereby recommends the City Council deny the amendments to the development agreement for the property located at 1981 South Geneva Road in the C2 zone, as shown in in Exhibit "A", which is attached hereto and incorporated herein by reference." (*Id.*, p.1).

On August 1, 2023, the City of Orem City Council held a public hearing, to consider "Amending the development agreement for the property located at 1981 South Geneva Road in the C2 zone." (Exhibit 4). At the conclusion of the public hearing, Mayor David A. Young opened the discussion for comments by the City Council. (Exhibit 5, p. 7). During the City Council's discussion, council members discussed rejecting the proposal to amend the development agreement and potentially rezoning the property from C2 to some other use, including R8. (*Id.*). Ultimately, the City Council unanimously voted to deny the amended development agreement for the property located at 1981 South Geneva Road. (*Id*. at p. 8).

On August 16, 2023, the City of Orem's Development Services filed an application to amend Article 22-5-3(A) and the Zoning Map of the City of Orem to rezone properties located at 1981 South Geneva Road and 868 West 2000 South from the C2 zone to the PO (Professional Office)

zone. (Exhibit 6). The City of Orem prepared and mailed notices for a September 6, 2023 public hearing to be held by the City of Orem Planning Commission. (*Id.*).

On August 21, 2023, Brent Neel/Holiday Oil, submitted a site plan application and final plat application for review with the City of Orem's Development Services department. On August 24, 2023, City staff began to process the application and review it for conformity with City of Orem code requirements.

Given the amount of public participation at the previous public hearings in the Planning Commission and City Council meetings, the City of Orem sent out a public service message to inform the surrounding properties regarding Brent Neel/Holiday Oil's application. (Exhibit 7). This public service message was not an official, legal, determination of completeness. Rather, it was simply a message to the surrounding property owners updating them regarding the submission of an application for the 1981 South Geneva Road property.

As City staff reviewed Holiday Oil's application, pursuant to Utah Code 10-9a-509(c), City staff asked for follow up information, through a red-lining process. On September 5, 2023, Holiday Oil submitted a revised packet to the City.

On September 6, 2023, the City of Orem Planning Commission held a public hearing to review the City's Development Service's application to rezone the property, generally located, at 1981 South Geneva Road from the C2 zone to the PO zone. (Exhibit 6). After the public hearing, the Planning Commission voted to forward the rezone application to the City Council with a FAVORABLE recommendation. (*Id.*).

Regardless of the pending legislation, City staff continued to process Holiday Oil's Site Plan Application. As City staff continued to review the Site Application for conformity with City code, it became apparent that the required Traffic Study was incomplete and non-responsive to City requirements. After an internal review of the submitted Traffic Study, Development Services determined that Holiday Oil failed to provide a complete application, as the Traffic Study was not "in a form that complies with the requirements of the applicable ordinances." (*See* Utah Code 10-9a-509). As such, on September 20, 2023, the City of Orem provided a written decision that Holiday Oil's application was incomplete, and provided a written explanation of that decision. (Exhibit 8).

On September 27, 2023, Holiday Oil filed its appeal of the City's Incomplete Application Determination. (Exhibit 9).

ARGUMENT

Applicant, Holiday Oil, submitted a Site Plan Application which failed to comply with Orem City Code requirements. A land use application is deemed complete "when the applicant provides the application in a form that complies with the requirements of applicable ordinances and pays all

applicable fees." Utah Code 10-9a-509(c). Holiday Oil's application was not submitted in a form that complied with the requirements of applicable ordinances. Therefore, the Board of Adjustment should uphold City staff's determination that Holiday Oil's application was incomplete.

Orem City Code 22-14-20(E) requires an applicant to submit specific documents, as part of its site plan application. Included in the required documents is a specific requirement for a traffic study. Orem City Code 22-14-20(E)(8)(a). Orem Code further delineates that the required "traffic study ***shall include all of the following***:

(1) An analysis of the off-site traffic impacts resulting from the development of the site and a description of the mitigation measures necessary to reduce the identified impacts.
(2) An analysis of internal traffic circulation patterns and their effect on ingress and egress from the site for emergency vehicles and the public.

(*Id.* emphasis added). In order to be complete, all information material to a decision to grant or deny the request must be contained in the application. If a land use application fails to contain relevant information, the City cannot properly review the application. Similarly, if the application contains incorrect or misleading information, the City's ability to accurately review the application is inhibited.

While Holiday Oil submitted a traffic study, that traffic study fails to meet the requirements of Orem City Code 22-14-20(E)(8)(a). As such, the Board of Adjustment should affirm City staff's determination that the application was not in a form that complies with the requirements of applicable ordinances.

Specifically, Holiday Oil's Traffic Impact Study fails to comply with the aforementioned requirements for the following reasons:

1. Holiday Oil submitted a Traffic Impact Study which did not provide a reliable analysis of the *current* off-site traffic impacts resulting from the development of the site.
2. The submitted Traffic Impact Study fails to provide "a description of the mitigation measures necessary to reduce the identified impacts".
3. The Traffic Impact Study failed to include any analysis of internal traffic circulation patterns.
4. The Study is silent on "internal traffic circulation patterns and their effect on ingress and egress from the site for emergency vehicles and the public".

These omissions of required and material information, in a required document, resulted in the Incomplete Application Determination.

I. Submitted Traffic Impact Study Does Not Provide Reliable Analysis of the Current Off-Site Traffic Impacts Resulting From the Development of the Site.

A complete application, must include a traffic study, which includes "[a]n analysis of the off-site traffic impacts resulting from the development of the site and a description of the mitigation measures necessary to reduce the identified impacts." OCC 22-14-20(E)(8)(a)(1). On ***August 21, 2023***, Holiday Oil submitted a Traffic Impact Study (TIS) which was prepared in ***April 2020***.

(Exhibit 10). The data collection for the "existing traffic counts" were performed on March 31, 2020. (Ex. 10, p. 8). This collection date presents various issues for the acceptance of the TIS to properly analyze the current "off-site traffic impacts" which would result from the development of the site in 2023-2024.

A. The Submitted TIS is outdated.

The TIS was prepared almost 4 years prior to the submission for the site plan. At the time the TIS was prepared, the intersection of 2000 South and Geneva Road did not have a traffic control signal. (Ex. 10, p. 1). Since March 2020, the area of 2000 South and Geneva Road has continued to develop. At the time the TIS was prepared, the residential neighborhood, which encircles the proposed development, was not developed. (*See* O-2020-0034, Ex. 1). The development in PD 43, which is directly west of the proposed development was under construction and not completed. (*See* Id.). The fact that these two major developments were either not constructed, or not completed, is also documented in the TIS. (Ex. 10, Figs. 2-3). Rather than submitting a current TIS, with actual data showing current traffic conditions, Holiday Oil submitted a TIS from almost 4 years ago. This outdated TIS does not provide actual current data, but rather provides assumed data from 2020.

Moreover, at the time the 2020 TIS was prepared, the corner of Geneva Road and 2000 South was not controlled by a traffic control signal. (Ex. 10, p. 1). Since the time that the TIS was prepared, and before Holiday Oil's application, Utah Department of Transportation (UDOT) installed a signal at the corner. The 2020 TIS recommended a signal at the location, pursuant to the assumed trip data analysis. However, the 2020 TIS fails to provide current traffic data to effectively evaluate and determine any "mitigation efforts" given the change in the area's density, use, changes in the intersection, and traffic patterns.

B. The Submitted TIS contains unreliable data / assumptions.

When the data was collected for the TIS (March 31, 2020), "current traffic conditions throughout the country" were disrupted "due to the COVID-19 pandemic" and closures of schools, businesses, and remote work. (Ex. 10, p. 8). ***While the TIS attempted to make adjustments "to create existing traffic volumes" in order to make them "reflective of conditions that would occur if this disruption did not occur", use of multipliers "did not yield volumes that would be expected for these types of developments"***. (Id.). The 2020 TIS does not contain actual traffic data, rather the TIS attempts to use trip generation (per ITE) and distribution analysis to provide traffic values, which "were used as the existing traffic". (Id.).

As the TIS attempted to provide modeling data, it neglected to take into account various "off-site" traffic impacts in the TIS including (but not limited to): traffic entering Geneva Road at 1950 South, the Lakeview Elementary School (located at 2899 W. 1390 North, Provo), the Provo High School (located at 1199 Lakeshore Dr., Provo, UT), the construction of the Lakeview Parkway, and the planned connection of the Lakeview Parkway with 2000 South.

The use of such unreliable data and assumptions do not provide the land use authority with sufficient information to determine "what mitigation measures" are necessary to reduce identified impacts.

C. The 2020 TIS contains incorrect information.

The TIS fails to provide correct information pertaining to the Safety Index for 2000 South and Geneva Road. The site application is for the construction of a gas station and convenience store on the corner of 2000 South and Geneva Road. Rather, than providing a safety analysis for that corner, the TIS provides:

*This segment of **State Street** has a Safety Index of 4 out of 10 with a crash rate of 40% of the average and a severe crash rate of 40% of the average.*

(Ex. 10, p. 25, emphasis added). This is the sole discussion regarding the safety of the traffic relating to the site plan application, yet it provides no relevant information regarding the safety of the roadway where the development will occur. As such, it fails to provide the City with the ability to review any analysis of the current off-site traffic impacts of the proposed development.

The submission of an outdated TIS, which does not provide actual, relevant, and current traffic data, fails to meet the required standard in Orem City Code 22-14-20(E)(8)(a). As such, the application is incomplete.

II. Submitted Traffic Impact Study Fails to Provide a Description of Mitigation Measures Necessary to Reduce the Identified Impacts.

For an application to be considered "complete", the application must contain a Traffic Study which provides a description of mitigation measures necessary to reduce the identified impacts. The 2020 TIS fails meet this requirement. As outlined above, the TIS fails to provide an analysis of the current off-site traffic impact. Given that deficiency, the current mitigation measures necessary to reduce impacts are unknown.

Moreover, the 2020 TIS identifies that both proposed access points to the site do not meet required spacing regulations. First, the TIS identifies that UDOT Administrative Rule R930-6 requires spacing of an access at 350 feet. The proposed access point is approximately 160 feet north of the UDOT traffic signal-controlled intersection. At the time the TIS was prepared, no signal existed, and a request for a variance from UDOT may have included a ¾ access point. However, at this time, the access on Geneva Road is now "within the functional area of the intersection" and will likely result in a right-in/right-out restriction, if the variance is granted. Applicant provided no information regarding the status of the needed variance, as part of the application packet. As such, the City cannot make any decision regarding what mitigation measures are necessary to reduce the identified impact of having an access point in the functional area of an intersection.

Second, the 2020 TIS also identifies that the 2000 South access point also fails to meet the required access spacing. The TIS identifies that the 2000 South access violates the Orem City Access Management Standards. However, the TIS misidentifies the roadway authority for 2000 South. 2000 South is controlled by Provo City. As such, the TIS discussion about spacing and misalignment, and recommendations are not relevant. Where the TIS misidentifies the appropriate standards, the City cannot formulate any decisions on necessary mitigation measures to reduce any potential impacts of the development.

III. Submitted Traffic Impact Study Fails to Include Any Discussion of Internal Traffic Circulation Patterns and Their Effect on Ingress and Egress from the Site for Emergency Vehicles.

For Holiday Oil's application to be a complete application, it must include a Traffic Study which discusses internal traffic circulation, and its effect on ingress and egress from the site for emergency vehicles. The submitted TIS wholly fails to meet this requirement. First, the 2020 TIS fails to include any discussion regarding the internal traffic circulation patterns. The applicant identifies that the development is "projected to generate 274 AM and 308 PM peak hour trips with 4,518 daily trips." (Ex. 10, p. 3). Geneva Road is an arterial road, and 2000 South is a collector road. The 2020 TIS acknowledges heavy traffic loads on Geneva Road and 2000 South, especially at peak periods. (*Id.* at p. 18). Given the heavy traffic loads on arterial and collector roads, which would be the access points for ingress and egress from the development, it should be expected that there would be discussion regarding the impact of internal traffic circulation on the ingress and egress from the proposed development. However, the 2020 TIS is silent on this requirement.

Second, and more concerning, is the failure to include any analysis and discussion regarding the internal traffic circulation patterns effects on the egress from the site for emergency vehicles. It is not lost on City staff that the applicant is applying for the operation of a gas station. A gas station is the delivery point of combustible and hazardous materials. Yet, there is no conversation in the TIS regarding the impact of internal traffic circulation on the ability of emergency services to respond to the proposed development. Given this deficiency, the City is unable to accept the submitted TIS.

IV. The City's Decision to Determine Holiday Oil's Application Due to Holiday Oil's Failure to Submit the Required Documentation Was Not "Malicious Behavior, Abuse of the Police Power, and Politicization of the Planning Process".

When the City of Orem rezoned the parcel in 2020, it concurrently entered into a development agreement, which was presumably assigned to Holiday Oil. The development agreement clearly stated the agreement did not "limit future exercise of the police power by the City in enacting zoning . . . plans, policies, ordinances, and regulations after the date of [the] [a]greement." (Ex. 2, ¶ 8). When Holiday Oil was presumably assigned the development agreement, it accepted the restrictions and terms of the development agreement. (Ex. 2, ¶ 17). However, Holiday Oil filed

an application requesting amendments to the development agreement. (Ex. 3). At this point, the City of Orem was required to hold public hearings and solicit input from the surrounding area. *See* Utah Code §§ 10-9a-205, 10-9a-502. It was during the public hearing, on the proposed land use regulation, that planning commission and legislative body heard the overwhelming public concern regarding the proposed development. The City Council discussion regarding potential rezoning of the 1981 South Geneva Road parcel, was open and transparent. (Ex. 5, p. 7). The City's Development Services application to rezone the parcel on August 16, 2023, was also transparent and provided all appropriate noticing. (Ex. 6). Holiday Oil was placed on notice that the City of Orem intended to exercise its police power by enacting a new zoning ordinance or regulation.

With this notice and understanding, Holiday Oil submitted its proposed Site Plan Application on August 21, 2023. Holiday Oil's submission of a deficient application does not amount to "malicious behavior" on the part of the City. Further, the City does not abuse the police power, when it acted according to Utah State law, and the assigned development agreement – which warned Holiday Oil of the City's authority to exercise future police power. The City's decision to revisit the zoning of a parcel, in the interest of "the health, safety, and general welfare of the City; the orderly development of land in the City; the effect upon the surrounding neighborhood" is neither an abuse of the police power nor a politicization of the planning process. (*See* PC-2023-0032, Exhibit 6; and *Smith Investment Co., et. Al. v. Sandy City, et. al.,* 958 P.2d 245, 252-253 (Utah App. 1998))

While Holiday claims that it "has done all that is required of a developer to obtain approval of its site plan", Holiday Oil neglects to acknowledge the deficiencies of its Site Plan Application, namely the Traffic Study requirement. Holiday Oil does not dispute the City's outlined deficiencies. Rather, Holiday Oil claims that it "reasonably relied upon the City's Development Agreement and rezoning of the Property to C2 to facilitate the development of the planned gas station on the Property." (Holiday Oil's Legal Counsel Letter, dated November 10, 2023, emphasis added). Holiday Oil may not assert any reasonable reliance theory on the Development Agreement. The Development Agreement specifically disclaims any guarantee on the rezone. (Ex. 2, ¶ 7). Further, the Development Agreement expressly warned that the agreement did not limit future "exercise of the police power by the City in enacting" subsequent land use regulations. (*Id.*, ¶ 8). Holiday Oil's Site Plan Application comes almost 3 years after the adoption of the development agreement. During those three years, the TIS became stale and outdated, surrounding parcels developed and were built out, and conditions surrounding the 1981 South Geneva Road parcel changed. Asserting a reliance theory on a development agreement, which disclaims such reliance, to overcome a deficient and incomplete Site Plan Application is unreasonable.

CONCLUSION

The City respectfully requests the Board of Adjustment to uphold City staff's September 20th Incomplete Application Determination. The plain language of Utah Code § 10-9a-509 requires that the land use application be in a form that complies with the requirements of applicable ordinances before it can be considered complete. Orem City Code 22-14-20(E)(8)(a) outlines the

specific requirements for a traffic study. Holiday Oil failed to submit a traffic study which meet the requirements of the applicable ordinance. As such, the application is incomplete. Holiday Oil does not dispute the deficiencies of the application. Rather, Holiday Oil argues that the Board of Adjustment should deem the application complete based on their "reasonable reliance" on the development agreement. Holiday Oil cannot rely on the development agreement, which contains disclaimers and warns of potential future land use regulations, to overcome the submission of a defective Site Plan Application.

EXHIBIT 1

(Orem City Ordinance O-2020-0034)

ORDINANCE NO. O-2020-0034

AN ORDINANCE BY THE OREM CITY COUNCIL AMENDING ARTICLE 22-5-3(A) AND THE ZONING MAP OF THE CITY OF OREM BY CHANGING THE ZONING OF APPROXIMATELY 2.16 ACRES FROM THE OS5 ZONE TO THE C2 ZONE AT APPROXIMATELY 2000 SOUTH GENEVA ROAD.

WHEREAS on May 3, 2020, Davies Design Build filed an application with the City of Orem requesting that the City Council amend Article 22-5-3(A) and the zoning map of the City of Orem by changing the zoning of approximately 2.16 acres from the OS5 zone to the C2 zone at approximately 2000 South Geneva Road; and

WHEREAS a public hearing considering the subject application was held by the Planning Commission on October 21, 2020, and the Planning Commission made no recommendation to the City Council regarding the application; and

WHEREAS a public hearing considering the subject application was held by the City Council on November 10, 2020, and an additional public meeting was held on December 8, 2020; and

WHEREAS the agendas of the City Council meetings at which the request was heard were posted in the Orem Public Library, the Orem City Webpage, and the City Offices at 56 N State Street; and

WHEREAS the matter having been submitted and the City Council having fully considered the request as it relates to the health, safety and general welfare of the City; the orderly development of land in the City; the effect upon surrounding neighborhoods; and the special conditions applicable to the request.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF OREM, UTAH, as follows:

1. The City Council finds this request is in the best interest of the City because it will allow for commercial development to serve the needs of residents and businesses in the area.

2. The City Council hereby amends Article 22-5-3(A) and the zoning map of the City of Orem by changing the zoning of approximately 2.16 acres from the OS5 zone to the C2 zone at approximately 2000 South Geneva Road.

3. If any part of this ordinance shall be declared invalid, such decision shall not affect the validity of the remainder of this ordinance.

4. This ordinance shall take effect immediately upon passage and publication in a newspaper of general circulation in the City of Orem.

PASSED, APPROVED and ORDERED PUBLISHED this **8th** day of **December** 2020.

Richard F. Brunst, Jr., Mayor

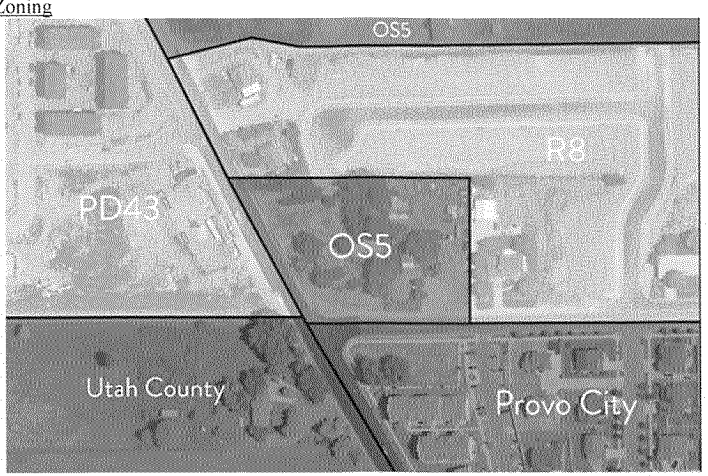
ATTEST:

JoD'Ann Bates, City Recorder

COUNCILMEMBER	AYE	NAY	ABSTAIN
Mayor Richard F. Brunst	☑	☐	☐
Jeff Lambson	☑	☐	☐
Debby Lauret	☑	☐	☐
Tom Macdonald	☑	☐	☐
Terry Peterson	☑	☐	☐
David Spencer	☑	☐	☐
Brent Sumner	☑	☐	☐

EXHIBIT A

Existing Zoning



New Zoning

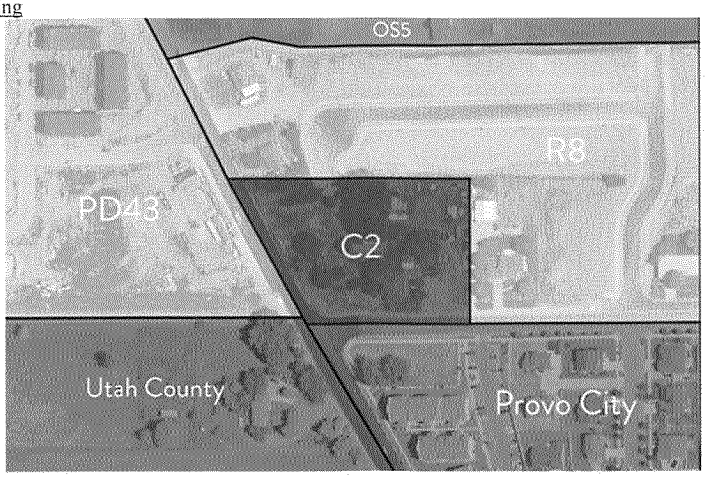


EXHIBIT 2

(2020 Development Agreement)

25

A-2021-173

DEVELOPMENT AGREEMENT

This Development Agreement is executed in duplicate this 8 day of Dec 2020, by and between the City of Orem, a municipal corporation and political subdivision of the State of Utah, with its principal offices located at 56 North State Street, Orem, Utah 84057 (hereinafter referred to as the "City"); and the following additional individuals and entities:
1. Lane Taylor and Cynthia Butler, Trustees of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007, with an address of 1981 South Geneva Road, Orem, Utah (hereinafter referred to as "Taylor");
2. Donald Kent Roberts, an individual with an address of 868 West 2000 South, Orem, Utah (hereinafter referred to as "Roberts"); and
3. Axley-Way Investments, LLC, a Utah limited liability company with its principal address of 1909 West State Road #250 Pleasant Grove, UT 84062 (hereinafter referred to as "Developer").

RECITALS

WHEREAS Lane Taylor and Cynthia Butler, Trustees of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007, is the owner of a parcel of property consisting of approximately 1.24 acres located at approximately 1981 South Geneva Road, Orem, Utah which is identified on the records of the Utah County Recorder as Tax ID # 19:036:0116 and which is more particularly described in Exhibit "A" (hereinafter referred to as the "Taylor Property"); and

WHEREAS Donald Kent Roberts is the owner of a parcel of property consisting of approximately 0.96 acres located at approximately 868 West 2000 South, Orem, Utah which is identified on the records of the Utah County Recorder as Tax ID # 19:036:0053 and which is more particularly described in Exhibit "B" (hereinafter referred to as the "Roberts Property"); and

WHEREAS the Taylor Property and the Roberts Property are sometimes referred to hereinafter as the "Property"; and

WHEREAS Developer has a contract to purchase the Taylor Property and the Roberts Property; and

WHEREAS the Property is currently zoned OS5; and

WHEREAS Developer has filed an application with the City to rezone the Property from OS5 to the C2 zone in order to allow the development of a gas station on the Property as shown in the concept plan attached hereto as Exhibit "C" (the "Project"); and

WHEREAS in order to mitigate the potential negative impacts of the Project on neighboring property owners and to ensure that the development on the Property is constructed in conformance with Developer's representations, Developer, Taylor and Roberts are willing to enter into this Development Agreement; and

ENT 125251:2021 PG 1 of 25
ANDREA ALLEN
UTAH COUNTY RECORDER
2021 Jul 15 10:45 am FEE 0.00 BY JR
RECORDED FOR OREM CITY CORPORATION

WHEREAS the City, acting pursuant to its authority under Utah Code Section 10-9-101, *et. seq.*, and in furtherance of its land use policies, goals, objectives, ordinances, resolutions, and regulations, has elected to approve this Agreement.

COVENANTS

NOW, THEREFORE, in consideration of the promises and conditions set forth herein, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the City and Developer hereby agree as follows:

1. **Development in Conformance with Concept Plan**. The parties acknowledge and agree that the concept plan, drawings and renderings that Developer presented to the City Council were a significant factor in the City Council's favorable consideration of Developer's request to rezone the Property to C2. The Property shall be developed in substantial conformance with the concept plan, drawings and renderings attached hereto as Exhibit "C" including, but not limited to conformance with building location, building design, layout, lighting, landscaping, elevations and building finish materials. Exhibit "C" is attached hereto and by reference is made a part hereof. However, notwithstanding anything herein to the contrary, only such signage as is allowed by City ordinances shall be allowed on the Property and the signage shown in the concept plan and drawings shall not be allowed unless it is otherwise permitted by City ordinances.

2. **Dimmed Lighting**. In order to minimize the impact of lighting on the adjoining residential properties, the lighting for the development on the Property shall be dimmed between the hours of 12:00 a.m.(midnight) and 5:00 a.m. so that only minimal security lighting is illuminated during these hours. All other lighting besides security lighting shall be dimmed to the point of zero illumination during the above hours. The impact of lighting on the Property on adjoining residential properties shall be minimized to the greatest extent possible (except for lighting essential for security). The nighttime renderings of the Project included in Exhibit "C" illustrate the nature and type of lighting that may be employed during the hours of 12:00 a.m. to 5:00 a.m.

3. **Hours of Operation**. Because of the proximity of the Property to residential uses, the hours of operation for all commercial development on the Property shall be limited to 5:00 a.m. to 12:00 a.m.(midnight). No business or other commercial activity shall take place on the Property between 12:00 a.m. to 5:00 a.m except for the use and operation of the outside fuel pumps for which there is no restriction on hours of operation.

4. **Restriction on Fuel Pumps**. In order to limit the traffic to and from the Property (and therefore the impact on surrounding properties and streets), no more than eight (8) fuel pumps (16 fueling stations) may be located on the Property. In addition, any diesel fueling stations on the Property shall only be made available to small trucks and passenger vehicles. Diesel fueling shall not be made available to semi-trucks or other vehicles of a similar size.

5. **Easements**. Developer, Taylor and Roberts shall convey to the City an easement for the construction, installation, operation, maintenance, repair and upgrade of water, sewer and storm sewer pipes and appurtenant facilities over, under, across and through a portion of the Property in the locations shown in Exhibit "D" which is attached hereto and by reference is made a part hereof.

6. **Agreement Considered Mitigation of Impact**. In consideration of the covenants of Developer, Taylor and Roberts set forth in this Agreement, the City staff shall make a recommendation to the Orem City Council to consider the terms of this Development Agreement as sufficient mitigation of the potential adverse impacts resulting from the request to change the zoning designation of the Property from the OS5 zone to the C2 zone.

7. **No Guarantee of Rezone**. The City makes no representation that the request of Developer to have the Property rezoned will be approved by the Orem City Council. Therefore, this Agreement shall not be binding upon Developer unless the request for a rezone of the Property to the C2 zone is approved by the Orem City Council.

8. **No Limitation on Exercise of Police Power**. Nothing in this Agreement shall limit the future exercise of the police power by the City in enacting zoning, subdivision, development, transportation, environmental, open space, and related land use plans, policies, ordinances and regulations after the date of this Agreement.

9. **Compliance With All Applicable Laws**. Nothing in this Agreement shall be deemed to relieve any person or entity who develops the Property from the obligation to comply with all applicable requirements of the City necessary for approval and recordation of subdivision plats and a site plan (if applicable), including the payment of fees and compliance with all other applicable ordinances, resolutions, including the Orem City Zoning and Subdivision Ordinances and design and construction standards.

10. **Agreement to be Recorded**. Upon the approval of the rezone of the Property to the C2 zone by the Orem City Council, this Agreement may be recorded against the Property and shall be deemed to run with the land and shall be binding on all successors and assigns of Taylor, Roberts and Developer in the ownership or development of any portion of the Property.

11. **Indemnification**. Developer, and Taylor and Roberts, if Taylor or Roberts develop the Property, agree to indemnify and hold the City harmless from and against any demand, claim, action, damages or loss of any type arising or resulting from the development of the Property except such demands, claims, actions, damages, or losses that are caused by the City's (or its employees') own negligence or willful misconduct.

12. **Lawful Agreement**. The parties represent that each of them has lawfully entered into this Agreement, having complied with all relevant statutes, ordinances, resolutions, bylaws, and other legal requirements applicable to their operation. The parties further represent that each of them

has authority to enter into this Agreement and that the individuals signing this Agreement on behalf of each party have authority to bind the party represented by the signing individual.

13. **Applicable Law**. This Agreement shall be interpreted pursuant to the laws of the State of Utah.

14. **Time of Essence**. Time shall be of the essence of this Agreement.

15. **Interpretation**. The invalidity of any portion of this Agreement shall not prevent the remainder from being carried into effect. Whenever the context of any provision shall require it, the singular number shall be held to include the plural number, and vice versa, and the use of any gender shall include the other gender. Should any provision of this Agreement require judicial interpretation, the Court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against one party, by reason of the rule of construction that a document is to be construed more strictly against the person who himself or through his agents prepared the same, it being acknowledged that both parties have participated in the preparation hereof.

16. **Modifications**. No oral modifications or amendments to this Agreement shall be effective, but this Agreement may be modified or amended by written agreement.

17. **Assignment**. Neither this Agreement nor any of the provisions, terms or conditions hereof can be assigned to any other party, individual or entity without assigning the rights as well as the responsibilities under this Agreement.

18. **Relationship of Parties**. This Agreement does not create any joint venture, partnership, undertaking or business arrangement between the parties hereto, nor any rights or benefits to a third party.

19. **Incorporation of Recitals**. The Recitals to this Agreement are incorporated by reference into the Covenants section of this Agreement as if fully set forth herein.

20. **Electronic Transaction and Signature**. Each party agrees that this transaction may be conducted by electronic means. Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol, or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such a record, including facsimile or email electronic signatures.

Balance of page left intentionally blank.

SIGNED and ENTERED INTO this 8 day of December, 2020.

City of Orem, by:

James P. Davidson, Orem City Manager

ATTEST:
JoD' Ann Bates, City Recorder

Lane Taylor, Trustee of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007

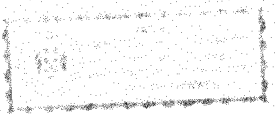
Cynthia Butler, Trustee of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this 8 day of December, 2020, by Lane Taylor and Cynthia Butler, as Trustees of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007.

NOTARY PUBLIC

TAYLOR HAMMER
Notary Public - State of Utah
Comm. No. 701449
My Commission Expires on
Sep 4, 2022



Donald Kent Roberts

Donald Kent Roberts

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this 8th day of December 2020, by Donald Kent Roberts.

NOTARY PUBLIC

NOTARY PUBLIC
CONSTANZA CUELLO
COMM. # 707289
MY COMMISSION EXPIRES
JULY 18, 2023
STATE OF UTAH

Axley-Way Investments, LLC
By:

See Next Page

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this _____ day of _____, 2020, by _____ as the _____ of Axley-Way Investments, LLC, who acknowledged that he/she signed this Agreement on behalf of Axley-Way Investments, LLC

NOTARY PUBLIC

Donald Kent Roberts

_____

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this _____ day of _____, 2020, by Donald Kent Roberts.

_____
NOTARY PUBLIC

Axley-Way Investments, LLC
By:

_____

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this 8th day of December, 2020, by Arnim Way as the Manager of Axley-Way Investments, LLC, who acknowledged that he/she signed this Agreement on behalf of Axley-Way Investments, LLC

_____
NOTARY PUBLIC

KIRA NICOL BARNEY
NOTARY PUBLIC - STATE OF UTAH
COMMISSION# 706244
COMM. EXP. 05-10-2023

Commencing West 7.68 chains from the Southeast corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian; thence West 2.14 chains; thence North 27°10' West 4.65 chains; thence North 89°53' East 4.26 chains; thence South 15.04 feet; thence North 89°29'20" East 12.72 feet; thence South 00°06' West 156.57 feet; thence South 59° West 14.28 feet; thence South 00°28'16" West 94.77 feet to beginning.

LESS AND EXCEPTING that portion conveyed by Boundary Fence Line Agreement recorded March 22, 2002 as Entry No. 32714:2002.

ALSO LESS AND EXCEPTING THE FOLLOWING:
A parcel of land in fee, being part of an entire tract situate in the Southeast Quarter of the Southeast Quarter of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian, in Utah County, Utah, for the construction of a signalized intersection at State Route 114 & 2000 North Street, Provo City, known at Project No. S-0114(33)4. The boundaries of said parcel of land are described as follows:

Beginning at a point in the Southerly boundary line of said entire tract and the existing Northerly right of way line of 2000 North Street, Provo City, at a point being 68.28 feet perpendicularly distant Easterly from the control line of said project at approximate Engineer Station 150+54.71, said point also being 586.81 feet North 90°00'00" West along the South line of said Section 28 from the Southeast corner of said Section 28; and running thence along said existing Northerly right of way line North 90°00'00" West 40.00 feet to a point in the existing Easterly right of way of State Highway 114, said point 33.00 feet perpendicular distant Easterly from the control line of said project at approximate Engineer Station 150+73.56; thence along said Easterly right of way line North 28°07'13" West 40.00 feet to a point 33.00 feet perpendicular distant Easterly from the control line of said project an approximate Engineer Station 151+13.56; thence South 59°03'36" East 68.62 feet to the point of beginning as shown on the map of said project on file in the office of the Utah Department of Transportation.
(Note: Rotate above bearings 00°27'51" clockwise to equal Highway Bearings based on the Utah State Plane Coordinate System, NAD 83, Central Zone).

NOTE: This page is only a part of a 2016 ALTA Commitment for Title Insurance. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; and Schedule B, Part-II Exceptions.
ALTA FORM COMMITMENT (06-17-06: Rev. 08-01-2016)

Exhibit "B"

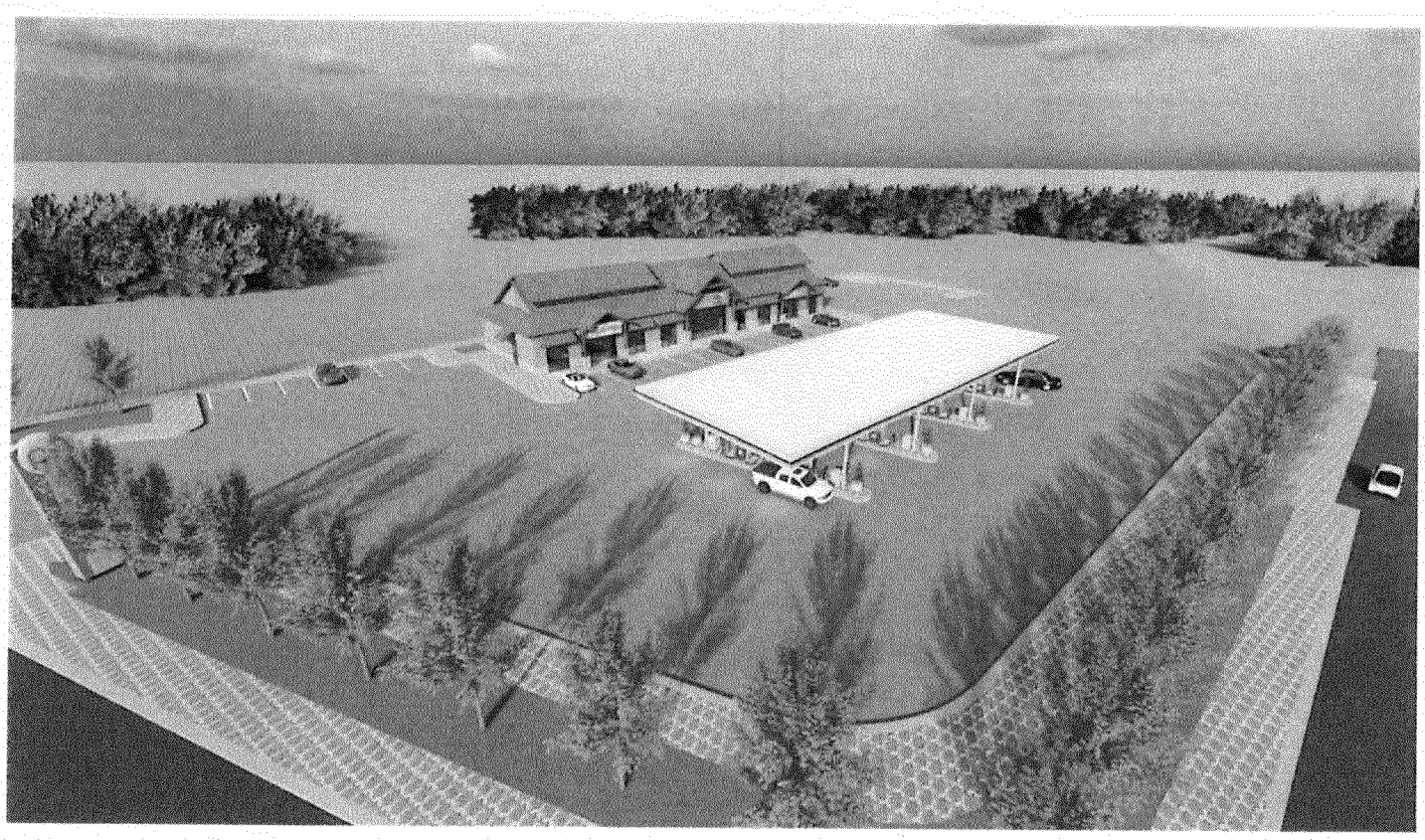
BEGINNING AT THE SOUTHWEST CORNER OF THAT CERTAIN PARCEL OF LAND CONVEYED TO DENIS E. GROO, ET UX. BY WARRANTY DEED RECORDED JANUARY 6, 1977, AS ENTRY
NO. 719, IN BOOK 1524, AT PAGE 389 OF OFFICIAL RECORDS, SAID SOUTHWEST CORNER IS DESCRIBED AS BEING NORTH 89°31'44" WEST 341.88 FEET, MORE OR LESS, FROM THE
SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 89°31'44" WEST ALONG THE SOUTH LINE OF SAID SECTION 28, 165.0 FEET TO THE SOUTHEAST CORNER OF THAT CERTAIN PARCEL OF LAND CONVEYED TO KARL R. TAYLOR BY QUIT-CLAIM DEED RECORDED JUNE 17, 1939, AS ENTRY NO. 5921, IN BOOK 342, AT PAGE 597 OF OFFICIAL RECORDS; THENCE NORTH 0°28'16" EAST ALONG THE EAST LINE OF SAID TAYLOR PROPERTY 264.0 FEET, MORE OR LESS, TO THE NORTHEAST CORNER THEREOF; THENCE SOUTH 89°31'44" EAST 165.0 FEET, MORE OR LESS, TO THE NORTHWEST CORNER OF SAID GROO PROPERTY; THENCE SOUTH 0°28'16" WEST ALONG THE WEST LINE OF SAID GROO PROPERTY 264.0 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH:
THE WEST 6' 3" OF THE FOLLOWING DESCRIBED PROPERTY: COMMENCING AT THE SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE
AND MERIDIAN; THENCE NORTH 89°31'44" WEST ALONG THE SECTION LINE 341.88 FEET (104.21 METERS); THENCE NORTH 00°28'16" EAST 264.00 FEET (80.47 METERS); THENCE
SOUTH 89°31'44" EAST 341.88 FEET (104.21 METERS); THENCE NORTH 00°28'16" EAST 264.00 FEET (80.47 METERS); THENCE SOUTH 88°04'23" EAST 4.44 FEET (1.35 METERS); THENCE
SOUTH 00°45'59" EAST PARTIALLY LONG A FENCE LINE 528.00 FEET (160.93 METERS); THENCE NORTH 89°33'59" WEST ALONG THE SECTION LINE 15.84 FEET (4.83 METERS) TO THE
POINT OF BEGINNING.

LESS AND EXCEPTING:
BEGINNING AT A POINT WHICH IS NORTH 89°31'44" WEST ALONG A SECTION LINE 506.88 FEET FROM THE SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THE NORTH 89°31'44" WEST ALONG THE SECTION LINE 114.99 FEET TO THE EASTERLY LINE OF GENEVA ROAD; THENCE NORTH 28°25'53" WEST ALONG SAID EAST LINE OF GENEVA ROAD 285.08 FEET; THENCE NORTH 88°33'11" EAST ALONG A FENCE LINE 32.34 FEET; THENCE NORTH 89°29'20" EAST 230.89 FEET; THENCE SOUTH 0°06' WEST 156.57 FEET; THENCE SOUTH 59°00" WEST 13.50 FEET; THENCE SOUTH 0°28'16 WEST 91.00 FEET TO THE POINT OF BEGINNING.

ALSO LESS AND EXCEPTING THEREFROM ANY PORTION LYING NORTH OF THE LINE DESCRIBED IN THAT CERTAIN BOUNDARY FENCE LINE AGREEMENT RECORDED MARCH 22,
2002 AS ENTRY NO. 32715:2002, OF THE OFFICIAL RECORDS.

EXHIBIT "C"



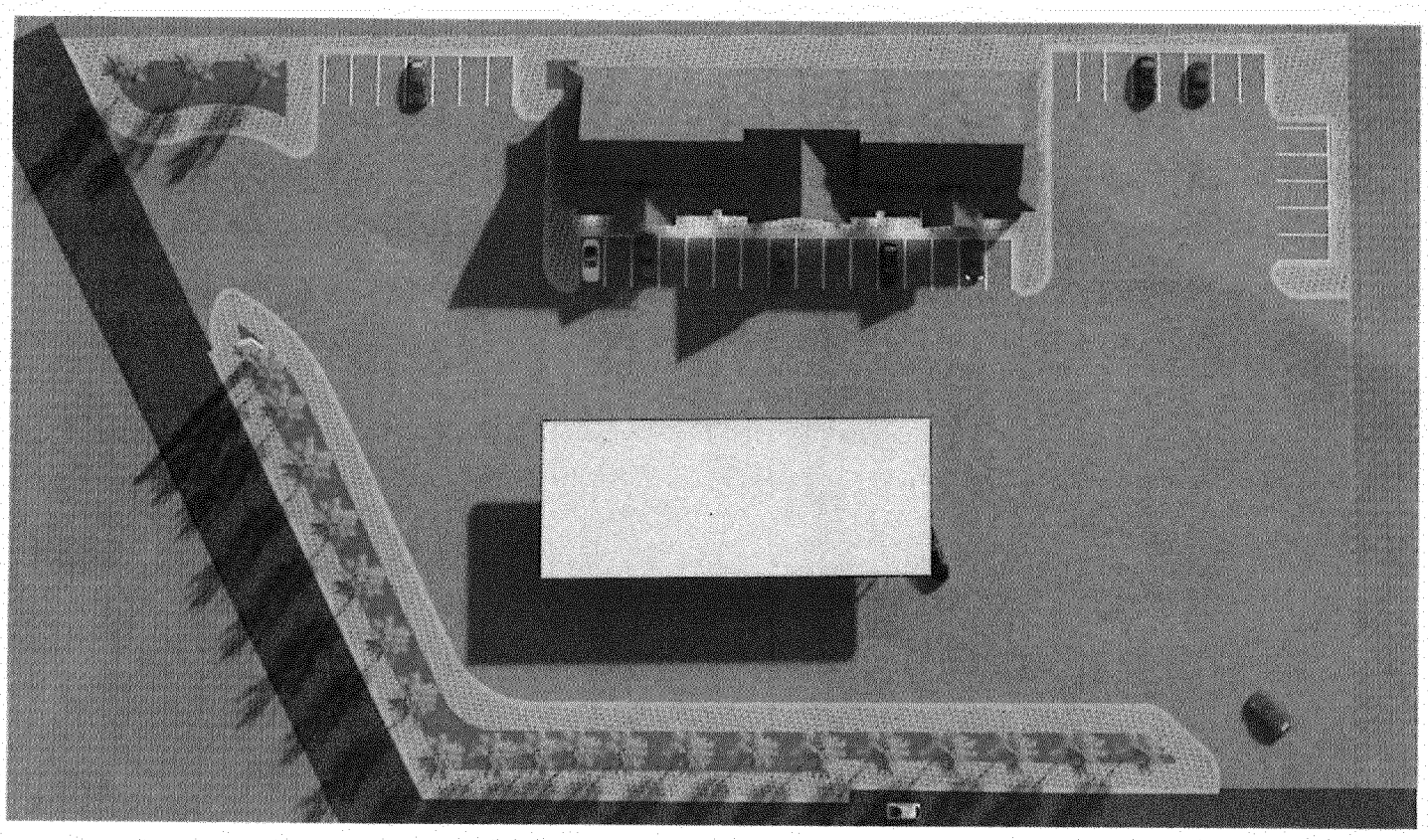
ENT 125251:2021 PG 11 of 25

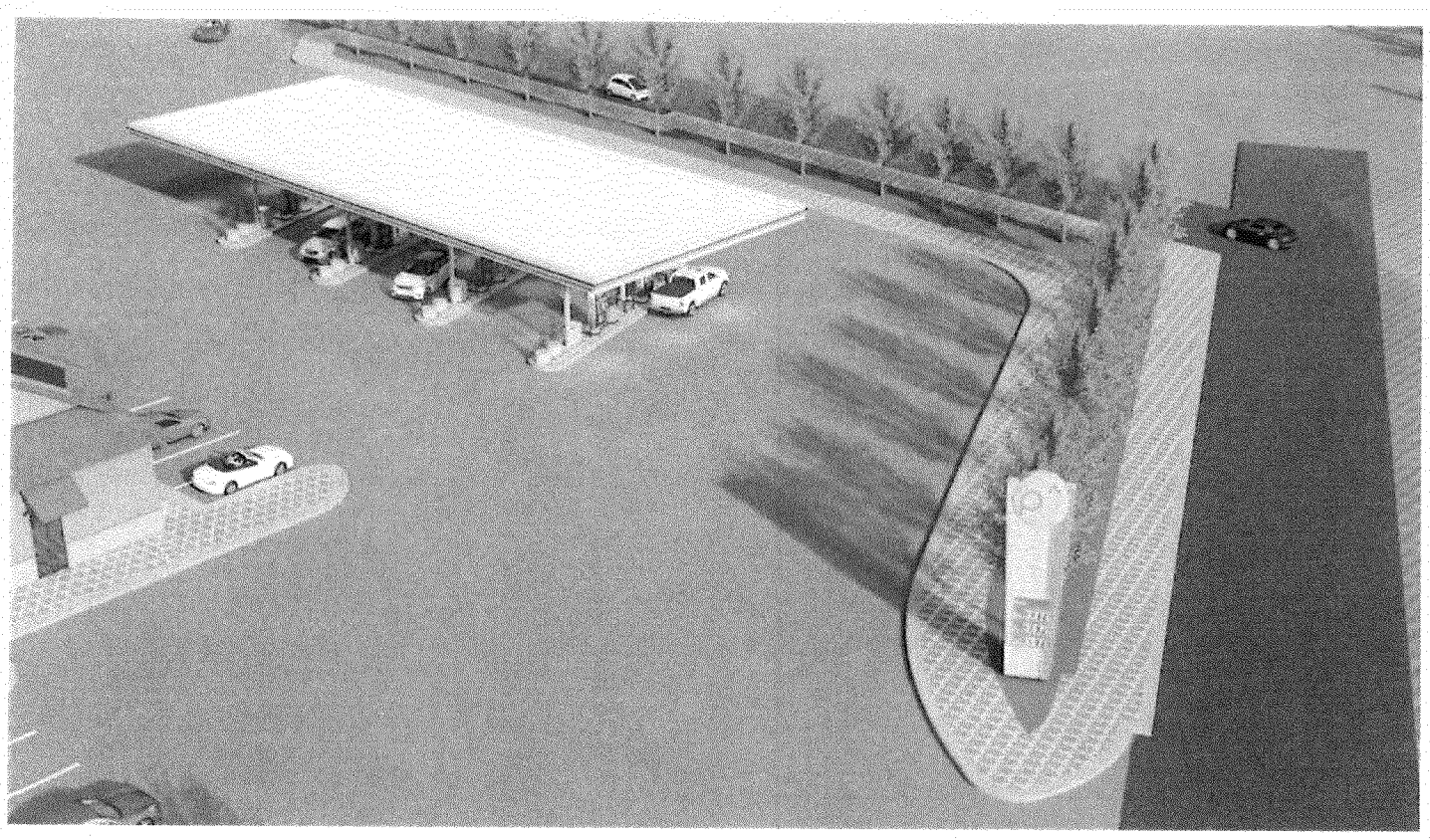


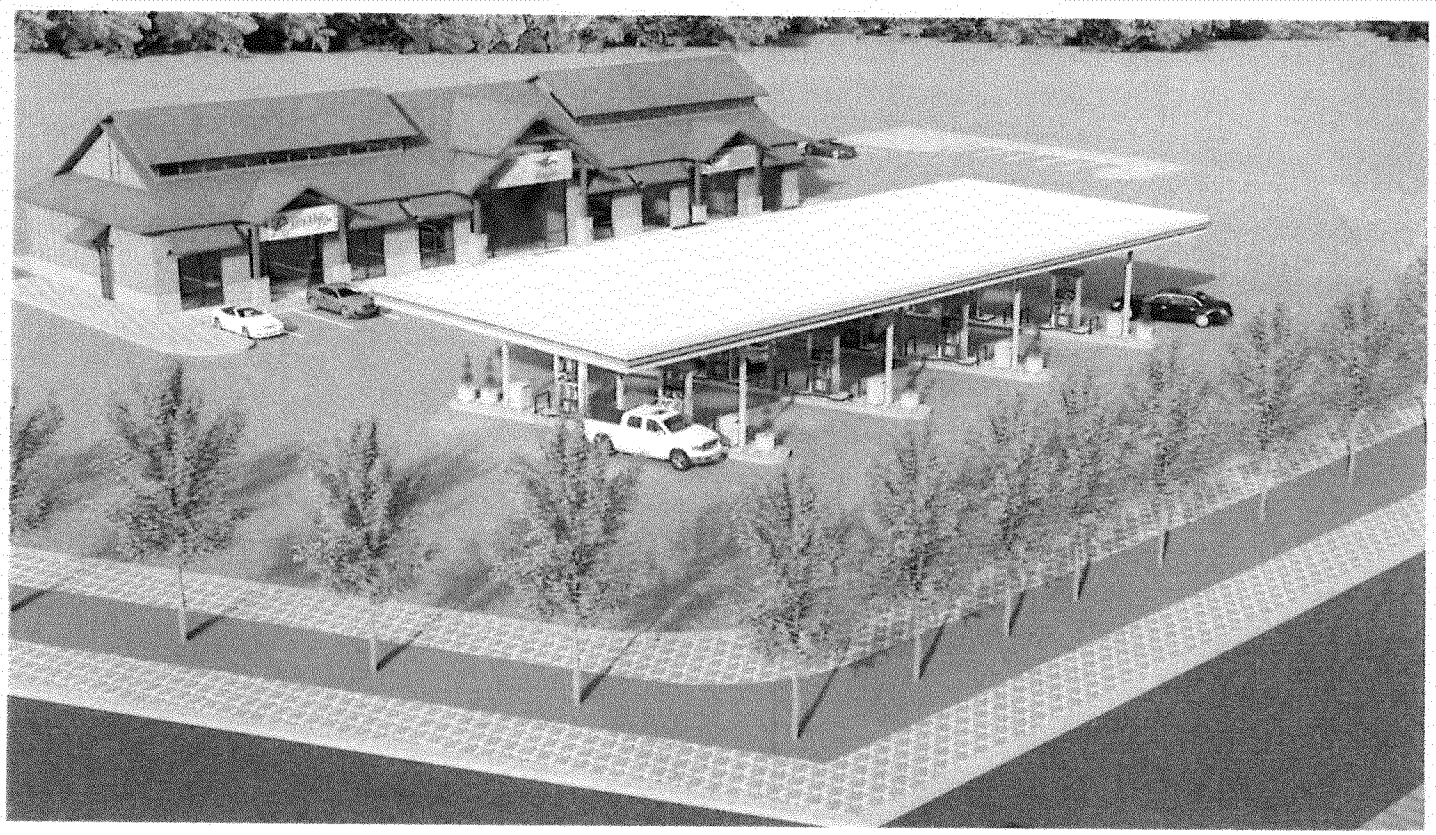
ENT 125251:2021 PG 12 of 25

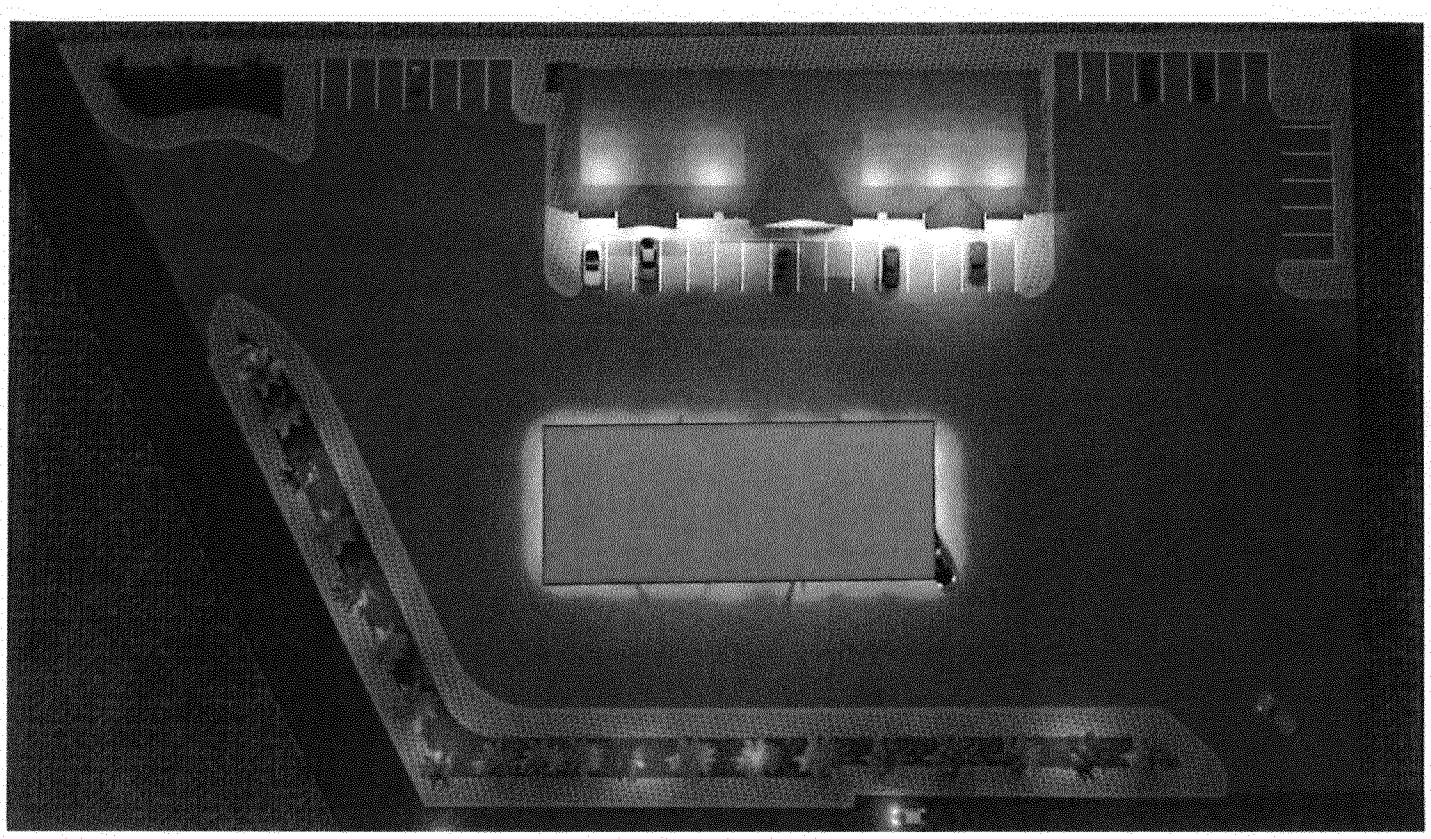
ENT 125251:2021 PG 13 of 25

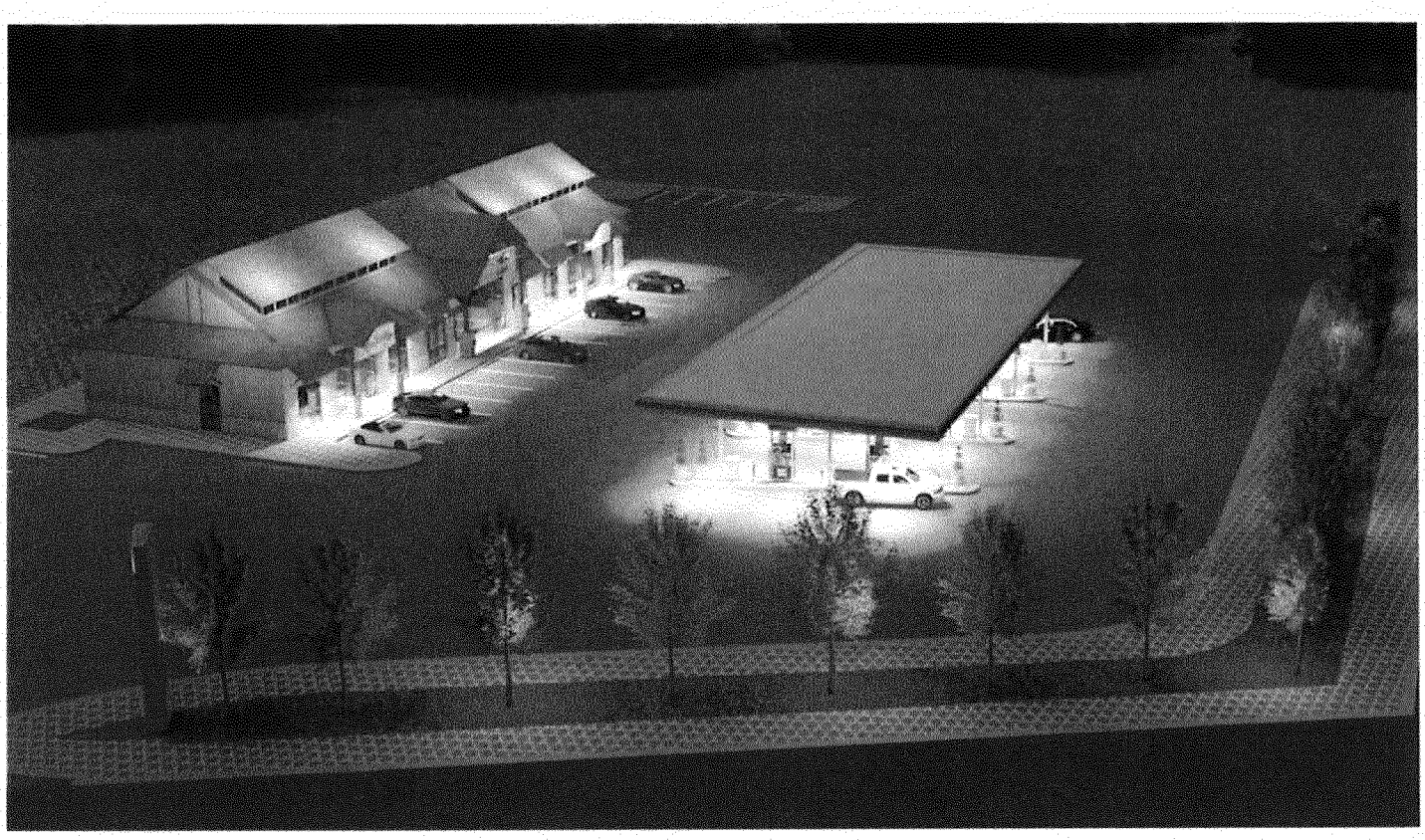
WhatsApp Image 2020-10-24 at 1.28.22 PM (1).jpeg



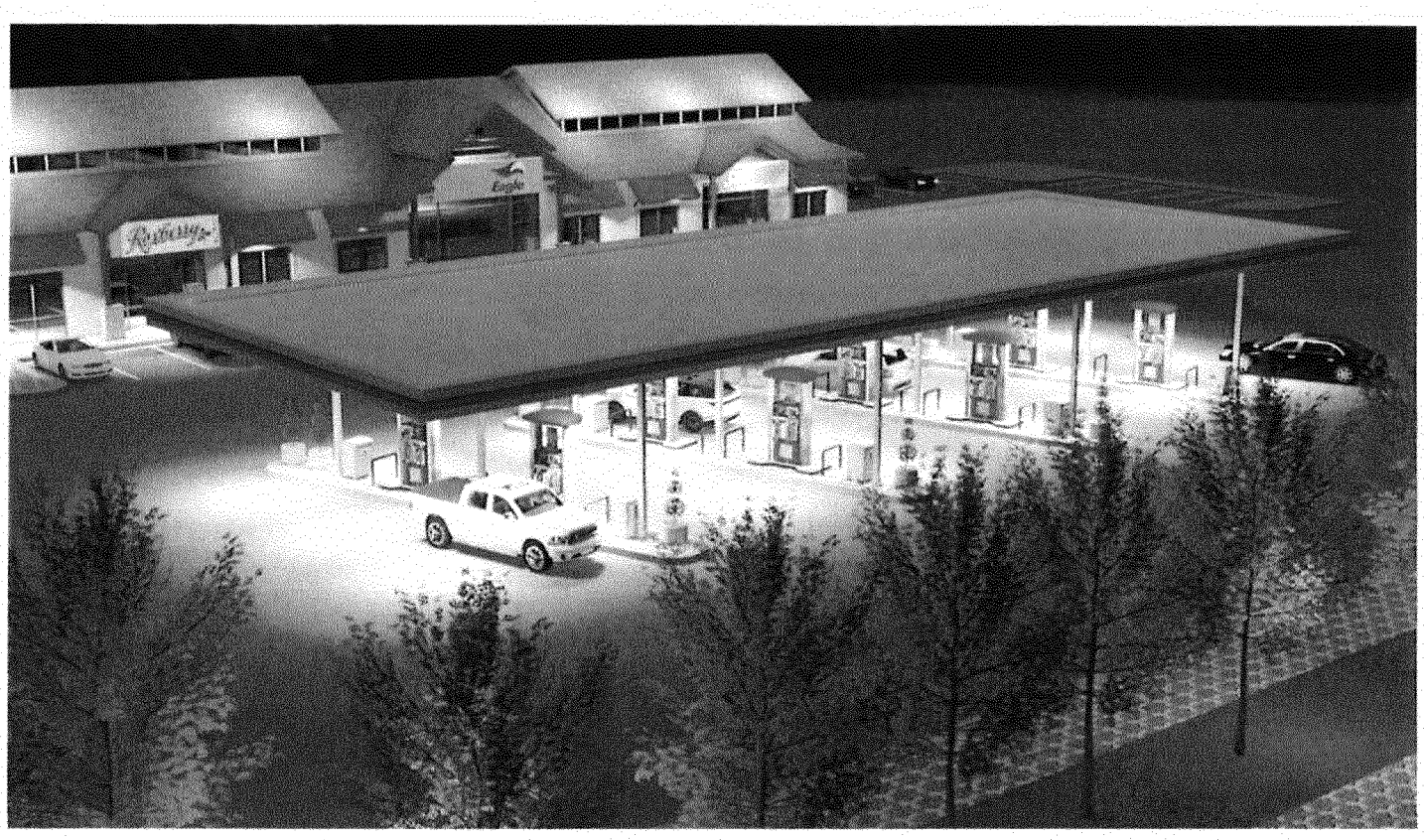


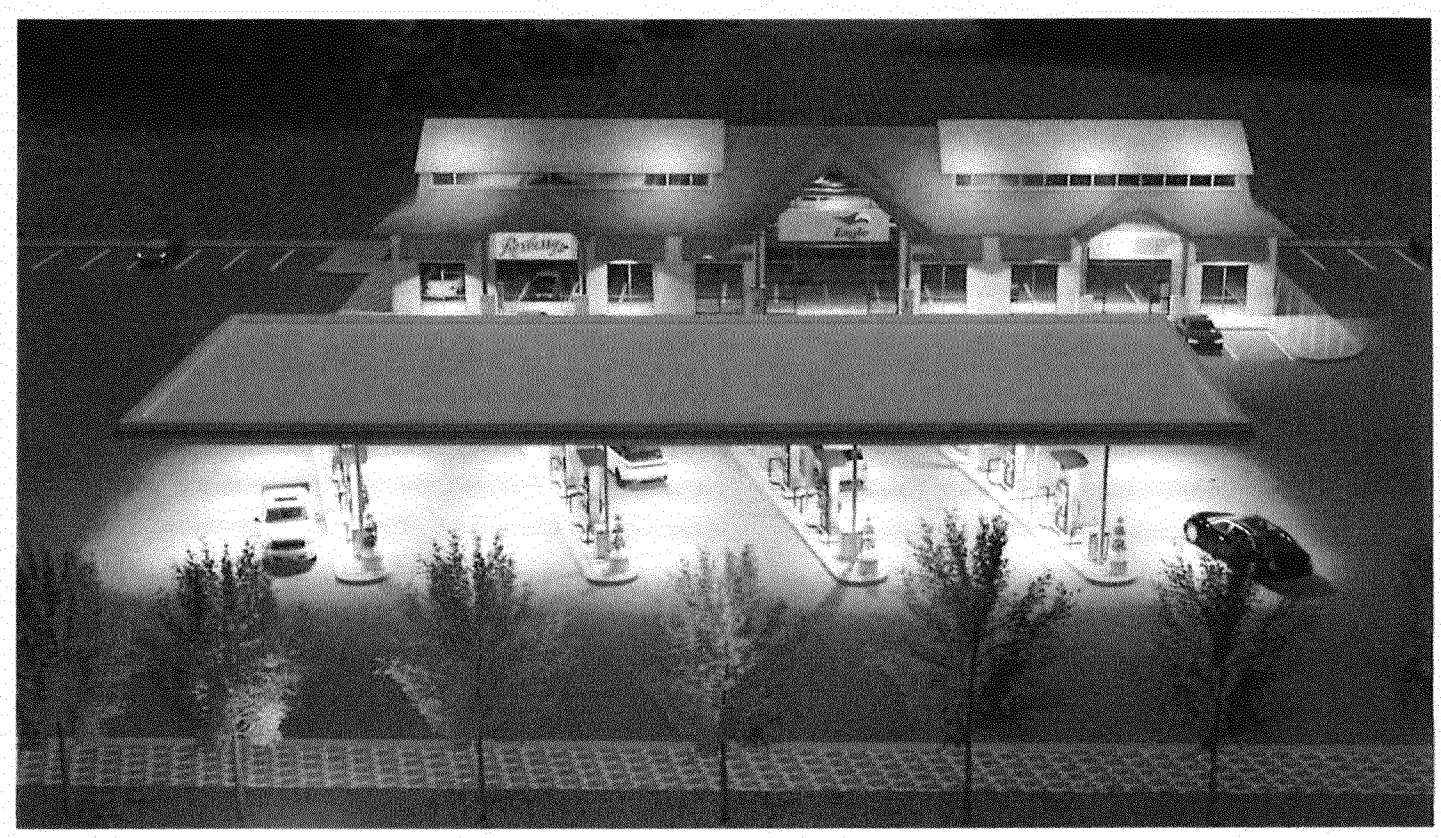


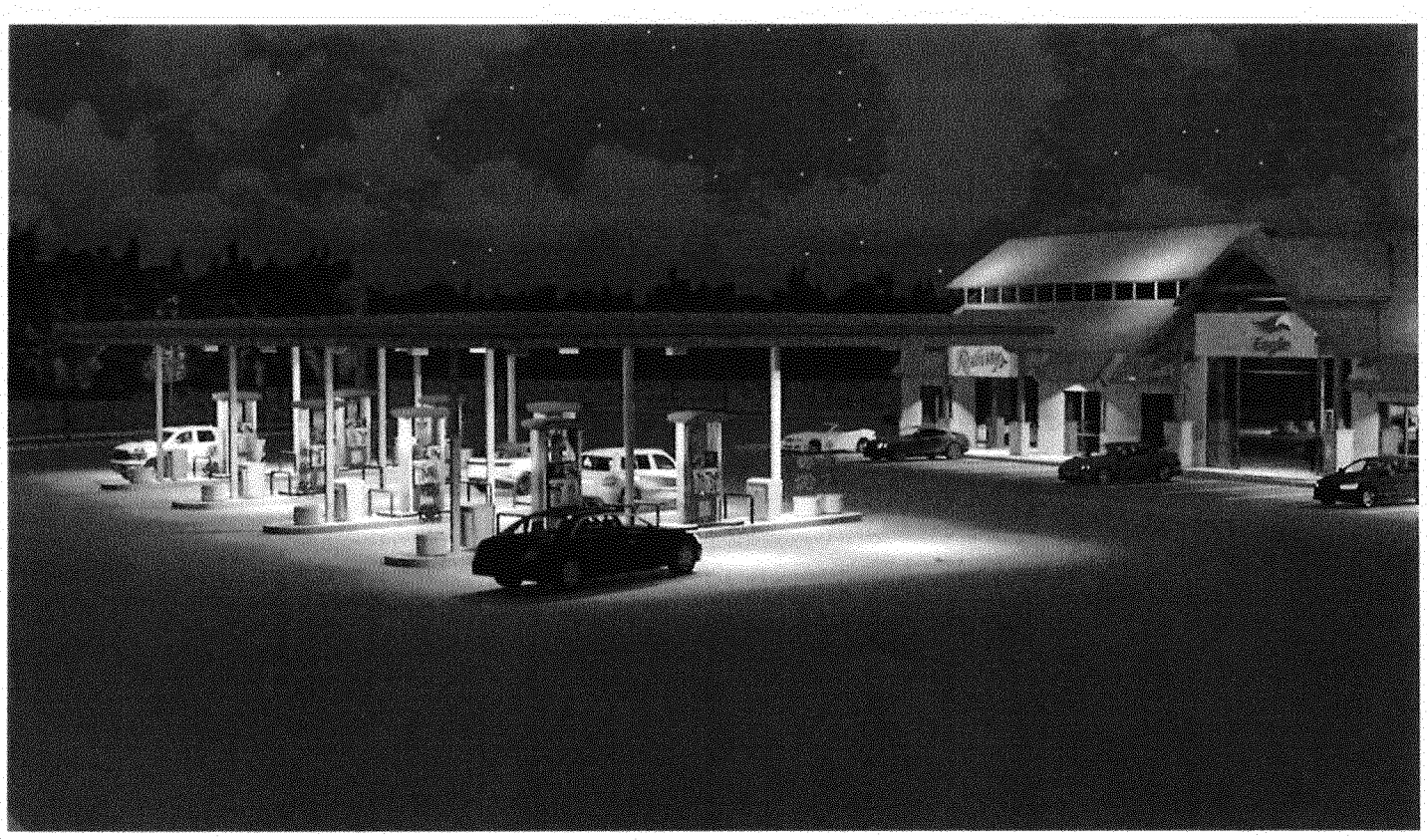


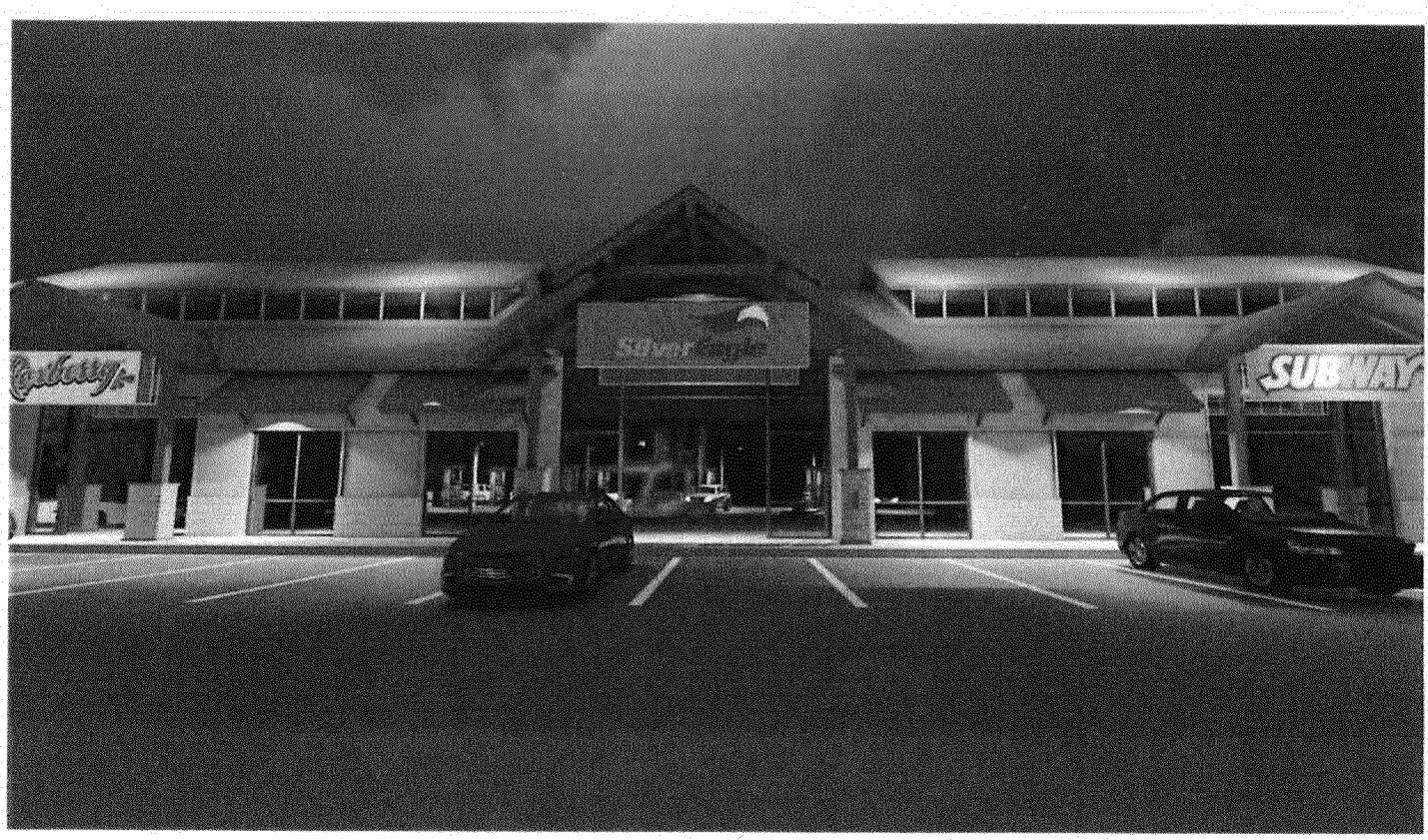


ENT 125251:2021 PG 18 of 25

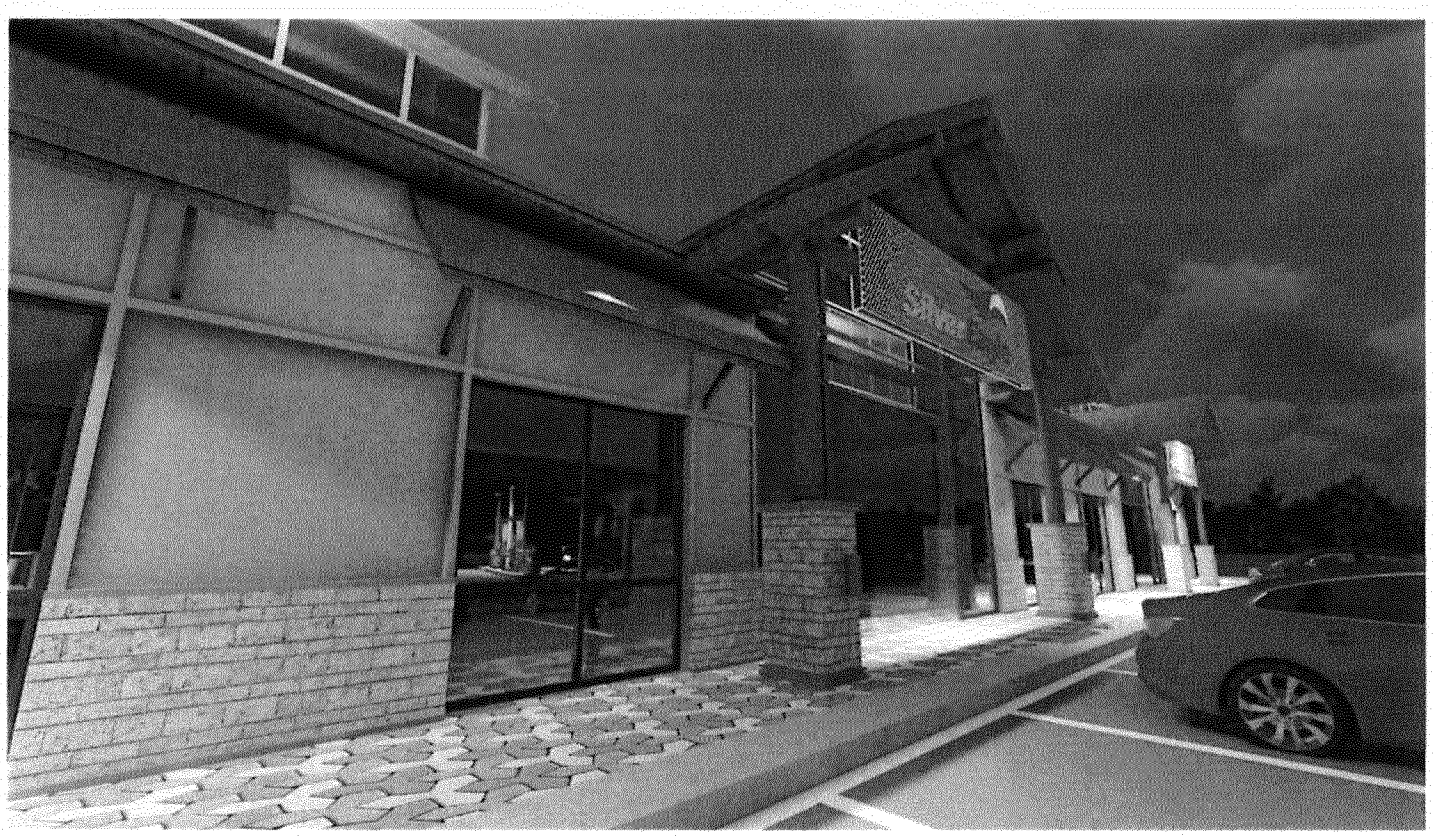


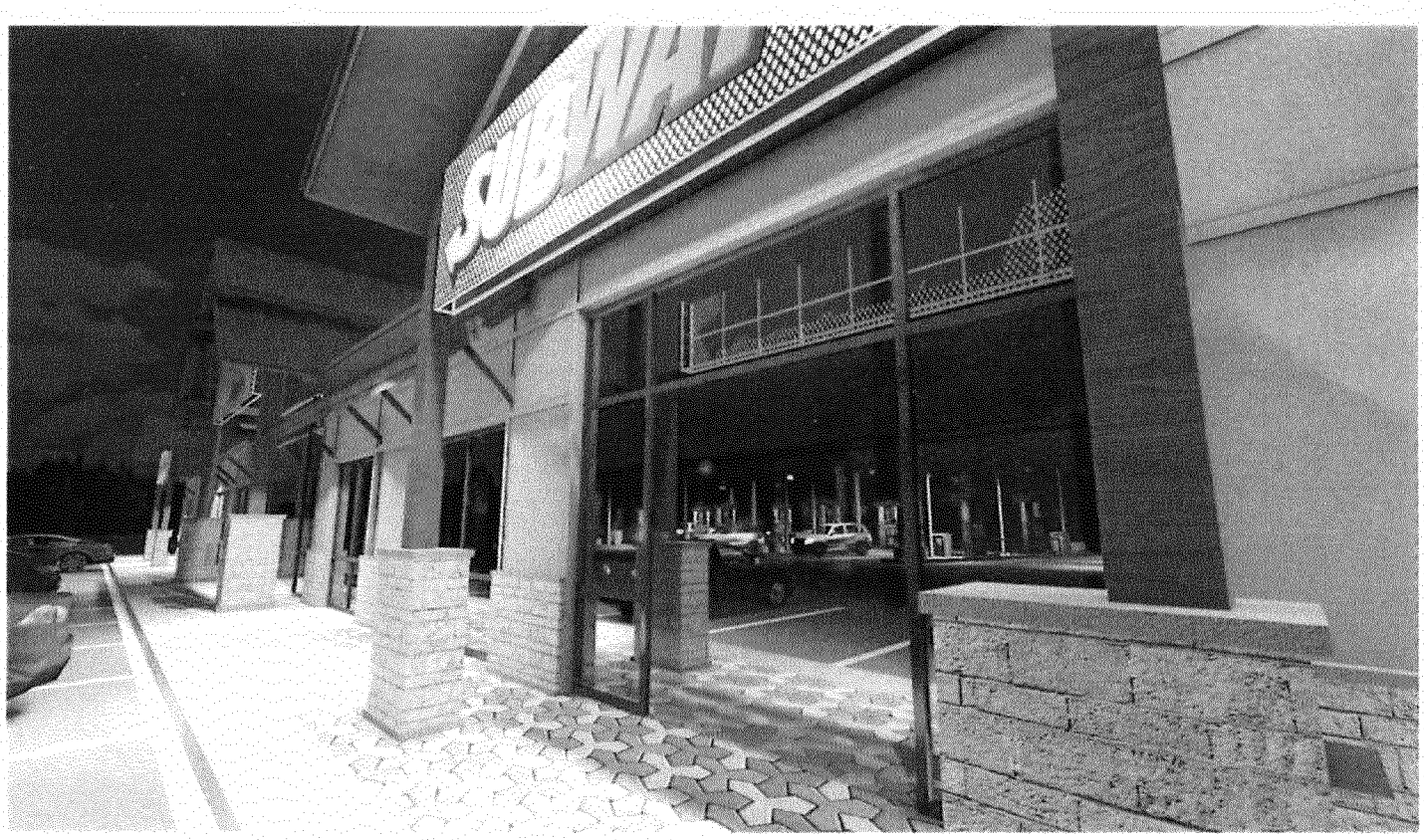






ENT 125251:2021 PG 22 of 25





ENT 125251:2021 Pg 25 of 25

Exhibit "D"

EXHIBIT 3

(Planning Commission Res. PC-2023-0024)

RESOLUTION NO. PC-2023-0024

A RESOLUTION BY THE OREM CITY PLANNING COMMISSION RECOMMENDING THE CITY COUNCIL DENY THE AMENDMENTS TO THE DEVELOPMENT AGREEMENT FOR THE PROPERTY LOCATED AT 1981 SOUTH GENEVA ROAD IN THE C2 ZONE.

WHEREAS on March 1, 2023, Brent Neel / Holiday Oil filed an application with the City of Orem requesting the Planning Commission recommend that the City Council amend the development agreement for the property located at 1981 South Geneva Road in the C2 zone; and

WHEREAS a public hearing considering the subject application was held by the Planning Commission on June 21, 2023; and

WHEREAS 138 notices were mailed to the property owners within 500 feet of the property; and

WHEREAS the agenda of the Planning Commission meeting at which the subject application was posted at the Orem Public Library, on the Orem City webpage and at the City offices at 56 North State Street; and

WHEREAS the matter having been submitted and the Planning Commission having fully considered the request as it relates to the health, safety, and general welfare of the City; the orderly development of land in the City; the effect upon the surrounding neighborhood; the compliance of the request with all applicable City ordinances and the Orem General Plan, and the special conditions applicable to the request.

BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF OREM, UTAH, as follows:

1. The Planning Commission finds this request will not negatively affect the health, safety, and general welfare of the City.
2. The Planning Commission hereby recommends the City Council deny the amendments to the development agreement for the property located at 1981 South Geneva Road in the C2 zone, as shown in Exhibit "A", which is attached hereto and incorporated herein by reference.
3. This resolution shall take effect immediately upon passage.
4. If any part of this resolution shall be declared invalid, such decision shall not affect the validity of the remainder of this resolution.

5. All other resolutions or policies in conflict herewith, either in whole or part, are hereby repealed.

PASSED and APPROVED this 21st day of June 2023.

CITY OF OREM, by
Murray Low, Acting Chair

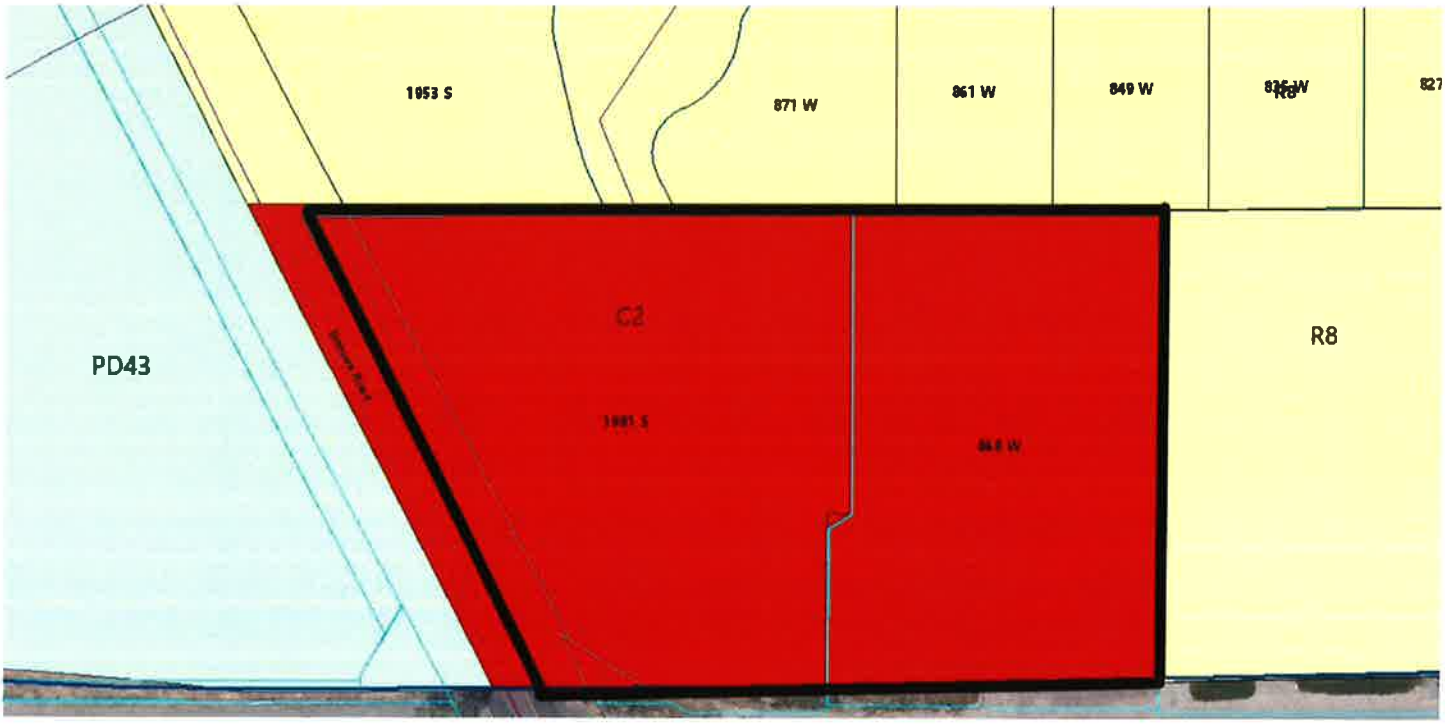
ATTEST:

Ryan L. Clark, Planning Commission Secretary

COMMISSION MEMBERS VOTING 'AYE'	COMMISSION MEMBERS VOTING 'NAY'
Mark Carpenter	
James Hawkes	
Helena Kleinlein	
Murray Low	

Exhibit "A"





Proposed Development Agreement

DEVELOPMENT AGREEMENT

This Development Agreement is executed in duplicate this ____.day of _____ 2023, by and between the City of Orem, a municipal corporation and political subdivision of the State of Utah, with its principal offices located at 56 North State Street, Orem, Utah 84057 (hereinafter referred to as the "City"); and the following additional individuals and entities:

1. Wagstaff Investments, LLC, a Utah limited liability company, with an address of 3115 West 2100 South, West Valley City, Utah (hereinafter referred to as "Owner" or "Developer");

RECITALS

WHEREAS Wagstaff Investments, LLC, is the owner of a parcel of property consisting of approximately 1.24 acres located at approximately 1981 South and is also the owner of a parcel of property consisting of approximately 0.96 acres located at approximately 868 West 2000 South, Orem, Utah which is identified on the records of the Utah County Recorder as Tax ID# 19:036:0053 Geneva Road, Orem, Utah which is identified on the records of the Utah County Recorder as Tax ID# 19:036:0116 and which is more particularly described in Exhibit "A" (hereinafter referred to as the "Taylor Property"); and

WHEREAS the Property is currently zoned OS5; and

WHEREAS the City has approved the C2 zone in order to allow the development of a gas station on the Property as shown in the concept plan attached hereto as Exhibit "C" (the "Project"); and

WHEREAS in order to mitigate the potential negative impacts of the Project on neighboring property owners and to ensure that the development on the Property is constructed in conformance with Developer's representations, Developer, is willing to enter into this Development Agreement; and

WHEREAS the City, acting pursuant to its authority under Utah Code Section 10-9-101, *et. seq.*, and in furtherance of its land use policies, goals, objectives, ordinances, resolutions, and regulations, has elected to approve this Agreement.

COVENANTS

NOW, THEREFORE, in consideration of the promises and conditions set forth herein, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the City and Developer hereby agree as follows:

1. **Development in Conformance with Concept Plan.** The parties acknowledge and agree that the concept plan, drawings and renderings that Developer presented to the City Council were a significant factor in the City Council's favorable consideration of

Developer's request to rezone the Property to C2. The Property shall be developed in substantial conformance with the concept plan, drawings and renderings attached hereto as Exhibit "C" including, but not limited to conformance with building location, building design, layout, lighting, landscaping, elevations and building finish materials. Exhibit "C" is attached hereto and by reference is made a part hereof. However, notwithstanding anything herein to the contrary, only such signage as is allowed by City ordinances shall be allowed on the Property and the signage shown in the concept plan and drawings shall not be allowed unless it is otherwise permitted by City ordinances.

2. **Dimmed Lighting.** In order to minimize the impact of lighting on the adjoining residential properties, the lighting for the development on the Property shall be dimmed between the hours of 12:00 a.m.(midnight) and 5:00 a.m. so that only minimal security lighting is illuminated during these hours. All other lighting besides security lighting shall be dimmed to the point of zero illumination during the above hours. The impact of lighting on the Property on adjoining residential properties shall be minimized to the greatest extent possible (except for lighting essential for security). The nighttime renderings of the Project included in Exhibit "C" illustrate the nature and type of lighting that may be employed during the hours of 12:00 a.m. to 5:00 a.m.

3. **Hours of Operation.** Because of the proximity of the Property to residential uses, the hours of operation for all commercial development on the Property shall be limited to 5:00 a.m. to 12:00 a.m.(midnight). No business or other commercial activity shall take place on the Property between 12:00 a.m. to 5:00 a.m except for the use and operation of the outside fuel pumps for which there is no restriction on hours of operation.

4. **Restriction on Fuel Pumps.** In order to limit the traffic to and from the Property (and therefore the impact on surrounding properties and streets), no more than eight (8) fuel pumps (16 fueling stations) may be located on the Property. In addition, any diesel fueling stations on the Property shall only be made available to small trucks and passenger vehicles. Diesel fueling shall not be made available to semi-trucks or other vehicles of a similar size.

5. Car wash will be constructed on-site with operational hours that match the times in which outdoor lighting will be dimmed (12:00a.m. (midnight) and 5:00a.m.) and will be constructed as reflected in the drawings in the attached Exhibit C.

6. **Easements.** Developer, shall convey to the City an easement for the construction, installation, operation, maintenance, repair and upgrade of water, sewer and storm sewer pipes and appurtenant facilities over, under, across and through a portion of the Property in the locations shown in Exhibit "D" which is attached hereto and by reference is made a part hereof.

7. **Agreement Considered Mitigation of Impact.** In consideration of the covenants of Developer, set forth in this Agreement, the City staff shall make a recommendation to

the Orem City Council to consider the terms of this Development Agreement as sufficient to satisfy the intent of the zoning approval for this Property. mitigation of the potential adverse impacts resulting from the request to change the zoning designation of the Property fi:om the OS5 zone to the C2 zone.

8. **No Limitation on Exercise of Police Power.** Nothing in this Agreement shall limit the future exercise of the police power by the City in enacting zoning, subdivision, development, transportation, environmental, open space, and related land use plans, policies, ordinances and regulations after the date of this Agreement.

9. **Compliance With All Applicable Laws.** Nothing in this Agreement shall be deemed to relieve any person or entity who develops the Property from the obligation to comply with all applicable requirements of the City necessary for approval and recordation of subdivision plats and a site plan (if applicable), including the payment of fees and compliance with all other applicable ordinances, resolutions, including the Orem City Zoning and Subdivision Ordinances and design and construction standards.

10. **Agreement to be Recorded.** Upon the approval of the rezone of the Property to the C2 zone by the Orem City Council, this Agreement may be recorded against the Property and shall be deemed to run with the land and shall be binding on all successors and assigns of Developer in the ownership or development of any portion of the Property.

11. **Indemnification.** When Owner develops the Property, Owner agrees to indemnify and hold the City harmless from and against any demand, claim, action, damages or loss of any type arising or resulting from the development of the Property except such demands, claims, actions, damages, or losses that are caused by the City's (or its employees') own negligence or willful misconduct.

12. **Lawful Agreement.** The parties represent that each of them has lawfully entered into this Agreement, having complied with all relevant statutes, ordinances, resolutions, bylaws, and other legal requirements applicable to their operation. The parties further represent that each of them has authority to enter into this Agreement and that the individuals signing this Agreement on behalf of each party have authority to bind the party represented by the signing individual.

13. **Applicable Law.** This Agreement shall be interpreted pursuant to the laws of the State of Utah.

14. **Time of Essence.** Time shall be of the essence of this Agreement.

15. **Interpretation.** The invalidity of any portion of this Agreement shall not prevent the remainder from being carried into effect. Whenever the context of any provision shall require it, the singular number shall be held to include the plural number, and vice versa, and the use of any gender shall include the other gender. Should any provision of this

Agreement require judicial interpretation, the Court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against one party, by reason of the rule of construction that a document is to be construed more strictly against the person who himself or through his agents prepared the same, it being acknowledged that both parties have participated in the preparation hereof.

16. **Modifications.** No oral modifications or amendments to this Agreement shall be effective, but this Agreement may be modified or amended by written agreement.

17. **Assignment.** Neither this Agreement nor any of the provisions, terms or conditions hereof can be assigned to any other party, individual or entity without assigning the rights as well as the responsibilities under this Agreement.

18. **Relationship of Parties.** This Agreement does not create any joint venture, partnership, undertaking or business arrangement between the parties hereto, nor any rights or benefits to a third party.

19. **Incorporation of Recitals.** The Recitals to this Agreement are incorporated by reference into the Covenants section of this Agreement as if fully set forth herein.

20. **Electronic Transaction and Signature.** Each party agrees that this transaction may be conducted by electronic means. Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol, or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such a record, including facsimile or email electronic signatures.

CITY: **OWNER:**

City of Orem
a Utah municipal corporation

By: _____
Name: _____
Its: _____

WAGSTAFF INVESTMENTS, LLC,
a Utah limited liability company

By: _____
Name: J. Scott Wagstaff
Its: Manager

EXHIBIT "A"

Commencing West 7.68 chains from the Southeast corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian; thence West 2.14 chains; thence North 27°10' West 4.65 chains; thence North 89°53' East 4.26 chains; thence South 15.04 feet; thence North 89°29'20" East 12.72 feet; thence South 00°06' West 156.57 feet; thence South 59° West 14.28 feet; thence South 00°28'16" West 94.77 feet to beginning.

LESS AND EXCEPTING that portion conveyed by Boundary Fence Line Agreement recorded March 22, 2002 as Entry No. 32714:2002.

ALSO LESS AND EXCEPTING THE FOLLOWING:
A parcel of land in fee, being pa1t of an entire tract situate in the Southeast Quarter of the Southeast Quarter of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian, in Utah County, Utah, for the construction of a signalized intersection at State Route 114 & 2000 North Street, Provo City, known at Project No. S-0114(33)4. The boundaries of said parcel of land are described as follows:

Beginning at a point in the Southerly boundary line of said entire tract and the existing Northerly right of way line of 2000 North Street, Provo City, at a point being 68.28 feet perpendicularly distant Easterly from the control line of said project at approximate Engineer Station 150+54.71, said point also being 586.81 feet North 90°00'00" West along the South line of said Section 28 from the Southeast corner of said Section 28; and running thence along said existing Northerly right of way.line North 90°00'00" West 40.00 feet to a point in the existing Easterly right of way of State Highway 114, said point 33.00 feet perpendicular distant Easterly from the control line of said project at approximate Engineer Station 150+73.56; thence along said Easterly right of way line North 28°07'13" West 40.00 feet to a point
33.00 feet perpendicular distant Easterly from the control line of said project an approximate Engineer Station 151+13.56; thence South 59°03'36" East 68.62 feet to the point of beginning as shown on the map of said project on file in the office of the Utah Department of Transportation. (Note: Rotate above bearings 00°27'51" clockwise to equal Highway Bearings based on the Utah State Plane Coordinate System, NAO 83, Central Zone).

Exhibit "6"

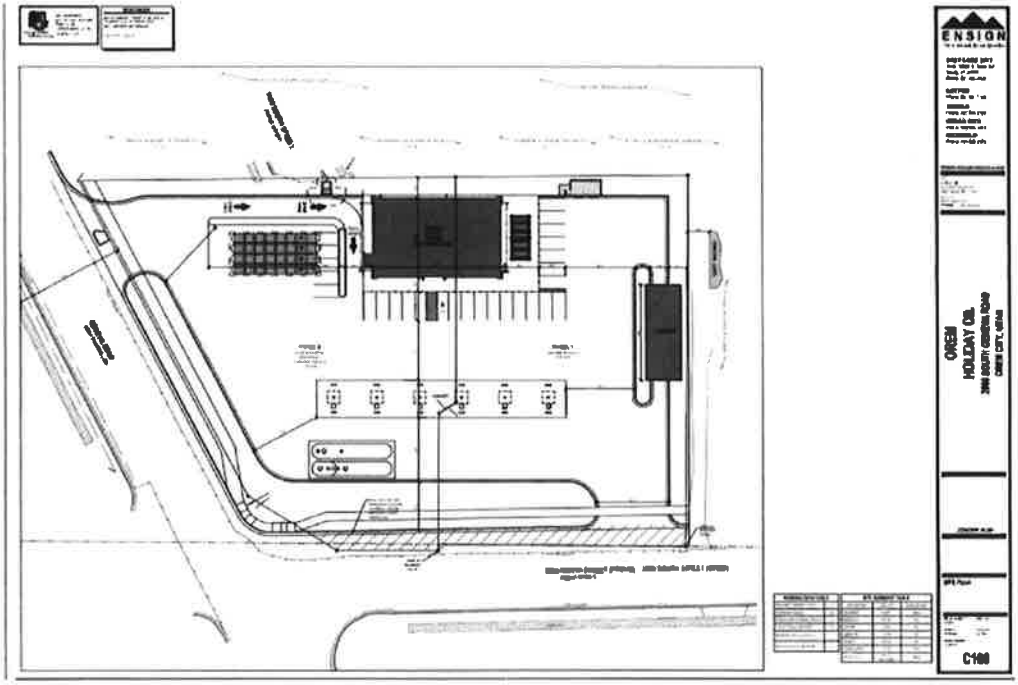
BEGINNING AT THE SOUTHWEST CORNER OF THAT CERTAIN PARCEL OF LAND CONVEYED TO DENISE. GROO, ET UX. BY WARRANTY DEED RECORDED JANUARY 6, 1977, AS ENTRY NO. 719, IN BOOK 1524, AT PAGE 389 OF OFFICIAL RECORDS, SAID SOUTHWEST CORNER IS DESCRIBED AS BEING NORTH 89°31'44" WEST 341.88 FEET, MORE OR LESS, FROM THE SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 89°31'44" WEST ALONG THE SOUTH LINE OF SAID SECTION 28, 165.0 FEET TO THE SOUTHEAST CORNER OF THAT CERTAIN PARCEL OF LAND CONVEYED TO KARL R. TAYLOR BY QUIT-CLAIM DEED RECORDED JUNE 17, 1939, AS ENTRY NO. 5921, IN BOOK 342, AT PAGE 597 OF OFFICIAL RECORDS; THENCE NORTH 0°28'16" EAST ALONG THE EAST LINE OF SAID TAYLOR PROPERTY 264.0 FEET, MORE OR LESS, TO THE NORTHEAST CORNER THEREOF; THENCE SOUTH 89°31'44" EAST 165.0 FEET, MORE OR LESS, TO THE NORTHWEST CORNER OF SAID GROO PROPERTY; THENCE SOUTH 0°28'16" WEST ALONG THE WEST LINE OF SAID GROO PROPERTY 264.0 FEET TO THE POINT OF BEGINNING.

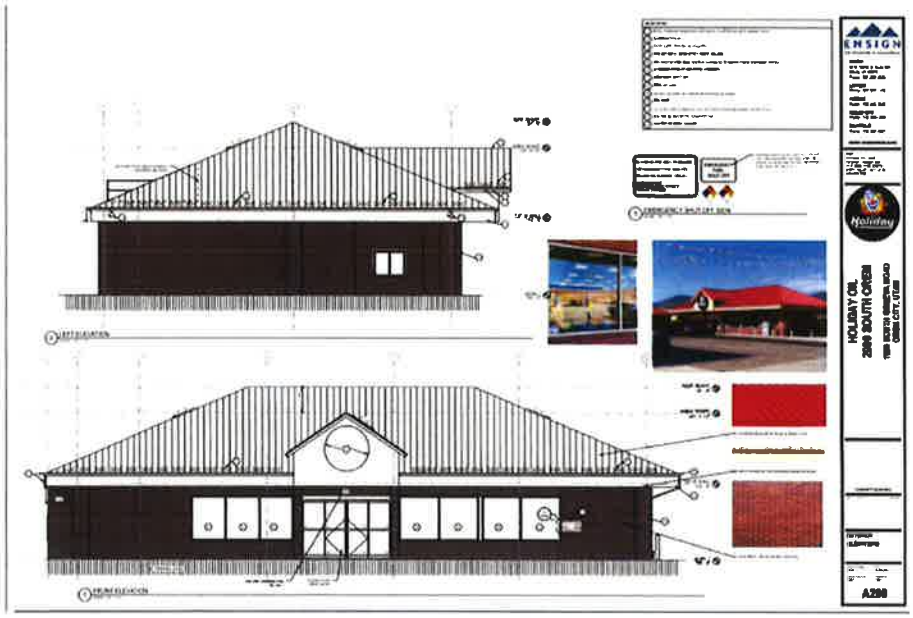
TOGETHER WITH:
THE WEST 6' 3" OF THE FOLLOWING DESCRIBED PROPERTY: COMMENCING AT THE SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 89°31'44" WEST ALONG THE SECTION LINE 341.88 FEET (104.21METERS); THENCE NORTH 00°28'16" EAST 264.00 FEET (80.47 METERS); THENCE SOUTH 89°31'44" EAST 341.88 FEET (104.21 METERS); THENCE NORTH 00°28'16" EAST 264.00 FEET (80.47 METERS); THENCE SOUTH 88°04'23" EAST 4.44 FEET (1.35 METERS); THENCE SOUTH 00°45'59" EAST PARTIALLY LONG A FENCE LINE 528.00 FEET (160.93 METERS); THENCE NORTH 89°33'59" WEST ALONG THE SECTION LINE 15.84 FEET (4.83 METERS) TO THE POINT OF BEGINNING.

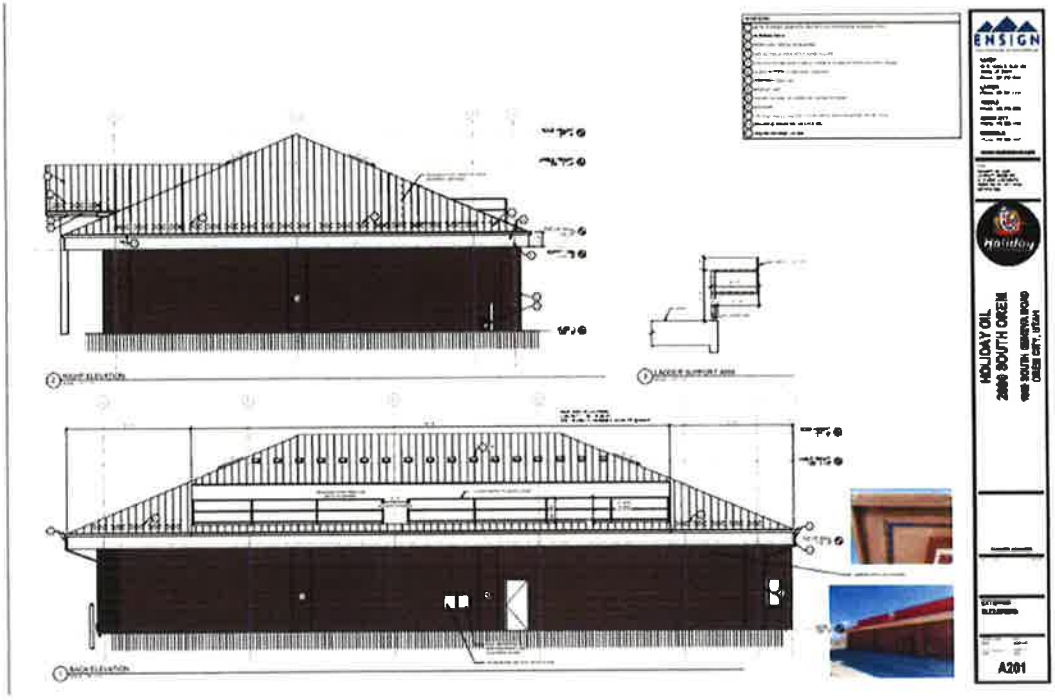
LESS AND EXCEPTING:
BEGINNING AT A POINT WHICH IS NORTH 89°31'44" WEST ALONG A SECTION LINE 506.88 FEET FROM THE SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THE NORTH 89°31'44" WEST ALONG THE SECTION LINE 114.99 FEET TO THE EASTERLY LINE OF GENEVA ROAD; THENCE NORTH 28°25'53" WEST ALONG SAID EAST LINE OF GENEVA ROAD 285.08 FEET; THENCE NORTH 88°33'11" EAST ALONG A FENCE LINE 32.34 FEET; THENCE NORTH 89°29'20" EAST 230.89 FEET; THENCE SOUTH 0°06' WEST 156.57 FEET; THENCE SOUTH 59°00" WEST 13.50 FEET; THENCE SOUTH 0°28'16 WEST 91.00 FEET TO THE POINT OF BEGINNING.

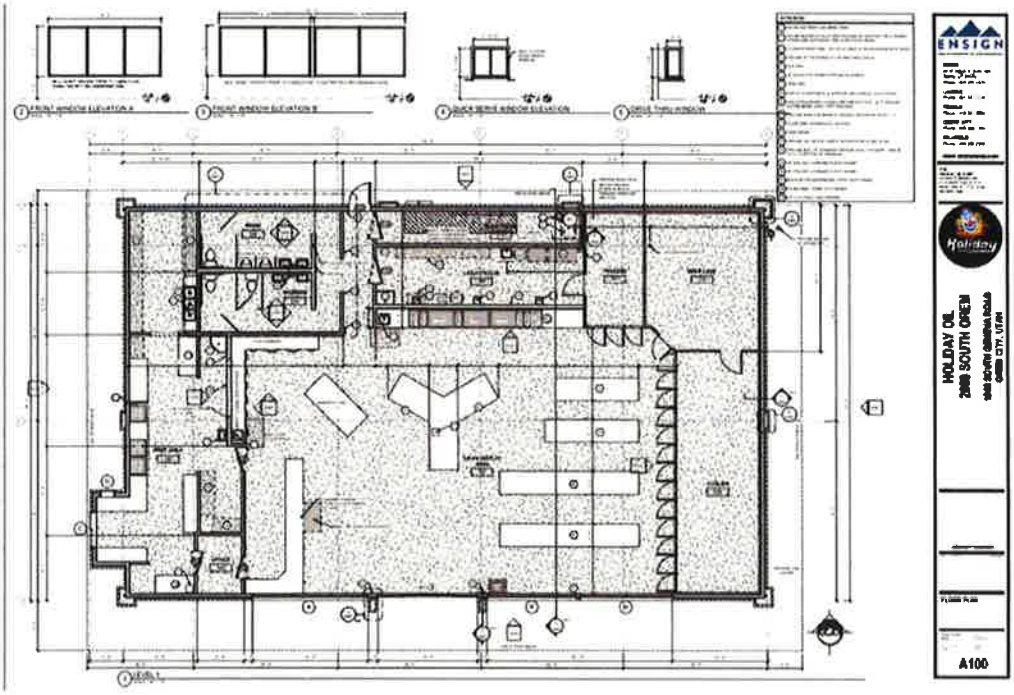
ALSO LESS AND EXCEPTING THEREFROM ANY PORTION LYING NORTH OF THE LINE DESCRIBED IN THAT CERTAIN BOUNDARY FENCE LINE AGREEMENT RECORDED MARCH 22, 2002 AS ENTRY NO. 32715:2002, OF THE OFFICIAL RECORDS.

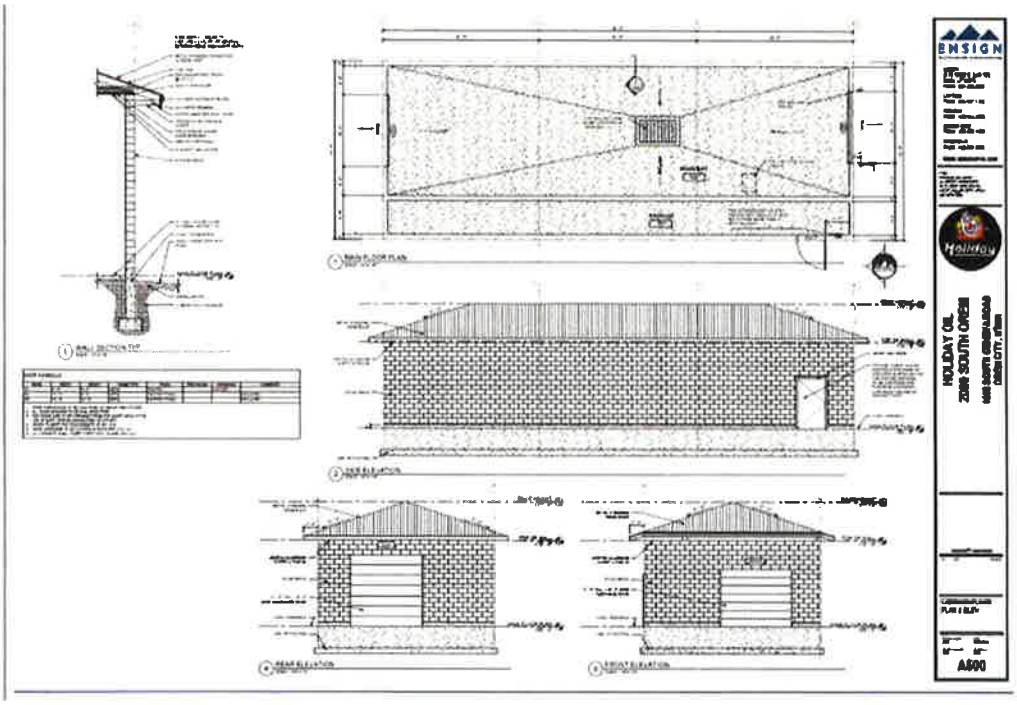
EXHIBIT "C"




ENSIGN
HOLIDAY OIL
2899 SOUTH ORem


ENSIGN
HOLIDAY OIL
2000 SOUTH OREM
A201


ENSIGN
HOLIDAY OIL
2000 SOUTH OREM
A100


ENSIGN
HOLIDAY OIL
2000 SOUTH DIXIE
A500





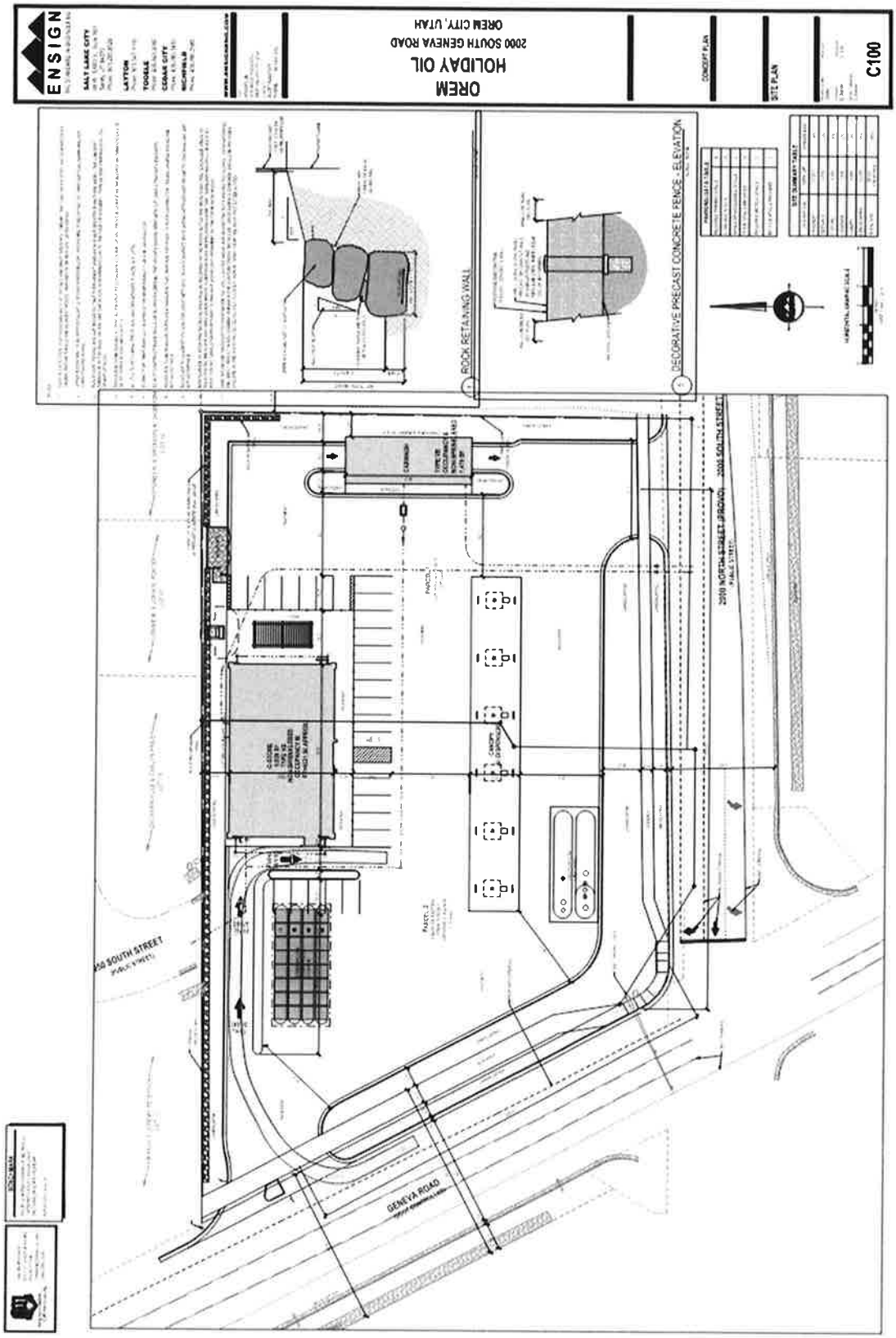

OREM
HOLIDAY OIL
2000 SOUTH GENEVA ROAD
OREM CITY, UTAH
C100
ROCK RETAINING WALL
DECORATIVE PRECAST CONCRETE FENCE - ELEVATION
GENEVA ROAD

EXHIBIT 4

(Orem City Council Agenda – August 1, 2023)

CITY OF OREM
CITY COUNCIL MEETING
56 North State Street, Orem, Utah
August 1, 2023

This meeting may be held electronically
to allow a Councilmember to participate.

2:30 P.M. WORK SESSION - CITY COUNCIL CONFERENCE ROOM

1 CITY COUNCIL TOUR: Waste Management Recycling Program and Recycling Film Presentation (120 min)
Please wear closed-toed shoes and ear protection
Presenter: Blake Leonelli, Waste Management Public Sector Solutions

2 DISCUSSION - Proposed City Code Updates: Section 2-27-4 (Order of Succession for City Manager); Section 2-5-5 (Powers and Duties of City Manager); and Section 2-3-4 through 2-3-7 (Election Code) (15 min)
Presenter: Steve Earl, City Attorney

3 PRESENTATION - Employee Engagement Survey Results (30 min)
Presenter: Ron Gailey, CEO/Founder of OnPointe Insights

4 EVENT - National Night Out with Orem Police Department (60 min)

1. AGENDA REVIEW & PREVIEW OF UPCOMING AGENDA ITEMS

The City Council will review the items on the agenda.

2. CITY COUNCIL REPORTS (BOARDS & COMMISSIONS, NEW BUSINESS, ETC.)

This is an opportunity for members of the City Council to raise issues of information or concern.

2.1 Council Member Dave Spencer

6:00 P.M. REGULAR SESSION - COUNCIL CHAMBERS

3. CALL TO ORDER

4. INVOCATION/INSPIRATIONAL THOUGHT: BY INVITATION

5. PLEDGE OF ALLEGIANCE: BY INVITATION

6. MAYOR'S REPORT/ITEMS REFERRED BY COUNCIL

6.1 UVU Track Honor
Presenter:Chad Foote, UVU Sport Administrator

7. PERSONAL APPEARANCES - 15 MINUTES

8. CONSENT ITEMS

8.1 APPROVAL OF MEETING MINUTES
Minutes for 07.11.2023, 09.27.2022, 10.11.2022 and 11.9.2022

8.2 APPROVAL OF UPDATED CITY COUNCIL SCHEDULE

8.3 RE-APPOINTMENT TO RECREATION ADVISORY BOARD
Skip McWhorter

9. SCHEDULED ITEMS

9.1 PUBLIC HEARING - Amending the development agreement for the property located at 1981 South Geneva Road in the C2 zone.
Presenter: Jason Bench, Assistant Development Services Director

9.2 RESOLUTION - Place Renewal of Care Tax on Ballot
Presenter: Steve Earl, City Attorney

10. COMMUNICATION ITEMS

11. CITY MANAGER INFORMATION ITEMS

12. ADJOURN

THE PUBLIC IS INVITED TO PARTICIPATE IN ALL CITY COUNCIL MEETINGS.
If you need a special accommodation to participate in the City Council Meetings and Study Sessions, please call the City Recorder's Office at least 3 working days prior to the meeting.
(Voice 801-229-7000)

This agenda is also available on the City's webpage at orem.org

EXHIBIT 5

(Orem City Council Meeting Minutes – August 1, 2023)

CITY OF OREM
CITY COUNCIL MEETING
56 North State Street Orem, Utah
August 1, 2023

2:30 P.M WORK SESSION - CITY COUNCIL CONFERENCE ROOM

CONDUCTING	Mayor David A. Young
ELECTED OFFICIALS	David Young, Jeff Lambson, David Spencer, Tom Macdonald, Terry Peterson, LaNae Millett and Debby Lauret
APPOINTED STAFF	Brenn Bybee, City Manager; Ryan Clark, Assistant City Manager/Development Services Director; Steve Earl, City Attorney; Chris Tschirki, Public Works Director; Keri Rugg, Management Services Director; Bryce Merrill, Library and Recreation Director; Brandon Nelson, Finance Director; Jason Bench, Assistant Development Services; Peter Wolfley, Communications Manager, PIO; Jesse Riddle, Director of Legislative Counsel; Carlo Okolowita. IT Division Manager; Amy Peterson, HR Division Manager;Teresa McKitrick, City Recorder

NOTE: The referenced report and presentation documents for each discussion may be viewed at orem.org/meetings under "City Council Presentations"

Waste Management Recycling Program Tour and Recycling Film Presentation: *Presenter: Blake Leonelli, Waste Management Public Sector Solutions*

Those in attendance: LaNae Millett, Debby Lauret, Brandon Nelson, Terry Peterson, David Young, Jeff Lambson, Brenn Bybee, Steve Earl, Pete Wolfley, Ryan Clark, Keri Rugg, Reed Price, Jason Bench, Chris Tschirki, Dave Spencer, Tom Macdonald, Lon Myers and Teresa McKitrick.

Mr. Leonelli led the group on a tour of the Recycling Program. He explained that Waste Management was willing to pay more for recycling because it is beneficial to the landfill. The Recycling plant services Utah, Wyoming, Colorado and Arizona. Mr. Leonelli explained that this plant in Salt Lake is the most state of the art recycling program in the country. Their pick rate is 65 miles per hour. Mr. Leonelli reminded the group that recyclables should never be bagged.

Proposed City Code Updates: Section 2-27-4 (Order of Succession for City Manager); Section 2-5-5 (Powers and Duties of City Manager); and Section 2-3-4 (Election Code) *Presenter: Steve Earl, City Attorney*

Mr. Earl explained that there are areas of the City Code that need updating. Section 2-3-4 of the Orem City code deals with Election Code. Orem City's Code is out of compliance with the State Code. Mr. Earl is proposing that rather than continuing to update our code every time the State Code changes, Orem City Code will just refer to the State Election Code. Ms. Millett would like to consider keeping one item that is different from the state election code and that is any campaign money received 30 days after the election would need to be reported to the City of Orem. She even suggested the possible lobbying of the State Legislature to have that added to State Code. Section 2-3-7 is another section that is in conflict with State Code. This section has to do with vacancy of office for the Mayor or Council Members. Mr. Earl again suggested that Orem Code refer to the State Election Code.

The second code change is Section 2-27-4, Order of Succession for City Managers. Mr. Earl said that the City Code isn't clear for City Manager succession if it is due to resignation or dismissal. He is suggesting that the code be clarified for those types of possibilities.

The third code change is Section 2-5-5, Powers and Duties of the City Manager. The final item in the list of the City Manager duties is that the City Manager has the power to appoint with approval by the majority vote of the full membership of the council an acting municipal manager.

https://www.youtube.com/watch?v=aA9xqHjPvVc&t=0s

Employee Engagement Survey Results: *Presenter: Ron Gailey, CEO/Founder of OnPointe Insights*
https://www.youtube.com/watch?v=aA9xqHjPvVc&t=268s

Mr. Gailey is here to report on an employee engagement survey that was conducted at the request of the City Council. The report started on June 27, 2023 and completed July 18, 2023. The city had 95% of their full time staff participate.

Mr. Gailey's summary is that Orem employees tend to agree that the city is heading in the right direction (80%). Also, 45% of employees feel the city has improved (45%) in the past 1-2 years, which is an excellent sign of positive progress. Compared to other cities, 87% said working for Orem was somewhat or much better, and no one said Orem was worse. Motivation is high, with 46% being very motivated and 34% being somewhat motivated. Few were unmotivated (8%). Also, few employees see themselves leaving in the next year (8%).

A deeper analysis reveals that Orem employees love working for the city. By addressing a few frustrations, their feelings would improve. This survey will help city leaders prioritize wisely.

- We asked employees to prioritize over 30 topics. They then rated their high priority

topics. The following were prioritized highly AND rated somewhat lower (poor or very poor): Exec. leaders that communicate effectively with employees, Different ideas and opinions are heard and respected, Policies are applied fairly to all employees, and Workload you can manage. These attributes were rated as the Top 10 MOST IMPORTANT, and had Poor/Very Poor ratings of more than 20%.

- The following were prioritized highly AND rated Very Good or Good: Executive leaders with integrity, Balance between personal and professional life, The right tools to execute responsibilities, and Positive team environment. For each of these, good ratings were over 60%.
- A few employees indicated low motivation. What differentiates them from others?
    - More unmotivated staff are found in the Library, in Finance, and are employed part-time.
    - Unmotivated staff ranked the importance of attributes differently, prioritizing The right tools, A workload they can manage, Being heard and respected, and Work/life balance higher than motivated staff.
- Employees evaluated several attributes dealing with compensation and benefits. Ratings indicate general satisfaction with benefits and none of them was rated low. Next time this study is done, it would be wise to prioritize them.

A final exploration finds that the City will need to be balanced in their approach and not focus on any single area, such as Engagement & Meaning, Growth & Autonomy or Leadership. A spectrum of attributes is valued by employees

CITY COUNCIL REPORTS (BOARDS & COMMISSIONS, NEW BUSINESS, ETC.)

AGENDA REVIEW & PREVIEW OF UPCOMING AGENDA ITEMS
https://www.youtube.com/watch?v=aA9xqHjPvVc&t=2487s

6:00 P.M. REGULAR SESSION - COUNCIL CHAMBERS

CONDUCTING	Mayor David A. Young
ELECTED OFFICIALS	David Young, Jeff Lambson, David Spencer, Tom Macdonald, Terry Peterson, LaNae Millett and Debby Lauret
APPOINTED STAFF	Brenn Bybee, City Manager; Ryan Clark, Assistant City Manager/Development Services Director; Steve Earl, City Attorney; Keri Rugg, Management Services Director; Chris Tschirki, Public Works Director; Bryce Merrill, Library and

Recreation Director; Josh Adams, Police Chief; Marc Sanderson, Fire Chief; Jesse Riddle, Director of Legislative Counsel; Sam Kelly, City Engineer; Peter Wolfley, Communications Manager, PIO; Teresa McKitrick, City Recorder

CALL TO ORDER
https://www.youtube.com/watch?v=aA9xqHjPvVc&t=3519s

INVOCATION / INSPIRATIONAL THOUGHT – Scott Scribner
PLEDGE OF ALLEGIANCE – Jenny Scribner

MAYOR'S REPORT/ ITEMS REFERRED BY COUNCIL

UVU Track Honor *Presenter: Keri Rugg, Management Services Director and Terry Peterson, City Council Member*
https://www.youtube.com/watch?v=aA9xqHjPvVc&t=3646s

Ms. Rugg honored the UVU track team, UVU track coach and National Champion runner Everlyn Kemboi (not present). She invited Coach Houle to come forward. Ms. Rugg presented him with a plaque.

Mr. Peterson spoke about Coach Houle. He has known him for years, Coach Houle coached four of Mr. Peterson's daughters when he was at Orem High. Mr. Peterson wanted to recognize Coach Houle for his many years of coaching, for being a good person and for blessing the lives of those he coached.

Coach Houle spoke about Everlyn Kemboi who is from Kenya. She has now signed a pro contract. She is the 10K National champion and took 2nd in the 5K race.

PERSONAL APPEARANCES

No personal appearances

CONSENT ITEMS
https://www.youtube.com/watch?v=aA9xqHjPvVc&t=3995s

Approval of Meeting Minutes from the July 11, 2023, September 27, 2022, October 11, 2022 and November 9, 2022

Approval of Updated City Council Schedule

Re-Appointment of Skip McWhorter to the Recreation Advisory Board

Mr. Macdonald moved to approve consent items. Ms. Millett **seconded** the motion. Those voting yes: David Young, David Spencer, Debby Lauret, Terry Peterson, Tom Macdonald, LaNae Millett, and Jeff Lambson. The motion **passed.**

SCHEDULED ITEMS

Public Hearing - Amending the development agreement for the property located at 1981 South Geneva Road in the C2 zone *Presenter: Jason Bench, Assistant Development Services Director*
https://www.youtube.com/watch?v=aA9xqHjPvVc&t=4038s

Mr. Bench explained that the property, located at 2000 South Geneva Road, was rezoned back in 2020 to a C2 zone for the purpose of adding a gas station. The City accepted a development agreement at that time with specific details for the proposed gas station. Mr. Bench presented the layout of the gas station for that development agreement. This included a gas station with two fast food type businesses on each side of the convenience store.

Now Holiday Oil has purchased the property and their intent is to put their branding on the gas station which would be a different floor plan from the original development agreement. Originally they were proposing a car wash, but the car wash was removed from the plans and they moved their trash enclosure closer to Geneva Road and further from the residential neighborhoods after the planning commission did not recommend that the City Council approve the amendments to the development agreement. They would like to add a drive thru to the amended plans. The City Council members asked clarifying questions about the original development agreement as compared to the proposed changes.

Mr. Peterson asked Mr.Earl to explain what options the City Council has for tonight's vote. Mr. Earl explained there are 3 ways the City Council can vote. First they can accept the proposed changes to the development agreement, second, they can reject the proposed changes or ,third, they can accept the changes with some modifications. Mr. Peterson asked if the City Council didn't like the original development agreement, what would be their options. Mr. Earl explained that the land could be rezoned, but reminded the council that development on C2 property is more valuable and expensive than residential development. This could mean a serious loss for the developer.

A discussion was held about the possible need of gas stations in the City of Orem as per the Sales Tax report from the State. Debby explained the use of the report as a tool to capitalize on Sales Tax. Mr. Peterson showed concern about using that report in this decision.

Mr. Neal with Holiday Oil explained that they went through neighborhood meetings and planning commission. They listened to the public and made modifications to accommodate some of the concerns. They plan to dim lights in the evenings and not have the additional tenants to the side, as well as no car wash. Mr. Neal confirmed that the land was purchased at the

higher cost of a C2 zone. He explained that they are at a lower elevation than the homes and that planned trees would cut down on the sound and visibility to neighbors. The City Council asked questions about the drive through, fencing, elevation and lighting.

Public Hearing opened at 6:50 pm

John Porter is a neighbor to this property. He is concerned about putting a commercial business in a residential area. He is also against allowing a drive-thru. He believes this property should never have allowed this area to be zoned for C2, it should be residential or office buildings.

Hunter Kimball lives in this area and does not want a gas station in his neighborhood. He believes a gas station could increase crime, traffic and negative environmental and health effects. He stated he will move if the gas station is allowed.

Bronson lives near the proposed gas station and he is also against the gas station. He is also concerned this is too close to the autistic academy.

Edie Dameron lives near the area and is hoping this zone will be changed back to residential. She is concerned about the 24 hour pumps and the flashy Holiday Oil style. She is worried she would not feel safe in her home. She believes that elevation will make it easier for customers to see into her home.

Linda Brown is against having a service station in the area. She is happy that the car wash is off the plans but she would like to see the gas station also off the plan. She is concerned about the traffic this will bring to the neighborhood, Geneva Road is already busy and has higher speeds. She believes the service station is not needed and a deterrent to the neighborhood.

Casey Backus lives at Peyton's Crossing. He believes this was approved during Covid when many were not building. He does not believe that this improves or helps Orem. He thinks this will decrease home values.

Zac Price lives behind the proposed gas station. He built his home believing that the area would be residential. He is concerned about the safety of his family. He believes a PRD would be the right zone. If this can't be stopped then he would ask that the retaining wall be higher and the road to be finished in the area.

Cynthia Dameron is the mother of a family living in that area. She is concerned that the homes will lose value to their homes. She believes the gas station could find a better location.

Sherry Fong lives in the neighborhood and she feels that she was led to believe this would be residential and she doesn't understand how this got rezoned. She believes that there should be a buffer zone between residential and commercial. She thinks that the residents were not informed about the zone change.

Carly Price is grateful for the opportunity to express her concerns and she believed when she bought her home that this area would stay a residential area. She didn't understand what was planned for that location. Her children often play in their yard which will be in view of this gas station. This causes her concern for her family's safety. She hopes the city council will make the right decision.

Allen Moose felt in his perspective that the rezoning was done in secret. He believes that his house will take a loss and that security is an issue. He thinks the tax revenue benefit is not a big enough reason to rezone this area. He understands that Holiday Oil may take a loss on this project if it is rejected but he believes that homeowners will take a loss if this gas station goes in.

Tanner Nordstrom was involved in the process with the first developer. He was disappointed with the last experience and doesn't agree with their choice to rezone the area. He has the same concerns as those who have spoken before him.

Pamela Moose lives in Peyton Crossing. She is concerned about safety and security with the addition of a convenience store. She is against this going in and if it goes forward she would like to see more accommodations.

Paula Mahady lives in Peyton Crossing. She can't move her home but the Holiday Oil could be built somewhere else. She pleaded with the council to protect the area.

Kris Lichty lives in the 55+ neighborhood in the area. She is concerned about safety and she is worried about the atmosphere of the area changing. She is asking the city council to show empathy to the neighborhood.

Heather Fry is an Orem resident who has been following this process. She believes that facts were misrepresented to these residents. She would like to see this corrected and to right the wrongs.

Matt Dameron lives in North East Orem, he is concerned about the noise and light pollution that will come from this project.

Tiffany Dameron is a resident of Orem. She wants to remind the City Council the city logo of Orem is Family City USA.

Public Hearing closed at 7:34 pm

Mayor Young opened up comments to the City Council. Ms. Lauret asked about accommodations that could be made to make a compromise with the area. Mr. Spencer is concerned about how we make both the residents and the business whole. He also asked to go over the choices the city council could make tonight and how the city council could change the zone. Mr. Earl said if the council wants to rezone then they would need to reject the proposal or continue the issue. The property would not be able to be a PRD zone because that requires an applicant. Mr. Earl continued it would probably need to be a C1 or C3 rezone. Mr. Spencer clarified that it could also be rezone to an R8 zone. Discussions were held about the possibility and process to rezone.

Mr. Peterson reminded the council that the city doesn't own the property. Mr. Earl did clarify that the owners or the city can file an application to rezone. Mr. Macdonald proposes that the council reject the proposal and start the process to change the zone. Mr. Earl stated that the continuance only makes sense if the gas station is going to go forward. Ms. Millet is concerned that there was no buffering between the commercial and residential zones when this was

originally approved. Mr. Peterson cautioned about the rezone and other unwanted business that could be proposed.

Mr. Spencer moved to deny the development agreement for the property located at 1981 South Geneva Road in the C2 zone. Mr. Peterson **seconded** the motion. Those voting yes: David Young, David Spencer, Debby Lauret, Terry Peterson, Tom Macdonald, LaNae Millett, and Jeff Lambson. The motion **passed.**

Resolution - Place renewal of CARE Tax on Ballot *Presenter: Steve Earl, City Attorney*
https://www.youtube.com/watch?v=aA9xqHjPvVc&t=10300s

Mr. Earl explained that it is time to put the CARE Tax on the November 2023 Ballot. This is a renewal of the current CARE tax. This tax is proposed to be 50% recreation and 50% Cultural Arts. The tax is 1/10th of 1%. This means $1 for every $1000. Ms. Lauret spoke of the benefit of this tax because neighboring cities who shop in Orem help pay for this tax. Mr. Peterson is opposed to many of the taxes but he is in support of this tax. Mayor Young explained this is a current tax that is very beneficial to the community and we get to see a benefit from the taxes we pay. Other council members showed support for this tax.

Mr. Lambson moved to approve a resolution of the Orem City Council to place an opinion question on the November 21, 2023, municipal general election ballot as to whether or not the City of Orem should renew a citywide local sales and use tax of 1/10 or 1% to fund city-owned recreational and cultural facilities, the ongoing operating expenses of city-owned recreational facilities, and the ongoing operating expenses of private, non-profit cultural organizations in Orem; and approve the ballot title and proposition. Mr. Spencer **seconded** the motion. Those voting yes: David Young, David Spencer, Debby Lauret, Terry Peterson, Tom Macdonald, LaNae Millett, and Jeff Lambson. The motion **passed.**

CITY MANAGER INFORMATION ITEMS

Mr. Bybee will put an update of things of note in the City Manager Minute tomorrow.

ADJOURN

Mr. Macdonald moved to adjourn the meeting, **seconded** by Mr. Spencer.. Those voting yes: David Young, David Spencer, Debby Lauret, Terry Peterson, Tom Macdonald, LaNae Millett, and Jeff Lambson. The motion **passed.**

PASSED and APPROVED this 22st day of August 2023.

David A. Young, Mayor

ATTEST:

Teresa McKitrick, City Recorder

CITY OF OREM CORPORATE SEAL STATE OF UTAH

COUNCILMEMBER	AYE	NAY	ABSTAIN
Mayor David A. Young	☑	☐	☐
Jeff Lambson	☑	☐	☐
Debby Lauret	☑	☐	☐
Tom Macdonald	☑	☐	☐
LaNae Millett	☑	☐	☐
Terry Peterson	☑	☐	☐
David Spencer	☑	☐	☐

EXHIBIT 6

(Planning Commission Resolution PC-2023-0032)

RESOLUTION NO. PC-2023-0032

A RESOLUTION BY THE OREM CITY PLANNING COMMISSION RECOMMENDING THE CITY COUNCIL AMEND ARTICLE 22-5-3(A) AND THE ZONING MAP OF THE CITY OF OREM BY REZONING THE PROPERTIES LOCATED AT 1981 SOUTH GENEVA ROAD AND 868 WEST 2000 SOUTH FROM THE C2 ZONE TO THE PO (PROFESSIONAL OFFICE) ZONE (APPROXIMATELY 2.16 ACRES).

WHEREAS on August 16, 2023, Development Services filed an application with the City of Orem requesting the City amend Article 22-5-3(A) and the Zoning Map of the City of Orem by rezoning the properties located at 1981 South Geneva Road and 868 West 2000 South from the C2 zone to the PO (Professional Office) zone (approximately 2.16 acres); and

WHEREAS a public hearing considering the subject application was held by the Planning Commission on September 6, 2023; and

WHEREAS the agenda of the Planning Commission hearing at which the subject application was heard was posted at the Orem Public Library, on the Orem City webpage and at the City offices at 56 North State Street; and

WHEREAS one hundred thirty-four (134) notices were mailed to residents within five hundred (500) feet of the property; and

WHEREAS the matter having been submitted and the Planning Commission having fully considered the request as it relates to the health, safety, and general welfare of the City; the orderly development of land in the City; the effect upon the surrounding neighborhood; the compliance of the request with all applicable City ordinances and the Orem General Plan, and the special conditions applicable to the request.

BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF OREM, UTAH, as follows:

1. The Planning Commission finds this request is in the best interest of the City.

2. The Planning Commission hereby recommends the City Council amend Article 22-5-3(A) and the Zoning Map of the City of Orem by rezoning the properties located at 1981 South Geneva Road and 868 West 2000 South from the C2 zone to the PO (Professional Office) zone (approximately 2.16 acres) as shown in Exhibit "A" which is attached hereto and incorporated herein by reference.

3. This resolution shall take effect immediately upon passage.

4. If any part of this resolution shall be declared invalid, such decision shall not affect the validity of the remainder of this resolution.

5. All other resolutions or policies in conflict herewith, either in whole or part, are hereby repealed.

PASSED and APPROVED this 6th day of September 2023.

CITY OF OREM, by
Madeline Komen, Chairman

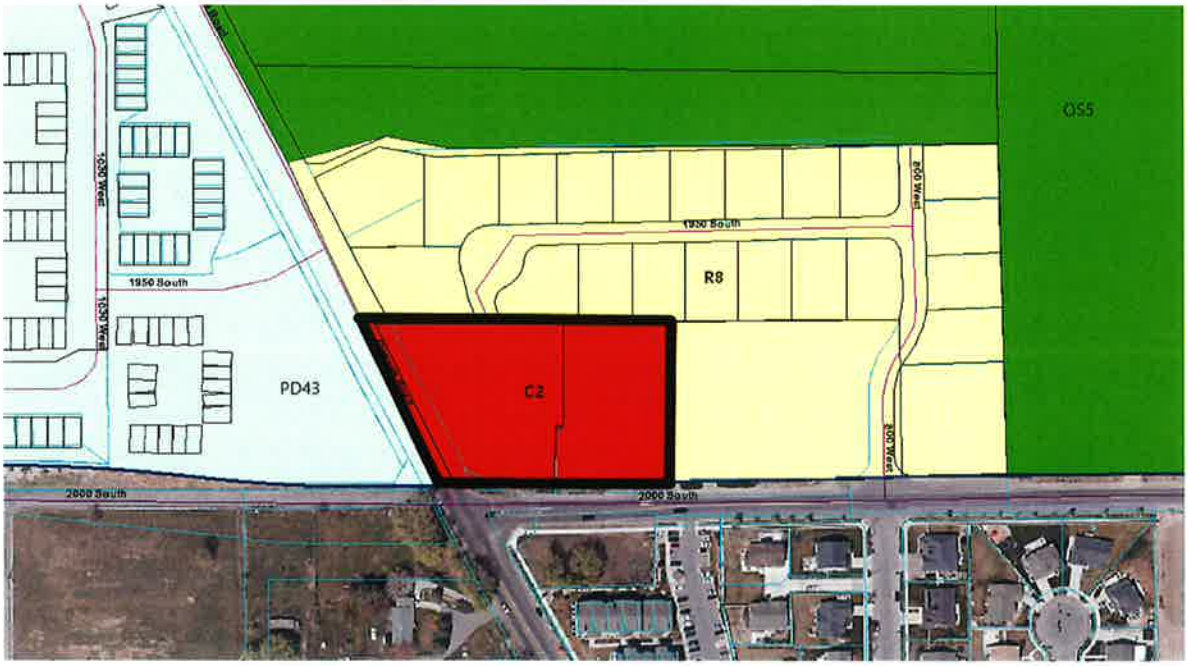
ATTEST:

for Ryan L. Clark, Planning Commission Secretary

COMMISSION MEMBERS VOTING 'AYE'	COMMISSION MEMBERS VOTING 'NAY'
Mike Carpenter	
Gerald Crismon	
James Hawkes	
Helena Kleinlein	
Madeline Komen	
Murray Low	
Haysam Sakar	

Exhibit A

Existing Zoning



Proposed PO Zoning

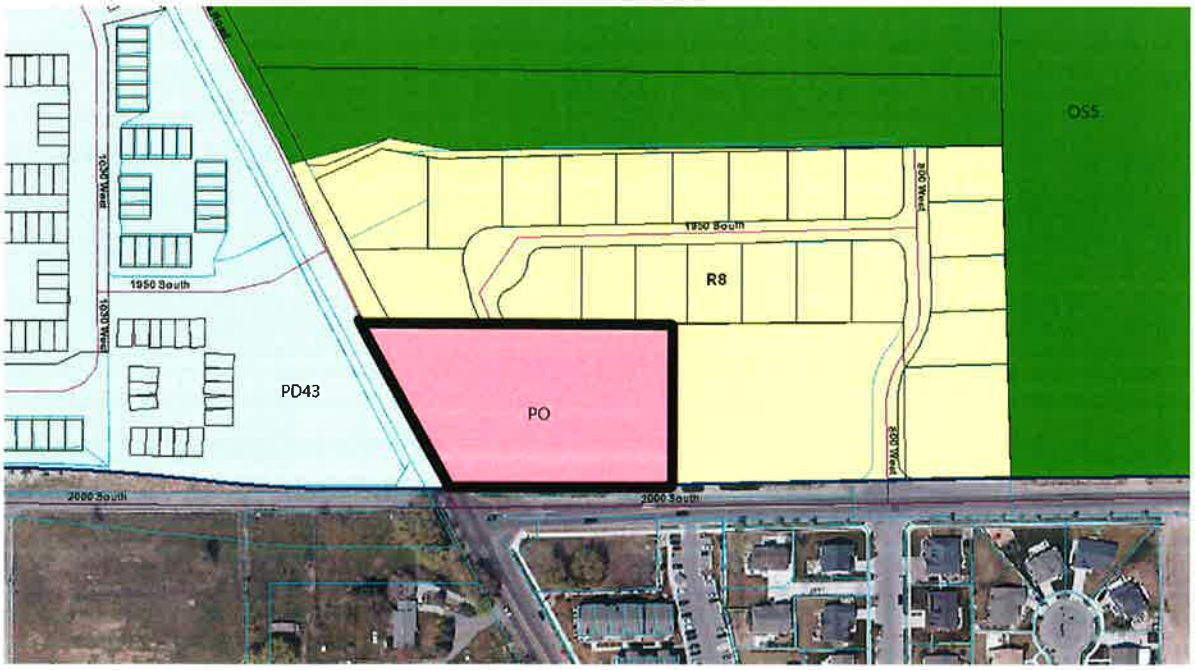


EXHIBIT 7

(Orem City Letter August 28, 2023)

August, 28, 2023

RE: Holiday Oil – 1981 South Geneva Road

Dear Neighbors:

We want to provide you with an update on a new development with the proposed Holiday Oil project at 1981 Geneva Road.

As you know, the Orem City Council strongly opposed the project and took aggressive action. This included denying a request by Holiday Oil to amend the existing development agreement. The Council also proactively started the rezoning process. The Council was working as quickly as possible to complete this rezone to prevent the project.

Unfortunately, Holiday Oil submitted a complete application on August 21, 2023, for a site plan that is consistent with the existing zoning regulations and, as a result, Orem City had to accept the application and will have no other option than to approve it if the City process is followed.

The proposed rezone that would have prevented this project was scheduled for consideration by the Planning Commission at its next regularly scheduled meeting on September 6th, more than 2 weeks after Holiday Oil submitted their application. The application for the rezone will proceed to the Planning Commision on September 6th at 4:30 p.m for consideration and will be considered pending in the event Holiday Oil does not follow through and obtain site plan approval.

Please know that we are committed to fighting for the interests of our neighborhoods and are sorely disappointed this project could not be prevented. As a Council, we are reviewing other similar areas for potential issues to see what action can be taken to stop this from happening in the future.

Sincerely,

City of Orem Mayor and City Council

EXHIBIT 8

(Orem City Letter to Holiday Oil – September 20, 2023)

INCOMPLETE APPLICATION DETERMINATION

To: Holiday Oil
3115 West 2100 South
West Valley City, Utah 84119

Re: Site Plan Application for 1981 South Geneva Road, Orem, Utah

On August 21, 2023, Brent Neel submitted a site plan application for the construction of a gas station and convenience store on the northeast corner of Geneva Road and 2000 South in Orem, Utah. City of Orem staff reviewed the site plan application and determined that the site plan application is ***incomplete***. Orem City Code 22-14-20(E) provides that "[a]nyone requesting approval of a site plan shall first submit to the Department of Development Services'' all required documentation. Among the required documentation is a traffic study. Orem City Code 22-14-20(E)(8)(a) provides:

> *a. The traffic study shall include all of the following:*
> *(1) An analysis of the off-site traffic impacts resulting from the development of the site and a description of the mitigation measures necessary to reduce the identified impacts.*
> *(2) An analysis of internal traffic circulation patterns and their effect on ingress and egress from the site for emergency vehicles and the public.*

While the submitted site plan application included a Traffic Impact Study, that study does not meet the required standards under Orem City Code.

I. Submitted Traffic Impact Study Does Not Provide Reliable Analysis of the Current Off-Site Traffic Impacts Resulting From the Development of the Site.

The submitted Traffic Impact Study (TIS) was prepared in April 2020. The data collection for the "existing traffic counts" were performed on March 31, 2020. (p. 8 of TIS). This collection date presents various issues for the acceptance of the TIS to properly analyze the current "off-site traffic impacts" which would result from the development of the site in 2023-2024. First, the submitted TIS was prepared almost 4 years prior to the submission for the site plan. At the time the TIS was prepared, the intersection of 2000 South and Geneva Road did not have a traffic control signal. (p. 1 of TIS). Since March 2020, the area of 2000 South and Geneva Road has continued to develop. A TIS from almost 4 years ago, does not provide the land use authority with sufficient information to determine "what mitigation measures" are necessary to reduce identified impacts. Second, at the time the data was collected for the TIS (March 31, 2020),

"current traffic conditions throughout the country" were disrupted "due to the COVID-19 pandemic" and closures of schools, businesses, and remote work. (p. 8 of TIS). While the TIS attempted to make adjustments "to create existing traffic volumes" in order to make them "reflective of conditions that would occur if this disruption did not occur", use of multipliers "did not yield volumes that would be expected for these types of developments". As such, A-Trans attempted to use trip generation (per ITE) and distribution analysis to provide traffic values, which "were used as the existing traffic". (p. 8 of TIS). As A-Trans attempted to provide modeling data, it neglected to take into account various "off-site" traffic impacts in the TIS including (but not limited to): the Lakeview Elementary School (located at 2899 W. 1390 North, Provo), the Provo High School (located at 1199 Lakeshore Dr., Provo, UT), the construction of the Lakeview Parkway, and the planned connection of the Lakeview Parkway with 2000 South.

Further, the TIS fails to provide correct information pertaining to the Safety Index for 2000 South and Geneva Road (p. 25 of TIS). The site application is for the construction of a gas station and convenience store on the corner of 2000 South and Geneva Road. Rather, than providing a safety analysis for that corner, the TIS provides:

> *This segment of **State Street** has a Safety Index of 4 out of 10 with a crash rate of 40% of the average and a severe crash rate of 40% of the average.*

This is the sole discussion regarding the safety of the traffic relating to the site plan application, yet it provides no relevant information regarding the safety of the roadway where the development will occur. As such, it fails to provide the City with the ability to review any analysis of the current off-site traffic impacts of the proposed development.

The submission of an outdated TIS, which does not provide actual, relevant, and current traffic data, fails to meet the required standard in Orem City Code 22-14-20(E)(8)(a). As such, the application is incomplete.

II. Submitted Traffic Impact Study Fails to Provide a Description of Mitigation Measures Necessary to Reduce the Identified Impacts.

The 2020 TIS fails to provide the City with a description of mitigation measures necessary to reduce the identified impacts. As outlined above, the TIS fails to provide an analysis of the current off-site traffic impact. Given that deficiency, the current mitigation measures necessary to reduce impacts are unknown.

Moreover, the 2020 TIS identifies that both proposed access points to the site do not meet required spacing regulations. First, the TIS identifies that UDOT Administrative Rule R930-6 requires spacing of an access at 350 feet. The proposed access point is approximately 160 feet north of the UDOT traffic signal-controlled intersection. At the time the TIS was prepared, no

signal existed, and a request for a variance from UDOT may have included a ¾ access point. However, at this time, the access on Geneva Road is now "within the functional area of the intersection" and will likely result in a right-in/right-out restriction, if the variance is granted. Applicant provided no information regarding the status of the needed variance, as part of the application packet. As such, cannot make any decision regarding what mitigation measures are necessary to reduce the identified impact of having an access point in the functional area of an intersection.

Second, the 2020 TIS also identifies that the 2000 South access point also fails to meet the required access spacing. The TIS identifies that the 2000 South access violates the Orem City Access Management Standards. However, the TIS misidentifies the roadway authority for 2000 South. 2000 South is controlled by Provo City. As such, the TIS discussion about spacing and misalignment, and recommendations are not relevant. Where the TIS misidentifies the appropriate standards, the City cannot formulate any decisions on necessary mitigation measures to reduce any potential impacts of the development.

III. Submitted Traffic Impact Study Fails to Include Any Discussion of Internal Traffic Circulation Patterns and Their Effect on Ingress and Egress from the Site for Emergency Vehicles.

The submitted TIS wholly fails to include any discussion regarding the internal traffic circulation patterns, let alone their effect on ingress and egress from the site for emergency vehicles. Given this deficiency, the City is unable to accept the submitted TIS.

CONCLUSION

Based on the deficiencies of the submitted TIS, the City of Orem determines that the Site Plan Application for the Holiday Oil, at 1981 South and Geneva Road, is *incomplete*. Therefore your Site Plan Application is not vested. In order for the Site Plan Application to be complete, it must have a Traffic Study which complies with the Orem City Code requirements. However, the applicant should be aware that there is pending legislation which may impact the City's ability to approve any future Site Plan Application.

Pursuant to Utah law and the City of Orem ordinances, the applicant may appeal this decision. Any appeal must conform with the requirements found in Orem City Code 2-16-9. Any questions regarding this decision should be directed to the City of Orem Attorney's office.

Respectfully,

Department of Development Services

EXHIBIT 9

(Holiday Oil Appeal)

OREM

DRC Application
Appeal

Applicant Information:		
Name: Waystaff Investments LLC (Scott Waystaff)	Phone: 801-631-3434	
Address: 3115 W. 2100 S.	City: West Valley City	
Email: scott@holidayoil.com	State: UT	Zip: 84119

Project Information:	
Project Name: Holiday Oil	
Project Address: 1981 S. Geneva Rd. Orem UT 84058	

Fees:		
All Appeals	☐ Neighborhood Notice Fee 132.86	TBD
Appeal to Board of Adjustment	X Appeal to Board of Adjustment Fee	~~$975~~
Appeal to Planning Commission	☐ Appeal to Planning Commission Fee	$1,232
Appeal to City Council	☐ Appeal to City Council Fee	$1,324
	Total: $ 1,107.86 ~~$975~~	

Deadline:

Except in the case of a holiday, the deadline for DRC Applications is **Monday at 12pm**. Please call Development Services to determine the deadline in the event of a holiday.

Contact Person:		
Contact Person: Scott Waystaff	Phone: 801-631-3434	Email: scott@holidayoil.com

Office Use Only:		
Project ID Number: 14304	Date Paid: 9/27/23	Received By: MW

Receipt #. 2024109827

Orem City DRC Packet
Appeal

Orem City Code, Article 22-1-8. Appeals.

A. Any person may appeal a decision applying a land use ordinance as follows:

1. An interpretation or application of a land use ordinance made by members of City staff may be appealed to the Board of Adjustment. A decision of the Board of Adjustment regarding the interpretation or application of a land use ordinance may be appealed to the City Council. However, an appeal to the City Council shall not be required for an adversely affected party to exhaust the party's administrative remedies.
2. A final decision of the Planning Commission may be appealed to the City Council.
3. A decision of the City Council may only be appealed to the District Court.

B. An application for **appeal to the City Council must be filed in the office of Development Services within thirty (30) days** after the date of the decision being appealed. Appeals to the Board of Adjustment shall be made pursuant to the procedure outlined in CHAPTER 2 of the City Code. An adversely affected party shall present to the appeal authority every theory of relief that it can raise in District Court.

C. The owner of private property whose property is subject to a physical taking or exaction by the City as part of a land use application may appeal the City's decision within 30 days after the decision is made. A decision regarding a proposed taking or exaction shall be deemed final and ripe for appeal when approved by the Development Review Committee (DRC). The Planning Commission shall hear and approve or reject the appeal within 14 days after it is submitted. If the Planning Commission fails to hear and decide the appeal within 14 days, the decision of the DRC is presumed to be approved. A property owner's failure to appeal the action of the City does not constitute a failure to exhaust available administrative remedies. The Planning Commission shall approve the decision of the DRC if it finds that:

1. An essential link exists between a legitimate governmental interest and the exaction; and
2. The exaction is roughly proportionate, both in nature and extent, to the impact of the proposed development.

OFFICE OF THE MAYOR & CITY COUNCIL
56 N. State Street | Orem, UT 84057

DEPARTMENT REVIEW

SEWER____/DATE_____
WATER____/DATE_____
STORM DRAIN ____/DATE_____
TRAFFIC _____/DATE_____
STREET LIGHTS____/DATE_____
FIRE MARSHAL____/DATE_____
STREETS ____/DATE_____

August, 28, 2023

RE: Holiday Oil – 1981 South Geneva Road

Dear Neighbors:

We want to provide you with an update on a new development with the proposed Holiday Oil project at 1981 Geneva Road.

As you know, the Orem City Council strongly opposed the project and took aggressive action. This included denying a request by Holiday Oil to amend the existing development agreement. The Council also proactively started the rezoning process. The Council was working as quickly as possible to complete this rezone to prevent the project.

Unfortunately, Holiday Oil submitted a complete application on August 21, 2023, for a site plan that is consistent with the existing zoning regulations and, as a result, Orem City had to accept the application and will have no other option than to approve it if the City process is followed.

The proposed rezone that would have prevented this project was scheduled for consideration by the Planning Commission at its next regularly scheduled meeting on September 6th, more than 2 weeks after Holiday Oil submitted their application. The application for the rezone will proceed to the Planning Commision on September 6th at 4:30 p.m for consideration and will be considered pending in the event Holiday Oil does not follow through and obtain site plan approval.

Please know that we are committed to fighting for the interests of our neighborhoods and are sorely disappointed this project could not be prevented. As a Council, we are reviewing other similar areas for potential issues to see what action can be taken to stop this from happening in the future.

Sincerely,

City of Orem Mayor and City Council

Received:
Date: 09/28/2023
By: MW

OREM

DEVELOPMENT SERVICES
56 N. State Street | Orem, UT 84057

INCOMPLETE APPLICATION DETERMINATION

To: Holiday Oil
3115 West 2100 South
West Valley City, Utah 84119

Re: Site Plan Application for 1981 South Geneva Road, Orem, Utah

On August 21, 2023, Brent Neel submitted a site plan application for the construction of a gas station and convenience store on the northeast corner of Geneva Road and 2000 South in Orem, Utah. City of Orem staff reviewed the site plan application and determined that the site plan application is *incomplete*. Orem City Code 22-14-20(E) provides that "[a]nyone requesting approval of a site plan shall first submit to the Department of Development Services" all required documentation. Among the required documentation is a traffic study. Orem City Code 22-14-20(E)(8)(a) provides:

> *a. The traffic study shall include all of the following:*
> *(1) An analysis of the off-site traffic impacts resulting from the development of the site and a description of the mitigation measures necessary to reduce the identified impacts.*
> *(2) An analysis of internal traffic circulation patterns and their effect on ingress and egress from the site for emergency vehicles and the public.*

While the submitted site plan application included a Traffic Impact Study, that study does not meet the required standards under Orem City Code.

I. Submitted Traffic Impact Study Does Not Provide Reliable Analysis of the Current Off-Site Traffic Impacts Resulting From the Development of the Site.

The submitted Traffic Impact Study (TIS) was prepared in April 2020. The data collection for the "existing traffic counts" were performed on March 31, 2020. (p. 8 of TIS). This collection date presents various issues for the acceptance of the TIS to properly analyze the current "off-site traffic impacts" which would result from the development of the site in 2023-2024. First, the submitted TIS was prepared almost 4 years prior to the submission for the site plan. At the time the TIS was prepared, the intersection of 2000 South and Geneva Road did not have a traffic control signal. (p. 1 of TIS). Since March 2020, the area of 2000 South and Geneva Road has continued to develop. A TIS from almost 4 years ago, does not provide the land use authority with sufficient information to determine "what mitigation measures" are necessary to reduce identified impacts. Second, at the time the data was collected for the TIS (March 31, 2020),

"current traffic conditions throughout the country" were disrupted "due to the COVID-19 pandemic" and closures of schools, businesses, and remote work. (p. 8 of TIS). While the TIS attempted to make adjustments "to create existing traffic volumes" in order to make them "reflective of conditions that would occur if this disruption did not occur", use of multipliers "did not yield volumes that would be expected for these types of developments". As such, A-Trans attempted to use trip generation (per ITE) and distribution analysis to provide traffic values, which "were used as the existing traffic". (p. 8 of TIS). As A-Trans attempted to provide modeling data, it neglected to take into account various "off-site" traffic impacts in the TIS including (but not limited to): the Lakeview Elementary School (located at 2899 W. 1390 North, Provo), the Provo High School (located at 1199 Lakeshore Dr., Provo, UT), the construction of the Lakeview Parkway, and the planned connection of the Lakeview Parkway with 2000 South.

Further, the TIS fails to provide correct information pertaining to the Safety Index for 2000 South and Geneva Road (p. 25 of TIS). The site application is for the construction of a gas station and convenience store on the corner of 2000 South and Geneva Road. Rather, than providing a safety analysis for that corner, the TIS provides:

> *This segment of **State Street** has a Safety Index of 4 out of 10 with a crash rate of 40% of the average and a severe crash rate of 40% of the average.*

This is the sole discussion regarding the safety of the traffic relating to the site plan application, yet it provides no relevant information regarding the safety of the roadway where the development will occur. As such, it fails to provide the City with the ability to review any analysis of the current off-site traffic impacts of the proposed development.

The submission of an outdated TIS, which does not provide actual, relevant, and current traffic data, fails to meet the required standard in Orem City Code 22-14-20(E)(8)(a). As such, the application is incomplete.

II. Submitted Traffic Impact Study Fails to Provide a Description of Mitigation Measures Necessary to Reduce the Identified Impacts.

The 2020 TIS fails to provide the City with a description of mitigation measures necessary to reduce the identified impacts. As outlined above, the TIS fails to provide an analysis of the current off-site traffic impact. Given that deficiency, the current mitigation measures necessary to reduce impacts are unknown.

Moreover, the 2020 TIS identifies that both proposed access points to the site do not meet required spacing regulations. First, the TIS identifies that UDOT Administrative Rule R930-6 requires spacing of an access at 350 feet. The proposed access point is approximately 160 feet north of the UDOT traffic signal-controlled intersection. At the time the TIS was prepared, no

signal existed, and a request for a variance from UDOT may have included a ¾ access point. However, at this time, the access on Geneva Road is now "within the functional area of the intersection" and will likely result in a right-in/right-out restriction, if the variance is granted. Applicant provided no information regarding the status of the needed variance, as part of the application packet. As such, cannot make any decision regarding what mitigation measures are necessary to reduce the identified impact of having an access point in the functional area of an intersection.

Second, the 2020 TIS also identifies that the 2000 South access point also fails to meet the required access spacing. The TIS identifies that the 2000 South access violates the Orem City Access Management Standards. However, the TIS misidentifies the roadway authority for 2000 South. 2000 South is controlled by Provo City. As such, the TIS discussion about spacing and misalignment, and recommendations are not relevant. Where the TIS misidentifies the appropriate standards, the City cannot formulate any decisions on necessary mitigation measures to reduce any potential impacts of the development.

III. Submitted Traffic Impact Study Fails to Include Any Discussion of Internal Traffic Circulation Patterns and Their Effect on Ingress and Egress from the Site for Emergency Vehicles.

The submitted TIS wholly fails to include any discussion regarding the internal traffic circulation patterns, let alone their effect on ingress and egress from the site for emergency vehicles. Given this deficiency, the City is unable to accept the submitted TIS.

CONCLUSION

Based on the deficiencies of the submitted TIS, the City of Orem determines that the Site Plan Application for the Holiday Oil, at 1981 South and Geneva Road, is *incomplete*. Therefore your Site Plan Application is not vested. In order for the Site Plan Application to be complete, it must have a Traffic Study which complies with the Orem City Code requirements. However, the applicant should be aware that there is pending legislation which may impact the City's ability to approve any future Site Plan Application.

Pursuant to Utah law and the City of Orem ordinances, the applicant may appeal this decision. Any appeal must conform with the requirements found in Orem City Code 2-16-9. Any questions regarding this decision should be directed to the City of Orem Attorney's office.

Respectfully,

Department of Development Services

25

A-2021-173

DEVELOPMENT AGREEMENT

This Development Agreement is executed in duplicate this 8 day of Dec 2020, by and between the City of Orem, a municipal corporation and political subdivision of the State of Utah, with its principal offices located at 56 North State Street, Orem, Utah 84057 (hereinafter referred to as the "City"); and the following additional individuals and entities:
1. Lane Taylor and Cynthia Butler, Trustees of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007, with an address of 1981 South Geneva Road, Orem, Utah (hereinafter referred to as "Taylor");
2. Donald Kent Roberts, an individual with an address of 868 West 2000 South, Orem, Utah (hereinafter referred to as "Roberts"); and
3. Axley-Way Investments, LLC, a Utah limited liability company with its principal address of 1909 West State Road #250 Pleasant Grove, UT 84062 (hereinafter referred to as "Developer").

RECITALS

WHEREAS Lane Taylor and Cynthia Butler, Trustees of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007, is the owner of a parcel of property consisting of approximately 1.24 acres located at approximately 1981 South Geneva Road, Orem, Utah which is identified on the records of the Utah County Recorder as Tax ID # 19:036:0116 and which is more particularly described in Exhibit "A" (hereinafter referred to as the "Taylor Property"); and

WHEREAS Donald Kent Roberts is the owner of a parcel of property consisting of approximately 0.96 acres located at approximately 868 West 2000 South, Orem, Utah which is identified on the records of the Utah County Recorder as Tax ID # 19:036:0053 and which is more particularly described in Exhibit "B" (hereinafter referred to as the "Roberts Property"); and

WHEREAS the Taylor Property and the Roberts Property are sometimes referred to hereinafter as the "Property"; and

WHEREAS Developer has a contract to purchase the Taylor Property and the Roberts Property; and

WHEREAS the Property is currently zoned OS5; and

WHEREAS Developer has filed an application with the City to rezone the Property from OS5 to the C2 zone in order to allow the development of a gas station on the Property as shown in the concept plan attached hereto as Exhibit "C" (the "Project"); and

WHEREAS in order to mitigate the potential negative impacts of the Project on neighboring property owners and to ensure that the development on the Property is constructed in conformance with Developer's representations, Developer, Taylor and Roberts are willing to enter into this Development Agreement; and

ENT 125251:2021 PG 1 of 25
ANDREA ALLEN
UTAH COUNTY RECORDER
2021 Jul 15 10:45 am FEE 0.00 BY JR
RECORDED FOR OREM CITY CORPORATION

WHEREAS the City, acting pursuant to its authority under Utah Code Section 10-9-101, *et. seq.*, and in furtherance of its land use policies, goals, objectives, ordinances, resolutions, and regulations, has elected to approve this Agreement.

COVENANTS

NOW, THEREFORE, in consideration of the promises and conditions set forth herein, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the City and Developer hereby agree as follows:

1. **Development in Conformance with Concept Plan**. The parties acknowledge and agree that the concept plan, drawings and renderings that Developer presented to the City Council were a significant factor in the City Council's favorable consideration of Developer's request to rezone the Property to C2. The Property shall be developed in substantial conformance with the concept plan, drawings and renderings attached hereto as Exhibit "C" including, but not limited to conformance with building location, building design, layout, lighting, landscaping, elevations and building finish materials. Exhibit "C" is attached hereto and by reference is made a part hereof. However, notwithstanding anything herein to the contrary, only such signage as is allowed by City ordinances shall be allowed on the Property and the signage shown in the concept plan and drawings shall not be allowed unless it is otherwise permitted by City ordinances.

2. **Dimmed Lighting**. In order to minimize the impact of lighting on the adjoining residential properties, the lighting for the development on the Property shall be dimmed between the hours of 12:00 a.m.(midnight) and 5:00 a.m. so that only minimal security lighting is illuminated during these hours. All other lighting besides security lighting shall be dimmed to the point of zero illumination during the above hours. The impact of lighting on the Property on adjoining residential properties shall be minimized to the greatest extent possible (except for lighting essential for security). The nighttime renderings of the Project included in Exhibit "C" illustrate the nature and type of lighting that may be employed during the hours of 12:00 a.m. to 5:00 a.m.

3. **Hours of Operation**. Because of the proximity of the Property to residential uses, the hours of operation for all commercial development on the Property shall be limited to 5:00 a.m. to 12:00 a.m.(midnight). No business or other commercial activity shall take place on the Property between 12:00 a.m. to 5:00 a.m except for the use and operation of the outside fuel pumps for which there is no restriction on hours of operation.

4. **Restriction on Fuel Pumps**. In order to limit the traffic to and from the Property (and therefore the impact on surrounding properties and streets), no more than eight (8) fuel pumps (16 fueling stations) may be located on the Property. In addition, any diesel fueling stations on the Property shall only be made available to small trucks and passenger vehicles. Diesel fueling shall not be made available to semi-trucks or other vehicles of a similar size.

5. **Easements**. Developer, Taylor and Roberts shall convey to the City an easement for the construction, installation, operation, maintenance, repair and upgrade of water, sewer and storm sewer pipes and appurtenant facilities over, under, across and through a portion of the Property in the locations shown in Exhibit "D" which is attached hereto and by reference is made a part hereof.

6. **Agreement Considered Mitigation of Impact**. In consideration of the covenants of Developer, Taylor and Roberts set forth in this Agreement, the City staff shall make a recommendation to the Orem City Council to consider the terms of this Development Agreement as sufficient mitigation of the potential adverse impacts resulting from the request to change the zoning designation of the Property from the OS5 zone to the C2 zone.

7. **No Guarantee of Rezone**. The City makes no representation that the request of Developer to have the Property rezoned will be approved by the Orem City Council. Therefore, this Agreement shall not be binding upon Developer unless the request for a rezone of the Property to the C2 zone is approved by the Orem City Council.

8. **No Limitation on Exercise of Police Power**. Nothing in this Agreement shall limit the future exercise of the police power by the City in enacting zoning, subdivision, development, transportation, environmental, open space, and related land use plans, policies, ordinances and regulations after the date of this Agreement.

9. **Compliance With All Applicable Laws**. Nothing in this Agreement shall be deemed to relieve any person or entity who develops the Property from the obligation to comply with all applicable requirements of the City necessary for approval and recordation of subdivision plats and a site plan (if applicable), including the payment of fees and compliance with all other applicable ordinances, resolutions, including the Orem City Zoning and Subdivision Ordinances and design and construction standards.

10. **Agreement to be Recorded**. Upon the approval of the rezone of the Property to the C2 zone by the Orem City Council, this Agreement may be recorded against the Property and shall be deemed to run with the land and shall be binding on all successors and assigns of Taylor, Roberts and Developer in the ownership or development of any portion of the Property.

11. **Indemnification**. Developer, and Taylor and Roberts, if Taylor or Roberts develop the Property, agree to indemnify and hold the City harmless from and against any demand, claim, action, damages or loss of any type arising or resulting from the development of the Property except such demands, claims, actions, damages, or losses that are caused by the City's (or its employees') own negligence or willful misconduct.

12. **Lawful Agreement**. The parties represent that each of them has lawfully entered into this Agreement, having complied with all relevant statutes, ordinances, resolutions, bylaws, and other legal requirements applicable to their operation. The parties further represent that each of them

has authority to enter into this Agreement and that the individuals signing this Agreement on behalf of each party have authority to bind the party represented by the signing individual.

13. **Applicable Law**. This Agreement shall be interpreted pursuant to the laws of the State of Utah.

14. **Time of Essence**. Time shall be of the essence of this Agreement.

15. **Interpretation**. The invalidity of any portion of this Agreement shall not prevent the remainder from being carried into effect. Whenever the context of any provision shall require it, the singular number shall be held to include the plural number, and vice versa, and the use of any gender shall include the other gender. Should any provision of this Agreement require judicial interpretation, the Court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against one party, by reason of the rule of construction that a document is to be construed more strictly against the person who himself or through his agents prepared the same, it being acknowledged that both parties have participated in the preparation hereof.

16. **Modifications**. No oral modifications or amendments to this Agreement shall be effective, but this Agreement may be modified or amended by written agreement.

17. **Assignment**. Neither this Agreement nor any of the provisions, terms or conditions hereof can be assigned to any other party, individual or entity without assigning the rights as well as the responsibilities under this Agreement.

18. **Relationship of Parties**. This Agreement does not create any joint venture, partnership, undertaking or business arrangement between the parties hereto, nor any rights or benefits to a third party.

19. **Incorporation of Recitals**. The Recitals to this Agreement are incorporated by reference into the Covenants section of this Agreement as if fully set forth herein.

20. **Electronic Transaction and Signature**. Each party agrees that this transaction may be conducted by electronic means. Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol, or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such a record, including facsimile or email electronic signatures.

Balance of page left intentionally blank.

SIGNED and ENTERED INTO this 8 day of December, 2020.

City of Orem, by:

James P. Davidson, Orem City Manager

ATTEST:
JoD' Ann Bates, City Recorder

Lane Taylor, Trustee of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007

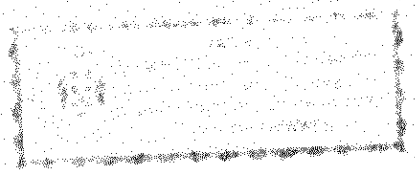
Cynthia Butler, Trustee of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this 8 day of December, 2020, by Lane Taylor and Cynthia Butler, as Trustees of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007.

NOTARY PUBLIC

TAYLOR HAMMER
Notary Public - State of Utah
Comm. No. 701449
My Commission Expires on
Sep 4, 2022



Donald Kent Roberts

Donald Kent Roberts

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this 8th day of December 2020, by Donald Kent Roberts.

NOTARY PUBLIC

NOTARY PUBLIC
CONSTANZA CUELLO
COMM. # 707289
MY COMMISSION EXPIRES
JULY 18, 2023
STATE OF UTAH

Axley-Way Investments, LLC
By:

See Next Page

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this _____ day of _____, 2020, by _____ as the _____ of Axley-Way Investments, LLC, who acknowledged that he/she signed this Agreement on behalf of Axley-Way Investments, LLC

NOTARY PUBLIC

Donald Kent Roberts

_____

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this _____ day of _____, 2020, by Donald Kent Roberts.

_____
NOTARY PUBLIC

Axley-Way Investments, LLC
By:

_____

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this 8th day of December, 2020, by Avrim Way as the Manager of Axley-Way Investments, LLC, who acknowledged that he/she signed this Agreement on behalf of Axley-Way Investments, LLC

_____
NOTARY PUBLIC

KIRA NICOL BARNEY
NOTARY PUBLIC - STATE OF UTAH
COMMISSION# 706244
COMM. EXP. 05-10-2023

Commencing West 7.68 chains from the Southeast corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian; thence West 2.14 chains; thence North 27°10' West 4.65 chains; thence North 89°53' East 4.26 chains; thence South 15.04 feet; thence North 89°29'20" East 12.72 feet; thence South 00°06' West 156.57 feet; thence South 59° West 14.28 feet; thence South 00°28'16" West 94.77 feet to beginning.

LESS AND EXCEPTING that portion conveyed by Boundary Fence Line Agreement recorded March 22, 2002 as Entry No. 32714:2002.

ALSO LESS AND EXCEPTING THE FOLLOWING:
A parcel of land in fee, being part of an entire tract situate in the Southeast Quarter of the Southeast Quarter of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian, in Utah County, Utah, for the construction of a signalized intersection at State Route 114 & 2000 North Street, Provo City, known at Project No. S-0114(33)4. The boundaries of said parcel of land are described as follows:

Beginning at a point in the Southerly boundary line of said entire tract and the existing Northerly right of way line of 2000 North Street, Provo City, at a point being 68.28 feet perpendicularly distant Easterly from the control line of said project at approximate Engineer Station 150+54.71, said point also being 586.81 feet North 90°00'00" West along the South line of said Section 28 from the Southeast corner of said Section 28; and running thence along said existing Northerly right of way line North 90°00'00" West 40.00 feet to a point in the existing Easterly right of way of State Highway 114, said point 33.00 feet perpendicular distant Easterly from the control line of said project at approximate Engineer Station 150+73.56; thence along said Easterly right of way line North 28°07'13" West 40.00 feet to a point 33.00 feet perpendicular distant Easterly from the control line of said project an approximate Engineer Station 151+13.56; thence South 59°03'36" East 68.62 feet to the point of beginning as shown on the map of said project on file in the office of the Utah Department of Transportation.
(Note: Rotate above bearings 00°27'51" clockwise to equal Highway Bearings based on the Utah State Plane Coordinate System, NAD 83, Central Zone).

NOTE: This page is only a part of a 2016 ALTA Commitment for Title Insurance. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; and Schedule B, Part-II Exceptions.
ALTA FORM COMMITMENT (06-17-06; Rev. 08-01-2016)

Exhibit "B"

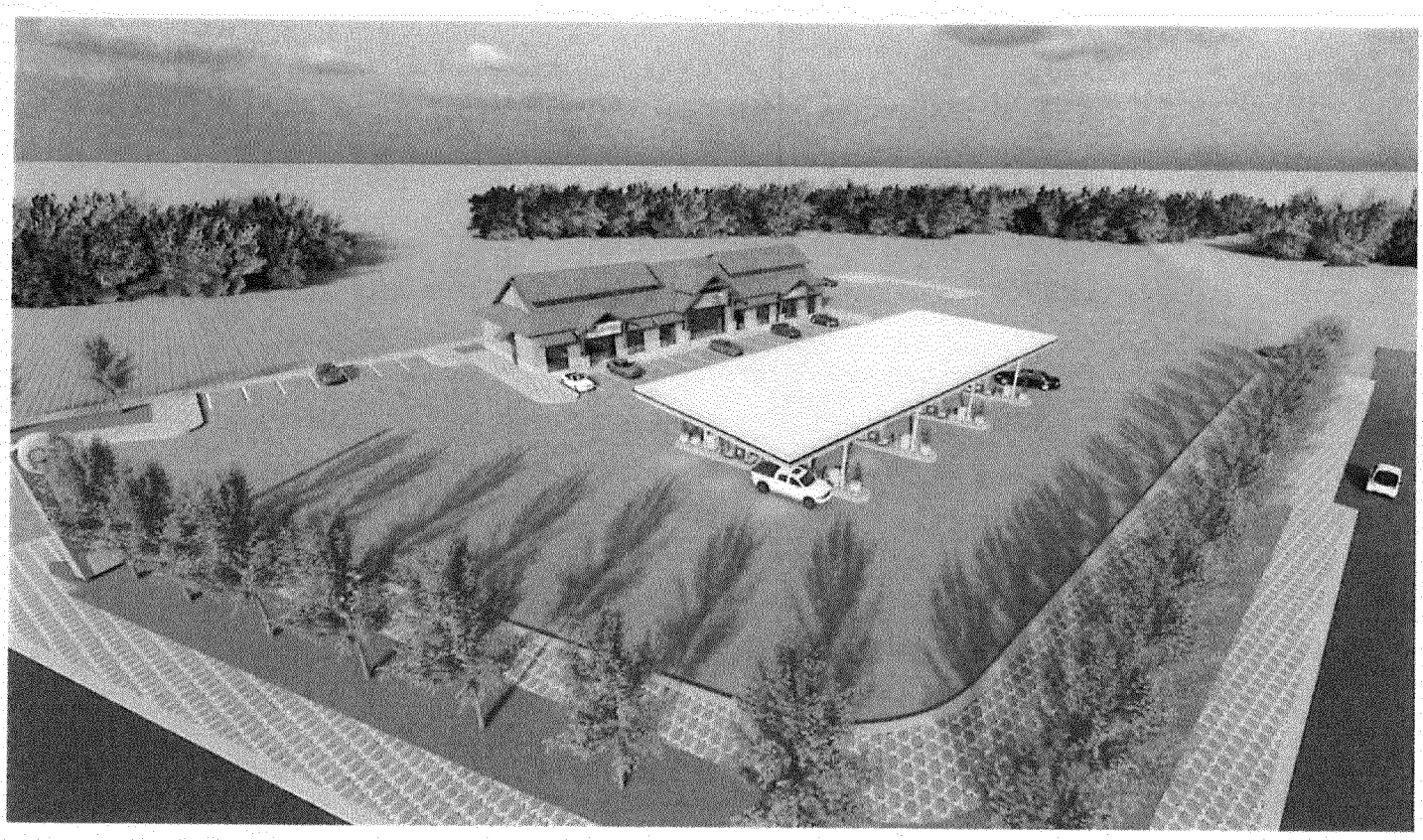
BEGINNING AT THE SOUTHWEST CORNER OF THAT CERTAIN PARCEL OF LAND CONVEYED TO DENIS E. GROO, ET UX. BY WARRANTY DEED RECORDED JANUARY 6, 1977, AS ENTRY
NO. 719, IN BOOK 1524, AT PAGE 389 OF OFFICIAL RECORDS, SAID SOUTHWEST CORNER IS DESCRIBED AS BEING NORTH 89°31'44" WEST 341.88 FEET, MORE OR LESS, FROM THE
SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 89°31'44" WEST ALONG THE SOUTH LINE OF SAID SECTION 28, 165.0 FEET TO THE SOUTHEAST CORNER OF THAT CERTAIN PARCEL OF LAND CONVEYED TO KARL R. TAYLOR BY QUIT-CLAIM DEED RECORDED JUNE 17, 1939, AS ENTRY NO. 5921, IN BOOK 342, AT PAGE 597 OF OFFICIAL RECORDS; THENCE NORTH 0°28'16" EAST ALONG THE EAST LINE OF SAID TAYLOR PROPERTY 264.0 FEET, MORE OR LESS, TO THE NORTHEAST CORNER THEREOF; THENCE SOUTH 89°31'44" EAST 165.0 FEET, MORE OR LESS, TO THE NORTHWEST CORNER OF SAID GROO PROPERTY; THENCE SOUTH 0°28'16" WEST ALONG THE WEST LINE OF SAID GROO PROPERTY 264.0 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH:
THE WEST 6' 3" OF THE FOLLOWING DESCRIBED PROPERTY: COMMENCING AT THE SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE
AND MERIDIAN; THENCE NORTH 89°31'44" WEST ALONG THE SECTION LINE 341.88 FEET (104.21 METERS); THENCE NORTH 00°28'16" EAST 264.00 FEET (80.47 METERS); THENCE
SOUTH 89°31'44" EAST 341.88 FEET (104.21 METERS); THENCE NORTH 00°28'16" EAST 264.00 FEET (80.47 METERS); THENCE SOUTH 88°04'23" EAST 4.44 FEET (1.35 METERS); THENCE
SOUTH 00°45'59" EAST PARTIALLY LONG A FENCE LINE 528.00 FEET (160.93 METERS); THENCE NORTH 89°33'59" WEST ALONG THE SECTION LINE 15.84 FEET (4.83 METERS) TO THE
POINT OF BEGINNING.

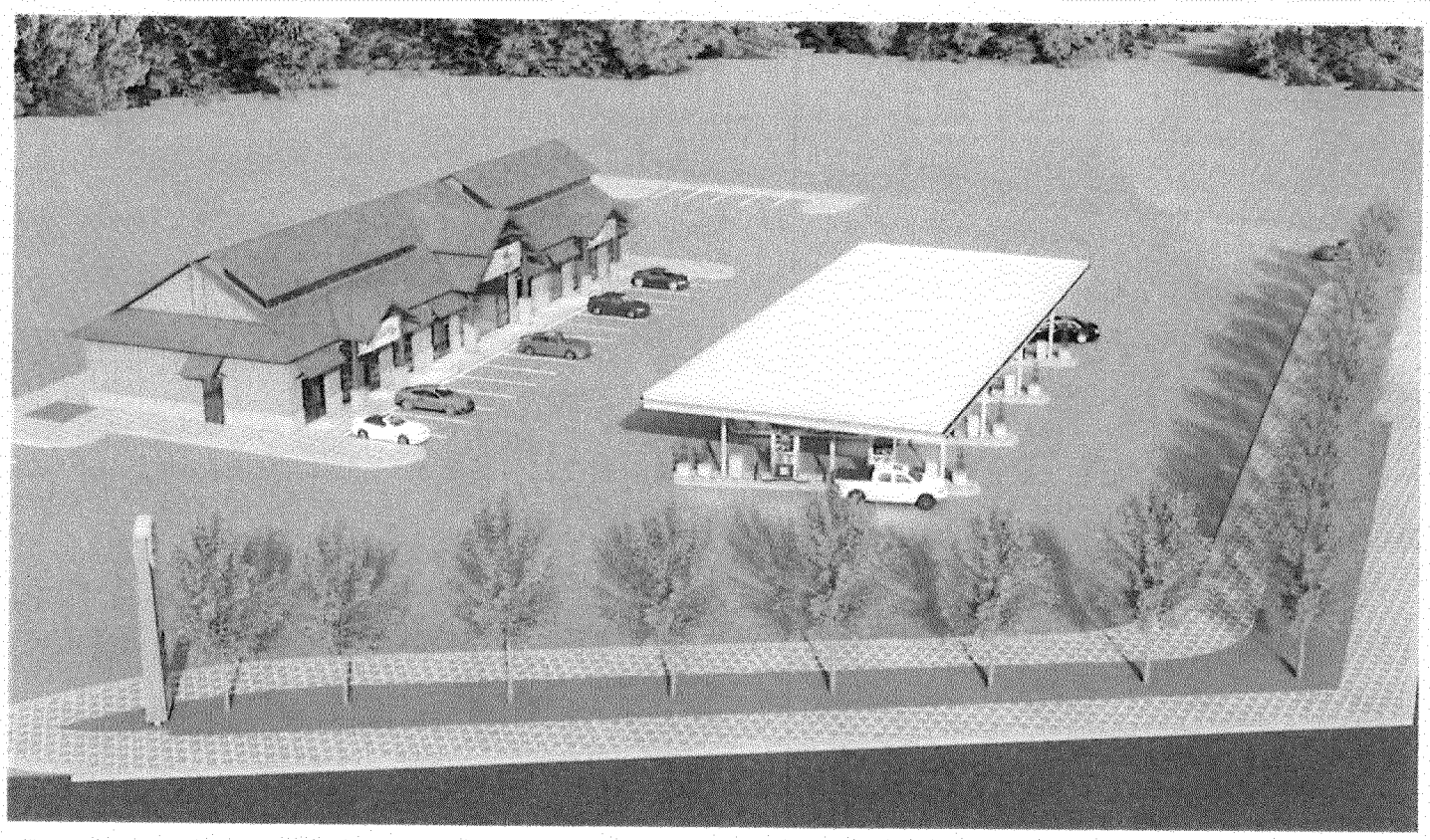
LESS AND EXCEPTING:
BEGINNING AT A POINT WHICH IS NORTH 89°31'44" WEST ALONG A SECTION LINE 506.88 FEET FROM THE SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THE NORTH 89°31'44" WEST ALONG THE SECTION LINE 114.99 FEET TO THE EASTERLY LINE OF GENEVA ROAD; THENCE NORTH 28°25'53" WEST ALONG SAID EAST LINE OF GENEVA ROAD 285.08 FEET; THENCE NORTH 88°33'11" EAST ALONG A FENCE LINE 32.34 FEET; THENCE NORTH 89°29'20" EAST 230.89 FEET; THENCE SOUTH 0°06' WEST 156.57 FEET; THENCE SOUTH 59°00" WEST 13.50 FEET; THENCE SOUTH 0°28'16 WEST 91.00 FEET TO THE POINT OF BEGINNING.

ALSO LESS AND EXCEPTING THEREFROM ANY PORTION LYING NORTH OF THE LINE DESCRIBED IN THAT CERTAIN BOUNDARY FENCE LINE AGREEMENT RECORDED MARCH 22,
2002 AS ENTRY NO. 32715:2002, OF THE OFFICIAL RECORDS.

EXHIBIT "C"



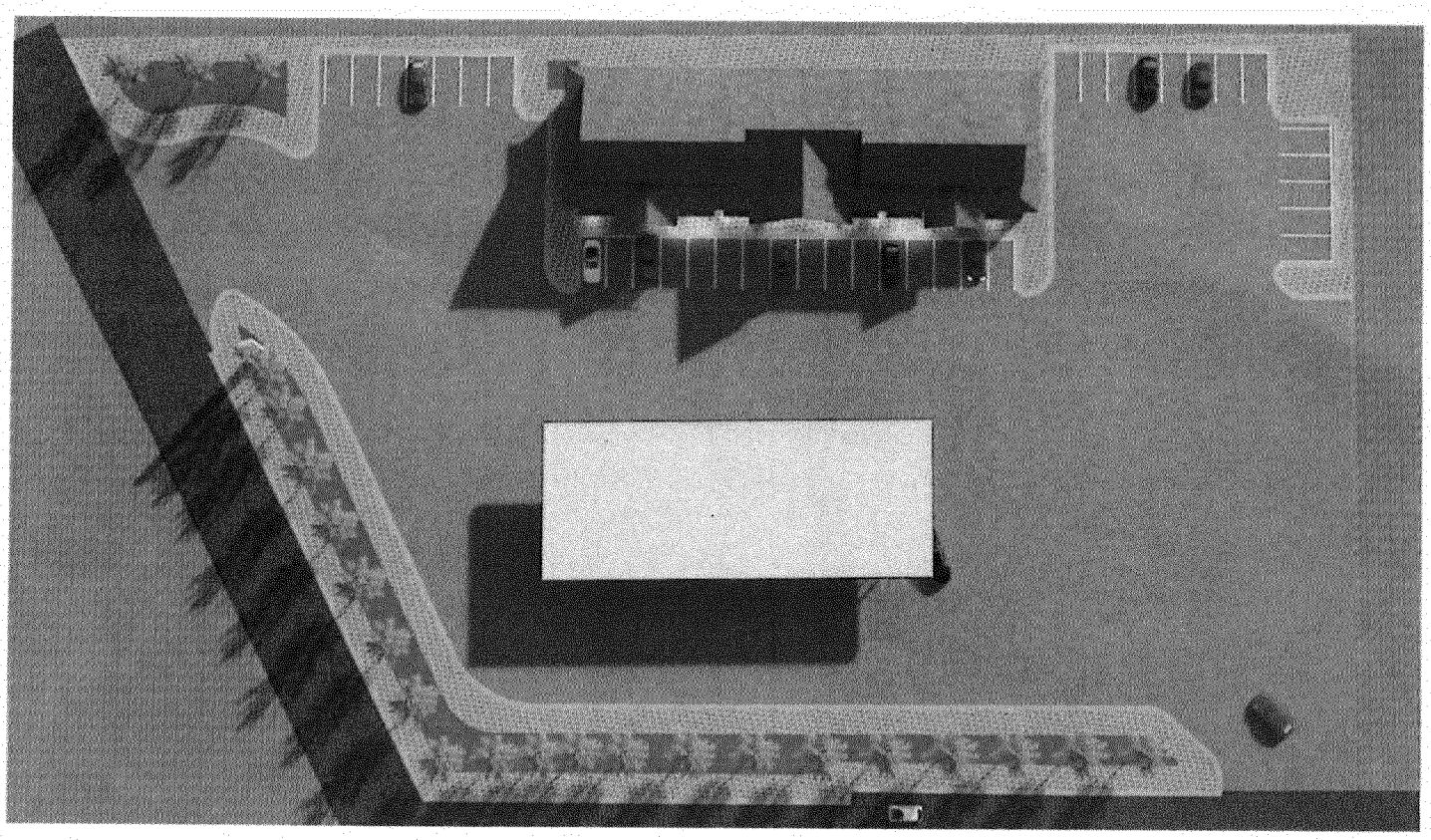
ENT 125251:2021 PG 11 of 25

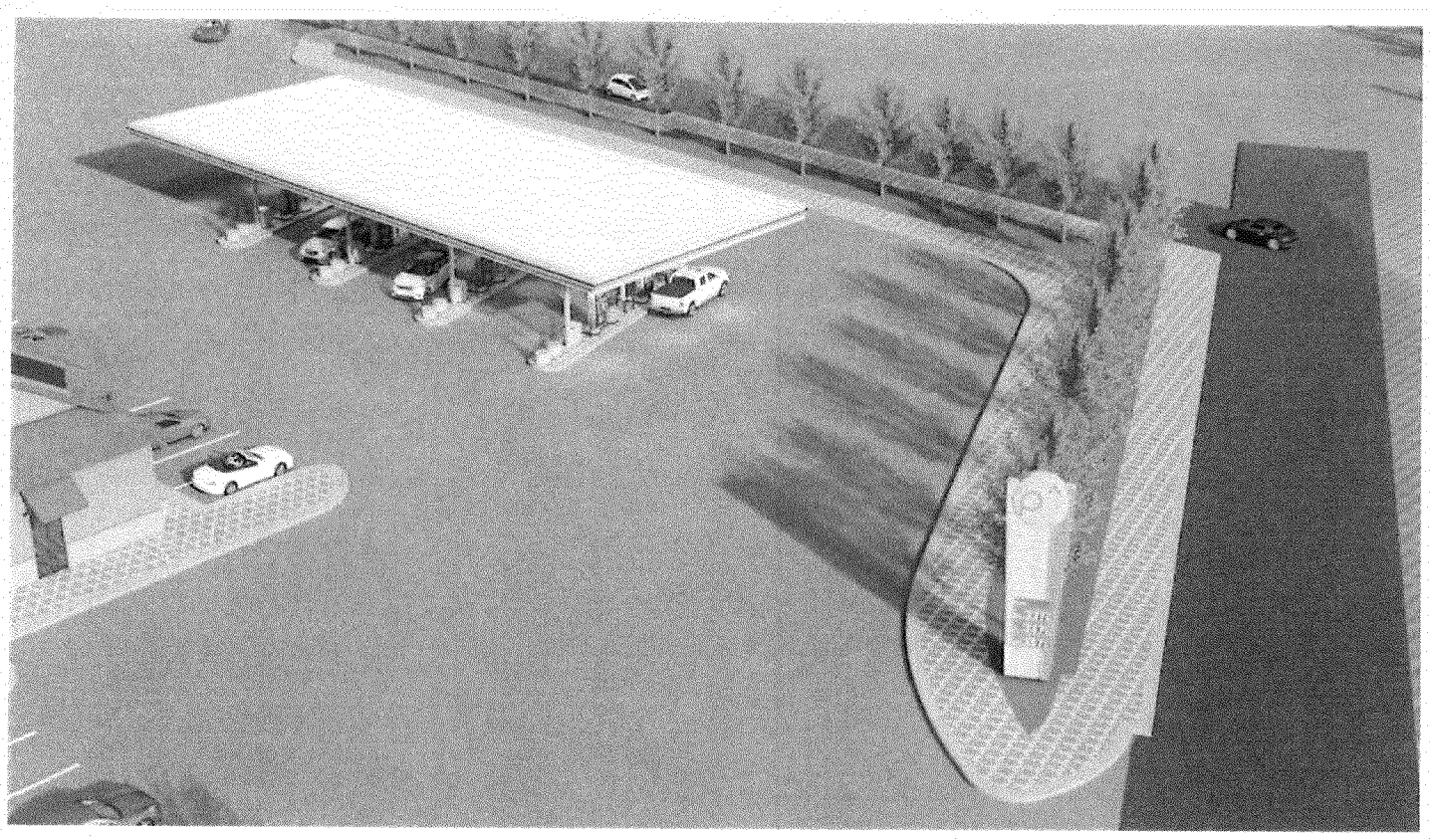


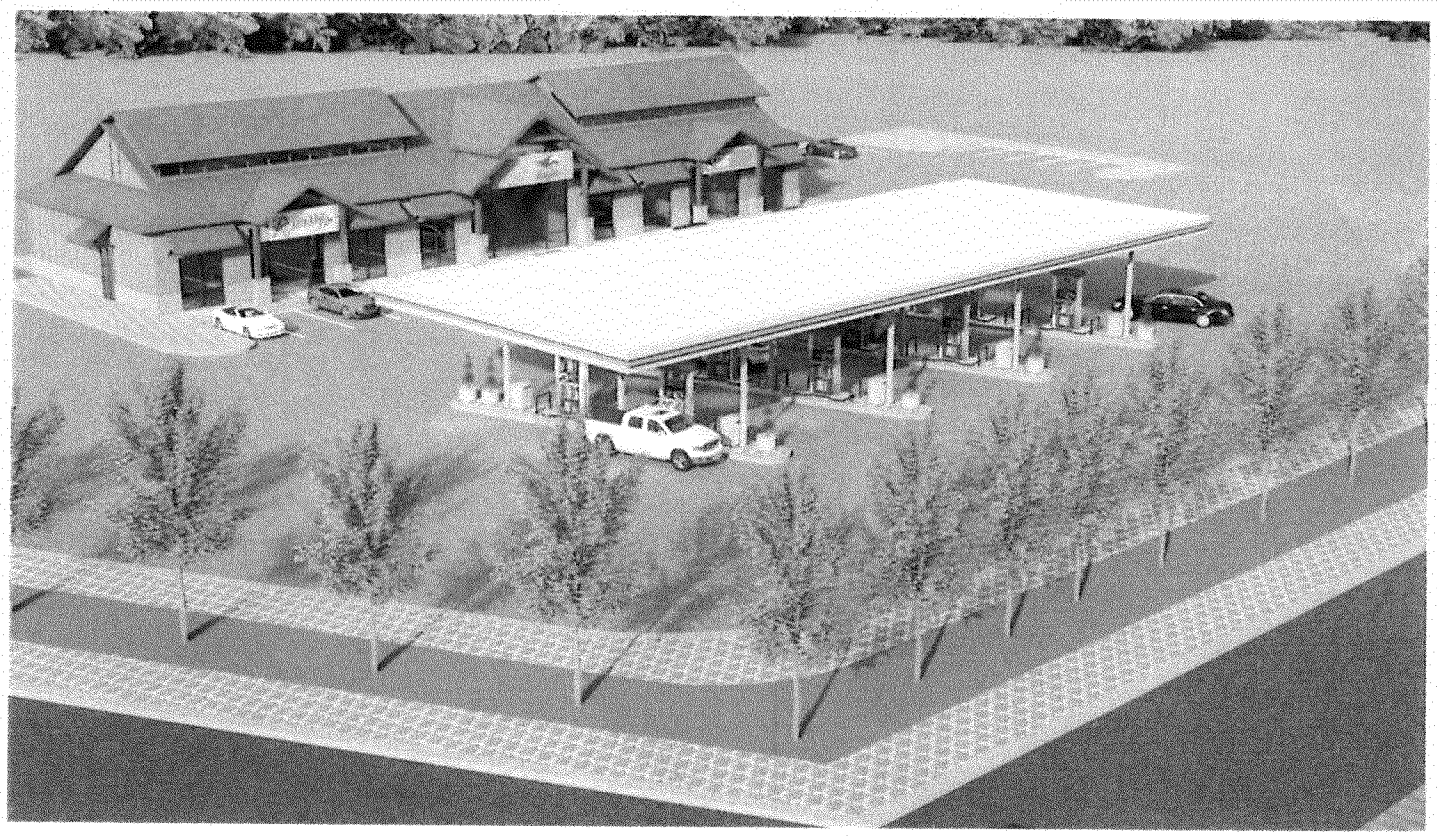
ENT 125251:2021 PG 12 of 25

ENT 125251:2021 Pg 13 of 25

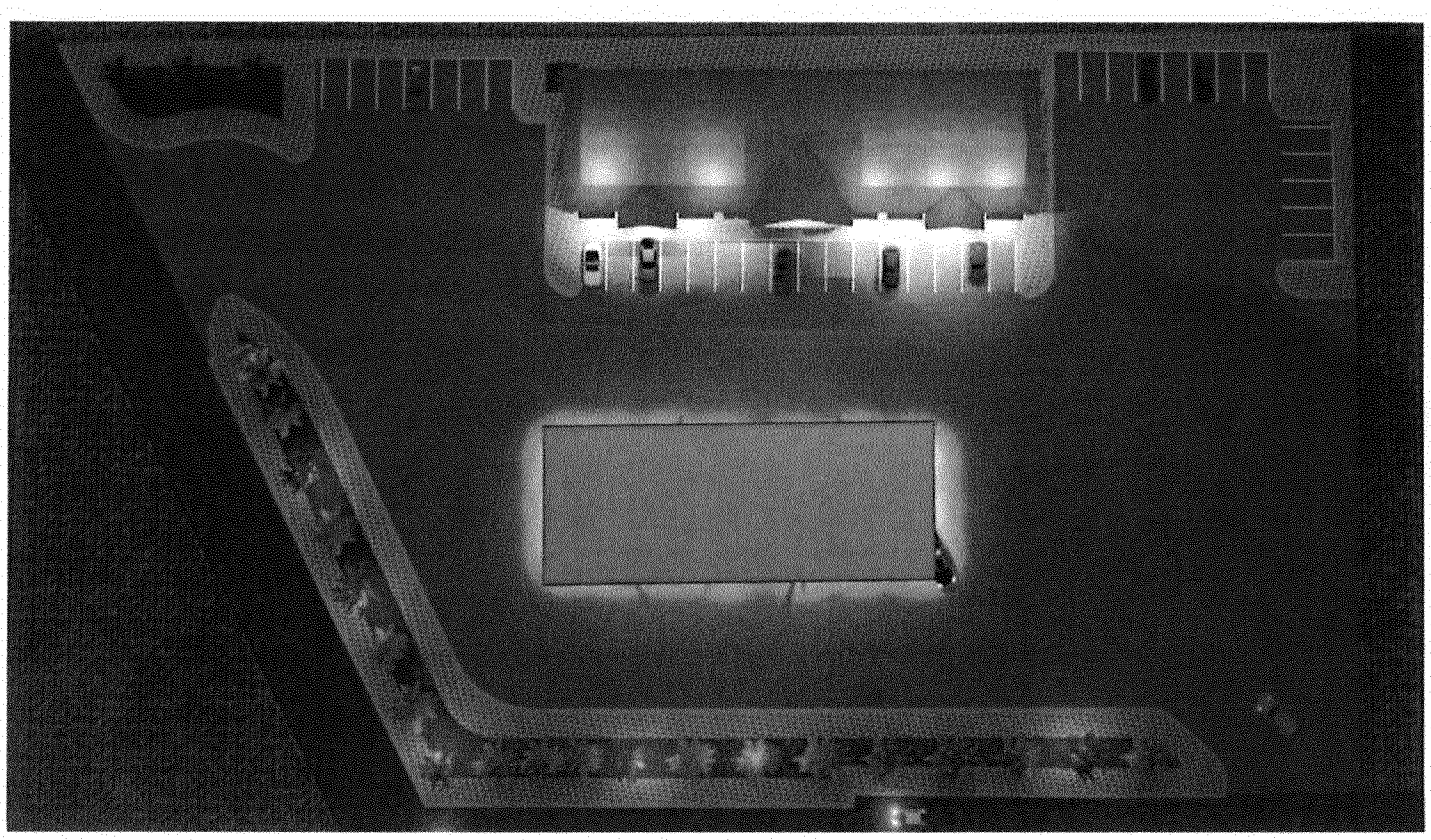
WhatsApp Image 2020-10-24 at 1.28.22 PM (1).jpeg

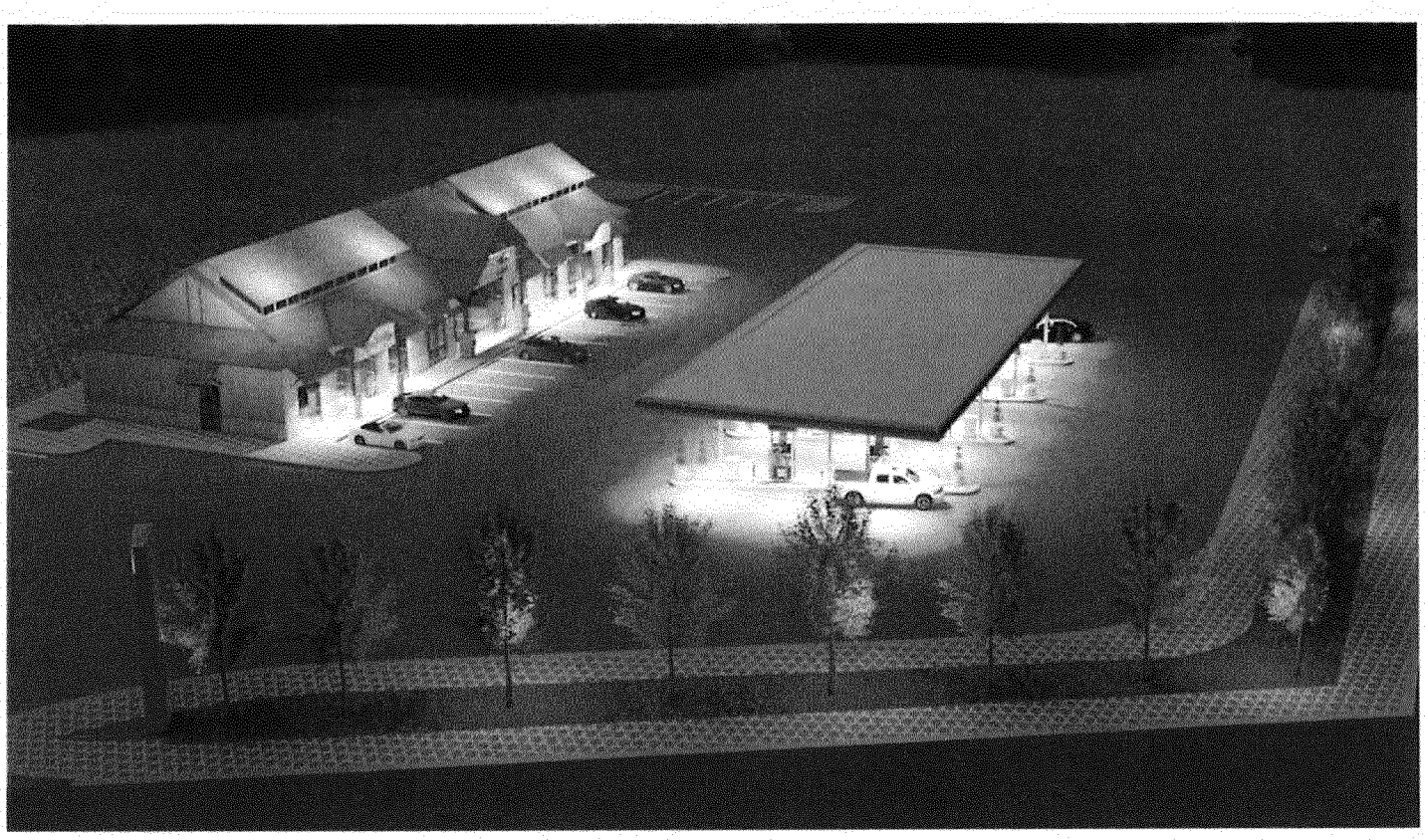




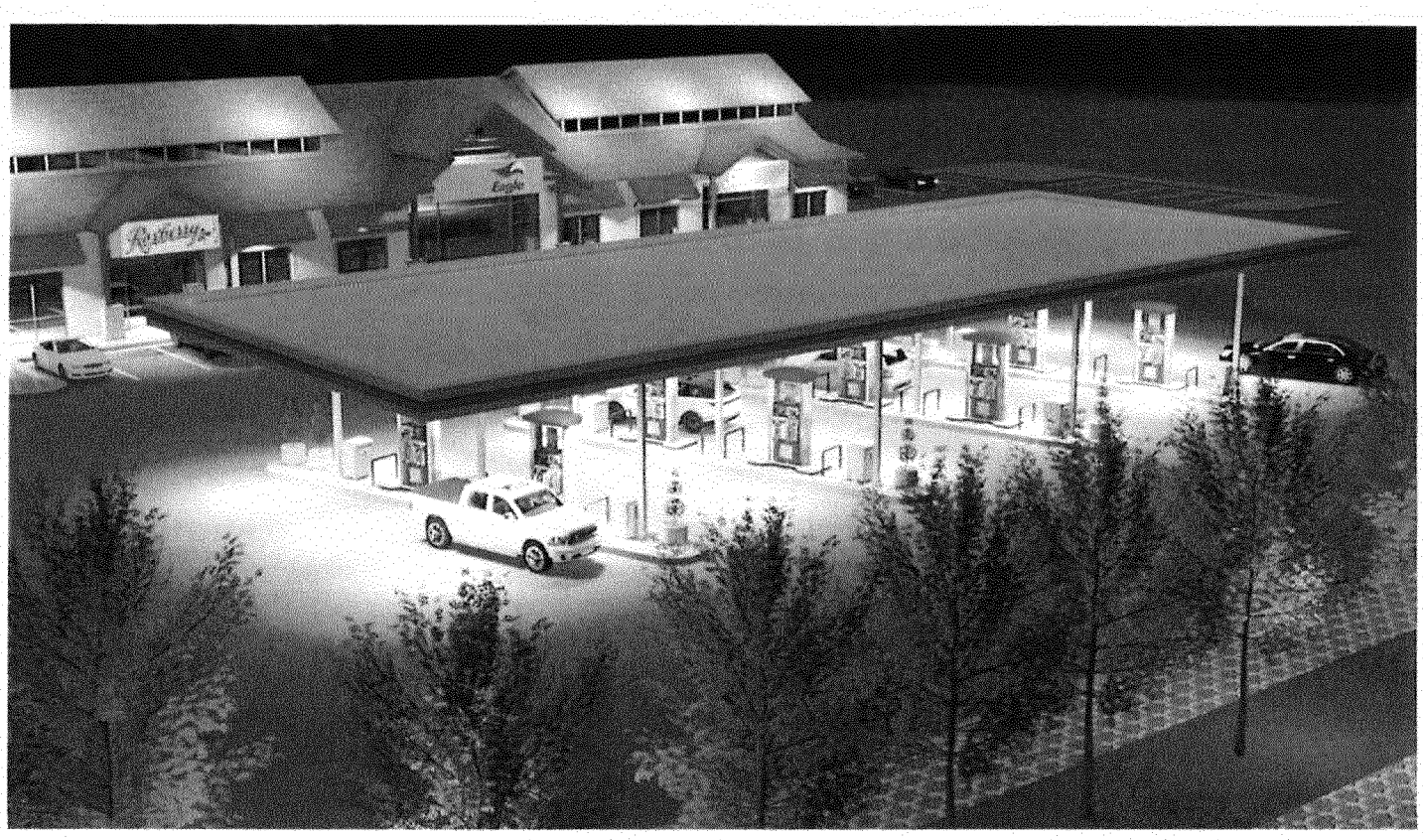


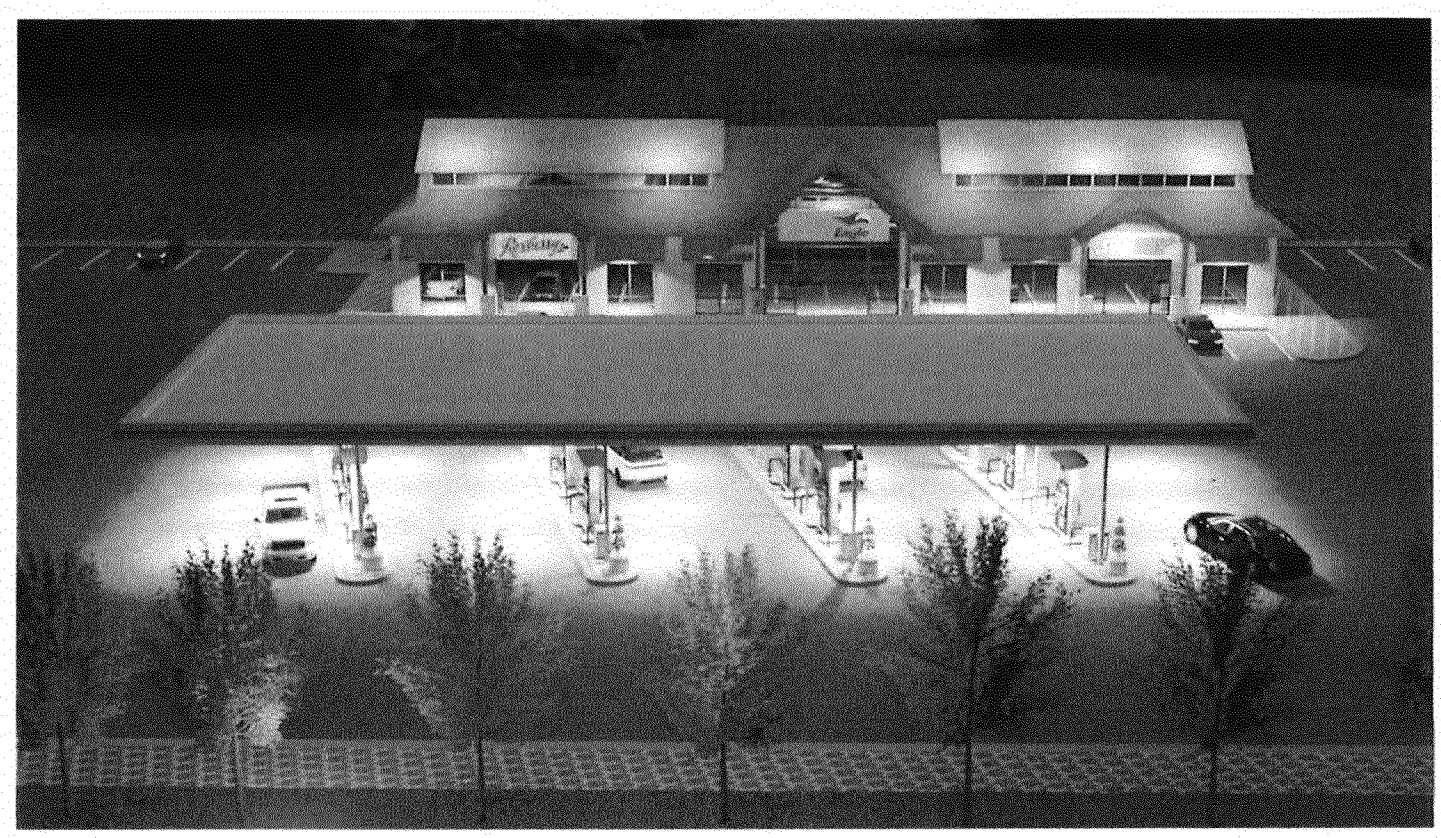
ENT 125251:2021 PG 16 of 25



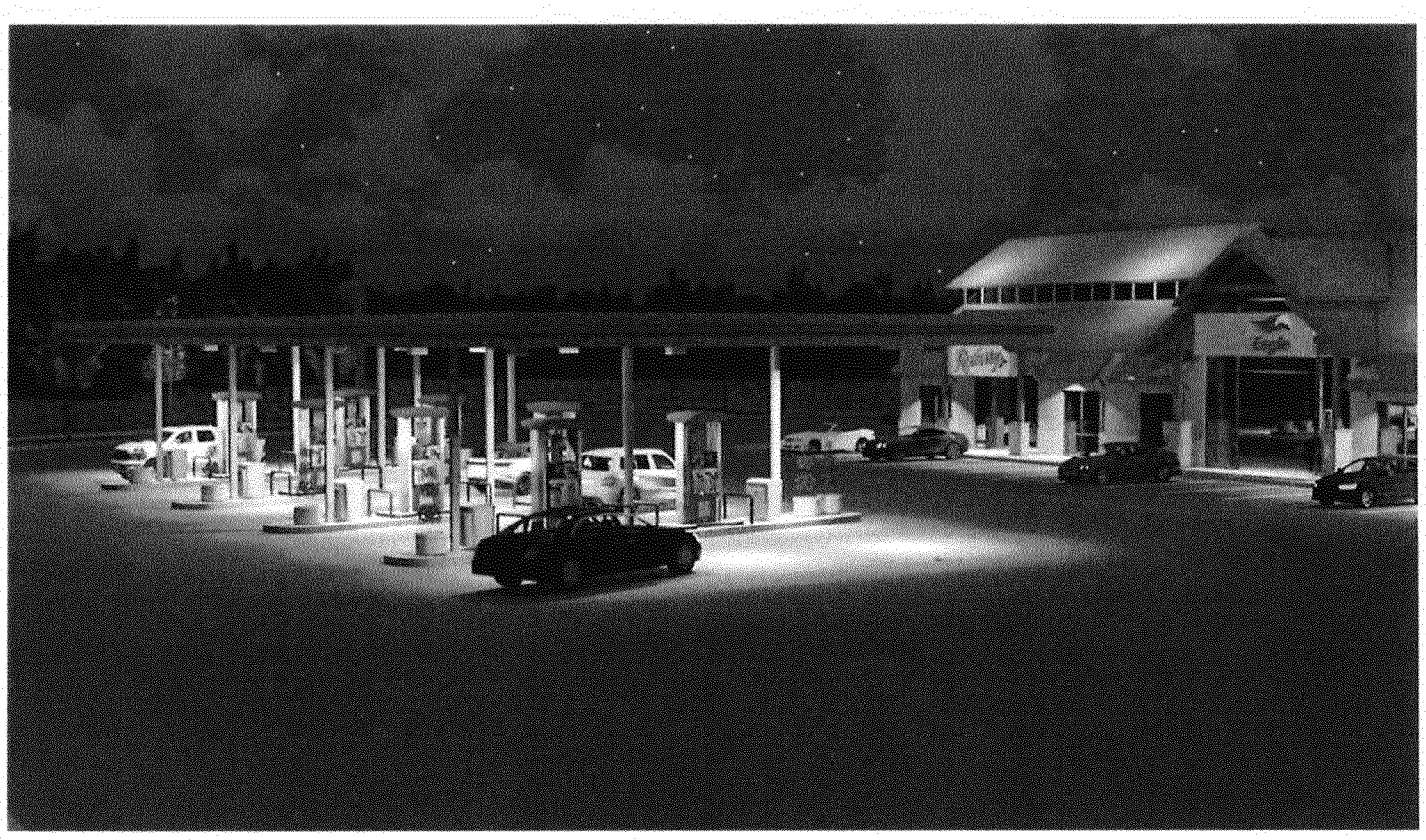


ENT 125251:2021 PG 18 of 25





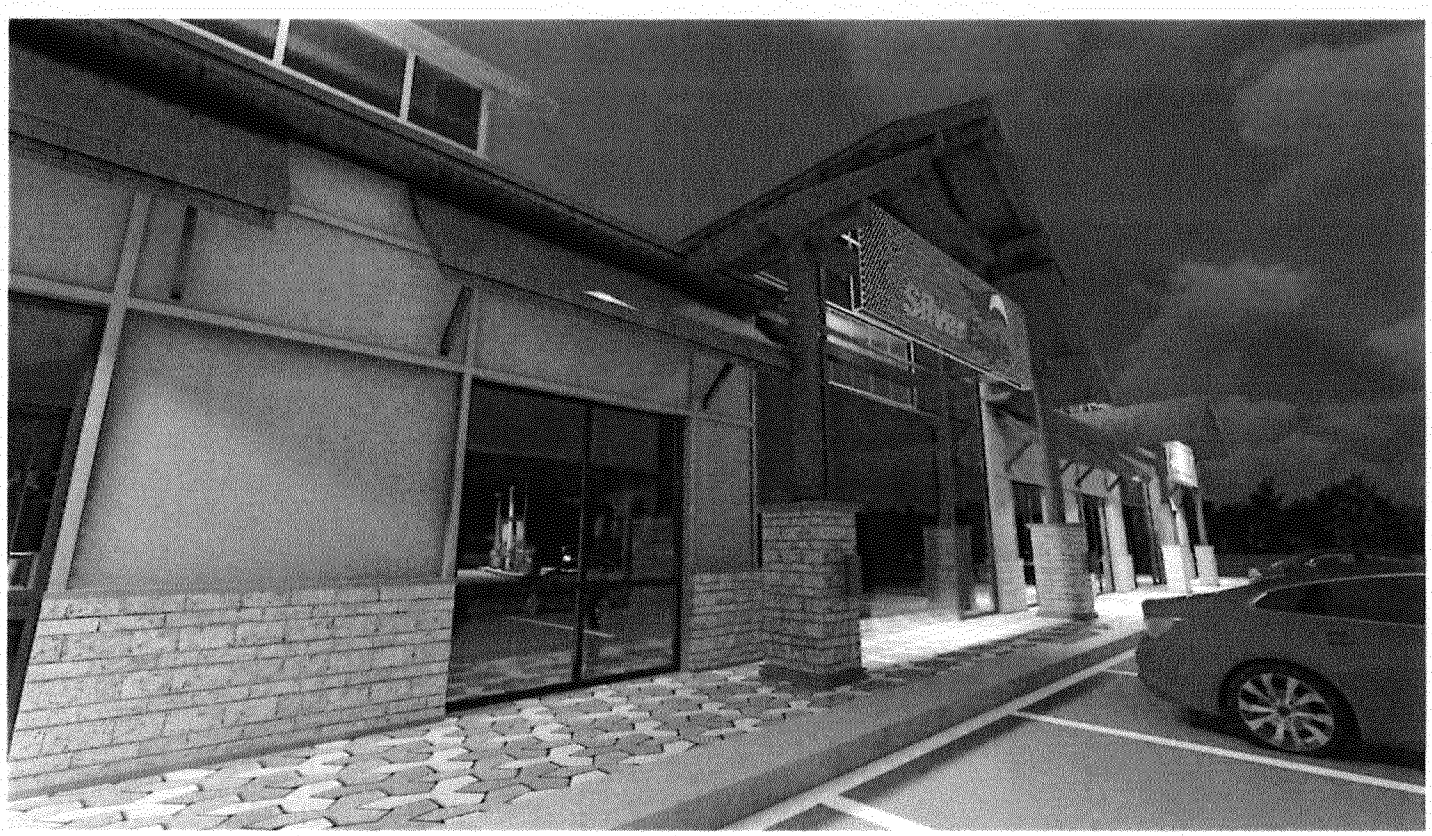
ENT 125251:2021 PG 20 of 25



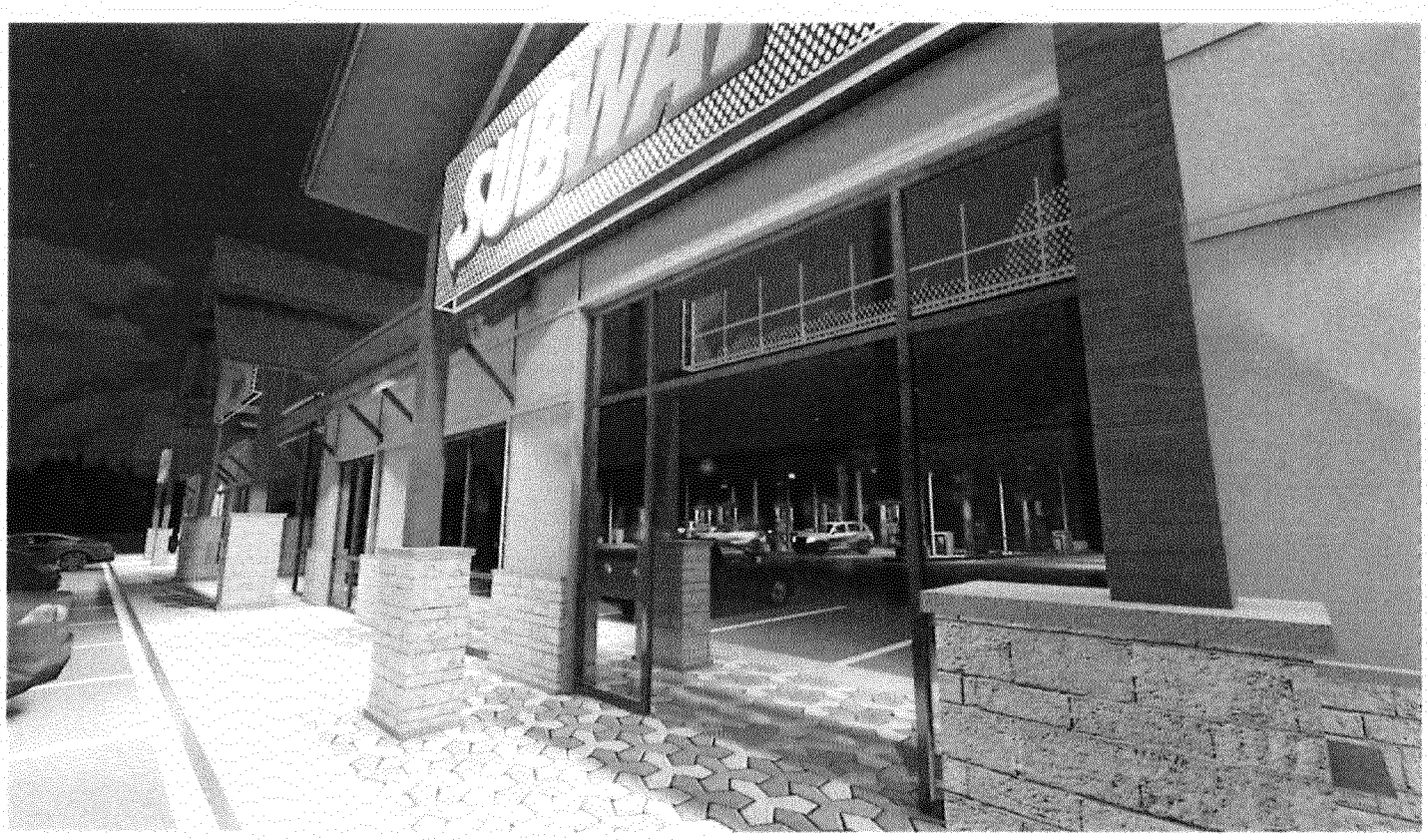
ENT 125251:2021 PG 21 of 25



ENT 125251:2021 PG 22 of 25



ENT 125251:2021 PG 23 of 25



ENT 125251:2021 Pg 25 of 25

Exhibit "D"

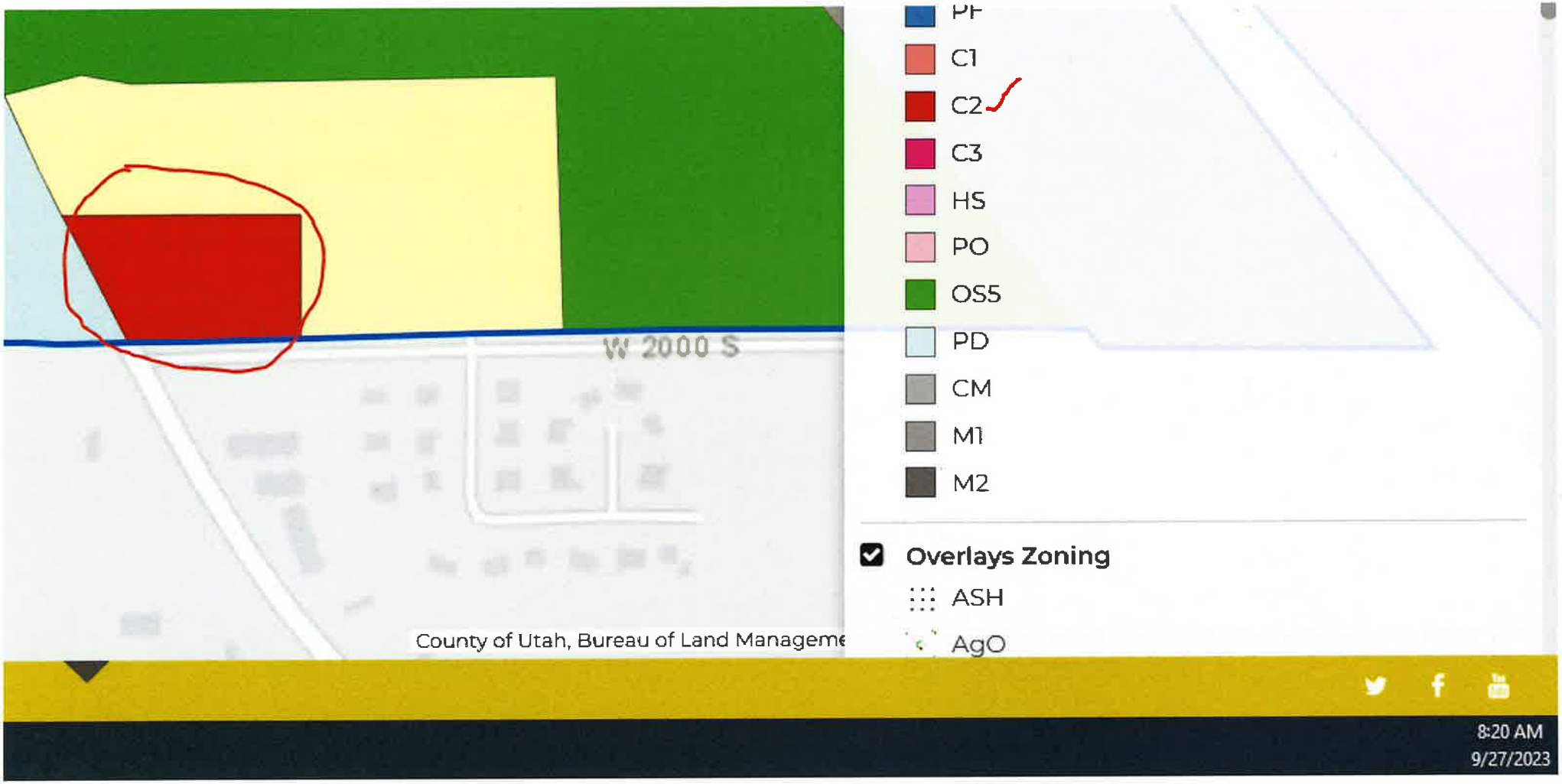

W 2000 S
County of Utah, Bureau of Land Manageme
PF
C1
C2
C3
HS
PO
OS5
PD
CM
M1
M2
Overlays Zoning
ASH
AgO
8:20 AM
9/27/2023

EXHIBIT 10

(Lakeview Corner Geneva Road & 2000 South Traffic Impact Study – April 2020)

TRAFFIC STUDY

Lakeview Corner
Geneva Road & 2000 South
Traffic Impact Study

Orem, UT

April 2020

TRANSPORTATION ENGINEERING

A-Trans Engineering
P.O. Box 521651
Salt Lake City, Utah 84152
(801) 949-0348 telephone
(801) 582-6252 fax

Lakeview Corner
Geneva Road & 2000 South
Traffic Impact Analysis

Orem, Utah

Category II

April 2020

Prepared by:

A-Trans Engineering
Joseph Perrin, PhD, PE, PTOE
P.O. Box City, 521651
Salt Lake City, Utah 84152
(801) 949-0348
atrans@comcast.net

Table of Contents

I. Introduction and Summary 1
II. Proposed Project 3
III. Study Area Conditions 5
IV. Analysis of Existing Condition 8
V. Projected Traffic 11
VI. Growth 14
VII. Traffic Analysis 18
VIII. Conclusions 26
IX. Recommendations 27

Table of Figures

Figure 1: Conceptual Site Plan 4
Figure 2: Site Location..... 6
Figure 3: Existing Geometry..... 7
Figure 4: Existing Traffic..... 10
Figure 5: Origin Destination 12
Figure 6: Site Trip Distribution..... 13
Figure 7: 2025 Background Traffic 15
Figure 8: 2020 Total Traffic 16
Figure 9: 2025 Total Traffic 17

Table of Tables

Table 1: University Parkway / Geneva Road Approach Volumes 8
Table 2: Intersection LOS-Delay Relationship 9
Table 3: Existing Level of Service 9
Table 4: Trip Generation for Site 11
Table 5: Growth Projections 14
Table 6: Geneva Road / 2000 South Intersection Analysis 19
Table 7: 3100 West / 2000 South Intersection Analysis 19
Table 8: Multifamily Access / Geneva Road Intersection Analysis 20
Table 9: 2000 South / Apartment Access (Site Access 1) Intersection Analysis 20
Table 10: Geneva Road / Site Access 2 Intersection Analysis 20
Table 11: 2025 Queue Analysis 21
Table 12: Signal Warrant Volumes 22

I. Introduction and Summary

The proposed Lakeview Corner development is planned as a 22 pump gas station and convenience store. The proposed site is located on the northeast corner of Geneva Road and 2000 South in Orem, Utah. The proposed gas station with C-store is projected to generate 274 AM and 380 PM peak trips with 4,518 daily trips. There are two proposed access points to the site, one along 2000 South and one along Geneva Road

Geneva Road / 2000 South operates with critical WBL at LOS C in the AM peak period and LOS F in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 with and without the site the intersection operates with critical WBL at LOS D in the AM peak period and LOS F in the PM peak period. If a signal is built at this location, which is planned in the future, it will operate with LOS A in 2025 with and without the site.

The site traffic increases traffic at the intersection by a projected 5.2% in the AM and 4.3% in the PM peak period. 3100 West / 2000 South operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 without the site the intersection operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. With the addition of the site the intersection operates with critical NBL at LOS C in the AM peak period and LOS B in the PM peak period.

The Multi-family Access / Geneva Road operates with a critical WBL at LOS C in the AM peak period and LOS C in the PM peak period. With the addition of the site the intersection operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period. In 2025 with and without the site the intersection operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period. The apartment access along 2000 South operates with NBL delay at LOS B with and without the site.

The SBL movement from site on 2000 South operates at LOS C throughout 2025. The site access along Geneva Road operates with WBL delay at LOS C in the AM and LOS D in the PM peak period. In 2025 the access operates with WBL delay at LOS C in the AM and LOS E in the PM peak period. If a signal is not built at Geneva Road / 2000 South, delay for westbound left traffic to the south will begin to experience high delay by 2025. With a signal at this location, traffic making a westbound left headed to the south from the site can utilize the access on 2000 South and the signal to travel to the south.

The following non-site related improvements are recommended:

- Due to the existing volumes at the intersection of Geneva Road / 2000 South a signal is warranted in the AM and PM peak period and the intersection operates at high side street delay. Consideration for a signal is recommended at this location.

The following site related improvements are recommended:

- Access 1 on 2000 South does not meet the required access spacing per Orem City Guidelines but is located to the eastern most extent of the property. The misalignment of the apartment access to the south and the proposed access are offset with the north leg to the west and the south leg to the east, this is the better type of offset as there is no overlapping of the left turn ingresses and therefore no shared storage location required for the EBL at the site and the WBL at the apartments. This offset will however increase the conflicts for NBL and SBL when compared to a typically aligned access. It is recommended that if the 2000 South access allows eastbound left turning movements, then 2000 South between Geneva Road and 3100 West, should be restriped as a 3 lane facility. This would restrict parking along this section of the road.
- Access 2 does not meet UDOT's required access spacing and therefore will require a variance. Per UDOT standards, this access will requires a NBR deceleration land and a SBL deceleration lane. The center turn lane has recently been constructed and the site frontage improvements should include a shoulder area that can be used for the right turn deceleration lane.

II. Proposed Project

The proposed site is located on the northeast corner of Geneva Road and 2000 South in Orem, Utah. The site is planned to include a 22 pump gas station and is projected to generate 274 AM and 308 PM peak hour trips with 4,518 daily trips.

The site is planning two access points, one along 2000 South and one along Geneva Road. Along 2000 South, the distance between access points is measured center to center per Orem City standards. Access 1 is located 290 feet east of Geneva Road, it is offset 60 feet to the west of the apartment access to the south and 3100 West is located approximately 300 feet east of the apartment access or 360 feet east of Access 1. Along Geneva Road, the distance between access points/intersections is measured from end of radius to end of adjacent radius per UDOT standard methodology. Access 2 is located approximately 160 feet north of 2000 South and 130 feet south of the apartment access on the west side of the roadway directly to the north. Figure 1 shows the conceptual site plan.



A-TRANS TRANSPORTATION ENGINEERING
P.O. BOX 521651, SLC, UT 84152
Phone: 801-949-0348 Fax: 801-582-6252

Figure 1

Conceptual Site Plan

III. Study Area Conditions

The study area includes the following intersection.

- Geneva Road / 2000 South
- 2000 South / 3100 West
- Geneva Road / Apartment Access
- 2000 South / Apartment Access (Site Access 1)
- Geneva Road / Site Access 2

Figure 2 shows the location of the site. Figure 3 shows existing intersection geometry.

Geneva Road

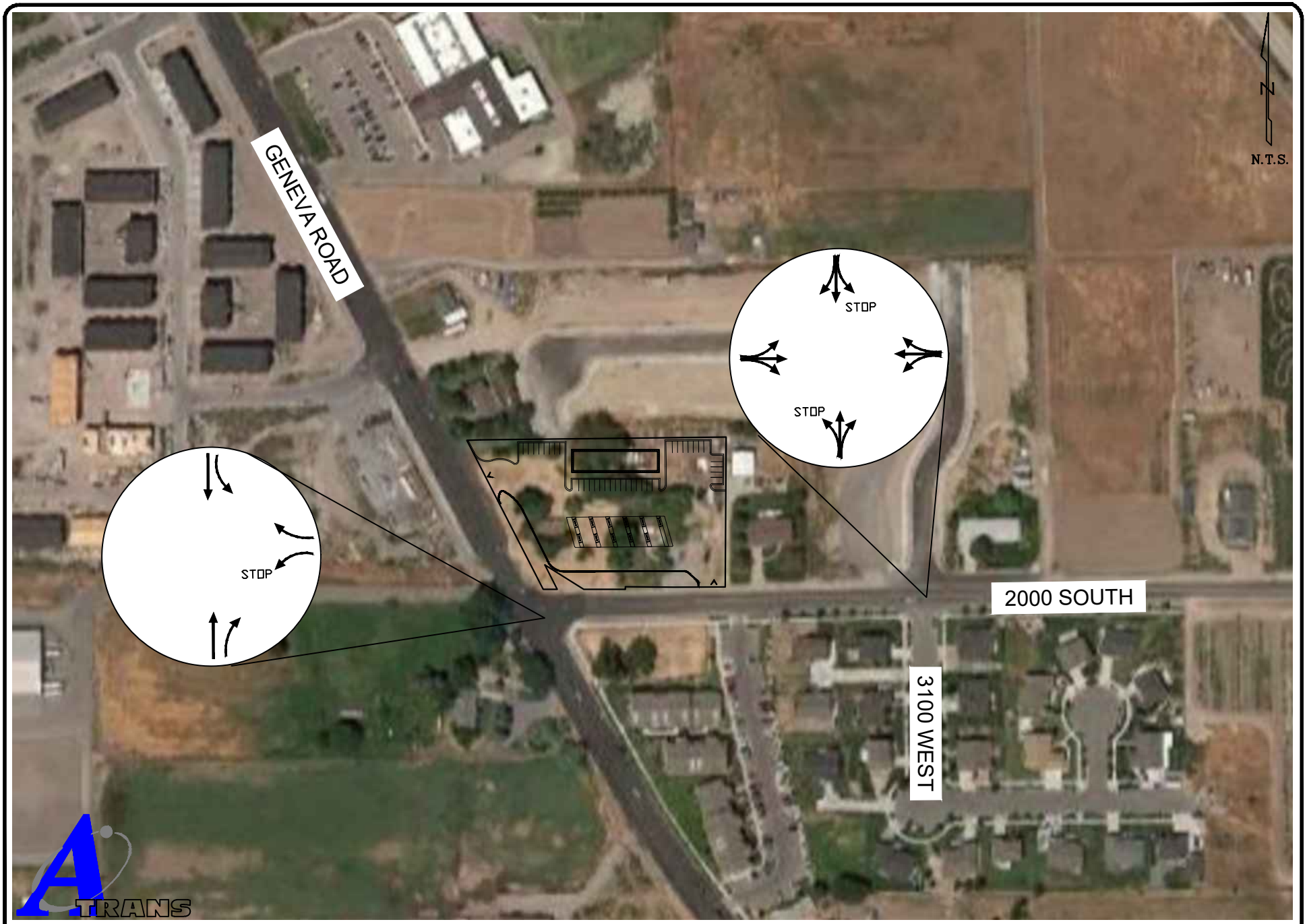
Geneva Road or SR 114 is currently a three lane facility with one lane in each direction with a center turn lane. The 2017 AADT is 13,000 vehicles per day with a posted speed limit is 45 MPH. It is classified by UDOT as a category 5 roadway and by Orem City as a 5 Lane Principal Arterial in the future.

2000 South

2000 South or Rt 2982 is currently a two lane facility with one lane in each direction. The 2017 AADT is 2,500 vehicles per day with a posted speed limit is 25 MPH. It is classified by Orem city as a 2-3 Lane Minor Arterial.



A-TRANS TRANSPORTATION ENGINEERING P.O. BOX 521651, SLC, UT 84152 Phone: 801-949-0348 Fax: 801-582-6252	Figure 2	Site Location



A-TRANS TRANSPORTATION ENGINEERING
P.O. BOX 521651, SLC, UT 84152
Phone: 801-949-0348 Fax: 801-582-6252

Figure 3

Existing Geometry

IV. Analysis of Existing Condition

The existing traffic counts were performed March 31, 2020 during the AM and PM peak periods. Due to the disruption to current traffic conditions throughout the country due to the COVID-19 pandemic, adjustments to the collected data were necessary to create existing traffic volumes that are reasonable and reflective of conditions that would occur if this disruption did not occur. This was done utilizing the traffic data available on UDOT's Automated Traffic Signal Performance Measures Website. Data from University Parkway / Geneva Road on February 11, 2020 and February 12, 2020 was compared against data extracted on March 31, 2020 (the same day of the traffic count). This data is shown in Table 1.

Table 1: University Parkway / Geneva Road Approach Volumes

	Typical Weekday				Day of Data Collection		Difference between average of Typical Weekday and Actual Data Collection Day	
	11-Feb-2020		12-Feb-2020		31-Mar-2020			
	AM	PM	AM	PM	AM	PM	AM	PM
Northbound	539	415	569	443	175	165	32%	38%
Southbound	841	1139	857	1207	440	824	52%	70%
Eastbound	178	599	190	535	131	277	71%	49%
Westbound	691	725	730	742	383	441	54%	60%
Total	2249	2878	2346	2927	1129	1707	**49%**	**59%**

The comparison showed that the AM traffic was approximately 49% of the typical traffic and the PM traffic was approximately 59% of the typical traffic. The existing traffic counts were multiplied by the resulting reduction to generate volumes more similar to those that would have been expected. These volumes were compared against the existing AADT data to check for accuracy. Traffic counts were performed at the apartment access south of 2000 South, at 3100 West and at the multifamily access on Geneva Road. These raw counts are shown in Appendix A. As a result of the change in traffic patterns due to the COVID-19 pandemic, the data gathered, even with the multipliers applied, did not yield volumes that would be expected for these types of developments. Therefore, trip generation (per ITE) and distribution (per the assumed origin destination) was done for each of the surrounding parcels and these values were used as the existing traffic. The apartments to the south of 2000 south were assumed to include 48 multifamily units. The single family to the north and south of 2000 South that accesses at 3100 West were assumed to have 22 units each on both the north and south side of 2000 South. The multifamily units along Geneva Road were estimate to include 210 multifamily units at build-out. The existing counts utilized in the study from the existing counts and this adjustment process is shown in Figure 4.

The 2010 Highway Capacity Manual defines the Level of Service (LOS) for both signalized and unsignalized intersections as a range of average experienced delay. LOS is a qualitative rating of traveler satisfaction from A to F whereby LOS A is good and LOS F poor. Table 2 shows the LOS range by delay for unsignalized and signalized intersections and accesses.

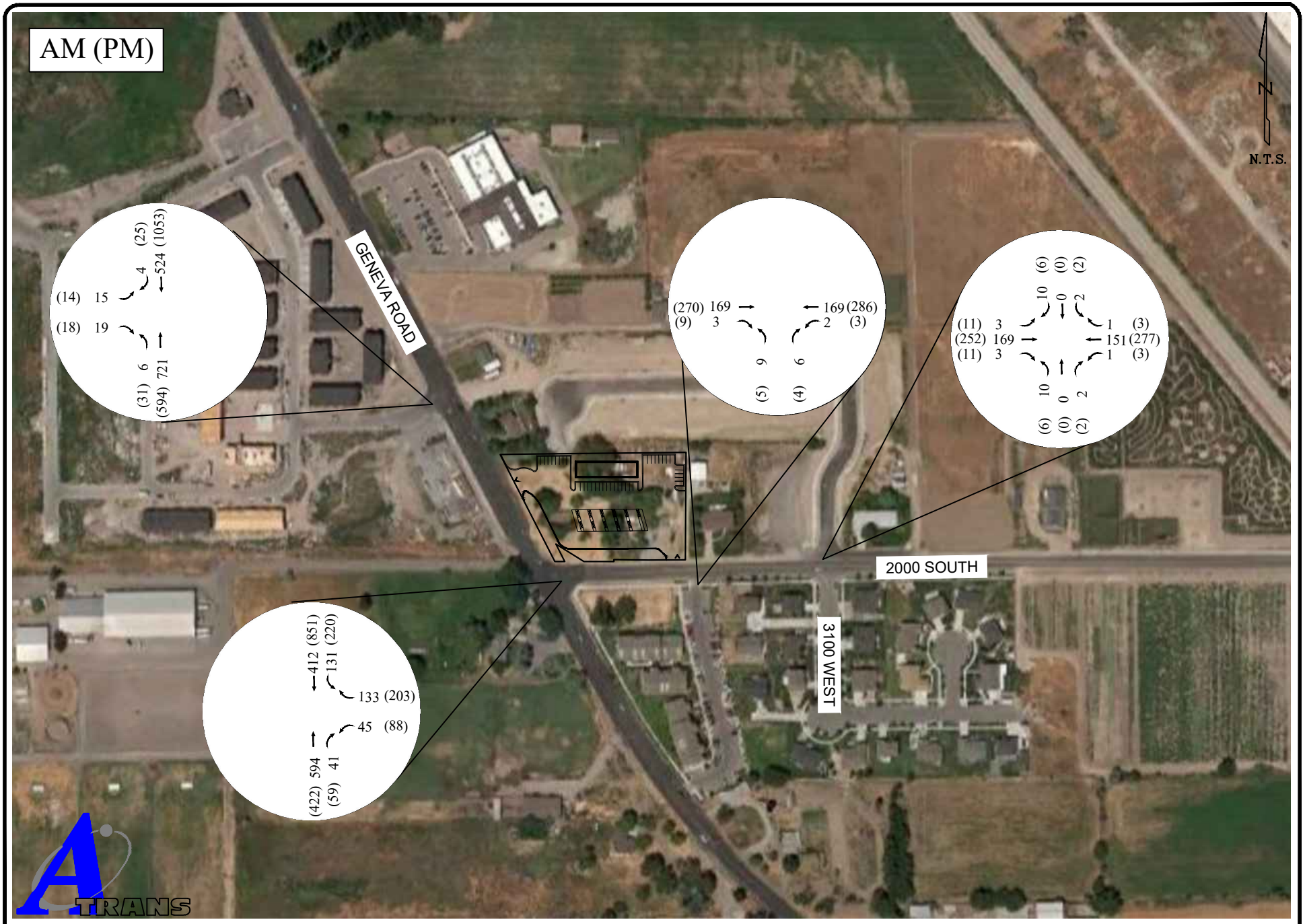
Table 2: Intersection LOS-Delay Relationship

	Unsignalized	Signalized
Level of Service	Total Delay per Vehicle (sec)	Total Delay per Vehicle (sec)
A	≤ 10.0	≤ 10.0
B	> 10.0 and ≤ 15.0	> 10.0 and ≤ 20.0
C	> 15.0 and ≤ 25.0	> 20.0 and ≤ 35.0
D	> 25.0 and ≤ 35.0	> 35.0 and ≤ 55.0
E	> 35.0 and ≤ 50.0	> 55.0 and ≤ 80.0
F	> 50.0	> 80.0

Geneva Road / 2000 South operates with critical WBL at LOS C in the AM peak period and LOS F in the PM peak period. Table 3 shows the Existing LOS.

Table 3: Existing Level of Service

Delay (sec/veh)	Geneva Road / 2000 South (WBL)	
AM	21.5	C
PM	70.3	F



A-TRANS TRANSPORTATION ENGINEERING P.O. BOX 521651, SLC, UT 84152 Phone: 801-949-0348 Fax: 801-582-6252	Figure 4	Existing Traffic

V. Projected Traffic

A. Trip Generation

Trip generation for the site was done using The Institute of Transportation Engineers (ITE) *Trip Generation* (10th Edition) handbook. The site is planned to include a 22 pump gas station and is projected to generate 274 AM and 308 PM peak hour trips with 4,518 daily trips. The trip generation for the site is shown in Table 4.

Table 4: Trip Generation for Site

Land Use	Size	Trip Rate	Trips	% IN	% Out	Trips In	Trips Out
AM							
Gas Station	22	12.47	274	51%	49%	140	134
PM							
Gas Station	22	13.99	308	51%	49%	157	151
Daily							
Gas Station	22	205.36	4,518				

B. Trip Distribution

Project site traffic was applied to the origin-destination (O-D) for the site. Origin-destination was determined from evaluating the existing traffic patterns and hourly traffic volumes on each leg of the included intersections as well as the location of retail centers and freeways relative to this site. This was used as a baseline for origin destination and engineering judgment was applied to this to determine the following OD for the site.

- 60% to/from north on Geneva Road
- 20% to/from south on Geneva Road
- 20% to/from east on 2000 South

Origin Destination is shown in Figure 5. Site trip distribution is shown in Figure 6.



A-TRANS TRANSPORTATION ENGINEERING P.O. BOX 521651, SLC, UT 84152 Phone: 801-949-0348 Fax: 801-582-6252	Figure 5	Origin Destination

Figure 6: Site Trip Distribution

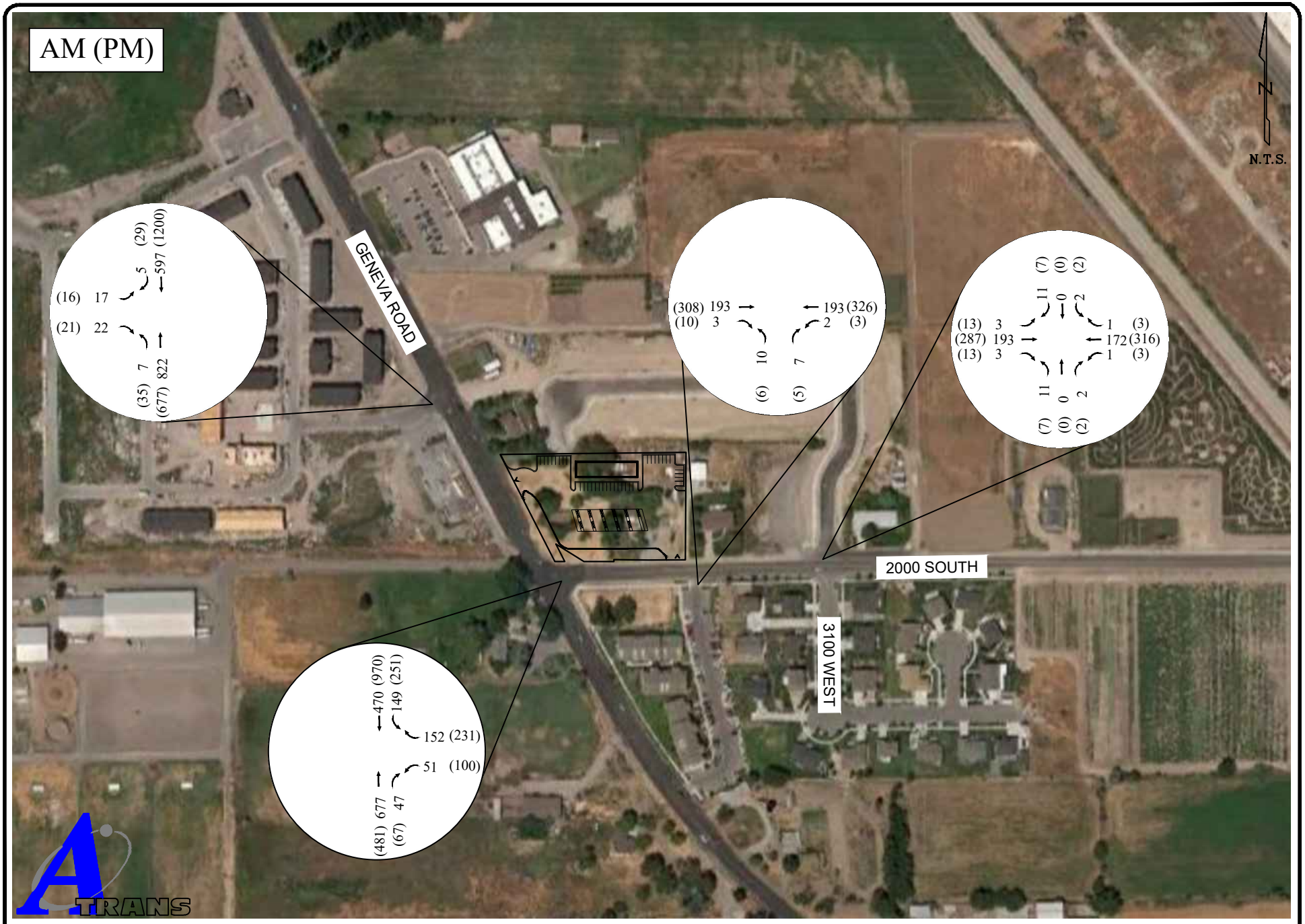
VI. Growth

Growth in the area was determined from UDOT's Traffic on Utah Highways. The volumes and projections utilized to determine growth in the area is shown in Table 5. Based on this information an average growth of 2.65% was found. The growth factor for 2025 is 1.14.

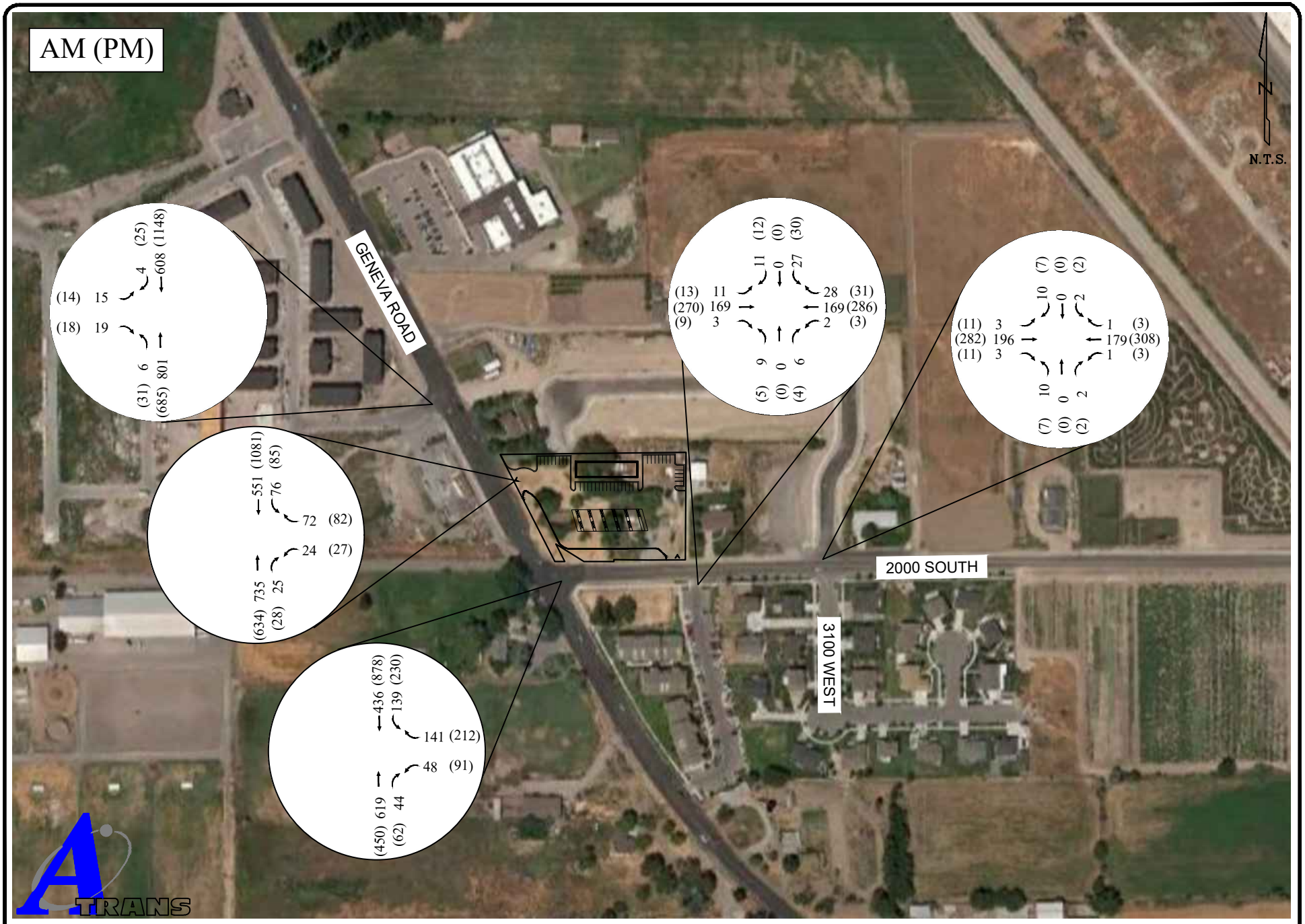
Table 5: Growth Projections

	Geneva Road		2000 South	
Year	AADT	Growth	AADT	Growth
2007	10,000		2,000	
2008	11,000	10%	1,900	-5%
2009	11,000	0%	1,900	0%
2010	11,000	0%	1,900	0%
2011	11,000	0%	2,300	21%
2012	10,000	-9%	2,200	-4%
2013	11,000	10%	2,200	0%
2014	11,000	0%	2,200	0%
2015	12,000	9%	2,300	5%
2016	12,000	0%	2,400	4%
2017	13,000	8%	2,500	4%
	Average	2.83%	Average	2.48%

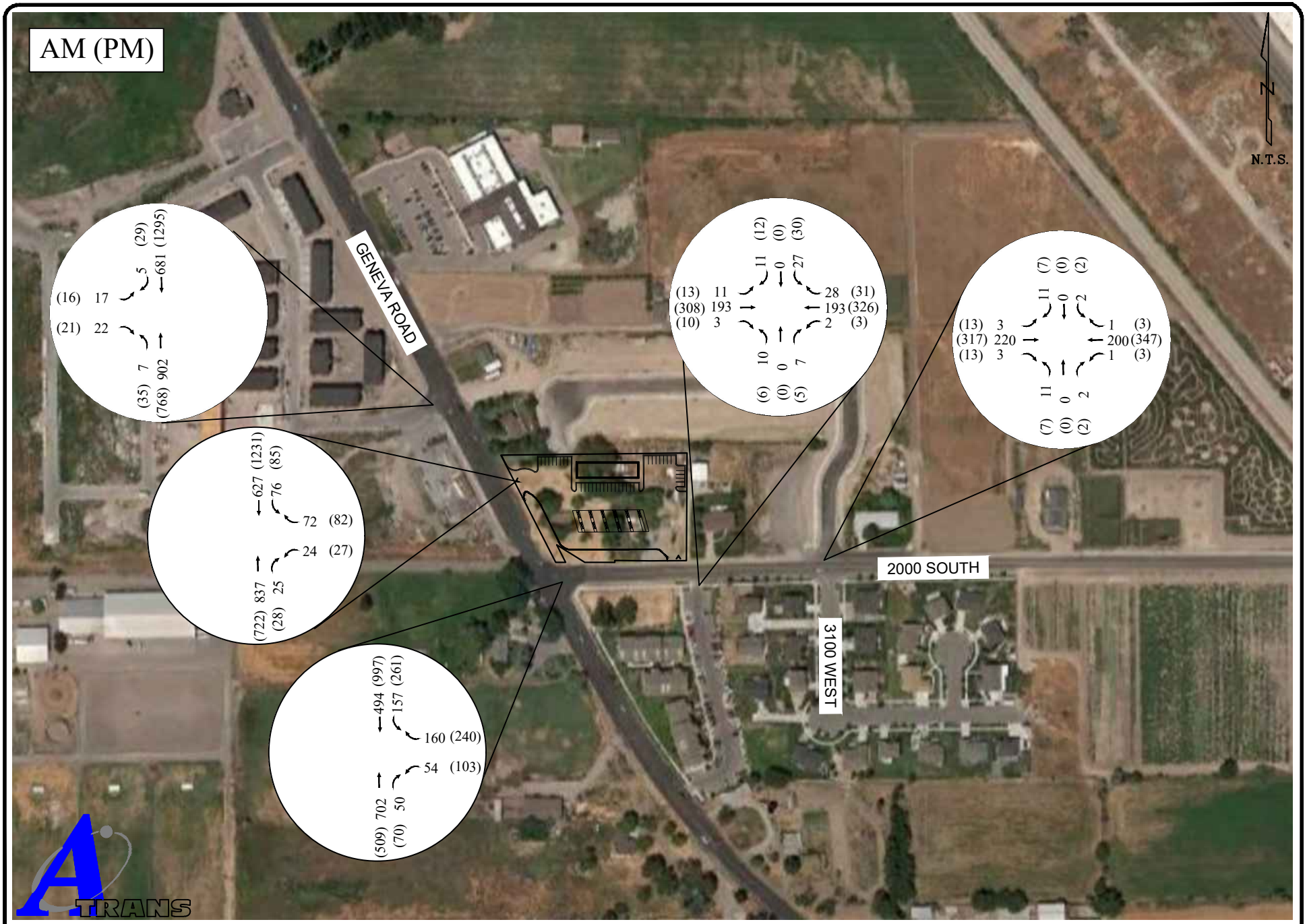
Background traffic is determined by multiplying the existing traffic by the growth factor for 2025. 2025 Background Traffic is shown in Figure 7. Total traffic in the area for the future projection years is derived by adding the non-site volume forecasts to the site trip distribution. 2020 Total Traffic is shown in Figure 9 and 2025 Total Traffic is shown in Figure 9.



A-TRANS TRANSPORTATION ENGINEERING P.O. BOX 521651, SLC, UT 84152 Phone: 801-949-0348 Fax: 801-582-6252	Figure 7	2025 Background Traffic



A-TRANS TRANSPORTATION ENGINEERING P.O. BOX 521651, SLC, UT 84152 Phone: 801-949-0348 Fax: 801-582-6252	Figure 8	2020 Total Traffic



A-TRANS TRANSPORTATION ENGINEERING P.O. BOX 521651, SLC, UT 84152 Phone: 801-949-0348 Fax: 801-582-6252	Figure 9	2025 Total Traffic

VII. Traffic Analysis

A. Level of Service Analysis

The intersection and access analysis evaluates the performance of each intersection and access using the measure of performance of delay and level of service (LOS). Tables 6-10 show the intersection and access analysis.

Analysis Results

- Geneva Road / 2000 South operates with critical WBL at LOS C in the AM peak period and LOS F in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 with and without the site the intersection operates with critical WBL at LOS D in the AM peak period and LOS F in the PM peak period. If a signal is built at this location it will operate with LOS A in 2025 with and without the site. The site traffic increases traffic at the intersection by 5.2% in the AM and 4.3% in the PM peak period.
- 3100 West / 2000 South operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 without the site the intersection operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. With the addition of the site the intersection operates with critical NBL at LOS C in the AM peak period and LOS B in the PM peak period.
- Multifamily Access / Geneva Road operates with critical WBL at LOS C in the AM peak period and LOS C in the PM peak period. With the addition of the site the access operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period. In 2025 with and without the site the intersection operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period.
- The site access along 2000 South operates with NBL delay at LOS B with and without the site. The SBL movement for site traffic leaving the site operates at LOS C throughout 2025.
- The site access along Geneva Road operates with WBL delay at LOS C in the AM and LOS D in the PM peak period. In 2025 the access operates with WBL delay at LOS C in the AM and LOS E in the PM peak period. If a signal is not built at Geneva Road / 2000 South, delay for egress traffic to the south will begin to experience high delay by 2025. With a signal at this location, traffic headed to the south from the site can use the access on 2000 South and the signal to travel to the south.

Table 6: Geneva Road / 2000 South Intersection Analysis

		WBL	WBR	NBT	NBR	SBL	SBT	INT
2020 Existing	AM	21.5 C	16.0 C			9.7 A		
	PM	70.3 F	14.4 B			9.5 A		
Opening Day	AM	23.2 C	16.9 C			9.9 A		
	PM	87.1 F	15.3 C			9.7 A		
2025 Background	AM	26.2 D	19.1 C			10.4 B		
	PM	163.6 F	16.8 C			10.1 B		
2025 Total	AM	28.7 D	20.5 C			10.6 B		
	PM	210.0 F	18.1 C			10.4 B		
2025 Background*	AM	42.9 D	13.8 B	4.4 A	1.0 A	4.4 A	3.3 A	6.1 A
	PM	45.0 D	11.7 B	4.2 A	0.9 A	6.1 A	9.5 A	9.5 A
2025 Total*	AM	43.0 D	13.7 B	4.6 A	1.0 A	4.9 A	3.4 A	6.3 A
	PM	45.0 D	11.6 B	4.4 A	0.9 A	6.8 A	10.3 B	10.0 A

*Indicates intersection control improved to include a signal.

Table 7: 3100 West / 2000 South Intersection Analysis

		NBL	EBL	WBL	SBL
2020 Existing	AM	11.0 B	7.6 A	7.6 A	9.5 A
	PM	13.2 B	7.9 A	7.8 A	11.0 B
Opening Day	AM	11.5 B	7.6 A	7.7 A	9.7 A
	PM	14.0 B	8.0 A	7.9 A	11.4 B
2025 Background	AM	11.5 B	7.6 A	7.7 A	9.7 A
	PM	14.3 B	8.0 A	7.9 A	11.6 B
2025 Total	AM	12.1 B	7.7 A	7.7 A	9.9 A
	PM	15.5 C	8.1 A	8.0 A	11.9 B

Table 8: Multifamily Access / Geneva Road Intersection Analysis

		NBL	EBL	EBR
2020 Existing	AM	8.6 A	17.8 C	12.2 B
	PM	11.4 B	24.9 C	21.1 C
Opening Day	AM	8.9 A	19.7 C	13.2 B
	PM	12.0 B	28.2 D	23.8 C
2025 Background	AM	8.9 A	20.0 C	13.1 B
	PM	12.5 B	30.0 D	25.7 D
2025 Total	AM	9.2 A	22.3 C	14.2 B
	PM	13.3 B	34.3 D	29.4 D

Table 9: 2000 South / Apartment Access (Site Access 1) Intersection Analysis

		NBL	EBL	WBL	SBL
2020 Existing	AM	10.5 B		7.6 A	
	PM	12.3 B		7.9 A	
Opening Day	AM	10.9 B	7.7 A	7.6 A	11.4 B
	PM	12.9 B	8.0 A	7.9 A	14.4 B
2025 Background	AM	10.9 B		7.7 A	
	PM	13.2 B		8.0 A	
2025 Total	AM	11.3 B	7.7 A	7.7 A	12.0 B
	PM	13.8 B	8.1 A	8.0 A	15.8 C

Table 10: Geneva Road / Site Access 2 Intersection Analysis

		NBL	WBL	SBL
Opening Day	AM	21.6 C	17.0 C	10.0 A
	PM	33.3 D	15.3 C	9.6 A
2025 Total	AM	24.6 C	19.4 C	10.6 B
	PM	41.3 E	17.1 C	10.0 B

B. Queue Analysis

Based on the projected traffic, queue storage length requirements can be determined. To determine if sufficient storage space exists to accommodate the projected demand, the intersection and accesses included in this traffic study are analyzed for queue storage capacity. The queue lengths are provided by the HCM analysis and are done through Synchro. Once the storage length is determined, this can typically be compared to the available storage length within the provided turn pockets or between intersections. The projected 2025 queue is shown in Table 11.

Table 11: 2025 Queue Analysis

		WBL	NBR	SBL
Geneva Road / 2000 South	Available	150		TWLT
	Unsignalized	175		50
	Signalized	125	50	125

The primary queueing concern for this area is the interaction between the access points and the surrounding intersections and accesses.

- Along Geneva Road, the NBL at the multifamily is estimated at 1 vehicle and the SBL at Access 2 is estimated at 1 vehicle. There is 130 feet located between the accesses and no queue overlap is anticipated but the deceleration will occur within the same two-way turn lane area.
- Along 2000 South, the EBL at Access 1 is estimated at 1 vehicle and the WBL at Geneva Road is estimated at 7 vehicles if no signal is built or 5 vehicles is a signal is built. There is approximately 225 feet between the stop bars and therefore no overlap is expected but again the deceleration will occur within the two-way turn lane which is recommended to be restriped to allow for one along 2000 South between Geneva Road and 3100 West.
- Along 2000 South, the EBL at 3100 West is estimated at 1 vehicle and the WBL at Access 1 is estimated at 1 vehicle. There is 240 feet between Access 1 (southern apartment access) and 3100 West and therefore no overlap is expected.

C. Signal Warrant Analysis

A peak hour warrant was performed for Geneva Road / 2000 South. The signal warrant is performed per MUTCD 4C.01 – 4C.10 on pages 436-447 of the 2009 Edition.

Warrant 3, Peak Hour

MUTCD 4C.04 states, the need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
   1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and
   2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and
   3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

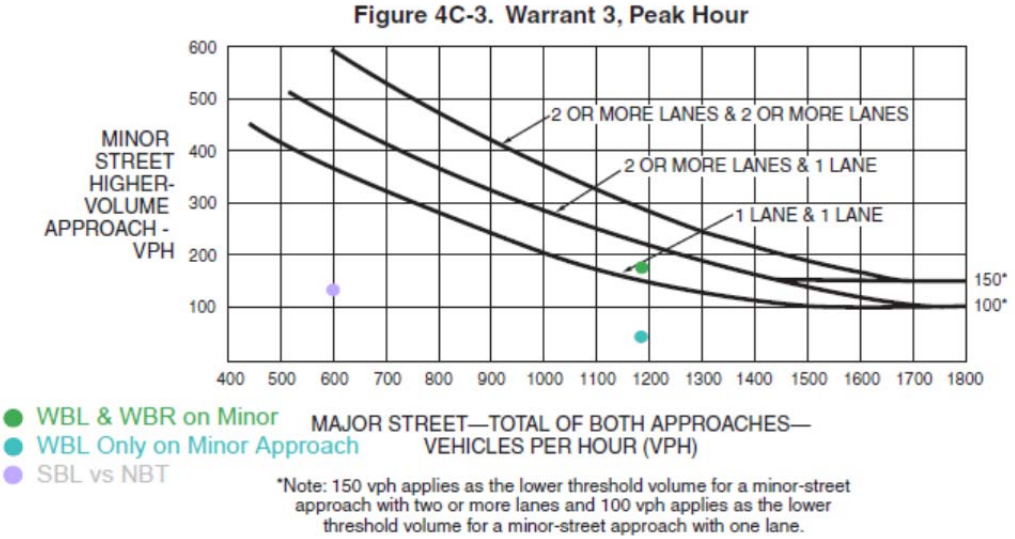
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average

The Peak Hour Volume Signal Warrant is performed for the AM and PM peak periods for the existing time period. It is done 3 different way, 1. WBL, WBT and WBR volumes are added together and compared against the sum of the NB and SB traffic. 2. WBL is compared against the sum of the NB and SB traffic. 3. SBL traffic is compared against the conflicting NBT movement. The warrant is met in the AM peak for Method 1 and 3 and in the PM peak for Method 3. Table 12 shows the volumes utilized in the warrant analysis. Graph 1 shows the AM Warrant. Graph 2 shows the PM Warrant. Based on this analysis the signal is warranted per Method 1 in both the AM and PM peak periods.

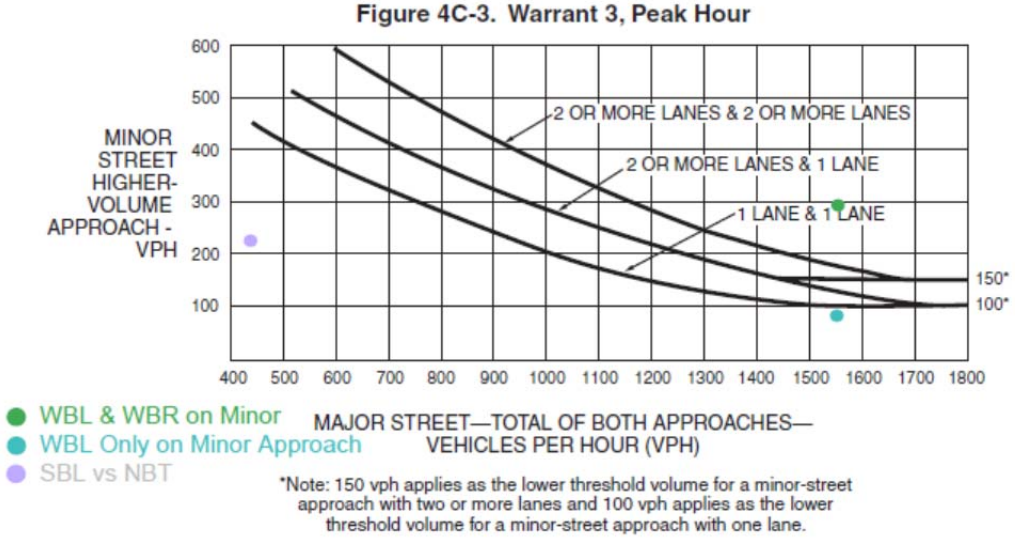
Table 12: Signal Warrant Volumes

	Method	Major	Minor	Warranted
AM	WBL and WBR on Minor Approach	1178	178	Yes
	WBL only Minor Approach	1178	45	No
		SBL	NBT	Warranted
	SBL with opposing NBT	131	594	No
PM		Major	Minor	Warranted
	WBL and WBR on Minor Approach	1552	291	Yes
	WBL only Minor Approach	1552	88	No
		SBL	NBT	Warranted
	SBL with opposing NBT	220	422	No

Graph 1: Existing Volumes Peak Hour Warrant



Graph 2: PM Peak Hour Warrant



D. Access and Roadway Category

UDOT Standard (Geneva Road)

According to the UDOT, SR 114 is categorized as a Category 5 roadway. As per UDOT Administrative Rule R930-6, a Category 3 roadway requires signal spacing at 2,640 feet, street spacing is required at 660 feet and access spacing is required at 350 feet or by variance. The distance between access points/intersections is measured from end of radius to end of adjacent radius. Access 2 is located along SR 114 approximately 160 feet north of 2000 South and 130 feet south of the apartment access on the west side of the roadway directly to the north. The access does not meet the required access spacing and therefore a variance is required.

According to UDOT Administrative Rule R930-6 a Category 5 roadway requires:

- A left turn deceleration lane with taper and storage length is required for any access with a projected peak hour left ingress turning volume greater than 10 vehicles per hour. The taper length must be included in the required deceleration length.
- A right turn deceleration lane and taper length is required for any access with a projected peak hour right ingress turning volume greater than 25 vehicles per hour. The taper length must be included in the required deceleration length.
- A right turn acceleration lane and taper length is required for any access with a projected peak hour right turning volume greater than 50 vehicles per hour when the posted speed on the highway is greater than 40 mph. The taper length must be included in the required acceleration length. A right turn acceleration lane may also be required at a signalized intersection if a free-right turn is needed to maintain an appropriate level of service for the intersection.
- Right turn deceleration and acceleration lanes are generally not required on roadways with three or more travel lanes in the direction of the right turn.
- A left turn acceleration lane may be required if it will be a benefit to the safety and operation of the roadway.
- A left turn acceleration lane is generally not required where the posted speed is less than 45 mph, the intersection is signalized, or the acceleration lane would interfere with the left turn ingress movements to any other access.

Per UDOT standards, the access requires a NBR deceleration land and a SBL deceleration lane.

Orem City Standards (2000 South)

Per Table 1: Access Spacing Based on Functional Classification on page 4 of the Orem City Access Management Standards, access spacing is measured center to center. Along 2000 South which is classified as a Minor Arterial, the required spacing is 500 feet between unsignalized full movement accesses. Access 1 is located 290 feet east of Geneva Road, it is offset 60 feet to the west of the apartment access to the south and 3100 West is located approximately 300 feet east of the apartment access or 360 feet east of Access 1.

Access 1 does not meet the required access spacing per Orem City Guidelines. The misalignment of the apartment access and the proposed access are offset with the north leg to the west and the south leg to the east, this is the optimal type of offset as there is no shared storage location required for the EBL at the site and the WBL at the apartments. This offset will however increase the size of the conflict area for NBL and SBL when compared to a typically aligned access. It is recommended that the access be built with an eastbound left deceleration lane, this can be accommodated by restriping 2000 South between Geneva Road and the access as a 3 lane facility.

E. Safety Discussion

UDOT provides a Safety Index or safety ratings in a statewide safety comparison of major roadways. This takes into account the different traffic patterns and volumes experienced in urban and rural areas. The Safety Index is a combination of four equally weighted safety analysis sub-scores: Crash Rate Score, Severe Crash Rate Score, Crashes per Mile Score and Severe Crashes per Mile Score. The Safety Index is reported on a 0 to 10 scale with 10 representing the worst condition.

This segment of State Street has a Safety Index of 4 out of 10 with a crash rate 40% of the average and a severe crash rate 40% of the average.

VIII. Conclusions

The proposed Lakeview Corner site is located on the northeast corner of Geneva Road and 2000 South in Orem, Utah. The site is planned to include a 22 pump gas station and is projected to generate 274 AM and 308 PM peak hour trips with 4,518 daily trips.

The following comments are made about the site:

- Geneva Road / 2000 South operates with critical WBL at LOS C in the AM peak period and LOS F in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 with and without the site the intersection operates with critical WBL at LOS D in the AM peak period and LOS F in the PM peak period. If a signal is built at this location it will operate with LOS A in 2025 with and without the site. The site traffic increases traffic at the intersection by 5.2% in the AM and 4.3% in the PM peak period.
- 3100 West / 2000 South operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 without the site the intersection operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. With the addition of the site the intersection operates with critical NBL at LOS C in the AM peak period and LOS B in the PM peak period.
- Multifamily Access / Geneva Road operates with critical WBL at LOS C in the AM peak period and LOS C in the PM peak period. With the addition of the site the intersection operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period. In 2025 with and without the site the intersection operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period.
- The site access along 2000 South operates with NBL delay at LOS B with and without the site. The SBL movement for site traffic leaving the site operates at LOS C throughout 2025.
- The site access along Geneva Road operates with WBL delay at LOS C in the AM and LOS D in the PM peak period. In 2025 the access operates with WBL delay at LOS C in the AM and LOS E in the PM peak period. If a signal is not built at Geneva Road / 2000 South, delay for egress traffic to the south will begin to experience high delay by 2025. With a signal at this location, traffic headed to the south from the site can use the access on 2000 South and the signal to travel to the south.
- The queue analysis indicates that there are no expected queue overlap locations between the accesses and the surrounding intersections and accesses.
- Based on this analysis the signal is warranted per Method 1 in both the AM and PM peak periods and per Method 2 in the PM peak period.
- This segment of State Street has a Safety Index of 4 out of 10 with a crash rate 40% of the average and a severe crash rate 40% of the average.

IX. Recommendations

The following non-site related improvements are recommended:

- Due to the existing volumes at the intersection of Geneva Road / 2000 South, a signal is warranted in the AM and PM peak period and the intersection operates at high side street delay. A signal is recommended at this location.

The following site related improvements are recommended:

- Access 1 on 2000 South does not meet the required access spacing per Orem City Guidelines. The misalignment of the apartment access and the proposed access are offset with the north leg to the west and the south leg to the east, this a better type of offset as there is no shared storage location overlap required for the EBL at the site and the WBL at the apartments. This offset will however increase the size of the conflict area for NBL and SBL when compared to a typically aligned access. It is recommended that the access be built with an eastbound left deceleration lane. This can be accommodated by restriping 2000 South as a three lane facility between Geneva Road and 3100 West with a center turn lane and restricting parking along both sides of the street.
- Access 2 does not meet the required access spacing and will require a variance through UDOT. Per UDOT standards, this access will requires a NBR deceleration land and a SBL deceleration lane. The center lane on Geneva Road provides the left turn deceleration. The expected site frontage improvements along Geneva Road should include a shoulder area that can be used as the right turn deceleration lane.

It should be noted that if the signal is installed at 2000 North and Geneva Road it will be a UDOT intersection and both accesses are considered to be within the functional area of the intersection which may restrict them to right-in / right-out operations depending if islands are installed to protect the turn lane area of the intersection.

APPENDICES

Appendix A	Traffic Counts and Projections
Appendix B	Without Site Intersection Analyses
Appendix C	With Site Intersection Analysis

Appendix A Traffic Counts and Projections

AM PEAK HOUR VOLUMES

INTERSECTION: **Geneva Road** **and** **2000 South**

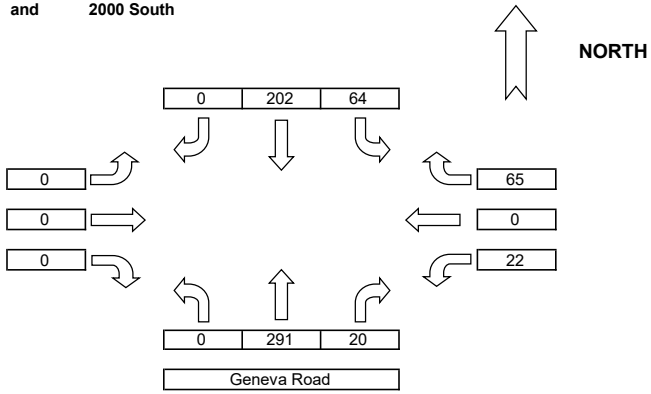
Ped = 0

N-S STREET: **Geneva Road**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **7:00 AM**
TO: **9:00 AM**

PK HR VOLUME:	664
PHF:	0.92
PEAK HOUR:	
FROM: 7:50 AM	TO: 8:50 AM



AM Traffic

COUNT DATA INPUT: Name: Lacie Name: Lacie Name: Lacie Name: Lacie

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
7:00 AM	7:05 AM	2	15	0	1	0	0	2	13	0	0	0	2	35	119	0	0
7:05 AM	7:10 AM	0	24	0	0	2	0	0	8	0	2	0	3	39	115	0	0
7:10 AM	7:15 AM	0	19	0	0	0	0	1	22	0	2	0	1	45	117	0	0
7:15 AM	7:20 AM	0	11	3	0	0	0	3	8	0	1	0	5	31	114	0	0
7:20 AM	7:25 AM	0	19	0	0	0	0	9	7	0	1	0	5	41	131	0	0
7:25 AM	7:30 AM	0	18	3	0	0	0	2	12	0	2	0	5	42	129	0	0
7:30 AM	7:35 AM	0	26	1	0	0	0	3	15	0	1	0	2	48	134	0	0
7:35 AM	7:40 AM	0	21	0	0	0	0	4	12	0	0	0	2	39	152	0	0
7:40 AM	7:45 AM	0	23	2	0	0	0	4	12	0	2	0	4	47	176	0	0
7:45 AM	7:50 AM	0	25	3	0	0	0	13	18	0	1	0	6	66	175	0	0
7:50 AM	7:55 AM	0	30	2	0	0	0	5	17	0	1	0	8	63	152	0	0
7:55 AM	8:00 AM	0	17	3	0	0	0	2	21	0	0	0	3	46	142	0	0
8:00 AM	8:05 AM	0	15	2	0	0	0	8	13	0	2	0	3	43	159	0	0
8:05 AM	8:10 AM	0	25	2	0	0	0	6	9	0	2	0	9	53	170	0	0
8:10 AM	8:15 AM	0	31	2	0	0	0	9	16	0	2	0	3	63	181	0	0
8:15 AM	8:20 AM	0	23	3	0	0	0	4	16	0	3	0	5	54	165	0	0
8:20 AM	8:25 AM	0	27	1	0	0	0	6	22	0	2	0	6	64	168	0	0
8:25 AM	8:30 AM	0	22	1	0	0	0	1	17	0	0	0	6	47	162	0	0
8:30 AM	8:35 AM	0	21	1	0	0	0	6	18	0	7	0	4	57	161	0	0
8:35 AM	8:40 AM	0	29	1	0	0	0	6	12	0	2	0	8	58	174	0	0
8:40 AM	8:45 AM	0	28	1	0	0	0	2	14	0	0	0	1	46	161	0	0
8:45 AM	8:50 AM	0	23	1	0	0	0	9	27	0	1	0	9	70	167	0	0
8:50 AM	8:55 AM	0	14	0	0	0	0	11	13	0	1	0	6	45	97	0	0
8:55 AM	9:00 AM	0	21	1	0	0	0	6	15	0	1	0	8	52	52	0	0

PM PEAK HOUR VOLUMES

Ped = 1

INTERSECTION: **Geneva Road** **and** **2000 South**

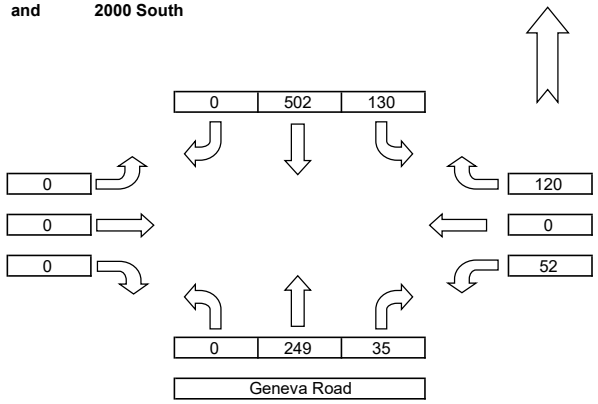
N-S STREET: **Geneva Road**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **4:00 PM**
TO: **6:00 PM**

PK HR VOLUME:	1,088
PHF:	0.86
PEAK HOUR:	
FROM:	TO:
4:40 PM	5:40 PM

2000 South



PM Traffic

COUNT DATA INPUT: Name: Lacie Name: Lacie Name: Lacie Name: Lacie

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
4:00 PM	4:05 PM	0	17	2	0	0	0	6	36	1	1	0	4	67	223	0	1
4:05 PM	4:10 PM	0	35	1	0	0	0	9	26	0	2	0	4	77	243	0	0
4:10 PM	4:15 PM	0	21	2	0	0	0	14	30	0	3	0	9	79	248	0	0
4:15 PM	4:20 PM	0	26	4	0	0	0	4	44	0	1	0	8	87	250	0	0
4:20 PM	4:25 PM	0	19	2	0	0	0	8	45	0	2	0	6	82	260	0	0
4:25 PM	4:30 PM	0	29	2	0	0	0	7	32	0	3	0	8	81	252	0	0
4:30 PM	4:35 PM	0	22	2	0	0	0	7	54	0	2	0	10	97	268	0	0
4:35 PM	4:40 PM	0	30	3	0	0	0	6	28	0	2	0	5	74	255	0	0
4:40 PM	4:45 PM	0	22	4	0	0	0	11	49	0	4	0	7	97	275	0	0
4:45 PM	4:50 PM	0	13	4	0	0	0	14	44	0	3	0	6	84	270	0	1
4:50 PM	4:55 PM	0	16	6	0	0	0	9	51	0	5	0	7	94	258	0	0
4:55 PM	5:00 PM	0	30	4	0	0	0	8	44	0	3	0	3	92	240	0	0
5:00 PM	5:05 PM	0	21	2	0	0	0	5	31	0	4	0	9	72	248	0	0
5:05 PM	5:10 PM	0	23	2	0	0	0	15	27	0	3	0	6	76	292	0	0
5:10 PM	5:15 PM	0	20	4	0	0	0	13	46	0	3	0	14	100	316	0	0
5:15 PM	5:20 PM	0	22	3	0	0	0	13	59	0	4	0	15	116	299	0	0
5:20 PM	5:25 PM	0	28	1	0	0	0	13	38	0	7	0	13	100	272	0	0
5:25 PM	5:30 PM	0	21	1	0	0	0	8	32	0	5	0	16	83	257	0	0
5:30 PM	5:35 PM	0	19	3	0	0	0	9	39	0	4	0	15	89	271	0	0
5:35 PM	5:40 PM	0	14	1	0	0	0	12	42	0	7	0	9	85	251	0	0
5:40 PM	5:45 PM	0	16	1	0	0	0	15	44	0	8	0	13	97	246	0	0
5:45 PM	5:50 PM	0	21	2	0	0	0	6	34	0	1	0	5	69	225	0	1
5:50 PM	5:55 PM	0	21	1	0	0	0	14	25	0	8	0	11	80	156	0	0
5:55 PM	6:00 PM	0	18	1	0	0	0	11	38	0	3	0	5	76	76	0	0

AM PEAK HOUR VOLUMES

INTERSECTION: **3100 West** **and** **2000 South**

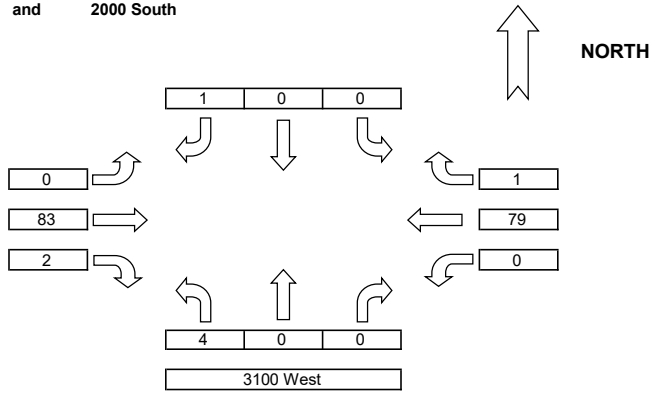
Ped = 0

N-S STREET: **3100 West**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **7:00 AM**
TO: **9:00 AM**

PK HR VOLUME:	170
PHF:	0.89
PEAK HOUR:	
FROM:	TO:
7:40 AM	8:40 AM



AM Traffic

COUNT DATA INPUT: Name: Bethea Name: Bethea Name: Bethea Name: Bethea

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
7:00 AM	7:05 AM	0	0	0	0	2	1	0	0	0	0	7	0	10	24	0	0
7:05 AM	7:10 AM	1	0	1	0	3	0	0	0	0	0	4	0	9	23	0	0
7:10 AM	7:15 AM	0	0	0	0	2	0	0	0	0	0	3	0	5	25	0	0
7:15 AM	7:20 AM	0	0	0	0	6	0	0	0	0	0	3	0	9	34	0	0
7:20 AM	7:25 AM	0	0	0	0	6	1	0	0	0	0	4	0	11	32	0	0
7:25 AM	7:30 AM	0	0	0	0	6	0	0	0	0	0	8	0	14	29	0	0
7:30 AM	7:35 AM	1	0	0	0	5	0	0	0	0	0	1	0	7	26	0	0
7:35 AM	7:40 AM	0	0	0	0	6	0	0	0	0	0	2	0	8	38	0	0
7:40 AM	7:45 AM	0	0	0	0	6	0	0	0	0	0	5	0	11	48	0	0
7:45 AM	7:50 AM	0	0	0	0	12	0	0	0	0	0	7	0	19	47	0	0
7:50 AM	7:55 AM	0	0	0	0	10	0	0	0	0	0	8	0	18	43	0	0
7:55 AM	8:00 AM	0	0	0	0	7	0	0	0	0	0	3	0	10	40	0	0
8:00 AM	8:05 AM	1	0	0	0	9	0	0	0	0	0	5	0	15	43	0	0
8:05 AM	8:10 AM	0	0	0	0	6	0	0	0	0	0	9	0	15	38	0	0
8:10 AM	8:15 AM	1	0	0	0	7	0	0	0	0	0	5	0	13	36	0	0
8:15 AM	8:20 AM	0	0	0	0	4	2	0	0	0	0	4	0	10	33	0	0
8:20 AM	8:25 AM	1	0	0	0	4	0	0	0	0	0	7	1	13	37	0	0
8:25 AM	8:30 AM	0	0	0	0	4	0	0	0	0	0	6	0	10	46	0	0
8:30 AM	8:35 AM	0	0	0	0	5	0	0	0	0	0	9	0	14	43	0	0
8:35 AM	8:40 AM	1	0	0	0	9	0	0	0	1	0	11	0	22	46	0	0
8:40 AM	8:45 AM	0	0	1	0	4	0	0	0	0	0	1	1	7	39	0	0
8:45 AM	8:50 AM	1	0	0	0	10	0	0	0	1	0	5	0	17	47	0	0
8:50 AM	8:55 AM	0	0	0	0	9	0	0	0	0	0	6	0	15	30	0	0
8:55 AM	9:00 AM	0	0	0	0	7	0	0	0	0	0	8	0	15	15	0	0

PM PEAK HOUR VOLUMES

Ped =0

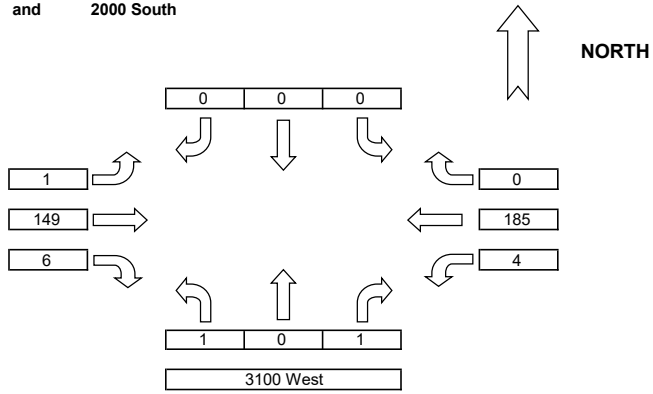
INTERSECTION: **3100 West** **and** **2000 South**

N-S STREET: **3100 West**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **4:00 PM**
TO: **6:00 PM**

PK HR VOLUME:	347
PHF:	0.83
PEAK HOUR:	
FROM: 4:55 PM	TO: 5:55 PM



PM Traffic

COUNT DATA INPUT: Name: Bethea Name: Bethea Name: Bethea Name: Bethea

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
4:00 PM	4:05 PM	0	0	0	0	11	0	0	2	0	0	4	0	17	57	0	0
4:05 PM	4:10 PM	0	0	0	0	13	0	0	0	1	1	11	0	26	60	0	0
4:10 PM	4:15 PM	0	0	0	1	4	0	0	0	0	0	9	0	14	50	0	0
4:15 PM	4:20 PM	0	0	0	0	8	0	0	0	0	1	11	0	20	65	0	0
4:20 PM	4:25 PM	0	0	0	0	10	0	0	0	0	0	6	0	16	65	0	0
4:25 PM	4:30 PM	1	0	0	0	15	0	0	0	0	0	13	0	29	77	0	0
4:30 PM	4:35 PM	0	0	1	0	10	0	0	0	0	0	9	0	20	85	0	0
4:35 PM	4:40 PM	0	0	0	0	17	0	1	0	0	0	9	1	28	83	0	0
4:40 PM	4:45 PM	0	0	0	0	24	1	0	0	0	0	12	0	37	66	0	0
4:45 PM	4:50 PM	0	0	0	0	10	0	0	0	0	0	8	0	18	58	0	0
4:50 PM	4:55 PM	0	0	0	0	9	0	0	0	0	0	2	0	11	68	0	0
4:55 PM	5:00 PM	0	0	0	0	13	0	0	0	0	1	15	0	29	92	0	0
5:00 PM	5:05 PM	0	0	0	1	14	1	0	0	0	0	12	0	28	104	0	0
5:05 PM	5:10 PM	1	0	0	0	17	0	0	0	0	0	17	0	35	105	0	0
5:10 PM	5:15 PM	0	0	0	0	20	0	0	0	0	0	21	0	41	96	0	0
5:15 PM	5:20 PM	0	0	0	0	6	1	0	0	0	0	22	0	29	78	0	0
5:20 PM	5:25 PM	0	0	0	0	12	1	0	0	0	0	13	0	26	83	0	0
5:25 PM	5:30 PM	0	0	0	0	8	0	0	0	0	1	14	0	23	83	0	0
5:30 PM	5:35 PM	0	0	0	0	17	0	0	0	0	1	16	0	34	84	0	0
5:35 PM	5:40 PM	0	0	1	0	10	0	0	0	0	0	15	0	26	80	0	0
5:40 PM	5:45 PM	0	0	0	0	8	1	0	0	0	0	15	0	24	76	0	0
5:45 PM	5:50 PM	0	0	0	0	12	2	0	0	0	0	16	0	30	65	0	0
5:50 PM	5:55 PM	0	0	0	0	12	0	0	0	0	1	9	0	22	35	0	0
5:55 PM	6:00 PM	0	0	0	0	8	0	0	0	0	0	5	0	13	13	0	0

Approx. 75 Units

AM PEAK HOUR VOLUMES

Ped = 0

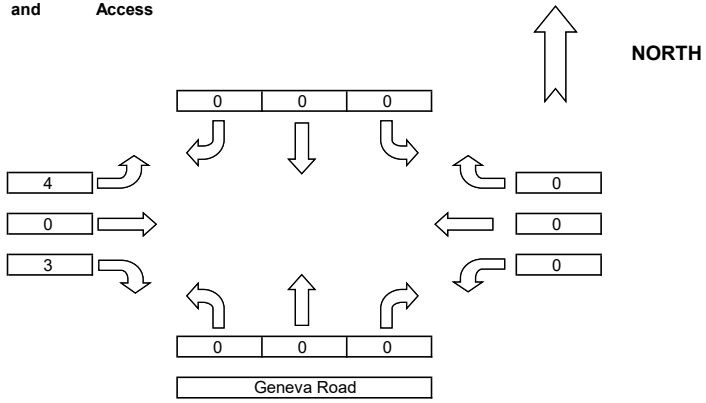
INTERSECTION: **Geneva Road** **and** **Access**

N-S STREET: **Geneva Road**
E-W STREET: **Access**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **7:00 AM**
TO: **9:00 AM**

PK HR VOLUME:	7
PHF:	0.58
PEAK HOUR:	
FROM: 8:00 AM	TO: 9:00 AM



AM Traffic

COUNT DATA INPUT: Name: Lacie Name: Lacie Name: Lacie Name: Lacie

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
7:00 AM	7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:05 AM	7:10 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
7:10 AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20 AM	7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:30 AM	7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:35 AM	7:40 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
7:40 AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:45 AM	7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:50 AM	7:55 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
7:55 AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:00 AM	8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:05 AM	8:10 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0
8:10 AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8:15 AM	8:20 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	3	0	0
8:20 AM	8:25 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0
8:25 AM	8:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0
8:30 AM	8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:35 AM	8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:40 AM	8:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0
8:45 AM	8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8:50 AM	8:55 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0
8:55 AM	9:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0

Approx. 75 Units

PM PEAK HOUR VOLUMES

Ped = 0

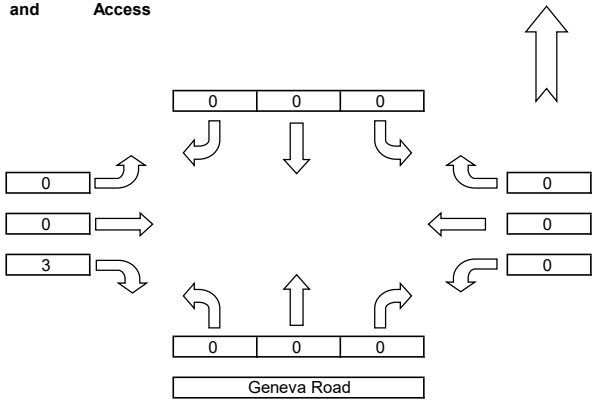
INTERSECTION: **Geneva Road** **and** **Access**

N-S STREET: **Geneva Road**
E-W STREET: **Access**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **4:00 PM**
TO: **6:00 PM**

PK HR VOLUME:	3
PHF:	0.25
PEAK HOUR:	
FROM: 4:45 PM	TO: 5:45 PM



PM Traffic

COUNT DATA INPUT: Name: Lacie Name: Lacie Name: Lacie Name: Lacie

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
4:00 PM	4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
4:10 PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
4:15 PM	4:20 PM	0	0	0	0	0	1	0	0	1	0	0	0	2	2	0	0
4:20 PM	4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:25 PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:50 PM	4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:55 PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
5:25 PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
5:30 PM	5:35 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	3	0	0
5:35 PM	5:40 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0
5:40 PM	5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0
5:45 PM	5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Approx. 47-50 Units

AM PEAK HOUR VOLUMES

Ped = 0

INTERSECTION: **Access** **and** **2000 South**

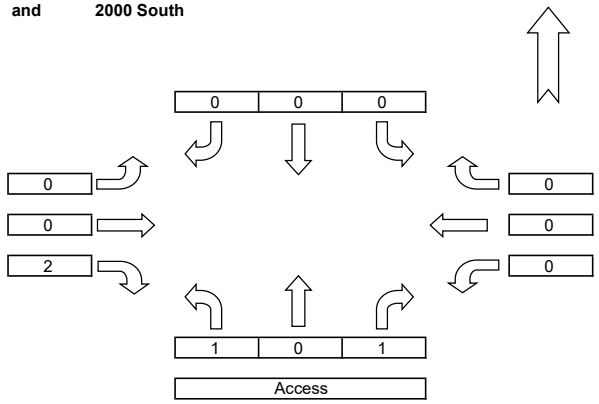
N-S STREET: **Access**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **7:00 AM**
TO: **9:00 AM**

PK HR VOLUME:	4
PHF:	0.33
PEAK HOUR:	
FROM:	TO:
7:00 AM	8:00 AM

2000 South



AM Traffic

COUNT DATA INPUT: Name: Bethea Name: Bethea Name: Bethea Name: Bethea

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
7:00 AM	7:05 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0
7:05 AM	7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10 AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20 AM	7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40 AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
7:45 AM	7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
7:50 AM	7:55 AM	0	0	1	0	0	1	0	0	0	0	0	0	2	3	0	0
7:55 AM	8:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
8:00 AM	8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:05 AM	8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	8:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:25 AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:35 AM	8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:40 AM	8:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
8:45 AM	8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8:50 AM	8:55 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
8:55 AM	9:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0

Approx. 47-50 Units

PM PEAK HOUR VOLUMES

Ped = 0

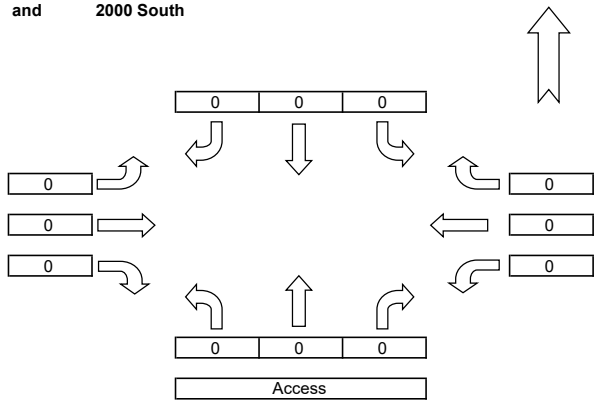
INTERSECTION: **Access** **and** **2000 South**

N-S STREET: **Access**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **4:00 PM**
TO: **6:00 PM**

PK HR VOLUME:	0
PHF:	#DIV/0!
PEAK HOUR:	
FROM:	TO:
4:00 PM	5:00 PM



PM Traffic

COUNT DATA INPUT: Name: Bethea Name: Bethea Name: Bethea Name: Bethea

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
4:00 PM	4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:20 PM	4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:25 PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:50 PM	4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:55 PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRIP GENERATION

			Trip Rate			Trips			In / Out %							New
ITE 10th Ed	Size	Land Use	AM	PM	Daily	AM	PM	Daily	AM IN	AM Out	PM IN	PM OUT	AM IN	AM Out	PM IN	PM OUT
Gas Station	22	945	12.47	13.99	205.36	274	308	4518	51%	49%	51%	49%	140	134	157	151
			0	0	0	0	0	0	0%	0%	0%	0%	0	0	0	0
Total						**274**	**308**	**4518**					**140**	**134**	**157**	**151**

Historic Growth

Traffic on Utah Highways

Geneva Road			**2000 South**		
Year	AADT	Growth	Year	AADT	Growth
2007	10,000		2007	2,000	
2008	11,000	10%	2008	1,900	-5%
2009	11,000	0%	2009	1,900	0%
2010	11,000	0%	2010	1,900	0%
2011	11,000	0%	2011	2,300	21%
2012	10,000	-9%	2012	2,200	-4%
2013	11,000	10%	2013	2,200	0%
2014	11,000	0%	2014	2,200	0%
2015	12,000	9%	2015	2,300	5%
2016	12,000	0%	2016	2,400	4%
2017	13,000	8%	2017	2,500	4%
	Avg	**2.83%**		**Avg**	**2.48%**

2.65%	Growth Factc	Years	Analysis Year
	1.00	0	2020
	1.14	5	2025
	1.73	21	2040

Straight line growth assumed between 2016 and 2040

Geneva Road / 2000 South				1.14	
	2020	Site	2020	2025	2025
AM	Existing	Traffic	Total	Growth	Total
EBL			0	0	0
EBT			0	0	0
EBR			0	0	0
WBL	45	3	48	51	54
WBT			0	0	0
WBR	133	8	141	152	160
NBL			0	0	0
NBT	594	25	619	677	702
NBR	41	3	44	47	50
SBL	131	8	139	149	157
SBT	412	24	436	470	494
SBR			0	0	0
East	350			399	
West	0			0	
North	1270			1448	
South	1092			1245	

5.24%

	2020	Site	2020	2025	2025
PM	Existing	Traffic	Total	Growth	Total
EBL			0	0	0
EBT			0	0	0
EBR			0	0	0
WBL	88	3	91	100	103
WBT			0	0	0
WBR	203	9	212	231	240
NBL			0	0	0
NBT	422	28	450	481	509
NBR	59	3	62	67	70
SBL	220	10	230	251	261
SBT	851	27	878	970	997
SBR			0	0	0
East	570			650	
West	0			0	
North	1696			1933	
South	1420			1619	

4.34%

3100 West / 2000 South				1.14	
	2020	Site	2020	2025	2025
AM	Existing	Traffic	Total	Growth	Total
EBL	3		3	3	3
EBT	169	27	196	193	220
EBR	3		3	3	3
WBL	1		1	1	1
WBT	151	28	179	172	200
WBR	1		1	1	1
NBL	10		10	11	11
NBT	0		0	0	0
NBR	2		2	2	2
SBL	2		2	2	2
SBT	0		0	0	0
SBR	10		10	11	11
East	326			372	
West	346			394	
North	16			18	
South	16			18	

15.63%

	2020	Site	2020	2025	2025
PM	Existing	Traffic	Total	Growth	Total
EBL	11		11	13	13
EBT	252	30	282	287	317
EBR	11		11	13	13
WBL	3		3	3	3
WBT	277	31	308	316	347
WBR	3		3	3	3
NBL	6		6	7	7
NBT	0		0	0	0
NBR	2		2	2	2
SBL	2		2	2	2
SBT	0		0	0	0
SBR	6		6	7	7
East	539			614	
West	563			642	
North	22			25	
South	22			25	

10.65%

Geneva Road / Apartment Access				1.14	
	2020	Site	2020	2025	2025
AM	Existing	Traffic	Total	Growth	Total
EBL	15		15	17	17
EBT			0	0	0
EBR	19		19	22	22
WBL			0	0	0
WBT			0	0	0
WBR			0	0	0
NBL	6		6	7	7
NBT	721	80	801	822	902
NBR			0	0	0
SBL			0	0	0
SBT	524	84	608	597	681
SBR	4		4	5	5
East	0			0	
West	44			50	
North	1264			1441	
South	1270			1448	

12.72%

	2020	Site	2020	2025	2025
PM	Existing	Traffic	Total	Growth	Total
EBL	14		14	16	16
EBT			0	0	0
EBR	18		18	21	21
WBL			0	0	0
WBT			0	0	0
WBR			0	0	0
NBL	31		31	35	35
NBT	594	91	685	677	768
NBR			0	0	0
SBL			0	0	0
SBT	1053	95	1148	1200	1295
SBR	25		25	29	29
East	0			0	
West	88			100	
North	1686			1922	
South	1696			1933	

10.72%

Site Access 1 / 2000 South				1.14	
	2020	Site	2020	2025	2025
AM	Existing	Traffic	Total	Growth	Total
EBL		11	11	0	11
EBT	169		169	193	193
EBR	3		3	3	3
WBL	2		2	2	2
WBT	169		169	193	193
WBR		28	28	0	28
NBL	9		9	10	10
NBT			0	0	0
NBR	6		6	7	7
SBL		27	27	0	27
SBT			0	0	0
SBR		11	11	0	11
East	346			394	
West	350			399	
North	0			0	
South	20			23	

21.51%

	2020	Site	2020	2025	2025
PM	Existing	Traffic	Total	Growth	Total
EBL		13	13	0	13
EBT	270		270	308	308
EBR	9		9	10	10
WBL	3		3	3	3
WBT	286		286	326	326
WBR		31	31	0	31
NBL	5		5	6	6
NBT			0	0	0
NBR	4		4	5	5
SBL		30	30	0	30
SBT			0	0	0
SBR		12	12	0	12
East	563			642	
West	570			650	
North	0			0	
South	21			24	

14.90%

Geneva Road / Site Access 2				1.14	
	2020	Site	2020	2025	2025
AM	Existing	Traffic	Total	Growth	Total
EBL			0	0	0
EBT			0	0	0
EBR			0	0	0
WBL		24	24	0	24
WBT			0	0	0
WBR		72	72	0	72
NBL			0	0	0
NBT	727	8	735	829	837
NBR		25	25	0	25
SBL		76	76	0	76
SBT	543	8	551	619	627
SBR			0	0	0
East	0			0	
West	0			0	
North	1270			1448	
South	1270			1448	

16.77%

	2020	Site	2020	2025	2025
PM	Existing	Traffic	Total	Growth	Total
EBL			0	0	0
EBT			0	0	0
EBR			0	0	0
WBL		27	27	0	27
WBT			0	0	0
WBR		82	82	0	82
NBL			0	0	0
NBT	625	9	634	713	722
NBR		28	28	0	28
SBL		85	85	0	85
SBT	1071	10	1081	1221	1231
SBR			0	0	0
East	0			0	
West	0			0	
North	1696			1933	
South	1696			1933	

14.21%

ArcGIS UDOT Access Category Identification Map

Details | Basemap | Share Print | Measure Find address or place

Legend

Mile Posts

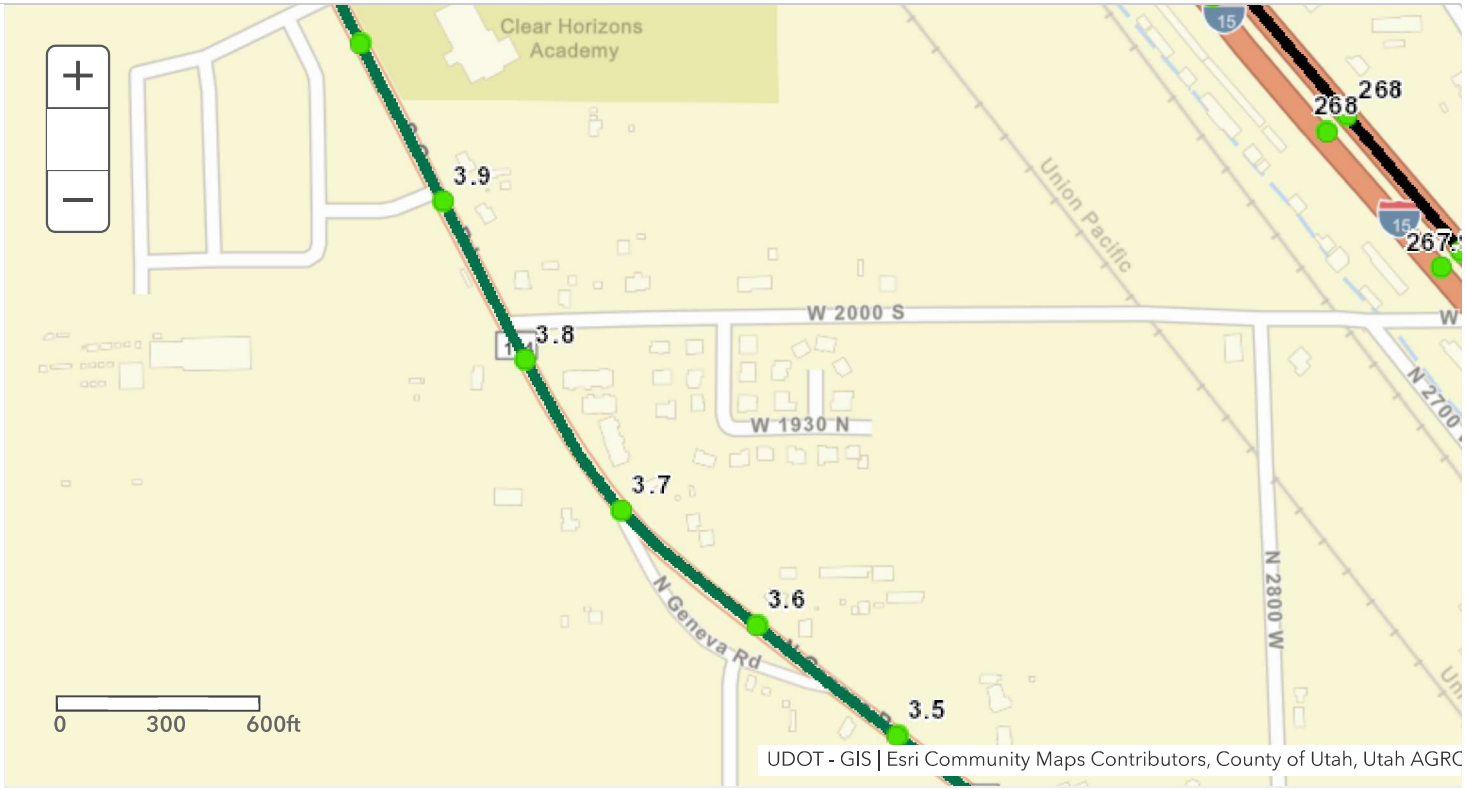
Tenth Mile Posts

UDOT Access Category Identification

UDOT Access Category Identification

- 1
- 2
- 3
- 4

. Trust Center . Legal . Contact Esri . Report Abuse .



Intersection 6316	Normal		Normal		Data Collection		Difference bet
Geneva Rd / University Parkway	5-Feb-20		12-Feb-20		31-Mar		Normal Days and
Movement	AM	PM	AM	PM	AM	PM	AM
NBL	64	19	73	24	16		23%
NBT	168	152	416	355	104		36%
NBR	38	35	80	64	55		93%
SBL	434	570	430	571	201		47%
SBT	442	666	427	636	239		55%
SBR							#DIV/0!
EBL	36	128	47	119	33		80%
EBT	110	314	123	359	81		70%
EBR	15	43	20	57	17		
WBL	186	340	160	401	99		57%
WBT	338	100	394	130	181		49%
WBR	100	143	176	211	103		
							#DIV/0!

			Normal		Normal		Data Collection		
			11-Feb-20		12-Feb-20		31-Mar		
			AM	PM	AM	PM	AM	PM	AM
Northbound			539	415	569	443	175	165	32%
Southbound			841	1139	857	1207	440	824	52%
Eastbound			178	599	190	535	131	277	71%
Westbouond			691	725	730	742	383	441	54%
Intersection			2249	2878	2346	2927	1129	1707	**49%**

:ween average of
d Actual Count Day

PM
0%
0%
0%
0%
0%
#DIV/0!
0%
0%
0%
0%

#DIV/0!

PM
38%
70%
49%
60%
59%

UDOT Traffic and Safety Data (2013-2015)

A story map

Safety Index Crash Rate Severe Crash Rate Crashes Per Mile Severe Crashes Per Mile

1 of 1

SR-114 at 820 North

Route:	SR-114
Location:	820 North
Region:	3
Beginning Milepost:	2.32
Ending Milepost:	4.96
2013-2015 Average AADT:	11,407
Functional Class:	Urban Principal Arterial
Total Crashes:	**38**
Actual Crash Rate:	1.2
Average Crash Rate:	2.9
Actual vs. Average Crash Rate:	0.4
Crashes per Mile per Year:	4.8
Total Severe Crashes:	**1**
Actual Severe Crash Rate:	3.0
Average Severe Crash Rate:	7.6
Actual vs. Average Severe Crash Rate:	0.4
Severe Crashes per Mile per Year:	0.1
Safety Index:	**4**
PROTECTED UNDER:	23 USC 409
More Information:	UDOT Crash Statistics

Appendix B Without Site Intersection Analyses

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	133	594	41	131	412
Future Vol, veh/h	45	133	594	41	131	412
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	49	145	646	45	142	448

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1378	646	0	0	691	0
Stage 1	646	-	-	-	-	-
Stage 2	732	-	-	-	-	-
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	160	472	-	-	904	-
Stage 1	522	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	135	472	-	-	904	-
Mov Cap-2 Maneuver	267	-	-	-	-	-
Stage 1	522	-	-	-	-	-
Stage 2	401	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.4	0	2.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	267	472	904	-
HCM Lane V/C Ratio	-	-	0.183	0.306	0.158	-
HCM Control Delay (s)	-	-	21.5	16	9.7	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0.7	1.3	0.6	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	169	3	1	151	1	10	0	2	2	0	10
Future Vol, veh/h	3	169	3	1	151	1	10	0	2	2	0	10
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	3	184	3	1	164	1	11	0	2	2	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	165	0	0	187	0	0	364	359	186	360	360	165
Stage 1	-	-	-	-	-	-	192	192	-	167	167	-
Stage 2	-	-	-	-	-	-	172	167	-	193	193	-
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	1413	-	-	1387	-	-	592	568	856	596	567	879
Stage 1	-	-	-	-	-	-	810	742	-	835	760	-
Stage 2	-	-	-	-	-	-	830	760	-	809	741	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1413	-	-	1387	-	-	583	566	856	593	565	879
Mov Cap-2 Maneuver	-	-	-	-	-	-	583	566	-	593	565	-
Stage 1	-	-	-	-	-	-	808	741	-	833	759	-
Stage 2	-	-	-	-	-	-	819	759	-	805	740	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	11	9.5
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	616	1413	-	-	1387	-	-	814
HCM Lane V/C Ratio	0.021	0.002	-	-	0.001	-	-	0.016
HCM Control Delay (s)	11	7.6	0	-	7.6	0	-	9.5
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	19	6	721	524	4
Future Vol, veh/h	15	19	6	721	524	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	21	7	784	570	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1368	570	574	0	-	0
Stage 1	570	-	-	-	-	-
Stage 2	798	-	-	-	-	-
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	162	521	999	-	-	-
Stage 1	566	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	161	521	999	-	-	-
Mov Cap-2 Maneuver	298	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.7	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	999	-	298	521	-	-
HCM Lane V/C Ratio	0.007	-	0.055	0.04	-	-
HCM Control Delay (s)	8.6	-	17.8	12.2	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	169	3	2	169	0	9	0	6	0	0	0
Future Vol, veh/h	0	169	3	2	169	0	9	0	6	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	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	0	184	3	2	184	0	10	0	7	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	184	0	0	187	0	0	374	374	186	377	375	184
Stage 1	-	-	-	-	-	-	186	186	-	188	188	-
Stage 2	-	-	-	-	-	-	188	188	-	189	187	-
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	1391	-	-	1387	-	-	583	557	856	580	556	858
Stage 1	-	-	-	-	-	-	816	746	-	814	745	-
Stage 2	-	-	-	-	-	-	814	745	-	813	745	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1391	-	-	1387	-	-	582	556	856	575	555	858
Mov Cap-2 Maneuver	-	-	-	-	-	-	582	556	-	575	555	-
Stage 1	-	-	-	-	-	-	816	746	-	814	744	-
Stage 2	-	-	-	-	-	-	812	744	-	807	745	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	10.5	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	667	1391	-	-	1387	-	-	-
HCM Lane V/C Ratio	0.024	-	-	-	0.002	-	-	-
HCM Control Delay (s)	10.5	0	-	-	7.6	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	727	0	0	543
Future Vol, veh/h	0	0	727	0	0	543
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	0	790	0	0	590

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1380	790	0	0	790	0
Stage 1	790	-	-	-	-	-
Stage 2	590	-	-	-	-	-
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	159	390	-	-	830	-
Stage 1	447	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	159	390	-	-	830	-
Mov Cap-2 Maneuver	297	-	-	-	-	-
Stage 1	447	-	-	-	-	-
Stage 2	554	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	830	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection	
Int Delay, s/veh	6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	88	203	422	59	220	851
Future Vol, veh/h	88	203	422	59	220	851
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	96	221	459	64	239	925

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1862	459	0	0	523	0
Stage 1	459	-	-	-	-	-
Stage 2	1403	-	-	-	-	-
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	~ 80	602	-	-	1043	-
Stage 1	636	-	-	-	-	-
Stage 2	227	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 62	602	-	-	1043	-
Mov Cap-2 Maneuver	143	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	175	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.3	0	1.9
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	143	602	1043	-
HCM Lane V/C Ratio	-	-	0.669	0.367	0.229	-
HCM Control Delay (s)	-	-	70.3	14.4	9.5	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	3.7	1.7	0.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	252	11	3	277	3	6	0	2	2	0	6
Future Vol, veh/h	11	252	11	3	277	3	6	0	2	2	0	6
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	12	274	12	3	301	3	7	0	2	2	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	304	0	0	286	0	0	616	614	280	614	619	303
Stage 1	-	-	-	-	-	-	304	304	-	309	309	-
Stage 2	-	-	-	-	-	-	312	310	-	305	310	-
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	1257	-	-	1276	-	-	403	407	759	404	404	737
Stage 1	-	-	-	-	-	-	705	663	-	701	660	-
Stage 2	-	-	-	-	-	-	699	659	-	705	659	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1257	-	-	1276	-	-	395	401	759	399	398	737
Mov Cap-2 Maneuver	-	-	-	-	-	-	395	401	-	399	398	-
Stage 1	-	-	-	-	-	-	697	656	-	693	658	-
Stage 2	-	-	-	-	-	-	691	657	-	695	652	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	13.2	11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	449	1257	-	-	1276	-	-	608
HCM Lane V/C Ratio	0.019	0.01	-	-	0.003	-	-	0.014
HCM Control Delay (s)	13.2	7.9	0	-	7.8	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	18	31	594	1053	25
Future Vol, veh/h	14	18	31	594	1053	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	15	20	34	646	1145	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1859	1145	1172	0	-	0
Stage 1	1145	-	-	-	-	-
Stage 2	714	-	-	-	-	-
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	81	243	596	-	-	-
Stage 1	303	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	76	243	596	-	-	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	286	-	-	-	-	-
Stage 2	485	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.8	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	596	-	196	243	-	-
HCM Lane V/C Ratio	0.057	-	0.078	0.081	-	-
HCM Control Delay (s)	11.4	-	24.9	21.1	-	-
HCM Lane LOS	B	-	C	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	0.3	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	270	9	3	286	0	5	0	4	0	0	0
Future Vol, veh/h	0	270	9	3	286	0	5	0	4	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	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	0	293	10	3	311	0	5	0	4	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	311	0	0	303	0	0	615	615	298	617	620	311
Stage 1	-	-	-	-	-	-	298	298	-	317	317	-
Stage 2	-	-	-	-	-	-	317	317	-	300	303	-
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	1249	-	-	1258	-	-	403	407	741	402	404	729
Stage 1	-	-	-	-	-	-	711	667	-	694	654	-
Stage 2	-	-	-	-	-	-	694	654	-	709	664	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1249	-	-	1258	-	-	402	406	741	399	403	729
Mov Cap-2 Maneuver	-	-	-	-	-	-	402	406	-	399	403	-
Stage 1	-	-	-	-	-	-	711	667	-	694	652	-
Stage 2	-	-	-	-	-	-	692	652	-	705	664	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	12.3	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	505	1249	-	-	1258	-	-	-
HCM Lane V/C Ratio	0.019	-	-	-	0.003	-	-	-
HCM Control Delay (s)	12.3	0	-	-	7.9	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	625	0	0	1071
Future Vol, veh/h	0	0	625	0	0	1071
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	0	679	0	0	1164

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1843	679	0	0	679	0
Stage 1	679	-	-	-	-	-
Stage 2	1164	-	-	-	-	-
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	83	452	-	-	913	-
Stage 1	504	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	83	452	-	-	913	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	297	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	913	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	133	594	41	131	412
Future Vol, veh/h	45	133	594	41	131	412
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	56	165	736	51	162	511

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1571	736	0	0	787	0
Stage 1	736	-	-	-	-	-
Stage 2	835	-	-	-	-	-
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	122	419	-	-	832	-
Stage 1	474	-	-	-	-	-
Stage 2	426	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	98	419	-	-	832	-
Mov Cap-2 Maneuver	225	-	-	-	-	-
Stage 1	474	-	-	-	-	-
Stage 2	343	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.9	0	2.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	225	419	832	-
HCM Lane V/C Ratio	-	-	0.248	0.393	0.195	-
HCM Control Delay (s)	-	-	26.2	19.1	10.4	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.9	1.8	0.7	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	169	3	1	151	1	10	0	2	2	0	10
Future Vol, veh/h	3	169	3	1	151	1	10	0	2	2	0	10
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	4	209	4	1	187	1	12	0	2	2	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	188	0	0	213	0	0	415	409	211	410	411	188
Stage 1	-	-	-	-	-	-	219	219	-	190	190	-
Stage 2	-	-	-	-	-	-	196	190	-	220	221	-
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	1386	-	-	1357	-	-	548	532	829	552	531	854
Stage 1	-	-	-	-	-	-	783	722	-	812	743	-
Stage 2	-	-	-	-	-	-	806	743	-	782	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1386	-	-	1357	-	-	538	530	829	549	529	854
Mov Cap-2 Maneuver	-	-	-	-	-	-	538	530	-	549	529	-
Stage 1	-	-	-	-	-	-	781	720	-	810	742	-
Stage 2	-	-	-	-	-	-	794	742	-	777	718	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	11.5	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	571	1386	-	-	1357	-	-	782
HCM Lane V/C Ratio	0.026	0.003	-	-	0.001	-	-	0.019
HCM Control Delay (s)	11.5	7.6	0	-	7.7	0	-	9.7
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	19	6	721	524	4
Future Vol, veh/h	15	19	6	721	524	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	19	24	7	893	649	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1556	649	654	0	-	0
Stage 1	649	-	-	-	-	-
Stage 2	907	-	-	-	-	-
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	124	470	933	-	-	-
Stage 1	520	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	123	470	933	-	-	-
Mov Cap-2 Maneuver	259	-	-	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	394	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.1	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	933	-	259	470	-	-
HCM Lane V/C Ratio	0.008	-	0.072	0.05	-	-
HCM Control Delay (s)	8.9	-	20	13.1	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0.2	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	169	3	2	169	0	9	0	6	0	0	0
Future Vol, veh/h	0	169	3	2	169	0	9	0	6	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	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	0	209	4	2	209	0	11	0	7	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	209	0	0	213	0	0	424	424	211	428	426	209
Stage 1	-	-	-	-	-	-	211	211	-	213	213	-
Stage 2	-	-	-	-	-	-	213	213	-	215	213	-
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	1362	-	-	1357	-	-	540	522	829	537	520	831
Stage 1	-	-	-	-	-	-	791	728	-	789	726	-
Stage 2	-	-	-	-	-	-	789	726	-	787	726	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1362	-	-	1357	-	-	539	521	829	532	519	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	539	521	-	532	519	-
Stage 1	-	-	-	-	-	-	791	728	-	789	725	-
Stage 2	-	-	-	-	-	-	787	725	-	780	726	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	10.9	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	627	1362	-	-	1357	-	-	-
HCM Lane V/C Ratio	0.03	-	-	-	0.002	-	-	-
HCM Control Delay (s)	10.9	0	-	-	7.7	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	727	0	0	543
Future Vol, veh/h	0	0	727	0	0	543
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	0	901	0	0	673

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1574	901	0	0	901	0
Stage 1	901	-	-	-	-	-
Stage 2	673	-	-	-	-	-
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	121	337	-	-	754	-
Stage 1	396	-	-	-	-	-
Stage 2	507	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	121	337	-	-	754	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	507	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	754	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection	
Int Delay, s/veh	10.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	88	203	422	59	220	851
Future Vol, veh/h	88	203	422	59	220	851
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	109	252	523	73	273	1055

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2124	523	0	0	596	0
Stage 1	523	-	-	-	-	-
Stage 2	1601	-	-	-	-	-
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	~ 55	554	-	-	980	-
Stage 1	595	-	-	-	-	-
Stage 2	182	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 40	554	-	-	980	-
Mov Cap-2 Maneuver	~ 108	-	-	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	131	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	61.2	0	2.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	108	554	980	-
HCM Lane V/C Ratio	-	-	1.01	0.454	0.278	-
HCM Control Delay (s)	-	-	163.6	16.8	10.1	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	6.5	2.3	1.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	252	11	3	277	3	6	0	2	2	0	6
Future Vol, veh/h	11	252	11	3	277	3	6	0	2	2	0	6
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	14	312	14	4	343	4	7	0	2	2	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	347	0	0	326	0	0	704	702	319	701	707	345
Stage 1	-	-	-	-	-	-	347	347	-	353	353	-
Stage 2	-	-	-	-	-	-	357	355	-	348	354	-
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	1212	-	-	1234	-	-	352	362	722	353	360	698
Stage 1	-	-	-	-	-	-	669	635	-	664	631	-
Stage 2	-	-	-	-	-	-	661	630	-	668	630	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1212	-	-	1234	-	-	344	355	722	347	354	698
Mov Cap-2 Maneuver	-	-	-	-	-	-	344	355	-	347	354	-
Stage 1	-	-	-	-	-	-	660	626	-	655	628	-
Stage 2	-	-	-	-	-	-	651	627	-	656	621	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	14.3	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	396	1212	-	-	1234	-	-	557
HCM Lane V/C Ratio	0.025	0.011	-	-	0.003	-	-	0.018
HCM Control Delay (s)	14.3	8	0	-	7.9	0	-	11.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	18	31	594	1053	25
Future Vol, veh/h	14	18	31	594	1053	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	17	22	38	736	1305	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2117	1305	1336	0	-	0
Stage 1	1305	-	-	-	-	-
Stage 2	812	-	-	-	-	-
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	56	196	516	-	-	-
Stage 1	254	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	52	196	516	-	-	-
Mov Cap-2 Maneuver	161	-	-	-	-	-
Stage 1	235	-	-	-	-	-
Stage 2	437	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.6	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	516	-	161	196	-	-
HCM Lane V/C Ratio	0.074	-	0.108	0.114	-	-
HCM Control Delay (s)	12.5	-	30	25.7	-	-
HCM Lane LOS	B	-	D	D	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	0.4	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	270	9	3	286	0	5	0	4	0	0	0
Future Vol, veh/h	0	270	9	3	286	0	5	0	4	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	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	0	335	11	4	354	0	6	0	5	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	354	0	0	346	0	0	703	703	341	705	708	354
Stage 1	-	-	-	-	-	-	341	341	-	362	362	-
Stage 2	-	-	-	-	-	-	362	362	-	343	346	-
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	1205	-	-	1213	-	-	352	362	701	351	360	690
Stage 1	-	-	-	-	-	-	674	639	-	657	625	-
Stage 2	-	-	-	-	-	-	657	625	-	672	635	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1205	-	-	1213	-	-	351	361	701	347	359	690
Mov Cap-2 Maneuver	-	-	-	-	-	-	351	361	-	347	359	-
Stage 1	-	-	-	-	-	-	674	639	-	657	623	-
Stage 2	-	-	-	-	-	-	654	623	-	667	635	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	13.2	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	451	1205	-	-	1213	-	-	-
HCM Lane V/C Ratio	0.025	-	-	-	0.003	-	-	-
HCM Control Delay (s)	13.2	0	-	-	8	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	625	0	0	1071
Future Vol, veh/h	0	0	625	0	0	1071
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	0	774	0	0	1327

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2101	774	0	0	774	0
Stage 1	774	-	-	-	-	-
Stage 2	1327	-	-	-	-	-
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	57	398	-	-	842	-
Stage 1	455	-	-	-	-	-
Stage 2	248	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	57	398	-	-	842	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	248	-	-	-	-	-

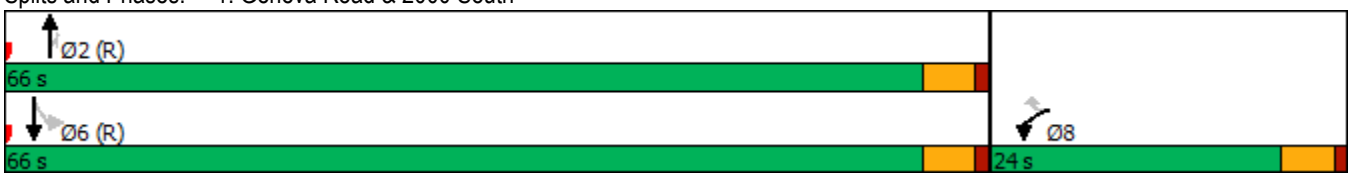
Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	842	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	45	133	594	41	131	412
Future Volume (vph)	45	133	594	41	131	412
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	24.0	24.0	66.0	66.0	66.0	66.0
Total Split (%)	26.7%	26.7%	73.3%	73.3%	73.3%	73.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	8.4	8.4	72.6	72.6	72.6	72.6
Actuated g/C Ratio	0.09	0.09	0.81	0.81	0.81	0.81
v/c Ratio	0.34	0.56	0.49	0.04	0.31	0.34
Control Delay	42.9	13.8	4.4	1.0	4.4	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	13.8	4.4	1.0	4.4	3.3
LOS	D	B	A	A	A	A
Approach Delay	21.2		4.1			3.5
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 6.1	Intersection LOS: A
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Geneva Road & 2000 South



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	88	203	422	59	220	851
Future Volume (vph)	88	203	422	59	220	851
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	67.5	67.5	67.5	67.5
Total Split (%)	25.0%	25.0%	75.0%	75.0%	75.0%	75.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	10.8	10.8	70.2	70.2	70.2	70.2
Actuated g/C Ratio	0.12	0.12	0.78	0.78	0.78	0.78
v/c Ratio	0.51	0.61	0.36	0.06	0.42	0.73
Control Delay	45.0	11.7	4.2	0.9	6.1	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	11.7	4.2	0.9	6.1	9.5
LOS	D	B	A	A	A	A
Approach Delay	21.7		3.8			8.8
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Geneva Road & 2000 South



Appendix C With Site Intersection Analyses

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	141	619	44	139	436
Future Vol, veh/h	48	141	619	44	139	436
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	153	673	48	151	474

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1449	673	0	0	721	0
Stage 1	673	-	-	-	-	-
Stage 2	776	-	-	-	-	-
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	144	455	-	-	881	-
Stage 1	507	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	119	455	-	-	881	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	507	-	-	-	-	-
Stage 2	376	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	2.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	250	455	881	-
HCM Lane V/C Ratio	-	-	0.209	0.337	0.171	-
HCM Control Delay (s)	-	-	23.2	16.9	9.9	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0.8	1.5	0.6	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	196	3	1	179	1	10	0	2	2	0	10
Future Vol, veh/h	3	196	3	1	179	1	10	0	2	2	0	10
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	3	213	3	1	195	1	11	0	2	2	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	196	0	0	216	0	0	424	419	215	420	420	196
Stage 1	-	-	-	-	-	-	221	221	-	198	198	-
Stage 2	-	-	-	-	-	-	203	198	-	222	222	-
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	1377	-	-	1354	-	-	540	525	825	544	525	845
Stage 1	-	-	-	-	-	-	781	720	-	804	737	-
Stage 2	-	-	-	-	-	-	799	737	-	780	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1377	-	-	1354	-	-	532	523	825	541	523	845
Mov Cap-2 Maneuver	-	-	-	-	-	-	532	523	-	541	523	-
Stage 1	-	-	-	-	-	-	779	719	-	802	736	-
Stage 2	-	-	-	-	-	-	788	736	-	776	719	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	11.5	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	565	1377	-	-	1354	-	-	773
HCM Lane V/C Ratio	0.023	0.002	-	-	0.001	-	-	0.017
HCM Control Delay (s)	11.5	7.6	0	-	7.7	0	-	9.7
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	19	6	801	608	4
Future Vol, veh/h	15	19	6	801	608	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	21	7	871	661	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1546	661	665	0	-	0
Stage 1	661	-	-	-	-	-
Stage 2	885	-	-	-	-	-
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	126	462	924	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	125	462	924	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	510	-	-	-	-	-
Stage 2	403	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.1	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	924	-	261	462	-	-
HCM Lane V/C Ratio	0.007	-	0.062	0.045	-	-
HCM Control Delay (s)	8.9	-	19.7	13.2	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	169	3	2	169	28	9	0	6	27	0	11
Future Vol, veh/h	11	169	3	2	169	28	9	0	6	27	0	11
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	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	12	184	3	2	184	30	10	0	7	29	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	187	0	0	419	428	186	416	414	199
Stage 1	-	-	-	-	-	-	210	210	-	203	203	-
Stage 2	-	-	-	-	-	-	209	218	-	213	211	-
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	1356	-	-	1387	-	-	544	519	856	547	529	842
Stage 1	-	-	-	-	-	-	792	728	-	799	733	-
Stage 2	-	-	-	-	-	-	793	723	-	789	728	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1387	-	-	532	513	856	538	523	842
Mov Cap-2 Maneuver	-	-	-	-	-	-	532	513	-	538	523	-
Stage 1	-	-	-	-	-	-	785	721	-	792	732	-
Stage 2	-	-	-	-	-	-	780	722	-	776	721	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	10.9	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	627	1356	-	-	1387	-	-	601
HCM Lane V/C Ratio	0.026	0.009	-	-	0.002	-	-	0.069
HCM Control Delay (s)	10.9	7.7	-	-	7.6	0	-	11.4
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	72	735	25	76	551
Future Vol, veh/h	24	72	735	25	76	551
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	26	78	799	27	83	599

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1578	813	0	0	826	0
Stage 1	813	-	-	-	-	-
Stage 2	765	-	-	-	-	-
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	120	378	-	-	805	-
Stage 1	436	-	-	-	-	-
Stage 2	459	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	108	378	-	-	805	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	436	-	-	-	-	-
Stage 2	412	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.2	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	243	378	805	-
HCM Lane V/C Ratio	-	-	0.107	0.207	0.103	-
HCM Control Delay (s)	-	-	21.6	17	10	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.8	0.3	-

Intersection	
Int Delay, s/veh	7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	91	212	450	62	230	878
Future Vol, veh/h	91	212	450	62	230	878
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	99	230	489	67	250	954

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1943	489	0	0	556	0
Stage 1	489	-	-	-	-	-
Stage 2	1454	-	-	-	-	-
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	~ 71	579	-	-	1015	-
Stage 1	616	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 54	579	-	-	1015	-
Mov Cap-2 Maneuver	132	-	-	-	-	-
Stage 1	616	-	-	-	-	-
Stage 2	162	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	36.9	0	2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	132	579	1015	-
HCM Lane V/C Ratio	-	-	0.749	0.398	0.246	-
HCM Control Delay (s)	-	-	87.1	15.3	9.7	-
HCM Lane LOS	-	-	F	C	A	-
HCM 95th %tile Q(veh)	-	-	4.4	1.9	1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	282	11	3	308	3	6	0	2	2	0	6
Future Vol, veh/h	11	282	11	3	308	3	6	0	2	2	0	6
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	12	307	12	3	335	3	7	0	2	2	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	338	0	0	319	0	0	683	681	313	681	686	337
Stage 1	-	-	-	-	-	-	337	337	-	343	343	-
Stage 2	-	-	-	-	-	-	346	344	-	338	343	-
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	1221	-	-	1241	-	-	363	373	727	364	370	705
Stage 1	-	-	-	-	-	-	677	641	-	672	637	-
Stage 2	-	-	-	-	-	-	670	637	-	676	637	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1221	-	-	1241	-	-	355	367	727	359	364	705
Mov Cap-2 Maneuver	-	-	-	-	-	-	355	367	-	359	364	-
Stage 1	-	-	-	-	-	-	669	633	-	664	635	-
Stage 2	-	-	-	-	-	-	662	635	-	666	629	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	14	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	407	1221	-	-	1241	-	-	568
HCM Lane V/C Ratio	0.021	0.01	-	-	0.003	-	-	0.015
HCM Control Delay (s)	14	8	0	-	7.9	0	-	11.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	18	31	685	1148	25
Future Vol, veh/h	14	18	31	685	1148	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	15	20	34	745	1248	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2061	1248	1275	0	-	0
Stage 1	1248	-	-	-	-	-
Stage 2	813	-	-	-	-	-
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	60	211	545	-	-	-
Stage 1	271	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	56	211	545	-	-	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	254	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.7	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	545	-	170	211	-	-
HCM Lane V/C Ratio	0.062	-	0.09	0.093	-	-
HCM Control Delay (s)	12	-	28.2	23.8	-	-
HCM Lane LOS	B	-	D	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	0.3	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	270	9	3	286	31	5	0	4	30	0	12
Future Vol, veh/h	13	270	9	3	286	31	5	0	4	30	0	12
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	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	14	293	10	3	311	34	5	0	4	33	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	345	0	0	303	0	0	667	677	298	662	665	328
Stage 1	-	-	-	-	-	-	326	326	-	334	334	-
Stage 2	-	-	-	-	-	-	341	351	-	328	331	-
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	1214	-	-	1258	-	-	372	375	741	375	381	713
Stage 1	-	-	-	-	-	-	687	648	-	680	643	-
Stage 2	-	-	-	-	-	-	674	632	-	685	645	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1214	-	-	1258	-	-	361	369	741	369	375	713
Mov Cap-2 Maneuver	-	-	-	-	-	-	361	369	-	369	375	-
Stage 1	-	-	-	-	-	-	679	640	-	672	641	-
Stage 2	-	-	-	-	-	-	660	630	-	673	637	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	12.9	14.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	468	1214	-	-	1258	-	-	428
HCM Lane V/C Ratio	0.021	0.012	-	-	0.003	-	-	0.107
HCM Control Delay (s)	12.9	8	-	-	7.9	0	-	14.4
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	82	634	28	85	1081
Future Vol, veh/h	27	82	634	28	85	1081
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	29	89	689	30	92	1175

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2063	704	0	0	719	0
Stage 1	704	-	-	-	-	-
Stage 2	1359	-	-	-	-	-
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	60	437	-	-	882	-
Stage 1	490	-	-	-	-	-
Stage 2	239	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	54	437	-	-	882	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	214	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.8	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	156	437	882	-
HCM Lane V/C Ratio	-	-	0.188	0.204	0.105	-
HCM Control Delay (s)	-	-	33.3	15.3	9.6	-
HCM Lane LOS	-	-	D	C	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0.8	0.3	-

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	160	702	50	157	494
Future Vol, veh/h	54	160	702	50	157	494
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	59	174	763	54	171	537

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1642	763	0	0	817	0
Stage 1	763	-	-	-	-	-
Stage 2	879	-	-	-	-	-
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	110	404	-	-	811	-
Stage 1	460	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	87	404	-	-	811	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	320	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.6	0	2.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	210	404	811	-
HCM Lane V/C Ratio	-	-	0.28	0.43	0.21	-
HCM Control Delay (s)	-	-	28.7	20.5	10.6	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	2.1	0.8	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	220	3	1	200	1	11	0	2	2	0	11
Future Vol, veh/h	3	220	3	1	200	1	11	0	2	2	0	11
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	3	239	3	1	217	1	12	0	2	2	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	218	0	0	242	0	0	473	467	241	468	468	218
Stage 1	-	-	-	-	-	-	247	247	-	220	220	-
Stage 2	-	-	-	-	-	-	226	220	-	248	248	-
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	1352	-	-	1324	-	-	501	493	798	505	493	822
Stage 1	-	-	-	-	-	-	757	702	-	782	721	-
Stage 2	-	-	-	-	-	-	777	721	-	756	701	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1352	-	-	1324	-	-	492	491	798	502	491	822
Mov Cap-2 Maneuver	-	-	-	-	-	-	492	491	-	502	491	-
Stage 1	-	-	-	-	-	-	755	700	-	780	720	-
Stage 2	-	-	-	-	-	-	765	720	-	752	699	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	12.1	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	523	1352	-	-	1324	-	-	749
HCM Lane V/C Ratio	0.027	0.002	-	-	0.001	-	-	0.019
HCM Control Delay (s)	12.1	7.7	0	-	7.7	0	-	9.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	22	7	902	681	5
Future Vol, veh/h	17	22	7	902	681	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	100	0	100	-	-	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	18	24	8	980	740	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1736	740	745	0	-	0
Stage 1	740	-	-	-	-	-
Stage 2	996	-	-	-	-	-
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	96	417	863	-	-	-
Stage 1	472	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	95	417	863	-	-	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	468	-	-	-	-	-
Stage 2	357	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	863	-	227	417	-	-
HCM Lane V/C Ratio	0.009	-	0.081	0.057	-	-
HCM Control Delay (s)	9.2	-	22.3	14.2	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	0.2	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	193	3	2	193	28	10	0	7	27	0	11
Future Vol, veh/h	11	193	3	2	193	28	10	0	7	27	0	11
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	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	12	210	3	2	210	30	11	0	8	29	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	240	0	0	213	0	0	471	480	212	469	466	225
Stage 1	-	-	-	-	-	-	236	236	-	229	229	-
Stage 2	-	-	-	-	-	-	235	244	-	240	237	-
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	1327	-	-	1357	-	-	503	485	828	505	494	814
Stage 1	-	-	-	-	-	-	767	710	-	774	715	-
Stage 2	-	-	-	-	-	-	768	704	-	763	709	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1327	-	-	1357	-	-	491	480	828	496	489	814
Mov Cap-2 Maneuver	-	-	-	-	-	-	491	480	-	496	489	-
Stage 1	-	-	-	-	-	-	760	704	-	767	714	-
Stage 2	-	-	-	-	-	-	755	703	-	749	703	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	11.3	12
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	590	1327	-	-	1357	-	-	559
HCM Lane V/C Ratio	0.031	0.009	-	-	0.002	-	-	0.074
HCM Control Delay (s)	11.3	7.7	-	-	7.7	0	-	12
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	72	837	25	76	627
Future Vol, veh/h	24	72	837	25	76	627
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	26	78	910	27	83	682

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1772	924	0	0	937	0
Stage 1	924	-	-	-	-	-
Stage 2	848	-	-	-	-	-
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	91	327	-	-	731	-
Stage 1	387	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	81	327	-	-	731	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	387	-	-	-	-	-
Stage 2	372	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.7	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	210	327	731	-
HCM Lane V/C Ratio	-	-	0.124	0.239	0.113	-
HCM Control Delay (s)	-	-	24.6	19.4	10.6	-
HCM Lane LOS	-	-	C	C	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.9	0.4	-

Intersection	
Int Delay, s/veh	13.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	103	240	509	70	261	997
Future Vol, veh/h	103	240	509	70	261	997
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	112	261	553	76	284	1084

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2205	553	0	0	629	0
Stage 1	553	-	-	-	-	-
Stage 2	1652	-	-	-	-	-
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	~ 49	533	-	-	953	-
Stage 1	576	-	-	-	-	-
Stage 2	171	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 34	533	-	-	953	-
Mov Cap-2 Maneuver	~ 99	-	-	-	-	-
Stage 1	576	-	-	-	-	-
Stage 2	120	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	75.7	0	2.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	99	533	953	-
HCM Lane V/C Ratio	-	-	1.131	0.489	0.298	-
HCM Control Delay (s)	-	-	210	18.1	10.4	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	7.3	2.7	1.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	13	317	13	3	347	3	7	0	2	2	0	7
Future Vol, veh/h	13	317	13	3	347	3	7	0	2	2	0	7
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	14	345	14	3	377	3	8	0	2	2	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	380	0	0	359	0	0	769	766	352	766	772	379
Stage 1	-	-	-	-	-	-	380	380	-	385	385	-
Stage 2	-	-	-	-	-	-	389	386	-	381	387	-
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	1178	-	-	1200	-	-	318	333	692	320	330	668
Stage 1	-	-	-	-	-	-	642	614	-	638	611	-
Stage 2	-	-	-	-	-	-	635	610	-	641	610	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1178	-	-	1200	-	-	310	327	692	315	324	668
Mov Cap-2 Maneuver	-	-	-	-	-	-	310	327	-	315	324	-
Stage 1	-	-	-	-	-	-	632	605	-	628	609	-
Stage 2	-	-	-	-	-	-	626	608	-	629	601	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	15.5	11.9
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	353	1178	-	-	1200	-	-	535
HCM Lane V/C Ratio	0.028	0.012	-	-	0.003	-	-	0.018
HCM Control Delay (s)	15.5	8.1	0	-	8	0	-	11.9
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	21	35	768	1295	29
Future Vol, veh/h	16	21	35	768	1295	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	17	23	38	835	1408	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2319	1408	1440	0	-	0
Stage 1	1408	-	-	-	-	-
Stage 2	911	-	-	-	-	-
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	41	170	471	-	-	-
Stage 1	226	-	-	-	-	-
Stage 2	392	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	38	170	471	-	-	-
Mov Cap-2 Maneuver	140	-	-	-	-	-
Stage 1	208	-	-	-	-	-
Stage 2	392	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.5	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	471	-	140	170	-	-
HCM Lane V/C Ratio	0.081	-	0.124	0.134	-	-
HCM Control Delay (s)	13.3	-	34.3	29.4	-	-
HCM Lane LOS	B	-	D	D	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	0.5	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	308	10	3	326	31	6	0	5	30	0	12
Future Vol, veh/h	13	308	10	3	326	31	6	0	5	30	0	12
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	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	14	335	11	3	354	34	7	0	5	33	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	388	0	0	346	0	0	753	763	341	748	751	371
Stage 1	-	-	-	-	-	-	369	369	-	377	377	-
Stage 2	-	-	-	-	-	-	384	394	-	371	374	-
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	1170	-	-	1213	-	-	326	334	701	329	340	675
Stage 1	-	-	-	-	-	-	651	621	-	644	616	-
Stage 2	-	-	-	-	-	-	639	605	-	649	618	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1170	-	-	1213	-	-	316	329	701	323	335	675
Mov Cap-2 Maneuver	-	-	-	-	-	-	316	329	-	323	335	-
Stage 1	-	-	-	-	-	-	643	614	-	636	614	-
Stage 2	-	-	-	-	-	-	625	603	-	636	611	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	13.8	15.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	421	1170	-	-	1213	-	-	380
HCM Lane V/C Ratio	0.028	0.012	-	-	0.003	-	-	0.12
HCM Control Delay (s)	13.8	8.1	-	-	8	0	-	15.8
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	82	722	28	85	1231
Future Vol, veh/h	27	82	722	28	85	1231
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	29	89	785	30	92	1338

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2322	800	0	0	815	0
Stage 1	800	-	-	-	-	-
Stage 2	1522	-	-	-	-	-
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	41	385	-	-	812	-
Stage 1	442	-	-	-	-	-
Stage 2	199	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	36	385	-	-	812	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	442	-	-	-	-	-
Stage 2	177	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.1	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	128	385	812	-
HCM Lane V/C Ratio	-	-	0.229	0.232	0.114	-
HCM Control Delay (s)	-	-	41.3	17.1	10	-
HCM Lane LOS	-	-	E	C	B	-
HCM 95th %tile Q(veh)	-	-	0.8	0.9	0.4	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	54	160	702	50	157	494
Future Volume (vph)	54	160	702	50	157	494
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	24.0	24.0	66.0	66.0	66.0	66.0
Total Split (%)	26.7%	26.7%	73.3%	73.3%	73.3%	73.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	8.6	8.6	72.4	72.4	72.4	72.4
Actuated g/C Ratio	0.10	0.10	0.80	0.80	0.80	0.80
v/c Ratio	0.35	0.56	0.51	0.04	0.34	0.36
Control Delay	43.0	13.7	4.6	1.0	4.9	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	13.7	4.6	1.0	4.9	3.4
LOS	D	B	A	A	A	A
Approach Delay	21.1		4.4			3.8
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Geneva Road & 2000 South



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	103	240	509	70	261	997
Future Volume (vph)	103	240	509	70	261	997
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	67.5	67.5	67.5	67.5
Total Split (%)	25.0%	25.0%	75.0%	75.0%	75.0%	75.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	11.0	11.0	70.0	70.0	70.0	70.0
Actuated g/C Ratio	0.12	0.12	0.78	0.78	0.78	0.78
v/c Ratio	0.52	0.62	0.38	0.06	0.46	0.75
Control Delay	45.0	11.6	4.4	0.9	6.8	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	11.6	4.4	0.9	6.8	10.3
LOS	D	B	A	A	A	B
Approach Delay	21.6		4.0			9.5
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 10.0	Intersection LOS: A
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Geneva Road & 2000 South



EXHIBIT 11

(Holiday Oil's Legal Counsel Letter, dated November 10, 2023)

MITCHELL BARLOW & MANSFIELD

MITCHELL BARLOW & MANSFIELD, P.C. | BOSTON BUILDING | NINE EXCHANGE PLACE, SUITE 600 | SALT LAKE CITY, UTAH 84111
TEL (801) 998-8888 | FAX (801) 998-8077 | www.mbmlawyers.com

November 10, 2023

Sent Via Hand-Delivery
City of Orem
Department of Development Services

Re: ***Holiday Oil – Site Plan Application for 1981 South Geneva Road, Orem, Utah***

To Whom It May Concern:

We have been engaged to represent Holiday Oil ("Holiday") in connection with Orem City's (the "City") recent denial of a building permit for the real property located at 1981 S. Geneva Road, Orem, Utah (the "Property"). Our client has filed a formal appeal of the City's decision with the Board of Adjustments. We are writing to you to further explain the basis for the appeal.

Background

The City entered into a Development Agreement with the previous owner of the Property on December 8, 2020 (the "Development Agreement"). The Development Agreement authorizes the development of the Property into a gas station. In furtherance of the Development Agreement, the City approved the previous owner's application to rezone the Property from OS5 to C2. According to the Development Agreement, the City determined that the planned gas station on the Property would further the City's land use policies, goals, and objectives. Prior to executing the Development Agreement, City officials reviewed and approved the previous owner's concept plan, drawings and renderings for the gas station (the "Prior Specifications").

As part of its due diligence to purchase the Property, Holiday reviewed the Development Agreement and spoke with Jason Bench, the City's Planning Director, about its desires to amend the Development Agreement to add a car wash to the gas station concept. Holiday acquired the Property in August 2022 in reliance upon its due diligence and the conversation with Jason Bench. In January 2023, Holiday began working with the City on an amended Development Agreement. In February, Holiday held a neighborhood meeting to present its revised concept, and on February 28, Holiday submitted its DRC packet to the City. The application was denied by the Planning Commission in June and by the City Council at its August 1st meeting. While Holiday understood the City Council could deny its proposal, what it did not anticipate was the City Council taking the extraordinary step of proposing to rezone the Property to R-8 or Professional Office space. There had been no mention of this possibility since the City approved the previous owner's application to rezone the Property for commercial development.

Rather than take a reasonable time period to explore this option of rezoning the Property, the City held a neighborhood meeting just two weeks later to propose the rezoning. Meanwhile, on August 21, Holiday submitted a DRC packet with a new site plan that matched the Prior Specifications. The application included all items required on the City's checklist, including the April 2020 traffic study. On August 29, Holiday received back from the City redline revisions to the DRC packet. Interestingly, there was no mention of needing to update or revise the included traffic study. On August 30, Holiday received written confirmation from the City that the DRC packet submitted by Holiday was complete. On September 5, Holiday submitted its revised DRC packet to the City with revisions responsive to the City's redlines. Despite having been told by the City that its application and all required materials were complete and having incorporated the City's few redlines into the revised application, on September 20, the City sent written notice to Holiday stating the application was incomplete due to an outdated traffic study. This action deviated from the City's normal process for addressing such concerns with a developer. Holiday filed its appeal of the decision on September 27, 2023.

City's Actions Against Holiday

Holiday learned that on August 28, 2023, the City sent residents in the vicinity of the Property a letter describing in detail the actions the City had taken and planned to take against Holiday. Among statements made by the City in this letter, the City stated that it "strongly opposed [Holiday's] project," it "took aggressive action," it "proactively started the rezoning process," and that the City "was working as quickly as possible to complete this rezone to prevent the project." The City expressed its disappointment that "[Holiday's] project could not be prevented." These unusual statements, coupled with the reversal of its prior approval of the gas station and rezoning of the Property, its failure to notify Holiday of any concerns with the traffic study when responding to the DRC packet, and the speed with which the City has pursued rezoning the Property – not to further the City's land use policies, goals, and objectives, but to target Holiday and aggressively oppose its efforts to develop the Property as previously approved by the City – smack of malicious behavior, abuse of the police power, and politicization of the planning process.

Holiday has done all that is required of a developer to obtain approval of its site plan with Orem City. It has reasonably relied upon the City's Development Agreement and rezoning of the Property to C2 to facilitate the development of the planned gas station on the Property. It submitted a complete application, the completeness of which was acknowledged by the City. This sudden turn of events is disturbing and alarming. It is our hope that by bringing these actions to light that the City will halt its efforts to thwart Holiday's planned development and will overturn its previous denial of the development application on appeal with the Board of Adjustments. The residents of Orem, both residential and commercial, deserve a fair process and treatment under the City's code and regulations. Personal animosity or agendas should not influence the City officials' performance of their duties.

Please contact us if you wish to discuss the particulars of this letter further. We look forward to hearing from you soon in response to Holiday's appeal. Thank you for your time and consideration.

Sincerely,

MITCHELL BARLOW & MANSFIELD, P.C.

Robert E. Mansfield

INCOMPLETE APPLICATION DETERMINATION

To: Holiday Oil
3115 West 2100 South
West Valley City, Utah 84119

Re: Site Plan Application for 1981 South Geneva Road, Orem, Utah

On August 21, 2023, Brent Neel submitted a site plan application for the construction of a gas station and convenience store on the northeast corner of Geneva Road and 2000 South in Orem, Utah. City of Orem staff reviewed the site plan application and determined that the site plan application is ***incomplete***. Orem City Code 22-14-20(E) provides that "[a]nyone requesting approval of a site plan shall first submit to the Department of Development Services'' all required documentation. Among the required documentation is a traffic study. Orem City Code 22-14-20(E)(8)(a) provides:

> *a. The traffic study shall include all of the following:*
> *(1) An analysis of the off-site traffic impacts resulting from the development of the site and a description of the mitigation measures necessary to reduce the identified impacts.*
> *(2) An analysis of internal traffic circulation patterns and their effect on ingress and egress from the site for emergency vehicles and the public.*

While the submitted site plan application included a Traffic Impact Study, that study does not meet the required standards under Orem City Code.

I. Submitted Traffic Impact Study Does Not Provide Reliable Analysis of the Current Off-Site Traffic Impacts Resulting From the Development of the Site.

The submitted Traffic Impact Study (TIS) was prepared in April 2020. The data collection for the "existing traffic counts" were performed on March 31, 2020. (p. 8 of TIS). This collection date presents various issues for the acceptance of the TIS to properly analyze the current "off-site traffic impacts" which would result from the development of the site in 2023-2024. First, the submitted TIS was prepared almost 4 years prior to the submission for the site plan. At the time the TIS was prepared, the intersection of 2000 South and Geneva Road did not have a traffic control signal. (p. 1 of TIS). Since March 2020, the area of 2000 South and Geneva Road has continued to develop. A TIS from almost 4 years ago, does not provide the land use authority with sufficient information to determine "what mitigation measures" are necessary to reduce identified impacts. Second, at the time the data was collected for the TIS (March 31, 2020),

"current traffic conditions throughout the country" were disrupted "due to the COVID-19 pandemic" and closures of schools, businesses, and remote work. (p. 8 of TIS). While the TIS attempted to make adjustments "to create existing traffic volumes" in order to make them "reflective of conditions that would occur if this disruption did not occur", use of multipliers "did not yield volumes that would be expected for these types of developments". As such, A-Trans attempted to use trip generation (per ITE) and distribution analysis to provide traffic values, which "were used as the existing traffic". (p. 8 of TIS). As A-Trans attempted to provide modeling data, it neglected to take into account various "off-site" traffic impacts in the TIS including (but not limited to): the Lakeview Elementary School (located at 2899 W. 1390 North, Provo), the Provo High School (located at 1199 Lakeshore Dr., Provo, UT), the construction of the Lakeview Parkway, and the planned connection of the Lakeview Parkway with 2000 South.

Further, the TIS fails to provide correct information pertaining to the Safety Index for 2000 South and Geneva Road (p. 25 of TIS). The site application is for the construction of a gas station and convenience store on the corner of 2000 South and Geneva Road. Rather, than providing a safety analysis for that corner, the TIS provides:

> *This segment of **State Street** has a Safety Index of 4 out of 10 with a crash rate of 40% of the average and a severe crash rate of 40% of the average.*

This is the sole discussion regarding the safety of the traffic relating to the site plan application, yet it provides no relevant information regarding the safety of the roadway where the development will occur. As such, it fails to provide the City with the ability to review any analysis of the current off-site traffic impacts of the proposed development.

The submission of an outdated TIS, which does not provide actual, relevant, and current traffic data, fails to meet the required standard in Orem City Code 22-14-20(E)(8)(a). As such, the application is incomplete.

II. Submitted Traffic Impact Study Fails to Provide a Description of Mitigation Measures Necessary to Reduce the Identified Impacts.

The 2020 TIS fails to provide the City with a description of mitigation measures necessary to reduce the identified impacts. As outlined above, the TIS fails to provide an analysis of the current off-site traffic impact. Given that deficiency, the current mitigation measures necessary to reduce impacts are unknown.

Moreover, the 2020 TIS identifies that both proposed access points to the site do not meet required spacing regulations. First, the TIS identifies that UDOT Administrative Rule R930-6 requires spacing of an access at 350 feet. The proposed access point is approximately 160 feet north of the UDOT traffic signal-controlled intersection. At the time the TIS was prepared, no

signal existed, and a request for a variance from UDOT may have included a ¾ access point. However, at this time, the access on Geneva Road is now "within the functional area of the intersection" and will likely result in a right-in/right-out restriction, if the variance is granted. Applicant provided no information regarding the status of the needed variance, as part of the application packet. As such, cannot make any decision regarding what mitigation measures are necessary to reduce the identified impact of having an access point in the functional area of an intersection.

Second, the 2020 TIS also identifies that the 2000 South access point also fails to meet the required access spacing. The TIS identifies that the 2000 South access violates the Orem City Access Management Standards. However, the TIS misidentifies the roadway authority for 2000 South. 2000 South is controlled by Provo City. As such, the TIS discussion about spacing and misalignment, and recommendations are not relevant. Where the TIS misidentifies the appropriate standards, the City cannot formulate any decisions on necessary mitigation measures to reduce any potential impacts of the development.

III. Submitted Traffic Impact Study Fails to Include Any Discussion of Internal Traffic Circulation Patterns and Their Effect on Ingress and Egress from the Site for Emergency Vehicles.

The submitted TIS wholly fails to include any discussion regarding the internal traffic circulation patterns, let alone their effect on ingress and egress from the site for emergency vehicles. Given this deficiency, the City is unable to accept the submitted TIS.

CONCLUSION

Based on the deficiencies of the submitted TIS, the City of Orem determines that the Site Plan Application for the Holiday Oil, at 1981 South and Geneva Road, is *incomplete*. Therefore your Site Plan Application is not vested. In order for the Site Plan Application to be complete, it must have a Traffic Study which complies with the Orem City Code requirements. However, the applicant should be aware that there is pending legislation which may impact the City's ability to approve any future Site Plan Application.

Pursuant to Utah law and the City of Orem ordinances, the applicant may appeal this decision. Any appeal must conform with the requirements found in Orem City Code 2-16-9. Any questions regarding this decision should be directed to the City of Orem Attorney's office.

Respectfully,

Development Services Department

OREM

DRC Application
Appeal

Applicant Information:		
Name: Waystaff Investments LLC (Scott Waystaff)	Phone: 801-631-3434	
Address: 3115 W. 2100 S.	City: West Valley City	
Email: scott@holidayoil.com	State: UT	Zip: 84119

Project Information:	
Project Name: Holiday Oil	
Project Address: 1981 S. Geneva Rd. Orem UT 84058	

Fees:		
All Appeals	☐ Neighborhood Notice Fee 132.86	TBD
Appeal to Board of Adjustment	X Appeal to Board of Adjustment Fee	$975
Appeal to Planning Commission	☐ Appeal to Planning Commission Fee	$1,232
Appeal to City Council	☐ Appeal to City Council Fee	$1,324
	Total: $ 1,107.86 ~~$975~~	

Deadline:

Except in the case of a holiday, the deadline for DRC Applications is **Monday at 12pm**. Please call Development Services to determine the deadline in the event of a holiday.

Contact Person:		
Contact Person: Scott Waystaff	Phone: 801-631-3434	Email: scott@holidayoil.com

Office Use Only:		
Project ID Number: 14304	Date Paid: 9/27/23	Received By: MW

Receipt #. 2024109827

Orem City DRC Packet
Appeal

Orem City Code, Article 22-1-8. Appeals.

A. Any person may appeal a decision applying a land use ordinance as follows:

1. An interpretation or application of a land use ordinance made by members of City staff may be appealed to the Board of Adjustment. A decision of the Board of Adjustment regarding the interpretation or application of a land use ordinance may be appealed to the City Council. However, an appeal to the City Council shall not be required for an adversely affected party to exhaust the party's administrative remedies.
2. A final decision of the Planning Commission may be appealed to the City Council.
3. A decision of the City Council may only be appealed to the District Court.

B. An application for **appeal to the City Council must be filed in the office of Development Services within thirty (30) days** after the date of the decision being appealed. Appeals to the Board of Adjustment shall be made pursuant to the procedure outlined in CHAPTER 2 of the City Code. An adversely affected party shall present to the appeal authority every theory of relief that it can raise in District Court.

C. The owner of private property whose property is subject to a physical taking or exaction by the City as part of a land use application may appeal the City's decision within 30 days after the decision is made. A decision regarding a proposed taking or exaction shall be deemed final and ripe for appeal when approved by the Development Review Committee (DRC). The Planning Commission shall hear and approve or reject the appeal within 14 days after it is submitted. If the Planning Commission fails to hear and decide the appeal within 14 days, the decision of the DRC is presumed to be approved. A property owner's failure to appeal the action of the City does not constitute a failure to exhaust available administrative remedies. The Planning Commission shall approve the decision of the DRC if it finds that:

1. An essential link exists between a legitimate governmental interest and the exaction; and
2. The exaction is roughly proportionate, both in nature and extent, to the impact of the proposed development.

OFFICE OF THE MAYOR & CITY COUNCIL
56 N. State Street | Orem, UT 84057

DEPARTMENT REVIEW

SEWER____/DATE_____
WATER____/DATE_____
STORM DRAIN ____/DATE_____
TRAFFIC _____/DATE_____
STREET LIGHTS____/DATE_____
FIRE MARSHAL____/DATE_____
STREETS ____/DATE_____

August, 28, 2023

RE: Holiday Oil – 1981 South Geneva Road

Dear Neighbors:

We want to provide you with an update on a new development with the proposed Holiday Oil project at 1981 Geneva Road.

As you know, the Orem City Council strongly opposed the project and took aggressive action. This included denying a request by Holiday Oil to amend the existing development agreement. The Council also proactively started the rezoning process. The Council was working as quickly as possible to complete this rezone to prevent the project.

Unfortunately, Holiday Oil submitted a complete application on August 21, 2023, for a site plan that is consistent with the existing zoning regulations and, as a result, Orem City had to accept the application and will have no other option than to approve it if the City process is followed.

The proposed rezone that would have prevented this project was scheduled for consideration by the Planning Commission at its next regularly scheduled meeting on September 6th, more than 2 weeks after Holiday Oil submitted their application. The application for the rezone will proceed to the Planning Commision on September 6th at 4:30 p.m for consideration and will be considered pending in the event Holiday Oil does not follow through and obtain site plan approval.

Please know that we are committed to fighting for the interests of our neighborhoods and are sorely disappointed this project could not be prevented. As a Council, we are reviewing other similar areas for potential issues to see what action can be taken to stop this from happening in the future.

Sincerely,

City of Orem Mayor and City Council

Received:
Date: 09/28/2023
By: MW

OREM

DEVELOPMENT SERVICES
56 N. State Street | Orem, UT 84057

INCOMPLETE APPLICATION DETERMINATION

To: Holiday Oil
3115 West 2100 South
West Valley City, Utah 84119

Re: Site Plan Application for 1981 South Geneva Road, Orem, Utah

On August 21, 2023, Brent Neel submitted a site plan application for the construction of a gas station and convenience store on the northeast corner of Geneva Road and 2000 South in Orem, Utah. City of Orem staff reviewed the site plan application and determined that the site plan application is *incomplete*. Orem City Code 22-14-20(E) provides that "[a]nyone requesting approval of a site plan shall first submit to the Department of Development Services" all required documentation. Among the required documentation is a traffic study. Orem City Code 22-14-20(E)(8)(a) provides:

> *a. The traffic study shall include all of the following:*
> *(1) An analysis of the off-site traffic impacts resulting from the development of the site and a description of the mitigation measures necessary to reduce the identified impacts.*
> *(2) An analysis of internal traffic circulation patterns and their effect on ingress and egress from the site for emergency vehicles and the public.*

While the submitted site plan application included a Traffic Impact Study, that study does not meet the required standards under Orem City Code.

I. Submitted Traffic Impact Study Does Not Provide Reliable Analysis of the Current Off-Site Traffic Impacts Resulting From the Development of the Site.

The submitted Traffic Impact Study (TIS) was prepared in April 2020. The data collection for the "existing traffic counts" were performed on March 31, 2020. (p. 8 of TIS). This collection date presents various issues for the acceptance of the TIS to properly analyze the current "off-site traffic impacts" which would result from the development of the site in 2023-2024. First, the submitted TIS was prepared almost 4 years prior to the submission for the site plan. At the time the TIS was prepared, the intersection of 2000 South and Geneva Road did not have a traffic control signal. (p. 1 of TIS). Since March 2020, the area of 2000 South and Geneva Road has continued to develop. A TIS from almost 4 years ago, does not provide the land use authority with sufficient information to determine "what mitigation measures" are necessary to reduce identified impacts. Second, at the time the data was collected for the TIS (March 31, 2020),

"current traffic conditions throughout the country" were disrupted "due to the COVID-19 pandemic" and closures of schools, businesses, and remote work. (p. 8 of TIS). While the TIS attempted to make adjustments "to create existing traffic volumes" in order to make them "reflective of conditions that would occur if this disruption did not occur", use of multipliers "did not yield volumes that would be expected for these types of developments". As such, A-Trans attempted to use trip generation (per ITE) and distribution analysis to provide traffic values, which "were used as the existing traffic". (p. 8 of TIS). As A-Trans attempted to provide modeling data, it neglected to take into account various "off-site" traffic impacts in the TIS including (but not limited to): the Lakeview Elementary School (located at 2899 W. 1390 North, Provo), the Provo High School (located at 1199 Lakeshore Dr., Provo, UT), the construction of the Lakeview Parkway, and the planned connection of the Lakeview Parkway with 2000 South.

Further, the TIS fails to provide correct information pertaining to the Safety Index for 2000 South and Geneva Road (p. 25 of TIS). The site application is for the construction of a gas station and convenience store on the corner of 2000 South and Geneva Road. Rather, than providing a safety analysis for that corner, the TIS provides:

> *This segment of **State Street** has a Safety Index of 4 out of 10 with a crash rate of 40% of the average and a severe crash rate of 40% of the average.*

This is the sole discussion regarding the safety of the traffic relating to the site plan application, yet it provides no relevant information regarding the safety of the roadway where the development will occur. As such, it fails to provide the City with the ability to review any analysis of the current off-site traffic impacts of the proposed development.

The submission of an outdated TIS, which does not provide actual, relevant, and current traffic data, fails to meet the required standard in Orem City Code 22-14-20(E)(8)(a). As such, the application is incomplete.

II. Submitted Traffic Impact Study Fails to Provide a Description of Mitigation Measures Necessary to Reduce the Identified Impacts.

The 2020 TIS fails to provide the City with a description of mitigation measures necessary to reduce the identified impacts. As outlined above, the TIS fails to provide an analysis of the current off-site traffic impact. Given that deficiency, the current mitigation measures necessary to reduce impacts are unknown.

Moreover, the 2020 TIS identifies that both proposed access points to the site do not meet required spacing regulations. First, the TIS identifies that UDOT Administrative Rule R930-6 requires spacing of an access at 350 feet. The proposed access point is approximately 160 feet north of the UDOT traffic signal-controlled intersection. At the time the TIS was prepared, no

signal existed, and a request for a variance from UDOT may have included a ¾ access point. However, at this time, the access on Geneva Road is now "within the functional area of the intersection" and will likely result in a right-in/right-out restriction, if the variance is granted. Applicant provided no information regarding the status of the needed variance, as part of the application packet. As such, cannot make any decision regarding what mitigation measures are necessary to reduce the identified impact of having an access point in the functional area of an intersection.

Second, the 2020 TIS also identifies that the 2000 South access point also fails to meet the required access spacing. The TIS identifies that the 2000 South access violates the Orem City Access Management Standards. However, the TIS misidentifies the roadway authority for 2000 South. 2000 South is controlled by Provo City. As such, the TIS discussion about spacing and misalignment, and recommendations are not relevant. Where the TIS misidentifies the appropriate standards, the City cannot formulate any decisions on necessary mitigation measures to reduce any potential impacts of the development.

III. Submitted Traffic Impact Study Fails to Include Any Discussion of Internal Traffic Circulation Patterns and Their Effect on Ingress and Egress from the Site for Emergency Vehicles.

The submitted TIS wholly fails to include any discussion regarding the internal traffic circulation patterns, let alone their effect on ingress and egress from the site for emergency vehicles. Given this deficiency, the City is unable to accept the submitted TIS.

CONCLUSION

Based on the deficiencies of the submitted TIS, the City of Orem determines that the Site Plan Application for the Holiday Oil, at 1981 South and Geneva Road, is *incomplete*. Therefore your Site Plan Application is not vested. In order for the Site Plan Application to be complete, it must have a Traffic Study which complies with the Orem City Code requirements. However, the applicant should be aware that there is pending legislation which may impact the City's ability to approve any future Site Plan Application.

Pursuant to Utah law and the City of Orem ordinances, the applicant may appeal this decision. Any appeal must conform with the requirements found in Orem City Code 2-16-9. Any questions regarding this decision should be directed to the City of Orem Attorney's office.

Respectfully,

Department of Development Services

25

A-2021-173

DEVELOPMENT AGREEMENT

This Development Agreement is executed in duplicate this 8 day of Dec 2020, by and between the City of Orem, a municipal corporation and political subdivision of the State of Utah, with its principal offices located at 56 North State Street, Orem, Utah 84057 (hereinafter referred to as the "City"); and the following additional individuals and entities:
1. Lane Taylor and Cynthia Butler, Trustees of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007, with an address of 1981 South Geneva Road, Orem, Utah (hereinafter referred to as "Taylor");
2. Donald Kent Roberts, an individual with an address of 868 West 2000 South, Orem, Utah (hereinafter referred to as "Roberts"); and
3. Axley-Way Investments, LLC, a Utah limited liability company with its principal address of 1909 West State Road #250 Pleasant Grove, UT 84062 (hereinafter referred to as "Developer").

RECITALS

WHEREAS Lane Taylor and Cynthia Butler, Trustees of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007, is the owner of a parcel of property consisting of approximately 1.24 acres located at approximately 1981 South Geneva Road, Orem, Utah which is identified on the records of the Utah County Recorder as Tax ID # 19:036:0116 and which is more particularly described in Exhibit "A" (hereinafter referred to as the "Taylor Property"); and

WHEREAS Donald Kent Roberts is the owner of a parcel of property consisting of approximately 0.96 acres located at approximately 868 West 2000 South, Orem, Utah which is identified on the records of the Utah County Recorder as Tax ID # 19:036:0053 and which is more particularly described in Exhibit "B" (hereinafter referred to as the "Roberts Property"); and

WHEREAS the Taylor Property and the Roberts Property are sometimes referred to hereinafter as the "Property"; and

WHEREAS Developer has a contract to purchase the Taylor Property and the Roberts Property; and

WHEREAS the Property is currently zoned OS5; and

WHEREAS Developer has filed an application with the City to rezone the Property from OS5 to the C2 zone in order to allow the development of a gas station on the Property as shown in the concept plan attached hereto as Exhibit "C" (the "Project"); and

WHEREAS in order to mitigate the potential negative impacts of the Project on neighboring property owners and to ensure that the development on the Property is constructed in conformance with Developer's representations, Developer, Taylor and Roberts are willing to enter into this Development Agreement; and

ENT 125251:2021 PG 1 of 25
ANDREA ALLEN
UTAH COUNTY RECORDER
2021 Jul 15 10:45 am FEE 0.00 BY JR
RECORDED FOR OREM CITY CORPORATION

WHEREAS the City, acting pursuant to its authority under Utah Code Section 10-9-101, *et. seq.*, and in furtherance of its land use policies, goals, objectives, ordinances, resolutions, and regulations, has elected to approve this Agreement.

COVENANTS

NOW, THEREFORE, in consideration of the promises and conditions set forth herein, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the City and Developer hereby agree as follows:

1. **Development in Conformance with Concept Plan**. The parties acknowledge and agree that the concept plan, drawings and renderings that Developer presented to the City Council were a significant factor in the City Council's favorable consideration of Developer's request to rezone the Property to C2. The Property shall be developed in substantial conformance with the concept plan, drawings and renderings attached hereto as Exhibit "C" including, but not limited to conformance with building location, building design, layout, lighting, landscaping, elevations and building finish materials. Exhibit "C" is attached hereto and by reference is made a part hereof. However, notwithstanding anything herein to the contrary, only such signage as is allowed by City ordinances shall be allowed on the Property and the signage shown in the concept plan and drawings shall not be allowed unless it is otherwise permitted by City ordinances.

2. **Dimmed Lighting**. In order to minimize the impact of lighting on the adjoining residential properties, the lighting for the development on the Property shall be dimmed between the hours of 12:00 a.m.(midnight) and 5:00 a.m. so that only minimal security lighting is illuminated during these hours. All other lighting besides security lighting shall be dimmed to the point of zero illumination during the above hours. The impact of lighting on the Property on adjoining residential properties shall be minimized to the greatest extent possible (except for lighting essential for security). The nighttime renderings of the Project included in Exhibit "C" illustrate the nature and type of lighting that may be employed during the hours of 12:00 a.m. to 5:00 a.m.

3. **Hours of Operation**. Because of the proximity of the Property to residential uses, the hours of operation for all commercial development on the Property shall be limited to 5:00 a.m. to 12:00 a.m.(midnight). No business or other commercial activity shall take place on the Property between 12:00 a.m. to 5:00 a.m except for the use and operation of the outside fuel pumps for which there is no restriction on hours of operation.

4. **Restriction on Fuel Pumps**. In order to limit the traffic to and from the Property (and therefore the impact on surrounding properties and streets), no more than eight (8) fuel pumps (16 fueling stations) may be located on the Property. In addition, any diesel fueling stations on the Property shall only be made available to small trucks and passenger vehicles. Diesel fueling shall not be made available to semi-trucks or other vehicles of a similar size.

5. **Easements**. Developer, Taylor and Roberts shall convey to the City an easement for the construction, installation, operation, maintenance, repair and upgrade of water, sewer and storm sewer pipes and appurtenant facilities over, under, across and through a portion of the Property in the locations shown in Exhibit "D" which is attached hereto and by reference is made a part hereof.

6. **Agreement Considered Mitigation of Impact**. In consideration of the covenants of Developer, Taylor and Roberts set forth in this Agreement, the City staff shall make a recommendation to the Orem City Council to consider the terms of this Development Agreement as sufficient mitigation of the potential adverse impacts resulting from the request to change the zoning designation of the Property from the OS5 zone to the C2 zone.

7. **No Guarantee of Rezone**. The City makes no representation that the request of Developer to have the Property rezoned will be approved by the Orem City Council. Therefore, this Agreement shall not be binding upon Developer unless the request for a rezone of the Property to the C2 zone is approved by the Orem City Council.

8. **No Limitation on Exercise of Police Power**. Nothing in this Agreement shall limit the future exercise of the police power by the City in enacting zoning, subdivision, development, transportation, environmental, open space, and related land use plans, policies, ordinances and regulations after the date of this Agreement.

9. **Compliance With All Applicable Laws**. Nothing in this Agreement shall be deemed to relieve any person or entity who develops the Property from the obligation to comply with all applicable requirements of the City necessary for approval and recordation of subdivision plats and a site plan (if applicable), including the payment of fees and compliance with all other applicable ordinances, resolutions, including the Orem City Zoning and Subdivision Ordinances and design and construction standards.

10. **Agreement to be Recorded**. Upon the approval of the rezone of the Property to the C2 zone by the Orem City Council, this Agreement may be recorded against the Property and shall be deemed to run with the land and shall be binding on all successors and assigns of Taylor, Roberts and Developer in the ownership or development of any portion of the Property.

11. **Indemnification**. Developer, and Taylor and Roberts, if Taylor or Roberts develop the Property, agree to indemnify and hold the City harmless from and against any demand, claim, action, damages or loss of any type arising or resulting from the development of the Property except such demands, claims, actions, damages, or losses that are caused by the City's (or its employees') own negligence or willful misconduct.

12. **Lawful Agreement**. The parties represent that each of them has lawfully entered into this Agreement, having complied with all relevant statutes, ordinances, resolutions, bylaws, and other legal requirements applicable to their operation. The parties further represent that each of them

has authority to enter into this Agreement and that the individuals signing this Agreement on behalf of each party have authority to bind the party represented by the signing individual.

13. **Applicable Law**. This Agreement shall be interpreted pursuant to the laws of the State of Utah.

14. **Time of Essence**. Time shall be of the essence of this Agreement.

15. **Interpretation**. The invalidity of any portion of this Agreement shall not prevent the remainder from being carried into effect. Whenever the context of any provision shall require it, the singular number shall be held to include the plural number, and vice versa, and the use of any gender shall include the other gender. Should any provision of this Agreement require judicial interpretation, the Court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against one party, by reason of the rule of construction that a document is to be construed more strictly against the person who himself or through his agents prepared the same, it being acknowledged that both parties have participated in the preparation hereof.

16. **Modifications**. No oral modifications or amendments to this Agreement shall be effective, but this Agreement may be modified or amended by written agreement.

17. **Assignment**. Neither this Agreement nor any of the provisions, terms or conditions hereof can be assigned to any other party, individual or entity without assigning the rights as well as the responsibilities under this Agreement.

18. **Relationship of Parties**. This Agreement does not create any joint venture, partnership, undertaking or business arrangement between the parties hereto, nor any rights or benefits to a third party.

19. **Incorporation of Recitals**. The Recitals to this Agreement are incorporated by reference into the Covenants section of this Agreement as if fully set forth herein.

20. **Electronic Transaction and Signature**. Each party agrees that this transaction may be conducted by electronic means. Each party agrees that the electronic signatures, whether digital or encrypted, of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means any electronic sound, symbol, or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such a record, including facsimile or email electronic signatures.

Balance of page left intentionally blank.

SIGNED and ENTERED INTO this 8 day of December, 2020.

City of Orem, by:

James P. Davidson, Orem City Manager

ATTEST:
JoD' Ann Bates, City Recorder

Lane Taylor, Trustee of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007

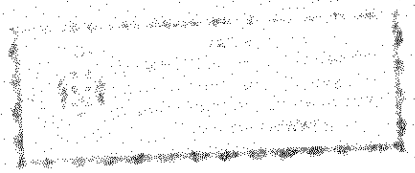
Cynthia Butler, Trustee of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this 8 day of December, 2020, by Lane Taylor and Cynthia Butler, as Trustees of the Lloyd Taylor Living Trust, as amended and restated in total on February 13, 2007.

NOTARY PUBLIC

TAYLOR HAMMER
Notary Public - State of Utah
Comm. No. 701449
My Commission Expires on
Sep 4, 2022



Donald Kent Roberts

Donald Kent Roberts

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this 8th day of December 2020, by Donald Kent Roberts.

NOTARY PUBLIC

NOTARY PUBLIC
CONSTANZA CUELLO
COMM. # 707289
MY COMMISSION EXPIRES
JULY 18, 2023
STATE OF UTAH

Axley-Way Investments, LLC
By:

See Next Page

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this _____ day of _____, 2020, by _____ as the _____ of Axley-Way Investments, LLC, who acknowledged that he/she signed this Agreement on behalf of Axley-Way Investments, LLC

NOTARY PUBLIC

Donald Kent Roberts

_____

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this _____ day of _____, 2020, by Donald Kent Roberts.

_____
NOTARY PUBLIC

Axley-Way Investments, LLC
By:

_____

STATE OF UTAH)
:ss.
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this 8th day of December, 2020, by Avrim Way as the Manager of Axley-Way Investments, LLC, who acknowledged that he/she signed this Agreement on behalf of Axley-Way Investments, LLC

_____
NOTARY PUBLIC

KIRA NICOL BARNEY
NOTARY PUBLIC - STATE OF UTAH
COMMISSION# 706244
COMM. EXP. 05-10-2023

Commencing West 7.68 chains from the Southeast corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian; thence West 2.14 chains; thence North 27°10' West 4.65 chains; thence North 89°53' East 4.26 chains; thence South 15.04 feet; thence North 89°29'20" East 12.72 feet; thence South 00°06' West 156.57 feet; thence South 59° West 14.28 feet; thence South 00°28'16" West 94.77 feet to beginning.

LESS AND EXCEPTING that portion conveyed by Boundary Fence Line Agreement recorded March 22, 2002 as Entry No. 32714:2002.

ALSO LESS AND EXCEPTING THE FOLLOWING:
A parcel of land in fee, being part of an entire tract situate in the Southeast Quarter of the Southeast Quarter of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian, in Utah County, Utah, for the construction of a signalized intersection at State Route 114 & 2000 North Street, Provo City, known at Project No. S-0114(33)4. The boundaries of said parcel of land are described as follows:

Beginning at a point in the Southerly boundary line of said entire tract and the existing Northerly right of way line of 2000 North Street, Provo City, at a point being 68.28 feet perpendicularly distant Easterly from the control line of said project at approximate Engineer Station 150+54.71, said point also being 586.81 feet North 90°00'00" West along the South line of said Section 28 from the Southeast corner of said Section 28; and running thence along said existing Northerly right of way line North 90°00'00" West 40.00 feet to a point in the existing Easterly right of way of State Highway 114, said point 33.00 feet perpendicular distant Easterly from the control line of said project at approximate Engineer Station 150+73.56; thence along said Easterly right of way line North 28°07'13" West 40.00 feet to a point 33.00 feet perpendicular distant Easterly from the control line of said project an approximate Engineer Station 151+13.56; thence South 59°03'36" East 68.62 feet to the point of beginning as shown on the map of said project on file in the office of the Utah Department of Transportation.
(Note: Rotate above bearings 00°27'51" clockwise to equal Highway Bearings based on the Utah State Plane Coordinate System, NAD 83, Central Zone).

NOTE: This page is only a part of a 2016 ALTA Commitment for Title Insurance. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; and Schedule B, Part-II Exceptions.
ALTA FORM COMMITMENT (06-17-06; Rev. 08-01-2016)

Exhibit "B"

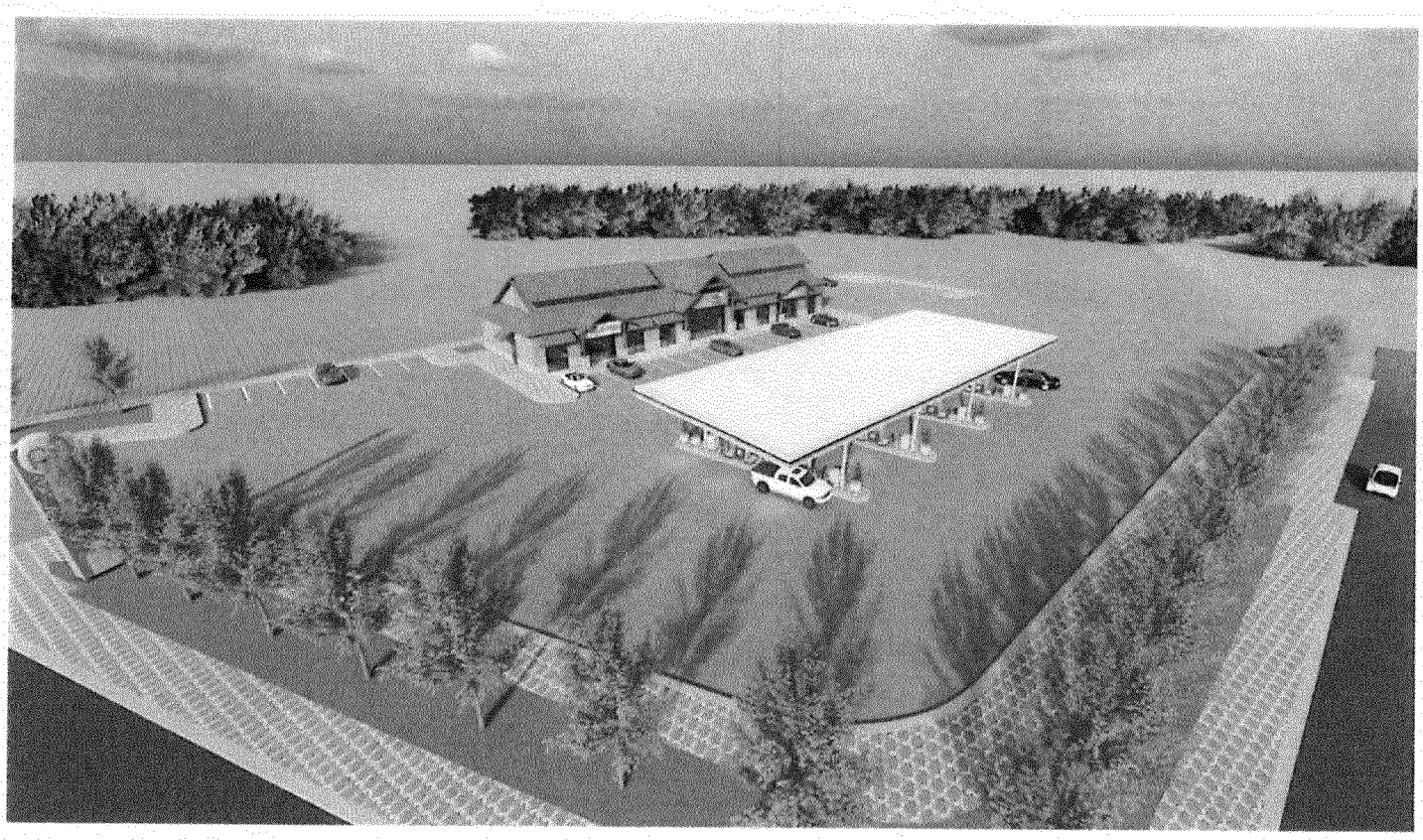
BEGINNING AT THE SOUTHWEST CORNER OF THAT CERTAIN PARCEL OF LAND CONVEYED TO DENIS E. GROO, ET UX. BY WARRANTY DEED RECORDED JANUARY 6, 1977, AS ENTRY
NO. 719, IN BOOK 1524, AT PAGE 389 OF OFFICIAL RECORDS, SAID SOUTHWEST CORNER IS DESCRIBED AS BEING NORTH 89°31'44" WEST 341.88 FEET, MORE OR LESS, FROM THE
SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 89°31'44" WEST ALONG THE SOUTH LINE OF SAID SECTION 28, 165.0 FEET TO THE SOUTHEAST CORNER OF THAT CERTAIN PARCEL OF LAND CONVEYED TO KARL R. TAYLOR BY QUIT-CLAIM DEED RECORDED JUNE 17, 1939, AS ENTRY NO. 5921, IN BOOK 342, AT PAGE 597 OF OFFICIAL RECORDS; THENCE NORTH 0°28'16" EAST ALONG THE EAST LINE OF SAID TAYLOR PROPERTY 264.0 FEET, MORE OR LESS, TO THE NORTHEAST CORNER THEREOF; THENCE SOUTH 89°31'44" EAST 165.0 FEET, MORE OR LESS, TO THE NORTHWEST CORNER OF SAID GROO PROPERTY; THENCE SOUTH 0°28'16" WEST ALONG THE WEST LINE OF SAID GROO PROPERTY 264.0 FEET TO THE POINT OF BEGINNING.

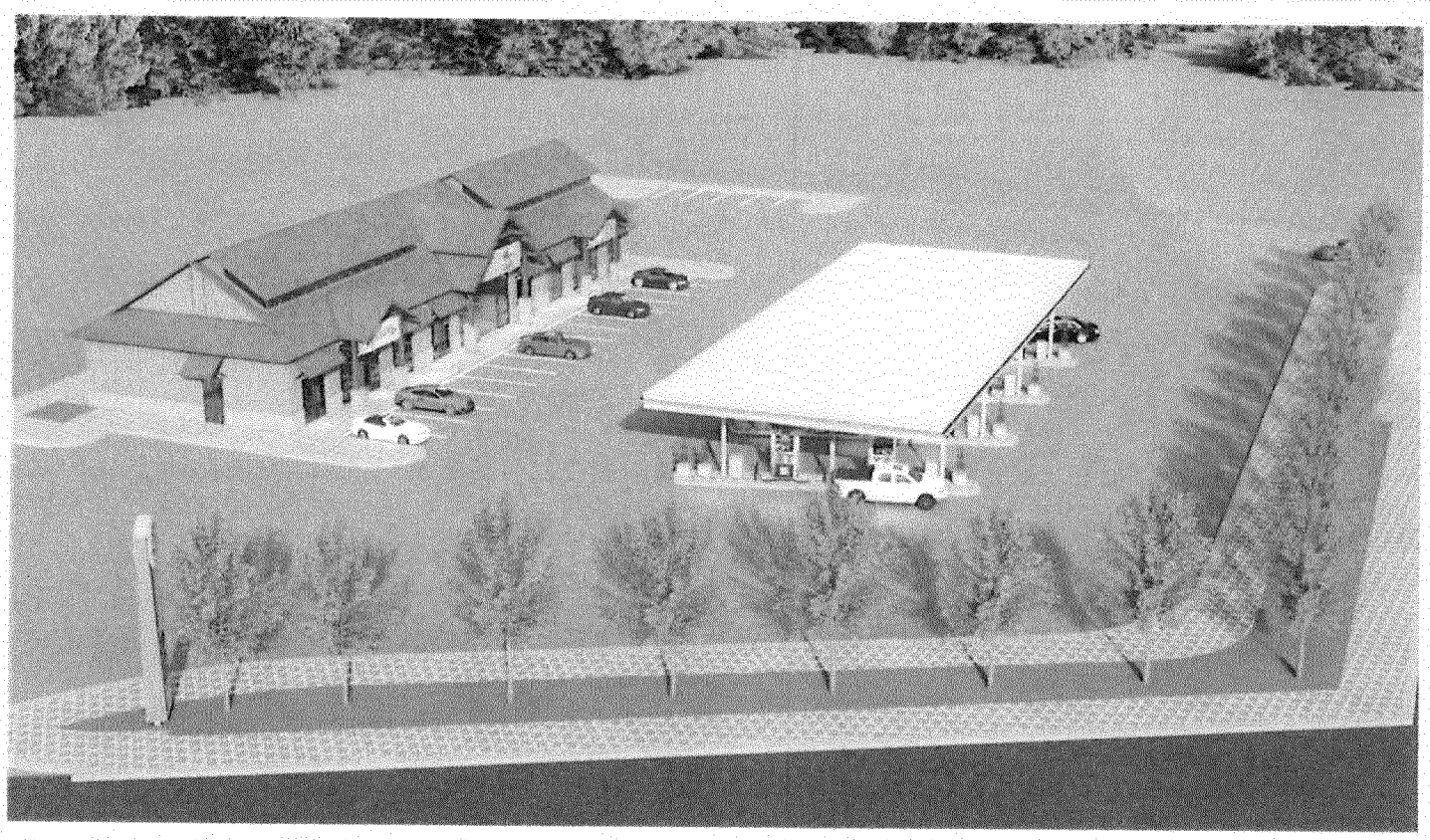
TOGETHER WITH:
THE WEST 6' 3" OF THE FOLLOWING DESCRIBED PROPERTY: COMMENCING AT THE SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE
AND MERIDIAN; THENCE NORTH 89°31'44" WEST ALONG THE SECTION LINE 341.88 FEET (104.21 METERS); THENCE NORTH 00°28'16" EAST 264.00 FEET (80.47 METERS); THENCE
SOUTH 89°31'44" EAST 341.88 FEET (104.21 METERS); THENCE NORTH 00°28'16" EAST 264.00 FEET (80.47 METERS); THENCE SOUTH 88°04'23" EAST 4.44 FEET (1.35 METERS); THENCE
SOUTH 00°45'59" EAST PARTIALLY LONG A FENCE LINE 528.00 FEET (160.93 METERS); THENCE NORTH 89°33'59" WEST ALONG THE SECTION LINE 15.84 FEET (4.83 METERS) TO THE
POINT OF BEGINNING.

LESS AND EXCEPTING:
BEGINNING AT A POINT WHICH IS NORTH 89°31'44" WEST ALONG A SECTION LINE 506.88 FEET FROM THE SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THE NORTH 89°31'44" WEST ALONG THE SECTION LINE 114.99 FEET TO THE EASTERLY LINE OF GENEVA ROAD; THENCE NORTH 28°25'53" WEST ALONG SAID EAST LINE OF GENEVA ROAD 285.08 FEET; THENCE NORTH 88°33'11" EAST ALONG A FENCE LINE 32.34 FEET; THENCE NORTH 89°29'20" EAST 230.89 FEET; THENCE SOUTH 0°06' WEST 156.57 FEET; THENCE SOUTH 59°00" WEST 13.50 FEET; THENCE SOUTH 0°28'16 WEST 91.00 FEET TO THE POINT OF BEGINNING.

ALSO LESS AND EXCEPTING THEREFROM ANY PORTION LYING NORTH OF THE LINE DESCRIBED IN THAT CERTAIN BOUNDARY FENCE LINE AGREEMENT RECORDED MARCH 22,
2002 AS ENTRY NO. 32715:2002, OF THE OFFICIAL RECORDS.

EXHIBIT "C"

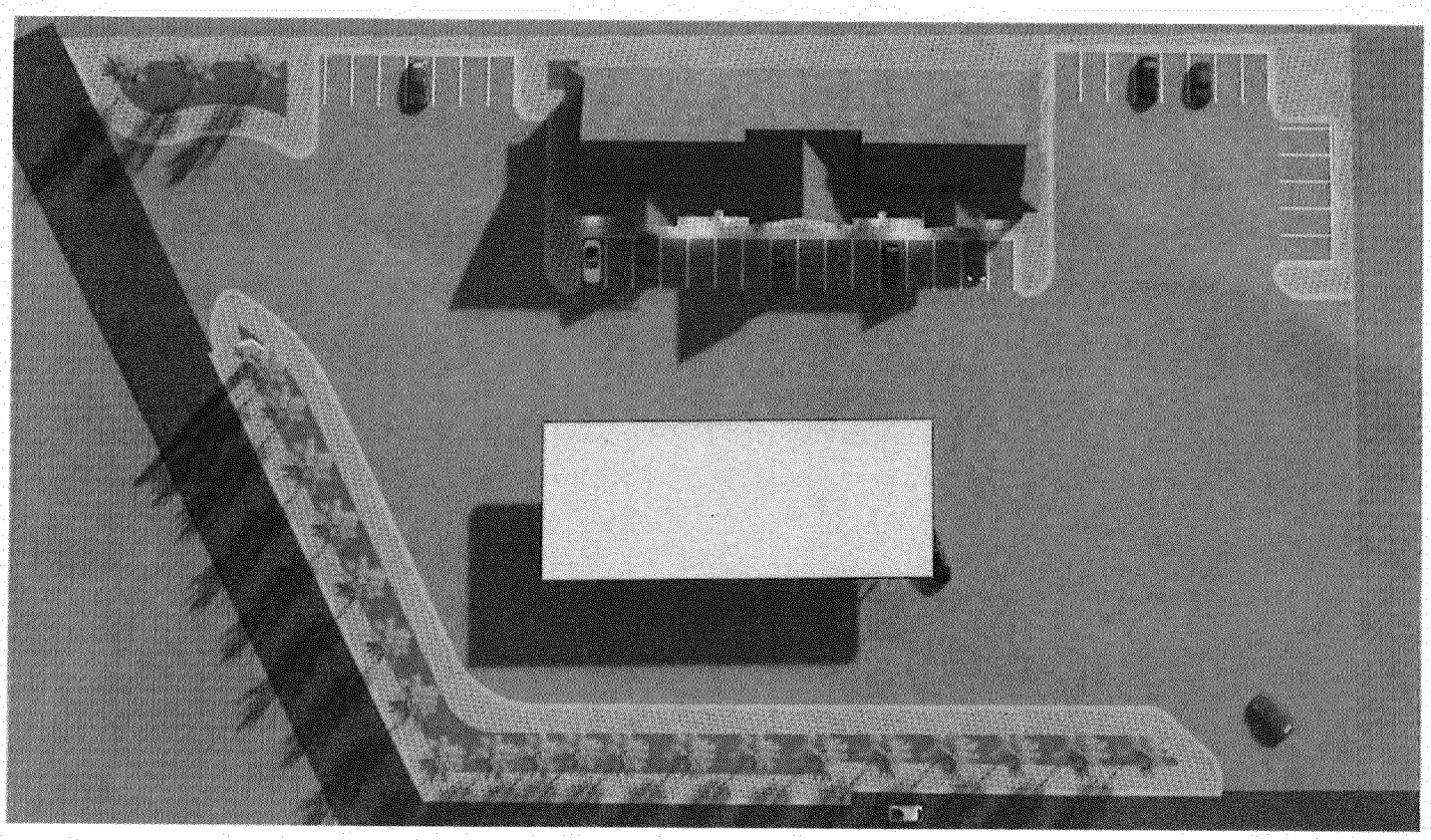


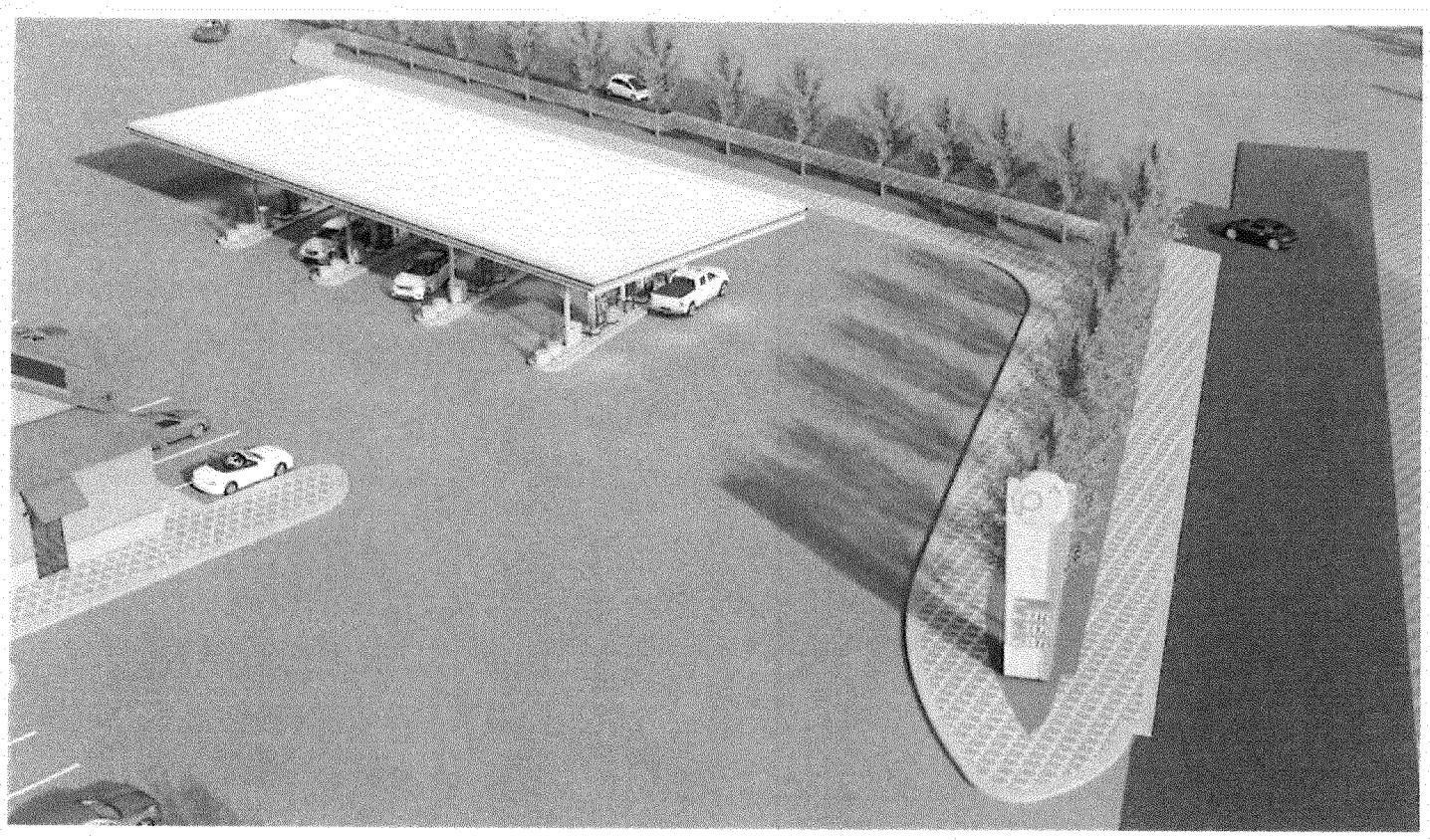


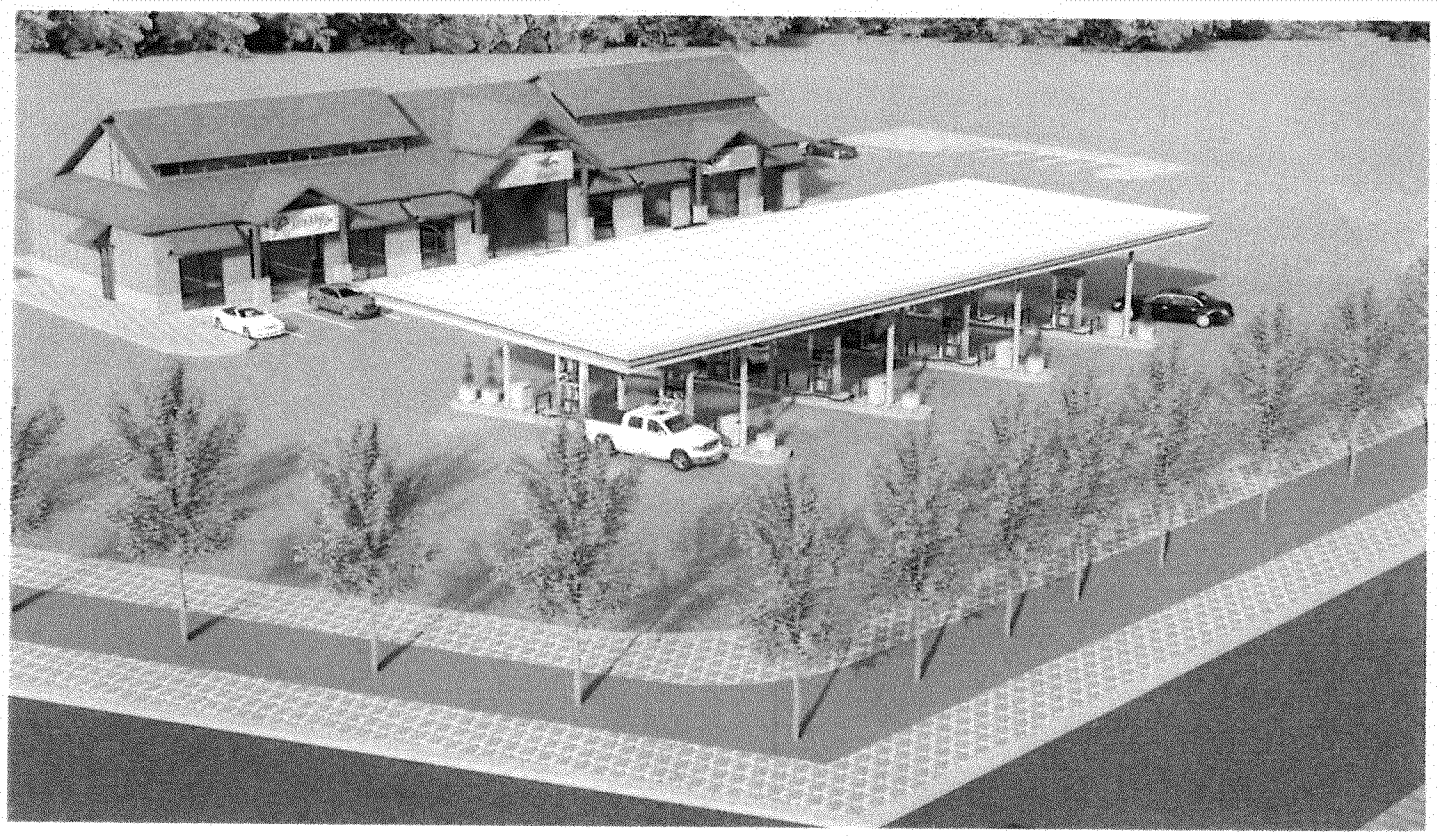
ENT 125251:2021 PG 12 of 25

ENT 125251:2021 Pg 13 of 25

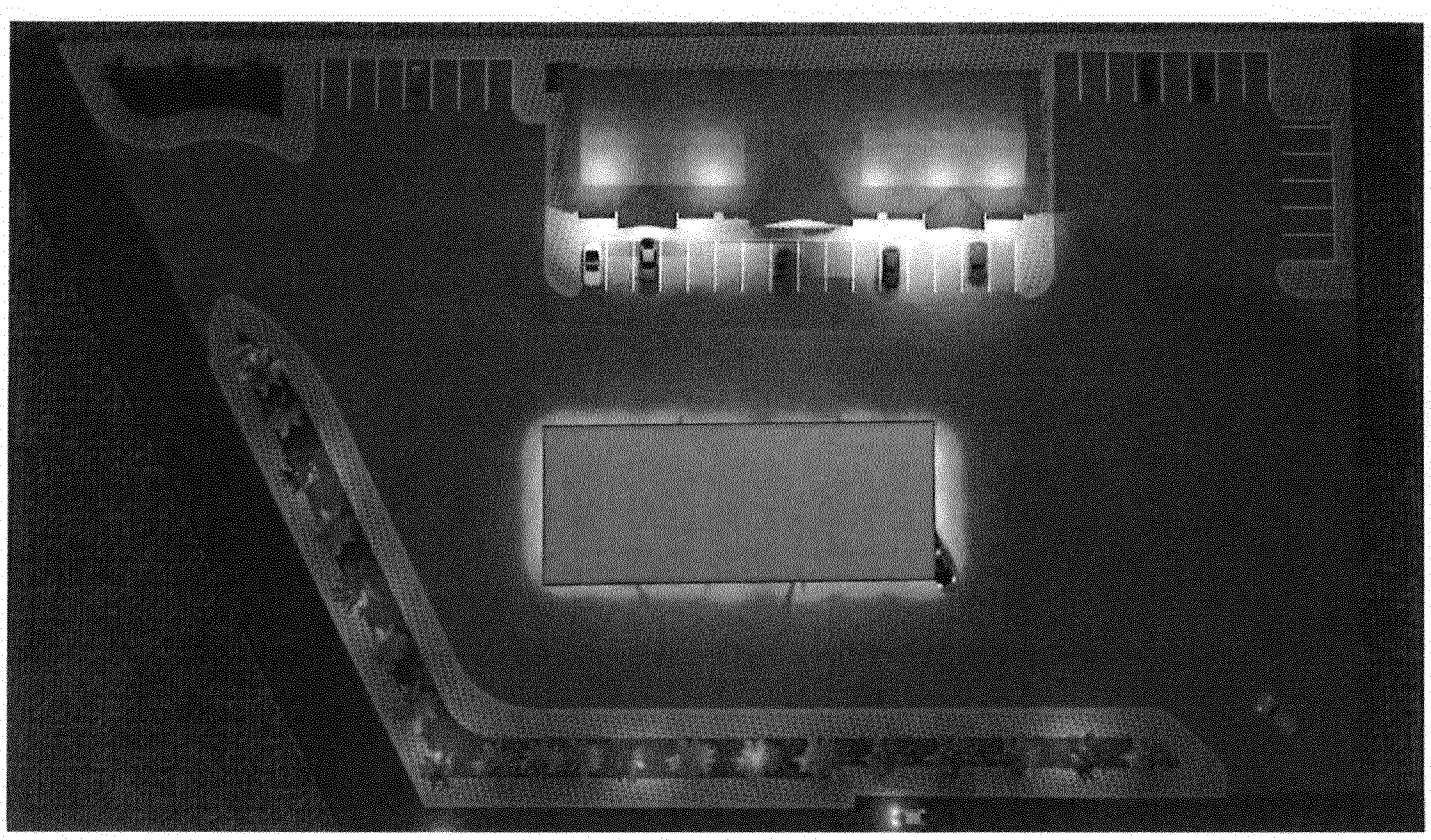
WhatsApp Image 2020-10-24 at 1.28.22 PM (1).jpeg

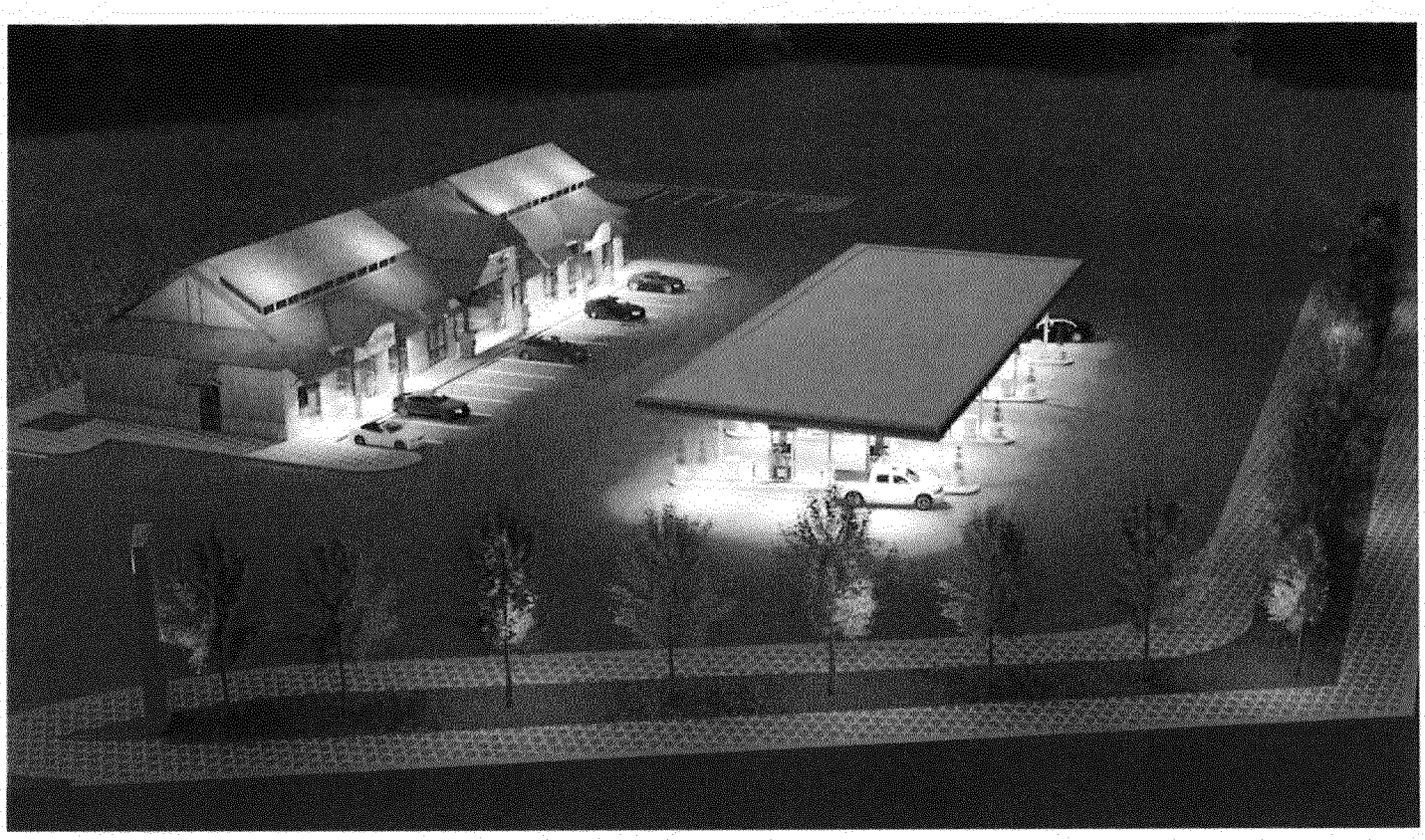




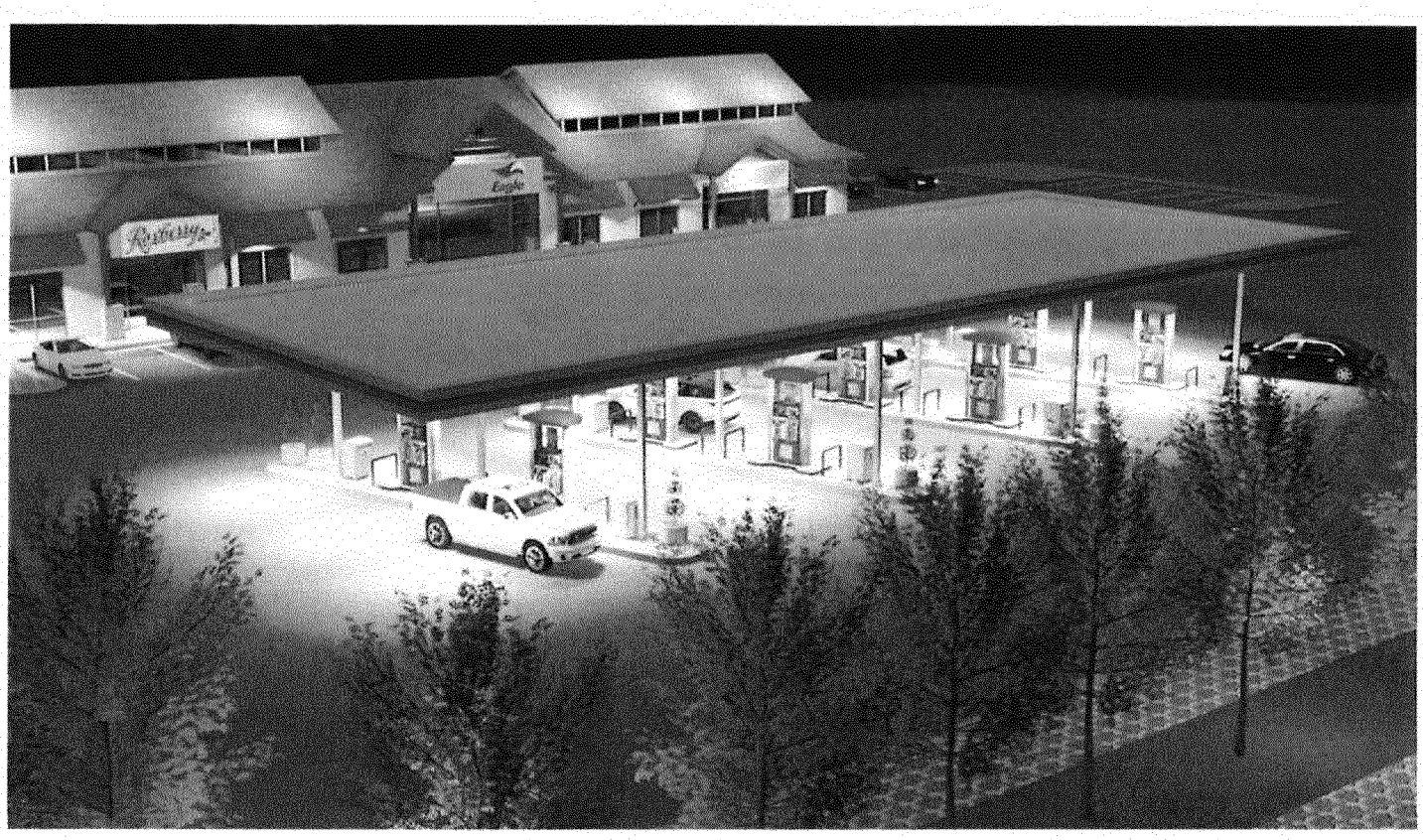


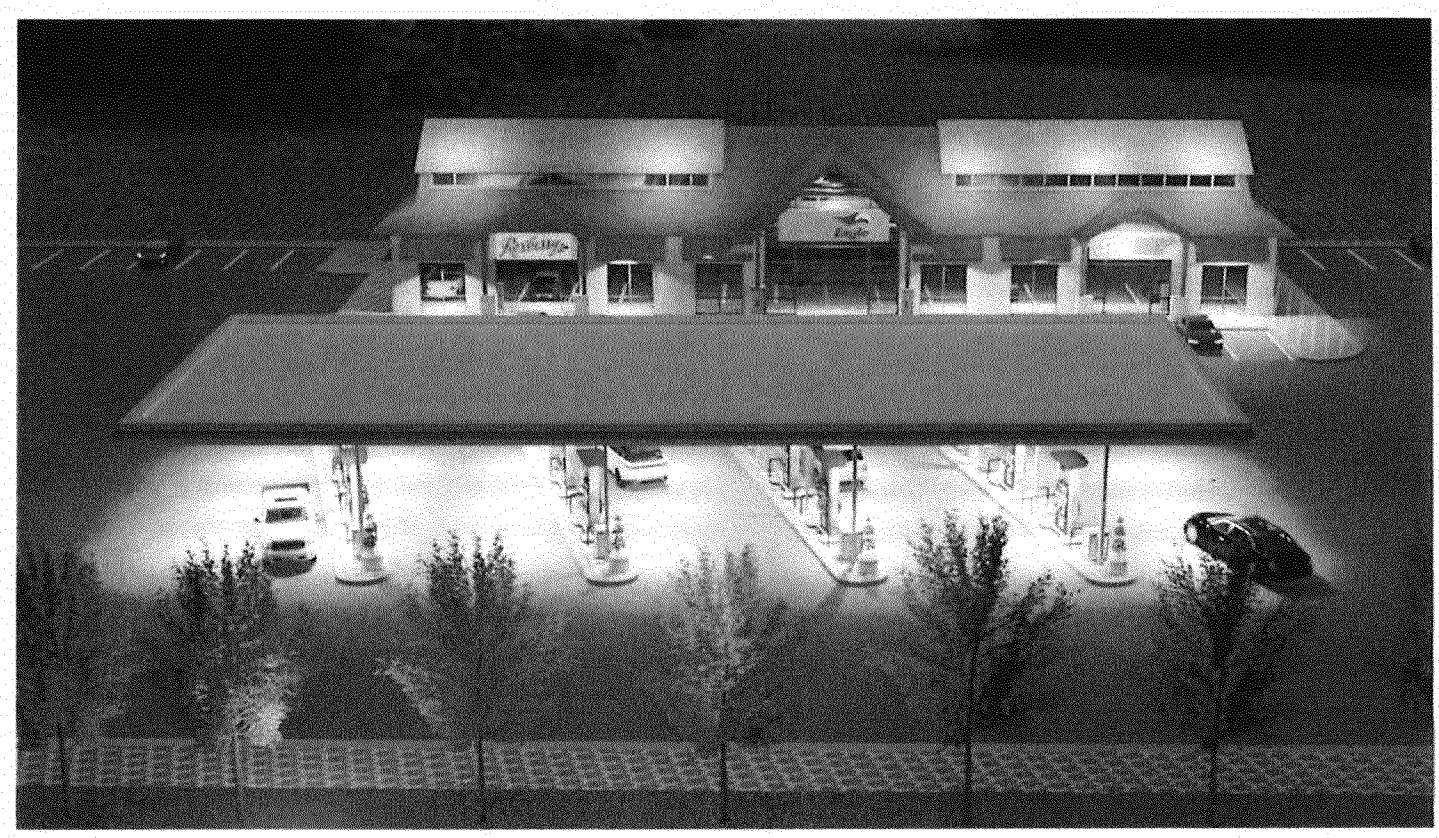
ENT 125251:2021 PG 16 of 25



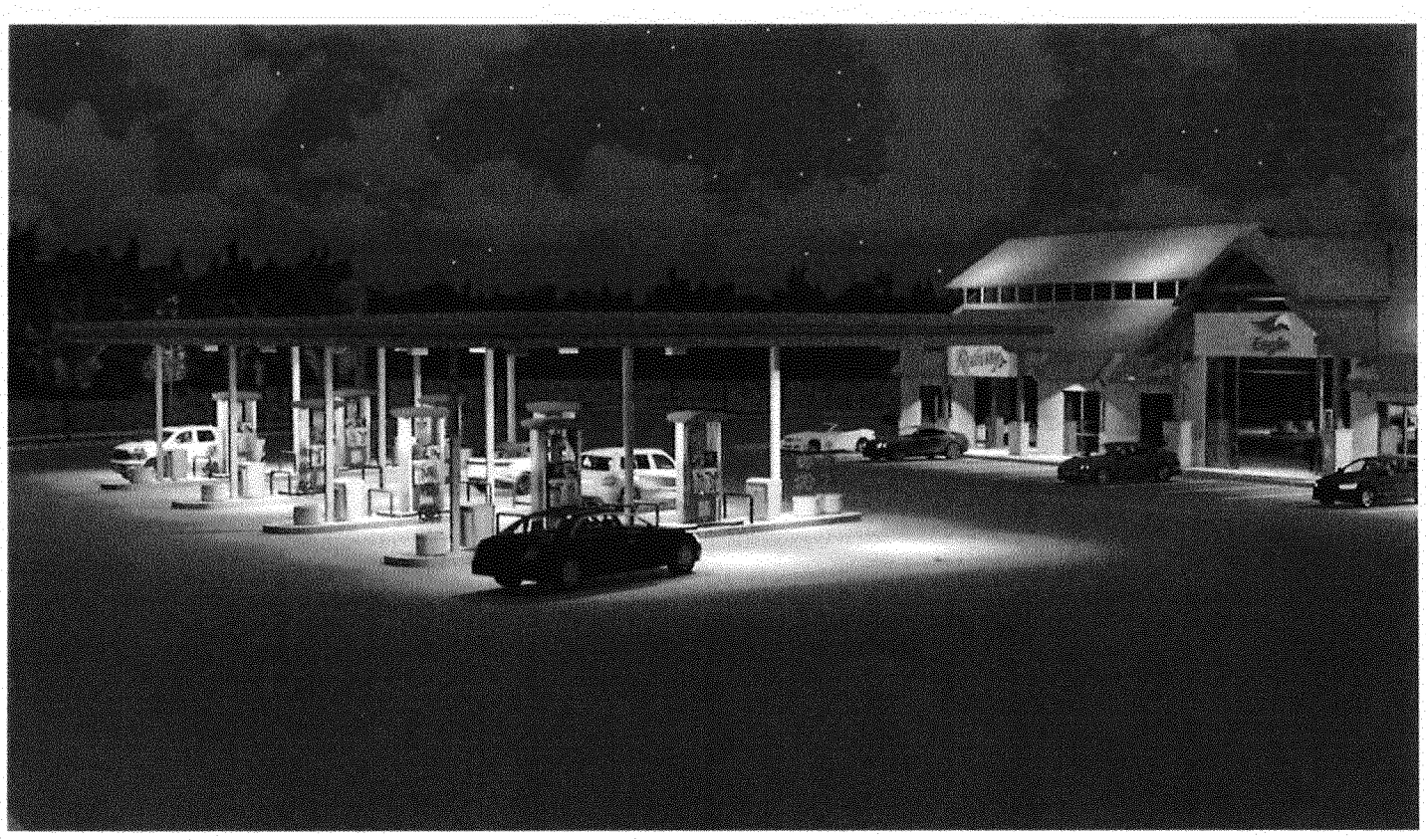


ENT 125251:2021 PG 18 of 25



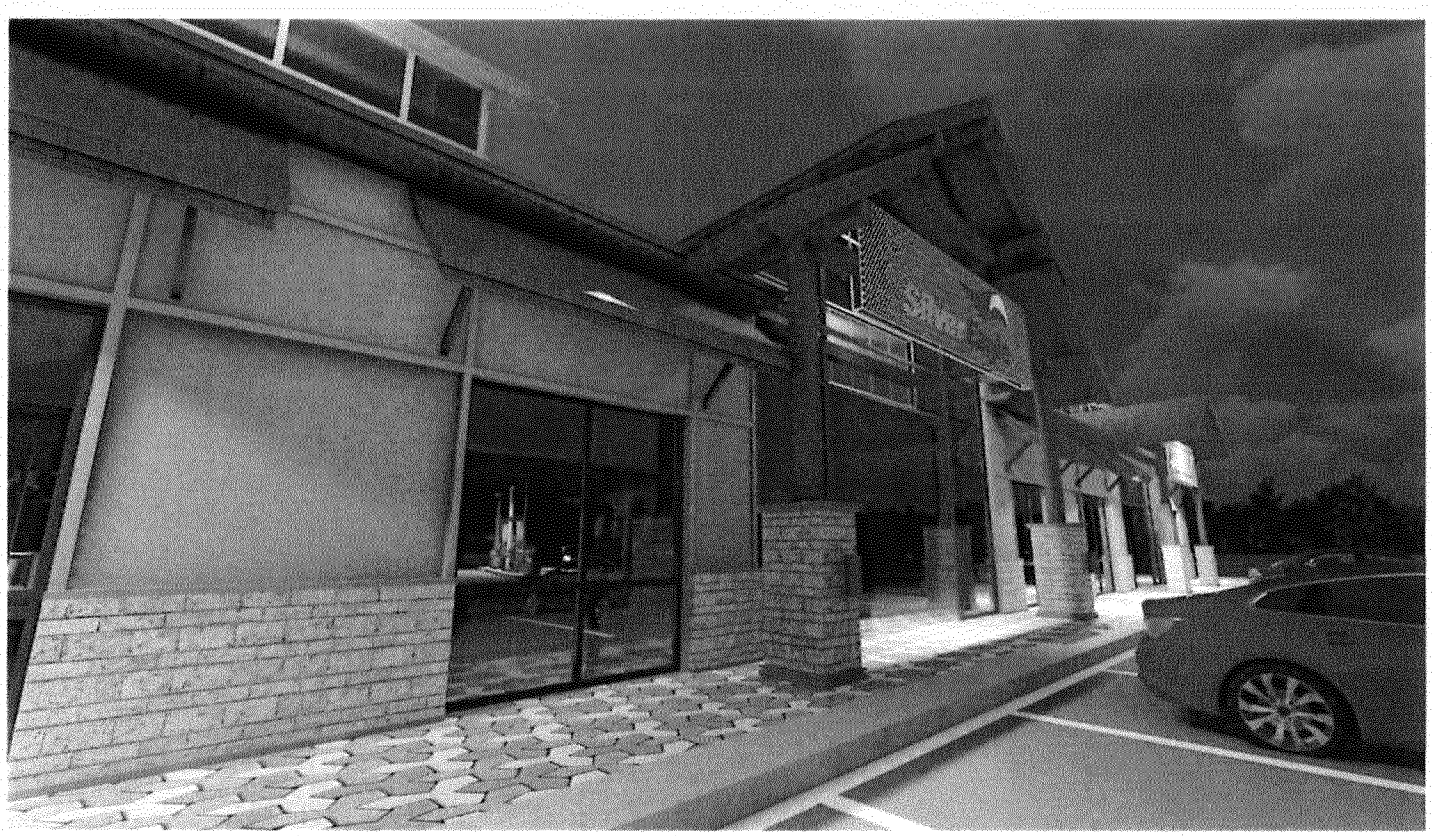


ENT 125251:2021 PG 20 of 25

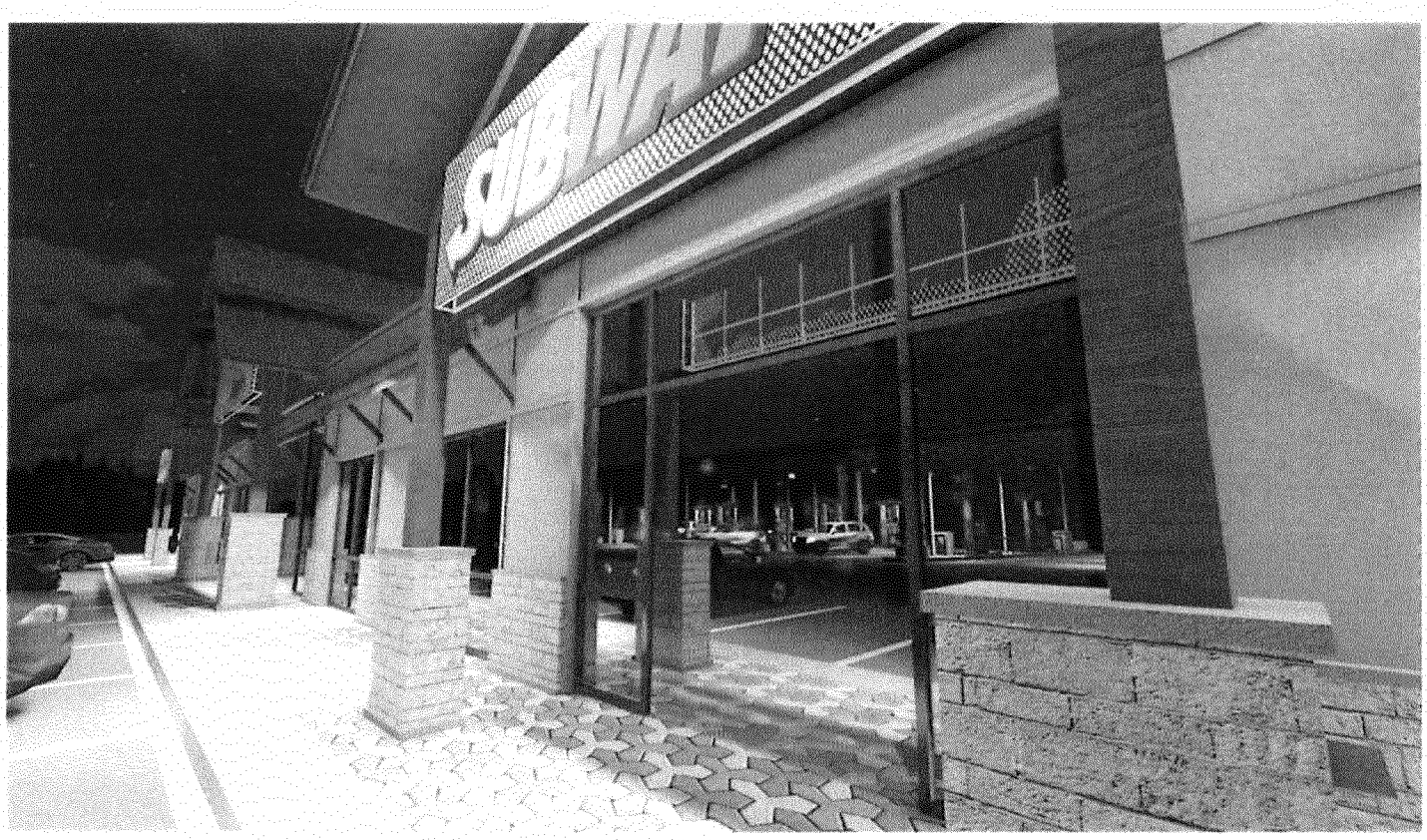


ENT 125251:2021 PG 21 of 25


SUBWAY

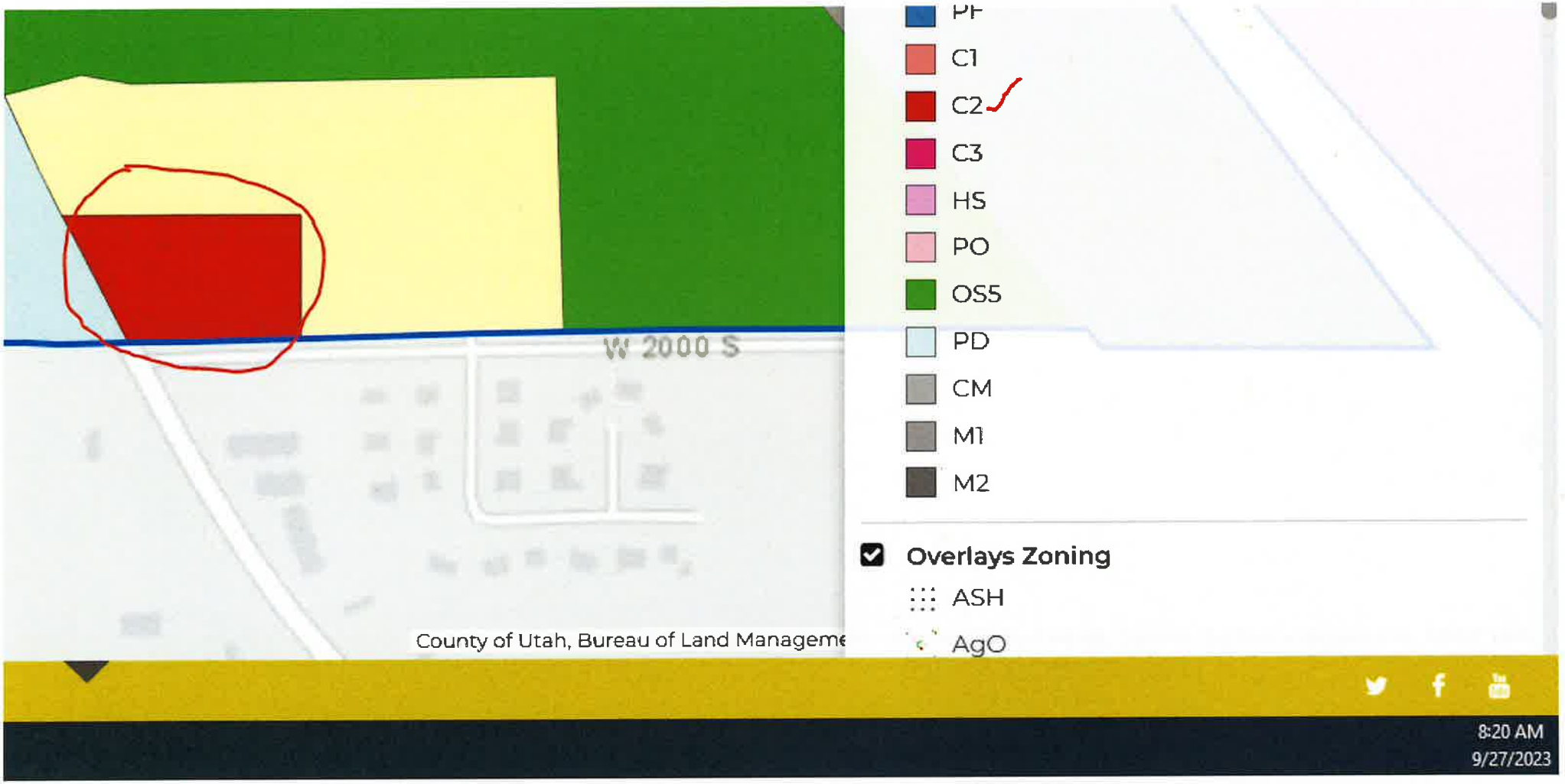


ENT 125251:2021 PG 23 of 25



ENT 125251:2021 Pg 25 of 25

Exhibit "D"


W 2000 S
County of Utah, Bureau of Land Manageme
PF
C1
C2
C3
HS
PO
OS5
PD
CM
M1
M2
Overlays Zoning
ASH
AgO
8:20 AM
9/27/2023

MITCHELL BARLOW & MANSFIELD

MITCHELL BARLOW & MANSFIELD, P.C. | BOSTON BUILDING | NINE EXCHANGE PLACE, SUITE 600 | SALT LAKE CITY, UTAH 84111
TEL (801) 998-8888 | FAX (801) 998-8077 | www.mbmlawyers.com

November 10, 2023

Sent Via Hand-Delivery
City of Orem
Department of Development Services

Re: ***Holiday Oil – Site Plan Application for 1981 South Geneva Road, Orem, Utah***

To Whom It May Concern:

We have been engaged to represent Holiday Oil ("Holiday") in connection with Orem City's (the "City") recent denial of a building permit for the real property located at 1981 S. Geneva Road, Orem, Utah (the "Property"). Our client has filed a formal appeal of the City's decision with the Board of Adjustments. We are writing to you to further explain the basis for the appeal.

Background

The City entered into a Development Agreement with the previous owner of the Property on December 8, 2020 (the "Development Agreement"). The Development Agreement authorizes the development of the Property into a gas station. In furtherance of the Development Agreement, the City approved the previous owner's application to rezone the Property from OS5 to C2. According to the Development Agreement, the City determined that the planned gas station on the Property would further the City's land use policies, goals, and objectives. Prior to executing the Development Agreement, City officials reviewed and approved the previous owner's concept plan, drawings and renderings for the gas station (the "Prior Specifications").

As part of its due diligence to purchase the Property, Holiday reviewed the Development Agreement and spoke with Jason Bench, the City's Planning Director, about its desires to amend the Development Agreement to add a car wash to the gas station concept. Holiday acquired the Property in August 2022 in reliance upon its due diligence and the conversation with Jason Bench. In January 2023, Holiday began working with the City on an amended Development Agreement. In February, Holiday held a neighborhood meeting to present its revised concept, and on February 28, Holiday submitted its DRC packet to the City. The application was denied by the Planning Commission in June and by the City Council at its August 1st meeting. While Holiday understood the City Council could deny its proposal, what it did not anticipate was the City Council taking the extraordinary step of proposing to rezone the Property to R-8 or Professional Office space. There had been no mention of this possibility since the City approved the previous owner's application to rezone the Property for commercial development.

Rather than take a reasonable time period to explore this option of rezoning the Property, the City held a neighborhood meeting just two weeks later to propose the rezoning. Meanwhile, on August 21, Holiday submitted a DRC packet with a new site plan that matched the Prior Specifications. The application included all items required on the City's checklist, including the April 2020 traffic study. On August 29, Holiday received back from the City redline revisions to the DRC packet. Interestingly, there was no mention of needing to update or revise the included traffic study. On August 30, Holiday received written confirmation from the City that the DRC packet submitted by Holiday was complete. On September 5, Holiday submitted its revised DRC packet to the City with revisions responsive to the City's redlines. Despite having been told by the City that its application and all required materials were complete and having incorporated the City's few redlines into the revised application, on September 20, the City sent written notice to Holiday stating the application was incomplete due to an outdated traffic study. This action deviated from the City's normal process for addressing such concerns with a developer. Holiday filed its appeal of the decision on September 27, 2023.

City's Actions Against Holiday

Holiday learned that on August 28, 2023, the City sent residents in the vicinity of the Property a letter describing in detail the actions the City had taken and planned to take against Holiday. Among statements made by the City in this letter, the City stated that it "strongly opposed [Holiday's] project," it "took aggressive action," it "proactively started the rezoning process," and that the City "was working as quickly as possible to complete this rezone to prevent the project." The City expressed its disappointment that "[Holiday's] project could not be prevented." These unusual statements, coupled with the reversal of its prior approval of the gas station and rezoning of the Property, its failure to notify Holiday of any concerns with the traffic study when responding to the DRC packet, and the speed with which the City has pursued rezoning the Property – not to further the City's land use policies, goals, and objectives, but to target Holiday and aggressively oppose its efforts to develop the Property as previously approved by the City – smack of malicious behavior, abuse of the police power, and politicization of the planning process.

Holiday has done all that is required of a developer to obtain approval of its site plan with Orem City. It has reasonably relied upon the City's Development Agreement and rezoning of the Property to C2 to facilitate the development of the planned gas station on the Property. It submitted a complete application, the completeness of which was acknowledged by the City. This sudden turn of events is disturbing and alarming. It is our hope that by bringing these actions to light that the City will halt its efforts to thwart Holiday's planned development and will overturn its previous denial of the development application on appeal with the Board of Adjustments. The residents of Orem, both residential and commercial, deserve a fair process and treatment under the City's code and regulations. Personal animosity or agendas should not influence the City officials' performance of their duties.

Please contact us if you wish to discuss the particulars of this letter further. We look forward to hearing from you soon in response to Holiday's appeal. Thank you for your time and consideration.

Sincerely,

MITCHELL BARLOW & MANSFIELD, P.C.

Robert E. Mansfield

OFFICE OF THE MAYOR & CITY COUNCIL
56 N. State Street | Orem, UT 84057

August, 28, 2023

RE: Holiday Oil – 1981 South Geneva Road

Dear Neighbors:

We want to provide you with an update on a new development with the proposed Holiday Oil project at 1981 Geneva Road.

As you know, the Orem City Council strongly opposed the project and took aggressive action. This included denying a request by Holiday Oil to amend the existing development agreement. The Council also proactively started the rezoning process. The Council was working as quickly as possible to complete this rezone to prevent the project.

Unfortunately, Holiday Oil submitted a complete application on August 21, 2023, for a site plan that is consistent with the existing zoning regulations and, as a result, Orem City had to accept the application and will have no other option than to approve it if the City process is followed.

The proposed rezone that would have prevented this project was scheduled for consideration by the Planning Commission at its next regularly scheduled meeting on September 6th, more than 2 weeks after Holiday Oil submitted their application. The application for the rezone will proceed to the Planning Commision on September 6th at 4:30 p.m for consideration and will be considered pending in the event Holiday Oil does not follow through and obtain site plan approval.

Please know that we are committed to fighting for the interests of our neighborhoods and are sorely disappointed this project could not be prevented. As a Council, we are reviewing other similar areas for potential issues to see what action can be taken to stop this from happening in the future.

Sincerely,

City of Orem Mayor and City Council

DRC Application
Full Site Plan

Applicant Information:			
Name: Holiday Oil		Phone: 801-973-7002	
Address: 3115 West 2100 South		City: West Valley City	
Email: brentq@holidayoil.com		State: UT	Zip: 84119

Project Information:		
Project Name:	Holiday Oil	
Project Address:	1981 S. Geneva Road, Orem UT 84058	
Which zone is your project in?	C2	
Is your project bordering a residential zone?	☒ Yes	☐ No

Fees:		
All Projects:	☒ Full Site Plan Fee	$2,194
	☒ Planning Commission Public Notice Fee	$100
If also doing a plat:	☒ Final Plat Fee	$1,069 + $139/lot
	☒ Preliminary Plat Fee	$1,578 + $162/lot
If in PD4, PD5, PD15, PD16, or PD21 Zone:	☐ Public Notice Sign Fee	$788
	☐ City Council Public Notice Fee	$100
	☐ Neighborhood Notice Fee	TBD
If bordering residential OR in C3 Zone	☒ Public Notice Sign Fee	$788
	☐ Neighborhood Notice Fee	TBD
If 1 acre or greater:	☒ Long Term Storm Water Mgmt. Plan Review Fee	$255
If less than an acre:	☐ Long Term Storm Water Mgmt. Plan Review Fee	TBD
If submitting for the fourth review:	☐ Resubmittal Fee	$623
	Total:	$ 6,285.00

Deadline:

Except in the case of a holiday, the deadline for DRC Applications is **Monday at 12pm**. Please call Development Services to determine the deadline in the event of a holiday.

Neighborhood Meeting:

A neighborhood meeting is required for a site plan one of the following conditions is true:

1. The site is adjacent to a residential zone
2. The site is within a residential zone.

Please contact development services if one of these conditions applies to your site.

Application Information:

"The DRC application must be complete at the time of submittal or it may not be accepted. An application for preliminary plat, final plat, and site plan approval shall expire if the application has not been approved or scheduled for review and approval by the approving authority within twelve months after the date it was submitted. The application shall also expire immediately following the passage of six months of no activity with respect to the application. Upon expiration, an application shall be considered null and void and a new application must be submitted, and fees paid." - Orem City Code 17-4-2 & 22-14-20(E)(1)

Contact Person:		
Contact Person: Brent Neel	Phone: 801-687-0842	Email: brentq@holidayoil.com

Signature:
Applicant Signature: 

Office Use Only:		
Project ID Number:	Date Paid:	Received By:

DRC Questionnaire
Full Site Plan

Please briefly describe your project. What are you proposing to do?

Holiday Oil is proposing to build a convenience store and a fueling station with 6 pumps (12 dispensers). The site will mirror the existing development agreement's site plan and elevations that was approved by the City in December 2020, and recorded with the County July 15, 2021.

Please describe any changes you are proposing to utilities, storm water drainage, landscaping, exteriors of buildings, traffic, parking lots, etc.

No changes will be made to the exterior of the building per the Development Agreement. We will continue working with the City to make sure all the utilities and storm drainage requirements meet the City's standards. Our site plan is showing an access on 2000 south as well as an access on Geneva Road. We are currently in the second review stage with UDOT and are responding to their most recent comments. We have preliminary approval on Geneva Road from our pre-application meeting.

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'

OREM HOLIDAY OIL

868 WEST 2000 SOUTH
OREM, UTAH

DEPARTMENT REVIEW

SEWER____/DATE_____
WATER____/DATE_____
STORM DRAIN ____/DATE_____
TRAFFIC _____/DATE_____
STREET LIGHTS____/DATE_____
FIRE MARSHAL____/DATE_____
STREETS ____/DATE_____

Received:
Date: 08/21/2023
By: MW

DATE PRINTED
August 21, 2023

OREM CITY NOTES:

"THE FIRE PROTECTION ITEMS (FIRE HYDRANTS, WATER MAINS, ACCESS ROADS, ETC.) SHOWN ON THIS SITE PLAN ARE PRE-LIMINARY ONLY. DETAILED FIRE PROTECTION PLANS SHALL BE SUBMITTED WITH THE BUILDING PLANS. PLAN REVIEWS BY THE CITY OF OREM FIRE PREVENTION BUREAU SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. THE PLAN REVIEWS BY THE CITY OF OREM FIRE PREVENTION BUREAU MAY IDENTIFY ADDITIONAL FIRE PROTECTION REQUIREMENTS MANDATED BY THE INTERNATIONAL FIRE CODE. FIRE HYDRANT FOOT VALVES SHALL BE INSTALLED AT THE CONNECTION POINT WITH THE MAIN WATER LINES."

"ALL LANDSCAPED AREAS SHALL HAVE AN AUTOMATIC, UNDERGROUND SPRINKLING SYSTEM WHICH INCLUDES A BACK-FLOW ASSEMBLY TO THE BUILDING. BACKFLOW ASSEMBLIES SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH SECTION 21-1-14 OF THE OREM CITY CODE. WATER METER SIZES SHALL BE DETERMINED BY THE CITY OF OREM BUILDING DIVISION AT THE TIME OF BUILDING PERMIT APPROVAL OR WHEN THERE IS A REQUEST TO CHANGE THE WATER METER SIZE. WATER METERS SHALL BE LOCATED AT THE BACK OF SIDEWALK OR CURB IN AN AREA THAT IS ACCESSIBLE FOR READING AND SERVICING. WATER METERS SHALL NOT BE LOCATED WITHIN AREAS ENCLOSED WITH FENCES OR WITHIN TEN FEET (10') OF ANY EXISTING OR PROPOSED STRUCTURE."

IF REQUIRED BY CHAPTER 20 OF THE OREM CITY CODE OR BY THE APPLICANT'S PERMIT FOR INDUSTRIAL WASTEWATER DISCHARGE, "A SAMPLING MANHOLE AND FAT AND OIL SEPARATOR/GREASE TRAP SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF OREM STANDARDS AND SPECIFICATIONS."

"ALL SIGNAGE SHALL COMPLY WITH THE REQUIREMENTS OF THE OREM CITY CODE."

"ALL UTILITIES, INCLUDING WATER AND SEWER LATERALS, WATER AND SEWER MAINS, STORM WATER DRAINS, STORM WATER SUMPS, SEWER MANHOLES, WATER VALVES, ETC., WATER LATERALS OR MAINS SHALL NOT BE LOCATED UNDER COVERED PARKING AREAS AND SHALL BE INSTALLED ACCORDING TO CHAPTER 21 OF THE OREM CITY CODE."

"ALL ROOF DRAINAGE SHALL BE ROUTED THROUGH ON-SITE STORM WATER MANAGEMENT FACILITIES OR TO LANDSCAPED AREAS."

"AT THE TIME OF CONSTRUCTION, THE CITY OF OREM MAY DETERMINE BASED ON PROFESSIONAL EXPERIENCE AND JUDGMENT AND AT ITS SOLE DISCRETION, THE NEED FOR THE OWNER/DEVELOPER TO PAY FOR, REMOVE, AND REPLACE ANY EXISTING SUBSTANDARD IMPROVEMENTS SUCH AS CURBS, GUTTERS, SIDEWALKS, DRIVE APPROACHES, DRIVEWAYS, DECORATIVE CONCRETE, WHEELCHAIR RAMPS, ETC., OR ANY UNUSED DRIVE APPROACHES."

"ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF OREM CONSTRUCTION STANDARDS AND SPECIFICATIONS UNLESS THE IMPROVEMENT IS WITHIN THE UDOT RIGHT-OF-WAY, IN WHICH CASE THE CONSTRUCTION SHALL CONFORM TO UDOT CONSTRUCTION STANDARDS AND SPECIFICATIONS."

NOTICE TO CONTRACTOR

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS OF THE U.S. DEPARTMENT OF LABOR AND THE STATE OF UTAH DEPARTMENT OF INDUSTRIAL RELATIONS CONSTRUCTION SAFETY ORDERS." THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTORS AND SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

CONTRACTOR FURTHER AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

INDEX OF DRAWINGS

1-2	ALTA / NSPS LAND TITLE & TOPOGRAPHY SURVEY
2-2	ALTA / NSPS LAND TITLE & TOPOGRAPHY SURVEY
1-1	PLAT
C001	GENERAL NOTES
C100	DEMOLITION PLAN
C200	SITE PLAN
C201	UDOT ACCESS PLAN
C202	UDOT SIGNAGE AND STRIPING PLAN
C300	GRADING AND DRAINAGE PLAN
C400	UTILITY PLAN
C500	EROSION CONTROL PLAN
C600	DETAILS
C601	DETAILS
C602	DETAILS
C603	DETAILS
C604	UDOT DETAILS
L100	LANDSCAPE PLAN
L200	IRRIGATION PLAN
L300	LANDSCAPE AND IRRIGATION DETAILS
PH100	PHOTOMETRIC PLAN

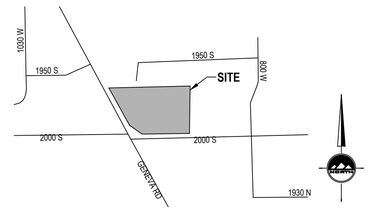
NOTICE TO DEVELOPER/CONTRACTOR

UNAPPROVED DRAWINGS REPRESENT WORK IN PROGRESS, ARE SUBJECT TO CHANGE, AND DO NOT CONSTITUTE A FINISHED ENGINEERING PRODUCT. ANY WORK UNDERTAKEN BY DEVELOPER OR CONTRACTOR BEFORE PLANS ARE APPROVED IS UNDERTAKEN AT THE SOLE RISK OF THE DEVELOPER, INCLUDING BUT NOT LIMITED TO BIDS, ESTIMATION, FINANCING, BONDING, SITE CLEARING, GRADING, INFRASTRUCTURE CONSTRUCTION, ETC.

UTILITY DISCLAIMER

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATIONS OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

VICINITY MAP



NO SCALE

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO OREM CITY STANDARDS & SPECIFICATIONS.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
8/21/2023
No. 9125581-2202
MICHAEL S. BUDGE
STATE OF UTAH

COVER SHEET

PROJECT NUMBER	PRINT DATE
12089	2023-08-21
PROJECT MANAGER	DESIGNED BY
CD	MB

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

SURVEYOR'S NARRATIVE

I, Patrick M. Harris do hereby state that I am a Professional Land Surveyor and that I hold certificate no. 286882 as prescribed by the laws of the State of Utah and represent that I have made a survey of the following described property. The Purpose of this survey is to provide an ALTA/NSPS Land Title and Topography Survey for use by the client. The Basis of Bearing is the line between the Southeast Corner and the South Quarter Corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian, measuring North 89°31'44" West 2672.30 feet.

COMMITMENT DESCRIPTIONS

Parcel 1:

Beginning at the Southwest corner of the certain parcel of land conveyed to Denis E. Groo, Et Ux. By Warrant Deed recorded January 6, 1977, as Entry No. 719, in Book 1524, at Page 389 of official records, said Southwest corner is described as being North 89° 31' 44" West 341.88 feet, more or less from the Southeast corner of Section 28, Township 6 South, Range 2 East Salt Lake Base and Meridian: thence North 89° 31' 44" West along the South line said Section 28, 165.0 feet to the Southeast corner of the certain parcel of land conveyed to Karl R. Taylor by Quit-Claim Deed recorded June 17, 1939, as Entry No. 5921, in Book 342, at Page 597 of official records; thence North 0° 28' 16" East along the East line of said Taylor property 264.0 feet, more or less, to the Northeast corner thereof; thence South 89° 31'44" East 165.0 feet more or less, to the Northwest corner of said Groo property; thence South 0° 28' 16" West along the West line of said Groo property 264.0 feet to the point of beginning.

TOGETHER WITH the West 6' 3" of the following described property: Commencing at the Southeast corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian; thence North 89° 31' 44" West along the Section line 341.88 feet (104.21 meters); thence North 00° 28' 16" East 264.00 feet (80.47 meters); thence South 89° 31' 44" East 341.88 feet (104.21 meters); thence North 00° 28' 16" East 264.00 feet (80.47 meters); thence South 88° 04' 23" East 4.44 feet (1.35 meters); thence South 00° 45' 59" East partially along a fence line 528.00 feet (160.93 meters); thence North 89° 33' 59" West along the Section line 15.84 feet (4.83 meters) to the point of beginning.

LESS AND EXCEPTING THEREFROM: Beginning at a point which is North 89° 31' 44" West along a Section line 506.88 feet from the Southeast corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian; thence North 89° 31' 44" West along the Section line 114.99 feet to the Easterly line of Geneva Road; thence North 28° 25' 53" West along said East line of Geneva Road 285.08 feet; thence North 88° 33' 11" East along a fence line 32.34 feet; thence North 89° 25' 20" East 230.89 feet; thence South 0° 06' West 156.57 feet; thence South 59° 00' West 13.50 feet; thence South 0° 28' 16" West 91.00 feet to the point of beginning.

ALSO LESS AND EXCEPTING THEREFROM any portion lying North of the line described in that certain Boundary Fence Line Agreement Recorded March 22, 2002 as Entry No. 32714:2002 in the Utah County Recorder's office.

ALSO LESS AND EXCEPTING THEREFROM any portion lying North of the line described in that certain Boundary Fence Line Agreement Recorded March 22, 2002 as Entry No. 32715:2002 in the Utah County Recorder's office.

ALSO LESS AND EXCEPTING THEREFROM any portion lying within the bounds of the Payton Crossing Subdivision, Plat "A".

Parcel 2:

Commencing at a point located North 89° 31' 44" West along the Section line 507.68 feet and South 4.18 feet from the Southeast corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian; thence West 71.23 feet; thence North 58° 35' 20" West 72.31 feet; thence North 27° 49' 58" West along Geneva Road 246.73 feet; thence North 89° 28' 53" East along Payton Crossing Subdivision 261.45 feet; thence South 00° 06' 00" West 156.12 feet; thence South 59° 00' 00" West 14.28 feet; thence South 00° 28' 16" West 94.77 feet to the point of beginning.

LESS AND EXCEPTING THEREFROM that portion conveyed in that certain Warranty Deed recorded on April 24, 2019 as Entry No. 34565:2019, in the Utah County Recorder's office, described as follows: A parcel of land in fee, being part of an entire tract situate in the SE1/4 SE1/4 of Section 28, Township 6 South, Range 2 East, SLB&M, in Utah County, Utah, for the construction of a signalized intersection at State Route 114 & 2000 North Street, Provo City, known as Project No. S-0114(33)4. The boundaries of said parcel of land are described as follows:

Beginning at a point in the southerly boundary line of said entire tract and the existing northerly right of way line of 2000 North Street, Provo City, at a point being 68.28 feet perpendicularly distant easterly from the control line of said project at approximate Engineer Station 150+54.71, said point also being 586.81 feet N.90°00'00"W. along the south line of said Section 28 from the Southeast corner of said Section 28; and running thence along said existing northerly right of way line N.90°00'00"W. 40.00 feet to a point in the existing easterly right of way of State Highway 114, said point 33.00 feet perpendicular distant easterly from the control line of said project at approximate Engineer Station 150+73.56; thence along said easterly right of way line N.28°07'13"W. 40.00 feet to a point 33.00 feet perpendicular distant easterly from the control line of said project at approximate Engineer Station 151+13.56; thence S.59°03'36"E. 68.62 feet to the point of beginning as shown on the map of said project on file in the office of the Utah Department of Transportation.

ALSO LESS AND EXCEPTING THEREFROM any portion lying within the bounds of the Payton Crossing Subdivision, Plat "A".

AS SURVEYED DESCRIPTIONS

Parcel 1:

A parcel of land situate in the Southeast Quarter of Section 28, Township 6 South, Range 2 East, Salt Lake Base & Meridian, being more particularly described as follows:

Beginning at a point located North 89°31'44" West 335.63 feet along the Section line from the Southeast Corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base & Meridian, and running;

thence North 89°31'47" West 172.01 feet;
thence North 00°28'16" East 90.59 feet;
thence North 59°00'00" East 14.28 feet;
thence North 00°06'00" East 156.12 feet to the south line of Payton Crossing Subdivision;
thence North 89°28'52" East 160.86 feet along the south line of Payton Crossing Subdivision;
thence South 00°28'16" West 256.94 feet to the Point of Beginning.

Parcel 2:

A parcel of land situate in the Southeast Quarter of Section 28, Township 6 South, Range 2 East, Salt Lake Base & Meridian, being more particularly described as follows:

Beginning at a point located North 89°31'44" West 507.64 feet and South 0°28'16" West 4.18 feet along the Section line from the Southeast Corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base & Meridian said, and running;

thence West 71.23 feet;
thence North 58°35'20" West 72.31 feet to the East line of Geneva Road;
thence North 27°49'58" West 246.73 feet along the East line of Geneva Road to the Southwest corner of Payton Crossing Subdivision;
thence North 89°28'53" East 261.45 feet along the south line of Payton Crossing Subdivision;
thence South 00°06'00" West 156.12 feet;
thence South 59°00'00" West 14.28 feet;
thence South 00°28'16" West 94.77 feet to the Point of Beginning.

To: (i)Wagstaff Investments, LLC, (ii)HL1, LLC, Pro-Title & Escrow, Inc. and First American Title Insurance Company.

This is to certify that this map or plat and the survey on which it is based were made in accordance with 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 5, 8, 11, 13, 14, 18 and 19 of Table A hereof.

The field work was completed on. December 5, 2022.

Date of Plat or Map: January 16, 2022.

_____ _____ _____
Date Patrick M. Harris
License No. 286882

Note: For conditions of record not shown hereon as well as specific references to items in the title report, please refer to a title report supplied by, Pro-Title & Escrow, Inc. of Provo, Utah under Commitment No. 38780-P, dated effective May 19, 2022.

Schedule B-2 Exceptions

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

2. Any facts, rights, interests, or claims that are not shown in the Public Records but that could be ascertained by an inspection of the Land or by making inquiry of persons in possession of the Land. (blanket in nature)

3. Easements, liens or encumbrances, or claims thereof, not shown in the Public Records. (blanket in nature)

4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title including discrepancies, conflicts in boundary lines, shortage in area, or any other facts that would be disclosed by an accurate and complete land survey of the Land and not shown in the Public Records. (blanket in nature)

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

6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown in the Public Records. (not survey related)

7. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met.

8. Taxes for the year 2021 are paid in the amount of $1,173.97. Taxes for the year 2022 are not yet due and payable but are a lien. Tax Serial No. 19:036:0053. (Parcel 1) (not survey related)

Taxes for the year 2021 are paid in the amount of $ 1,262.69 under Base Tax Serial No. 19:036:0116. Taxes for the year 2022 are not yet due and payable but are a lien. New Tax Serial No. 19:036:0130. (Parcel 2) (not survey related)

9. Mechanics' and/or Materialmen's Lien claims if either work is started, any material delivered or service rendered, prior to the recordation of the Security Instrument to be insured. (not survey related)

LOSS OF PRIORITY under this provision may jeopardize the Company's ability to insure under an ALTA Owner's or Lenders Policy.

The State Construction Registry discloses the following Preliminary Notice(s):

(a) Entry No. 8451331, filed February 3, 2021, by CMT Engineering Laboratories.
(b) Entry No. 8465253, filed February 9, 2021, by LKL Associates.
(c) Entry No. 9078281, filed October 14, 2021, by Spring Line Construction.
(d) Entry No. 9078297, filed October 14, 2021, by Spring Line Construction.

10. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown in the public records. (not survey related)

11. Right-of-Way and Easement Grant in favor of PacifiCorp, an Oregon Corporation, d/b/a Rocky Mountain Power its successors and assigns recorded April 21, 2009 as Entry No. 42704:2009 in the Utah County Recorder's office. (Parcel 1) (shown on survey)

12. Right-of-Way and Easement Grant in favor of PacifiCorp, an Oregon Corporation, d/b/a Rocky Mountain Power its successors and assigns recorded September 15, 2009 as Entry No. 99560:2009 in the Utah County Recorder's office. (Parcel 2) (shown on survey)

13. Water Line Easement in favor of the City of Orem, a municipal corporation recorded on December 19, 2016 as Entry No. 127102:2016 in the Utah County Recorder's Office. (Parcel 2) (shown on survey)

14. Water Line Easement in favor of the City of Orem, a municipal corporation recorded on December 19, 2016 as Entry No. 127104:2016 in the Utah County Recorder's Office. (Parcel 1) (shown on survey)

15. Water Line Easement in favor of the City of Orem, a municipal corporation recorded on January 9, 2017 as Entry No. 1916:2017 in the Utah County Recorder's Office. (Parcel 2) (shown on survey)

16. Boundary Fence Line Agreement dated January 25, 2002, by and between Elva Ferguson Scott Van Wagenen, Trustee of the Elva Ferguson Scott Van Wagenen Trust as Party of the First Part and Karl Lloyd Taylor as Party of the Second Part, recorded on March 22, 2002 as Entry No. 32714:2002 in the Utah County Recorder's Office. (shown on survey)

17. Boundary Fence Line Agreement dated January 25, 2002, by and between SCP Properties, LLC as Party of the First Part and Karl Lloyd Taylor as Party of the Second Part and Donal Kent Roberts and Katheryn Ann Roberts as Party of the Third Part as Party of the Second Part, recorded on March 22, 2002 as Entry No. 32715:2002 in the Utah County Recorder's Office. (shown on survey)

18. Agreement by and between Provo City, a municipal corporation and the City of Orem, a municipal corporation recorded on July 22, 2015 as Entry No. 65900:2015 in the Utah County Recorder's Office.

19. Water Deed recorded on January 4, 2021 as Entry No. 557:2021 in the Utah County Recorder's Office.

20. Development Agreement dated December 8, 2020 by and between Axley-Way Investments, LLC as Developer and the City of Orem. Said Agreement recorded on July 15, 2021 as Entry No. 125251:2021 in the Utah County Recorder's office.

21. Any encroachment, gap, overlap, or adverse circumstance affecting the Title including discrepancies, conflicts in boundary lines, shortage in area, or any other facts that would be disclosed by an accurate and complete survey of the Land. (blanket in nature)

22. Rights of way or easements for any roads, ditches, canals or utility lines now existing over, under or across the land. (blanket in nature)

23. The rights of tenants and/or parties in possession of the subject land under unrecorded leases, rental or occupancy agreements and any claims thereunder. (blanket in nature)

24. Water rights, claims or title to water, whether or not the matters are shown by the public records. (not survey related)

25. Minerals of whatsoever kind, subsurface and surface substances, including but not limited to coal, lignite, oil, gas, uranium, clay, rock, sand and gravel in, on, under and that may be produced from the Land, together with all rights, privileges, and immunities relating thereto, whether or not appearing in the Public Records or listed in Schedule B. The Company makes no representation as to the present ownership of any such interests. There may be leases, grants, exceptions or reservations of interests that are not listed. (not survey related)

26. Any charge upon the land by reason of its inclusion in the Utah Valley Dispatch Special Service District as disclosed in that certain Resolution No. 2008-126 recorded on September 30, 2008 as Entry No. 107508:2008 in the Utah County Recorder's Office.

27. Any charge upon the land by reason of its inclusion in the Utah Valley Road Special Service District as disclosed in that certain Resolution No. 2009-66 recorded on April 21, 2009 as Entry No. 42373:2009 in the Utah County Recorder's Office. (not survey related)

28. Any charge upon the land by reason of its inclusion in the North Pointe Solid Waste Special Service District. (not survey related)

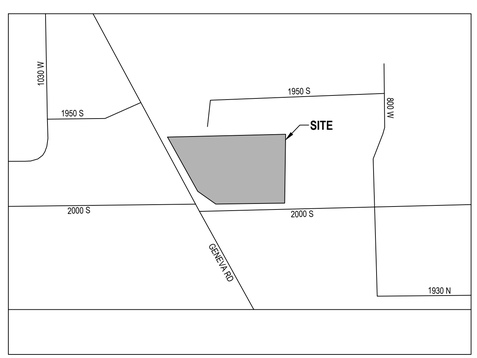
29. Any charges or assessments levied upon the land by reason of its inclusion within the boundaries of Orem City and its service districts. (not survey related)

30. Any charges or assessments levied upon the land by reason of its inclusion within the boundaries of Provo City and its service districts. (not survey related)

31. The following names have been checked for judgments, state tax liens, federal tax liens, and bankruptcies:
HL1, LLC
Wagstaff Investments, LLC

TABLE A

1) All monuments used and set are shown on survey.
2) Parcel address: 868 West 2000 South, Orem, UT 84058.
3) Parcel is located in Flood Zone "X", per FEMA FIRM map, 49049C0340F effective 06/19/2020 .
4) Subject parcels contain: Parcel 1 42,073 sq.ft or 0.97 acres.
Parcel 2 47,073 sq.ft. or 1.10 acres
5) 1 foot contours are shown on survey.
8) Substantial features are shown on survey.
11) Utilities are shown on survey.
13) Adjacent owners are shown on survey.
14) Distance to nearest intersecting street is shown on survey.
18) All plottable easements are shown on survey.
19) All insurance liability minimums have been met.



ENSIGN
THE STANDARD IN ENGINEERING

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH 84119
CONTACT:
SCOTT WAGSTAFF
PHONE: 801-973-7002

HOLIDAY OIL OREM
ALTA / NSPS LAND TITLE & TOPOGRAPHY SURVEY
868 WEST 2000 SOUTH
OREM, UTAH

ALTA / NSPS LAND TITLE & TOPOGRAPHY SURVEY

PROJECT NUMBER 12089
PRINT DATE 1/16/23
DRAWN BY BDH
CHECKED BY P. HARRIS
PROJECT MANAGER P. HARRIS

1 OF 2

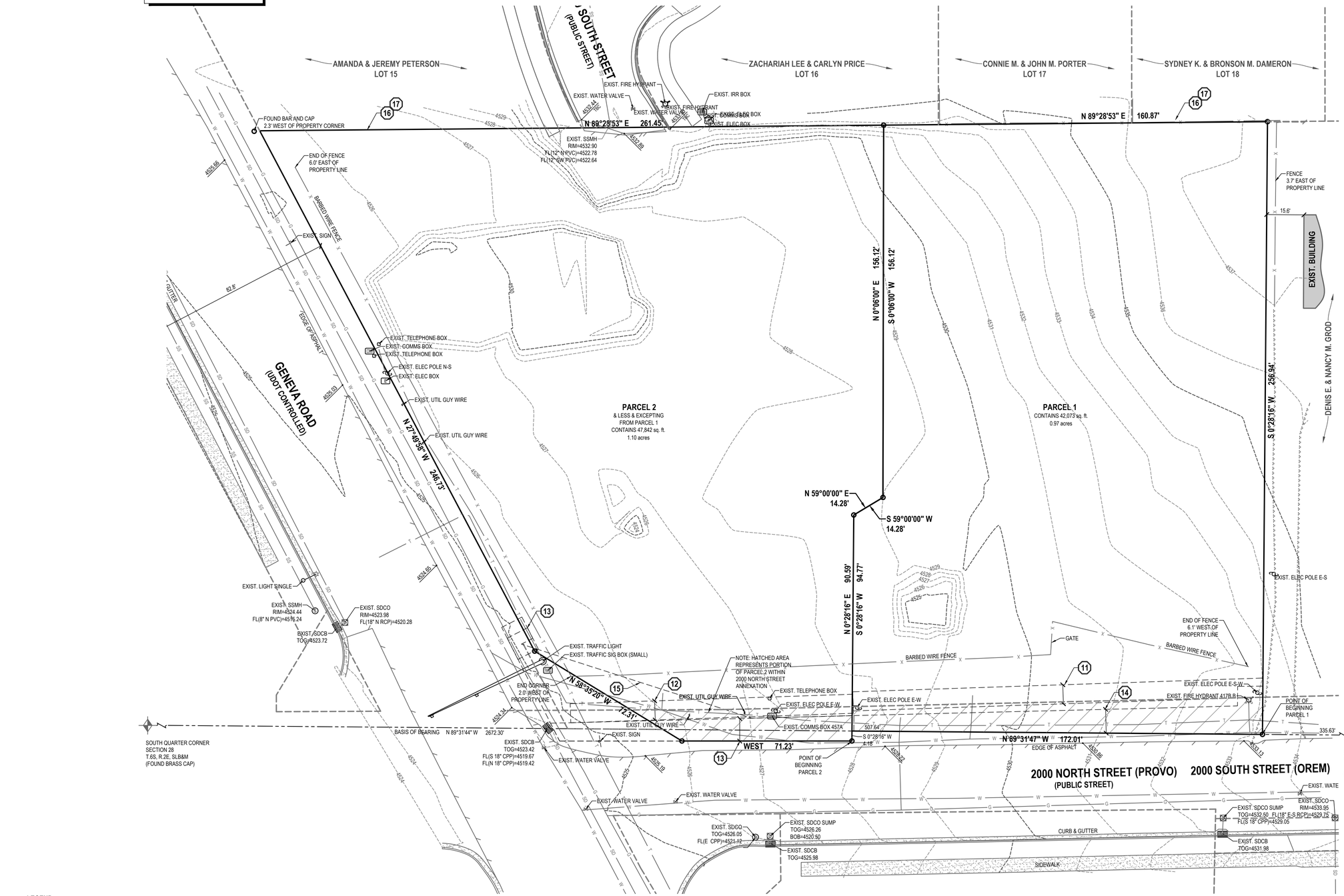
CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

811 Know what's below. Call before you dig.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'



LEGEND

SECTION CORNER	STORM DRAIN CATCH BASIN	MINOR CONTOURS 1' INCREMENT	DEED LINE	SW	SECONDARY WATERLINE
MONUMENT	STORM DRAIN COMBO BOX	MAJOR CONTOURS 5' INCREMENT	TANGENT LINE	IRR	IRRIGATION LINE
EXIST REBAR AND CAP	STORM DRAIN CULVERT	CONCRETE	SECTION LINE		CENTERLINE
SET ENSIGN REBAR AND CAP	SIGN	ELECTRIC METER	FENCE		PROPERTY LINE
SET RIVET	UTILITY MANHOLE	STORM DRAIN CLEAN OUT	EDGE OF ASPHALT		ADJACENT PROPERTY LINE
WATER METER	UTILITY POLE	SANITARY SEWER MANHOLE	SANITARY SEWER	E	ELECTRIC POWERLINE
WATER MANHOLE	GAS METER	WATER LINE	STORM DRAIN LINE	T	TELEPHONE LINE
WATER VALVE	TREE	ADJACENT RIGHT OF WAY	GAS LINE		IRRIGATION VALVE
FIRE HYDRANT	OHP OVERHEAD POWER LINE	RIGHT OF WAY	BUILDING PRIMARY	#	SCHEDULE B-2 REFERENCE NUMBER

ENSIGN ENG. LAND SURV.

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 28 TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN OREM, UTAH COUNTY, UTAH

NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

HORZ: 1 inch = 20 ft.

ENSIGN
THE STANDARD IN ENGINEERING

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH 84119
CONTACT:
SCOTT WAGSTAFF
PHONE: 801-973-7002

HOLIDAY OIL OREM
ALTA / NSPS LAND TITLE & TOPOGRAPHY SURVEY
868 WEST 2000 SOUTH
OREM, UTAH

ALTA / NSPS LAND TITLE & TOPOGRAPHY SURVEY

PROJECT NUMBER 12089	PRINT DATE 1/16/23
DRAWN BY BDH	CHECKED BY P. HARRIS
PROJECT MANAGER P. HARRIS	

2 OF 2

GENERAL NOTES

1. ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: THE DESIGN ENGINEER, LOCAL AGENCY JURISDICTION, APWA (CURRENT EDITION), AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.). THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. THE LATEST EDITION OF ALL STANDARDS AND SPECIFICATIONS MUST BE ADHERED TO. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
2. CONTRACTOR TO STRICTLY FOLLOW THE MOST CURRENT COPY OF THE SOILS REPORT FOR THIS PROJECT. ALL GRADING INCLUDING BUT NOT LIMITED TO CUT, FILL, COMPACTION, ASPHALT SECTION, SUBBASE, TRENCH EXCAVATION/BACKFILL, SITE GRUBBING, AND FOOTINGS MUST BE COORDINATED DIRECTLY WITH SOILS REPORT.
3. CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING, AND BRING UP ANY QUESTIONS BEFORE SUBMITTING BID.
4. CONTRACTOR SHALL PROVIDE A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE CITY, STATE, OR COUNTY REGULATIONS FOR WORKING IN THE PUBLIC WAY.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ACCORDING TO GOVERNING AGENCY STANDARDS. WET DOWN DRY MATERIALS AND RUBBISH TO PREVENT BLOWING.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF OR DAMAGE TO EXISTING UTILITIES.
8. THE CONTRACTOR IS RESPONSIBLE TO FURNISH ALL MATERIALS TO COMPLETE THE PROJECT.
9. ALL EXPOSED SURFACES WILL HAVE A TEXTURED FINISH, RUBBED, OR BROOMED. ANY "PLASTERING" OF NEW CONCRETE WILL BE DONE WHILE IT IS STILL "GREEN".
10. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
11. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE. CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.
12. ALL DIMENSIONS, GRADES, AND UTILITY DESIGN SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST, PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO THE DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
13. NO CHANGE IN DESIGN LOCATION OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE PROJECT ENGINEER.
14. NATURAL VEGETATION AND SOIL COVER SHALL NOT BE DISTURBED PRIOR TO ACTUAL CONSTRUCTION OF A REQUIRED FACILITY OR IMPROVEMENT. MASS CLEARING OF THE SITE IN ANTICIPATION OF CONSTRUCTION SHALL BE AVOIDED.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND MONUMENT REFERENCE MARKS WITHIN THE PROJECT SITE. CONTACT THE CITY OR COUNTY SURVEYOR FOR MONUMENT LOCATIONS AND CONSTRUCTION DETAILS.
16. EXISTING UTILITY INFORMATION SHOWN IS FOR INFORMATIONAL PURPOSES ONLY. IT IS DERIVED FROM ON-SITE SURVEY AND/OR UTILITY MAPPING PROVIDED TO THE ENGINEER, AND THEREFORE UTILITIES MAY NOT BE LOCATED CORRECTLY, EITHER HORIZONTALLY OR VERTICALLY, AND MAY NOT BE ALL INCLUSIVE. CONTRACTOR IS REQUIRED TO FOLLOW THE PROCEDURE OUTLINED BELOW:
    - 16.1. CONTRACTOR IS REQUIRED TO LOCATE AND POTHOLE ALL EXISTING UTILITY LINES (BOTH HORIZONTALLY AND VERTICALLY) THAT AFFECT THE PROJECT CONSTRUCTION, EITHER ON-SITE OR OFF-SITE, AND DETERMINE IF THERE ARE ANY CONFLICTS WITH THE DESIGN OF THE SITE AS SHOWN ON THE APPROVED PLANS PRIOR TO ANY CONSTRUCTION. IF IT IS DETERMINED THAT CONFLICTS EXIST BETWEEN EXISTING UTILITIES AND DESIGN UTILITIES (OR ANOTHER ASPECT OF PROPOSED CONSTRUCTION) THE ENGINEER MUST BE NOTIFIED IMMEDIATELY TO CORRECT THE CONFLICTS BEFORE ANY WORK CAN BEGIN. IF THE CONTRACTOR FAILS TO FOLLOW THIS ABSOLUTE REQUIREMENT AND CONFLICTS ARISE DURING CONSTRUCTION THE CONTRACTOR WILL BEAR THE SOLE RESPONSIBILITY TO FIX THE CONFLICTS.
    - 16.2. CONTRACTOR IS REQUIRED TO VERIFY THAT PROPER COVER AND PROTECTION OF EXISTING UTILITY LINES IS MAINTAINED OR ATTAINED WITHIN THE DESIGN ONCE VERIFICATION OF THE EXISTING UTILITIES IS COMPLETED AS OUTLINED IN 16.1 ABOVE.
    - 16.3. IN ADDITION TO 16.1 AND 16.2 ABOVE THE CONTRACTOR WILL VERIFY DEPTHS OF UTILITIES IN THE FIELD BY "POTHOLING" A MINIMUM OF 300 FEET AHEAD OF PROPOSED PIPELINE CONSTRUCTION TO AVOID POTENTIAL CONFLICTS WITH DESIGNED PIPELINE ALIGNMENT AND GRADE AND EXISTING UTILITIES.
    - 16.4. IF A CONFLICT ARISES BETWEEN EXISTING UTILITIES AND DESIGN UTILITIES (OR ANOTHER ASPECT OF PROPOSED CONSTRUCTION) AS DETERMINED UNDER 16.1, 16.2 OR 16.3 THE CONTRACTOR WILL NOTIFY THE ENGINEER IMMEDIATELY TO RESOLVE THE CONFLICT.
    - 16.5. IF A CONFLICT ARISES BETWEEN EXISTING UTILITIES AND DESIGN UTILITIES (OR ANOTHER ASPECT OF PROPOSED CONSTRUCTION) RESULTING FROM THE CONTRACTOR'S NEGLIGENCE TO IDENTIFY AND/OR "POTHOLE" EXISTING UTILITIES AS REQUIRED IN 16.1, 16.2 AND 16.3 ABOVE, THE CONTRACTOR WILL BE REQUIRED TO RESOLVE THE CONFLICT WITHOUT ADDITIONAL COST OR CLAIM TO THE OWNER OR ENGINEER.
17. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
18. CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
19. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
20. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.
21. CONTRACTOR SHALL, AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE OF UTAH AND SHALL BE BONDABLE FOR AN AMOUNT REQUIRED BY THE OWNER.
22. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
23. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
24. IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
25. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.
26. CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
27. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.
28. ALL EXISTING GATES AND FENCES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL GATES AND FENCES FROM DAMAGE.
29. ALL EXISTING TREES ARE TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL TREES FROM DAMAGE.
30. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE GOVERNING AGENCY PRIOR TO THE PLACEMENT.
31. CONTRACTORS ARE RESPONSIBLE FOR ALL OSHA REQUIREMENTS ON THE PROJECT SITE.
32. A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR ALL CONSTRUCTION ACTIVITIES 1 ACRE OR MORE AS WELL AS A STORM WATER POLLUTION PREVENTION PLAN.

UTILITY NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS, CITY AND STATE REQUIREMENTS AND THE MOST RECENT EDITIONS OF THE FOLLOWING: THE INTERNATIONAL PLUMBING CODE, UTAH DRINKING WATER REGULATIONS, APWA MANUAL OF STANDARD PLANS AND SPECIFICATIONS. THE CONTRACTOR IS REQUIRED TO ADHERE TO ALL OF THE ABOVE-MENTIONED DOCUMENTS UNLESS OTHERWISE NOTED AND APPROVED BY THE ENGINEER.
2. CONTRACTOR SHALL COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE & INTERNET SERVICE, GAS SERVICE, CABLE, AND POWER.
3. EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS BASED ON ON-SITE SURVEY. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES AT 1-800-662-4111 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK. THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
4. CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT CONTRACTOR'S EXPENSE.
5. TRENCH BACKFILL MATERIAL AND COMPACTION TESTS ARE TO BE TAKEN PER APWA STANDARD SPECIFICATIONS (CURRENT EDITION), SECTION 33 05 20 - BACKFILLING TRENCHES, OR AS REQUIRED BY THE GEOTECHNICAL REPORT IF NATIVE MATERIALS ARE USED. NO NATIVE MATERIALS ARE ALLOWED IN THE PIPE ZONE. THE MAXIMUM LIFT FOR BACKFILLING EXCAVATIONS IS DETERMINED BY THE GEOTECHNICAL RECOMMENDATIONS.
6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMING TO LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES AND FOR THE PROTECTION OF WORKERS.
7. THE CONTRACTOR IS REQUIRED TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE APPROVED PROJECT LIMITS. THIS INCLUDES, BUT IS NOT LIMITED TO VEHICLE AND EQUIPMENT STAGING, MATERIAL STORAGE AND LIMITS OF TRENCH EXCAVATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMISSION AND/OR EASEMENTS FROM THE APPROPRIATE GOVERNING ENTITY AND/OR INDIVIDUAL PROPERTY OWNER(S) FOR WORK OR STAGING OUTSIDE OF THE PROJECT LIMITS.
8. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE, CAUSED BY ANY CONDITION INCLUDING SETTLEMENT, TO EXISTING UTILITIES FROM WORK PERFORMED AT OR NEAR EXISTING UTILITIES. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT ALL EXISTING PUBLIC AND PRIVATE ROADWAY AND UTILITY FACILITIES. DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE TO THE SATISFACTION OF THE OWNER OF SAID FACILITIES.
9. ALL WATER LINE AND SEWER LINE INSTALLATION AND TESTING TO BE IN ACCORDANCE WITH LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. ALL MANHOLES, HYDRANTS, VALVES, CLEANOUT BOXES, CATCH BASINS, METERS, ETC. MUST BE RAISED OR LOWERED TO FINAL GRADE PER APWA (CURRENT EDITION) STANDARDS AND INSPECTOR REQUIREMENTS. CONCRETE COLLARS MUST BE CONSTRUCTED ON ALL MANHOLES, CLEANOUT BOXES, CATCH BASINS, AND VALVES PER APWA STANDARDS. ALL MANHOLE, CATCH BASIN, OR CLEANOUT BOX CONNECTIONS MUST BE MADE WITH THE PIPE CUT FLUSH WITH THE INSIDE OF THE BOX AND GROUTED OR SEALED.
11. CONTRACTOR SHALL NOT ALLOW ANY GROUNDWATER OR DEBRIS TO ENTER THE NEW OR EXISTING PIPE DURING CONSTRUCTION.
12. SILT AND DEBRIS ARE TO BE CLEANED OUT OF ALL STORM DRAIN BOXES. CATCH BASINS ARE TO BE MAINTAINED IN A CLEANED CONDITION AS NEEDED UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
13. CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF OF ALL MANHOLE LIDS AND INLET GRATES TO ALLOW ACCESS.
14. EACH TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE SO BRACED THAT THE WORKMEN MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THE PIPE LAYING MAY TAKE PLACE IN DEWATERED CONDITIONS.
15. CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES WITH WHICH TO REMOVE PROMPTLY AND TO PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.
16. ALL SEWER LINES AND SEWER SERVICES SHALL HAVE A MINIMUM SEPARATION OF 10 FEET, EDGE TO EDGE, FROM THE WATER LINES. IF A 10 FOOT SEPARATION CAN NOT BE MAINTAINED, CONSTRUCT PER GOVERNING AGENCY'S MINIMUM SEPARATION STANDARDS.
17. CONTRACTOR SHALL INSTALL THRUST BLOCKING AT ALL WATERLINE ANGLE POINTS AND TEES.
18. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK AND STREET PAVING.
19. CONTRACTOR SHALL INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL NONMETALLIC PIPE.

TRAFFIC CONTROL AND SAFETY NOTES

1. TRAFFIC CONTROL AND STRIPING TO CONFORM TO THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
2. BARRICADING AND DETOURING SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CURRENT M.U.T.C.D.
3. NO STREET SHALL BE CLOSED TO TRAFFIC WITHOUT WRITTEN PERMISSION FROM THE APPROPRIATE AGENCY, EXCEPT WHEN DIRECTED BY LAW ENFORCEMENT OR FIRE OFFICIALS.
4. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE FOR SMOOTH TRAFFIC FLOW AND SAFETY. ACCESS SHALL BE MAINTAINED FOR ALL PROPERTIES ADJACENT TO THE WORK.
5. DETOURING OPERATIONS FOR A PERIOD OF SIX CONSECUTIVE CALENDAR DAYS, OR MORE, REQUIRE THE INSTALLATION OF TEMPORARY STREET STRIPING AND REMOVAL OF INTERFERING STRIPING BY SANDBLASTING. THE DETOURING STRIPING PLAN OR CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED TO THE GOVERNING AGENCY FOR REVIEW AND APPROVAL.
6. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF THE WORK TO THE SATISFACTION OF THE GOVERNING AGENCY.
7. TRAFFIC CONTROL DEVICES (TCDs) SHALL REMAIN VISIBLE AND OPERATIONAL AT ALL TIMES.
8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. THE CONTRACTOR SHALL PROVIDE BARRICADES, SIGNS, FLASHERS, OTHER EQUIPMENT AND FLAG PERSONS NECESSARY TO INSURE THE SAFETY OF WORKERS AND VISITORS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTAH TRANSIT AUTHORITY (UTA) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.

DEMOLITION NOTES

1. EXISTING UTILITY INFORMATION SHOWN IS FOR INFORMATIONAL PURPOSES ONLY. IT IS DERIVED FROM ON-SITE SURVEY AND MAY NOT BE LOCATED CORRECTLY AND IS NOT ALL INCLUSIVE. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES WITHIN THE PROJECT LIMITS BEFORE BEGINNING DEMOLITION/CONSTRUCTION.
2. THERE MAY BE BURIED UTILITIES WITHIN THE LIMITS OF DISTURBANCE THAT ARE NOT SHOWN ON THE PLANS DUE TO LACK OF MAPPING OR RECORD INFORMATION. CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN UNEXPECTED UTILITIES ARE DISCOVERED.
3. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR LOCATING AND PROTECTING FROM DAMAGE ALL EXISTING UTILITIES AND IMPROVEMENTS WHETHER OR NOT SHOWN ON THESE PLANS. THE FACILITIES AND IMPROVEMENTS ARE BELIEVED TO BE CORRECTLY SHOWN BUT THE CONTRACTOR IS REQUIRED TO SATISFY HIMSELF AS TO THE COMPLETENESS AND ACCURACY OF THE LOCATIONS. ANY CONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE HIMSELF WITH THE SITE AND SHALL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY, OR INDIRECTLY, FROM HIS OPERATIONS, WHETHER OR NOT SAID FACILITIES ARE SHOWN ON THESE PLANS.

GRADING AND DRAINAGE NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL RELATED ADDENDUMS.
2. THE CONTRACTOR SHALL STRIP AND CLEAR THE TOPSOIL, MAJOR ROOTS AND ORGANIC MATERIAL FROM ALL PROPOSED BUILDING AND PAVEMENT AREAS PRIOR TO SITE GRADING. (THE TOPSOIL MAY BE STOCKPILED FOR LATER USE IN LANDSCAPED AREAS.)
3. THE CONTRACTOR SHALL REMOVE ALL ORGANIC MATERIAL AND OTHER DELETERIOUS MATERIALS PRIOR TO PLACING GRADING FILL OR BASE COURSE. THE AREA SHOULD BE PROOF-ROLLED TO IDENTIFY ANY SOFT AREAS. WHERE SOFT AREAS ARE ENCOUNTERED, THE CONTRACTOR SHALL REMOVE THE SOIL AND REPLACE WITH COMPACTED FILL.
4. ALL DEBRIS PILES AND BERMS SHOULD BE REMOVED AND HAULED AWAY FROM SITE OR USED AS GENERAL FILL IN LANDSCAPED AREAS.
5. THE CONTRACTOR SHALL CONSTRUCT THE BUILDING PAD TO THESE DESIGN PLANS AS PART OF THE SITE GRADING CONTRACT, AND STRICTLY ADHERE TO THE SITE PREPARATION AND GRADING REQUIREMENTS OUTLINED IN THE GEOTECHNICAL REPORT.
6. THE CONTRACTOR SHALL GRADE THE PROJECT SITE TO PROVIDE A SMOOTH TRANSITION BETWEEN NEW AND EXISTING ASPHALT, CURB AND GUTTER, AND ADJOINING SITE IMPROVEMENTS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE AND DEBRIS ON ADJACENT STREETS WHEN EQUIPMENT IS TRAVELING THOSE STREETS.
8. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL CONDITIONS AND RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT AND TAKE ALL NECESSARY PRECAUTIONS AND RECOMMENDED PROCEDURES TO ASSURE SOUND GRADING PRACTICES.
9. THE CONTRACTOR SHALL TAKE APPROPRIATE GRADING MEASURES TO DIRECT STORM SURFACE RUNOFF TOWARDS CATCH BASINS.
10. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON ON-SITE SURVEY. IT SHALL BE THE CONTRACTORS' FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES, AND SLOPES SHOWN.
12. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
13. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT. ALL CONTRACTOR ACTIVITIES 1 ACRE OR MORE IN SIZE ARE REQUIRED TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN.
14. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
15. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER FROM GOVERNING AGENCY.
16. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS, AND ALL OTHER PUBLIC RIGHT-OF-WAYS IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY-OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC, SHALL BE MAINTAINED IN A CLEAN, SAFE, AND USABLE CONDITION.

ABBREVIATIONS

APWA	AMERICAN PUBLIC WORKS ASSOCIATION
AR	ACCESSIBLE ROUTE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BOS	BOTTOM OF STEP
BVC	BEGIN VERTICAL CURVE
C	CURVE
CB	CATCH BASIN
CF	CURB FACE OR CUBIC FEET
CL	CENTER LINE
CO	CLEAN OUT
COMM	COMMUNICATION
CONC	CONCRETE
CONT	CONTINUOUS
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
ELEC	ELECTRICAL
ELEV	ELEVATION
EOA	EDGE OF ASPHALT
EVC	END OF VERTICAL CURVE
EW	EACH WAY
EXIST	EXISTING
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE OR FLANGE
GB	GRADE BREAK
GF	GARAGE FLOOR
GV	GATE VALVE
HC	HANDICAP
HP	HIGH POINT
IRR	IRRIGATION
K	RATE OF VERTICAL CURVATURE
LD	LAND DRAIN
LF	LINEAR FEET
LP	LOW POINT
MEX	MATCH EXISTING
MH	MANHOLE
MJ	MECHANICAL JOINT
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NO	NUMBER
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OHP	OVERHEAD POWER
PC	POINT OF CURVATURE OR PRESSURE CLASS
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PRO	PROPOSED
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
RD	ROOF DRAIN
ROW	RIGHT OF WAY
S	SLOPE
SAN SWR	SANITARY SEWER
SD	STORM DRAIN
SEC	SECONDARY
SS	SANITARY SEWER
STA	STATION
SW	SECONDARY WATER LINE
TBC	TOP BACK OF CURB
TOG	TOP OF GRATE
TOA	TOP OF ASPHALT
TOC	TOP OF CONCRETE
TOF	TOP OF FOUNDATION
TOW	TOP OF WALL
TOS	TOP OF STEP
TYP	TYPICAL
VC	VERTICAL CURVE
WIV	WALL INDICATOR VALVE
W	WATER LINE

NOTE: MAY CONTAIN ABBREVIATIONS THAT ARE NOT USED IN THIS PLAN SET.

LEGEND

SECTION CORNER	EXISTING EDGE OF ASPHALT
EXISTING MONUMENT	PROPOSED EDGE OF ASPHALT
PROPOSED MONUMENT	EXISTING STRIPING
EXISTING REBAR AND CAP	PROPOSED STRIPING
SET ENSIGN REBAR AND CAP	EXISTING FENCE
EXISTING WATER METER	PROPOSED FENCE
PROPOSED WATER METER	EXISTING FLOW LINE
EXISTING WATER MANHOLE	PROPOSED FLOW LINE
PROPOSED WATER MANHOLE	GRADE BREAK
EXISTING WATER BOX	EXISTING STORM DRAIN LINE
EXISTING WATER VALVE	PROPOSED STORM DRAIN LINE
PROPOSED WATER VALVE	ROOF DRAIN LINE
EXISTING FIRE HYDRANT	CATCHMENTS
PROPOSED FIRE HYDRANT	HIGHWATER LINE
PROPOSED FIRE DEPARTMENT CONNECTION	EXISTING SANITARY SEWER
EXISTING SECONDARY WATER VALVE	PROPOSED SANITARY SEWER LINE
PROPOSED SECONDARY WATER VALVE	PROPOSED SAN. SWR. SERVICE LINE
EXISTING IRRIGATION BOX	EXISTING LAND DRAIN LINE
EXISTING IRRIGATION VALVE	PROPOSED LAND DRAIN LINE
PROPOSED IRRIG

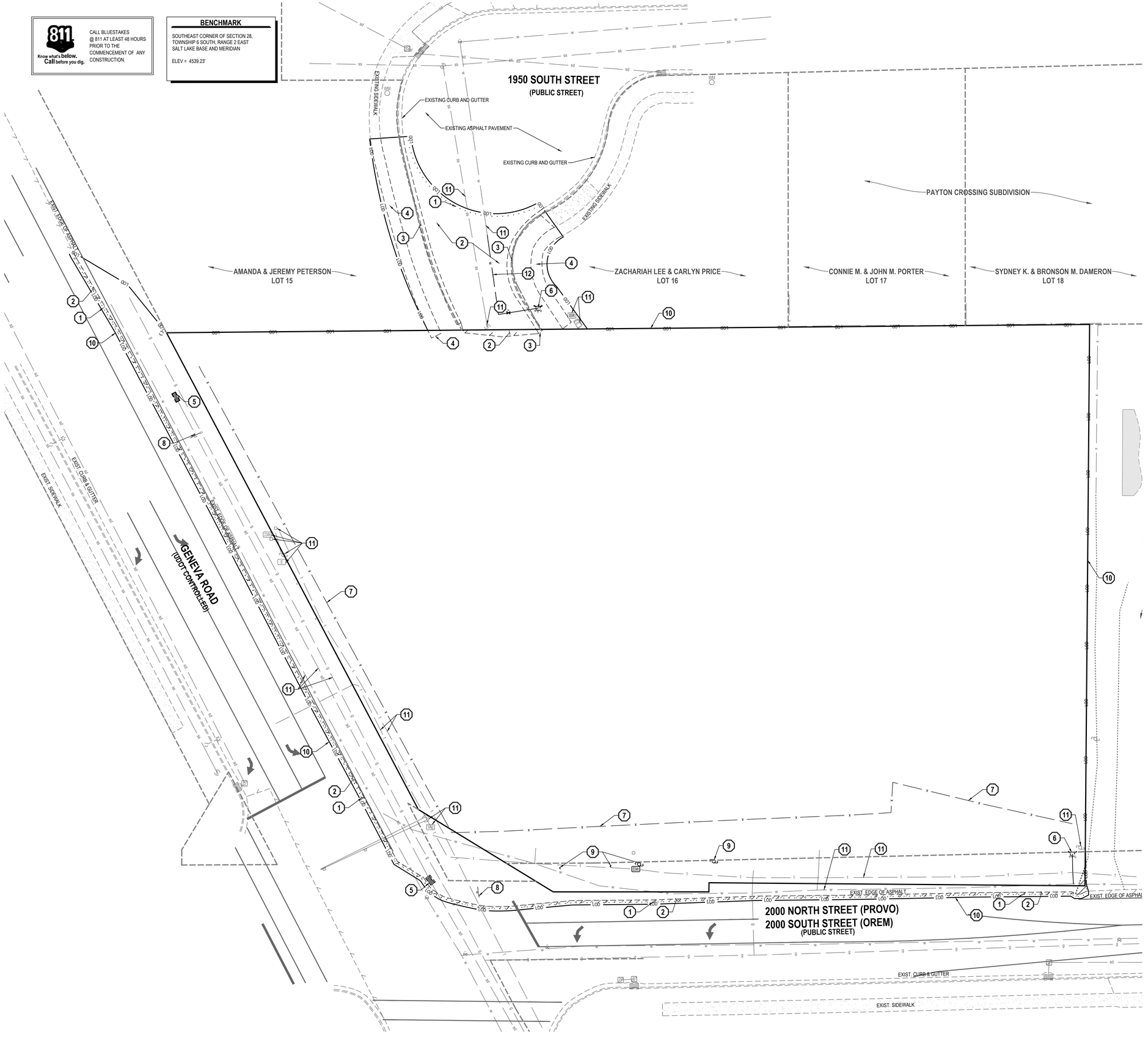
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'



GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
3. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
4. ALL CONSTRUCTION SIGNAGE, BARRICADES, TRAFFIC CONTROL DEVICES, ETC. SHALL CONFORM TO THE LATEST EDITION OF THE M.U.T.C.D. THE CONTRACTOR WILL MAINTAIN SUCH SO THAT THEY ARE PROPERLY PLACED AND VISIBLE AT ALL TIMES.
5. SIDEWALKS AND CURBS DESIGNATED TO BE DEMOLISHED SHALL BE DEMOLISHED TO THE NEAREST EXPANSION JOINT, MATCHING THESE PLANS AS CLOSELY AS POSSIBLE.
6. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. SAWCUT EXISTING ASPHALT PAVEMENT TO PROVIDE A CLEAN EDGE FOR THE TRANSITION BETWEEN EXISTING AND PROPOSED ASPHALT PAVEMENT.
2. REMOVE AND PROPERLY DISPOSE OF EXISTING ASPHALT PAVEMENT.
3. SAWCUT, REMOVE, AND PROPERLY DISPOSE OF EXISTING CONCRETE CURB AND GUTTER.
4. SAWCUT, REMOVE, AND PROPERLY DISPOSE OF EXISTING CONCRETE SIDEWALK.
5. REMOVE AND PROPERLY DISPOSE OF EXISTING STORM DRAIN CATCH BASIN.
6. REMOVE AND PROPERLY DISPOSE OF EXISTING FIRE HYDRANT.
7. REMOVE AND PROPERLY DISPOSE OF EXISTING FENCE.
8. REMOVE AND RELOCATE EXISTING SIGN.
9. REMOVE AND RELOCATE EXISTING POWER POLES, OVERHEAD POWER LINES AND/OR GUY WIRES. COORDINATE WITH LOCAL POWER COMPANY.
10. LIMIT OF DISTURBANCE.
11. PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, SIGNS, ETC. (TYPICAL UNLESS OTHERWISE NOTED).
12. REMOVE AND PROPERLY DISPOSE OF EXISTING WATER LINE.

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

OREM
HOLIDAY OIL #868
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 9125581-2202
MICHAEL S. BUDGE
STATE OF UTAH
8/21/2023
Michael S. Budge

DEMOLITION PLAN

PROJECT NUMBER 12089
PRINT DATE 2023-08-21
PROJECT MANAGER CD
DESIGNED BY MB

C100

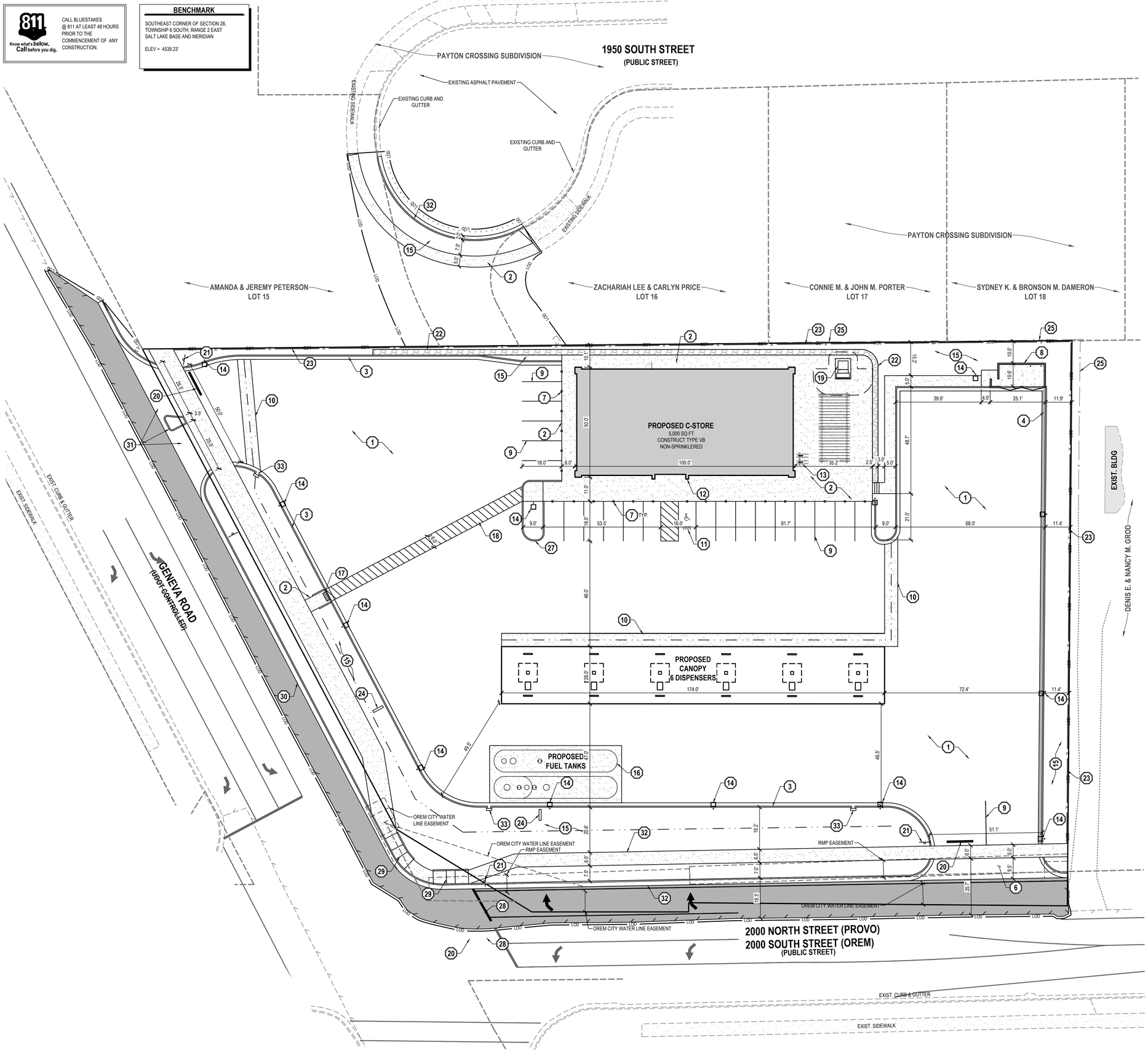
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'



GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. SEE LANDSCAPE/ARCHITECTURAL PLANS FOR CONCRETE MATERIAL, COLOR, FINISH, AND SCORE PATTERNS THROUGHOUT SITE.
4. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE M.U.T.C.D. (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
5. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
6. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE OR ASPHALT.
7. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
8. NO DRIVEWAY OR DRIVE ACCESS MAY BE LOCATED WITHIN TWENTY-FIVE FEET (25') OF AN EXISTING FENCE WHICH IS GREATER THAN THREE FEET (3') IN HEIGHT.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. CONCRETE PAVEMENT: 6" THICK CONCRETE WITH 5" UNTREATED BASE COURSE PER GEOTECHNICAL REPORT AND DETAIL 1/C600.
2. 4" THICK CONCRETE PATIO/SIDEWALK WITH 4" UNTREATED BASE COURSE PER GEOTECHNICAL REPORT.
3. 24" COLLECTION CURB AND GUTTER PER DETAIL 2/C600.
4. 24" REVERSE PAN CURB AND GUTTER PER DETAIL 3/C600.
5. TRANSITION BETWEEN COLLECTION CURB AND GUTTER AND REVERSE PAN CURB AND GUTTER.
6. DRIVE APPROACH PER OREM CITY STANDARD DRAWING RW-5. SEE SHEET C601.
7. 6" BOLLARD PER DETAIL 8/C600.
8. DOUBLE TRASH ENCLOSURE PER DETAILS 5/C-500, 7/C600. MUST MEET OREM STANDARDS AS MINIMUM.
9. 4" WIDE SOLID SINGLE WHITE PAVEMENT MARKING PER M.U.T.C.D. STANDARD PLANS.
10. 6' WATERWAY PER APWA STANDARD PLAN NO. 211 AND SPECIFICATIONS.
11. PAINTED ADA SYMBOL AND ASSOCIATED HATCHING PER M.U.T.C.D. STANDARD PLANS.
12. "HANDICAP PARKING" SIGN PER M.U.T.C.D. STANDARD PLANS INSTALLED ON BUILDING. SEE DETAIL 4/C600. NORTH HANDICAP PARKING STALL TO BE DESIGNATED "VAN ACCESSIBLE" ON SIGN.
13. BICYCLE RACK (5% OF REQUIRED CAR STALLS)
14. 16' TALL LIGHT POLE, SEE PHOTOMETRIC PLAN
15. NEW LANDSCAPING. SEE LANDSCAPE PLANS.
16. FUEL TANKS. SEE TANK DRAWINGS.
17. ADA RAMP ASSEMBLY PER APWA STANDARD PLAN NO. 235 AND SPECIFICATIONS.
18. 6' WIDE CROSSWALK MARKING PER M.U.T.C.D STANDARDS.
19. S.A.D.S.M.P. ELECTRICAL TRANSFORMER. LAYOUT SHOWN IS SCHEMATIC IN NATURE AND MAY VARY IN THE FIELD. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.
20. 12" WIDE SOLID WHITE STOP BAR PER M.U.T.C.D. STANDARD PLANS.
21. STOP SIGN PER M.U.T.C.D STANDARDS.
22. ROCK RETAINING WALL PER DETAIL 15/C600. SEE GRADING PLAN FOR ELEVATION INFORMATION.
23. 7' TALL PRECAST CONCRETE FENCE. PER DETAIL 1/C603.
24. MONUMENT SIGN. SEPARATE SIGN PERMIT.
25. EXISTING FENCE.
26. INSTALL NEW OREM STANDARD STREET LIGHT
27. 6" TYPE "P" CURB WALL PER APWA STANDARD PLAN NO. 209.
28. NOT USED
29. GENERAL PEDESTRIAN ACCESS RAMP PER UDOT STANDARD PA 1.
30. INSTALL TYPE B1 CURB AND GUTTER PER UDOT STANDARDS.
31. CONCRETE DRIVEWAY, MODIFIED PORKCHOP AND SIDEWALK PER UDOT STANDARD DRAWING GW-3B AND UDOT SPECIFICATIONS.
32. 24" CONCRETE CURB, GUTTER AND SIDEWALK PER OREM CITY STANDARD DRAWINGS RW-1 AND RW-O4.
33. CURB CUT PER DETAIL 1/C604.

SITE SUMMARY TABLE

ITEM	AREA	CALCULATION
TOTAL GROSS ACREAGE (ACRES)	2.064	100%
STREET RIGHT OF WAYS (SQ. FT.)	NA	NA
TOTAL BUILDING FOOTPRINT (SQ. FT.)	5,000	7.5%
C-STORE BUILDING FOOTPRINT (SQ. FT.)	5,000	
LANDSCAPING (SQ. FT.)	13,440	15%
REQUIRED NUMBER OF PARKING SPACES	-	-
ACTUAL NUMBER OF PARKING SPACES	34	100%
STANDARD STALLS	21	62%
PUMP STALLS	12	35%
HANDICAP-ACCESSIBLE STALLS	1	3%
REQUIRED NUMBER OF BIKE STALLS	3	100%

HORIZONTAL GRAPHIC SCALE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 9125581-2202
6/21/2023
MICHAEL S. BUDGE
STATE OF UTAH

SITE PLAN

PROJECT NUMBER	PRINT DATE
12089	2023-08-21
PROJECT MANAGER	DESIGNED BY
CD	MB

C200

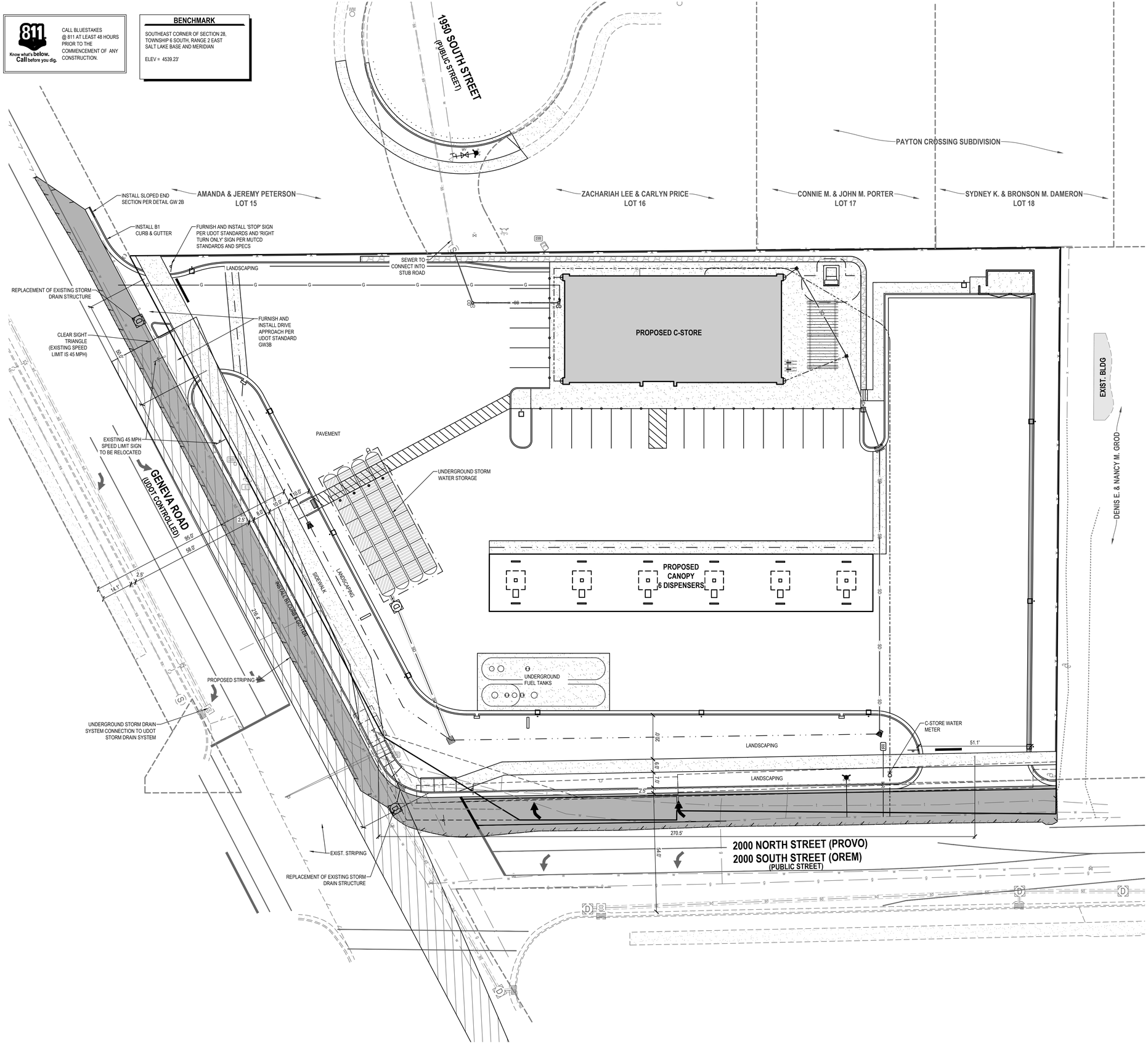
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'



UDOT NOTES

1. ALL CONSTRUCTION WITHIN THE UDOT RIGHT-OF-WAY SHALL CONFORM TO THE MOST CURRENT UDOT STANDARD (INCLUDING SUPPLEMENTAL) DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR IS TO OBTAIN AN ENCROACHMENT PERMIT FROM THE APPLICABLE UDOT REGION PERMIT OFFICE PRIOR TO COMMENCING WORK WITHIN UDOT RIGHT-OF-WAY. WORKING HOUR LIMITATIONS WILL BE LISTED IN THE LIMITATIONS SECTION OF THE ENCROACHMENT PERMIT.
3. UDOT RESERVES THE RIGHT, AT ITS OPTION, TO INSTALL A RAISED MEDIAN ISLAND OR RESTRICT THE ACCESS TO A RIGHT-IN OR RIGHT-OUT AT ANY TIME.
4. OWNER, DEVELOPER, AND CONTRACTOR ARE RESPONSIBLE FOR ANY DAMAGES DIRECTLY OR INDIRECTLY WITHIN THE UDOT RIGHT-OF-WAY AS A RESULT OF DEVELOPMENT ACTIVITIES.
5. OWNER, DEVELOPER, AND/OR CONTRACTOR IS REQUIRED TO HIRE AN INDEPENDENT COMPANY FOR ALL TESTING WITHIN THE UDOT RIGHT-OF-WAY.
6. ALL SIGNS INSTALLED ON THE UDOT RIGHT-OF-WAY MUST BE HIGH INTENSITY GRADE (TYPE XI SHEETING) WITH A B3 SLIP BASE. INSTALL ALL SIGNS PER UDOT SN SERIES STANDARD DRAWINGS.
7. COMPLY WITH THE REQUIREMENTS OF UTAH CODE 17-23-14 (DISTURBED CORNERS - COUNTY SURVEYOR TO BE NOTIFIED - COORDINATION WITH CERTAIN STATE AGENCIES).

NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
3. ALL SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER SARATOGA SPRINGS STANDARD PLANS AND SPECIFICATIONS.
4. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER SARATOGA SPRINGS OR APWA STANDARD PLANS AND SPECIFICATIONS.
5. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING UTILITY STRUCTURES OR PIPES.
6. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER SARATOGA SPRINGS CITY STANDARDS AND SPECIFICATIONS.
7. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
8. ALL WORK WITHIN THE UDOT RIGHT-OF-WAY SHALL BE PER UDOT STANDARDS AND SPECIFICATIONS.
9. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
10. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
11. CULINARY WATER FACILITIES: ALL FACILITIES, I.E. PIPES, SERVICE LATERALS, VALVES, BENDS, THRUST BLOCKS, FIRE HYDRANTS, MISCELLANEOUS FITTINGS, ARE THE SOLE RESPONSIBILITY OF THE PROPERTY OWNERS TO MANAGE AND REPAIR TO THE CITY STANDARDS WHEN FAILURES OCCUR.
12. SANITARY SEWER FACILITIES: ALL FACILITIES, I.E. PIPES, MANHOLES, LATERALS, PIPELINE CLEANING, SEWER BACKUPS, ARE THE SOLE RESPONSIBILITY OF THE PROPERTY OWNERS TO MANAGE AND REPAIR TO THE CITY STANDARDS WHEN FAILURES OCCUR.
13. STORM WATER FACILITIES: ALL FACILITIES, I.E. PIPES, MANHOLES, INLET CATCH BASINS, ORIFICE AND ORIFICE CONTROL STRUCTURES, DETENTION STORAGE BASINS, OVERFLOW SPILLWAYS, ARE THE SOLE RESPONSIBILITY OF THE PROPERTY OWNERS TO MANAGE AND REPAIR TO THE CITY STANDARDS WHEN FAILURES OCCUR.
14. ROADWAYS AND SIDEWALK FACILITIES: ALL HARD SURFACING FACILITIES ARE THE SOLE RESPONSIBILITY OF THE PROPERTY OWNERS TO MANAGE AND REPAIR TO THE CITY STANDARDS WHEN FAILURES OCCUR.

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

HORZ: 1 inch = 20 ft.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 9125581-2202
MICHAEL S. BUDGE
8/21/2023
Michael S. Budge
STATE OF UTAH

UDOT ACCESS PLAN

PROJECT NUMBER 12089
PRINT DATE 2023-08-21
PROJECT MANAGER CD
DESIGNED BY MB

C201

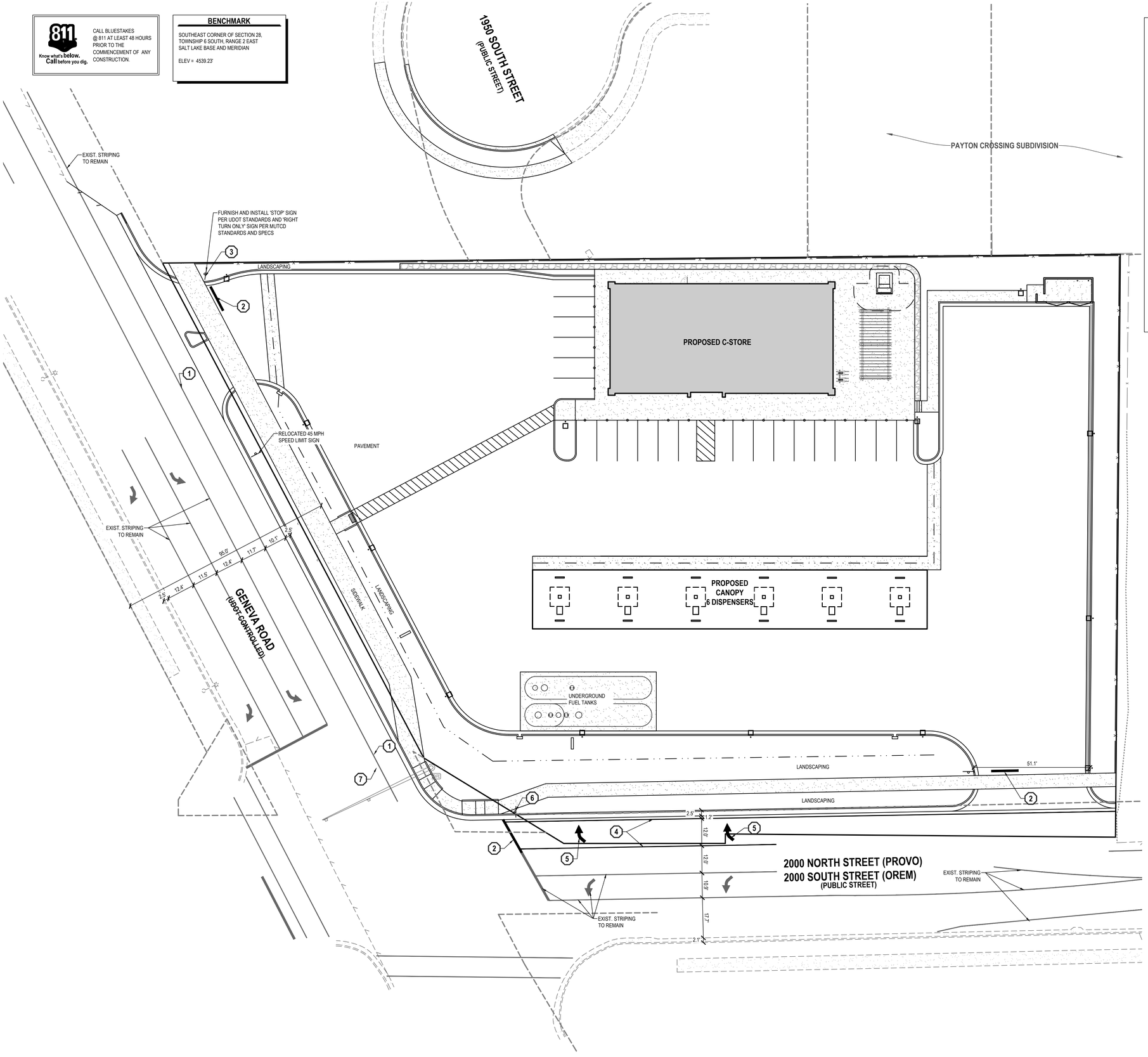
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'



UDOT NOTES

1. UDOT RESERVES THE RIGHT, AT ITS OPTION, TO INSTALL A RAISED MEDIAN ISLAND OR RESTRICT THE ACCESS TO A RIGHT-IN OR RIGHT-OUT AT ANY TIME.
2. WORK ON THE UDOT RIGHT-OF-WAY IS SEASONALLY RESTRICTED FROM OCTOBER 15 TO APRIL 15.
3. ROW WORK: WORK IS NOT ALLOWED ON THE RIGHT-OF-WAY DURING THE AM/PM PEAK TRAFFIC HOURS (6:00 – 9:00 AM AND 3:30–6:00 PM). ADDITIONAL WORK RESTRICTIONS OR MODIFICATIONS MAY BE IMPOSED AT THE TIME OF THE ENCROACHMENT PERMIT.
4. REPLACE ALL PAVEMENT MARKINGS IN KIND (TAPE WITH TAPE AND PAINT WITH PAINT). INSTALL ALL PAINT LINES WITH PERMANENT PAINT APPLICATION PER UDOT SPECIFICATION 02765. PAINT MUST HAVE AT LEAST 6 MONTHS LIFE AS DETERMINED BY UDOT'S PERMITS OFFICER.
5. ALL NEW PAVEMENT WORDS, ARROWS AND SYMBOLS MARKING WITHIN THE RIGHT-OF-WAY SHALL BE PRE-FORMED THERMO PLASTIC. ALL LETTERS, ARROWS, AND SYMBOLS SHALL CONFORM WITH THE "STANDARD ALPHABET FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION.
6. ALL SIGNS INSTALLED ON THE UDOT RIGHT-OF-WAY MUST BE HIGH INTENSITY GRADE (TYPE XI SHEETING) WITH A B3 SLIP BASE. INSTALL ALL SIGNS PER UDOT SN SERIES STANDARD DRAWINGS.
7. BEFORE COMMENCING WORK ON THE STATE HIGHWAY, THE GENERAL CONTRACTOR IS REQUIRED TO OBTAIN AN ENCROACHMENT PERMIT FROM THE APPLICABLE REGION'S PERMITS OFFICE BEFORE WORKING WITHIN THE STATE RIGHT-OF-WAY.
8. NO ROAD CUTS ALLOWED ON THIS JOB.
9. FOR ALL UTILITY TAPS (ROAD CUTS), USE FLOWABLE FILL PER UDOT'S CURRENT MIX DESIGN (50-150 PSI) UDOT SPEC. 03575.
10. ALL UTILITIES WITHIN THE PAVED SURFACE MUST BE BORED.
11. FOR EXCAVATIONS OUTSIDE OF THE ROADWAY, BACK FILL WITH UDOT APPROVED GRANULAR BORROW AND ROAD BASE. COMPACTION PER UDOT SPEC. 2056 AND 2721.
12. OWNER, DEVELOPER, AND/OR THE CONTRACTOR IS REQUIRED TO HIRE AN INDEPENDENT COMPANY FOR ALL TESTING WITHIN THE UDOT RIGHT-OF-WAY.
13. OWNER, DEVELOPER, AND THE CONTRACTOR ARE RESPONSIBLE FOR ANY DAMAGE TO THE UDOT RIGHT-OF-WAY THAT MAY BE DIRECTLY OR INDIRECTLY CAUSED BY THE DEVELOPMENT ACTIVITY.
14. TRAFFIC SIGNAL INSTALLATION OR MODIFICATION REQUIRES A SEPARATE WARRANTY BOND ONCE THE WORK HAS BEEN COMPLETED AND ACCEPTED. THE PERMITTEE IS RESPONSIBLE FOR HIRING AN INDEPENDENT INSPECTION COMPANY TO PERFORM INSPECTION SERVICES FOR ALL SIGNAL WORK COMPLETED. FOR A LIST OF THE UDOT APPROVED CONTRACTORS AND CONSULTANTS CONTACT THE APPROPRIATE REGIONS TRAFFIC SIGNALS ENGINEER.
15. PARTIAL CONCRETE PANEL REPLACEMENT IS NOT ALLOWED. WHEN PANELS ARE REMOVED, THE ENTIRE PANEL IS REQUIRED TO BE REPLACED PER UDOT STANDARDS, SPECIFICATIONS, AND STANDARD DRAWINGS.
16. DOUBLE SAW CUT THE CONCRETE TO PREVENT THE SPALLING OF OTHER CONCRETE PANELS AND TO AVOID OVER CUTS. OVER CUTS AND SPALLS WILL REQUIRE FULL PANEL REPLACEMENT.
17. ALL ABOVE GROUND FEATURES INCLUDING UTILITIES (POLES, FIRE HYDRANTS, BOXES, ETC.) MUST BE RELOCATED OUT OF THE AASHTO CLEAR ZONE OR A MINIMUM OF 18" BEHIND CURB.

GENERAL NOTES

1. ALL WORK TO COMPLY WITH OREM CITY'S STANDARDS AND SPECIFICATIONS.
2. ALL WORK DONE WITHIN UDOT RIGHT OF WAY SHALL COMPLY WITH UDOT STANDARDS AND SPECIFICATIONS.
3. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
4. SEE LANDSCAPE/ARCHITECTURAL PLANS FOR CONCRETE MATERIAL, COLOR, FINISH, AND SCORE PATTERNS THROUGHOUT SITE.
5. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE M.U.T.C.D. (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
6. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
7. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE OR ASPHALT.
8. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
9. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
10. ALL CONSTRUCTION SIGNAGE, BARRICADES, TRAFFIC CONTROL DEVICES, ETC. SHALL CONFORM TO THE LATEST EDITION OF THE M.U.T.C.D. THE CONTRACTOR WILL MAINTAIN SUCH SO THAT THEY ARE PROPERLY PLACED AND VISIBLE AT ALL TIMES.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. 4" WIDE SOLID WHITE PAVEMENT MARKING PER UDOT STANDARDS
2. INSTALL 12" WHITE STOP BAR AND CROSSWALK PER M.U.T.C.D. STANDARDS
3. INSTALL 36" X 36" STOP SIGN AND SIGN POST PER UDOT STANDARD SN SERIES DRAWINGS
4. 4" WIDE DOTTED WHITE PAVEMENT MARKING.
5. TURN ARROW PER M.U.T.C.D. STANDARDS.
6. STOP SIGN PER M.U.T.C.D STANDARDS.
7. REMOVE EXISTING PAVEMENT MARKINGS FROM EXISTING ASPHALT PAVEMENT BY GRINDING OR WATER BLASTING, OR APPROVED EQUAL, TO MINIMIZE SURFACE SCARRING.

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

HORZ: 1 inch = 20 ft.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
9/21/2023
No. 9125581-2202
MICHAEL S. BUDGE
STATE OF UTAH

UDOT SIGNAGE AND STRIPING PLAN

PROJECT NUMBER	PRINT DATE
12089	2023-08-21
PROJECT MANAGER	DESIGNED BY
CD	MB

C202

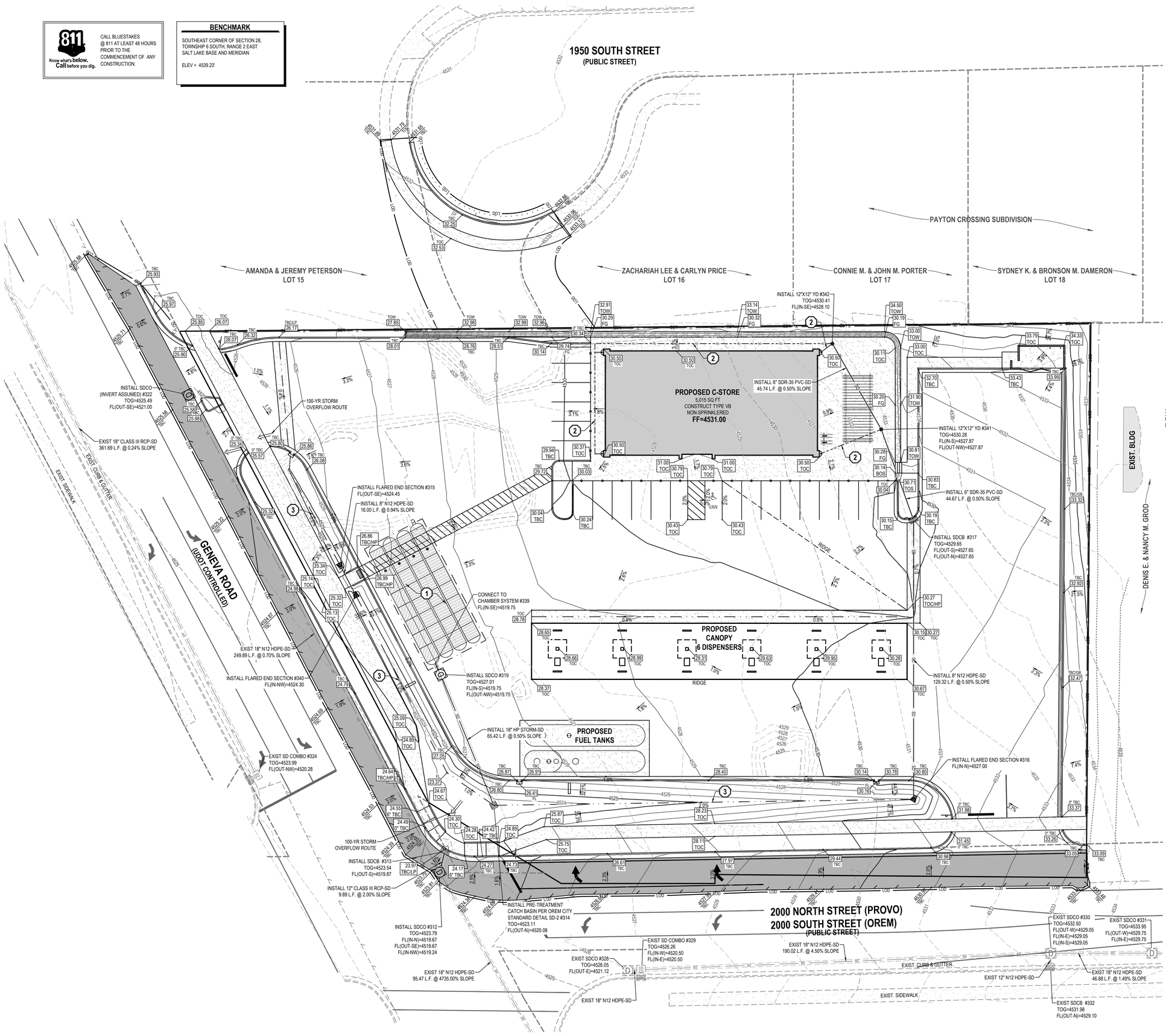
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'



GENERAL NOTES

1. ALL WORK TO COMPLY WITH OREM STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. ALL WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER POSSIBLY INCLUDING, BUT NOT LIMITED TO, REMOVAL OF UNCONSOLIDATED FILL, ORGANICS, AND DEBRIS, PLACEMENT OF SUBSURFACE DRAIN LINES AND GEOTEXTILE, AND OVEREXCAVATION OF UNSUITABLE BEARING MATERIALS AND PLACEMENT OF ACCEPTABLE FILL MATERIAL.
4. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING SOIL CONDITIONS.
5. ELEVATIONS HAVE BEEN TRUNCATED FOR CLARITY. XX.XX REPRESENTS AN ELEVATION OF 46XX.XX ON THESE PLANS.
6. LANDSCAPED AREAS REQUIRE SUBGRADE TO BE MAINTAINED AT A SPECIFIC ELEVATION BELOW FINISHED GRADE AND REQUIRE SUBGRADE TO BE PROPERLY PREPARED AND SCARIFIED. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
7. SLOPE ALL LANDSCAPED AREAS AWAY FROM BUILDING FOUNDATIONS TOWARD CURB AND GUTTER OR STORM DRAIN INLETS.
8. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
9. ALL STORM DRAIN INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
10. ENSURE MINIMUM COVER OVER ALL STORM DRAIN PIPES PER MANUFACTURER'S RECOMMENDATIONS. NOTIFY ENGINEER IF MINIMUM COVER CANNOT BE ATTAINED.
11. ALL FACILITIES WITH DOWNSPOUTS/ROOF DRAINS SHALL BE CONNECTED TO THE STORM DRAIN SYSTEM. SEE MECHANICAL/PLUMBING PLANS FOR DOWNSPOUT/ROOF DRAIN LOCATIONS AND SIZES. ALL ROOF DRAINS TO HAVE MINIMUM 1% SLOPE.
12. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL OREM STANDARDS AND SPECIFICATIONS.
13. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, OR STORM DRAIN STRUCTURES OR PIPES.
14. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
15. CONTRACTOR TO ENSURE THAT BOXES ARE SIZED TO ACCOMMODATE PIPE SIZES.
16. PERMANENT UNDERGROUND DETENTION FACILITY TO BE OWNED AND MAINTAINED BY OWNER OF THIS PROPERTY NOT TO BE ALTERED OR REMOVED WITHOUT APPROVAL FROM OREM ENGINEER.
17. STORM DRAIN INFRASTRUCTURE WITHIN PROPERTY IS PRIVATE, TO BE OWNED AND MAINTAINED BY OWNER OF THIS PROPERTY NOT TO BE ALTERED OR REMOVED WITHOUT APPROVAL FROM OREM ENGINEER.
18. "THIS REPORT FOR THE DRAINAGE DESIGN OF OREM HOLIDAY OIL WAS PRE-PARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE PROVISIONS OF CITY OF OREM STORM DRAIN-AGE SYSTEMS DESIGN AND MANAGEMENT MANUAL, AND WAS DESIGNED TO COMPLY WITH THE PROVISIONS THEREOF. I UNDERSTAND THAT THE CITY OF OREM DOES NOT AND WILL NOT ASSUME LIABILITY FOR DRAINAGE FACILITIES DESIGN.

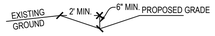
SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

(1) UNDERGROUND RETENTION BASIN: 32 STORMTECH MC-3500 CHAMBERS AND 8 END CAPS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE DETAILS ON SHEET C602 AND C603
STORAGE REQUIRED = 6,100 CF
STORAGE PROVIDED = 6,482 CF
TOP OF STONE = 4524.25
TOP OF CHAMBERS = 4523.25
BOTTOM OF CHAMBERS = 4519.75
BOTTOM OF STONE = 4519.00
RETENTION CHAMBERS TO RETAIN THE 80TH PERCENTILE STORM OF 0.50-INCHES.
80TH PERCENTILE LID STORAGE REQUIRED = 2,774 CF

(2) INSTALL 6" SDR-35 PVC ROOF DRAIN LINE @ 1.0% MINIMUM SLOPE. CONNECT TO STORM DRAIN PIPE WITH INSERTA TEE ONEFIT OR DIRECTLY INTO STORM DRAIN BOX.

(3) GRADE DRAINAGE SWALE PER DETAIL 'A' ON THIS SHEET.



A **DRAINAGE SWALE**
SCALE: NONE

HORIZONTAL GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
HORZ: 1 inch = 20 ft.

NORTH

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 9125581-2202
MICHAEL S. BUDGE
8/21/2023
STATE OF UTAH
Michael S. Budge

GRADING AND DRAINAGE PLAN

PROJECT NUMBER 12089
PRINT DATE 2023-08-21
PROJECT MANAGER CD
DESIGNED BY MB

C300

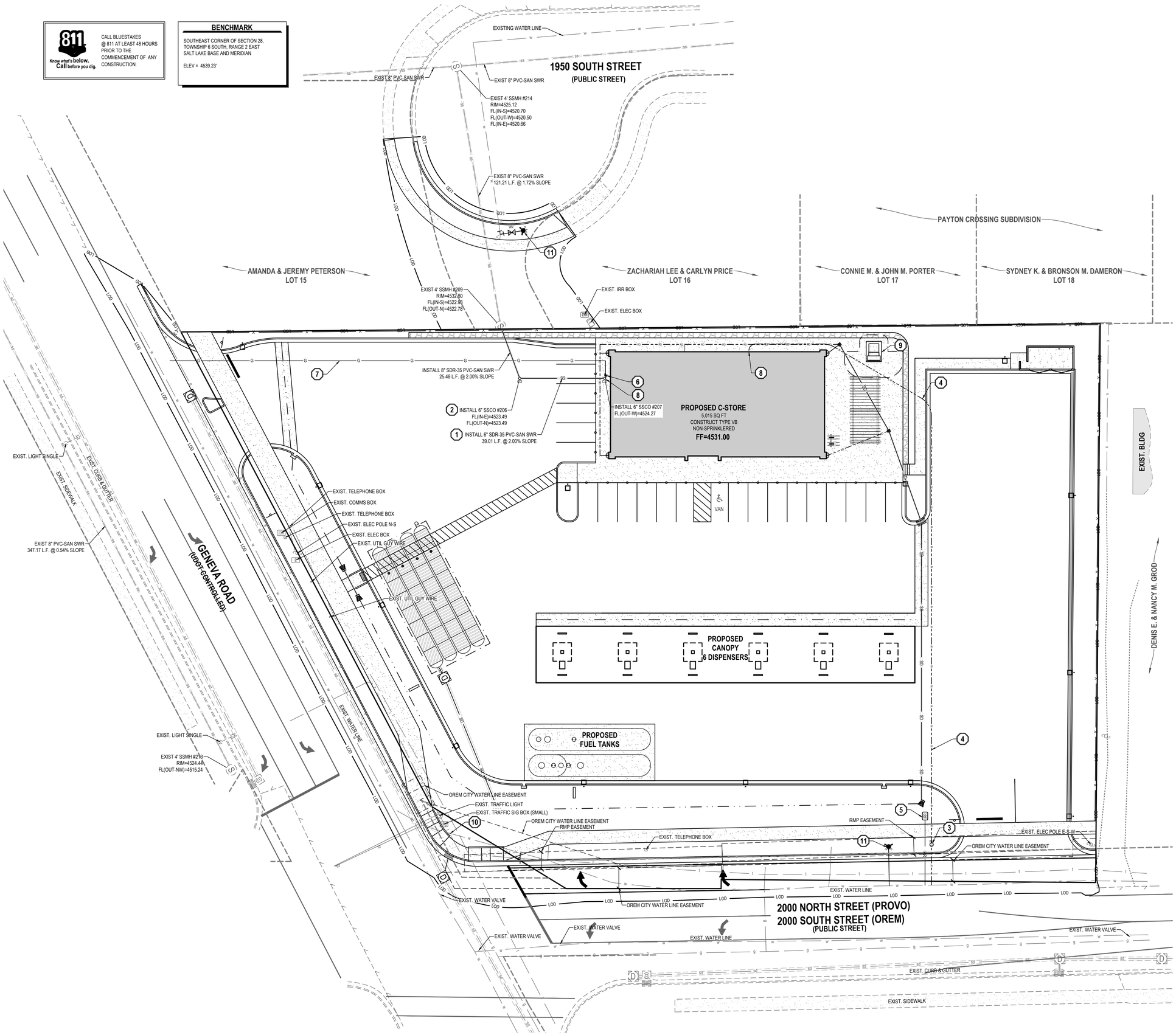
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'



GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
3. ALL SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY STANDARD PLANS AND SPECIFICATIONS.
4. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
6. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
7. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
8. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
9. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING UTILITY STRUCTURES OR PIPES.
10. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
11. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
12. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING MANHOLES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTING ANY NEW SEWER LINES.
13. FOUR FEET IS REQUIRED OVER ALL SEWER LINES.
14. ALL MECHANICAL JOINTS REQUIRE A MEGA LUG OR OTHER APPROVED EQUAL JOINT RESTRAINT.
15. AT LEAST THREE FEET (3') OF HORIZONTAL SEPARATION AND ONE FOOT (1') VERTICAL SEPARATION MUST BE MAINTAINED FROM CITY UTILITIES.
16. WHEN TRENCHLESS UTILITY INSTALLATION METHODS ARE EMPLOYED, ALL EXISTING UTILITES ARE TO BE POTHOLED AND EXPOSED FOR VISUAL INSPECTION PRIOR TO AND DURING THE INSTALLATION PROCESS.
17. "ALL UTILITIES SHALL NOT BE LOCATED UNDER COVERED PARKING AREAS AND SHALL BE INSTALLED ACCORDING TO CHAPTER 21-4-6 OF THE OREM CITY CODE." THESE UTILITIES INCLUDE BUT ARE NOT LIMITED TO: WATER AND SEWER LATERALS, WATER AND SEWER MAINS, STORM WATER SUMPS, SEWER MANHOLES, WATER VALVES AND METERS, AND FIRE HYDRANTS.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. SDR-35 PVC SANITARY SEWER LATERAL, INCLUDING CLEANOUTS AT MAXIMUM 100-FOOT SPACING. INSTALLATION AND TRENCHING PER OREM STANDARD DRAWING SS-3. SIZE, LENGTH AND SLOPE PER PLAN.
2. SANITARY SEWER CLEANOUT PER OREM STANDARDS AND SPECIFICATIONS.
3. 1-1/2" WATER METER WITH 1-1/2" BLUE CTS POLY SERVICE FROM MAIN TO METER PER OREM STANDARD DRAWING W-13 (USC APPROVED RPZ BACKFLOW PREVENTER INSTALLED INSIDE BUILDINGS).
4. 1-1/2" BLUE CTS POLY PIPE WATER SERVICE PER OREM STANDARD DRAWING W-13.
5. 1" POINT OF CONNECTION FOR IRRIGATION CONTRACTOR. INSTALL 1" PURPLE IPS POLY SERVICE LINE FOR PRESSURE IRRIGATION SERVICE WITH USC APPROVED RPZ BACKFLOW PREVENTER PER OREM STANDARDS AND SPECIFICATIONS.
6. GAS METER LOCATION. COORDINATE GAS SERVICE WITH DOMINION ENERGY.
7. 2 LB NATURAL GAS LINE (220' +/-) FROM C-STORE TO CARWASH - SEE NATURAL GAS ISOMETRIC ON PLUMBING PLANS.
8. UTILITY POINT OF CONNECTION. SEE PLUMBING PLANS FOR FURTHER INFORMATION.
9. S.A.D.S.M.P. ELECTRICAL TRANSFORMER. LAYOUT SHOWN IS SCHEMATIC IN NATURE AND MAY VARY IN THE FIELD. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION
10. UTILITY CROSSING. LOOP UTILITIES AS NEEDED PER OREM STANDARD DETAILS AND DRAWINGS.
11. FIRE HYDRANT ASSEMBLY COMPLETE PER CITY OF OREM STANDARD DRAWING W-7.

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
8/21/2023
No. 9125581-2202
MICHAEL S. BUDGE
STATE OF UTAH

UTILITY PLAN

PROJECT NUMBER	PRINT DATE
12089	2023-08-21
PROJECT MANAGER	DESIGNED BY
CD	MB

C400

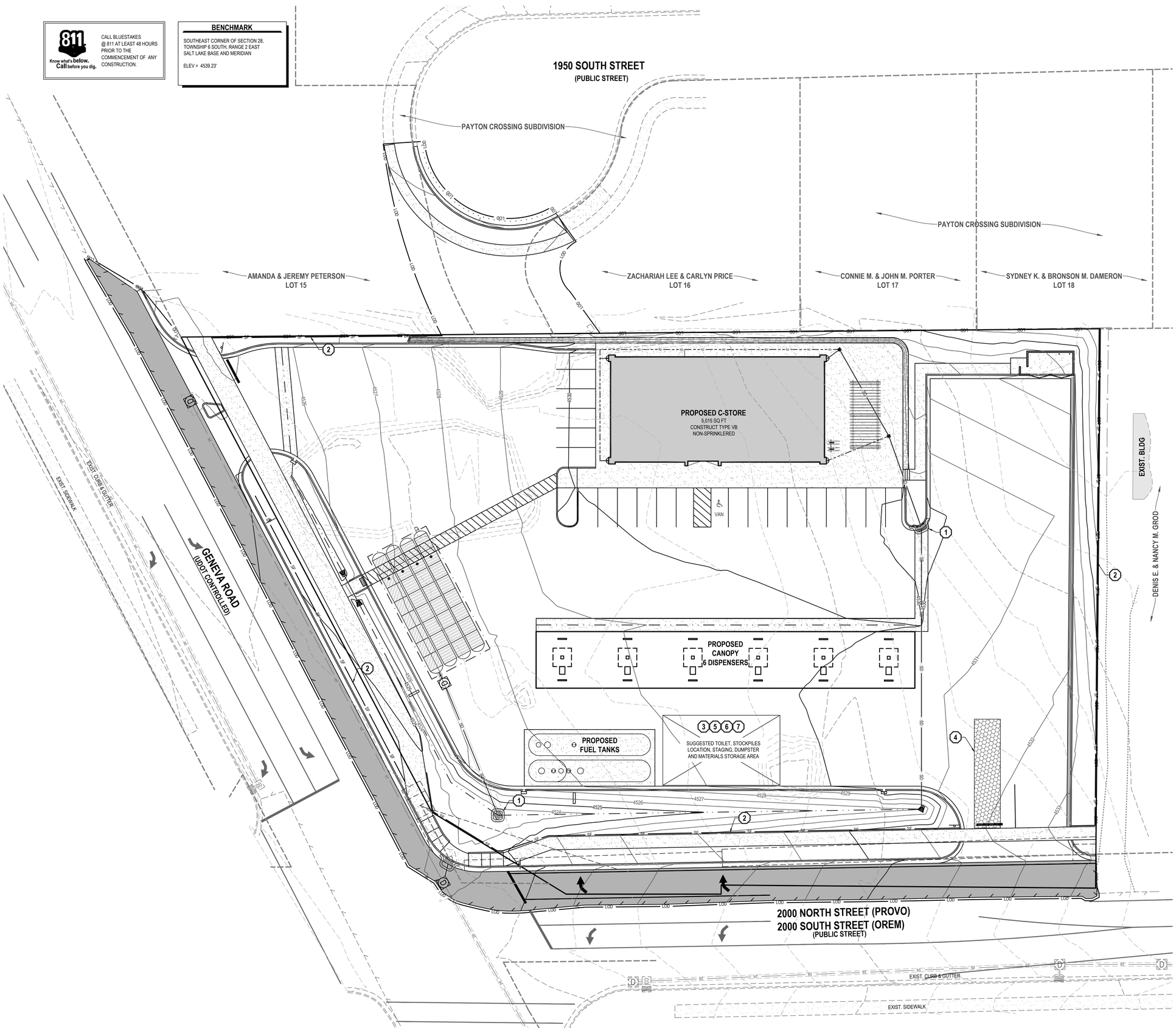
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'



GENERAL NOTES

1. THIS PLAN IS DESIGNED AS A FIRST APPRAISAL OF NECESSARY MEANS TO PROTECT THE WATERS OF THE STATE FROM POTENTIAL POLLUTION. IT IS THE RESPONSIBILITY OF THE OWNER/OPERATOR TO ADD WARRANTED BEST MANAGEMENT PRACTICES (BMP'S) AS NECESSARY, MODIFY THOSE SHOWN AS APPROPRIATE, AND DELETE FROM THE PROJECT THOSE FOUND TO BE UNNECESSARY. FEDERAL AND STATE LAW ALLOWS THESE UPDATES TO BE MADE BY THE OWNER/OPERATOR ONSITE AND RECORDED BY THE OWNER/OPERATOR ON THE COPY OF THE SWPPP KEPT ONSITE.
2. DISTURBED LAND SHALL BE KEPT TO A MINIMUM. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. HOWEVER, WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. RESEED DISTURBED LAND WITH NATIVE GRASS MIXTURE WITHIN 14 CALENDAR DAYS OF ACHIEVEMENT OF FINISH GRADE TO STABILIZE SOILS IF LAND IS NOT TO BE RE-WORKED WITHIN 14 CALENDAR DAYS OF THE CESSATION OF CONSTRUCTION ACTIVITIES AT THAT LOCATION.
4. DETAILS SHOWN ARE TO BE EMPLOYED TO PROTECT RUNOFF AS APPROPRIATE DURING CONSTRUCTION. NOT ALL DETAILS ARE NECESSARY AT ALL PHASES OF THE PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/OPERATOR TO USE APPROPRIATE BEST MANAGEMENT PRACTICES AT THE APPROPRIATE PHASE OF CONSTRUCTION. SEE SWPPP FOR BMP IMPLEMENTATION SCHEDULE.
5. VARIOUS BEST MANAGEMENT PRACTICES HAVE BEEN SHOWN ON THE PLANS AT SUGGESTED LOCATIONS. THE CONTRACTOR MAY MOVE AND RECONFIGURE THESE BMP'S TO OTHER LOCATIONS IF PREFERRED, PROVIDED THE INTENT OF THE DESIGN IS PRESERVED.
6. NOT ALL POSSIBLE BMP'S HAVE BEEN SHOWN. THE CONTRACTOR IS RESPONSIBLE TO APPLY CORRECT MEASURES TO PREVENT THE POLLUTION OF STORM WATER PER PROJECT SWPPP.
7. A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR ALL CONSTRUCTION ACTIVITIES 1 ACRE OR MORE.
8. PRIOR TO CONSTRUCTION AN EROSION AND SEDIMENTATION CONTROL PLAN WILL BE SUBMITTED TO THE PUBLIC WORKS DIRECTOR FOR APPROVAL.

SCOPE OF WORK:

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED, THE DETAILS NOTED, AND/OR AS SHOWN ON THE CONSTRUCTION DRAWINGS:

1. INLET PROTECTION PER DETAIL 11/C-500
2. TEMPORARY CONSTRUCTION FENCE OR SILT FENCE PER DETAIL 12/C-500
3. PORTABLE TOILET PER DETAIL 9/C-500
4. VEHICLE WASHDOWN AND STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 10/C-500
5. CONCRETE WASTE MANAGEMENT PER DETAIL 13/C-500
6. SUGGESTED TEMPORARY CONSTRUCTION SITE PARKING, STAGING, DUMPSTER, AND MATERIAL STORAGE AREA.
7. SUGGESTED STOCKPILE AREA.

REVISION SCHEDULE

NUMBER	DATE	AUTHOR	COMPANY REPRESENTATIVE SIGNATURE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

HORZ. 1 inch = 20 ft.

NORTH

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 9125581-2202
MICHAEL S. BUDGE
STATE OF UTAH
8/21/2023

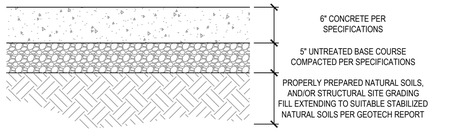
EROSION CONTROL PLAN

PROJECT NUMBER 12089
PRINT DATE 2023-08-21
PROJECT MANAGER CD
DESIGNED BY MB

C500

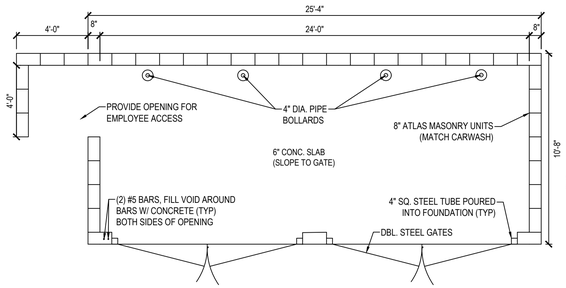
CONCRETE NOTES

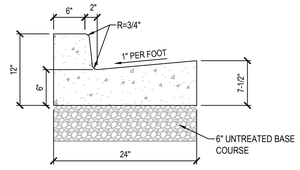
1. ALL PAVING TO BE PLACED OVER PROPERLY PREPARED NATURAL SOILS AND/OR PROPERLY PREPARED EXISTING FILL SOILS AND PROPERLY COMPACTED STRUCTURAL FILL WHERE SPECIFIED.
2. ALL STRUCTURAL FILL TO BE PLACED AND COMPACTED PER THE PROJECT GEOTECHNICAL REPORT OR TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T-180 (D-1557) METHOD OF COMPACTION. LIFTS SHOULD BE PLACED PER GEOTECHNICAL RECOMMENDATIONS BUT SHOULD NOT EXCEED 8" IN LOOSE THICKNESS.
3. REMOVE SURFACE VEGETATION AND OTHER DELETERIOUS MATERIALS OVER THE ENTIRE SITE IN PREPARATION OF PROPOSED IMPROVEMENTS.



1 CONCRETE PAVEMENT SECTION

SCALE: NONE



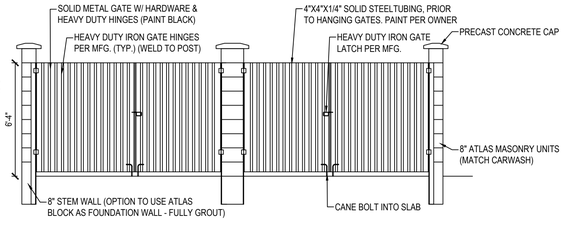


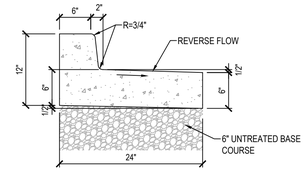
NOTE:

1. CONSTRUCT PER NOTES AND SPECIFICATIONS ASSOCIATED WITH APWA STANDARD PLAN NO. 205.
2. PROVIDE EXPANSION JOINT AT 60' MAX. O.C.
3. PROVIDE 2" SCORE AT 8' O.C.

2 24" COLLECTION CURB AND GUTTER

SCALE: NONE



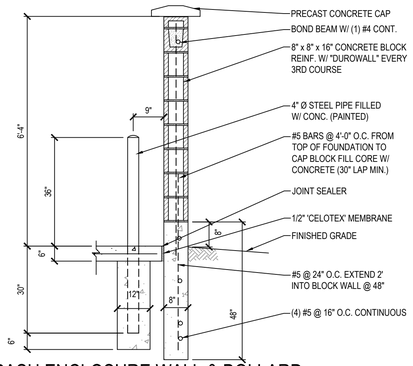


NOTE:

1. CONSTRUCT PER NOTES AND SPECIFICATIONS ASSOCIATED WITH APWA STANDARD PLAN NO. 205.
2. PROVIDE EXPANSION JOINT AT 60' MAX. O.C.
3. PROVIDE 2" SCORE AT 8' O.C.

3 24" REVERSE PAN CURB AND GUTTER

SCALE: NONE

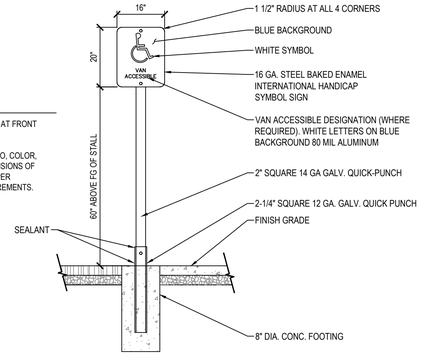


4 ACCESIBLE PARKING SIGN

SCALE: NONE

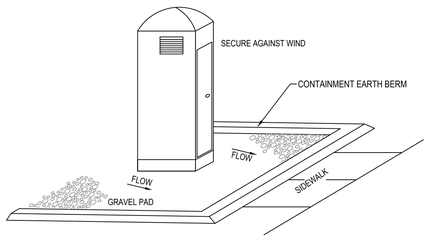
NOTES:

1. SIGNS TO BE CENTERED AT FRONT OF PARKING SPACE.
2. HANDICAP PARKING LOGO, COLOR, HEIGHT, OF POLE, DIMENSIONS OF SIGN TO BE INSTALLED PER GOVERNMENTAL REQUIREMENTS.



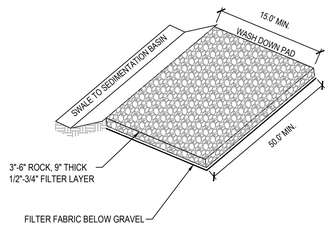
5 DOUBLE TRASH ENCLOSURE

SCALE: NONE



6 DOUBLE TRASH ENCLOSURE ELEVATION

SCALE: NONE

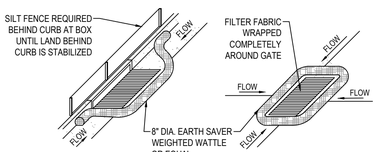


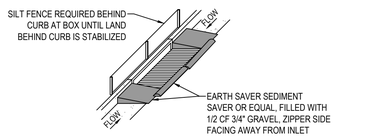
NOTE:

1. PLACE SIGN ADJACENT TO ENTRANCE " CONSTRUCTION TRAFFIC ONLY - ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT SITE AT THIS LOCATION"

7 TRASH ENCLOSURE WALL & BOLLARD

SCALE: NONE



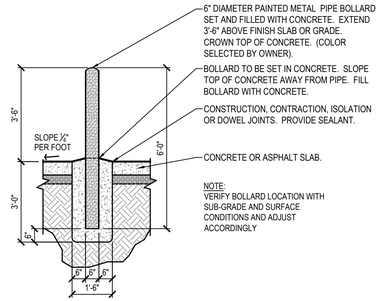


NOTES:

1. PLACE WATTLES OR GRAVEL BAGS TIGHT AGAINST CURB TO PREVENT SEDIMENT-LADEN WATER FROM GETTING BETWEEN CURB AND WATTLE/BAG.
2. PLACE WATTLES OR GRAVEL BAGS SUCH THAT FLOW DOES NOT OVERTOP CURB OR ROAD CENTERLINE.
3. INSPECT INLET PROTECTION AFTER EVERY LARGE STORM EVENT AND AT LEAST BI-WEEKLY, OR PER SWPPP REQUIREMENTS, WHICHEVER IS MORE STRINGENT, TO ENSURE THAT SEDIMENT CONTROL IS MEETING ITS DESIGN INTENT. MAINTAIN AND/OR REPLACE AS NEEDED.
4. REMOVE SEDIMENT ACCUMULATED WHEN IT REACHES 50% OF GRAVEL BAG OR WATTLE HEIGHT.
5. CONTRACTOR MAY SUBMIT AN ALTERNATIVE METHOD OF INLET PROTECTION. THE ALTERNATIVE METHOD SHALL BE APPROVED BY THE CITY INSPECTOR AND THE ENGINEER OF RECORD.
6. BEFORE PLACEMENT OF CURB, STABILIZATION OF LAND BEHIND CURB, AND/OR PAVING, MAINTAIN TOP OF INLET AT 6" ABOVE GRADE, AND SURROUND WITH SILT FENCE FOR SEDIMENTATION AROUND BOX. MAINTAIN SILT FENCE BEHIND BOX UNTIL LAND BEHIND CURB IS STABILIZED.

8 BOLLARD DETAIL

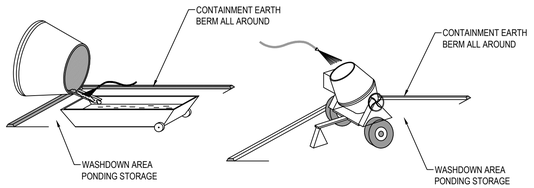
SCALE: NONE



NOTE:
VERIFY BOLLARD LOCATION WITH SUB-GRADE AND SURFACE CONDITIONS AND ADJUST ACCORDINGLY

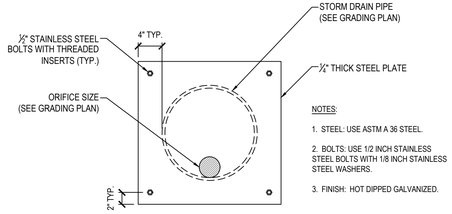
9 PORTABLE TOILET

SCALE: NONE



10 STABILIZED CONSTRUCTION ENTRANCE

SCALE: NONE

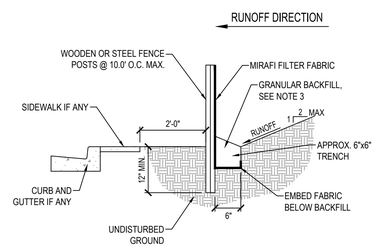


NOTES:

1. STEEL: USE ASTM A 36 STEEL.
2. BOLTS: USE 1/2 INCH STAINLESS STEEL BOLTS WITH 1/8 INCH STAINLESS STEEL WASHERS.
3. FINISH: HOT DIPPED GALVANIZED.

11 SAG INLET PROTECTION

SCALE: NONE



NOTES:

1. EXCAVATE 6"x6" TRENCH ALONG LIMITS OF DISTURBANCE AS SHOWN ON CONSTRUCTION DRAWINGS.
2. POSTS SHALL BE POSITIONED ON DOWNSTREAM SIDE OF FENCE.
3. LAY TOE-IN FABRIC FLAP IN BOTTOM OF TRENCH. BACKFILL TRENCH WITH FREE DRAINING GRANULAR MATERIAL. COMPACT TRENCH TO SATISFACTION OF THE ENGINEER OF RECORD.
4. SILT FENCE GEOTEXTILE SHALL MEET AASHTO M288-92 REQUIREMENTS.
5. REMOVE & DISPOSE OF SEDIMENT WHEN ACCUMULATION IS 50% OF EXPOSED FENCE HEIGHT.
6. 10' MAX. SPACING BETWEEN STAKES.
7. SILT FENCES SHALL BE INSTALLED ALONG CONTOURS, NOT UP AND DOWN SLOPES, WITH 10' OVERLAP AT BREAKS.

12 TEMPORARY SILT FENCE

SCALE: NONE

NOTES:

1. EACH ROCK IS TO BE PLACED INDIVIDUALLY OF THE SIZE AND SHAPE SPECIFIED. ENSURE THAT EACH ROCK IS SET AND SUPPORTED BY UNDERLYING MATERIALS AND ADJACENT ROCKS. REPOSITION OR REPLACE LOOSE ROCKS.
2. UPPER ROCKS ARE TO BE SUPPORTED BY (2) ROCKS IN ROW BELOW. ROCKS ARE TO BE OFFSET SO THAT VERTICAL SEAMS ARE NOT CONSTRUCTED IN WALL.
3. PLACE BASE, FACING, AND CAP ROCKS SO THAT THEIR HEIGHT DIMENSION IS NOT GREATER THAN THEIR WIDTH. THE LONGEST DIMENSION OF THE BASE, FACING, AND CAP ROCKS IS PERPENDICULAR TO THE FACE OF ROCKERY. TYPICAL BASE DIMENSION IS 1.5 x HEIGHT OF ROCK.
4. ROCKS ARE TO BE PLACED SO THAT SLOPE BACK INTO HILLSIDE AT A MIN. OF 5%. PROVIDE 'CHINKS' AS NECESSARY BETWEEN ROCKS TO SLOPE UPPER ROCKS ADEQUATELY.
5. ALL FILL TO BE COMPACTED TO 90% MAX DRY DENSITY PLACED IN 8" LIFTS.
6. STABILITY OF TEMPORARY CUT SLOPES IS THE RESPONSIBILITY OF THE CONTRACTOR.
7. DO NOT CONSTRUCT ROCK WALLS OR SLOPES EXCEEDING THE HEIGHTS SHOWN HERE WITHOUT CONSULTING WITH ENGINEER.
8. ROCKS ARE TO BE ANGULAR TO PROVIDE ADEQUATE 'FLAT SURFACE' FOR ROCK TO ROCK CONNECTION. ROUND SHAPED ROCKS ARE NOT ACCEPTABLE.
9. ROCKS ARE TO QUARRIED BY NON-EXPLOSIVE METHODS. ROCKS QUARRIED BY BLASTING METHODS ARE PRONE TO CRACKING AND ARE NOT ACCEPTABLE.
10. MAINTENANCE OF ROCK-PROTECTED SLOPES WILL BE REQUIRED AS THE ROCKS SETTLE AND MOVE OVER TIME. LOCALIZED AREAS OF ROCK-PROTECTED SLOPE MAY NEED ADJUSTMENTS TO IMPROVE ROCK INTERLOCKING OVER TIME. ADEQUATE BACKFILL OR ROCK TO ROCK CONTACT SHOULD BE MAINTAINED TO PREVENT SIGNIFICANT MOVEMENT OF THE TOP ROW OF ROCKS.
11. CARE SHOULD BE TAKEN NOT TO OVER WATER THE SOIL LOCATED ABOVE AND BEHIND THE ROCK-PROTECTED SLOPES. OVER WATERING WILL LIKELY RESULT IN SOIL ERODING THROUGH THE JOINTS BETWEEN THE ROCKS.
12. GOOD SURFACE DRAINAGE SHOULD BE PROVIDED UPSLOPE OF THE ROCK-PROTECTED SLOPES TO DIRECT RUNOFF AWAY FROM THE ROCK PROTECTED SLOPES.

13 CONCRETE WASTE MANAGEMENT

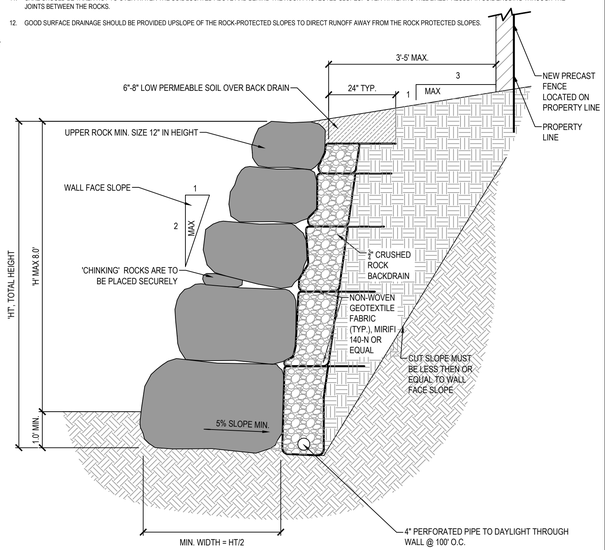
SCALE: NONE

14 ORIFICE PLATE

SCALE: NONE

15 ROCK RETAINING WALL

SCALE: NONE



ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

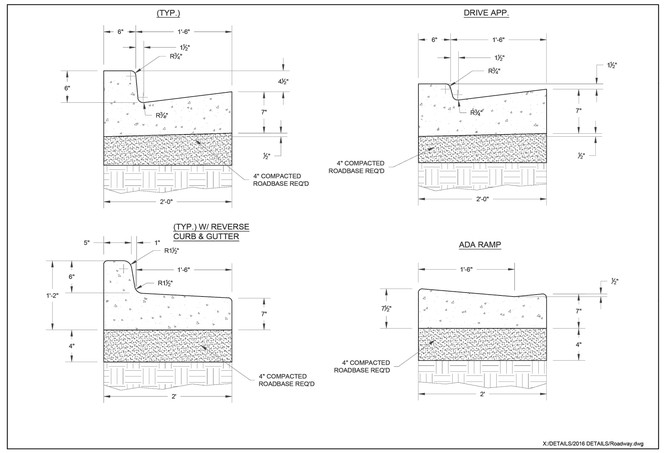
OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
8/21/2023
No. 9125581-2202
MICHAEL S. BUDGE
STATE OF UTAH

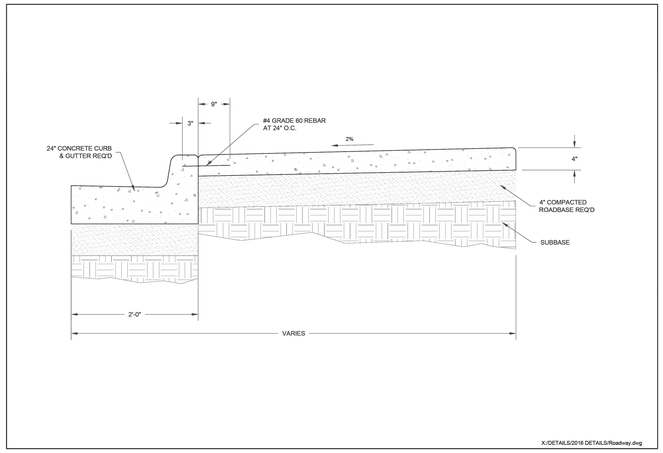
DETAILS

PROJECT NUMBER 12089
PRINT DATE 2023-08-21
PROJECT MANAGER CD
DESIGNED BY MB

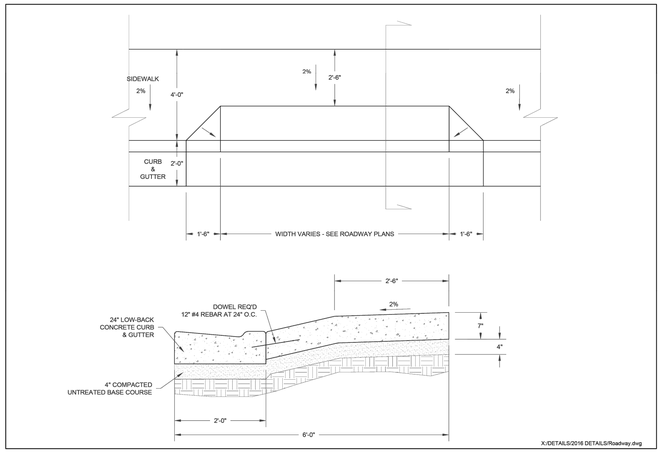
C600



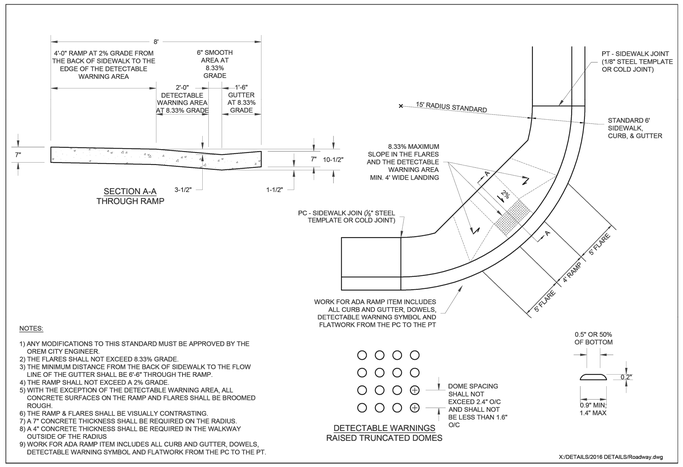
OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	2' CURB & GUTTER	REV. 1/2016 RW-1



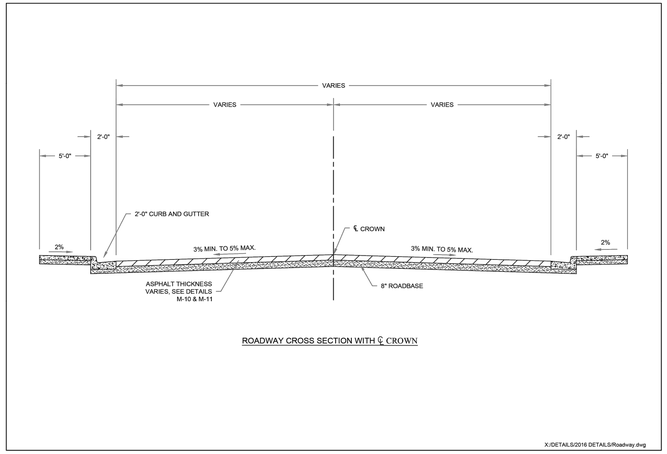
OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	CONCRETE CURB, GUTTER & SIDEWALK	REV. 1/2016 RW-4



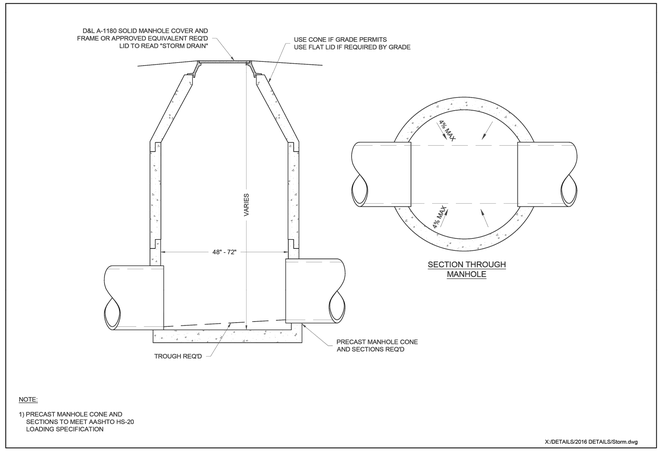
OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	6' CURB, GUTTER & SIDEWALK DRIVE APPROACH	REV. 1/2016 RW-5



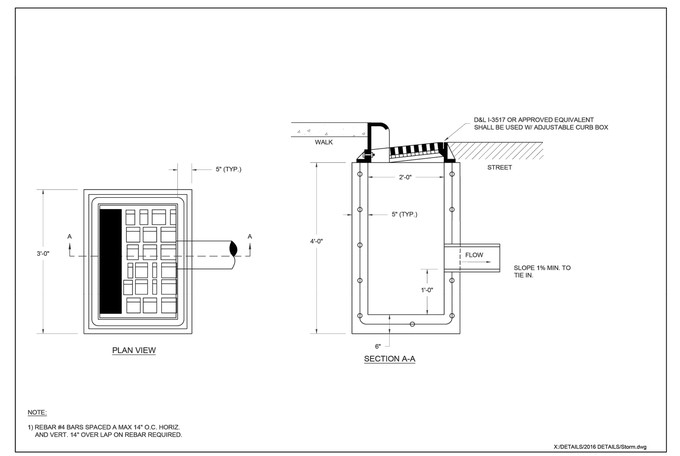
OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	ADA RAMP	REV. 1/2016 RW-11



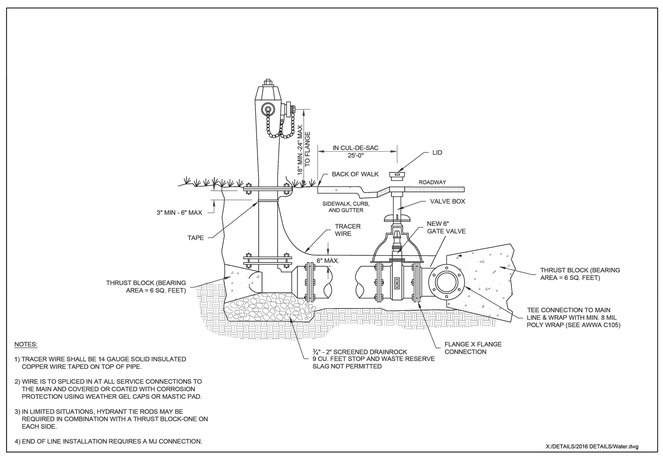
OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	ROADWAY CROSS SECTION WITH ℄ CROWN	REV. 1/2016 RW-14



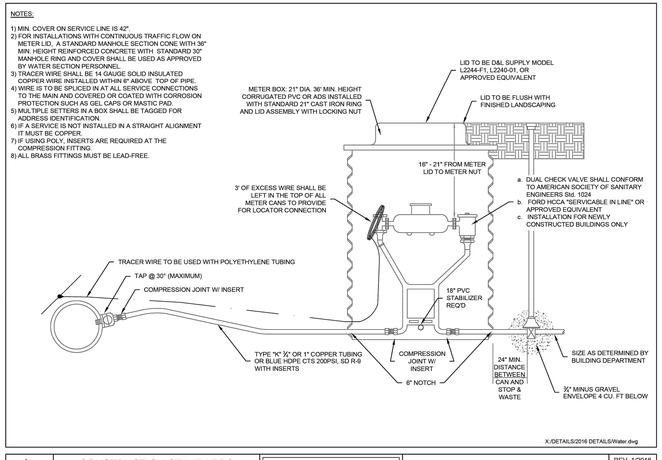
OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	48" - 72" PRECAST STORM DRAIN MANHOLE	REV. 1/2016 SD-1



OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	STANDARD CATCH BASIN	REV. 1/2016 SD-4



OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	FIRE HYDRANT ASSEMBLY	REV. 1/2016 W-7



OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	3/4" & 1" SERVICE LINE INSTALLATION	REV. 1/2016 W-13

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 9125581-2202
MICHAEL S. BUDGE
STATE OF UTAH
8/31/2023
Michael S. Budge

DETAILS

PROJECT NUMBER 12089
PRINT DATE 2023-08-21
PROJECT MANAGER CD
DESIGNED BY MB

C601

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

ADS Advanced Drainage Systems, Inc.

ADS SiteAssist® FOR STORMTECH INSTALLATION INSTRUCTIONS VISIT OUR APP

HOLIDAY OIL OREM

OREM, UT, USA

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

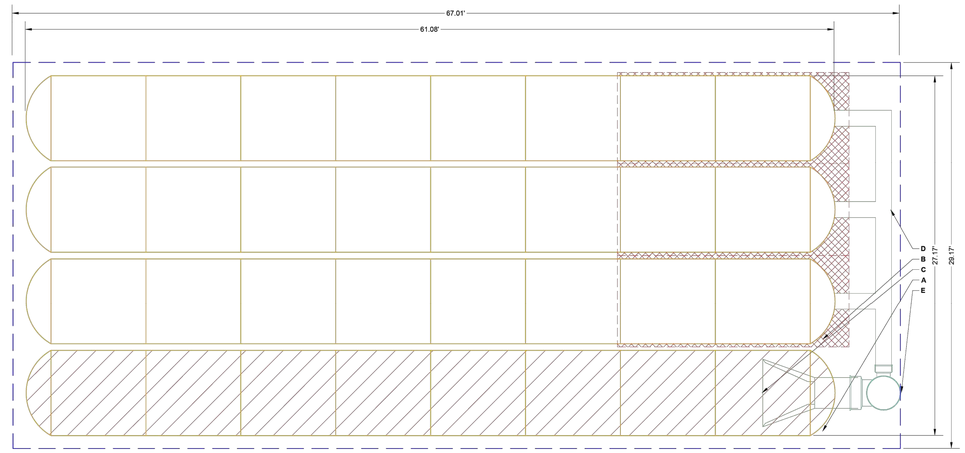
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

©2023 ADS, INC.

PROPOSED LAYOUT		PROPOSED ELEVATIONS:	
32	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	4532.50
8	STORMTECH MC-3500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	4526.50
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	4526.00
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	4526.00
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	4526.00
6483	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	4523.50
		TOP OF MC-3500 CHAMBER:	4523.50
		12" x 12" TOP MANIFOLD INVERT:	4522.95
		24" ISOLATOR ROW PLUS INVERT:	4520.92
1955	SYSTEM AREA (SF)	BOTTOM OF MC-3500 CHAMBER:	4520.75
192.4	SYSTEM PERIMETER (ft)	BOTTOM OF STONE:	4520.00

ITEM ON LAYOUT	DESCRIPTION	*INVERT ABOVE BASE OF CHAMBER INVERT*	MAX FLOW
A	24" BOTTOM CORED END CAP, PART#: MC3500IEPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
B	12" TOP CORED END CAP, PART#: MC3500IEPP12T / TYP OF ALL 12" TOP CONNECTIONS	26.36"	
C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP		
D	12" x 12" TOP MANIFOLD, ADS N-12	26.36"	
E	30" DIAMETER (24.00" SUMP MIN)		6.7 CFS IN



ISOLATOR ROW PLUS SEE DETAIL()

PLACE MINIMUM 17.50' OF ADSPLUS175 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- PRIOR TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

HOLIDAY OIL OREM
OREM, UT, USA
DRAWN: MB
CHECKED: N/A
DATE:
PROJECT #:

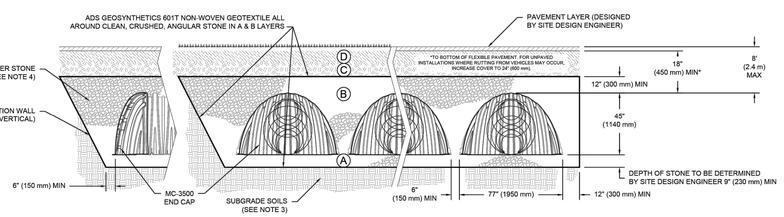
DATE	DRW	CHK	DESCRIPTION

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER WHO IS SOLELY RESPONSIBLE FOR ITS CONTENT. IT IS THE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO REVIEW THE PRODUCT SUPPLIED HEREIN TO ENSURE THAT THE PRODUCT IS SUITED FOR ALL ASPECTS OF THE PROJECT INCLUDING BUT NOT LIMITED TO, SITE SPECIFIC LOADS, REGULATIONS, AND PROJECT REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT SUPPLIED HEREIN IS SUITABLE FOR THE INTENDED USE AND THAT ALL ASPECTS OF THE PROJECT HAVE BEEN ADDRESSED. ADS ASSUMES NO RESPONSIBILITY FOR THE USE OF THIS DRAWING FOR PURPOSES OTHER THAN THOSE FOR WHICH IT WAS PREPARED.

StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

SHEET
2 OF 6



ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

HOLIDAY OIL OREM
OREM, UT, USA
DRAWN: MB
CHECKED: N/A
DATE:
PROJECT #:

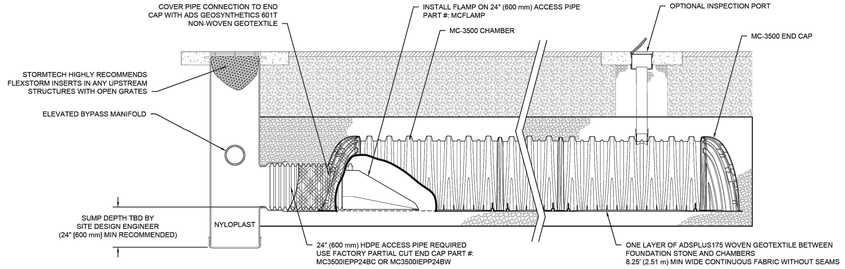
DATE	DRW	CHK	DESCRIPTION

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER WHO IS SOLELY RESPONSIBLE FOR ITS CONTENT. IT IS THE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO REVIEW THE PRODUCT SUPPLIED HEREIN TO ENSURE THAT THE PRODUCT IS SUITED FOR ALL ASPECTS OF THE PROJECT INCLUDING BUT NOT LIMITED TO, SITE SPECIFIC LOADS, REGULATIONS, AND PROJECT REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT SUPPLIED HEREIN IS SUITABLE FOR THE INTENDED USE AND THAT ALL ASPECTS OF THE PROJECT HAVE BEEN ADDRESSED. ADS ASSUMES NO RESPONSIBILITY FOR THE USE OF THIS DRAWING FOR PURPOSES OTHER THAN THOSE FOR WHICH IT WAS PREPARED.

StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

SHEET
3 OF 6



MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

HOLIDAY OIL OREM
OREM, UT, USA
DRAWN: MB
CHECKED: N/A
DATE:
PROJECT #:

DATE	DRW	CHK	DESCRIPTION

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER WHO IS SOLELY RESPONSIBLE FOR ITS CONTENT. IT IS THE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO REVIEW THE PRODUCT SUPPLIED HEREIN TO ENSURE THAT THE PRODUCT IS SUITED FOR ALL ASPECTS OF THE PROJECT INCLUDING BUT NOT LIMITED TO, SITE SPECIFIC LOADS, REGULATIONS, AND PROJECT REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT SUPPLIED HEREIN IS SUITABLE FOR THE INTENDED USE AND THAT ALL ASPECTS OF THE PROJECT HAVE BEEN ADDRESSED. ADS ASSUMES NO RESPONSIBILITY FOR THE USE OF THIS DRAWING FOR PURPOSES OTHER THAN THOSE FOR WHICH IT WAS PREPARED.

StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

SHEET
4 OF 6

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

LICENSED PROFESSIONAL ENGINEER
No. 9125581-2202
MICHAEL S. BUDGE
STATE OF UTAH
8/21/2023

DETAILS

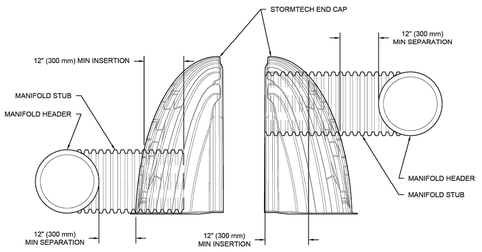
PROJECT NUMBER	PRINT DATE
12089	2023-08-21
PROJECT MANAGER	DESIGNED BY
CD	MB

C602

OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

MC-SERIES END CAP INSERTION DETAIL

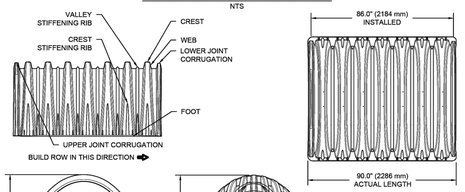
NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

MC-3500 TECHNICAL SPECIFICATION

NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

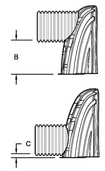
SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

HOLIDAY OIL OREM
OREM, UT, USA
DRAWN: MB
DATE: PROJECT #: CHECKED: N/A

DATE	DRW	CHK	DESCRIPTION

StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM

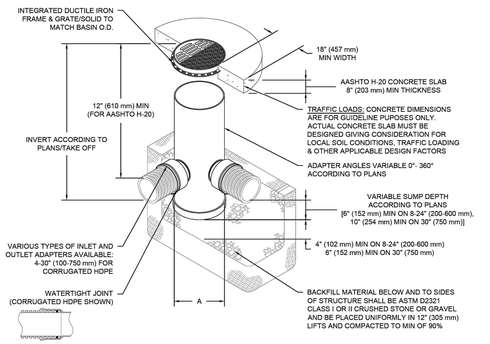
ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OF RECORD. IT IS THE SITE DESIGN ENGINEER'S RESPONSIBILITY TO REVIEW AND CONFIRM THAT THE SYSTEM DESIGNED BY OTHERS MEETS THE REQUIREMENTS FOR THE SPECIFIC APPLICATION. ADS ASSUMES NO RESPONSIBILITY FOR SITE DESIGN ELEMENTS NOT DESIGNED BY ADS. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER OF RECORD TO ENSURE THAT THE PROJECT IS DESIGNED AND CONSTRUCTED AS PER THE ULTIMATE REQUIREMENTS.

SHEET 5 OF 6

NYLOPLAST DRAIN BASIN

NTS



NOTES

1. 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
2. 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
5. FOR COMPLETE DESIGN AND PRODUCT INFORMATION: **WWW.NYLOPLAST-US.COM**
6. TO ORDER CALL: **800-821-6710**

A	PART #	GRATE/SOLID COVER OPTIONS		
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10" (250 mm)	2810AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12" (300 mm)	2812AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
15" (375 mm)	2815AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18" (450 mm)	2818AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
24" (600 mm)	2824AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
30" (750 mm)	2830AG	PEDESTRIAN AASHTO H-20	STANDARD AASHTO H-20	SOLID AASHTO H-20

Project: Holiday Oil Orem

ADS StormTech

Chamber Model -	MC-3500	
Units -	Imperial	
Number of Chambers -	52	
Number of End Caps -	6	
Voids in the stone (porosity) -	40	%
Base of Stone Elevation -	4520.50	ft
Amount of Stone Above Chambers -	9	in
Amount of Stone Below Chambers -	9	in
Area of system -	1955	sf Min. Area - 1716 sf min. area

StormTech MC-3500 Cumulative Storage Volumes

Height of System (inches)	Incremental Single Chamber (cubic feet)	Incremental Single End Cap (cubic feet)	Incremental Chambers (cubic feet)	Incremental End Cap (cubic feet)	Incremental Stone (cubic feet)	Incremental Ch, EC and Stone (cubic feet)	Cumulative System (cubic feet)	Elevation (feet)
66	0.00	0.00	0.00	0.00	65.15	65.15	6402.01	4525.50
65	0.00	0.00	0.00	0.00	65.15	65.15	6417.72	4525.42
64	0.00	0.00	0.00	0.00	65.15	65.15	6352.57	4525.33
63	0.00	0.00	0.00	0.00	65.15	65.15	6287.41	4525.25
62	0.00	0.00	0.00	0.00	65.15	65.15	6222.26	4525.17
61	0.00	0.00	0.00	0.00	65.15	65.15	6157.11	4525.08
60	0.00	0.00	0.00	0.00	65.15	65.15	6091.95	4525.00
59	0.00	0.00	0.00	0.00	65.15	65.15	6026.80	4524.92
58	0.00	0.00	0.00	0.00	65.15	65.15	5961.65	4524.83
57	0.00	0.00	0.00	0.00	65.15	65.15	5896.50	4524.75
56	0.00	0.00	0.00	0.00	65.15	65.15	5831.34	4524.67
55	0.00	0.00	0.00	0.00	65.15	65.15	5766.19	4524.58
54	0.06	0.00	1.86	0.00	64.41	66.27	5701.04	4524.50
53	0.19	0.02	6.21	0.18	62.59	68.99	5634.77	4524.42
52	0.29	0.04	9.41	0.30	61.27	70.98	5565.77	4524.33
51	0.40	0.05	12.92	0.41	59.82	73.15	5494.80	4524.25
50	0.69	0.07	21.99	0.54	56.14	78.67	5421.65	4524.17
49	1.03	0.09	32.81	0.71	51.71	85.32	5342.98	4524.08
48	1.25	0.11	39.98	0.86	48.82	89.66	5257.66	4524.00
47	1.42	0.13	45.51	1.01	46.54	93.07	5168.00	4523.92
46	1.57	0.14	50.34	1.16	44.55	96.05	5074.93	4523.83
45	1.71	0.16	54.63	1.30	42.78	98.71	4978.88	4523.75
44	1.83	0.18	58.51	1.45	41.17	101.13	4880.17	4523.67
43	1.94	0.20	62.01	1.60	39.71	103.32	4779.04	4523.58
42	2.04	0.22	65.31	1.73	38.39	105.43	4675.72	4523.50
41	2.13	0.23	68.21	1.85	37.20	107.26	4570.29	4523.42
40	2.22	0.25	71.18	2.00	35.98	109.06	4463.04	4523.33
39	2.31	0.27	73.82	2.12	34.78	110.72	4354.00	4523.25
38	2.38	0.28	76.31	2.24	33.73	112.28	4243.28	4523.17
37	2.46	0.29	78.69	2.35	32.74	113.78	4131.00	4523.08
36	2.53	0.31	80.90	2.46	31.81	115.17	4017.22	4523.00
35	2.59	0.32	83.00	2.57	30.93	116.49	3902.05	4522.92
34	2.66	0.33	84.99	2.68	30.09	117.75	3785.56	4522.83
33	2.72	0.35	86.88	2.78	29.29	118.95	3667.80	4522.75
32	2.77	0.36	88.68	2.88	28.53	120.09	3548.85	4522.67
31	2.82	0.37	90.39	2.98	27.81	121.17	3428.76	4522.58
30	2.88	0.38	92.01	3.07	27.12	122.21	3307.59	4522.50
29	2.92	0.40	93.57	3.17	26.46	123.20	3185.38	4522.42
28	2.97	0.41	95.07	3.26	25.83	124.16	3062.18	4522.33
27	3.01	0.42	96.46	3.35	25.23	125.03	2938.02	4522.25
26	3.05	0.43	97.70	3.44	24.70	125.84	2813.00	4522.17
25	3.09	0.44	99.02	3.52	24.16	126.69	2687.16	4522.08
24	3.13	0.45	100.18	3.61	23.64	127.42	2560.54	4522.00
23	3.17	0.46	101.30	3.69	23.16	128.15	2433.11	4521.92
22	3.20	0.47	102.38	3.77	22.69	128.84	2304.97	4521.83
21	3.23	0.48	103.40	3.84	22.26	129.49	2176.13	4521.75
20	3.26	0.49	104.37	3.91	21.84	130.12	2046.63	4521.67
19	3.29	0.50	105.29	3.98	21.44	130.72	1916.51	4521.58
18	3.32	0.51	106.17	4.05	21.06	131.29	1785.80	4521.50
17	3.34	0.51	107.01	4.12	20.70	131.83	1654.51	4521.42
16	3.37	0.52	107.80	4.18	20.36	132.34	1522.68	4521.33
15	3.39	0.53	108.56	4.24	20.03	132.83	1390.34	4521.25
14	3.41	0.54	109.27	4.29	19.73	133.29	1257.51	4521.17
13	3.44	0.54	109.94	4.35	19.43	133.72	1124.21	4521.08
12	3.46	0.55	110.55	4.40	19.14	134.16	990.47	4521.00
11	3.48	0.56	111.32	4.44	18.85	134.61	856.29	4520.92
10	3.51	0.59	112.16	4.76	18.38	135.31	721.68	4520.83
9	0.00	0.00	0.00	0.00	65.15	65.15	586.38	4520.75
8	0.00	0.00	0.00	0.00	65.15	65.15	521.22	4520.67
7	0.00	0.00	0.00	0.00	65.15	65.15	456.07	4520.58
6	0.00	0.00	0.00	0.00	65.15	65.15	390.92	4520.50
5	0.00	0.00	0.00	0.00	65.15	65.15	325.77	4520.42
4	0.00	0.00	0.00	0.00	65.15	65.15	260.61	4520.33
3	0.00	0.00	0.00	0.00	65.15	65.15	195.46	4520.25
2	0.00	0.00	0.00	0.00	65.15	65.15	130.31	4520.17
1	0.00	0.00	0.00	0.00	65.15	65.15	65.15	4520.08

HOLIDAY OIL OREM
OREM, UT, USA
DRAWN: MB
DATE: PROJECT #: CHECKED: N/A

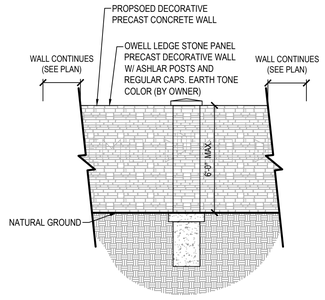
DATE	DRW	CHK	DESCRIPTION

Nyloplast®
770-932-2443 | WWW.NYLOPLAST-US.COM

ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

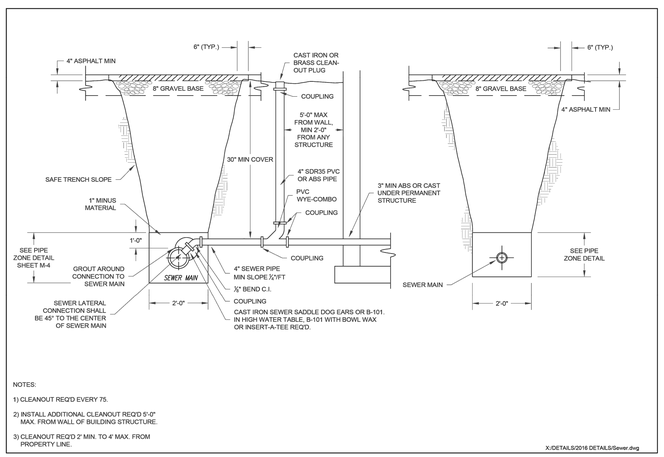
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OF RECORD. IT IS THE SITE DESIGN ENGINEER'S RESPONSIBILITY TO REVIEW AND CONFIRM THAT THE SYSTEM DESIGNED BY OTHERS MEETS THE REQUIREMENTS FOR THE SPECIFIC APPLICATION. ADS ASSUMES NO RESPONSIBILITY FOR SITE DESIGN ELEMENTS NOT DESIGNED BY ADS. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER OF RECORD TO ENSURE THAT THE PROJECT IS DESIGNED AND CONSTRUCTED AS PER THE ULTIMATE REQUIREMENTS.

SHEET 6 OF 6



1 PRE-CAST FENCE

SCALE: NONE



NOTES:

1) CLEANOUT REQ'D EVERY 75.

2) INSTALL ADDITIONAL CLEANOUT REQ'D 5'-0" MAX. FROM WALL OF BUILDING STRUCTURE.

3) CLEANOUT REQ'D 2' MIN. TO 4' MAX. FROM PROPERTY LINE.

X:/DETAILS/2016 DETAILS/Sewer.dwg

OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	SEWER LATERAL CONNECTION	REV. 1/2016 SS-3

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

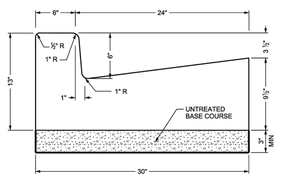
OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
8/21/2023
No. 9125581-2202
MICHAEL S. BUDGE
STATE OF UTAH

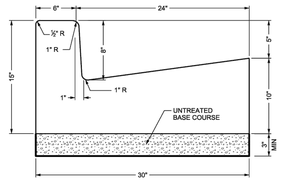
DETAILS

PROJECT NUMBER 12089
PRINT DATE 2023-08-21
PROJECT MANAGER CD
DESIGNED BY MB

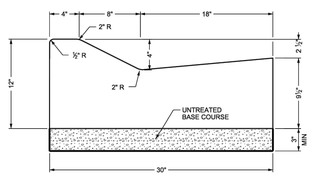
C603



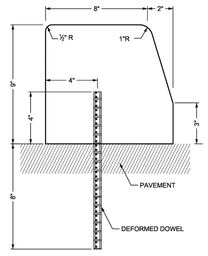
TYPE B1 CURB & GUTTER
AREA = 1.929 SQ FT



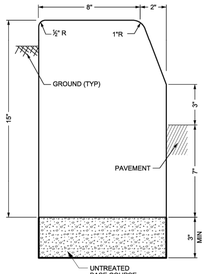
TYPE B2 CURB & GUTTER
AREA = 2.059 SQ FT



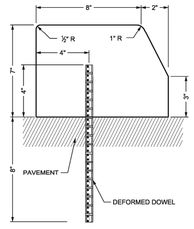
TYPE M1 CURB & GUTTER
AREA = 1.982 SQ FT



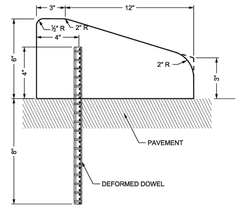
TYPE B3 CURB
AREA = 0.580 SQ FT



TYPE B4 CURB
AREA = 1.033 SQ FT



TYPE B5 CURB
RAISED MEDIAN
AREA = 0.490 SQ FT



TYPE M2 CURB
AREA = 0.484 SQ FT

NOTES:

1. USE ⅜ INCH DEFORMED DOWELS ON 5 FT MAXIMUM CENTERS.
2. PRECAST CURBS:
   A. MINIMUM OF 10 FT IN LENGTH.
   B. DOWELS AT A MINIMUM OF 3 PER 10 FT LENGTH.
   C. INCLUDE ADEQUATE REINFORCING STEEL TO WITHSTAND HANDLING STRESSES.
3. MEASURE CURB HEIGHT VERTICALLY FROM THE FLOW LINE OF THE GUTTER TO TOP BACK OF CURB.
4. REFER TO STD DWG GW 2B FOR CURB AND GUTTER AT ADA ACCESSES.

REVISIONS

NO.	DATE	BY	DESCRIPTION
1	8/1/23	CDW	LEVELED BOTTOM OF CURB AND GUTTER SECTIONS
2	8/21/23	MB	REMOVED DURBIN DRAI'N WATER

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

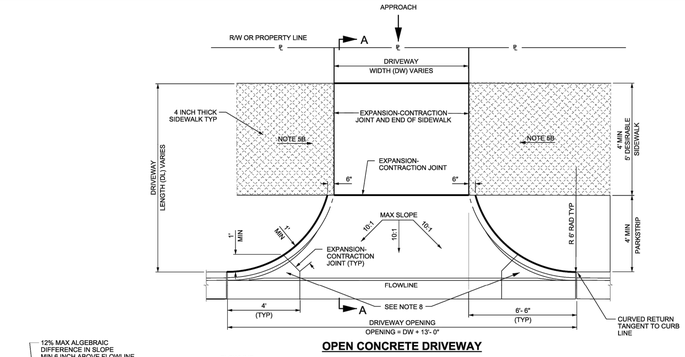
RECOMMENDED FOR APPROVAL — DATE
STANDARDS & STANDARD COMMITTEE
APPROVED — DATE
DEPUTY DIRECTOR

2023 Standard Drawing

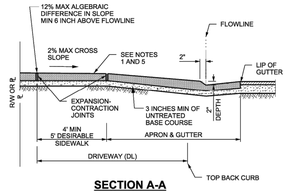
CONCRETE CURB AND GUTTER TYPES

STANDARD DRAWING TITLE

STD. DWG. NO.
GW 2A



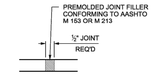
OPEN CONCRETE DRIVEWAY



SECTION A-A

DRIVEWAY FLARE AREA CHART	
OPEN DRIVEWAY	
PARKSTRIP WIDTH	FLARE AREA
4 FT	15.00 ft²
5 FT	15.40 ft²
6 FT	15.45 ft²

NOTES:
1. 6" FT RADIUS TYPICAL
2. 8" QUANTITY FOR BOTH SIDES OF DRIVEWAY



EXPANSION-CONTRACTION JOINT DETAIL

NOTES:

1. SIDEWALK CROSS SLOPE DIMENSIONS SHOWN ARE NOT SUBJECT TO CONVENTIONAL INDUSTRY TOLERANCES. CONSTRUCT SIDEWALKS AND RAMPS SUCH THAT THE MAXIMUM OR MINIMUM VALUES ARE NOT EXCEEDED. WORK THAT EXCEEDS THOSE VALUES WILL NOT BE ACCEPTED.
2. MAXIMUM DISTANCE BETWEEN CONTROL JOINTS 10 FT LATERALLY AND LONGITUDINALLY SPACED EQUALLY.
3. PROVIDE EXPANSION-CONTRACTION JOINTS IN CONCRETE SIDEWALK AT 30 FT INTERVALS AND WHERE CONCRETE SIDEWALK BUTTS AGAINST DRIVEWAY.
4. SIDEWALK INSIDE THE DRIVEWAY LIMITS IS PAID AS PART OF DRIVEWAY, NOT AS PART OF SIDEWALK.
5. OPEN CONCRETE DRIVEWAY
   A. RESIDENTIAL = 6 INCH THICK, COMMERCIAL = 7 INCH THICK. USE THESE THICKNESSES FOR APRON, SIDEWALK WITHIN DRIVEWAY AREA, APPROACH AND RADII.
   B. DEPRESS THE LONGITUDINAL SLOPE OF THE SIDEWALK AT A MAXIMUM RATE OF 5 PERCENT TO MEET THE APRON - APPROACH ELEVATION IF THE GRADES SHOWN ON THE SLOPE DETAIL CANNOT BE MET. THE TOP BACK OF SIDEWALK IS TO BE A MINIMUM 6 INCHES ABOVE THE FLOWLINE OF CURB AND GUTTER AT ALL TIMES.
6. USE CLASS AA(AE) CONCRETE FOR SIDEWALK AND DRIVEWAYS.
7. USE UNTREATED BASE COURSE UNDER ALL SIDEWALKS AND DRIVEWAYS.
8. QUANTITIES FOR DRIVEWAYS INCLUDE FLARES TO TOP BACK OF CURB. CURB AND GUTTER PAID SEPARATELY THROUGH DRIVEWAY LOCATIONS.
9. REMOVE EXISTING SIDEWALK AND REPLACE BACK TO NEAREST EXPANSION-CONTRACTION JOINT.
10. APPROACH IS FROM EXISTING DRIVEWAY TIE-IN TO TOP-BACK-CURB AND IS PART OF DRIVEWAY QUANTITIES.
11. DRIVEWAY DIMENSIONS (MAX.& MIN.) ARE LOCATED IN UTAH ADMINISTRATIVE RULE R930-6 ACCESS MANAGEMENT.

REVISIONS

NO.	DATE	BY	DESCRIPTION
1	8/1/23	CDW	CHANGED DURBIN DRAI'N WATER TO CONSTRUCTION NOTES
2	8/21/23	MB	REVISED

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

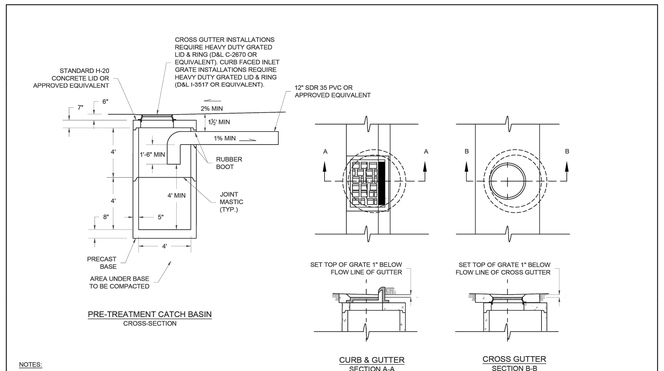
RECOMMENDED FOR APPROVAL — DATE
STANDARDS & STANDARD COMMITTEE
APPROVED — DATE
DEPUTY DIRECTOR

2023 Standard Drawing

CONCRETE DRIVEWAYS AND SIDEWALKS

STANDARD DRAWING TITLE

STD. DWG. NO.
GW 3B



PRE-TREATMENT CATCH BASIN
CROSS-SECTION

CURB & GUTTER
SECTION A-A

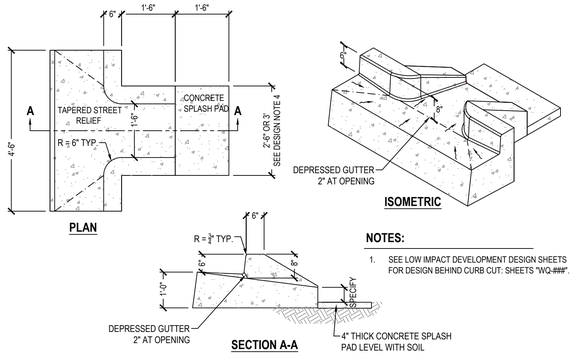
CROSS GUTTER
SECTION B-B

NOTES:

1) MANHOLE BASE AND ALL SECTIONS SHALL BE PRECAST TO CONFORM TO ASTM C478.
2) THE PRE-TREATMENT MANHOLE SHALL BE CONSTRUCTED TO ENSURE WATER TIGHTNESS.
3) ANY APPROVED EQUIVALENTS REQUIRE CITY ENGINEER'S WRITTEN APPROVAL.
4) SNOUTS ARE ALLOWED. INSTALL AS PER MANUFACTURERS RECOMMENDATIONS.

X:/DETAILS/2016 DETAILS/Storm.dwg

OREM	CONSTRUCTION STANDARDS AND SPECIFICATIONS	CITY OF OREM	PRE-TREATMENT CATCH BASIN	REV. 1/2016 SD-2



NOTES:

1. SEE LOW IMPACT DEVELOPMENT DESIGN SHEETS FOR DESIGN BEHIND CURB CUT: SHEETS "WQ-###".

1 CURB CUT TYPICAL DETAIL

SCALE: NONE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

OREM
HOLIDAY OIL
868 WEST 2000 SOUTH
OREM, UTAH

LICENSED PROFESSIONAL ENGINEER
8/21/2023
No. 9125581-2202
MICHAEL S. BUDGE
STATE OF UTAH

UDOT DETAILS

PROJECT NUMBER 12089
PRINT DATE 2023-08-21
PROJECT MANAGER CD
DESIGNED BY MB

C604

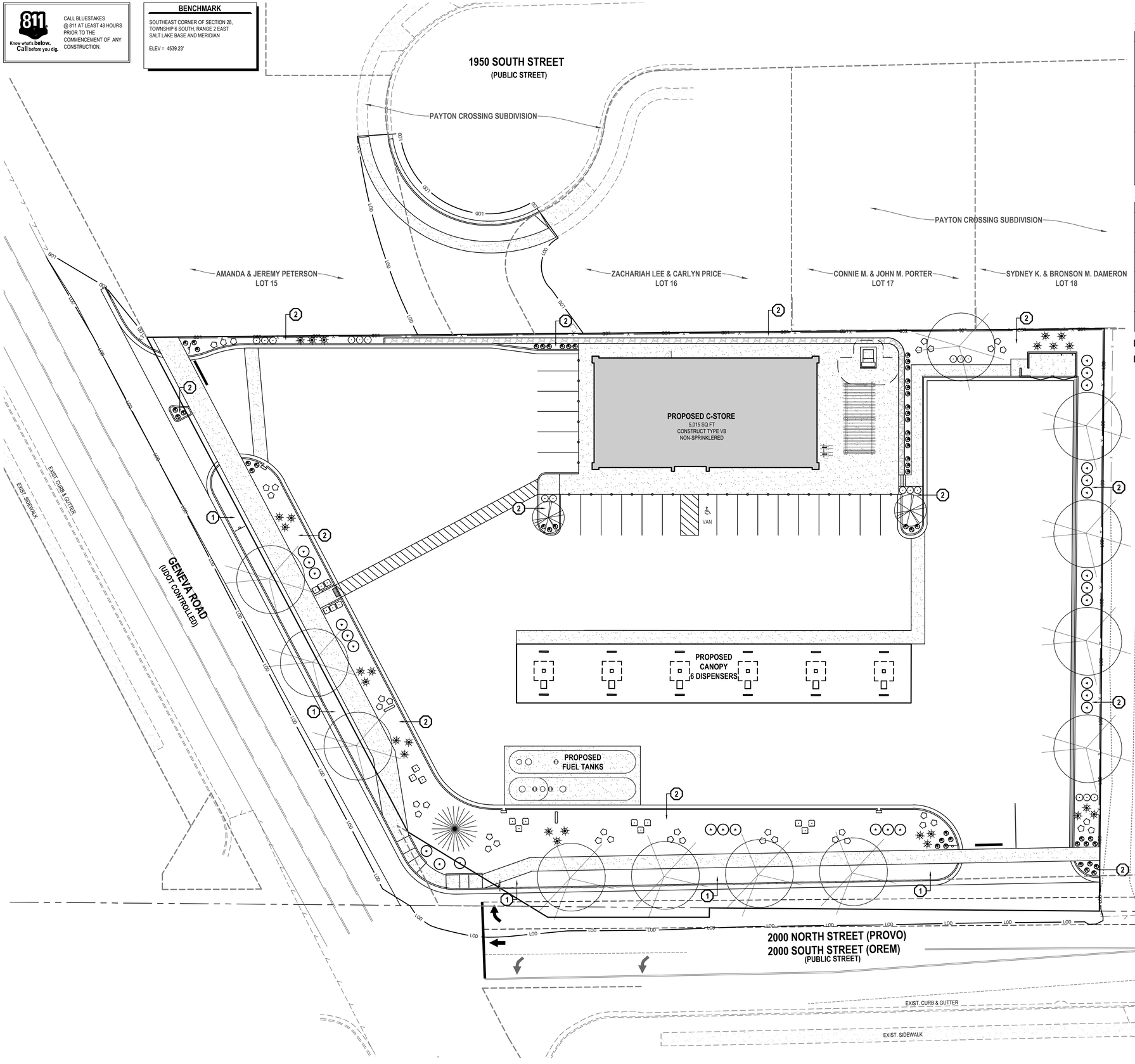
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'



Landscape

Trees

Qty	Symbol	Common Name	Botanical Name	Plant Size
1		Norway Spruce	Picea abies	6' Min.
2		Columnar Norway Maple	Acer platanoides 'Columnare'	2" Cal.
12		Eastern Redbud	Cercis canadensis	2" Cal.

Shrubs

Qty	Symbol	Common Name	Botanical Name	Plant Size
17		Barberry, 'Crimson Pygmy'	Berberis thunbergii atropurpurea nana	5 Gallon
18		Boxwood, Littleleaf	Buxus microphylla	5 Gallon
39		Cinquefoil	Potentilla fruticosa 'Abbotswood'	5 Gallon
27		Winged Euonymus	Euonymus alatus 'Grove's Compactus'	5 Gallon
26		Pine, Mugo	Pinus mugo 'Compacta'	5 Gallon
51		Fountain Grass	Pennisetum setaceum	1 Gallon

1. Install sod
2. In all planter bed areas, install 4" deep 2"-3" dia. Nephi Rock & Gravel color 'Southtown' or equiv. decorative rock over weed barrier, typ.

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

NORTH

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

OREM
HOLIDAY OIL
2000 SOUTH GENEVA ROAD
OREM, UTAH

LANDSCAPE PLAN

PROJECT NUMBER 12089
PRINT DATE 2023-08-17
PROJECT MANAGER CD
DESIGNED BY MB

L100

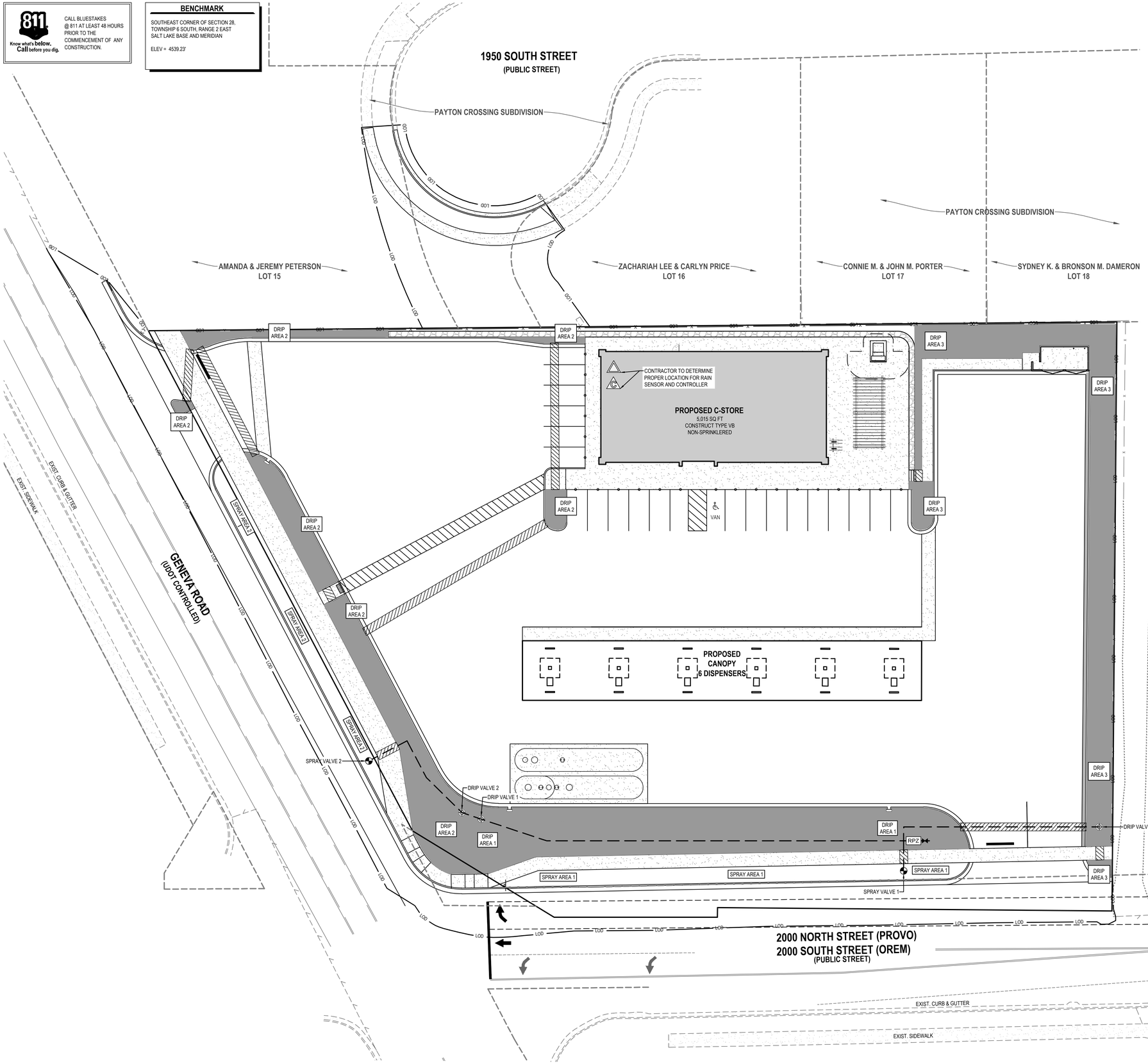
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'



Irrigation

Qty	Symbol	Description
2		Rain Bird 100-PGA Globe
3		Rain Bird XCZ-100 COM
		Pipe Sleeve - 2x Pipe Diameter
		Mainline - 1" Schedule 40 PVC
1	M	1 inch meter
1		Rain Bird RSD-BEx Rain Sensor
1	C	Rain Bird ESP-LX Plus Controller
1		Mueller 1" Brass Stop and Waste
1	RPZ	RPZ Backflow Prevention Device
	DRIP AREA	Rain Bird XBS Black Stripe Tubing with Rain Bird XB-10 Emitters*

*Install 2 emitters per shrub, 4 emitters per tree

** NOTES **

THIS IRRIGATION SYSTEM WAS DESIGNED AT AND 60 (WORKING) PSI AT THE POINT OF CONNECTION. IF THESE MINIMUM REQUIREMENTS CAN NOT BE MET, PLEASE CONTACT THE DESIGNER. **THIS PLAN WAS DRAWN FOR GRAPHIC CLARITY ONLY.** PLEASE PLACE ALL MAINLINE AND LATERAL LINES IN ADJACENT LANDSCAPE AREAS. SOME FIELD MODIFICATIONS MAY BE NEEDED TO AVOID ON SITE OBSTRUCTIONS.

COORDINATE IRRIGATION CONTROLLER WITH OWNER'S FACILITY OPERATION DEPARTMENT.

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

HORZ: 1 inch = 20 ft.

NORTH

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

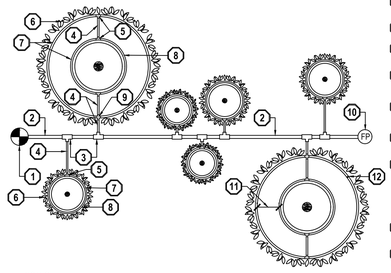
Holiday

OREM
HOLIDAY OIL
2000 SOUTH GENEVA ROAD
OREM, UTAH

IRRIGATION PLAN

PROJECT NUMBER 12089
PRINT DATE 2023-08-17
PROJECT MANAGER CD
DESIGNED BY MB

L200

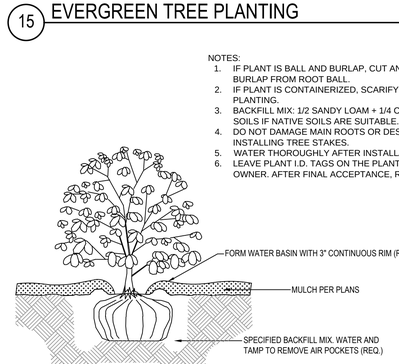


1. RAIN BIRD CONTROL ZONE KIT (SIZED TO ACCOMMODATE LATERAL FLOW DEMAND)
2. PVC DRIP MANIFOLD PIPE
3. PVC SCH 40 TEE OR EL (TYPICAL)
4. 1/2" POLYETHYLENE TUBING: RAIN BIRD XF SERIES BLANK TUBING (TYPICAL)
5. BARB X BARB INSERT TEE: RAIN BIRD XFF-TEE (TYPICAL)
6. PROJECTED CANOPY LINE OF TREE OR SHRUB (TYPICAL)
7. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFCV SERIES PLACE AS SHOWN (LENGTH AS REQUIRED, TYPICAL)
8. ROOT BALL (TYPICAL)
9. BARB X BARB INSERT CROSS: RAIN BIRD XFD-CROSS (TYPICAL)
10. DRIPLINE FLUSH POINT (SEE RAIN BIRD DETAIL: "XFCV DRIPLINE FLUSH POINT WITH BALL VALVE")
11. SPACING PER SPECIFICATION
12. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (QUANTITY AS REQUIRED, SEE NOTES 2-3)

NOTES:
1. INSTALL MULTIPLE RINGS AS REQUIRED TO PROVIDE IRRIGATION COVERAGE FROM ROOT BALL TO PROJECTED TREE CANOPY. REFER TO RAIN BIRD DESIGN GUIDELINES AND SPECIFICATIONS FOR RECOMMENDED SPACING BETWEEN RINGS.
2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

13 ON-SURFACE DRIPLINE TREE/SHRUB DETAIL

SCALE: NONE

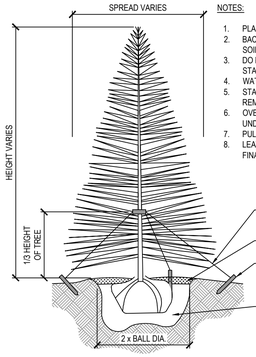


NOTES:
1. PLANT SO THAT THE TOP OF THE ROOT BALL IS EVEN WITH THE FINISHED GRADE.
2. BACKFILL MIX: 1/2 SANDY LOAM TOPSOIL + 1/4 ORGANIC MULCH, AND 1/4 NATIVE SOILS.
3. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKES.
4. WATER THOROUGHLY AFTER INSTALLATION.
5. STAKING IS REQUIRED: LOOSEN TREE STAKES AFTER FIRST GROWING SEASON AND REMOVE TREE STAKES AFTER SECOND GROWING SEASON.
6. OVER EXCAVATE PITS TO 3' DEPTH AND INSTALL ADDITIONAL COMPACTED TOPSOIL UNDER TREE.

CINCH TIES 1" DIA.
2" DIA. ROUND FIR POSTS; 2 PER TREE
MAINTAIN TREE BASE AT OR SLIGHTLY HIGHER THAN EXISTING GRADE, TO ALLOW FOR SETTLEMENT
MULCH PER PLAN, CREATE WATER BASIN AROUND TREE
FINISHED GRADE
CUT AND REMOVE ALL BURLAP AND WIRE FROM ROOTS
ROOT BALL
BACKFILL MIX AS SPECIFIED
BELOW SCARIFY PIT BOTTOM (MIN. 6")
2 x BALL DIA.

14 DECIDUOUS TREE PLANTING

SCALE: NONE



NOTES:
1. PLANT SO THAT THE TOP OF THE ROOT BALL IS EVEN WITH THE FINISHED GRADE.
2. BACKFILL MIX: 1/2 SANDY LOAM TOPSOIL + 1/4 ORGANIC MULCH, AND 1/4 NATIVE SOILS.
3. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKES.
4. WATER THOROUGHLY AFTER INSTALLATION.
5. STAKING IS REQUIRED: LOOSEN TREE STAKES AFTER FIRST GROWING SEASON AND REMOVE TREE STAKES AFTER SECOND GROWING SEASON.
6. OVER EXCAVATE PITS TO 3' DEPTH AND INSTALL ADDITIONAL COMPACTED TOPSOIL UNDER TREE.
7. PULL COBBLE ROCK A MINIMUM OF 6" AWAY FROM TRUNK OF TREE.
8. LEAVE PLANT I.D. TAGS ON THE TREES UNTIL ACCEPTANCE BY THE OWNER. AFTER FINAL ACCEPTANCE, REMOVE I.D. TAGS.

SPREAD VARIES
HEIGHT VARIES
1/3 HEIGHT OF TREE
CINCH TIES 1" DIA.
MULCH PER PLAN, CREATE WATER BASIN AROUND TREE
32" x 4" x 24" PRESS TREATED STAKES - TOP OF STAKE 6" ABOVE GROUND
SPECIFIED BACKFILL, MIX WATER AND TAMP TO REMOVE AIR POCKETS
2 x BALL DIA.

15 EVERGREEN TREE PLANTING

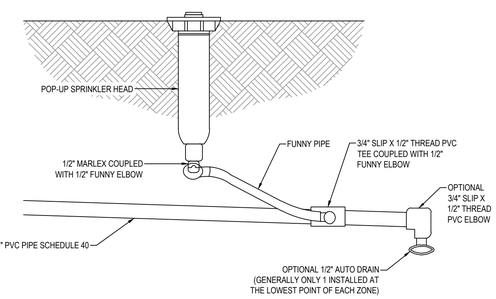
SCALE: NONE

NOTES:
1. IF PLANT IS BALL AND BURLAP, CUT AND REMOVE TOP 1/3 OF BURLAP FROM ROOT BALL.
2. IF PLANT IS CONTAINERIZED, SCARIFY ROOT BALL PRIOR TO PLANTING.
3. BACKFILL MIX: 1/2 SANDY LOAM + 1/4 ORGANIC MULCH + 1/4 NATIVE SOILS IF NATIVE SOILS ARE SUITABLE.
4. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKES.
5. WATER THOROUGHLY AFTER INSTALLATION.
6. LEAVE PLANT I.D. TAGS ON THE PLANTS UNTIL ACCEPTANCE BY THE OWNER. AFTER FINAL ACCEPTANCE, REMOVE I.D. TAGS.

FORM WATER BASIN WITH 3" CONTINUOUS RIM (REQ.)
MULCH PER PLANS
SPECIFIED BACKFILL MIX. WATER AND TAMP TO REMOVE AIR POCKETS (REQ.)
2 x BALL DIA.

16 SHRUB PLANTING

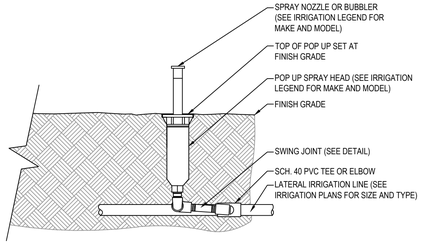
SCALE: NONE



POP-UP SPRINKLER HEAD
1/2" MARLEX COUPLED WITH 1/2" FUNNY ELBOW
FUNNY PIPE
3/4" SLIP X 1/2" THREAD PVC TEE COUPLED WITH 1/2" FUNNY ELBOW
OPTIONAL 3/4" SLIP X 1/2" THREAD PVC ELBOW
3/4" PVC PIPE SCHEDULE 40
OPTIONAL 1/2" AUTO DRAIN (GENERALLY ONLY 1 INSTALLED AT THE LOWEST POINT OF EACH ZONE)

9 SWING JOINT

SCALE: NONE

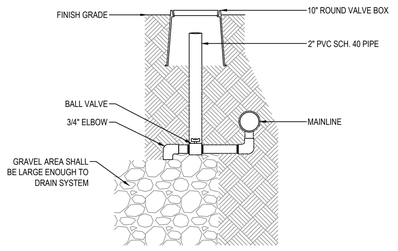


SPRAY NOZZLE OR BUBBLER (SEE IRRIGATION LEGEND FOR MAKE AND MODEL)
TOP OF POP UP SET AT FINISH GRADE
POP UP SPRAY HEAD (SEE IRRIGATION LEGEND FOR MAKE AND MODEL)
FINISH GRADE
SWING JOINT (SEE DETAIL)
SCH. 40 PVC TEE OR ELBOW
LATERAL IRRIGATION LINE (SEE IRRIGATION PLANS FOR SIZE AND TYPE)

NOTES:
1. 6" POP UPS SHALL BE USED IN TURF AREAS.
2. CONTRACTOR SHALL SETTLE SOIL AROUND THE POP UP AFTER INSTALLATION
3. ALL POP UP SPRAY HEADS SHALL HAVE CHECK VALVES
4. ALL SCH. 40 PVC TO SCH. 80 PVC CONNECTIONS SHALL BE MADE USING TEFLON TAPE

10 POP-UP SPRAY SPRINKLER

SCALE: NONE

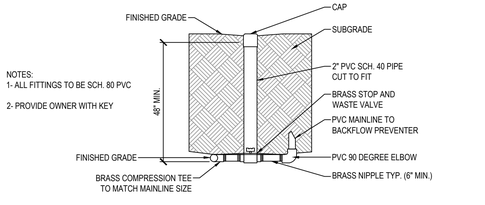


FINISH GRADE
10" ROUND VALVE BOX
2" PVC SCH. 40 PIPE
BALL VALVE
3/4" ELBOW
MAINLINE
GRAVEL AREA SHALL BE LARGE ENOUGH TO DRAIN SYSTEM

NOTES:
1. ALL FITTINGS TO BE SCH. 80 PVC
2. PROVIDE OWNER WITH KEY

11 MANUAL DRAIN VALVE

SCALE: NONE



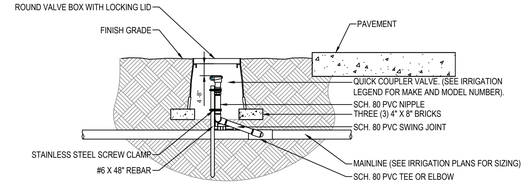
FINISHED GRADE
CAP
SUBGRADE
2" PVC SCH. 40 PIPE CUT TO FIT
BRASS STOP AND WASTE VALVE
PVC MAINLINE TO BACKFLOW PREVENTER
48" MIN.
FINISHED GRADE
PVC 90 DEGREE ELBOW
BRASS COMPRESSION TEE TO MATCH MAINLINE SIZE
BRASS NIPPLE TYP. (6" MIN.)

NOTES:
1- ALL FITTINGS TO BE SCH. 80 PVC

2- PROVIDE OWNER WITH KEY

12 STOP AND WASTE VALVE ASSEMBLY

SCALE: NONE



ROUND VALVE BOX WITH LOCKING LID
FINISH GRADE
PAVEMENT
QUICK COUPLER VALVE. (SEE IRRIGATION LEGEND FOR MAKE AND MODEL NUMBER).
SCH. 80 PVC NIPPLE
THREE (3) 4" X 8" BRICKS
SCH. 80 PVC SWING JOINT
STAINLESS STEEL SCREW CLAMP
#6 X 48" REBAR
MAINLINE (SEE IRRIGATION PLANS FOR SIZING)
SCH. 80 PVC TEE OR ELBOW

NOTES:
1-ALL THREADED CONNECTIONS SHALL BE INSTALLED USING TEFLON TAPE.

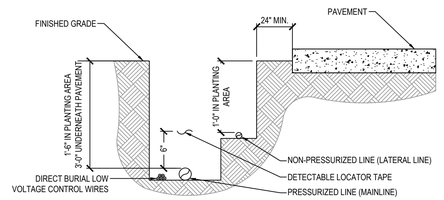
2-VALVE BOX SHALL BE WRAPPED WITH A MINIMUM 3 MIL THICK PLASTIC AND SECURED TO THE VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.

3- ALL QUICK COUPLERS SHALL BE INSTALLED A MINIMUM OF 18" OFF OF THE MAINLINE.

4-VALVE BOXED SHALL BE LOCATED IN PLANTING AREAS.

5 QUICK-COUPLING VALVE

SCALE: NONE



FINISHED GRADE
24" MIN.
PAVEMENT
18" MIN. PLANTING AREA 3'-0" UNDERNEATH PAVEMENT
1'-0" IN PLANTING AREA
6"
DIRECT BURIAL LOW VOLTAGE CONTROL WIRES
NON-PRESSURIZED LINE (LATERAL LINE)
DETECTABLE LOCATOR TAPE
PRESSURIZED LINE (MAINLINE)

NOTES:
1- SEE IRRIGATION LEGEND FOR MAINLINE AND LATERAL LINE PIPE SIZE AND TYPE.

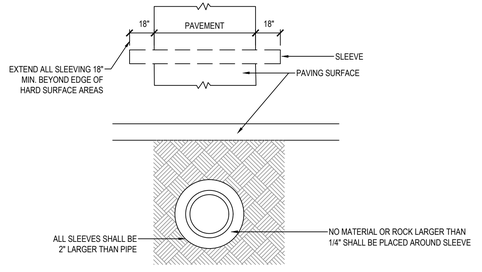
2- DIRECT BURIAL CONTROL WIRES SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT IF REQUIRED.

3- 2-WIRE IRRIGATION WIRE SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT.

4- DETECTABLE LOCATOR TAPE SHALL BE LOCATED SIX INCHES (6") ABOVE THE ENTIRE MAINLINE RUN.

6 IRRIGATION TRENCHING

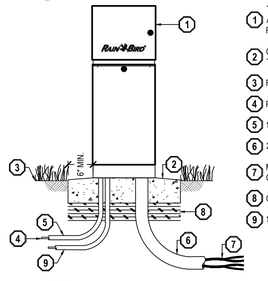
SCALE: NONE



18"
PAVEMENT
18"
SLEEVE
PAVING SURFACE
EXTEND ALL SLEEVING 18" MIN. BEYOND EDGE OF HARD SURFACE AREAS
ALL SLEEVES SHALL BE 2" LARGER THAN PIPE
NO MATERIAL OR ROCK LARGER THAN 1/4" SHALL BE PLACED AROUND SLEEVE

7 PIPE BENEATH PAVEMENT

SCALE: NONE



1. TWO-WIRE CONTROLLER: RAIN BIRD ESP-LXIVM/PRO WITH LXMM METAL CABINET AND LXMMPED METAL PEDESTAL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. CONCRETE PAD 6-INCH MINIMUM THICKNESS, 6-INCHES LARGER ON ALL SIDES THAN PEDESTAL FOOTPRINT.
3. FINISH GRADE
4. POWER SUPPLY WIRE
5. 1-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR POWER SUPPLY
6. 2-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR TWO-WIRE CABLE
7. MAXICABLE TWO-WIRE PATH TO FIELD DEVICES. USE DIFFERENT CABLE JACKET COLOR FOR EACH PATH.
8. COMPACTED SUBGRADE
9. 1-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR GROUND.

6" MIN.

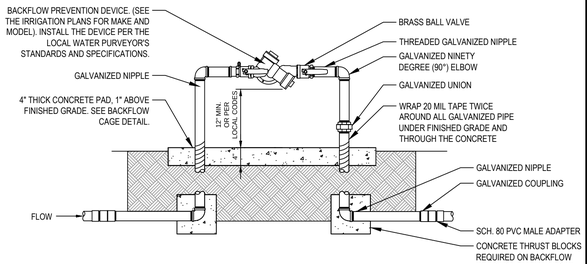
NOTES:
1. ESP-LXIVM CONTROLLER IS AVAILABLE IN TWO MODELS, THE LXIVM WITH 60 STATIONS AND THE LMIVM-PRO WITH 240 STATIONS. REFER TO THE CHART ON THE RIGHT FOR DIFFERENCES BETWEEN THE TWO MODELS.
2. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.

KEY SPECIFICATIONS

MODEL ▼ / FEATURE	MAX PROGRAMS	STATIONS	MAX SIMUL STATIONS	MASTER VALVES	FLOW SENSORS	WEATHER SENSORS
LX-IVM	10	60	8	5	5	4
LX-IVM PRO	40	240	16	10	10	8

8 IRRIGATION CONTROLLER

SCALE: NONE

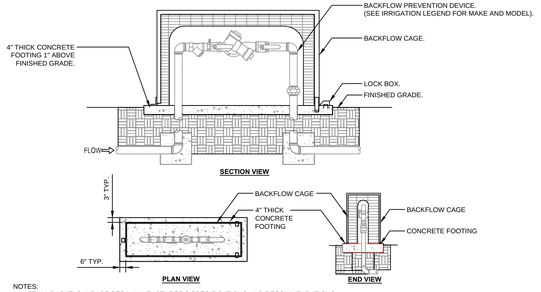


BACKFLOW PREVENTION DEVICE. (SEE THE IRRIGATION PLANS FOR MAKE AND MODEL). INSTALL THE DEVICE PER THE LOCAL WATER PURVEYOR'S STANDARDS AND SPECIFICATIONS.
GALVANIZED NIPPLE
4" THICK CONCRETE PAD, 1" ABOVE FINISHED GRADE. SEE BACKFLOW CAGE DETAIL.
12" MIN. (OR AS PER LOCAL CODES)
BRASS BALL VALVE
THREADED GALVANIZED NIPPLE
GALVANIZED NINETY DEGREE (90°) ELBOW
GALVANIZED UNION
WRAP 20 MIL TAPE TWICE AROUND ALL GALVANIZED PIPE UNDER FINISHED GRADE AND THROUGH THE CONCRETE
GALVANIZED NIPPLE
GALVANIZED COUPLING
FLOW
SCH. 80 PVC MALE ADAPTER
CONCRETE THRUST BLOCKS REQUIRED ON BACKFLOW DEVICES 2.5" AND LARGER

NOTE:
1- ALL ASSEMBLY PARTS (THREADED NIPPLES, FITTINGS, ETC.) SHALL BE GALVANIZED OR BRASS PER LOCAL CODES AND REQUIREMENTS.
2- GALVANIZED NIPPLE SHALL EXTEND 12" PAST THE EDGE OF THE CONCRETE FOOTING.
3- SCH. 80 PVC MALE ADAPTER SHALL BE USED IN CONNECTION FROM GALVANIZED TO THE MAINLINE.
4- BACKFLOW PREVENTION DEVICE SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE LANDSCAPE METER
5- BACKFLOW PREVENTION DEVICE SHALL BE LOCATED IN PLANTING AREA UNLESS APPROVED BY OWNER'S REPRESENTATIVE.
6- SEE DETAIL FOR BACKFLOW CAGE INSTALLATION.
7- ALL BACKFLOW PREVENTION DEVICES SHALL HAVE FREEZE BLANKET INCLUDED UPON INSTALLATION.
8- ALL GALVANIZED CONNECTIONS SHALL TO BE MADE USING PIPE THREAD SEALANT. ALL SCH. 80 PVC TO GALVANIZED CONNECTIONS TO BE MADE USING TEFLON TAPE.

1 BACKFLOW PREVENTER

SCALE: NONE



BACKFLOW PREVENTION DEVICE. (SEE IRRIGATION LEGEND FOR MAKE AND MODEL).
4" THICK CONCRETE FOOTING 1" ABOVE FINISHED GRADE.
BACKFLOW CAGE.
LOCK BOX.
FINISHED GRADE.
FLOW
SECTION VIEW
3" TYP.
6" TYP.
BACKFLOW CAGE
4" THICK CONCRETE FOOTING
BACKFLOW CAGE
CONCRETE FOOTING
PLAN VIEW
END VIEW

NOTES:
1- INSTALL BACKFLOW CAGE PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

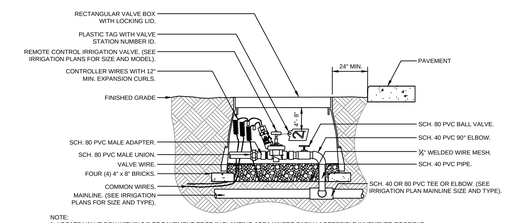
2- SEE BACKFLOW PREVENTION DEVICE DETAIL FOR REFERENCE.

2- LOCK BOX SHALL BE LOCATED ABOVE CONCRETE FOOTING.

3- CONTRACTOR SHALL PROVIDE A LOCK AS APPROVED BY THE OWNER'S REPRESENTATIVE.

2 BACKFLOW CAGE

SCALE: NONE



RECTANGULAR VALVE BOX WITH LOCKING LID.
PLASTIC TAG WITH VALVE STATION NUMBER I.D.
REMOTE CONTROL IRRIGATION VALVE. (SEE IRRIGATION PLANS FOR SIZE AND MODEL).
CONTROLLER WIRES WITH 12" MIN. EXPANSION CURLS.
FINISHED GRADE
24" MIN.
PAVEMENT
SCH. 80 PVC BALL VALVE.
SCH. 40 PVC 90° ELBOW.
SCH. 80 PVC MALE ADAPTER.
SCH. 80 PVC MALE UNION.
VALVE WIRE.
FOUR (4) 4" x 8" BRICKS.
COMMON WIRES.
MAINLINE. (SEE IRRIGATION PLANS FOR SIZE AND TYPE).
SCH. 40 PVC PIPE.
1/4" WELDED WIRE MESH.
SCH. 40 OR 80 PVC TEE OR ELBOW. (SEE IRRIGATION PLAN MAINLINE SIZE AND TYPE).

NOTE:
1- LOCATE VALVE BOX WITHIN 24" OF PAVEMENT EDGE IN PLANTING AREA WHERE EASILY ACCESSIBLE WHENEVER POSSIBLE.

2- COMMON WIRE AND CONTROLLER WIRE SHALL BE DIRECT BURIAL 14 AWG OR LARGER. COLOR: COMMON (WHITE), CONTROLLER WIRE FOR TURF (BLUE), AND CONTROLLER WIRE FOR SHRUBS (RED). (SEE SPECIFICATIONS FOR 2-WIRE CONTROLLERS).

3- ALL WIRE RUNS SHALL BE CONTINUOUS WITHOUT ANY SPLICES UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE. SEE SPLICE BOX DETAIL. WIRE CONNECTIONS SHALL BE MADE USING DBRY-6 CONNECTORS OR APPROVED EQUAL.

4-VALVE BOX SHALL BE WRAPPED WITH MIN. 3 MIL THICK PLASTIC AND SECURE IT USING DUCT TAPE OR ELECTRICAL TAPE.

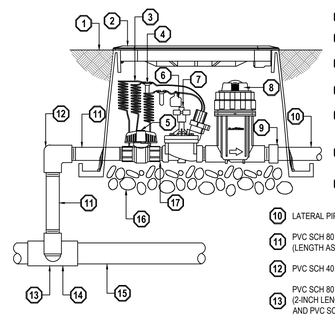
5- MAINLINES 4" OR LARGER SHALL USE SADDLES AT THE CONNECTIONS POINTS TO THE IRRIGATION VALVE. (SEE SPECIFICATIONS FOR IRRIGATION SADDLES).

6- ALL SCH. 80 PVC TO SCH. 40 PVC THREADED CONNECTIONS SHALL BE MADE USING TEFLON TAPE.

7- VALVE BOXES SHALL BE LOCATED IN PLANTING AREAS.

3 CONTROL VALVE

SCALE: NONE



1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-STD
3. 30-INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
5. 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT)
6. ID TAG
7. REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUDED IN XCZ-PRB-100-COM KIT)
8. PRESSURE REGULATING QUICK CHECK BASKET FILTER: RAIN BIRD PRB-QKCHK-100 (INCLUDED IN XCZ-PRB-100-COM KIT)
9. PVC SCH 40 FEMALE ADAPTOR
10. LATERAL PIPE
11. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
12. PVC SCH 40 ELL
13. PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
14. PVC SCH 40 TEE OR ELL
15. MAINLINE PIPE
16. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ-PRB-100-COM KIT)

4 DRIP CONTROL ZONE KIT

SCALE: NONE

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

OREM
HOLIDAY OIL
2000 SOUTH GENEVA ROAD
OREM, UTAH

LANDSCAPE AND IRRIGATION DETAILS

PROJECT NUMBER 12089
PRINT DATE 2023-08-17
PROJECT MANAGER CD
DESIGNED BY MB

L300

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTHEAST CORNER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 2 EAST SALT LAKE BASE AND MERIDIAN

ELEV = 4539.23'

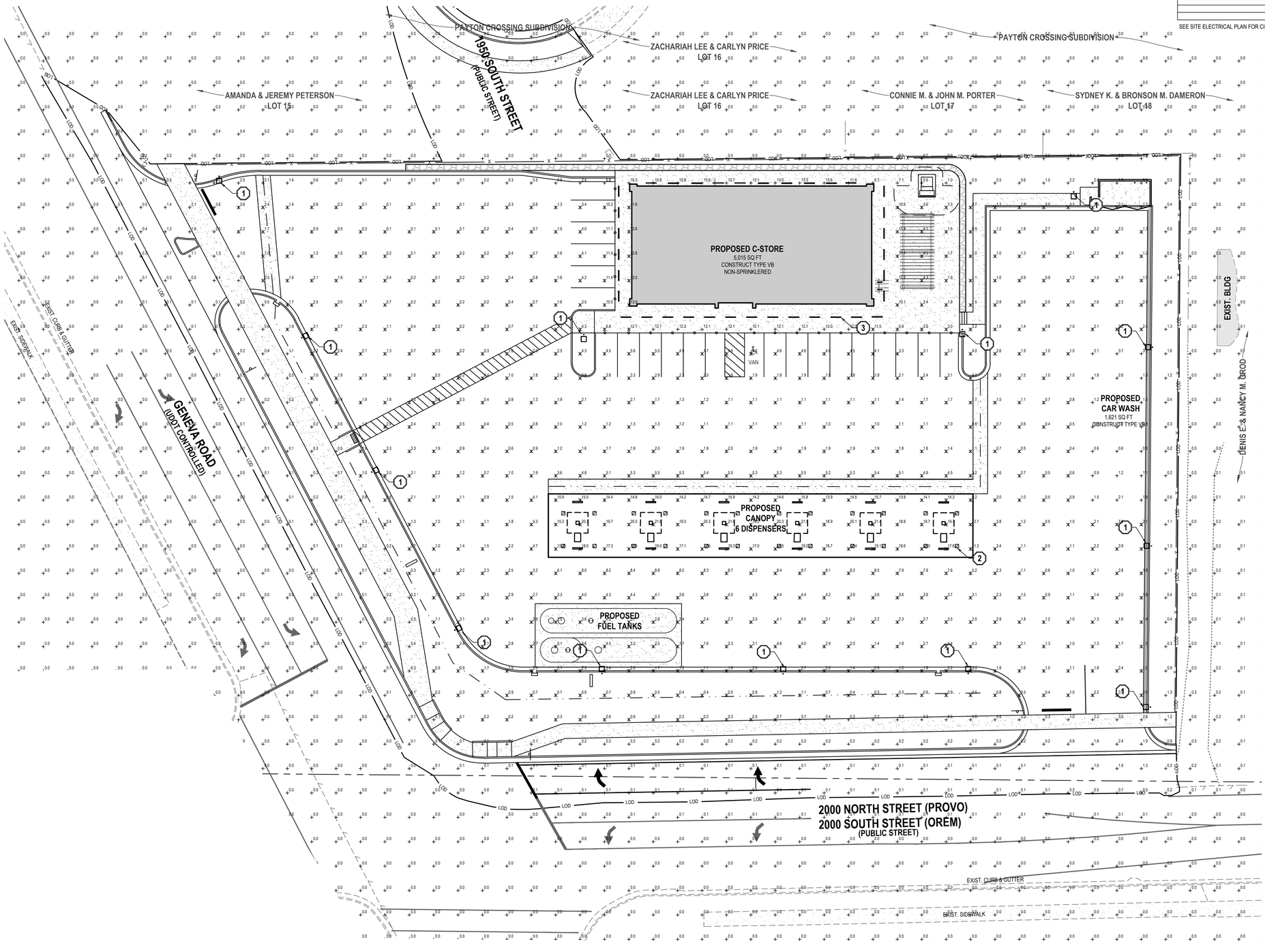
PARKING CALCULATION SUMMARY (TOTAL):

AVERAGE:	3.6 FC
MAX.:	21.8 FC
MIN.:	0.1 FC
MAX./MIN.:	218:1
AVE./MIN.:	36:1

MAX. MOUNTING HEIGHT 16'
FULL CUTOFF LIGHT POLE FIXTURE AS REQUIRED
ALL LIGHT FIXTURES SHALL BE DARK SKY COMPLIANT

TYPE	MOUNTING	LAMPS	DESCRIPTION
1	16' POLE	LED	CUTOFF LIGHT FIXTURE TYPE 4
2	CANOPY	LED	CUTOFF
3	SURFACE	LED	SURFACE

SEE SITE ELECTRICAL PLAN FOR CIRCUITING AND FIXTURE TYPES



HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

NORTH

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH

CONTACT:
SCOTT WAGSTAFF
PHONE: (801) 631-3434

Holiday

OREM
HOLIDAY OIL
2000 SOUTH GENEVA ROAD
OREM, UTAH

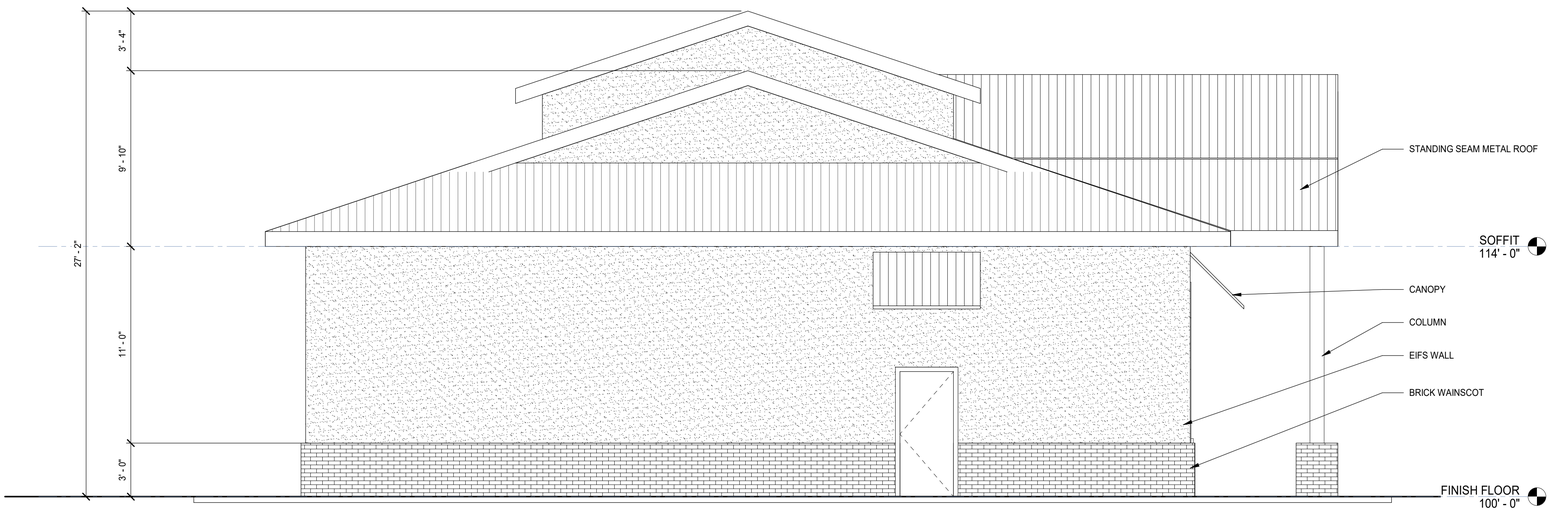
PHOTOMETRIC PLAN

PROJECT NUMBER	PRINT DATE
12089	2023-08-19
PROJECT MANAGER	DESIGNED BY
CD	MB

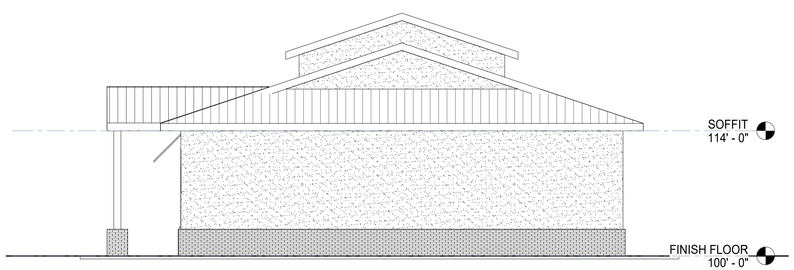
PH100



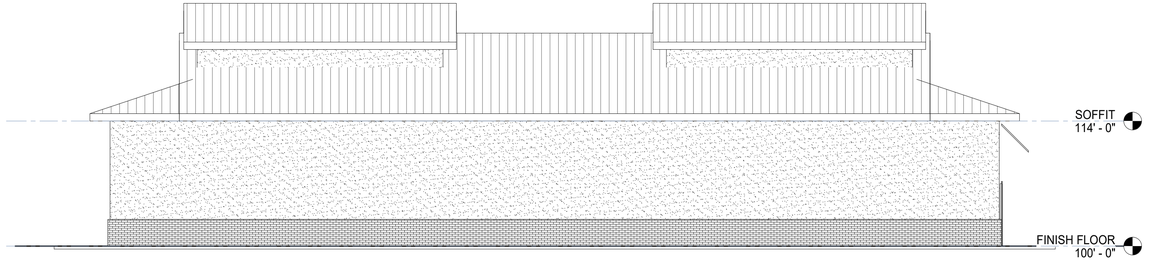
1 South
SCALE: 1/4" = 1'-0"



2 West
SCALE: 1/4" = 1'-0"



3 East
SCALE: 1/8" = 1'-0"



4 North
SCALE: 1/8" = 1'-0"

ENSIGN
THE STANDARD IN ENGINEERING

SANDY
45 W 10000 S, Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
SCOTT WAGSTAFF
HOLIDAY OIL
3115 WEST 2100 SOUTH
WEST VALLEY CITY, UTAH
(801) 631-3434

OREM
HOLIDAY OIL
2000 SOUTH GENEVA ROAD
OREM, UTAH

CONCEPT PLANS

NO.	DATE	REVISION

EXTERIOR ELEVATIONS

PROJECT NUMBER 1000 | DATE 01-02-03
PROJECT MANAGER PM-Initials | DESIGNED BY DE-Initials

A200

PRO-TITLE & ESCROW, INC.

101 North University Avenue, Provo, Utah 84601 Phone (801) 375-0026 Fax (801)375-0046

Commitment for Title Insurance prepared for:

Property address: 868 West 2000 South, Orem, UT 84058

Lender	Buyer/Seller
	Wagstaff Investments, LLC Perks Place, LLC and 3 Mile Holdings, LLC and 7 Mile Holdings, LLC
Listing Agent	Selling Agent

Here is some information we thought might be helpful:

Your order has been assigned our file number: 38780-P.

The closing officers assigned to your file are Mark and Jill. Please call us if you have any questions about the closing, fees, clearing, payoffs, or disbursal. The closing officers are located in our Provo office and can be reached at 801-375-0026 or by email at markandjill@pro-title.com. If you need to schedule your closing or need to make changes to this arrangement please contact us. We will be happy to assist you.

Christine Parry was the title examiner and can answer your questions relating to the public record (ie: boundary lines, easements, maps, etc). After the documents are recorded, Garrett can help you with your final policy, recorded documents and billing. Our title examiners are located in our Provo Office and can be reached at (801) 375-0026.

Thank you for placing your order with us. We look forward to working with you so please feel free to call us if you have any questions.

First American Title™	ALTA Commitment for Title Insurance ISSUED BY **First American Title Insurance Company**
Commitment	

COMMITMENT FOR TITLE INSURANCE

Issued By

FIRST AMERICAN TITLE INSURANCE COMPANY

NOTICE

IMPORTANT–READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

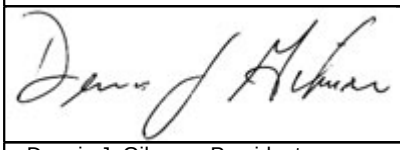
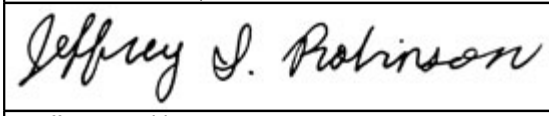
THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I–Requirements; Schedule B, Part II–Exceptions; and the Commitment Conditions, ***First American Title Insurance Company***, a Nebraska Corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I–Requirements have not been met within six months after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

First American Title Insurance Company

Dennis J. Gilmore, President

Jeffrey S. Robinson, Secretary

If this jacket was created electronically, it constitutes an original document.

This page is only part of a 2016 ALTA® Commitment for Title Insurance issued by First American Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I--Requirements; and Schedule B, Part II--Exceptions.

COMMITMENT CONDITIONS

1. DEFINITIONS

(a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
(b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
(c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
(d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
(e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
(f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
(g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I–Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:
(a) the Notice;
(b) the Commitment to Issue Policy;
(c) the Commitment Conditions;
(d) Schedule A;
(e) Schedule B, Part I–Requirements; and
(f) Schedule B, Part II–Exceptions.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

(a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
  (i) comply with the Schedule B, Part I–Requirements;
  (ii) eliminate, with the Company's written consent, any Schedule B, Part II–Exceptions; or
  (iii) acquire the Title or create the Mortgage covered by this Commitment.
(b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
(c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
(d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
(e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
(f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I–Requirements have been met to the satisfaction of the Company.
(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.
(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
(d) The deletion or modification of any Schedule B, Part II–Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is $2,000,000 or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at http://www.alta.org/arbitration.

Transaction Identification Data for reference only:

Pro-Title File Number: 38780-P
Property Address: 868 West 2000 South, Orem, UT 84058

SCHEDULE A

1. Commitment date: May 19, 2022 @ 7:30 a.m.

2. Policy or Policies to be issued: Amount of Insurance

A. ALTA Owner's Policy (2006) $1,550,000.00
Proposed Insured:

Premium: $4,205.00

Wagstaff Investments, LLC

B. ALTA Loan Policy
Proposed Insured:

C. ENDORSEMENTS

3. The estate or interest in the Land described or referred to in this Commitment is:

Fee Simple

4. The Title is, at the Commitment Date, vested in:

Perks Place, LLC and 3 Mile Holdings, LLC and 7 Mile Holdings, LLC

5. The Land is described as follows:

See Attached Exhibit "A"

EXHIBIT "A"

Parcel 1:
Beginning at the Southwest corner of the certain parcel of land conveyed to Denis E. Groo, Et Ux. By Warrant Deed recorded January 6, 1977, as Entry No. 719, in Book 1524, at Page 389 of official records, said Southwest corner is described as being North 89° 31' 44" West 341.88 feet, more or less from the Southeast corner of Section 28, Township 6 South, Range 2 East Salt Lake Base and Meridian: thence North 89° 31' 44" West along the South line said Section 28, 165.0 feet to the Southeast corner of the certain parcel of land conveyed to Karl R. Taylor by Quit-Claim Deed recorded June 17, 1939, as Entry No. 5921, in Book 342, at Page 597 of official records; thence North 0° 28' 16" East along the East line of said Taylor property 264.0 feet, more or less, to the Northeast corner thereof; thence South 89° 31'44" East 165.0 feet more or less, to the Northwest corner of said Groo property; thence South 0° 28' 16" West along the West line of said Groo property 264.0 feet to the point of beginning.

TOGETHER WITH the West 6' 3" of the following described property: Commencing at the Southeast corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian; thence North 89° 31' 44" West along the Section line 341.88 feet (104.21 meters); thence North 00° 28' 16" East 264.00 feet (80.47 meters); thence South 89° 31' 44" East 341.88 feet (104.21 meters); thence North 00° 28' 16" East 264.00 feet (80.47 meters); thence South 88° 04' 23" East 4.44 feet (1.35 meters); thence South 00° 45' 59" East partially along a fence line 528.00 feet (160.93 meters); thence North 89° 33' 59" West along the Section line 15.84 feet (4.83 meters) to the point of beginning.

LESS AND EXCEPTING THEREFROM: Beginning at a point which is North 89° 31' 44" West along a Section line 506.88 feet from the Southeast corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian; thence North 89° 31' 44" West along the Section line 114.99 feet to the Easterly line of Geneva Road; thence North 28° 25' 53" West along said East line of Geneva Road 285.08 feet; thence North 88° 33' 11" East along a fence line 32.34 feet; thence North 89° 29' 20" East 230.89 feet; thence South 0° 06' West 156.57 feet; thence South 59° 00" West 13.50 feet; thence South 0° 28' 16" West 91.00 feet to the point of beginning.

ALSO LESS AND EXCEPTING THEREFROM any portion lying North of the line described in that certain Boundary Fence Line Agreement Recorded March 22, 2002 as Entry No. 32714:2002 in the Utah County Recorder's office.

ALSO LESS AND EXCEPTING THEREFROM any portion lying North of the line described in that certain Boundary Fence Line Agreement Recorded March 22, 2002 as Entry No. 32715:2002 in the Utah County Recorder's office.

ALSO LESS AND EXCEPTING THEREFROM any portion lying within the bounds of the Payton Crossing Subdivision, Plat "A".

Parcel 2:
Commencing at a point located North 89° 31' 44" West along the Section line 507.68 feet and South 4.18 feet from the Southeast corner of Section 28, Township 6 South, Range 2 East, Salt Lake Base and Meridian; thence West 71.23 feet; thence North 58° 35' 20" West 72.31 feet; thence North 27° 49' 58" West along Geneva Road 246.73 feet; thence North 89° 28' 53" East along Payton Crossing Subdivision 261.45 feet; thence South 00° 06' 00" West 156.12 feet; thence South 59° 00' 00" West 14.28 feet; thence South 00° 28' 16" West 94.77 feet to the point of beginning.

LESS AND EXCEPTING THEREFROM that portion conveyed in that certain Warranty Deed recorded on April 24, 2019 as Entry No. 34565:2019, in the Utah County Recorder's office, described as follows:
A parcel of land in fee, being part of an entire tract situate in the SE1/4 SE1/4 of Section 28, Township 6 South, Range 2 East, SLB&M, in Utah County, Utah, for the construction of a signalized intersection at State Route 114 &

2000 North Street, Provo City, known as Project No. S-0114(33)4. The boundaries of said parcel of land are described as follows:

Beginning at a point in the southerly boundary line of said entire tract and the existing northerly right of way line of 2000 North Street, Provo City, at a point being 68.28 feet perpendicularly distant easterly from the control line of said project at approximate Engineer Station 150+54.71, said point also being 586.81 feet N.90°00'00"W. along the south line of said Section 28 from the Southeast corner of said Section 28; and running thence along said existing northerly right of way line N.90°00'00"W. 40.00 feet to a point in the existing easterly right of way of State Highway 114, said point 33.00 feet perpendicular distant easterly from the control line of said project at approximate Engineer Station 150+73.56; thence along said easterly right of way line N.28°07'13"W. 40.00 feet to a point 33.00 feet perpendicular distant easterly from the control line of said project at approximate Engineer Station 151+13.56; thence S.59°03'36"E. 68.62 feet to the point of beginning as shown on the map of said project on file in the office of the Utah Department of Transportation.

ALSO LESS AND EXCEPTING THEREFROM any portion lying within the bounds of the Payton Crossing Subdivision, Plat "A".

SCHEDULE B, PART I
Requirements

All of the following Requirements are to be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

2. Pay the agreed amount for the estate or interest to be insured.

3. Pay the premiums, fees, and charges for the Policy to the Company.

4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

5. Provide releases, reconveyances, or other instruments, acceptable to the Company, including payment of any amounts due, removing the encumbrances shown in Schedule B, Part II that are objectionable to the Proposed Insured.

6. Provide us with copies of appropriate agreements, resolutions, certificates, or other evidence needed to identify the parties authorized to execute the documents creating the interest to be insured.

7. Provide us with any information regarding personal property taxes which may have been assessed or are due and payable which could become a lien on the real property.

8. Affidavit as to Debts and Liens executed and delivered to the Company.

9. Inspection of the State Construction Registry prior to the recording of the Deed of Trust. Should the inspection reveal that either a Preliminary Notice(s) or Notice(s) of Retention has been filed additional requirements or exceptions may be added to this commitment, including but not limited to proof that the filer(s) of said notice(s) has accepted payment in full for construction services that the filer(s) furnished before the recording of the Deed of Trust.

10. "Utah Waiver And Release Upon Final Payment" waiver signed and dated on or after the day of recording of the insured Deed of Trust must be returned to company for all filers of Preliminary Notices or Notices of Retention as filed on the Utah State Construction Registry.

    NOTE: Exception No. 6 (the "mechanics lien exception") in Schedule B-II of this commitment will remain in the final policy unless this requirement is complied with.

SCHEDULE B, PART II
(Exceptions)

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

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

2. Any facts, rights, interests, or claims that are not shown in the Public Records but that could be ascertained by an inspection of the Land or by making inquiry of persons in possession of the Land.

3. Easements, liens or encumbrances, or claims thereof, not shown in the Public Records.

4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title including discrepancies, conflicts in boundary lines, shortage in area, or any other facts that would be disclosed by an accurate and complete land survey of the Land and not shown in the Public Records.

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

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

7. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I–Requirements are met.

8. Taxes for the year 2021 are paid in the amount of $1,173.97. Taxes for the year 2022 are not yet due and payable but are a lien. Tax Serial No. 19:036:0053. (Parcel 1)

   Taxes for the year 2021 are paid in the amount of $ 1,262.69 under Base Tax Serial No. 19:036:0116. Taxes for the year 2022 are not yet due and payable but are a lien. New Tax Serial No. 19:036:0130. (Parcel 2)

(Continued)

SCHEDULE B, PART II
(Exceptions Continued)

9. Right-of-Way and Easement Grant in favor of PacifiCorp, an Oregon Corporation, d/b/a Rocky Mountain Powert it successors and assigns recorded April 21, 2009 as Entry No. 42704:2009 in the Utah County Recorder's office. (Parcel 1)

10. Right-of-Way and Easement Grant in favor of PacifiCorp, an Oregon Corporation, d/b/a Rocky Mountain Powert it successors and assigns recorded September 15, 2009 as Entry No. 99560:2009 in the Utah County Recorder's office. (Parcel 2)

11. Water Line Easement in favor of the City of Orem, a municipal corporation recorded on December 19, 2016 as Entry No. 127102:2016 in the Utah County Recorder's Office. (Parcel 2)

12. Water Line Easement in favor of the City of Orem, a municipal corporation recorded on December 19, 2016 as Entry No. 127104:2016 in the Utah County Recorder's Office. (Parcel 1)

13. Water Line Easement in favor of the City of Orem, a municipal corporation recorded on January 9, 2017 as Entry No. 1916:2017 in the Utah County Recorder's Office. (Parcel 2)

14. Boundary Fence Line Agreement dated January 25, 2002, by and between Elva Ferguson Scott Van Wagenen, Trustee of the Elva Ferguson Scott Van Wagenen Trust as Party of the First Part and Karl Lloyd Taylor as Party of the Second Part, recorded on March 22, 2002 as Entry No. 32714:2002 in the Utah County Recorder's Office.

15. Boundary Fence Line Agreement dated January 25, 2002, by and between SCP Properties, LLC as Party of the First Part and Karl Lloyd Taylor as Party of the Second Part and Donal Kent Roberts and Katheryn Ann Roberts as Party of the Third Part as Party of the Second Part, recorded on March 22, 2002 as Entry No. 32715:2002 in the Utah County Recorder's Office.

16. Agreement by and between Provo City, a municipal corporation and the City of Orem, a municipal corporation recorded on July 22, 2015 as Entry No. 65900:2015 in the Utah County Recorder's Office.

17. Water Deed recorded on January 4, 2021 as Entry No. 557:2021 in the Utah County Recorder's Office.

18. Development Agreement dated December 8, 2020 by and between Axley-Way Investments, LLC as Developer and the City of Orem. Said Agreement recorded on July 15, 2021 as Entry No. 125251:2021 in the Utah County Recorder's office.

19. Any encroachment, gap, overlap, or adverse circumstance affecting the Title including discrepancies, conflicts in boundary lines, shortage in area, or any other facts that would be disclosed by an accurate and complete survey of the Land.

20. Rights of way or easements for any roads, ditches, canals or utility lines now existing over, under or across the land.

21. The rights of tenants and/or parties in possession of the subject land under unrecorded leases, rental or occupancy agreements and any claims thereunder.

(Continued)

SCHEDULE B, PART II
(Exceptions Continued)

22. Water rights, claims or title to water, whether or not the matters are shown by the public records.

23. Minerals of whatsoever kind, subsurface and surface substances, including but not limited to coal, lignite, oil, gas, uranium, clay, rock, sand and gravel in, on, under and that may be produced from the Land, together with all rights, privileges, and immunities relating thereto, whether or not appearing in the Public Records or listed in Schedule B. The Company makes no representation as to the present ownership of any such interests. There may be leases, grants, exceptions or reservations of interests that are not listed.

24. Any charge upon the land by reason of its inclusion in the Utah Valley Dispatch Special Service District as disclosed in that certain Resolution No. 2008-126 recorded on September 30, 2008 as Entry No. 107508:2008 in the Utah County Recorder's Office.

25. Any charge upon the land by reason of its inclusion in the Utah Valley Road Special Service District as disclosed in that certain Resolution No. 2009-66 recorded on April 21, 2009 as Entry No. 42373:2009 in the Utah County Recorder's Office.

26. Any charge upon the land by reason of its inclusion in the North Pointe Solid Waste Special Service District.

27. Any charges or assessments levied upon the land by reason of its inclusion within the boundaries of Orem City and its service districts.

28. Any charges or assessments levied upon the land by reason of its inclusion within the boundaries of Provo City and its service districts.

(Continued)

SCHEDULE B, PART II
(Exceptions Continued)

29. The following names have been checked for judgments, state tax liens, federal tax liens, and bankruptcies:

HL1, LLC
Wagstaff Investments, LLC

No judgments, tax liens, or bankruptcies were found unless disclosed herein.

Chain of Title

The following list represents the conveyances of the subject land within the last 36 months:

Parcel 1: Special Warranty Deed by and between Donald Kent Roberts, Trustee of the Donald Kent Roberts Living Trust, U/A/D the 25th day of March, 2015 as Grantor(s) and Donald Kent Roberts as Grantee(s) recorded December 20, 2019 as Entry No. 135381:2019 in the Utah County Recorder's Office.

Warranty Deed by and between Donald Kent Roberts as Grantor(s) and HL1, LLC as Grantee(s) recorded January 4, 2021 as Entry No. 630:2021 in the Utah County Recorder's Office.

Parcel 2: Warranty Deed by and between Cynthia Ann Butler and Allen Lane Taylor, Successor Trustees of the Lloyd Taylor Living Trust as amended and restated in total on February 13, 2007 as Grantor(s) and HL1, LLC as Grantee(s) recorded January 4, 2021 as Entry No. 556:2021 in the Utah County Recorder's Office.

Parcel 1 and 2: Warranty Deed by and between HL1, LLC as Grantor(s) and Perks Place, LLC and 3 Mile Holdings, LLC and 7 Mile Holdings, LLC as Grantee(s) recorded August 24, 2022 as Entry No.93745:2022 in the Utah County Recorder's Office.

NOTE: The policy(ies) to be issued as a result of this Commitment contain an Arbitration Clause set forth in the Conditions/Conditions and Stipulations Section. The following is included for the information of the proposed insured(s):

Any matter in dispute between you and the company may be subject to arbitration as an alternative to court action pursuant to the rules of the American Arbitration Association or other recognized arbitrator, a copy of which is available on request from the company. Any decision reached by arbitration shall be binding upon both you and the company. The arbitration award may include attorney's fees if allowed by state law and may be entered as a judgment in any court of proper jurisdiction.

***

This Commitment is not an abstract, examination, report, or representation of fact or title and does not create and shall not be the basis of any claim for negligence, negligent misrepresentation or other tort claim or action, the sole liability of the Company and its title insurance agent shall arise under and be governed by the conditions of the commitment.

***

A Cancellation Fee of $200.00 has been assessed for this report. In the event this transaction does not close within a reasonable time period (not to exceed 6 months), this cancellation fee shall be immediately due and payable. Said fee shall be applied as a credit toward the premium to be charged on any title policy issued in connection with this commitment within 6 months of the date of this commitment.

***

If you have title inquiries or you require additional copies of this commitment or copies of any documents identified in this commitment, the Company will furnish the same upon specific request. For inquiries please contact Garrett Wilson at (801) 375-0026.

***

The map attached or included, if any, may or may not be a survey of the land depicted hereon. First American Title and Pro-Title and Escrow, Inc. expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

***

NOTICE TO APPLICANT: The land herein may be serviced by cities, improvement district, or utility companies that provide municipal type service for water, sewer, electricity or other services that do not result in a lien, but for which service may be terminated in the event of non-payment of service charges to date or transfer fees. The Company assumes no liability for these charges or fees, you are urged to make investigation into such matters.

Thank you for your business. We look forward to serving you again!

PRO-TITLE & ESCROW, INC.
Privacy Policy Notice

PURPOSE OF THIS NOTICE

Title V of the Gramm-Leach-Bliley Act (GLBA) generally prohibits any financial institution, directly or through its affiliates, from sharing nonpublic personal information about you with a nonaffiliated third party unless the institution provides you with a notice of its privacy policies and practices, such as the type of information that it collects about you and the categories of persons or entities to whom it may be disclosed. In compliance with the GLBA, we are providing you with this document, which notifies you of the privacy policies and practices of Pro-Title & Escrow, Inc.

We may collect nonpublic personal information about you from the following sources:

Information we receive from you such as on applications or other forms.

Information about your transactions we secure from our files, or from our affiliates or others.

Information we receive from a consumer reporting agency.

Information that we receive from others involved in your transaction, such as the real estate agent or lender.

Unless it is specifically stated otherwise in an amended Privacy Policy Notice, no additional nonpublic personal information will be collected about you.

We may disclose any of the above information that we collect about our customers or former customers to our affiliates or to nonaffiliated third parties as permitted by law.

We also may disclose this information about our customers or former customers to nonaffiliated companies that perform services on our behalf.

WE DO NOT DISCLOSE ANY NONPUBLIC PERSONAL INFORMATION ABOUT YOU WITH ANYONE FOR ANY PURPOSE THAT IS NOT SPECIFICALLY PERMITTED BY LAW.

We restrict access to nonpublic personal information about you to those employees who need to know that information in order to provide products or services to you. We maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

UTAH DEPARTMENT OF
TRANSPORTATION
%RIGHT OF WAY FOURTH FLOOR
PO BOX 148420
SALT LAKE CITY, UT 84114

WAGSTAFF INVESTMENTS LLC
PO BOX 367
PANGUITCH, UT 84759

JAMES HAWKES
55 WEST 500 SOUTH
OREM, UT 84058

KRISTIE SNYDER
56 N STATE STREET
OREM, UT 84057

BRINKERHOFF, WALTER A & CONI JO
(ET AL)
70 BIG MEADOW LN
LOVELOCK, NV 89419

COMMON AREA
100 E CENTER ST
PROVO, UT 84606

JEFF LAMBSON
156 E 1060 N
OREM, UT 84057

DAVE YOUNG
173 S COUNTRYSIDE LANE
OREM, UT 84058

MILLHAVEN CONSTRUCTION LLC
272 W 200 N STE 100
LINDON, UT 84042

LANAE MILLETT
288 W 1500 N
OREM, UT 84057

PROVO CITY
351 W CENTER ST
PROVO, UT 84601

PETERSON, JEREMY & AMANDA
459 W 1840 S
OREM, UT 84058

THOMAS MACDONALD
489 NORTH PALISADES DR
OREM, UT 84097

HEATON, GERRY L & KAYE B
501 W MAIN CANYON RD
WALLSBURG, UT 84082

GENEVA ROAD 44 LLC
519 W STATE ST STE 202
PLEASANT GROVE, UT 84062

DEBBY LAURET
641 S 1920 W
OREM, UT 84059

MADELINE KOMEN
653 W. 1360 NORTH
OREM, UT 84057

BROWN, BARRY E & LINDA B (ET AL)
782 W 2000 S
OREM, UT 84058

VARGAS, LEANDRO DAVID & ALISSA
KITCHEN
819 W 1950 S
OREM, UT 84058

PULHAM, KURT TERRY
822 W 1950 S
OREM, UT 84058

TRONSON, TANNER DON (ET AL)
827 W 1950 S
OREM, UT 84058

GRIFFIN, SKYLER REED (ET AL)
830 W 1950 S
OREM, UT 84058

MORRILL, JENNIFER
835 W 1950 S
OREM, UT 84058

GROO, DENIS E & NANCY M
838 W 2000 S
OREM, UT 84058

FONG, THOMAS & SHARON
840 W 1950 S
OREM, UT 84058

DAMERON, SYDNEY K & BRONSON
M
849 W 1950 S
OREM, UT 84058

ANDERTON, PARKER (ET AL)
854 W 1950 S
OREM, UT 84058

PORTER, JOHN M & CONNIE M (ET
AL)
861 W 1950 S
OREM, UT 84058

BERNIER, ADAM & JENNY
866 W 1950 S ST
OREM, UT 84058

WAGSTAFF INVESTMENTS LLC
--OR CURRENT RESIDENT--
868 W 2000 SOUTH
OREM, UT 84058

PRICE, ZACHARIAH LEE & CARLYN
871 W 1950 S
OREM, UT 84058

SLS2 LLC
%BERRETT, CRAE
878 W 1950 S
OREM, UT 84058

CAMPBELL, TREVIN JOSEPH
890 W 1950 S
OREM, UT 84058

DAVID SPENCER
899 NORTH 550 EAST
OREM, UT 84097

MURRAY LOW
904 S. 725 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1006 W 1950 SOUTH
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1008 W 1950 SOUTH
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1014 W 1950 DS
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1018 W 1950 SOUTH
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1022 W 1950 SOUTH
OREM, UT 84058

CHOWDHARY, PRATAPRAI R & KIRAN B
--OR CURRENT RESIDENT--
1033 W 1970 SOUTH
OREM, UT 84058

THOMPSON, BEAU
1036 W 1970 S
OREM, UT 84057

FQU HOLDINGS LLC
--OR CURRENT RESIDENT--
1037 W 1970 SOUTH
OREM, UT 84058

VINDEL, JOSUE MORENO & KELLY MORENO
1038 W 1970 S
OREM, UT 84058

GERALD CRISMON
1069 S. 545 EAST
OREM, UT 84097

TERRY PETERSON
1125 LYNNWOOD DRIVE
OREM, UT 84097

HAYSAM SAKAR
1194 E. 1090 NORTH
OREM, UT 84097

TINA OKOLOWITZ
1245 N. 260 WEST
OREM, UT 84057

AMBER POPE
1278 N. 500 WEST
OREM, UT 84057

RYAN CLARK
1405 N. 1430 WEST
PLEASANT GROVE, UT 84062

MORGAN, SANDRA C (ET AL)
1476 N LAKE SHORE DR
PROVO, UT 84604

UTAH AUTISM ACADEMY
1875 S GENEVA RD
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1893 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1897 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1899 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1901 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1903 S 1030 WEST
OREM, UT 84058

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 103
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 104
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 105
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 106
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 203
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 204
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 205
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 206
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 303
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 304
PROVO, UT 84601

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1907 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1909 S 1030 WEST
OREM, UT 84058

JASON BENCH
1911 N MAIN STREET
OREM, UT 84057-2101

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1911 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1913 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1917 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1919 S 1030 WEST
OREM, UT 84058

HEATON, GERRY L & KAYE B
--OR CURRENT RESIDENT--
1921 N GENEVA RD
PROVO, UT 84601

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1921 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1923 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1927 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1929 S 1030 WEST
OREM, UT 84058

OYANEDEL, ANGEL PATRICIO
1929 S GENEVA RD
OREM, UT 84058

NIELSON, LINDA E
1931 N 3100 W
PROVO, UT 84601

CISNEROS, JESUS JR & CHRISTIAN A
1936 N 3100 W
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 101
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 102
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 103
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 104
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 201
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 202
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 203
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 204
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 301
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 302
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 303
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 304
PROVO, UT 84601

JOHNSON, BLAINE E
1939 N 3100 W
PROVO, UT 84601

ROYLANCE, SHAUNA L (ET AL)
1941 S 800 W
OREM, UT 84058

NORDSTROM, MACKENZIE & TANNER
1942 N 3100 W
PROVO, UT 84601

FQU HOLDINGS LLC
1945 N 1120 W
PROVO, UT 84604

BARNEY, THOMAS & APRIL (ET AL)
1948 S 1030 W # 431
OREM, UT 84058

MOOSE, ALAN L & PAMELA C
1949 S 800 W
OREM, UT 84058

THENOT, JODY R
1953 N 3050 W
PROVO, UT 84601

FLYGARE, KELLY
1959 N 3100 W
PROVO, UT 84601

LARSEN, JENNIFER C (ET AL)
1960 S 800 W
OREM, UT 84058

MAHEDY, PAUL PATRICK & PAULA ALICE
1963 S 800 W
OREM, UT 84058

MERRILL, SETH & BROOKE
1965 N 3050 W
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 101
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 102
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 103
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 104
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 105
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 106
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 201
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 202
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 203
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 204
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 205
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 206
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 301
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 302
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 303
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 304
PROVO, UT 84601

BAHR, DON F & VONDA P
1969 N GENEVA RD
PROVO, UT 84601

NARCISO, DAVID L JR & TATIANA H
1971 N 3100 W
PROVO, UT 84601

BACKUS, KRISTOPHER C & JILL R
1975 S 800 W
OREM, UT 84058

HERNANDEZ, GABRIELA COMPRES & GABRIELA
1979 N 3100 W
PROVO, UT 84601

HERIFORD, HANK & AUBREY
1987 N 3100 W
PROVO, UT 84601

GERMAN, EDWARD & JEANNETTE VARGAS
1988 N 3100 W
PROVO, UT 84601

VILLAGE OF LAKEVIEW FIELDS LLC THE
2825 E COTTONWOOD PKWY # 500
SALT LAKE CITY, UT 84121

LAKEVIEW FIELDS HOMEOWNERS ASSOCIATION
%ROBLES, LIZ
3089 W 1930 N
PROVO, UT 84601

JAUREGUI, JOSE ARMANDO
3103 W 1930 N
PROVO, UT 84601

WAGSTAFF INVESTMENTS LLC
3115 W 2100 S
WEST VALLEY CITY, UT 84119

CHOWDHARY, PRATAPRAI R & KIRAN B
3465 W 11TH LOOP A
WESTMINSTER, CO 80031

ALVARENGA, BORIS & JOSIE
4393 SHADYHOLLOW LOOP
LEHI, UT 84043

UTAH DEPARTMENT OF TRANSPORTATION
4501 S 2700 W
SALT LAKE CITY, UT 84114

SWITZLER, AL
5082 OLD OAK LN
HIGHLAND, UT 84003

CHURCH, MATTHEW J & MELISSA K (ET AL)
5501 W 10600 N
HIGHLAND, UT 84003

BOARDWALK INDUSTRIES LLC
6955 UNION PARK CTR # 160
MIDVALE, UT 84047

HOLLAND, CINDY B (ET AL)
7107 DREAM INN LN
ROSEVILLE, CA 95747

Name	Address
Sydney Dameron	
Bronson Dameron	
Don + Vonda Boehr	
Thomas + Sharon Fong	
Alissa & Leo Vargas	
Carlyn Price	
Zac Price	
[illegible] + Elaine Delafield	
McClellan Dameron	
Barry Brown	
[illegible]	
DAVID BRETEY	
Michelle Olsen	
Alan Moose	
Jenny Barker	
[illegible]	
[illegible] Paige	
[illegible] Paige	
Jill Backus	
KC Backus	

Orem Neighborhood Meeting Minutes

February 7, 2023

Location: Holiday Oil – 759 N 1500 W, Orem UT 84057

Below were the questions/concerns brought up in the neighborhood site plan review meeting:

1. Resident: Was there a notification sent just Orem residents or just to Provo residents?
    a. Me: I received the labels from Orem City which had everyone that lived within 500'
2. Resident: What about 2 years ago. Was there a notice sent notifying the residents of the zone change?
    a. Me: Yes, there would have been a notice sent to everyone that lived within a certain distance notifying of the zone change. However, if you were under construction and hadn't closed on your home or the County hadn't recorded your property yet, then they wouldn't have sent a notice. (a lot of these people were under construction or just moved in when the zone change took place in December 2020)
3. Resident: Why weren't we notified or why would the City allow a gas station be built on this site when residents live so close? We left California to get away from this.
    a. Me: The property is zoned commercial, so it was approved to have commercial business on the property. There are certain types of businesses that are allowed and not allowed, but that is up the City with what is permitted within the zoning code.
4. Resident: You are not going to be able to get an access off Geneva like your site plan is showing. Someone else tried to get that and UDOT denied them.
    a. Me: We had a UDOT pre-application meeting and they have approved the access on Geneva. We haven't submitted for a permit yet, but UDOT granted approval of the access on Geneva.
5. Resident: How much space is your building from the property line (North property line)?
    a. Me: the site plan is showing 15'
6. Resident: The purpose of C-2 Zone is to create a buffer between residential and commercial and a 15' between my back porch and that doesn't feel like quite enough. I think that's a concern that I would raise with the City.
    a. Me: That's where we rely on the City Staff. We submit a site plan and they review it. I t goes through numerous reviews and approvals. Planning, Engineering, and building will look at the setbacks and they will provide redlines and we will update our site plan based off the redlines.
7. Resident: what is this on the map?
    a. Me: this is an underground storm temperature. So, all the water that flows we have to retain so much water on our property before we release it into the City drainage or to UDOT's system.
8. Resident: Can you point out what everything is on the Site Plan map?
    a. Me: I explained all the items on the Site Plan.
9. Resident: Where are you going to get water for a car wash?
    a. Me: The City has impact fees where they calculate our water usage and we can purchase water through their fee schedule.

10. Resident: Is the car wash 24 hour service?
    a. Me: It is. You can talk to planning commission to give approval but apply a condition on the car wash that it can only operate at certain hours.
11. Resident: Where is the trash dumpster? Is it right behind my backyard?
    a. Me: This is just a site plan so it doesn't take in account the landscaping. We'll show a landscaping plan where we can put more trees along the property line or concentrate more trees in a certain area to block the site and meet city requirements.
12. Resident: How much acreage are you showing?
    a. Me: It's about 2 to 2.1 acres
13. Resident: How tall is your fence?
    a. Me: We have done 7' on other submittals and we have done 8' at other sites. It is a masonry wall which is typically required between residential and commercial properties.
14. Resident: There is a lot of difference in property lines with height difference.
    a. Me: Again, this is just going over the site plan. We haven't created the grading plan yet for the site. I was mentioning to another neighbor that will be bringing dirt, moving dirt around and I anticipate retaining walls will be needed on our side to prevent dirt from sliding away from your properties.
15. Resident: So the black line is the property line?
    a. Me: Yes, there are some other things we can do with additional setbacks with the dumpster and we can put limitations on times they can collect the garbage so they aren't coming at 5am. (lots of concerns about the smells from the dumpster being that close to residential property line).
16. Resident: There is a school, for autistic children, that is 850' away and the director of the school is concerned about a gas station being on this corner. People parking along Geneva and this will create more parking along Geneva.
    a. Me: Oh, I didn't know there was a school to the North. I knew there was a school east down on 2000 south.
17. Resident: You have heard about a stop line going in at the intersection, haven't you?
    a. Me: Where they have already started on the electrical and I would assume they would work on it again in the Spring, but that is UDOT performing the work.
18. Resident: So the City will know about the stop light and aware of your project?
    a. Me: This meeting is the first step. After this meeting we will submit our site plan to the city to be reviewed. Then we will go to planning commission. The City Staff has to approve the approve the site plan prior to going to Planning Commission and Planning Commission will notify everyone again for the public hearing for this project where you can voice your concerns and opinions.
19. Resident: We don't understand why C-3 zoning was rejected that offered more protection for the neighborhood and they agreed to C-2, which is to create a buffer between residential and commercial.
    a. Me: I'm not sure with the processing of approving C-2 over C-3.
20. Resident: Have you ever built a gas station, like this, so close to residential property lines?
    a. Me: Yes, it's more common in the Salt Lake Valley, but we have recently built next to property lines with three stores last year. (Concerned those homes weren't as nice and valuable as this neighborhood homes)

21. Resident: The property still has piping for residential utilities and if you build here, you'd have to maintain those. I think that was part of the 2020 agreement. 2020 Planning Commission told the developer "You're going to have to keep it piped that way" (residential piping).
    a. Me: I wasn't aware of the residential piping, but we'll work with the engineers to make sure we do everything according to code and work with the City.
22. Resident: Why this location?
    a. Me: As a convenience store, we try to be as convenient as possible to service people. There aren't any gas stations between Prove Center Street and University Parkway along Geneva Road. With the growth and the new high school down the street, we feel it's a great spot for a gas station.
23. Resident: This road (2000 S) gets backed up and it gets to be a big mess.
    a. Me: We found out that Orem City owns behind curb on 2000 South and Provo City operates and maintains 2000 S. The developers improve the site with road expansion in mind and will build the site with the improvements already in place or be ready to dedicate land when the time comes to widen the road(s).
24. Resident: You guys have provided the blueprint of the store, but how do we learn about the particulars of the operation? You said weekdays the store closes at what time?
    a. Me: Weekdays, 5am-11pm and Weekends 5am – 12am. C-Store is not opened 24 hours but at this time the car wash and fueling pumps are available 24/7.
25. Resident: The City will know that people are concerned about this site and this meeting tonight?
    a. Me: Yes, there is a sign in sheet for your name and address to show how many people came to the meeting. The more names on the paper will show the City how many people are concerned.
26. Resident: Would you want this (gas station) in your backyard? We have to look out our windows and we see a big gas station with a red roof. Can't we do black or white colors?
    a. Me: Operational we have a brand and market recognition for our stores. (Resident brought up McDonalds has to conform to City standards).
27. Resident: Will you allow alcohol sales?
    a. Me: Yes, we sale alcohol inside the store.
28. Resident: Will this be a Chevron store? We notice that Chevron Holiday stores have blue/white lights on the canopy and Sinclair Holiday stores have yellow/red lights.
    a. Me: We don't know if it will be Chevron or Sinclair yet. We'll send that out to bid between the two companies and then that will determine the canopy colors/lights.
29. Resident: We are concerned of the hours the dumpster will be picked up? Dumpster being slammed to the ground, doors shutting, and other people dumping items next to the dumpster like a couch/mattresses to be taken away.
    a. Me: We can work with the trash companies to put restrictions when they can empty on each site.
30. Resident: How do you address homeless people coming on the site?
    a. Me: If people are loitering, we can call the police officers and get them on future no trespassing charges. I know that was a concern with this site (800 N 15000 W) with the half-way house being just down the street, but we really don't experience many

homeless people. If it does happen, it's more in the West Valley area but we can call the police offers to remove them off the property.

31. Resident: How far away do you have to notify people with this project? There were over 40 people that showed up last time to planning commission.
    a. Me: I received the mailing addresses from the City and there were about 180 people notified (it was 140 when I got back and looked).
32. Resident: Is this project a certainty?
    a. Me: We own the property and at this time we are proposing and moving forward with a gas station site plan to the City. If it's not us coming in, it will more than likely be another commercial use. I don't anticipate us or anyone else selling it to a home developer because commercial prices for property are much higher than residential developers would be willing to pay.
33. Resident: So what I hear is something is going in here no matter what we do and we might as well just kiss our property values goodbye? We're either going to lose money or you lose money is what I am hearing?
    a. Me: I don't know why the residential developer sold off and the person who owned the property before us got the zone changed.
    b. Resident: none of us were hear yet when the zone changed. We didn't have a say because our houses were in the process of getting built.
    c. Me: We want to be good neighbors and whether it's us or someone else, we won't take your concerns lightly.
    d. Resident: Then give us a 8' foot masonry wall and no car wash. The car wash will keep us up all night. There are so many car washes already along Geneva Road, we don't need another car wash. Still don't know how this was able to be zoned commercial this close to homes and C2 Zoning. C2 zoning isn't meant to be for your gas station; C2 is supposed to be a buffer between commercial and residential.
34. Resident: We need more of a buffer area of landscaping between the properties. I feel this location is really out of place with residential homes so close to commercial and feel there is nothing we can do and that's not super awesome to hear to be honest.
    a. Me: That's the purpose for Planning Commission. There will be a public hearing portion where they will take into consideration all of your concerns when either approving or denying the site plan.
35. Resident: So even if we go to that meeting and say it's struck down this time, maybe another year goes by is going to be another proposal, right? Because the land is so owned by you guys.
    a. Me: Probably so, if it isn't us then it will be another commercial use applying.
36. Resident: Will the proposed store be this size and there this many pumps?
    a. Me: Yes, the store will be very similar to this and there will be no more than six dispensers. This store has eight dispensers just because this property is much larger than the one we are discussing. Again, that's why I wanted to hold this meeting at this store to give you an idea what the building looks like and the lighting. The lights on the building are under the eves so the lights project straight down the wall and not out toward the property line.
    b. Resident: But even so I feel like this ones going to just right in our backyard.

37. Resident: Have you followed up on other locations as to how much crime increases and then we did six hours we did. That's in there. We did crime rates, air pollution, water pollution, noise, pollution. There's a study in there. Says, they don't recommend a gas station, like a gas pump within 500 feet of a residential area, which would be well, within we'd be well within that like person for like health and safety reasons.
    a. Me: (Didn't have a chance to respond. More people said stuff that couldn't be picked up on the recording. However, I have not conducted a study about the concerns they brought up. I feel you can find studies that prove all the unhealthy reasons and you can find a study there are no health concerns. Depends how much you want to dig.)
38. Resident: Can we set up an appointment with the City Planner to discuss?
    a. Me: Yes, that is what they are there for. To help and address concerns.
39. Resident: Do you have an idea when you will be resubmitting to the City?
    a. Me: I would guess within 2-3 months. Then the review process starts where we will receive feedback from the City on the site plan.
40. Resident: I know your job is hard and this is not an easy meeting for you. We're just trying to express the like and if you can imagine like oh sure buying a house at the height of the market and then having someone come in and say actually it's not going to be worth $100,000 less than what you pay for it. That's like really terrifying and if we do stay there we're going to have kids and our kids are going to be in the backyard smelling, gas and dumpster and here and all this other stuff. And like, and I just, I just know there's some garbage that comes over the fence
    a. Me: Once we do a grading plan that will let us know how and where the retaining wall and fence will sit that will help a lot with noise, lighting, smells, etc.... but we haven't got to that point yet on the engineered plans.
41. Resident: Well, I guess we'll talk with Cheryl and then move forward.
    a. Me: Thanks for coming out.

That ended the meeting with 18-22 people. I stayed around until 7pm and right before leaving three new residents came up and started talking. One resident's (John Porter) main concern was drainage issues from the backyards. He said Orem City didn't approve the drainage for the area and puddles of water accumulate. I told him we would look at the carefully and do any kind of French drain or other drain needed to help resolve ponding issues. He also gave us a report that I'll attach as well as the report we received from Bronson & Sydney Dameron.

Holiday Oil – 3115 West 2100 South – West Valley, UT 84119
Telephone: 801-973-7002

To Whom It May Concern,

Pursuant to Orem City Code Section 22-14-20(I), this meeting is being held to discuss the project with you. This is an opportunity for you to review the plans and provide input and recommendations regarding the project. This application has not yet been reviewed by the City and is subject to change during the review process.

We welcome neighbors to join us on **February 7th, at 6pm** to discuss the proposed site plan for the property located on the Northeast corner of 2000 S / Geneva Road, Orem UT. We are looking for initial feedback from the residents prior to submitting an application with Orem City.

The meeting will be held at our Holiday Oil store located at 759 North 1500 West, Orem UT 84057.

Regards,

Brent Neel
Project Manager
Holiday Oil Corporate Office
3115 W. 2100 S. WVC, UT 84119

DRC Checklist
Full Site Plan

This checklist must be filled out completly in order to apply for DRC. Unless specified below, each item must be checked off. If for some reason, you feel that a particular item is not applicable to you, explain why in writing.

Disclaimer: This information is an abridged version of the Site Plan Ordinance found in the Orem City Code Chapter 22-14-20. This information is for the benefit of the developer/applicant to help follow the required review and approval process for your project. This checklist does not release the developer/applicant from the responsibility of reading and following all provisions listed in the latest edition of the City Development Codes.

☒ Formatting

- ☒ The site plan drawings shall consist of one or more pages of maps or drawings drawn accurately to scale on paper no larger than 24 inches by 36 inches. The scale should be no smaller than 1"=40'.
- ☒ All drawings shall indicate the scale to which the drawings are done.
- ☒ All plan drawings shall indicate parcel boundaries with dimensions and shall have a North Arrow indicating north.
- ☒ The following notes shall be placed on the first sheet of any site plan drawing:
  - ☐ "The fire protection items (fire hydrants, water mains, access roads, etc.) shown on this site plan are preliminary only. Detailed fire protection plans shall be submitted with the building plans. Plan reviews by the City of Orem Fire Prevention Bureau shall be completed prior to the issuance of a building permit. The plan reviews by the City of Orem Fire Prevention Bureau may identify additional fire protection requirements mandated by the International Fire Code. Fire hydrant foot valves shall be installed at the connection point with the main water lines."
  - ☐ "All landscaped areas shall have an automatic, underground sprinkling system which includes a back-flow assembly to the building. Backflow assemblies shall be installed and tested in accordance with Section 21-1-14 of the Orem City Code. Water meter sizes shall be determined by the City of Orem Building Division at the time of building permit approval or when there is a request to change the water meter size. Water meters shall be located at the back of sidewalk or curb in an area that is accessible for reading and servicing. Water meters shall not be located within areas enclosed with fences or within ten feet (10') of any existing or proposed structure."
  - ☐ If required by Chapter 20 of the Orem City Code or by the applicant's Permit for Industrial Wastewater Discharge, "A sampling manhole and fat and oil separator/grease trap shall be installed in accordance with the City of Orem Standards and Specifications."
  - ☐ "All signage shall comply with the requirements of the Orem City Code."
  - ☐ "All utilities, including water and sewer laterals, water and sewer mains, storm water drains, storm water sumps, sewer manholes, water valves, etc., Water laterals or mains shall not be located under covered parking areas and shall be installed according to Chapter 21 of the Orem City Code."

- ☐ "All roof drainage shall be routed through on-site storm water management facilities or to landscaped areas."
- ☐ "At the time of construction, the City of Orem may determine based on professional experience and judgment and at its sole discretion, the need for the Owner/Developer to pay for, remove, and replace any existing substandard improvements such as curbs, gutters, sidewalks, drive approaches, driveways, decorative concrete, wheelchair ramps, etc., or any unused drive approaches."
- ☐ "All construction shall conform to the City of Orem construction standards and specifications unless the improvement is within the UDOT right-of-way, in which case the construction shall conform to UDOT construction standards and specifications."

- ☒ Name of the development.
- ☒ Name of the applicant.
- ☒ Name of the owner of the property.
- ☒ Area of the lot in square feet.
- ☒ Lot line dimensions.
- ☒ A vicinity map containing sufficient information to accurately locate the property shown on the plan.
- ☒ Tabulation Table in the following format:

	Square Footage	Acreage	Percent of Total Area
Total Area			100
Total Building Area			
Total Impervious Area			
Total Landscaped Area			
Total Parking Spaces			

- ☒ North Arrow on each sheet. Vicinity Map (reduced to scale) and Legend of line-types, symbols and hatches.
- ☒ The proposed name of the development with public or private streets identified.
- ☒ Names and addresses of the property owner(s), the developer and the engineer or surveyor of the propose subdivision.
- ☒ Names and addresses of the current owners of all parcels immediately adjoining the proposed subdivision, and the boundary lines of such parcels.
- ☒ Contours drawn at 2' intervals.
- ☒ Boundary lines of the parcel(s) to be developed that is referenced to two section corner monuments and is prepared by a licensed land surveyor. The section corner monuments and the point of beginning shall indicate computed "State Plane Coordinates."
- ☒ Dimensions, square footage, and addresses of each lot.
- ☒ Final grade elevations. Minimum Public Street grade is 0.5%. Minimum asphalt slopes must be between 2% and 4%.
- ☒ If submitting plats, they must be stamped by a Professional Land Surveyor or Professional Engineer.
- ☒ Names and locations of fronting streets and locations and dimensions of public streets, private streets, and driveways.

☒ Site Plan

- ☒ Names and locations of fronting streets and locations and dimensions of public streets, private streets, and driveways.
- ☒ Footprints of existing and proposed buildings and structures to include a notation of each building's main finish floor height above grade, and the location of mechanical equipment and mitigation measures proposed to reduce noise impacts for such mechanical equipment.
- ☒ Location, dimensions, and distance to property lines of existing and proposed drive accesses.
- ☒ Location and dimensions of existing and proposed curb, gutter and sidewalk.
- ☒ Location and dimensions of off-street parking spaces.
- ☒ The layout and location of required public streets; street connections shall be made to street connection points as shown in the Street Connection Master Plan.
- ☒ Show parking striping, traffic lanes, loading areas and docks, etc.
- ☒ Location, dimensions, and distance to property lines of existing and proposed drive accesses.
- ☒ Location and description (height, materials) of existing and proposed fences.
- ☒ Location and description (dimensions, distance to property lines and type of lighting (direct or indirect)) of existing and proposed signs.
- ☒ Location of loading areas.
- ☒ Location of solid waste disposal facilities (dumpsters).
- ☒ Traffic circulation plan.
- ☒ Exterior display areas.
- ☒ Exterior storage areas.
- ☒ A contour map drawn at two foot intervals. This requirement may be waived in writing by the City Engineer if the average slope of the site is less than two percent (2%) and spot elevations are provided.
- ☒ Location and type of exterior lighting.
- ☒ A note indicating that no driveway or drive access may be located within twenty-five feet (25') of an existing fence which is greater than three feet (3') in height.
- ☒ Location of needed address signs and stop signs.
- ☒ For each lot, the location and dimensions of existing and proposed irrigation systems and easements.
- ☒ The footprints of existing and proposed buildings to include a notation of each building's main finish floor height above grade, and the location of mechanical equipment and mitigation measures proposed to reduce noise.
- ☒ Building envelopes of each lot.
- NA ☐ Provide the elevation of the lowest habitable floor space.
- ☒ All existing and proposed improvements (shown in distinctly different line types).

- [X] Curb, gutter, and sidewalk along street rights-of-way bordering the site.
- [X] Fences bordering residential zones.
- [X] Parking tabulation.
- [X] Location(s) of new parking stalls as required by Orem City Code 22-15.
- [X] Locations of dumpsters and solid waste disposal containers. A dumpster or solid waste disposal container with a capacity of one and one half (1.5) cubic yards or more shall not be located inside any building or within five feet (5') of any combustible wall, combustible roof eave line, or any opening in such walls except as permitted by the Uniform Fire Code. Dumpster and solid waste disposal containers shall not be located in the front yard setback or side yard setback facing a street.
- [X] Show applicable fire protection in accordance with both local and state adopted fire codes.

[X] Storm Water Drainage Plan

- [X] A storm water drainage plan, approved by the City Engineer, that is designed to retain the first 0.50 inch (80th percentile storm) of precipitation, through infiltration, evapotranspiration and/or harvesting and reusing rainwater, as well as accommodating the water generated by a "twenty-five year storm" within the proposed site with a discharge rate of no more than 60 GPM/acre. Orem Standard Pre-treatment Sumps may be used in any Safe Sump Zone area from Figure 5-1 from the Storm Water Master Plan or as a temporary use in the 15 year Drinking Water Source Protection Zones with approval from the City Engineer. Sumps used in any portion of any 15 year Drinking Water Source Protection Zone must be designed to current standards, interconnected and piped to the property line for a connection to a future storm drain trunk line. All proposed sumps must include percolation rates for individual proposed sites. Sumps located in a "poor percolation area" as shown in detail SD 14 must include soils report groundwater depths for every development. Sumps may be used in a poor percolation area if the applicant submits a soils report that addresses percolation rates and the rate is approved by the City Engineer. Sumps are not allowed in the 3 year Drinking Water Source Protection Zones. If developing in areas where sumps or injection is not allowed due to drinking water source protection zones storm water detention standards still apply. Site detention with a maximum discharge rate of no more than 60 GPM/acre after utilization of other structural and non structural treatment LIDs are implemented for your site. Refer to A Guide to Low Impact Development Within Utah referenced elsewhere in this document for guidance. All storm water drainage plans must include the following:
- [X] General description of the property, area, existing site conditions including all existing onsite drainage and irrigation facilities such as ditches, canals, washes, swales, structures, storm drains, springs, historic water flows, detention, and any proposed modifications to drainage facilities.
- [X] General description of off-site drainage features and characteristics upstream and downstream of the site and any known drainage problems and plan to mitigate problems.
- [X] Pre-development hydrology report to include maps, hydrologic calculations, soil types, runoff information, historical flows and volumes, etc.
- [X] The evaluation and use of at least one non-structural storm water treatment practices is required on all new and redeveloped sites. Non-structural BMPs include design approaches and practices that are used for their ability to prevent the occurrence of storm water runoff and reduce pollutant loads. Utilizing non-structural BMPs during site development is much more efficient and cost-effective than attempting to correct problems after development has occurred. The use of additional non-structural storm water treatment practices is encouraged in order to minimize the reliance on structural practices. These non-structural practices include practices found in the Storm Water Credit Program Manual found at stormwater.orem.org as well as in numer-

ous manuals, pamphlets, booklets, etc. that discuss LID's for development sites

- [X] Show flow path through/from development for 100 year storm event. Note any potential downstream problems areas for storm events up to and including a 100 year storm event.
- [X] All storm water runoff generated from new development or redevelopment sites shall not discharge untreated storm water directly into any wetland or waters of the State of Utah including the storm sewer system without treatment to the maximum extent practical. Treatment type shall match expected pollutants from specific areas from the site.
- [X] Detailed runoff calculations for the design storm. See Section 3 for design criteria (Storm Water Design Manual).
- [X] All roof drains and dumpster areas must be routed through on site vegitative landscaping areas. Any exceptions must be approved by the City Engineer.
- [X] Contains stamped statement: "This report for the drainage design of [NAME OF DEVELOPMENT] was prepared by me (or under my direct supervision) in accordance with the provisions of City of Orem Storm Drainage Systems Design and Management Manual, and was designed to comply with the provisions thereof. I understand that the City of Orem does not and will not assume liability for drainage facilities design.
- [X] No development or redevelopment activity will commence or no approvals or permits will be given on any site subject to this Section until a Long Term Storm Water Management Plan detailing in concept how storm water runoff and associated water quality impacts resulting from the development or redevelopment will be controlled or managed. Is concept plan included with initial submittal? Completed and approved Final Long Term Storm Water Management plan required at recording and it must include a maintenance agreement submitted on a form provided by the City.
- [X] General description of current and planned masterplan drainage facilities on or adjacent to the lot and proposed drainage features and how the development and proposed drainage facilities conform to the storm water master plan. Current City of Orem Storm Water Masterplan can be found at https://orem.org/stormwater/
- [X] Incorporate components of Low Impact Development (LID) where applicable throughout the entire site.
- [X] Location, type, and design of surface water drainage system.
- [X] A drainage report.

[X] Utility Plan

- [X] A utility plan represents complete construction drawings for any proposed improvement of any public street and/or City utility on or adjacent to the site. It must show the following:
- [X] Location and size of existing and proposed sewer lines and manholes, storm drains and manholes, water supply main valves, water lines, culverts.
- [X] Location of existing and proposed fire protection devices within the tract and within two hundred feet (200') of the boundaries of the proposed development. This shall include identifying required fire department apparatus access roads and proposed fire hydrant locations, as well as the International Building Codes specified construction type.
- [X] Show piping of irrigation ditches bordering or within the site. This requirement may be waived by the approving body if the irrigation ditches do not detract from the overall safety or aesthetics of the site.
- [X] Show applicable fire protection in accordance with both local and state adopted fire codes.

- [x] Dimensions and locations of existing and proposed improvements, structures, easements, and topographical and within two hundred feet (200') of the proposed development. All existing and proposed sewer or storm drains must show proposed and existing grades with rim and flow line elevations at all manholes and catch basins.
- [x] Location and size of existing and proposed sewer lines and manholes, storm drains and manholes, water supply main valves, water lines, pressure reducing valves (PRV's), backflow assemblies, water services, water meters and culverts.
- [x] Provide sewer and water demand of project.
- [x] All projects within 300 feet of an Orem sewer system must connect to the sewer system where practical. No septic systems may be installed within a wellhead protection zone.
- [x] A note stating that at least three feet (3') of horizontal separation and one foot (1') vertical separation must be maintained from City utilities.
- [x] When trenchless utility installation methods are employed, all existing utilites are to be potholed and exposed for visual inspection prior to and during the installation process.
- [x] Add note, "All utilities shall not be located under covered parking areas and shall be installed according to Chapter 21-4-6 of the Orem City Code." These utilities include but are not limited to: water and sewer laterals, water and sewer mains, storm water sumps, sewer manholes, water valves and meters, and fire hydrants.

[x] Demolition Plan

- [ ] The location of existing structures within the preliminary plat boundaries (buildings, monument signs, fences, walls, etc.) and a notation as to whether the existing structures will remain or be demolished.

[x] Landscape Plan

- [x] Detailed landscape plan showing the location of landscaped areas with specific types of plants and their general locations.
- [x] Permanent, underground, automatic sprinkling system for all landscaped areas.
- [x] Show that landscaping will be in compliance with zone specific standards and Orem City Code 22-14-13.
- [x] Location of landscaping backflow assemblies. This information should also be displayed on the utility plan.

[x] Elevations

- [x] Drawings of proposed structure elevations, showing the height, dimensions, and appearance of proposed buildings and structures. If a project is in a zone that restricts exterior finishing materials, the site plan shall show and indicate the type of exterior finishing materials for all proposed structures.
- [x] The architecture, design theme, and construction materials of a commercial building's front elevation shall be applied to the exterior walls of all elevations of the building that are within 200 feet of and face a collector or arterial street. All elevations of a commercial building that are within 200 feet of and face a public street shall include windows, awnings, varying façade depth, high-quality exterior finishing materials, lighting, and other similar features that are used in the front elevation of a building.

☒ Traffic Study

- ☒ **If a site plan is proposing any of the following, a traffic study is required to be submitted with the application:**
  - ☐ **Seventy-five (75) or more parking stalls.**
  - ☐ A drive-up window.
  - ☒ More than two drive approaches from dedicated streets, or
  - ☒ A corner lot where one or more of the streets is a collector or arterial street.
- ☐ The Development Services Director or his designee may waive the requirements of a traffic study if a new traffic study would be unnecessarily cumulative or otherwise not add to the information already available to the Development Services Director.
- ☒ The traffic study shall include all of the following:
  - ☐ An analysis of the off-site traffic impacts resulting from the development of the site and a description of the mitigation measures necessary to reduce the identified impacts.
  - ☐ An analysis of internal traffic circulation patterns and their effect on ingress and egress from the site for emergency vehicles and the public.
- ☒ The final approving authority may impose traffic mitigation requirements based on the impacts identified by a traffic study prepared by the applicant, the City or any qualified independent traffic consultant. Nothing in this Section shall preclude the City from performing its own traffic study.

☒ Neighborhood Meeting

- ☒ **If the proposed site plan is within or adjacent to a residential zone, a neighborhood meeting is required.**
- ☒ If required, the neighborhood meeting must be held by the applicant and prior to submitting an application for site plan approval.
- ☒ The neighborhood meeting shall be held on any weeknight after 6:00 p.m. or Saturday after 9:00 a.m. to provide the best opportunity for the neighbors to attend. The meeting shall not be held on a holiday or the day before or after a holiday.
- ☒ The applicant shall send written notice of the place, date, and time of the neighborhood meeting to all property owners, as listed in the records of the Utah County Recorder, located within one-thousand feet (1000') of the site if attached residential units are included in the site plan or within five hundred (500') feet if attached residential units are not included in the site plan.
- ☒ The notice shall be written on letterhead which includes the contact information of the applicant, including but not limited to a name, adddress, phone number and an e-mail address.
- ☒ The notice must also include the following language: *"Pursuant to Orem City Code Section 22-14-20(I), this meeting is being held to discuss the project with you. This is an opportunity for you to review the plans and provide input and recommendations regarding the project. This application has not yet been reviewed by the City and is subject to change during the review process."*
- ☒ All required notices shall be provided at least one week prior to the date of the meeting.
- ☒ The neighborhood meeting must be conducted at a location within the City boundaries. Phone calls or informal door-to-door contacts are not considered neighborhood meetings.

- [x] The applicant shall keep detailed minutes of the content of the neighborhood meeting.
- [x] The application for site plan approval shall include a list of all individuals who were notified of the meeting, a roster of attendees at the meeting, and a copy of the minutes from the neighborhood meeting.

[x] Preliminary Plat

- [x] **A preliminary plat may not required for site plan approval.** If a preliminary plat is desired to be approved as part of the site plan, the following items must be checked:
- [x] The preliminary plat shall be drawn on standard drafting medium, the dimensions of which shall not exceed twenty-four inches by thirty-six inches (24" x 36"), and shall be drawn to scale. The scale shall be indicated on each sheet, but shall not be less than one inch (1") = sixty feet (60'). The preliminary plat shall contain the following:
- [x] An arrow, indicating north, drawn on each sheet.
- [x] The proposed name of the subdivision. The City may reject a proposed subdivision name if the proposed name is similar to or may be confused with an existing subdivision name.
- [x] A vicinity drawing accurately locating the property shown on the plat.
- [x] The names and addresses of the property owner(s), the developer and the engineer or surveyor of the proposed subdivision.
- [x] Contours drawn at two-foot (2') intervals, unless waived by the City Engineer.
- [x] The boundary lines of the parcel to be subdivided and a description of the proposed outside boundary of the property contained within the preliminary plat that is referenced to two section corner monuments and is prepared by a licensed land surveyor. The section corner monuments and the point of beginning shall indicate computed "State Plane Coordinates."
- [x] The dimensions and square footage of each lot.
- [x] The dimensions and locations of existing and proposed improvements, structures, easements, and topographical features within the parcel to be subdivided and within two hundred feet (200') of the proposed subdivision boundaries.
- [x] For each lot, the location and dimensions of existing and proposed irrigation systems and easements.
- [x] Final grade elevations, if required by the City Engineer.
- NA [ ] Where the preliminary plat covers only a part of a larger unsubdivided or undeveloped area, the plat shall show the location of the subdivision as it forms part of the larger area, and shall include a sketch proposing a future street system of the unsubdivided or undeveloped area.
- [x] A storm water drainage plan, approved by the City Engineer that is designed to accommodate the water generated by a "twenty-five year storm" within the proposed subdivision.
- [x] The location of any areas of potential flood hazard, as defined in Chapter 10 of the City Code, within the subdivision boundaries or within 200 feet of the subdivision boundaries.
- [x] The location of any known fault lines located within 1,000 feet of any part of the subdivision as determined from the Utah County Hazards Map and any other source.
- [x] The location of existing structures within the preliminary plat boundaries, and a notation as to whether the

existing structures will remain or be demolished.

- ☒ The layout and location of future public streets. The City may require streets in the preliminary plat in such locations, sizes and of such design as may be necessary to provide adequate traffic circulation and access to the property contained within the preliminary plat and to other parcels of property in the surrounding area. Street connections shall be made to street connection points as shown in the Street Connection Master Plan.
- ☒ A note indicating that no driveway or drive access may be located within twenty-five feet (25') of an existing fence which is greater than three feet (3') in height if to do so would result in the fence being within the Clear Vision Area associated with the driveway or drive access as described in Section 22-14-19.
- ☒ A neighborhood meeting is required for preliminary plats if a new public street is proposed or if changes are proposed to an existing public street.
- ☒ Any parcel of property which was originally part of a parcel now being subdivided, and which was divided off from the parcel being subdivided since January 1, 1954, shall be included in the preliminary plat of the proposed subdivision unless it has already been recorded as part of another subdivision or unless it is owned by someone other than the developer.
- ☒ The DRC may require that the owner dedicate to the City any or all of the street rights-of-way or easements designated on the preliminary plat as a condition of approval of the preliminary plat. See Orem City Code 17-4-6 for more details.
- ☒ The City may require that the area of future streets shown in the Orem Transportation Master Plan or the Orem Street Connection Master Plan that are not to be constructed or dedicated concurrent with the development contemplated by the preliminary plat, be shown on the preliminary plat as "corridor preservation." See Orem City Code 17-4-8 for details.

☐ Final Plat

- ☐ **A final plat may not required for site plan approval.** A final plat may be submitted for approval concurrently with the preliminary plat and site plan, provided the final plat meets the requirements of Orem City Code. If the developer chooses to submit the preliminary and final plats concurrently, the City maintains the right to deny the request for approval of the plats, and the developer shall bear all risks associated with their preparation and submittal. If a final plat is desired to be approved as part of the site plan, the following items must be contained in the plat or checked off:
- ☐ The final plat shall be drawn on a sheet approved by the Utah County Recorder's Office.
- ☐ The final plat shall be drawn with all lines, dimensions and markings made in waterproof black drawing ink.
- ☐ The final plat shall be drawn to scale. The scale shall be indicated on the plat and shall not be less than one inch (1") = sixty feet (60').
- ☐ An arrow indicating north on each sheet.
- ☐ The name of the subdivision.
- ☐ The subdivision boundary lines showing the proper bearings and dimensions, which lines shall be of heavier line weight than any other lines on the drawing, and which shall be referenced to two section corner monuments. The section corner monuments and the point of beginning shall indicate computed "State Plane Coordinates." All bearing change locations of the subdivision boundary shall indicate computed "State Plane Coordinates."
- ☐ The names, widths, lengths, bearings and curve data of all streets and other areas intended for public use.

- □ The numbers of all lots, blocks, and streets, which numbering shall be in accordance with the City street numbering system, as designated by the City Engineer. Streets shall not be given names other than the appropriate number designation (e.g. 400 North) for the street, except in the case of streets that cannot be readily assigned numerical designations because of a configuration which is not aligned with north-south or east-west coordinates.

- □ The bearings, dimensions, and square footage of each lot.

- □ The bearings, dimensions, and locations of all easements within the subdivision.

- □ A "Certificate of Survey" with a metes and bounds description, the signature of a land surveyor licensed in the State of Utah, and the land surveyor's seal.

- □ A provision containing the notarized signatures of all of the owners, dedicating all streets, public utility easements and other public areas to the City for the perpetual use of the City.

- □ A notice of all covenants, conditions and other restrictions that may be relevant and applicable to the property contained within the final plat.

- □ An "Acceptance by the City of Orem" approval block for the signatures of the Development Services Director, City Engineer, and attestation by the City Recorder. A signature line for the Planning Commission Chairperson shall be provided if the plat replaces all or part of a vacated plat. A signature line for the City Attorney to sign approved as to form shall be provided outside of the approval block. In the case of a PRD development, there shall be a City Council approval block for the signatures of the Mayor and City Recorder.

- □ A lined block in the lower right hand corner of the first sheet in substantially the following form: "CONDITIONS OF APPROVAL"

- □ The following documents shall be included with the application for final plat approval:

    - □ Construction drawings showing existing ground and/or asphalt elevations, planned grades and elevations of proposed improvements and the location of all public utilities. Improvements shown on the construction drawings shall be in accordance with the preliminary plat. The City Engineer may adopt a policy governing additional requirements for Construction drawings. All Construction drawings shall have the designing engineer or architect state license seal stamped on all submitted sheets. No final plat shall be approved by the City Engineer until the construction drawings have been approved by the City Engineer.

    - □ Documents evidencing conveyances or consents from owners of property interests within the subdivision when such are required by law.

    - □ Any other documents the City may reasonably require to ensure compliance with the terms and purposes of this Chapter.

- □ Unless previously dedicated, the developer shall dedicate to the City the full width of all street rights-of-way on the final plat; provided, however, that in cases where a proposed street in the subdivision abuts undeveloped property where no street currently exists and evidence is provided showing that the owner of the abutting property has no intention of developing it within the near future, the City Engineer may waive the full width dedication requirement and allow the dedication of a lesser width if he or she finds that such is necessary to promote the public interest. In no case, however, shall the lesser width allowed be less than thirty feet (30').

- □ If there are a existing irrigation facilities on the property, there must be irrigation easements over them. If these facilities are to be abandoned, a signed letter from the irragation company(s) granting permission for that abandonment must be obtained and submitted with the plat.

☒ Submit with Application

- ☒ A completed Development Review Application.
- ☒ Payment of non-refundable Application Fee.
- ☒ All required drawings.
- ☒ A completed Industrial Waste Questionnaire (Pre-Treatment Questionnaire included with this packet).
- ☒ Preliminary title report prepared by a title company licensed to practice in the State of Utah which shows that the owner/applicant owns or represents the owner(s) of all of the property contained within the preliminary plat. The City may require that the owner/developer resolve any boundary overlaps, gaps or other title discrepancies before approval of the preliminary plat. Completed Long Term SWPPP.
- ☒ Complete set of plans emailed to the City.
- ☒ A Storm Water Pollution Prevention Plan and a Long Term Storm Water Management Plan as previously described in this checklist and as required by Chapter 23 of the Orem City Code. The Storm Water Pollution Prevention Plan shall be drawn on a separate sheet and to the same scale as the site plan.
- ☒ A traffic study if applicable.
- ☒ Proposed plat documents if desired.
- ☒ Completed Storm Water Questionnaire.
- ☒ Completed Pretreatment Questionnaire.
- ☒ A copy of the Neighborhood Meeting notice, the role from the meeting, and the meeting minutes.

• Expiration Dates & Miscellaneous Information

- **An application for site plan approval shall expire if the application has not been approved or scheduled for review and approval by the approving authority within twelve months after the date it was submitted. An application for site plan approval shall also expire immediately following the passage of six months of no activity with respect to the application.** The City shall provide written notice of a pending expiration to the applicant at least (30) days prior to the date that the application is deemed to have expired. Upon expiration, an application for site plan approval shall be considered null and void and a new application must be submitted and fees paid.
- In order to mitigate the negative impact a proposed development will have on the surrounding area, the City may require the applicant to dedicate land to the City if certain findings are made. See Orem City Code 22-14-20(J).
- Failure to obtain a building permit for an approved site plan within two (2) years of the date of approval of the site plan shall terminate all proceedings and render approval of the site plan null and void.
- All public improvements shown on an approved site plan shall be completed within one year of the date of issuance of the building permit or at such earlier time as the approving body may designate. If the improvements are not completed within the time specified, the City shall have the option of taking action on the bond to complete the improvements, or voiding the approval. Upon request, the Planning Commission may grant an extension for the completion of improvements for up to one (1) year. An extension of one year may be granted only if the applicant demonstrates good cause for not completing the improvements and demonstrates the ability to complete the improvements within the extended time period.

- The City may require that the area of the future streets shown in the Orem Transportation Master Plan or the Orem Street Connection Master Plan that are not to be constructed or dedicated concurrent with the development contemplated by the site plan, be shown on the site plan as "corridor preservation." The City may prohibit or limit the construction or installation of improvements in the corridor preservation area in order to preserve such area for the construction of future streets. The City's right to require corridor preservation under this section shall be subject to the requirements of Utah Code Sections 72-5-401 through 72-5-406 inclusive.

- An application for preliminary plat approval shall expire if the application has not been approved or scheduled for review and approval by the approving authority within twelve months after the date it was submitted. An application for preliminary plat approval shall also expire immediately following the passage of six months of no activity with respect to the application. The City shall provide written notice of a pending expiration to the applicant at least (30) days prior to the date that the application is deemed to have expired. Upon expiration, an application for preliminary plat approval shall be considered null and void and a new application must be submitted and fees paid.

- An approved preliminary plat is valid for one (1) year. The Planning Commission may grant one (1) year extensions of the preliminary plat, provided the plat still complies with all applicable ordinances. No person or entity obtains a vested right to develop the property by reason of obtaining preliminary plat approval. See Orem City Code 17-4-7 for details.

- An application for final plat approval shall expire if the application has not been approved within twelve months after the date it was submitted. An application for final plat approval shall also expire immediately following the passage of six months of no activity with respect to the application. The City shall provide written notice of a pending expiration to the applicant at least (30) days prior to the date that the application is deemed to have expired. Upon expiration, an application for final plat approval shall be considered null and void and a new application must be submitted and fees paid.

- No final subdivision plat shall be recorded until (1) the developer of the subdivision has tendered the bond required by Article 17-6 and entered into an agreement with the City in which the developer agrees to install the improvements as required by this Chapter, and to indemnify and hold the City harmless from any claims, suits or judgments arising from the condition of the property dedicated to the City, from the time that the property is dedicated to the City to the time when the improvements on the dedicated property are finally accepted by the City (including the passage of the warranty period); and (2) the owner(s) of the subdivision has given written permission to the City or its representatives to enter upon the property included within the final plat to complete any subdivision improvements required by this Chapter in the event that the owner/developer fails to satisfactorily complete such improvements in the time allowed by this Chapter.

- The final plat shall expire and be void one (1) year after approval by the City Engineer, unless the plat has been recorded.

- Lots having existing residential or commercial structures must be included in a final plat before fifty percent (50%) of the lots in the preliminary plat in which the structure is located have been included in an approved final plat.

TRAFFIC STUDY

Lakeview Corner
Geneva Road & 2000 South
Traffic Impact Study

Orem, UT

April 2020

TRANSPORTATION ENGINEERING

A-Trans Engineering
P.O. Box 521651
Salt Lake City, Utah 84152
(801) 949-0348 telephone
(801) 582-6252 fax

Lakeview Corner
Geneva Road & 2000 South
Traffic Impact Analysis

Orem, Utah

Category II

April 2020

Prepared by:

A-Trans Engineering
Joseph Perrin, PhD, PE, PTOE
P.O. Box City, 521651
Salt Lake City, Utah 84152
(801) 949-0348
atrans@comcast.net

Table of Contents

I. Introduction and Summary 1
II. Proposed Project 3
III. Study Area Conditions 5
IV. Analysis of Existing Condition 8
V. Projected Traffic 11
VI. Growth 14
VII. Traffic Analysis 18
VIII. Conclusions 26
IX. Recommendations 27

Table of Figures

Figure 1: Conceptual Site Plan 4
Figure 2: Site Location..... 6
Figure 3: Existing Geometry..... 7
Figure 4: Existing Traffic..... 10
Figure 5: Origin Destination 12
Figure 6: Site Trip Distribution..... 13
Figure 7: 2025 Background Traffic 15
Figure 8: 2020 Total Traffic 16
Figure 9: 2025 Total Traffic 17

Table of Tables

Table 1: University Parkway / Geneva Road Approach Volumes 8
Table 2: Intersection LOS-Delay Relationship 9
Table 3: Existing Level of Service 9
Table 4: Trip Generation for Site 11
Table 5: Growth Projections 14
Table 6: Geneva Road / 2000 South Intersection Analysis 19
Table 7: 3100 West / 2000 South Intersection Analysis 19
Table 8: Multifamily Access / Geneva Road Intersection Analysis 20
Table 9: 2000 South / Apartment Access (Site Access 1) Intersection Analysis 20
Table 10: Geneva Road / Site Access 2 Intersection Analysis 20
Table 11: 2025 Queue Analysis 21
Table 12: Signal Warrant Volumes 22

I. Introduction and Summary

The proposed Lakeview Corner development is planned as a 22 pump gas station and convenience store. The proposed site is located on the northeast corner of Geneva Road and 2000 South in Orem, Utah. The proposed gas station with C-store is projected to generate 274 AM and 380 PM peak trips with 4,518 daily trips. There are two proposed access points to the site, one along 2000 South and one along Geneva Road

Geneva Road / 2000 South operates with critical WBL at LOS C in the AM peak period and LOS F in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 with and without the site the intersection operates with critical WBL at LOS D in the AM peak period and LOS F in the PM peak period. If a signal is built at this location, which is planned in the future, it will operate with LOS A in 2025 with and without the site.

The site traffic increases traffic at the intersection by a projected 5.2% in the AM and 4.3% in the PM peak period. 3100 West / 2000 South operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 without the site the intersection operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. With the addition of the site the intersection operates with critical NBL at LOS C in the AM peak period and LOS B in the PM peak period.

The Multi-family Access / Geneva Road operates with a critical WBL at LOS C in the AM peak period and LOS C in the PM peak period. With the addition of the site the intersection operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period. In 2025 with and without the site the intersection operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period. The apartment access along 2000 South operates with NBL delay at LOS B with and without the site.

The SBL movement from site on 2000 South operates at LOS C throughout 2025. The site access along Geneva Road operates with WBL delay at LOS C in the AM and LOS D in the PM peak period. In 2025 the access operates with WBL delay at LOS C in the AM and LOS E in the PM peak period. If a signal is not built at Geneva Road / 2000 South, delay for westbound left traffic to the south will begin to experience high delay by 2025. With a signal at this location, traffic making a westbound left headed to the south from the site can utilize the access on 2000 South and the signal to travel to the south.

The following non-site related improvements are recommended:

- Due to the existing volumes at the intersection of Geneva Road / 2000 South a signal is warranted in the AM and PM peak period and the intersection operates at high side street delay. Consideration for a signal is recommended at this location.

The following site related improvements are recommended:

- Access 1 on 2000 South does not meet the required access spacing per Orem City Guidelines but is located to the eastern most extent of the property. The misalignment of the apartment access to the south and the proposed access are offset with the north leg to the west and the south leg to the east, this is the better type of offset as there is no overlapping of the left turn ingresses and therefore no shared storage location required for the EBL at the site and the WBL at the apartments. This offset will however increase the conflicts for NBL and SBL when compared to a typically aligned access. It is recommended that if the 2000 South access allows eastbound left turning movements, then 2000 South between Geneva Road and 3100 West, should be restriped as a 3 lane facility. This would restrict parking along this section of the road.
- Access 2 does not meet UDOT's required access spacing and therefore will require a variance. Per UDOT standards, this access will requires a NBR deceleration land and a SBL deceleration lane. The center turn lane has recently been constructed and the site frontage improvements should include a shoulder area that can be used for the right turn deceleration lane.

II. Proposed Project

The proposed site is located on the northeast corner of Geneva Road and 2000 South in Orem, Utah. The site is planned to include a 22 pump gas station and is projected to generate 274 AM and 308 PM peak hour trips with 4,518 daily trips.

The site is planning two access points, one along 2000 South and one along Geneva Road. Along 2000 South, the distance between access points is measured center to center per Orem City standards. Access 1 is located 290 feet east of Geneva Road, it is offset 60 feet to the west of the apartment access to the south and 3100 West is located approximately 300 feet east of the apartment access or 360 feet east of Access 1. Along Geneva Road, the distance between access points/intersections is measured from end of radius to end of adjacent radius per UDOT standard methodology. Access 2 is located approximately 160 feet north of 2000 South and 130 feet south of the apartment access on the west side of the roadway directly to the north. Figure 1 shows the conceptual site plan.



A-TRANS TRANSPORTATION ENGINEERING
P.O. BOX 521651, SLC, UT 84152
Phone: 801-949-0348 Fax: 801-582-6252

Figure 1

Conceptual Site Plan

III. Study Area Conditions

The study area includes the following intersection.

- Geneva Road / 2000 South
- 2000 South / 3100 West
- Geneva Road / Apartment Access
- 2000 South / Apartment Access (Site Access 1)
- Geneva Road / Site Access 2

Figure 2 shows the location of the site. Figure 3 shows existing intersection geometry.

Geneva Road

Geneva Road or SR 114 is currently a three lane facility with one lane in each direction with a center turn lane. The 2017 AADT is 13,000 vehicles per day with a posted speed limit is 45 MPH. It is classified by UDOT as a category 5 roadway and by Orem City as a 5 Lane Principal Arterial in the future.

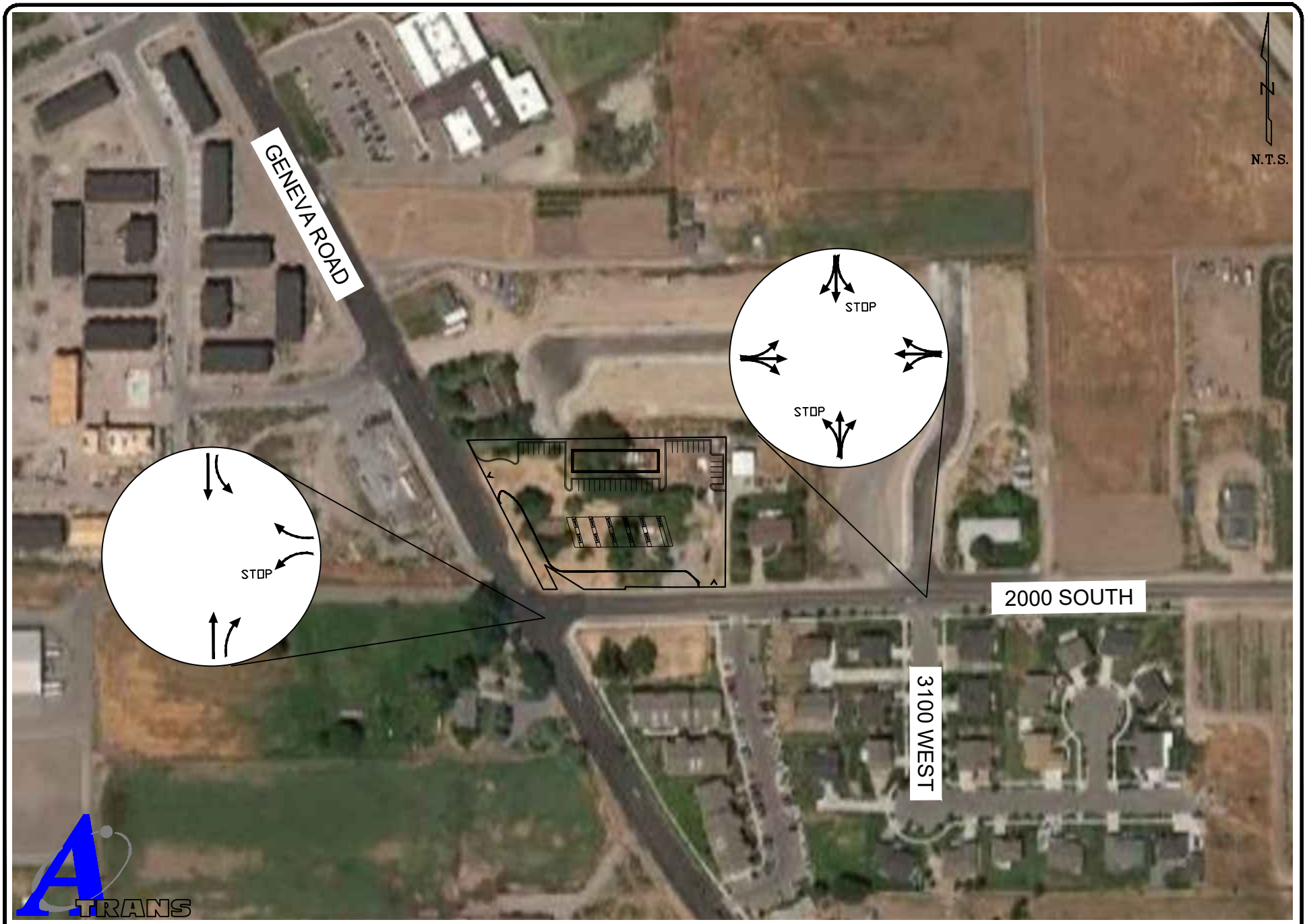
2000 South

2000 South or Rt 2982 is currently a two lane facility with one lane in each direction. The 2017 AADT is 2,500 vehicles per day with a posted speed limit is 25 MPH. It is classified by Orem city as a 2-3 Lane Minor Arterial.



A-TRANS TRANSPORTATION ENGINEERING
P.O. BOX 521651, SLC, UT 84152
Phone: 801-949-0348 Fax: 801-582-6252

Figure 2 Site Location



A-TRANS TRANSPORTATION ENGINEERING
P.O. BOX 521651, SLC, UT 84152
Phone: 801-949-0348 Fax: 801-582-6252

Figure 3

Existing Geometry

IV. Analysis of Existing Condition

The existing traffic counts were performed March 31, 2020 during the AM and PM peak periods. Due to the disruption to current traffic conditions throughout the country due to the COVID-19 pandemic, adjustments to the collected data were necessary to create existing traffic volumes that are reasonable and reflective of conditions that would occur if this disruption did not occur. This was done utilizing the traffic data available on UDOT's Automated Traffic Signal Performance Measures Website. Data from University Parkway / Geneva Road on February 11, 2020 and February 12, 2020 was compared against data extracted on March 31, 2020 (the same day of the traffic count). This data is shown in Table 1.

Table 1: University Parkway / Geneva Road Approach Volumes

	Typical Weekday				Day of Data Collection		Difference between average of Typical Weekday and Actual Data Collection Day	
	11-Feb-2020		12-Feb-2020		31-Mar-2020			
	AM	PM	AM	PM	AM	PM	AM	PM
Northbound	539	415	569	443	175	165	32%	38%
Southbound	841	1139	857	1207	440	824	52%	70%
Eastbound	178	599	190	535	131	277	71%	49%
Westbound	691	725	730	742	383	441	54%	60%
Total	2249	2878	2346	2927	1129	1707	**49%**	**59%**

The comparison showed that the AM traffic was approximately 49% of the typical traffic and the PM traffic was approximately 59% of the typical traffic. The existing traffic counts were multiplied by the resulting reduction to generate volumes more similar to those that would have been expected. These volumes were compared against the existing AADT data to check for accuracy. Traffic counts were performed at the apartment access south of 2000 South, at 3100 West and at the multifamily access on Geneva Road. These raw counts are shown in Appendix A. As a result of the change in traffic patterns due to the COVID-19 pandemic, the data gathered, even with the multipliers applied, did not yield volumes that would be expected for these types of developments. Therefore, trip generation (per ITE) and distribution (per the assumed origin destination) was done for each of the surrounding parcels and these values were used as the existing traffic. The apartments to the south of 2000 south were assumed to include 48 multifamily units. The single family to the north and south of 2000 South that accesses at 3100 West were assumed to have 22 units each on both the north and south side of 2000 South. The multifamily units along Geneva Road were estimate to include 210 multifamily units at build-out. The existing counts utilized in the study from the existing counts and this adjustment process is shown in Figure 4.

The 2010 Highway Capacity Manual defines the Level of Service (LOS) for both signalized and unsignalized intersections as a range of average experienced delay. LOS is a qualitative rating of traveler satisfaction from A to F whereby LOS A is good and LOS F poor. Table 2 shows the LOS range by delay for unsignalized and signalized intersections and accesses.

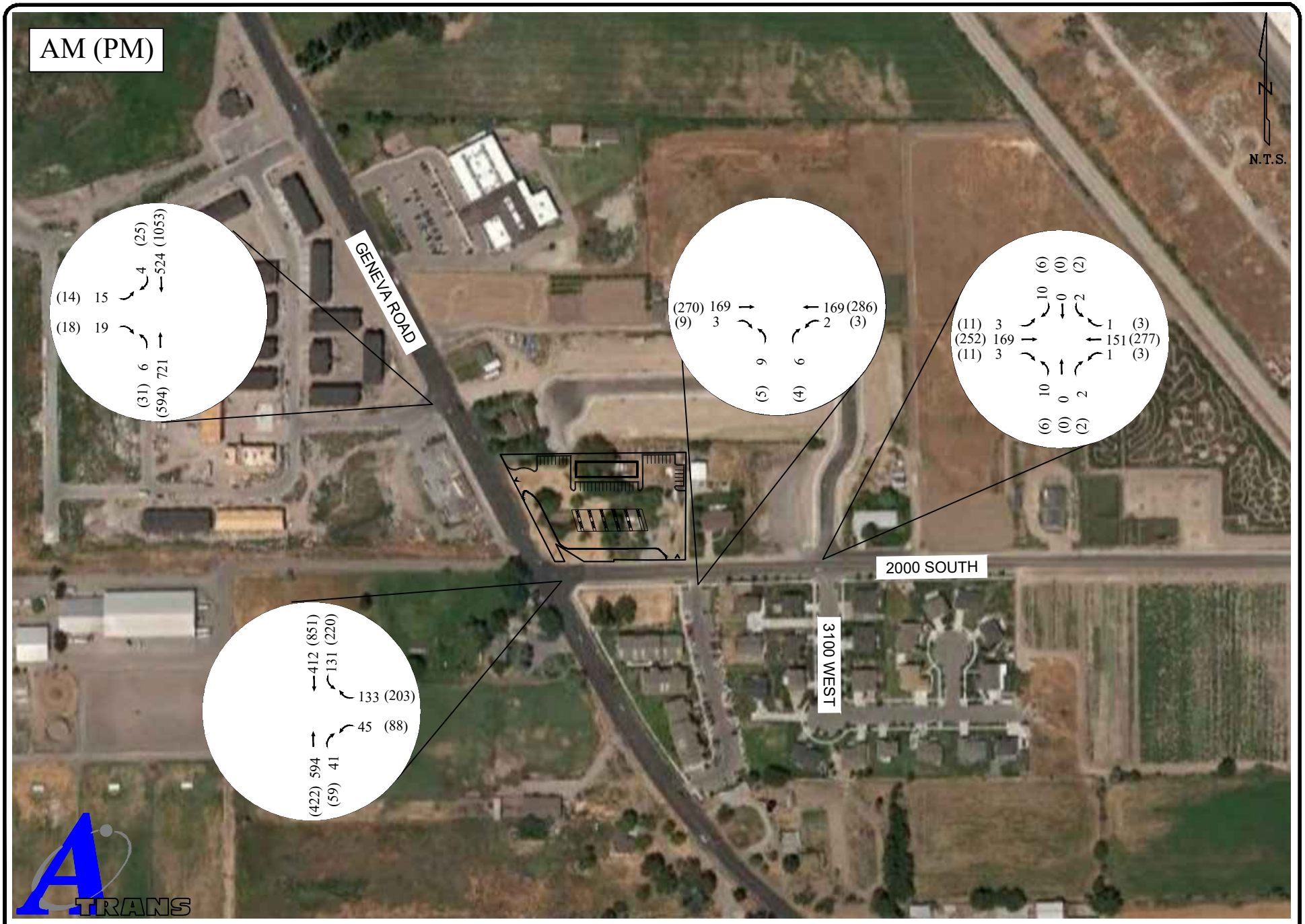
Table 2: Intersection LOS-Delay Relationship

	Unsignalized	Signalized
Level of Service	Total Delay per Vehicle (sec)	Total Delay per Vehicle (sec)
A	≤ 10.0	≤ 10.0
B	> 10.0 and ≤ 15.0	> 10.0 and ≤ 20.0
C	> 15.0 and ≤ 25.0	> 20.0 and ≤ 35.0
D	> 25.0 and ≤ 35.0	> 35.0 and ≤ 55.0
E	> 35.0 and ≤ 50.0	> 55.0 and ≤ 80.0
F	> 50.0	> 80.0

Geneva Road / 2000 South operates with critical WBL at LOS C in the AM peak period and LOS F in the PM peak period. Table 3 shows the Existing LOS.

Table 3: Existing Level of Service

Delay (sec/veh)	Geneva Road / 2000 South (WBL)	
AM	21.5	C
PM	70.3	F



A-TRANS TRANSPORTATION ENGINEERING P.O. BOX 521651, SLC, UT 84152 Phone: 801-949-0348 Fax: 801-582-6252	Figure 4	Existing Traffic

V. Projected Traffic

A. Trip Generation

Trip generation for the site was done using The Institute of Transportation Engineers (ITE) *Trip Generation* (10th Edition) handbook. The site is planned to include a 22 pump gas station and is projected to generate 274 AM and 308 PM peak hour trips with 4,518 daily trips. The trip generation for the site is shown in Table 4.

Table 4: Trip Generation for Site

Land Use	Size	Trip Rate	Trips	% IN	% Out	Trips In	Trips Out
AM							
Gas Station	22	12.47	274	51%	49%	140	134
PM							
Gas Station	22	13.99	308	51%	49%	157	151
Daily							
Gas Station	22	205.36	4,518				

B. Trip Distribution

Project site traffic was applied to the origin-destination (O-D) for the site. Origin-destination was determined from evaluating the existing traffic patterns and hourly traffic volumes on each leg of the included intersections as well as the location of retail centers and freeways relative to this site. This was used as a baseline for origin destination and engineering judgment was applied to this to determine the following OD for the site.

- 60% to/from north on Geneva Road
- 20% to/from south on Geneva Road
- 20% to/from east on 2000 South

Origin Destination is shown in Figure 5. Site trip distribution is shown in Figure 6.



A-TRANS TRANSPORTATION ENGINEERING
P.O. BOX 521651, SLC, UT 84152
Phone: 801-949-0348 Fax: 801-582-6252

Figure 5

Origin Destination

Figure 6: Site Trip Distribution

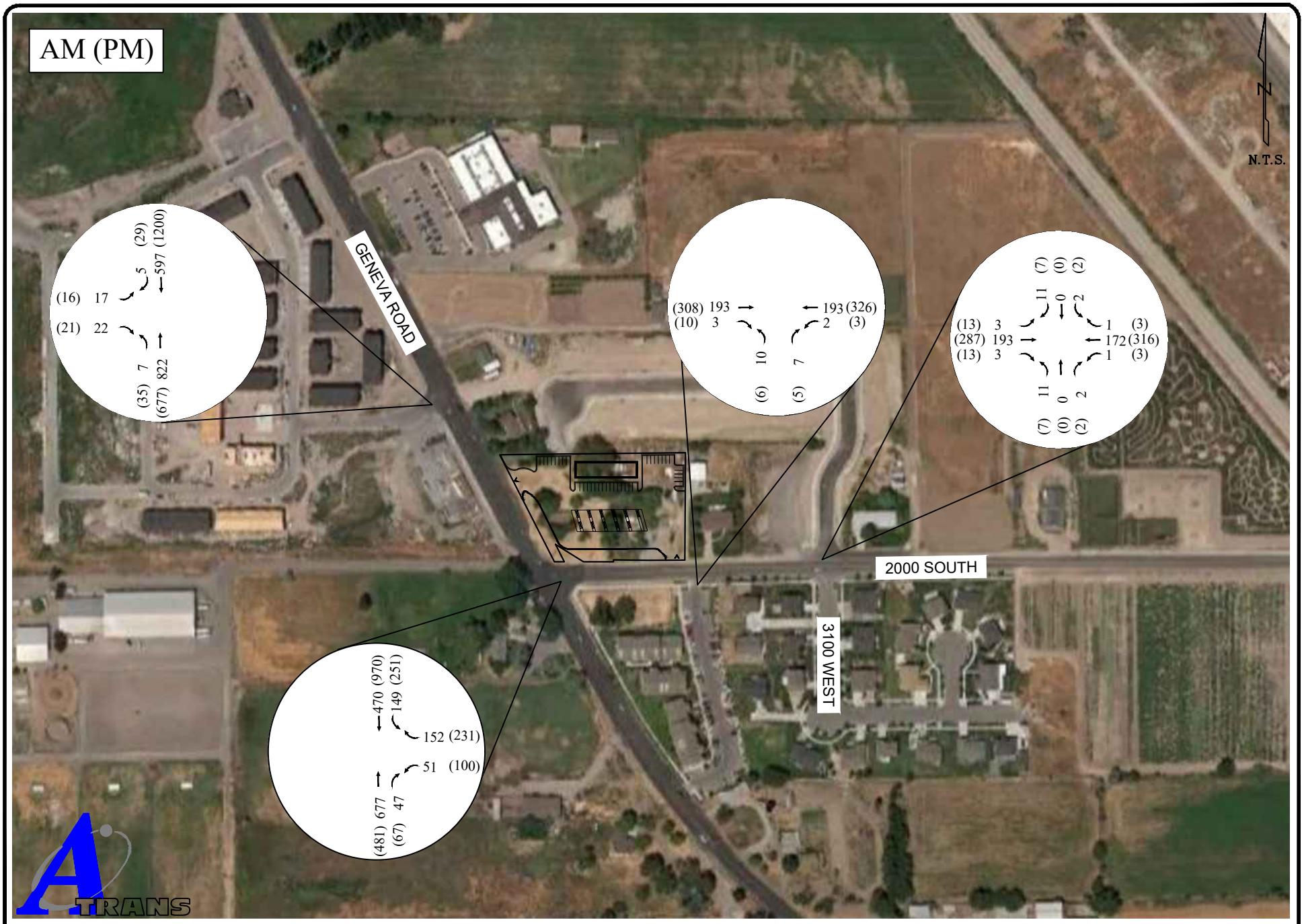
VI. Growth

Growth in the area was determined from UDOT's Traffic on Utah Highways. The volumes and projections utilized to determine growth in the area is shown in Table 5. Based on this information an average growth of 2.65% was found. The growth factor for 2025 is 1.14.

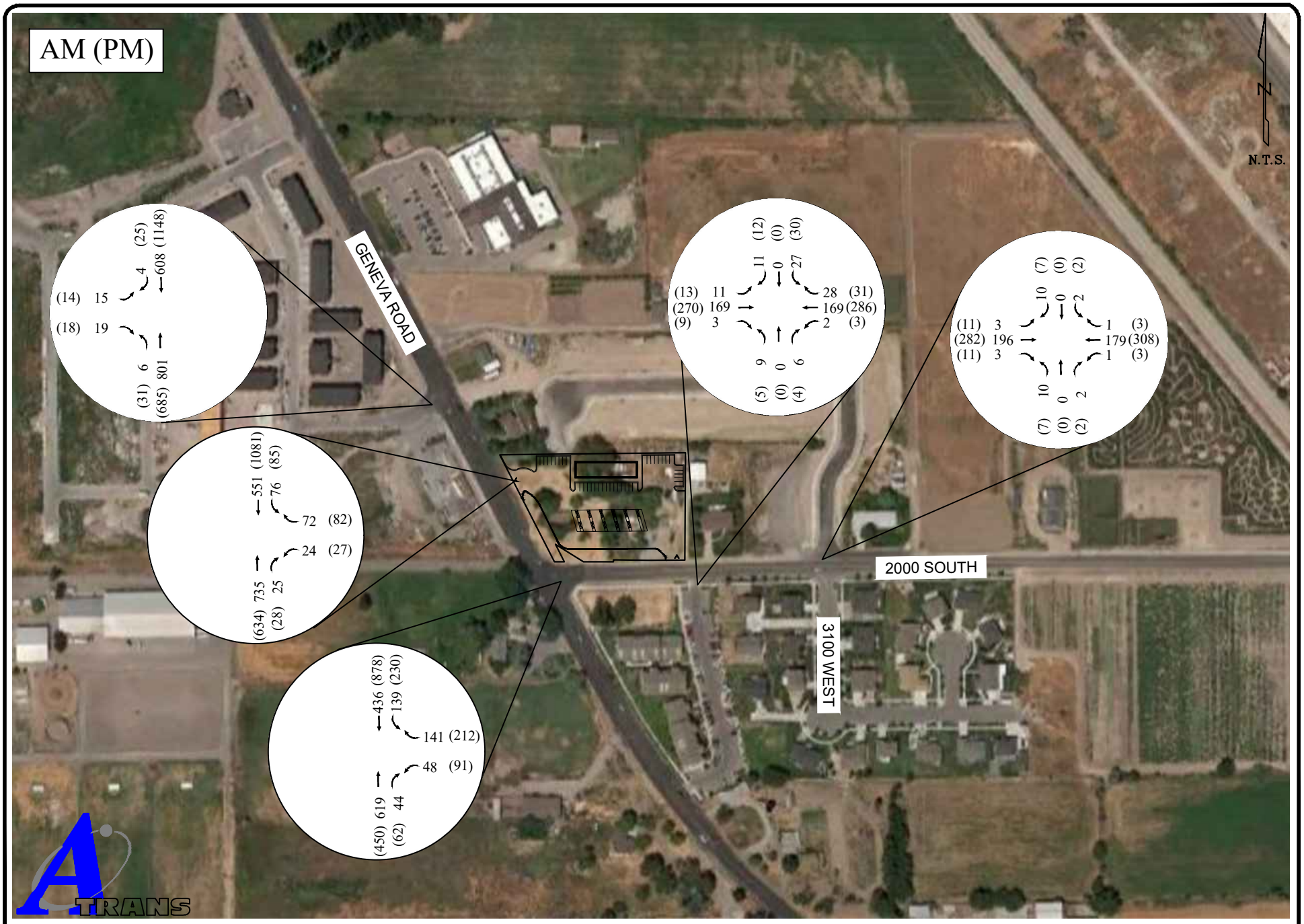
Table 5: Growth Projections

	Geneva Road		2000 South	
Year	AADT	Growth	AADT	Growth
2007	10,000		2,000	
2008	11,000	10%	1,900	-5%
2009	11,000	0%	1,900	0%
2010	11,000	0%	1,900	0%
2011	11,000	0%	2,300	21%
2012	10,000	-9%	2,200	-4%
2013	11,000	10%	2,200	0%
2014	11,000	0%	2,200	0%
2015	12,000	9%	2,300	5%
2016	12,000	0%	2,400	4%
2017	13,000	8%	2,500	4%
	Average	2.83%	Average	2.48%

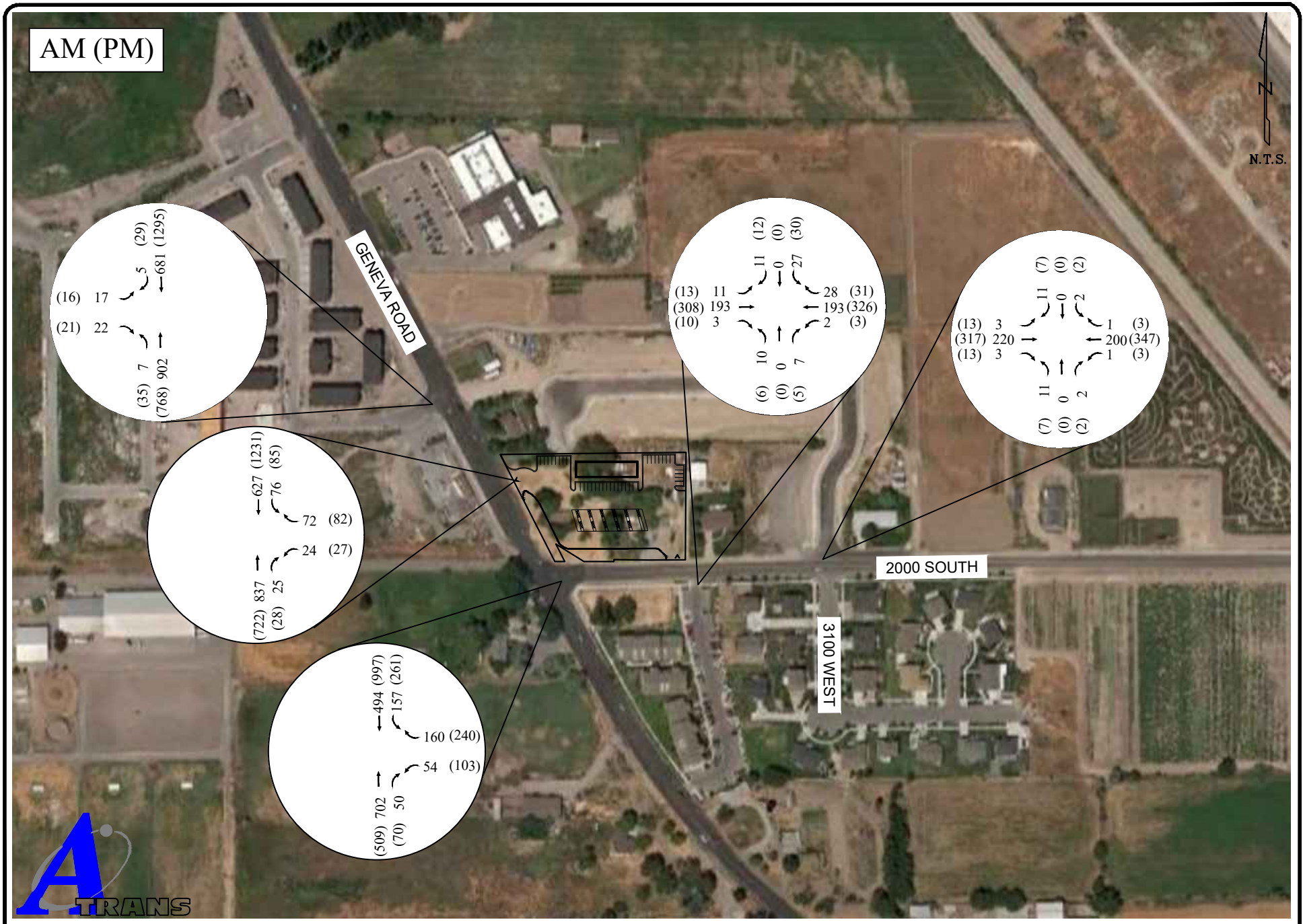
Background traffic is determined by multiplying the existing traffic by the growth factor for 2025. 2025 Background Traffic is shown in Figure 7. Total traffic in the area for the future projection years is derived by adding the non-site volume forecasts to the site trip distribution. 2020 Total Traffic is shown in Figure 9 and 2025 Total Traffic is shown in Figure 9.



A-TRANS TRANSPORTATION ENGINEERING P.O. BOX 521651, SLC, UT 84152 Phone: 801-949-0348 Fax: 801-582-6252	Figure 7	2025 Background Traffic



A-TRANS TRANSPORTATION ENGINEERING P.O. BOX 521651, SLC, UT 84152 Phone: 801-949-0348 Fax: 801-582-6252	Figure 8	2020 Total Traffic



A-TRANS TRANSPORTATION ENGINEERING P.O. BOX 521651, SLC, UT 84152 Phone: 801-949-0348 Fax: 801-582-6252	Figure 9	2025 Total Traffic

VII. Traffic Analysis

A. Level of Service Analysis

The intersection and access analysis evaluates the performance of each intersection and access using the measure of performance of delay and level of service (LOS). Tables 6-10 show the intersection and access analysis.

Analysis Results

- Geneva Road / 2000 South operates with critical WBL at LOS C in the AM peak period and LOS F in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 with and without the site the intersection operates with critical WBL at LOS D in the AM peak period and LOS F in the PM peak period. If a signal is built at this location it will operate with LOS A in 2025 with and without the site. The site traffic increases traffic at the intersection by 5.2% in the AM and 4.3% in the PM peak period.
- 3100 West / 2000 South operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 without the site the intersection operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. With the addition of the site the intersection operates with critical NBL at LOS C in the AM peak period and LOS B in the PM peak period.
- Multifamily Access / Geneva Road operates with critical WBL at LOS C in the AM peak period and LOS C in the PM peak period. With the addition of the site the access operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period. In 2025 with and without the site the intersection operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period.
- The site access along 2000 South operates with NBL delay at LOS B with and without the site. The SBL movement for site traffic leaving the site operates at LOS C throughout 2025.
- The site access along Geneva Road operates with WBL delay at LOS C in the AM and LOS D in the PM peak period. In 2025 the access operates with WBL delay at LOS C in the AM and LOS E in the PM peak period. If a signal is not built at Geneva Road / 2000 South, delay for egress traffic to the south will begin to experience high delay by 2025. With a signal at this location, traffic headed to the south from the site can use the access on 2000 South and the signal to travel to the south.

Table 6: Geneva Road / 2000 South Intersection Analysis

		WBL	WBR	NBT	NBR	SBL	SBT	INT
2020 Existing	AM	21.5 C	16.0 C			9.7 A		
	PM	70.3 F	14.4 B			9.5 A		
Opening Day	AM	23.2 C	16.9 C			9.9 A		
	PM	87.1 F	15.3 C			9.7 A		
2025 Background	AM	26.2 D	19.1 C			10.4 B		
	PM	163.6 F	16.8 C			10.1 B		
2025 Total	AM	28.7 D	20.5 C			10.6 B		
	PM	210.0 F	18.1 C			10.4 B		
2025 Background*	AM	42.9 D	13.8 B	4.4 A	1.0 A	4.4 A	3.3 A	6.1 A
	PM	45.0 D	11.7 B	4.2 A	0.9 A	6.1 A	9.5 A	9.5 A
2025 Total*	AM	43.0 D	13.7 B	4.6 A	1.0 A	4.9 A	3.4 A	6.3 A
	PM	45.0 D	11.6 B	4.4 A	0.9 A	6.8 A	10.3 B	10.0 A

*Indicates intersection control improved to include a signal.

Table 7: 3100 West / 2000 South Intersection Analysis

		NBL	EBL	WBL	SBL
2020 Existing	AM	11.0 B	7.6 A	7.6 A	9.5 A
	PM	13.2 B	7.9 A	7.8 A	11.0 B
Opening Day	AM	11.5 B	7.6 A	7.7 A	9.7 A
	PM	14.0 B	8.0 A	7.9 A	11.4 B
2025 Background	AM	11.5 B	7.6 A	7.7 A	9.7 A
	PM	14.3 B	8.0 A	7.9 A	11.6 B
2025 Total	AM	12.1 B	7.7 A	7.7 A	9.9 A
	PM	15.5 C	8.1 A	8.0 A	11.9 B

Table 8: Multifamily Access / Geneva Road Intersection Analysis

		NBL	EBL	EBR
2020 Existing	AM	8.6 A	17.8 C	12.2 B
	PM	11.4 B	24.9 C	21.1 C
Opening Day	AM	8.9 A	19.7 C	13.2 B
	PM	12.0 B	28.2 D	23.8 C
2025 Background	AM	8.9 A	20.0 C	13.1 B
	PM	12.5 B	30.0 D	25.7 D
2025 Total	AM	9.2 A	22.3 C	14.2 B
	PM	13.3 B	34.3 D	29.4 D

Table 9: 2000 South / Apartment Access (Site Access 1) Intersection Analysis

		NBL	EBL	WBL	SBL
2020 Existing	AM	10.5 B		7.6 A	
	PM	12.3 B		7.9 A	
Opening Day	AM	10.9 B	7.7 A	7.6 A	11.4 B
	PM	12.9 B	8.0 A	7.9 A	14.4 B
2025 Background	AM	10.9 B		7.7 A	
	PM	13.2 B		8.0 A	
2025 Total	AM	11.3 B	7.7 A	7.7 A	12.0 B
	PM	13.8 B	8.1 A	8.0 A	15.8 C

Table 10: Geneva Road / Site Access 2 Intersection Analysis

		NBL	WBL	SBL
Opening Day	AM	21.6 C	17.0 C	10.0 A
	PM	33.3 D	15.3 C	9.6 A
2025 Total	AM	24.6 C	19.4 C	10.6 B
	PM	41.3 E	17.1 C	10.0 B

B. Queue Analysis

Based on the projected traffic, queue storage length requirements can be determined. To determine if sufficient storage space exists to accommodate the projected demand, the intersection and accesses included in this traffic study are analyzed for queue storage capacity. The queue lengths are provided by the HCM analysis and are done through Synchro. Once the storage length is determined, this can typically be compared to the available storage length within the provided turn pockets or between intersections. The projected 2025 queue is shown in Table 11.

Table 11: 2025 Queue Analysis

		WBL	NBR	SBL
Geneva Road / 2000 South	Available	150		TWLT
	Unsignalized	175		50
	Signalized	125	50	125

The primary queueing concern for this area is the interaction between the access points and the surrounding intersections and accesses.

- Along Geneva Road, the NBL at the multifamily is estimated at 1 vehicle and the SBL at Access 2 is estimated at 1 vehicle. There is 130 feet located between the accesses and no queue overlap is anticipated but the deceleration will occur within the same two-way turn lane area.
- Along 2000 South, the EBL at Access 1 is estimated at 1 vehicle and the WBL at Geneva Road is estimated at 7 vehicles if no signal is built or 5 vehicles is a signal is built. There is approximately 225 feet between the stop bars and therefore no overlap is expected but again the deceleration will occur within the two-way turn lane which is recommended to be restriped to allow for one along 2000 South between Geneva Road and 3100 West.
- Along 2000 South, the EBL at 3100 West is estimated at 1 vehicle and the WBL at Access 1 is estimated at 1 vehicle. There is 240 feet between Access 1 (southern apartment access) and 3100 West and therefore no overlap is expected.

C. Signal Warrant Analysis

A peak hour warrant was performed for Geneva Road / 2000 South. The signal warrant is performed per MUTCD 4C.01 – 4C.10 on pages 436-447 of the 2009 Edition.

Warrant 3, Peak Hour

MUTCD 4C.04 states, the need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
   1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and
   2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and
   3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

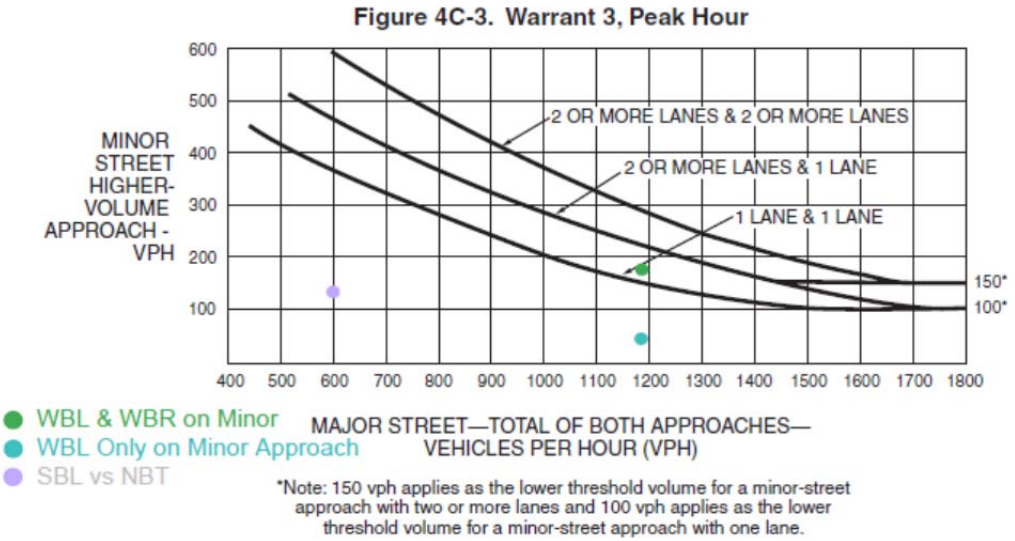
B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average

The Peak Hour Volume Signal Warrant is performed for the AM and PM peak periods for the existing time period. It is done 3 different way, 1. WBL, WBT and WBR volumes are added together and compared against the sum of the NB and SB traffic. 2. WBL is compared against the sum of the NB and SB traffic. 3. SBL traffic is compared against the conflicting NBT movement. The warrant is met in the AM peak for Method 1 and 3 and in the PM peak for Method 3. Table 12 shows the volumes utilized in the warrant analysis. Graph 1 shows the AM Warrant. Graph 2 shows the PM Warrant. Based on this analysis the signal is warranted per Method 1 in both the AM and PM peak periods.

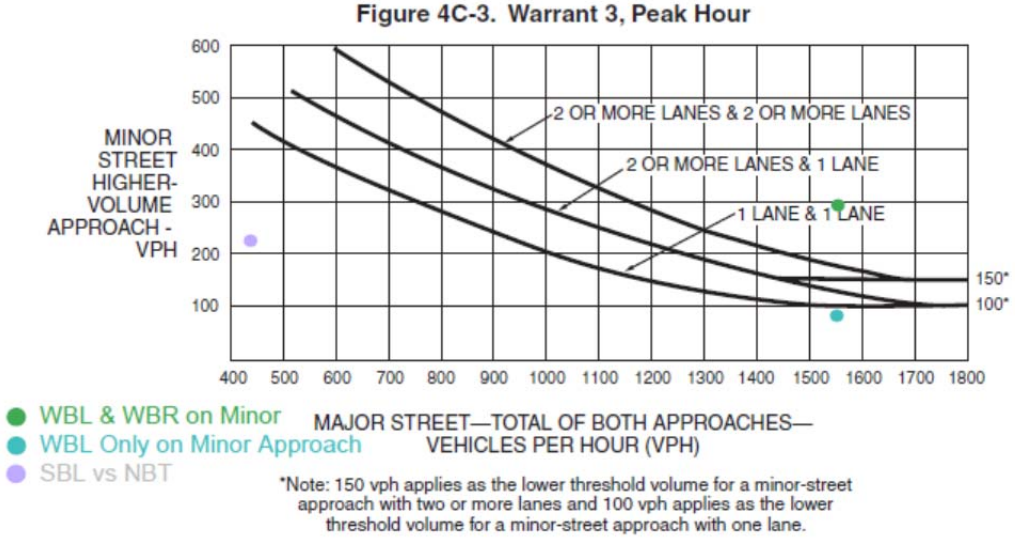
Table 12: Signal Warrant Volumes

	Method	Major	Minor	Warranted
AM	WBL and WBR on Minor Approach	1178	178	Yes
	WBL only Minor Approach	1178	45	No
		SBL	NBT	Warranted
	SBL with opposing NBT	131	594	No
PM		Major	Minor	Warranted
	WBL and WBR on Minor Approach	1552	291	Yes
	WBL only Minor Approach	1552	88	No
		SBL	NBT	Warranted
	SBL with opposing NBT	220	422	No

Graph 1: Existing Volumes Peak Hour Warrant



Graph 2: PM Peak Hour Warrant



D. Access and Roadway Category

UDOT Standard (Geneva Road)

According to the UDOT, SR 114 is categorized as a Category 5 roadway. As per UDOT Administrative Rule R930-6, a Category 3 roadway requires signal spacing at 2,640 feet, street spacing is required at 660 feet and access spacing is required at 350 feet or by variance. The distance between access points/intersections is measured from end of radius to end of adjacent radius. Access 2 is located along SR 114 approximately 160 feet north of 2000 South and 130 feet south of the apartment access on the west side of the roadway directly to the north. The access does not meet the required access spacing and therefore a variance is required.

According to UDOT Administrative Rule R930-6 a Category 5 roadway requires:

- A left turn deceleration lane with taper and storage length is required for any access with a projected peak hour left ingress turning volume greater than 10 vehicles per hour. The taper length must be included in the required deceleration length.
- A right turn deceleration lane and taper length is required for any access with a projected peak hour right ingress turning volume greater than 25 vehicles per hour. The taper length must be included in the required deceleration length.
- A right turn acceleration lane and taper length is required for any access with a projected peak hour right turning volume greater than 50 vehicles per hour when the posted speed on the highway is greater than 40 mph. The taper length must be included in the required acceleration length. A right turn acceleration lane may also be required at a signalized intersection if a free-right turn is needed to maintain an appropriate level of service for the intersection.
- Right turn deceleration and acceleration lanes are generally not required on roadways with three or more travel lanes in the direction of the right turn.
- A left turn acceleration lane may be required if it will be a benefit to the safety and operation of the roadway.
- A left turn acceleration lane is generally not required where the posted speed is less than 45 mph, the intersection is signalized, or the acceleration lane would interfere with the left turn ingress movements to any other access.

Per UDOT standards, the access requires a NBR deceleration land and a SBL deceleration lane.

Orem City Standards (2000 South)

Per Table 1: Access Spacing Based on Functional Classification on page 4 of the Orem City Access Management Standards, access spacing is measured center to center. Along 2000 South which is classified as a Minor Arterial, the required spacing is 500 feet between unsignalized full movement accesses. Access 1 is located 290 feet east of Geneva Road, it is offset 60 feet to the west of the apartment access to the south and 3100 West is located approximately 300 feet east of the apartment access or 360 feet east of Access 1.

Access 1 does not meet the required access spacing per Orem City Guidelines. The misalignment of the apartment access and the proposed access are offset with the north leg to the west and the south leg to the east, this is the optimal type of offset as there is no shared storage location required for the EBL at the site and the WBL at the apartments. This offset will however increase the size of the conflict area for NBL and SBL when compared to a typically aligned access. It is recommended that the access be built with an eastbound left deceleration lane, this can be accommodated by restriping 2000 South between Geneva Road and the access as a 3 lane facility.

E. Safety Discussion

UDOT provides a Safety Index or safety ratings in a statewide safety comparison of major roadways. This takes into account the different traffic patterns and volumes experienced in urban and rural areas. The Safety Index is a combination of four equally weighted safety analysis sub-scores: Crash Rate Score, Severe Crash Rate Score, Crashes per Mile Score and Severe Crashes per Mile Score. The Safety Index is reported on a 0 to 10 scale with 10 representing the worst condition.

This segment of State Street has a Safety Index of 4 out of 10 with a crash rate 40% of the average and a severe crash rate 40% of the average.

VIII. Conclusions

The proposed Lakeview Corner site is located on the northeast corner of Geneva Road and 2000 South in Orem, Utah. The site is planned to include a 22 pump gas station and is projected to generate 274 AM and 308 PM peak hour trips with 4,518 daily trips.

The following comments are made about the site:

- Geneva Road / 2000 South operates with critical WBL at LOS C in the AM peak period and LOS F in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 with and without the site the intersection operates with critical WBL at LOS D in the AM peak period and LOS F in the PM peak period. If a signal is built at this location it will operate with LOS A in 2025 with and without the site. The site traffic increases traffic at the intersection by 5.2% in the AM and 4.3% in the PM peak period.
- 3100 West / 2000 South operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. This is maintained with the addition of the site in 2020. In 2025 without the site the intersection operates with critical NBL at LOS B in the AM peak period and LOS B in the PM peak period. With the addition of the site the intersection operates with critical NBL at LOS C in the AM peak period and LOS B in the PM peak period.
- Multifamily Access / Geneva Road operates with critical WBL at LOS C in the AM peak period and LOS C in the PM peak period. With the addition of the site the intersection operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period. In 2025 with and without the site the intersection operates with critical WBL at LOS C in the AM peak period and LOS D in the PM peak period.
- The site access along 2000 South operates with NBL delay at LOS B with and without the site. The SBL movement for site traffic leaving the site operates at LOS C throughout 2025.
- The site access along Geneva Road operates with WBL delay at LOS C in the AM and LOS D in the PM peak period. In 2025 the access operates with WBL delay at LOS C in the AM and LOS E in the PM peak period. If a signal is not built at Geneva Road / 2000 South, delay for egress traffic to the south will begin to experience high delay by 2025. With a signal at this location, traffic headed to the south from the site can use the access on 2000 South and the signal to travel to the south.
- The queue analysis indicates that there are no expected queue overlap locations between the accesses and the surrounding intersections and accesses.
- Based on this analysis the signal is warranted per Method 1 in both the AM and PM peak periods and per Method 2 in the PM peak period.
- This segment of State Street has a Safety Index of 4 out of 10 with a crash rate 40% of the average and a severe crash rate 40% of the average.

IX. Recommendations

The following non-site related improvements are recommended:

- Due to the existing volumes at the intersection of Geneva Road / 2000 South, a signal is warranted in the AM and PM peak period and the intersection operates at high side street delay. A signal is recommended at this location.

The following site related improvements are recommended:

- Access 1 on 2000 South does not meet the required access spacing per Orem City Guidelines. The misalignment of the apartment access and the proposed access are offset with the north leg to the west and the south leg to the east, this a better type of offset as there is no shared storage location overlap required for the EBL at the site and the WBL at the apartments. This offset will however increase the size of the conflict area for NBL and SBL when compared to a typically aligned access. It is recommended that the access be built with an eastbound left deceleration lane. This can be accommodated by restriping 2000 South as a three lane facility between Geneva Road and 3100 West with a center turn lane and restricting parking along both sides of the street.
- Access 2 does not meet the required access spacing and will require a variance through UDOT. Per UDOT standards, this access will requires a NBR deceleration land and a SBL deceleration lane. The center lane on Geneva Road provides the left turn deceleration. The expected site frontage improvements along Geneva Road should include a shoulder area that can be used as the right turn deceleration lane.

It should be noted that if the signal is installed at 2000 North and Geneva Road it will be a UDOT intersection and both accesses are considered to be within the functional area of the intersection which may restrict them to right-in / right-out operations depending if islands are installed to protect the turn lane area of the intersection.

APPENDICES

Appendix A	Traffic Counts and Projections
Appendix B	Without Site Intersection Analyses
Appendix C	With Site Intersection Analysis

Appendix A Traffic Counts and Projections

AM PEAK HOUR VOLUMES

INTERSECTION: **Geneva Road** **and** **2000 South**

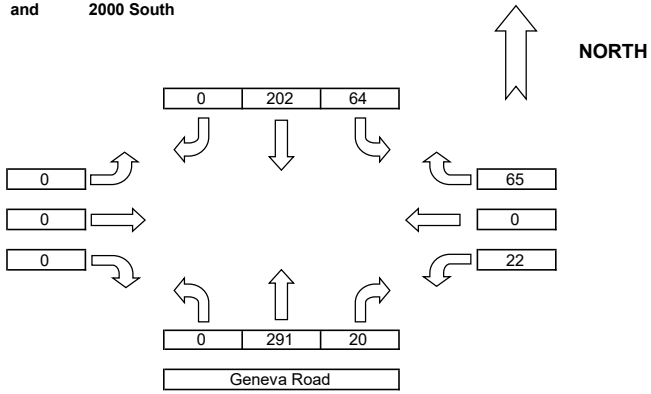
Ped = 0

N-S STREET: **Geneva Road**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **7:00 AM**
TO: **9:00 AM**

PK HR VOLUME:	664
PHF:	0.92
PEAK HOUR:	
FROM:	TO:
7:50 AM	8:50 AM



AM Traffic

COUNT DATA INPUT: Name: Lacie Name: Lacie Name: Lacie Name: Lacie

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
7:00 AM	7:05 AM	2	15	0	1	0	0	2	13	0	0	0	2	35	119	0	0
7:05 AM	7:10 AM	0	24	0	0	2	0	0	8	0	2	0	3	39	115	0	0
7:10 AM	7:15 AM	0	19	0	0	0	0	1	22	0	2	0	1	45	117	0	0
7:15 AM	7:20 AM	0	11	3	0	0	0	3	8	0	1	0	5	31	114	0	0
7:20 AM	7:25 AM	0	19	0	0	0	0	9	7	0	1	0	5	41	131	0	0
7:25 AM	7:30 AM	0	18	3	0	0	0	2	12	0	2	0	5	42	129	0	0
7:30 AM	7:35 AM	0	26	1	0	0	0	3	15	0	1	0	2	48	134	0	0
7:35 AM	7:40 AM	0	21	0	0	0	0	4	12	0	0	0	2	39	152	0	0
7:40 AM	7:45 AM	0	23	2	0	0	0	4	12	0	2	0	4	47	176	0	0
7:45 AM	7:50 AM	0	25	3	0	0	0	13	18	0	1	0	6	66	175	0	0
7:50 AM	7:55 AM	0	30	2	0	0	0	5	17	0	1	0	8	63	152	0	0
7:55 AM	8:00 AM	0	17	3	0	0	0	2	21	0	0	0	3	46	142	0	0
8:00 AM	8:05 AM	0	15	2	0	0	0	8	13	0	2	0	3	43	159	0	0
8:05 AM	8:10 AM	0	25	2	0	0	0	6	9	0	2	0	9	53	170	0	0
8:10 AM	8:15 AM	0	31	2	0	0	0	9	16	0	2	0	3	63	181	0	0
8:15 AM	8:20 AM	0	23	3	0	0	0	4	16	0	3	0	5	54	165	0	0
8:20 AM	8:25 AM	0	27	1	0	0	0	6	22	0	2	0	6	64	168	0	0
8:25 AM	8:30 AM	0	22	1	0	0	0	1	17	0	0	0	6	47	162	0	0
8:30 AM	8:35 AM	0	21	1	0	0	0	6	18	0	7	0	4	57	161	0	0
8:35 AM	8:40 AM	0	29	1	0	0	0	6	12	0	2	0	8	58	174	0	0
8:40 AM	8:45 AM	0	28	1	0	0	0	2	14	0	0	0	1	46	161	0	0
8:45 AM	8:50 AM	0	23	1	0	0	0	9	27	0	1	0	9	70	167	0	0
8:50 AM	8:55 AM	0	14	0	0	0	0	11	13	0	1	0	6	45	97	0	0
8:55 AM	9:00 AM	0	21	1	0	0	0	6	15	0	1	0	8	52	52	0	0

PM PEAK HOUR VOLUMES

Ped = 1

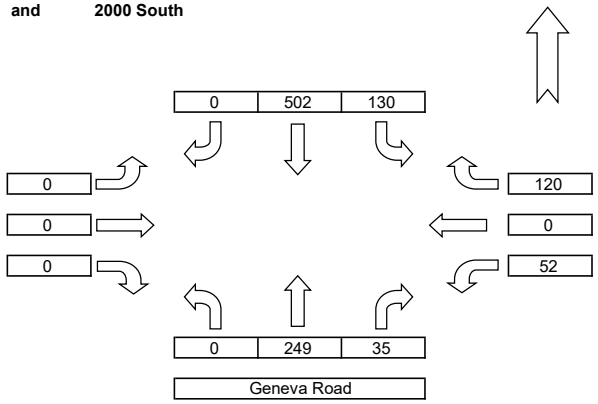
INTERSECTION: **Geneva Road** **and** **2000 South**

N-S STREET: **Geneva Road**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **4:00 PM**
TO: **6:00 PM**

PK HR VOLUME:	1,088
PHF:	0.86
PEAK HOUR:	
FROM:	TO:
4:40 PM	5:40 PM



PM Traffic

COUNT DATA INPUT: Name: Lacie Name: Lacie Name: Lacie Name: Lacie

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
4:00 PM	4:05 PM	0	17	2	0	0	0	6	36	1	1	0	4	67	223	0	1
4:05 PM	4:10 PM	0	35	1	0	0	0	9	26	0	2	0	4	77	243	0	0
4:10 PM	4:15 PM	0	21	2	0	0	0	14	30	0	3	0	9	79	248	0	0
4:15 PM	4:20 PM	0	26	4	0	0	0	4	44	0	1	0	8	87	250	0	0
4:20 PM	4:25 PM	0	19	2	0	0	0	8	45	0	2	0	6	82	260	0	0
4:25 PM	4:30 PM	0	29	2	0	0	0	7	32	0	3	0	8	81	252	0	0
4:30 PM	4:35 PM	0	22	2	0	0	0	7	54	0	2	0	10	97	268	0	0
4:35 PM	4:40 PM	0	30	3	0	0	0	6	28	0	2	0	5	74	255	0	0
4:40 PM	4:45 PM	0	22	4	0	0	0	11	49	0	4	0	7	97	275	0	0
4:45 PM	4:50 PM	0	13	4	0	0	0	14	44	0	3	0	6	84	270	0	1
4:50 PM	4:55 PM	0	16	6	0	0	0	9	51	0	5	0	7	94	258	0	0
4:55 PM	5:00 PM	0	30	4	0	0	0	8	44	0	3	0	3	92	240	0	0
5:00 PM	5:05 PM	0	21	2	0	0	0	5	31	0	4	0	9	72	248	0	0
5:05 PM	5:10 PM	0	23	2	0	0	0	15	27	0	3	0	6	76	292	0	0
5:10 PM	5:15 PM	0	20	4	0	0	0	13	46	0	3	0	14	100	316	0	0
5:15 PM	5:20 PM	0	22	3	0	0	0	13	59	0	4	0	15	116	299	0	0
5:20 PM	5:25 PM	0	28	1	0	0	0	13	38	0	7	0	13	100	272	0	0
5:25 PM	5:30 PM	0	21	1	0	0	0	8	32	0	5	0	16	83	257	0	0
5:30 PM	5:35 PM	0	19	3	0	0	0	9	39	0	4	0	15	89	271	0	0
5:35 PM	5:40 PM	0	14	1	0	0	0	12	42	0	7	0	9	85	251	0	0
5:40 PM	5:45 PM	0	16	1	0	0	0	15	44	0	8	0	13	97	246	0	0
5:45 PM	5:50 PM	0	21	2	0	0	0	6	34	0	1	0	5	69	225	0	1
5:50 PM	5:55 PM	0	21	1	0	0	0	14	25	0	8	0	11	80	156	0	0
5:55 PM	6:00 PM	0	18	1	0	0	0	11	38	0	3	0	5	76	76	0	0

AM PEAK HOUR VOLUMES

INTERSECTION: **3100 West** **and** **2000 South**

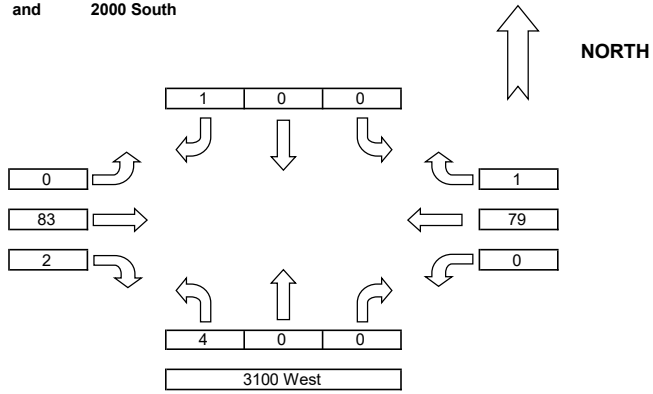
Ped = 0

N-S STREET: **3100 West**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **7:00 AM**
TO: **9:00 AM**

PK HR VOLUME:	170
PHF:	0.89
PEAK HOUR:	
FROM:	TO:
7:40 AM	8:40 AM



AM Traffic

COUNT DATA INPUT: Name: Bethea Name: Bethea Name: Bethea Name: Bethea

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
7:00 AM	7:05 AM	0	0	0	0	2	1	0	0	0	0	7	0	10	24	0	0
7:05 AM	7:10 AM	1	0	1	0	3	0	0	0	0	0	4	0	9	23	0	0
7:10 AM	7:15 AM	0	0	0	0	2	0	0	0	0	0	3	0	5	25	0	0
7:15 AM	7:20 AM	0	0	0	0	6	0	0	0	0	0	3	0	9	34	0	0
7:20 AM	7:25 AM	0	0	0	0	6	1	0	0	0	0	4	0	11	32	0	0
7:25 AM	7:30 AM	0	0	0	0	6	0	0	0	0	0	8	0	14	29	0	0
7:30 AM	7:35 AM	1	0	0	0	5	0	0	0	0	0	1	0	7	26	0	0
7:35 AM	7:40 AM	0	0	0	0	6	0	0	0	0	0	2	0	8	38	0	0
7:40 AM	7:45 AM	0	0	0	0	6	0	0	0	0	0	5	0	11	48	0	0
7:45 AM	7:50 AM	0	0	0	0	12	0	0	0	0	0	7	0	19	47	0	0
7:50 AM	7:55 AM	0	0	0	0	10	0	0	0	0	0	8	0	18	43	0	0
7:55 AM	8:00 AM	0	0	0	0	7	0	0	0	0	0	3	0	10	40	0	0
8:00 AM	8:05 AM	1	0	0	0	9	0	0	0	0	0	5	0	15	43	0	0
8:05 AM	8:10 AM	0	0	0	0	6	0	0	0	0	0	9	0	15	38	0	0
8:10 AM	8:15 AM	1	0	0	0	7	0	0	0	0	0	5	0	13	36	0	0
8:15 AM	8:20 AM	0	0	0	0	4	2	0	0	0	0	4	0	10	33	0	0
8:20 AM	8:25 AM	1	0	0	0	4	0	0	0	0	0	7	1	13	37	0	0
8:25 AM	8:30 AM	0	0	0	0	4	0	0	0	0	0	6	0	10	46	0	0
8:30 AM	8:35 AM	0	0	0	0	5	0	0	0	0	0	9	0	14	43	0	0
8:35 AM	8:40 AM	1	0	0	0	9	0	0	0	1	0	11	0	22	46	0	0
8:40 AM	8:45 AM	0	0	1	0	4	0	0	0	0	0	1	1	7	39	0	0
8:45 AM	8:50 AM	1	0	0	0	10	0	0	0	1	0	5	0	17	47	0	0
8:50 AM	8:55 AM	0	0	0	0	9	0	0	0	0	0	6	0	15	30	0	0
8:55 AM	9:00 AM	0	0	0	0	7	0	0	0	0	0	8	0	15	15	0	0

PM PEAK HOUR VOLUMES

Ped =0

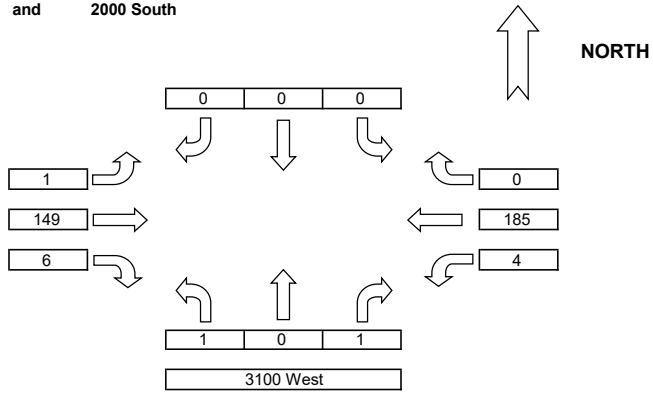
INTERSECTION: **3100 West** **and** **2000 South**

N-S STREET: **3100 West**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **4:00 PM**
TO: **6:00 PM**

PK HR VOLUME:	347
PHF:	0.83
PEAK HOUR:	
FROM:	TO:
4:55 PM	5:55 PM



PM Traffic

COUNT DATA INPUT: Name: Bethea Name: Bethea Name: Bethea Name: Bethea

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
4:00 PM	4:05 PM	0	0	0	0	11	0	0	2	0	0	4	0	17	57	0	0
4:05 PM	4:10 PM	0	0	0	0	13	0	0	0	1	1	11	0	26	60	0	0
4:10 PM	4:15 PM	0	0	0	1	4	0	0	0	0	0	9	0	14	50	0	0
4:15 PM	4:20 PM	0	0	0	0	8	0	0	0	0	1	11	0	20	65	0	0
4:20 PM	4:25 PM	0	0	0	0	10	0	0	0	0	0	6	0	16	65	0	0
4:25 PM	4:30 PM	1	0	0	0	15	0	0	0	0	0	13	0	29	77	0	0
4:30 PM	4:35 PM	0	0	1	0	10	0	0	0	0	0	9	0	20	85	0	0
4:35 PM	4:40 PM	0	0	0	0	17	0	1	0	0	0	9	1	28	83	0	0
4:40 PM	4:45 PM	0	0	0	0	24	1	0	0	0	0	12	0	37	66	0	0
4:45 PM	4:50 PM	0	0	0	0	10	0	0	0	0	0	8	0	18	58	0	0
4:50 PM	4:55 PM	0	0	0	0	9	0	0	0	0	0	2	0	11	68	0	0
4:55 PM	5:00 PM	0	0	0	0	13	0	0	0	0	1	15	0	29	92	0	0
5:00 PM	5:05 PM	0	0	0	1	14	1	0	0	0	0	12	0	28	104	0	0
5:05 PM	5:10 PM	1	0	0	0	17	0	0	0	0	0	17	0	35	105	0	0
5:10 PM	5:15 PM	0	0	0	0	20	0	0	0	0	0	21	0	41	96	0	0
5:15 PM	5:20 PM	0	0	0	0	6	1	0	0	0	0	22	0	29	78	0	0
5:20 PM	5:25 PM	0	0	0	0	12	1	0	0	0	0	13	0	26	83	0	0
5:25 PM	5:30 PM	0	0	0	0	8	0	0	0	0	1	14	0	23	83	0	0
5:30 PM	5:35 PM	0	0	0	0	17	0	0	0	0	1	16	0	34	84	0	0
5:35 PM	5:40 PM	0	0	1	0	10	0	0	0	0	0	15	0	26	80	0	0
5:40 PM	5:45 PM	0	0	0	0	8	1	0	0	0	0	15	0	24	76	0	0
5:45 PM	5:50 PM	0	0	0	0	12	2	0	0	0	0	16	0	30	65	0	0
5:50 PM	5:55 PM	0	0	0	0	12	0	0	0	0	1	9	0	22	35	0	0
5:55 PM	6:00 PM	0	0	0	0	8	0	0	0	0	0	5	0	13	13	0	0

Approx. 75 Units

AM PEAK HOUR VOLUMES

Ped = 0

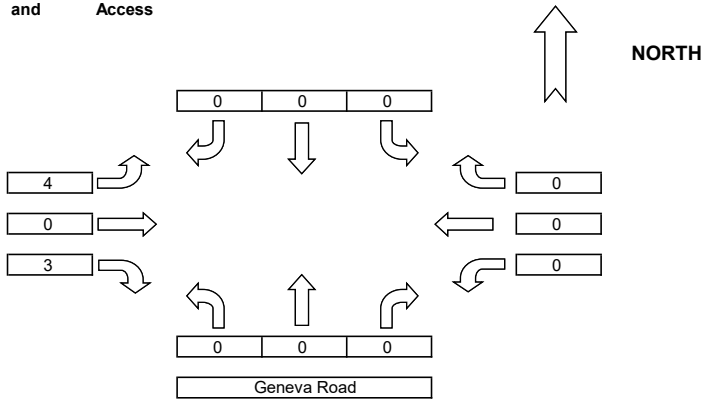
INTERSECTION: **Geneva Road** **and** **Access**

N-S STREET: **Geneva Road**
E-W STREET: **Access**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **7:00 AM**
TO: **9:00 AM**

PK HR VOLUME:	7
PHF:	0.58
PEAK HOUR:	
FROM: 8:00 AM	TO: 9:00 AM



AM Traffic

COUNT DATA INPUT: Name: Lacie Name: Lacie Name: Lacie Name: Lacie

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
7:00 AM	7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:05 AM	7:10 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
7:10 AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20 AM	7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:30 AM	7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:35 AM	7:40 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
7:40 AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:45 AM	7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:50 AM	7:55 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
7:55 AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:00 AM	8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:05 AM	8:10 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0
8:10 AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8:15 AM	8:20 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	3	0	0
8:20 AM	8:25 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0
8:25 AM	8:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0
8:30 AM	8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:35 AM	8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:40 AM	8:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0
8:45 AM	8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8:50 AM	8:55 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0
8:55 AM	9:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0

Approx. 75 Units

PM PEAK HOUR VOLUMES

Ped = 0

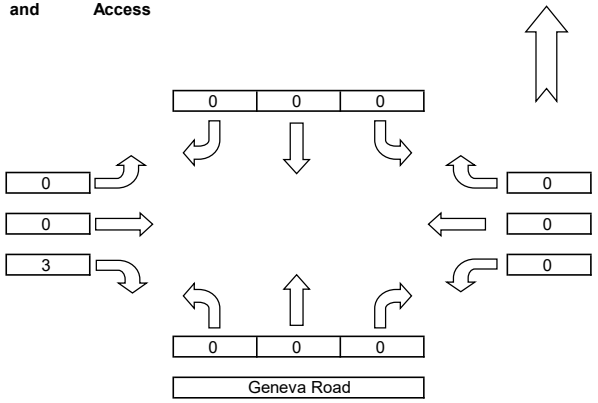
INTERSECTION: **Geneva Road** **and** **Access**

N-S STREET: **Geneva Road**
E-W STREET: **Access**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **4:00 PM**
TO: **6:00 PM**

PK HR VOLUME:	3
PHF:	0.25
PEAK HOUR:	
FROM: 4:45 PM	TO: 5:45 PM



PM Traffic

COUNT DATA INPUT: Name: Lacie Name: Lacie Name: Lacie Name: Lacie

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
4:00 PM	4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
4:10 PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
4:15 PM	4:20 PM	0	0	0	0	0	1	0	0	1	0	0	0	2	2	0	0
4:20 PM	4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:25 PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:50 PM	4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:55 PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
5:25 PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
5:30 PM	5:35 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	3	0	0
5:35 PM	5:40 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0
5:40 PM	5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0
5:45 PM	5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Approx. 47-50 Units

AM PEAK HOUR VOLUMES

Ped = 0

INTERSECTION: **Access** **and** **2000 South**

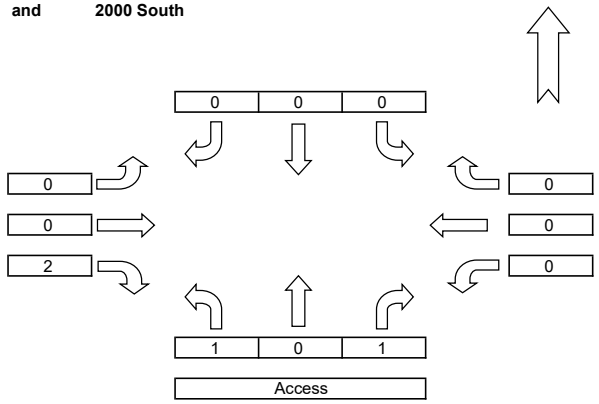
N-S STREET: **Access**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **7:00 AM**
TO: **9:00 AM**

PK HR VOLUME:	4
PHF:	0.33
PEAK HOUR:	
FROM:	TO:
7:00 AM	8:00 AM

2000 South



AM Traffic

COUNT DATA INPUT: Name: Bethea Name: Bethea Name: Bethea Name: Bethea

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
7:00 AM	7:05 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0
7:05 AM	7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10 AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20 AM	7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40 AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
7:45 AM	7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
7:50 AM	7:55 AM	0	0	1	0	0	1	0	0	0	0	0	0	2	3	0	0
7:55 AM	8:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
8:00 AM	8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:05 AM	8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	8:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:25 AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:35 AM	8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:40 AM	8:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
8:45 AM	8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8:50 AM	8:55 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
8:55 AM	9:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0

Approx. 47-50 Units

PM PEAK HOUR VOLUMES

Ped = 0

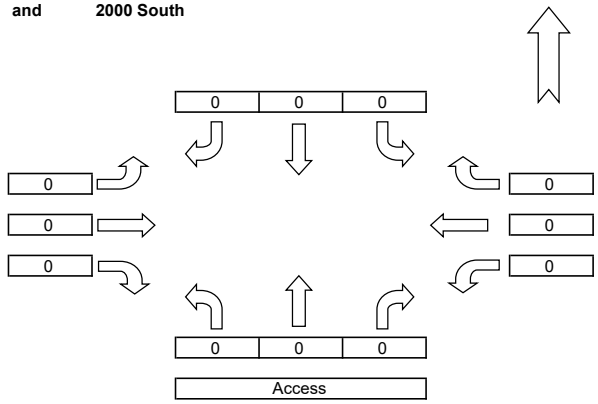
INTERSECTION: **Access** **and** **2000 South**

N-S STREET: **Access**
E-W STREET: **2000 South**

COUNT DATE: **March 31, 2020**
Day of the Week: **Tuesday**
NOTES:

COUNT TIME:
FROM: **4:00 PM**
TO: **6:00 PM**

PK HR VOLUME:	0
PHF:	#DIV/0!
PEAK HOUR:	
FROM:	TO:
4:00 PM	5:00 PM



PM Traffic

COUNT DATA INPUT: Name: Bethea Name: Bethea Name: Bethea Name: Bethea

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
4:00 PM	4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:20 PM	4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:25 PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:50 PM	4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:55 PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRIP GENERATION

			Trip Rate			Trips			In / Out %							New
ITE 10th Ed	Size	Land Use	AM	PM	Daily	AM	PM	Daily	AM IN	AM Out	PM IN	PM OUT	AM IN	AM Out	PM IN	PM OUT
Gas Station	22	945	12.47	13.99	205.36	274	308	4518	51%	49%	51%	49%	140	134	157	151
			0	0	0	0	0	0	0%	0%	0%	0%	0	0	0	0
Total						**274**	**308**	**4518**					**140**	**134**	**157**	**151**

Historic Growth

Traffic on Utah Highways

Geneva Road			**2000 South**		
Year	AADT	Growth	Year	AADT	Growth
2007	10,000		2007	2,000	
2008	11,000	10%	2008	1,900	-5%
2009	11,000	0%	2009	1,900	0%
2010	11,000	0%	2010	1,900	0%
2011	11,000	0%	2011	2,300	21%
2012	10,000	-9%	2012	2,200	-4%
2013	11,000	10%	2013	2,200	0%
2014	11,000	0%	2014	2,200	0%
2015	12,000	9%	2015	2,300	5%
2016	12,000	0%	2016	2,400	4%
2017	13,000	8%	2017	2,500	4%
	Avg	**2.83%**		**Avg**	**2.48%**

2.65%	Growth Factc	Years	Analysis Year
	1.00	0	2020
	1.14	5	2025
	1.73	21	2040

Straight line growth assumed between 2016 and 2040

Geneva Road / 2000 South				1.14	
	2020	Site	2020	2025	2025
AM	Existing	Traffic	Total	Growth	Total
EBL			0	0	0
EBT			0	0	0
EBR			0	0	0
WBL	45	3	48	51	54
WBT			0	0	0
WBR	133	8	141	152	160
NBL			0	0	0
NBT	594	25	619	677	702
NBR	41	3	44	47	50
SBL	131	8	139	149	157
SBT	412	24	436	470	494
SBR			0	0	0
East	350			399	
West	0			0	
North	1270			1448	
South	1092			1245	

5.24%

	2020	Site	2020	2025	2025
PM	Existing	Traffic	Total	Growth	Total
EBL			0	0	0
EBT			0	0	0
EBR			0	0	0
WBL	88	3	91	100	103
WBT			0	0	0
WBR	203	9	212	231	240
NBL			0	0	0
NBT	422	28	450	481	509
NBR	59	3	62	67	70
SBL	220	10	230	251	261
SBT	851	27	878	970	997
SBR			0	0	0
East	570			650	
West	0			0	
North	1696			1933	
South	1420			1619	

4.34%

3100 West / 2000 South				1.14	
	2020	Site	2020	2025	2025
AM	Existing	Traffic	Total	Growth	Total
EBL	3		3	3	3
EBT	169	27	196	193	220
EBR	3		3	3	3
WBL	1		1	1	1
WBT	151	28	179	172	200
WBR	1		1	1	1
NBL	10		10	11	11
NBT	0		0	0	0
NBR	2		2	2	2
SBL	2		2	2	2
SBT	0		0	0	0
SBR	10		10	11	11
East	326			372	
West	346			394	
North	16			18	
South	16			18	

15.63%

	2020	Site	2020	2025	2025
PM	Existing	Traffic	Total	Growth	Total
EBL	11		11	13	13
EBT	252	30	282	287	317
EBR	11		11	13	13
WBL	3		3	3	3
WBT	277	31	308	316	347
WBR	3		3	3	3
NBL	6		6	7	7
NBT	0		0	0	0
NBR	2		2	2	2
SBL	2		2	2	2
SBT	0		0	0	0
SBR	6		6	7	7
East	539			614	
West	563			642	
North	22			25	
South	22			25	

10.65%

Geneva Road / Apartment Access				1.14	
	2020	Site	2020	2025	2025
AM	Existing	Traffic	Total	Growth	Total
EBL	15		15	17	17
EBT			0	0	0
EBR	19		19	22	22
WBL			0	0	0
WBT			0	0	0
WBR			0	0	0
NBL	6		6	7	7
NBT	721	80	801	822	902
NBR			0	0	0
SBL			0	0	0
SBT	524	84	608	597	681
SBR	4		4	5	5
East	0			0	
West	44			50	
North	1264			1441	
South	1270			1448	

12.72%

	2020	Site	2020	2025	2025
PM	Existing	Traffic	Total	Growth	Total
EBL	14		14	16	16
EBT			0	0	0
EBR	18		18	21	21
WBL			0	0	0
WBT			0	0	0
WBR			0	0	0
NBL	31		31	35	35
NBT	594	91	685	677	768
NBR			0	0	0
SBL			0	0	0
SBT	1053	95	1148	1200	1295
SBR	25		25	29	29
East	0			0	
West	88			100	
North	1686			1922	
South	1696			1933	

10.72%

Site Access 1 / 2000 South				1.14	
	2020	Site	2020	2025	2025
AM	Existing	Traffic	Total	Growth	Total
EBL		11	11	0	11
EBT	169		169	193	193
EBR	3		3	3	3
WBL	2		2	2	2
WBT	169		169	193	193
WBR		28	28	0	28
NBL	9		9	10	10
NBT			0	0	0
NBR	6		6	7	7
SBL		27	27	0	27
SBT			0	0	0
SBR		11	11	0	11
East	346			394	
West	350			399	
North	0			0	
South	20			23	

21.51%

	2020	Site	2020	2025	2025
PM	Existing	Traffic	Total	Growth	Total
EBL		13	13	0	13
EBT	270		270	308	308
EBR	9		9	10	10
WBL	3		3	3	3
WBT	286		286	326	326
WBR		31	31	0	31
NBL	5		5	6	6
NBT			0	0	0
NBR	4		4	5	5
SBL		30	30	0	30
SBT			0	0	0
SBR		12	12	0	12
East	563			642	
West	570			650	
North	0			0	
South	21			24	

14.90%

Geneva Road / Site Access 2				1.14	
	2020	Site	2020	2025	2025
AM	Existing	Traffic	Total	Growth	Total
EBL			0	0	0
EBT			0	0	0
EBR			0	0	0
WBL		24	24	0	24
WBT			0	0	0
WBR		72	72	0	72
NBL			0	0	0
NBT	727	8	735	829	837
NBR		25	25	0	25
SBL		76	76	0	76
SBT	543	8	551	619	627
SBR			0	0	0
East	0			0	
West	0			0	
North	1270			1448	
South	1270			1448	

16.77%

	2020	Site	2020	2025	2025
PM	Existing	Traffic	Total	Growth	Total
EBL			0	0	0
EBT			0	0	0
EBR			0	0	0
WBL		27	27	0	27
WBT			0	0	0
WBR		82	82	0	82
NBL			0	0	0
NBT	625	9	634	713	722
NBR		28	28	0	28
SBL		85	85	0	85
SBT	1071	10	1081	1221	1231
SBR			0	0	0
East	0			0	
West	0			0	
North	1696			1933	
South	1696			1933	

14.21%

ArcGIS UDOT Access Category Identification Map

Details | Basemap | Share Print | Measure Find address or place

Legend

Mile Posts

Tenth Mile Posts

UDOT Access Category Identification

UDOT Access Category Identification

- 1
- 2
- 3
- 4

. Trust Center . Legal . Contact Esri . Report Abuse .



Intersection 6316	Normal		Normal		Data Collection		Difference bet
Geneva Rd / University Parkway	5-Feb-20		12-Feb-20		31-Mar		Normal Days and
Movement	AM	PM	AM	PM	AM	PM	AM
NBL	64	19	73	24	16		23%
NBT	168	152	416	355	104		36%
NBR	38	35	80	64	55		93%
SBL	434	570	430	571	201		47%
SBT	442	666	427	636	239		55%
SBR							#DIV/0!
EBL	36	128	47	119	33		80%
EBT	110	314	123	359	81		70%
EBR	15	43	20	57	17		
WBL	186	340	160	401	99		57%
WBT	338	100	394	130	181		49%
WBR	100	143	176	211	103		
							#DIV/0!

			Normal		Normal		Data Collection		
			11-Feb-20		12-Feb-20		31-Mar		
			AM	PM	AM	PM	AM	PM	AM
Northbound			539	415	569	443	175	165	32%
Southbound			841	1139	857	1207	440	824	52%
Eastbound			178	599	190	535	131	277	71%
Westbouond			691	725	730	742	383	441	54%
Intersection			2249	2878	2346	2927	1129	1707	**49%**

:ween average of
d Actual Count Day

PM
0%
0%
0%
0%
0%
#DIV/0!
0%
0%
0%
0%

#DIV/0!

PM
38%
70%
49%
60%
59%

UDOT Traffic and Safety Data (2013-2015)

A story map

Safety Index Crash Rate Severe Crash Rate Crashes Per Mile Severe Crashes Per Mile

1 of 1

SR-114 at 820 North

Route:	SR-114
Location:	820 North
Region:	3
Beginning Milepost:	2.32
Ending Milepost:	4.96
2013-2015 Average AADT:	11,407
Functional Class:	Urban Principal Arterial
Total Crashes:	**38**
Actual Crash Rate:	1.2
Average Crash Rate:	2.9
Actual vs. Average Crash Rate:	0.4
Crashes per Mile per Year:	4.8
Total Severe Crashes:	**1**
Actual Severe Crash Rate:	3.0
Average Severe Crash Rate:	7.6
Actual vs. Average Severe Crash Rate:	0.4
Severe Crashes per Mile per Year:	0.1
Safety Index:	**4**
PROTECTED UNDER:	23 USC 409
More Information:	UDOT Crash Statistics

Appendix B Without Site Intersection Analyses

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	133	594	41	131	412
Future Vol, veh/h	45	133	594	41	131	412
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	49	145	646	45	142	448

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1378	646	0	0	691	0
Stage 1	646	-	-	-	-	-
Stage 2	732	-	-	-	-	-
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	160	472	-	-	904	-
Stage 1	522	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	135	472	-	-	904	-
Mov Cap-2 Maneuver	267	-	-	-	-	-
Stage 1	522	-	-	-	-	-
Stage 2	401	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.4	0	2.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	267	472	904	-
HCM Lane V/C Ratio	-	-	0.183	0.306	0.158	-
HCM Control Delay (s)	-	-	21.5	16	9.7	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0.7	1.3	0.6	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	169	3	1	151	1	10	0	2	2	0	10
Future Vol, veh/h	3	169	3	1	151	1	10	0	2	2	0	10
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	3	184	3	1	164	1	11	0	2	2	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	165	0	0	187	0	0	364	359	186	360	360	165
Stage 1	-	-	-	-	-	-	192	192	-	167	167	-
Stage 2	-	-	-	-	-	-	172	167	-	193	193	-
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	1413	-	-	1387	-	-	592	568	856	596	567	879
Stage 1	-	-	-	-	-	-	810	742	-	835	760	-
Stage 2	-	-	-	-	-	-	830	760	-	809	741	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1413	-	-	1387	-	-	583	566	856	593	565	879
Mov Cap-2 Maneuver	-	-	-	-	-	-	583	566	-	593	565	-
Stage 1	-	-	-	-	-	-	808	741	-	833	759	-
Stage 2	-	-	-	-	-	-	819	759	-	805	740	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	11	9.5
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	616	1413	-	-	1387	-	-	814
HCM Lane V/C Ratio	0.021	0.002	-	-	0.001	-	-	0.016
HCM Control Delay (s)	11	7.6	0	-	7.6	0	-	9.5
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	19	6	721	524	4
Future Vol, veh/h	15	19	6	721	524	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	21	7	784	570	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1368	570	574	0	-	0
Stage 1	570	-	-	-	-	-
Stage 2	798	-	-	-	-	-
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	162	521	999	-	-	-
Stage 1	566	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	161	521	999	-	-	-
Mov Cap-2 Maneuver	298	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.7	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	999	-	298	521	-	-
HCM Lane V/C Ratio	0.007	-	0.055	0.04	-	-
HCM Control Delay (s)	8.6	-	17.8	12.2	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	169	3	2	169	0	9	0	6	0	0	0
Future Vol, veh/h	0	169	3	2	169	0	9	0	6	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	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	0	184	3	2	184	0	10	0	7	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	184	0	0	187	0	0	374	374	186	377	375	184
Stage 1	-	-	-	-	-	-	186	186	-	188	188	-
Stage 2	-	-	-	-	-	-	188	188	-	189	187	-
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	1391	-	-	1387	-	-	583	557	856	580	556	858
Stage 1	-	-	-	-	-	-	816	746	-	814	745	-
Stage 2	-	-	-	-	-	-	814	745	-	813	745	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1391	-	-	1387	-	-	582	556	856	575	555	858
Mov Cap-2 Maneuver	-	-	-	-	-	-	582	556	-	575	555	-
Stage 1	-	-	-	-	-	-	816	746	-	814	744	-
Stage 2	-	-	-	-	-	-	812	744	-	807	745	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	10.5	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	667	1391	-	-	1387	-	-	-
HCM Lane V/C Ratio	0.024	-	-	-	0.002	-	-	-
HCM Control Delay (s)	10.5	0	-	-	7.6	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	727	0	0	543
Future Vol, veh/h	0	0	727	0	0	543
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	0	790	0	0	590

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1380	790	0	0	790	0
Stage 1	790	-	-	-	-	-
Stage 2	590	-	-	-	-	-
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	159	390	-	-	830	-
Stage 1	447	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	159	390	-	-	830	-
Mov Cap-2 Maneuver	297	-	-	-	-	-
Stage 1	447	-	-	-	-	-
Stage 2	554	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	830	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection	
Int Delay, s/veh	6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	88	203	422	59	220	851
Future Vol, veh/h	88	203	422	59	220	851
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	96	221	459	64	239	925

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1862	459	0	0	523	0
Stage 1	459	-	-	-	-	-
Stage 2	1403	-	-	-	-	-
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	~ 80	602	-	-	1043	-
Stage 1	636	-	-	-	-	-
Stage 2	227	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 62	602	-	-	1043	-
Mov Cap-2 Maneuver	143	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	175	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.3	0	1.9
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	143	602	1043	-
HCM Lane V/C Ratio	-	-	0.669	0.367	0.229	-
HCM Control Delay (s)	-	-	70.3	14.4	9.5	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	3.7	1.7	0.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	11	252	11	3	277	3	6	0	2	2	0	6
Future Vol, veh/h	11	252	11	3	277	3	6	0	2	2	0	6
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	12	274	12	3	301	3	7	0	2	2	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	304	0	0	286	0	0	616	614	280	614	619	303
Stage 1	-	-	-	-	-	-	304	304	-	309	309	-
Stage 2	-	-	-	-	-	-	312	310	-	305	310	-
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	1257	-	-	1276	-	-	403	407	759	404	404	737
Stage 1	-	-	-	-	-	-	705	663	-	701	660	-
Stage 2	-	-	-	-	-	-	699	659	-	705	659	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1257	-	-	1276	-	-	395	401	759	399	398	737
Mov Cap-2 Maneuver	-	-	-	-	-	-	395	401	-	399	398	-
Stage 1	-	-	-	-	-	-	697	656	-	693	658	-
Stage 2	-	-	-	-	-	-	691	657	-	695	652	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	13.2	11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	449	1257	-	-	1276	-	-	608
HCM Lane V/C Ratio	0.019	0.01	-	-	0.003	-	-	0.014
HCM Control Delay (s)	13.2	7.9	0	-	7.8	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	18	31	594	1053	25
Future Vol, veh/h	14	18	31	594	1053	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	15	20	34	646	1145	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1859	1145	1172	0	-	0
Stage 1	1145	-	-	-	-	-
Stage 2	714	-	-	-	-	-
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	81	243	596	-	-	-
Stage 1	303	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	76	243	596	-	-	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	286	-	-	-	-	-
Stage 2	485	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.8	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	596	-	196	243	-	-
HCM Lane V/C Ratio	0.057	-	0.078	0.081	-	-
HCM Control Delay (s)	11.4	-	24.9	21.1	-	-
HCM Lane LOS	B	-	C	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	0.3	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	270	9	3	286	0	5	0	4	0	0	0
Future Vol, veh/h	0	270	9	3	286	0	5	0	4	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	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	0	293	10	3	311	0	5	0	4	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	311	0	0	303	0	0	615	615	298	617	620	311
Stage 1	-	-	-	-	-	-	298	298	-	317	317	-
Stage 2	-	-	-	-	-	-	317	317	-	300	303	-
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	1249	-	-	1258	-	-	403	407	741	402	404	729
Stage 1	-	-	-	-	-	-	711	667	-	694	654	-
Stage 2	-	-	-	-	-	-	694	654	-	709	664	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1249	-	-	1258	-	-	402	406	741	399	403	729
Mov Cap-2 Maneuver	-	-	-	-	-	-	402	406	-	399	403	-
Stage 1	-	-	-	-	-	-	711	667	-	694	652	-
Stage 2	-	-	-	-	-	-	692	652	-	705	664	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	12.3	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	505	1249	-	-	1258	-	-	-
HCM Lane V/C Ratio	0.019	-	-	-	0.003	-	-	-
HCM Control Delay (s)	12.3	0	-	-	7.9	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	625	0	0	1071
Future Vol, veh/h	0	0	625	0	0	1071
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	0	679	0	0	1164

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1843	679	0	0	679	0
Stage 1	679	-	-	-	-	-
Stage 2	1164	-	-	-	-	-
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	83	452	-	-	913	-
Stage 1	504	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	83	452	-	-	913	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	297	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	913	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	133	594	41	131	412
Future Vol, veh/h	45	133	594	41	131	412
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	56	165	736	51	162	511

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1571	736	0	0	787	0
Stage 1	736	-	-	-	-	-
Stage 2	835	-	-	-	-	-
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	122	419	-	-	832	-
Stage 1	474	-	-	-	-	-
Stage 2	426	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	98	419	-	-	832	-
Mov Cap-2 Maneuver	225	-	-	-	-	-
Stage 1	474	-	-	-	-	-
Stage 2	343	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.9	0	2.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	225	419	832	-
HCM Lane V/C Ratio	-	-	0.248	0.393	0.195	-
HCM Control Delay (s)	-	-	26.2	19.1	10.4	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.9	1.8	0.7	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	169	3	1	151	1	10	0	2	2	0	10
Future Vol, veh/h	3	169	3	1	151	1	10	0	2	2	0	10
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	4	209	4	1	187	1	12	0	2	2	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	188	0	0	213	0	0	415	409	211	410	411	188
Stage 1	-	-	-	-	-	-	219	219	-	190	190	-
Stage 2	-	-	-	-	-	-	196	190	-	220	221	-
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	1386	-	-	1357	-	-	548	532	829	552	531	854
Stage 1	-	-	-	-	-	-	783	722	-	812	743	-
Stage 2	-	-	-	-	-	-	806	743	-	782	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1386	-	-	1357	-	-	538	530	829	549	529	854
Mov Cap-2 Maneuver	-	-	-	-	-	-	538	530	-	549	529	-
Stage 1	-	-	-	-	-	-	781	720	-	810	742	-
Stage 2	-	-	-	-	-	-	794	742	-	777	718	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	11.5	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	571	1386	-	-	1357	-	-	782
HCM Lane V/C Ratio	0.026	0.003	-	-	0.001	-	-	0.019
HCM Control Delay (s)	11.5	7.6	0	-	7.7	0	-	9.7
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	19	6	721	524	4
Future Vol, veh/h	15	19	6	721	524	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	19	24	7	893	649	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1556	649	654	0	-	0
Stage 1	649	-	-	-	-	-
Stage 2	907	-	-	-	-	-
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	124	470	933	-	-	-
Stage 1	520	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	123	470	933	-	-	-
Mov Cap-2 Maneuver	259	-	-	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	394	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.1	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	933	-	259	470	-	-
HCM Lane V/C Ratio	0.008	-	0.072	0.05	-	-
HCM Control Delay (s)	8.9	-	20	13.1	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0.2	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	169	3	2	169	0	9	0	6	0	0	0
Future Vol, veh/h	0	169	3	2	169	0	9	0	6	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	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	0	209	4	2	209	0	11	0	7	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	209	0	0	213	0	0	424	424	211	428	426	209
Stage 1	-	-	-	-	-	-	211	211	-	213	213	-
Stage 2	-	-	-	-	-	-	213	213	-	215	213	-
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	1362	-	-	1357	-	-	540	522	829	537	520	831
Stage 1	-	-	-	-	-	-	791	728	-	789	726	-
Stage 2	-	-	-	-	-	-	789	726	-	787	726	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1362	-	-	1357	-	-	539	521	829	532	519	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	539	521	-	532	519	-
Stage 1	-	-	-	-	-	-	791	728	-	789	725	-
Stage 2	-	-	-	-	-	-	787	725	-	780	726	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	10.9	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	627	1362	-	-	1357	-	-	-
HCM Lane V/C Ratio	0.03	-	-	-	0.002	-	-	-
HCM Control Delay (s)	10.9	0	-	-	7.7	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	727	0	0	543
Future Vol, veh/h	0	0	727	0	0	543
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	0	901	0	0	673

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1574	901	0	0	901	0
Stage 1	901	-	-	-	-	-
Stage 2	673	-	-	-	-	-
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	121	337	-	-	754	-
Stage 1	396	-	-	-	-	-
Stage 2	507	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	121	337	-	-	754	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	507	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	754	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection	
Int Delay, s/veh	10.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	88	203	422	59	220	851
Future Vol, veh/h	88	203	422	59	220	851
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	109	252	523	73	273	1055

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2124	523	0	0	596	0
Stage 1	523	-	-	-	-	-
Stage 2	1601	-	-	-	-	-
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	~ 55	554	-	-	980	-
Stage 1	595	-	-	-	-	-
Stage 2	182	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 40	554	-	-	980	-
Mov Cap-2 Maneuver	~ 108	-	-	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	131	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	61.2	0	2.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	108	554	980	-
HCM Lane V/C Ratio	-	-	1.01	0.454	0.278	-
HCM Control Delay (s)	-	-	163.6	16.8	10.1	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	6.5	2.3	1.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	252	11	3	277	3	6	0	2	2	0	6
Future Vol, veh/h	11	252	11	3	277	3	6	0	2	2	0	6
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	14	312	14	4	343	4	7	0	2	2	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	347	0	0	326	0	0	704	702	319	701	707	345
Stage 1	-	-	-	-	-	-	347	347	-	353	353	-
Stage 2	-	-	-	-	-	-	357	355	-	348	354	-
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	1212	-	-	1234	-	-	352	362	722	353	360	698
Stage 1	-	-	-	-	-	-	669	635	-	664	631	-
Stage 2	-	-	-	-	-	-	661	630	-	668	630	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1212	-	-	1234	-	-	344	355	722	347	354	698
Mov Cap-2 Maneuver	-	-	-	-	-	-	344	355	-	347	354	-
Stage 1	-	-	-	-	-	-	660	626	-	655	628	-
Stage 2	-	-	-	-	-	-	651	627	-	656	621	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	14.3	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	396	1212	-	-	1234	-	-	557
HCM Lane V/C Ratio	0.025	0.011	-	-	0.003	-	-	0.018
HCM Control Delay (s)	14.3	8	0	-	7.9	0	-	11.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	18	31	594	1053	25
Future Vol, veh/h	14	18	31	594	1053	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	17	22	38	736	1305	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2117	1305	1336	0	-	0
Stage 1	1305	-	-	-	-	-
Stage 2	812	-	-	-	-	-
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	56	196	516	-	-	-
Stage 1	254	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	52	196	516	-	-	-
Mov Cap-2 Maneuver	161	-	-	-	-	-
Stage 1	235	-	-	-	-	-
Stage 2	437	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.6	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	516	-	161	196	-	-
HCM Lane V/C Ratio	0.074	-	0.108	0.114	-	-
HCM Control Delay (s)	12.5	-	30	25.7	-	-
HCM Lane LOS	B	-	D	D	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	0.4	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	270	9	3	286	0	5	0	4	0	0	0
Future Vol, veh/h	0	270	9	3	286	0	5	0	4	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	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	0	335	11	4	354	0	6	0	5	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	354	0	0	346	0	0	703	703	341	705	708	354
Stage 1	-	-	-	-	-	-	341	341	-	362	362	-
Stage 2	-	-	-	-	-	-	362	362	-	343	346	-
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	1205	-	-	1213	-	-	352	362	701	351	360	690
Stage 1	-	-	-	-	-	-	674	639	-	657	625	-
Stage 2	-	-	-	-	-	-	657	625	-	672	635	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1205	-	-	1213	-	-	351	361	701	347	359	690
Mov Cap-2 Maneuver	-	-	-	-	-	-	351	361	-	347	359	-
Stage 1	-	-	-	-	-	-	674	639	-	657	623	-
Stage 2	-	-	-	-	-	-	654	623	-	667	635	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	13.2	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	451	1205	-	-	1213	-	-	-
HCM Lane V/C Ratio	0.025	-	-	-	0.003	-	-	-
HCM Control Delay (s)	13.2	0	-	-	8	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	625	0	0	1071
Future Vol, veh/h	0	0	625	0	0	1071
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	0	774	0	0	1327

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2101	774	0	0	774	0
Stage 1	774	-	-	-	-	-
Stage 2	1327	-	-	-	-	-
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	57	398	-	-	842	-
Stage 1	455	-	-	-	-	-
Stage 2	248	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	57	398	-	-	842	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	248	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	842	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	45	133	594	41	131	412
Future Volume (vph)	45	133	594	41	131	412
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	24.0	24.0	66.0	66.0	66.0	66.0
Total Split (%)	26.7%	26.7%	73.3%	73.3%	73.3%	73.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	8.4	8.4	72.6	72.6	72.6	72.6
Actuated g/C Ratio	0.09	0.09	0.81	0.81	0.81	0.81
v/c Ratio	0.34	0.56	0.49	0.04	0.31	0.34
Control Delay	42.9	13.8	4.4	1.0	4.4	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	13.8	4.4	1.0	4.4	3.3
LOS	D	B	A	A	A	A
Approach Delay	21.2		4.1			3.5
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 6.1	Intersection LOS: A
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Geneva Road & 2000 South



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	88	203	422	59	220	851
Future Volume (vph)	88	203	422	59	220	851
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	67.5	67.5	67.5	67.5
Total Split (%)	25.0%	25.0%	75.0%	75.0%	75.0%	75.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	10.8	10.8	70.2	70.2	70.2	70.2
Actuated g/C Ratio	0.12	0.12	0.78	0.78	0.78	0.78
v/c Ratio	0.51	0.61	0.36	0.06	0.42	0.73
Control Delay	45.0	11.7	4.2	0.9	6.1	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	11.7	4.2	0.9	6.1	9.5
LOS	D	B	A	A	A	A
Approach Delay	21.7		3.8			8.8
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Geneva Road & 2000 South



Appendix C With Site Intersection Analyses

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	141	619	44	139	436
Future Vol, veh/h	48	141	619	44	139	436
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	153	673	48	151	474

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1449	673	0	0	721	0
Stage 1	673	-	-	-	-	-
Stage 2	776	-	-	-	-	-
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	144	455	-	-	881	-
Stage 1	507	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	119	455	-	-	881	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	507	-	-	-	-	-
Stage 2	376	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	2.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	250	455	881	-
HCM Lane V/C Ratio	-	-	0.209	0.337	0.171	-
HCM Control Delay (s)	-	-	23.2	16.9	9.9	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0.8	1.5	0.6	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	196	3	1	179	1	10	0	2	2	0	10
Future Vol, veh/h	3	196	3	1	179	1	10	0	2	2	0	10
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	3	213	3	1	195	1	11	0	2	2	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	196	0	0	216	0	0	424	419	215	420	420	196
Stage 1	-	-	-	-	-	-	221	221	-	198	198	-
Stage 2	-	-	-	-	-	-	203	198	-	222	222	-
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	1377	-	-	1354	-	-	540	525	825	544	525	845
Stage 1	-	-	-	-	-	-	781	720	-	804	737	-
Stage 2	-	-	-	-	-	-	799	737	-	780	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1377	-	-	1354	-	-	532	523	825	541	523	845
Mov Cap-2 Maneuver	-	-	-	-	-	-	532	523	-	541	523	-
Stage 1	-	-	-	-	-	-	779	719	-	802	736	-
Stage 2	-	-	-	-	-	-	788	736	-	776	719	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	11.5	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	565	1377	-	-	1354	-	-	773
HCM Lane V/C Ratio	0.023	0.002	-	-	0.001	-	-	0.017
HCM Control Delay (s)	11.5	7.6	0	-	7.7	0	-	9.7
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	19	6	801	608	4
Future Vol, veh/h	15	19	6	801	608	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	21	7	871	661	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1546	661	665	0	-	0
Stage 1	661	-	-	-	-	-
Stage 2	885	-	-	-	-	-
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	126	462	924	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	125	462	924	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	510	-	-	-	-	-
Stage 2	403	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.1	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	924	-	261	462	-	-
HCM Lane V/C Ratio	0.007	-	0.062	0.045	-	-
HCM Control Delay (s)	8.9	-	19.7	13.2	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	169	3	2	169	28	9	0	6	27	0	11
Future Vol, veh/h	11	169	3	2	169	28	9	0	6	27	0	11
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	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	12	184	3	2	184	30	10	0	7	29	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	187	0	0	419	428	186	416	414	199
Stage 1	-	-	-	-	-	-	210	210	-	203	203	-
Stage 2	-	-	-	-	-	-	209	218	-	213	211	-
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	1356	-	-	1387	-	-	544	519	856	547	529	842
Stage 1	-	-	-	-	-	-	792	728	-	799	733	-
Stage 2	-	-	-	-	-	-	793	723	-	789	728	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1387	-	-	532	513	856	538	523	842
Mov Cap-2 Maneuver	-	-	-	-	-	-	532	513	-	538	523	-
Stage 1	-	-	-	-	-	-	785	721	-	792	732	-
Stage 2	-	-	-	-	-	-	780	722	-	776	721	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	10.9	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	627	1356	-	-	1387	-	-	601
HCM Lane V/C Ratio	0.026	0.009	-	-	0.002	-	-	0.069
HCM Control Delay (s)	10.9	7.7	-	-	7.6	0	-	11.4
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	72	735	25	76	551
Future Vol, veh/h	24	72	735	25	76	551
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	26	78	799	27	83	599

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1578	813	0	0	826	0
Stage 1	813	-	-	-	-	-
Stage 2	765	-	-	-	-	-
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	120	378	-	-	805	-
Stage 1	436	-	-	-	-	-
Stage 2	459	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	108	378	-	-	805	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	436	-	-	-	-	-
Stage 2	412	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.2	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	243	378	805	-
HCM Lane V/C Ratio	-	-	0.107	0.207	0.103	-
HCM Control Delay (s)	-	-	21.6	17	10	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.8	0.3	-

Intersection	
Int Delay, s/veh	7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	91	212	450	62	230	878
Future Vol, veh/h	91	212	450	62	230	878
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	99	230	489	67	250	954

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1943	489	0	0	556	0
Stage 1	489	-	-	-	-	-
Stage 2	1454	-	-	-	-	-
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	~ 71	579	-	-	1015	-
Stage 1	616	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 54	579	-	-	1015	-
Mov Cap-2 Maneuver	132	-	-	-	-	-
Stage 1	616	-	-	-	-	-
Stage 2	162	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	36.9	0	2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	132	579	1015	-
HCM Lane V/C Ratio	-	-	0.749	0.398	0.246	-
HCM Control Delay (s)	-	-	87.1	15.3	9.7	-
HCM Lane LOS	-	-	F	C	A	-
HCM 95th %tile Q(veh)	-	-	4.4	1.9	1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	282	11	3	308	3	6	0	2	2	0	6
Future Vol, veh/h	11	282	11	3	308	3	6	0	2	2	0	6
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	12	307	12	3	335	3	7	0	2	2	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	338	0	0	319	0	0	683	681	313	681	686	337
Stage 1	-	-	-	-	-	-	337	337	-	343	343	-
Stage 2	-	-	-	-	-	-	346	344	-	338	343	-
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	1221	-	-	1241	-	-	363	373	727	364	370	705
Stage 1	-	-	-	-	-	-	677	641	-	672	637	-
Stage 2	-	-	-	-	-	-	670	637	-	676	637	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1221	-	-	1241	-	-	355	367	727	359	364	705
Mov Cap-2 Maneuver	-	-	-	-	-	-	355	367	-	359	364	-
Stage 1	-	-	-	-	-	-	669	633	-	664	635	-
Stage 2	-	-	-	-	-	-	662	635	-	666	629	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	14	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	407	1221	-	-	1241	-	-	568
HCM Lane V/C Ratio	0.021	0.01	-	-	0.003	-	-	0.015
HCM Control Delay (s)	14	8	0	-	7.9	0	-	11.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	18	31	685	1148	25
Future Vol, veh/h	14	18	31	685	1148	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	15	20	34	745	1248	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2061	1248	1275	0	-	0
Stage 1	1248	-	-	-	-	-
Stage 2	813	-	-	-	-	-
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	60	211	545	-	-	-
Stage 1	271	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	56	211	545	-	-	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	254	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.7	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	545	-	170	211	-	-
HCM Lane V/C Ratio	0.062	-	0.09	0.093	-	-
HCM Control Delay (s)	12	-	28.2	23.8	-	-
HCM Lane LOS	B	-	D	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	0.3	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	270	9	3	286	31	5	0	4	30	0	12
Future Vol, veh/h	13	270	9	3	286	31	5	0	4	30	0	12
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	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	14	293	10	3	311	34	5	0	4	33	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	345	0	0	303	0	0	667	677	298	662	665	328
Stage 1	-	-	-	-	-	-	326	326	-	334	334	-
Stage 2	-	-	-	-	-	-	341	351	-	328	331	-
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	1214	-	-	1258	-	-	372	375	741	375	381	713
Stage 1	-	-	-	-	-	-	687	648	-	680	643	-
Stage 2	-	-	-	-	-	-	674	632	-	685	645	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1214	-	-	1258	-	-	361	369	741	369	375	713
Mov Cap-2 Maneuver	-	-	-	-	-	-	361	369	-	369	375	-
Stage 1	-	-	-	-	-	-	679	640	-	672	641	-
Stage 2	-	-	-	-	-	-	660	630	-	673	637	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	12.9	14.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	468	1214	-	-	1258	-	-	428
HCM Lane V/C Ratio	0.021	0.012	-	-	0.003	-	-	0.107
HCM Control Delay (s)	12.9	8	-	-	7.9	0	-	14.4
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	82	634	28	85	1081
Future Vol, veh/h	27	82	634	28	85	1081
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	29	89	689	30	92	1175

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2063	704	0	0	719	0
Stage 1	704	-	-	-	-	-
Stage 2	1359	-	-	-	-	-
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	60	437	-	-	882	-
Stage 1	490	-	-	-	-	-
Stage 2	239	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	54	437	-	-	882	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	214	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.8	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	156	437	882	-
HCM Lane V/C Ratio	-	-	0.188	0.204	0.105	-
HCM Control Delay (s)	-	-	33.3	15.3	9.6	-
HCM Lane LOS	-	-	D	C	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0.8	0.3	-

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	160	702	50	157	494
Future Vol, veh/h	54	160	702	50	157	494
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	59	174	763	54	171	537

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1642	763	0	0	817	0
Stage 1	763	-	-	-	-	-
Stage 2	879	-	-	-	-	-
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	110	404	-	-	811	-
Stage 1	460	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	87	404	-	-	811	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	320	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.6	0	2.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	210	404	811	-
HCM Lane V/C Ratio	-	-	0.28	0.43	0.21	-
HCM Control Delay (s)	-	-	28.7	20.5	10.6	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	2.1	0.8	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	220	3	1	200	1	11	0	2	2	0	11
Future Vol, veh/h	3	220	3	1	200	1	11	0	2	2	0	11
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	3	239	3	1	217	1	12	0	2	2	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	218	0	0	242	0	0	473	467	241	468	468	218
Stage 1	-	-	-	-	-	-	247	247	-	220	220	-
Stage 2	-	-	-	-	-	-	226	220	-	248	248	-
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	1352	-	-	1324	-	-	501	493	798	505	493	822
Stage 1	-	-	-	-	-	-	757	702	-	782	721	-
Stage 2	-	-	-	-	-	-	777	721	-	756	701	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1352	-	-	1324	-	-	492	491	798	502	491	822
Mov Cap-2 Maneuver	-	-	-	-	-	-	492	491	-	502	491	-
Stage 1	-	-	-	-	-	-	755	700	-	780	720	-
Stage 2	-	-	-	-	-	-	765	720	-	752	699	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	12.1	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	523	1352	-	-	1324	-	-	749
HCM Lane V/C Ratio	0.027	0.002	-	-	0.001	-	-	0.019
HCM Control Delay (s)	12.1	7.7	0	-	7.7	0	-	9.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	22	7	902	681	5
Future Vol, veh/h	17	22	7	902	681	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	100	0	100	-	-	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	18	24	8	980	740	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1736	740	745	0	-	0
Stage 1	740	-	-	-	-	-
Stage 2	996	-	-	-	-	-
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	96	417	863	-	-	-
Stage 1	472	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	95	417	863	-	-	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	468	-	-	-	-	-
Stage 2	357	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	863	-	227	417	-	-
HCM Lane V/C Ratio	0.009	-	0.081	0.057	-	-
HCM Control Delay (s)	9.2	-	22.3	14.2	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	0.2	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	193	3	2	193	28	10	0	7	27	0	11
Future Vol, veh/h	11	193	3	2	193	28	10	0	7	27	0	11
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	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	12	210	3	2	210	30	11	0	8	29	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	240	0	0	213	0	0	471	480	212	469	466	225
Stage 1	-	-	-	-	-	-	236	236	-	229	229	-
Stage 2	-	-	-	-	-	-	235	244	-	240	237	-
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	1327	-	-	1357	-	-	503	485	828	505	494	814
Stage 1	-	-	-	-	-	-	767	710	-	774	715	-
Stage 2	-	-	-	-	-	-	768	704	-	763	709	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1327	-	-	1357	-	-	491	480	828	496	489	814
Mov Cap-2 Maneuver	-	-	-	-	-	-	491	480	-	496	489	-
Stage 1	-	-	-	-	-	-	760	704	-	767	714	-
Stage 2	-	-	-	-	-	-	755	703	-	749	703	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	11.3	12
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	590	1327	-	-	1357	-	-	559
HCM Lane V/C Ratio	0.031	0.009	-	-	0.002	-	-	0.074
HCM Control Delay (s)	11.3	7.7	-	-	7.7	0	-	12
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	72	837	25	76	627
Future Vol, veh/h	24	72	837	25	76	627
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	26	78	910	27	83	682

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1772	924	0	0	937	0
Stage 1	924	-	-	-	-	-
Stage 2	848	-	-	-	-	-
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	91	327	-	-	731	-
Stage 1	387	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	81	327	-	-	731	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	387	-	-	-	-	-
Stage 2	372	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.7	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	210	327	731	-
HCM Lane V/C Ratio	-	-	0.124	0.239	0.113	-
HCM Control Delay (s)	-	-	24.6	19.4	10.6	-
HCM Lane LOS	-	-	C	C	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.9	0.4	-

Intersection	
Int Delay, s/veh	13.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	103	240	509	70	261	997
Future Vol, veh/h	103	240	509	70	261	997
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	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	112	261	553	76	284	1084

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2205	553	0	0	629	0
Stage 1	553	-	-	-	-	-
Stage 2	1652	-	-	-	-	-
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	~ 49	533	-	-	953	-
Stage 1	576	-	-	-	-	-
Stage 2	171	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 34	533	-	-	953	-
Mov Cap-2 Maneuver	~ 99	-	-	-	-	-
Stage 1	576	-	-	-	-	-
Stage 2	120	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	75.7	0	2.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	99	533	953	-
HCM Lane V/C Ratio	-	-	1.131	0.489	0.298	-
HCM Control Delay (s)	-	-	210	18.1	10.4	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	7.3	2.7	1.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	13	317	13	3	347	3	7	0	2	2	0	7
Future Vol, veh/h	13	317	13	3	347	3	7	0	2	2	0	7
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	14	345	14	3	377	3	8	0	2	2	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	380	0	0	359	0	0	769	766	352	766	772	379
Stage 1	-	-	-	-	-	-	380	380	-	385	385	-
Stage 2	-	-	-	-	-	-	389	386	-	381	387	-
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	1178	-	-	1200	-	-	318	333	692	320	330	668
Stage 1	-	-	-	-	-	-	642	614	-	638	611	-
Stage 2	-	-	-	-	-	-	635	610	-	641	610	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1178	-	-	1200	-	-	310	327	692	315	324	668
Mov Cap-2 Maneuver	-	-	-	-	-	-	310	327	-	315	324	-
Stage 1	-	-	-	-	-	-	632	605	-	628	609	-
Stage 2	-	-	-	-	-	-	626	608	-	629	601	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	15.5	11.9
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	353	1178	-	-	1200	-	-	535
HCM Lane V/C Ratio	0.028	0.012	-	-	0.003	-	-	0.018
HCM Control Delay (s)	15.5	8.1	0	-	8	0	-	11.9
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	21	35	768	1295	29
Future Vol, veh/h	16	21	35	768	1295	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	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	17	23	38	835	1408	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2319	1408	1440	0	-	0
Stage 1	1408	-	-	-	-	-
Stage 2	911	-	-	-	-	-
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	41	170	471	-	-	-
Stage 1	226	-	-	-	-	-
Stage 2	392	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	38	170	471	-	-	-
Mov Cap-2 Maneuver	140	-	-	-	-	-
Stage 1	208	-	-	-	-	-
Stage 2	392	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.5	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	471	-	140	170	-	-
HCM Lane V/C Ratio	0.081	-	0.124	0.134	-	-
HCM Control Delay (s)	13.3	-	34.3	29.4	-	-
HCM Lane LOS	B	-	D	D	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	0.5	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	308	10	3	326	31	6	0	5	30	0	12
Future Vol, veh/h	13	308	10	3	326	31	6	0	5	30	0	12
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	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	14	335	11	3	354	34	7	0	5	33	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	388	0	0	346	0	0	753	763	341	748	751	371
Stage 1	-	-	-	-	-	-	369	369	-	377	377	-
Stage 2	-	-	-	-	-	-	384	394	-	371	374	-
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	1170	-	-	1213	-	-	326	334	701	329	340	675
Stage 1	-	-	-	-	-	-	651	621	-	644	616	-
Stage 2	-	-	-	-	-	-	639	605	-	649	618	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1170	-	-	1213	-	-	316	329	701	323	335	675
Mov Cap-2 Maneuver	-	-	-	-	-	-	316	329	-	323	335	-
Stage 1	-	-	-	-	-	-	643	614	-	636	614	-
Stage 2	-	-	-	-	-	-	625	603	-	636	611	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	13.8	15.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	421	1170	-	-	1213	-	-	380
HCM Lane V/C Ratio	0.028	0.012	-	-	0.003	-	-	0.12
HCM Control Delay (s)	13.8	8.1	-	-	8	0	-	15.8
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	82	722	28	85	1231
Future Vol, veh/h	27	82	722	28	85	1231
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	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	29	89	785	30	92	1338

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2322	800	0	0	815	0
Stage 1	800	-	-	-	-	-
Stage 2	1522	-	-	-	-	-
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	41	385	-	-	812	-
Stage 1	442	-	-	-	-	-
Stage 2	199	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	36	385	-	-	812	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	442	-	-	-	-	-
Stage 2	177	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.1	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	128	385	812	-
HCM Lane V/C Ratio	-	-	0.229	0.232	0.114	-
HCM Control Delay (s)	-	-	41.3	17.1	10	-
HCM Lane LOS	-	-	E	C	B	-
HCM 95th %tile Q(veh)	-	-	0.8	0.9	0.4	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	54	160	702	50	157	494
Future Volume (vph)	54	160	702	50	157	494
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	24.0	24.0	66.0	66.0	66.0	66.0
Total Split (%)	26.7%	26.7%	73.3%	73.3%	73.3%	73.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	8.6	8.6	72.4	72.4	72.4	72.4
Actuated g/C Ratio	0.10	0.10	0.80	0.80	0.80	0.80
v/c Ratio	0.35	0.56	0.51	0.04	0.34	0.36
Control Delay	43.0	13.7	4.6	1.0	4.9	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	13.7	4.6	1.0	4.9	3.4
LOS	D	B	A	A	A	A
Approach Delay	21.1		4.4			3.8
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Geneva Road & 2000 South



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	103	240	509	70	261	997
Future Volume (vph)	103	240	509	70	261	997
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	67.5	67.5	67.5	67.5
Total Split (%)	25.0%	25.0%	75.0%	75.0%	75.0%	75.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	11.0	11.0	70.0	70.0	70.0	70.0
Actuated g/C Ratio	0.12	0.12	0.78	0.78	0.78	0.78
v/c Ratio	0.52	0.62	0.38	0.06	0.46	0.75
Control Delay	45.0	11.6	4.4	0.9	6.8	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	11.6	4.4	0.9	6.8	10.3
LOS	D	B	A	A	A	B
Approach Delay	21.6		4.0			9.5
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 10.0	Intersection LOS: A
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Geneva Road & 2000 South



Street View



For more information, contact Cheryl Vargas at
(801) 229-7183 or chvargas@orem.gov

City Council Chambers, 56 N State Street

***** IMPORTANT DEVELOPMENT NOTICE *****

APPEAL – The applicant requests the Board of Adjustment hear an appeal pertaining to the City of Orem's determination that their DRC application was incomplete for a Holiday Oil gas station and convenience store located generally at 1981 South Geneva Road in the C2 zone.

Additional information can be viewed on orem.org/planning under "Current Planning (Public Hearing Notices)" tab.

Board of Adjustment
Wed, Nov 29, 2023
6:00 pm

CHOWDHARY, PRATAPRAI R & KIRAN B
3465 W 111TH LOOP
WESTMINSTER, CO 80031

For more information, contact Cheryl Vargas at
(801) 229-7183 or chvargas@orem.gov

City Council Chambers, 56 N State Street

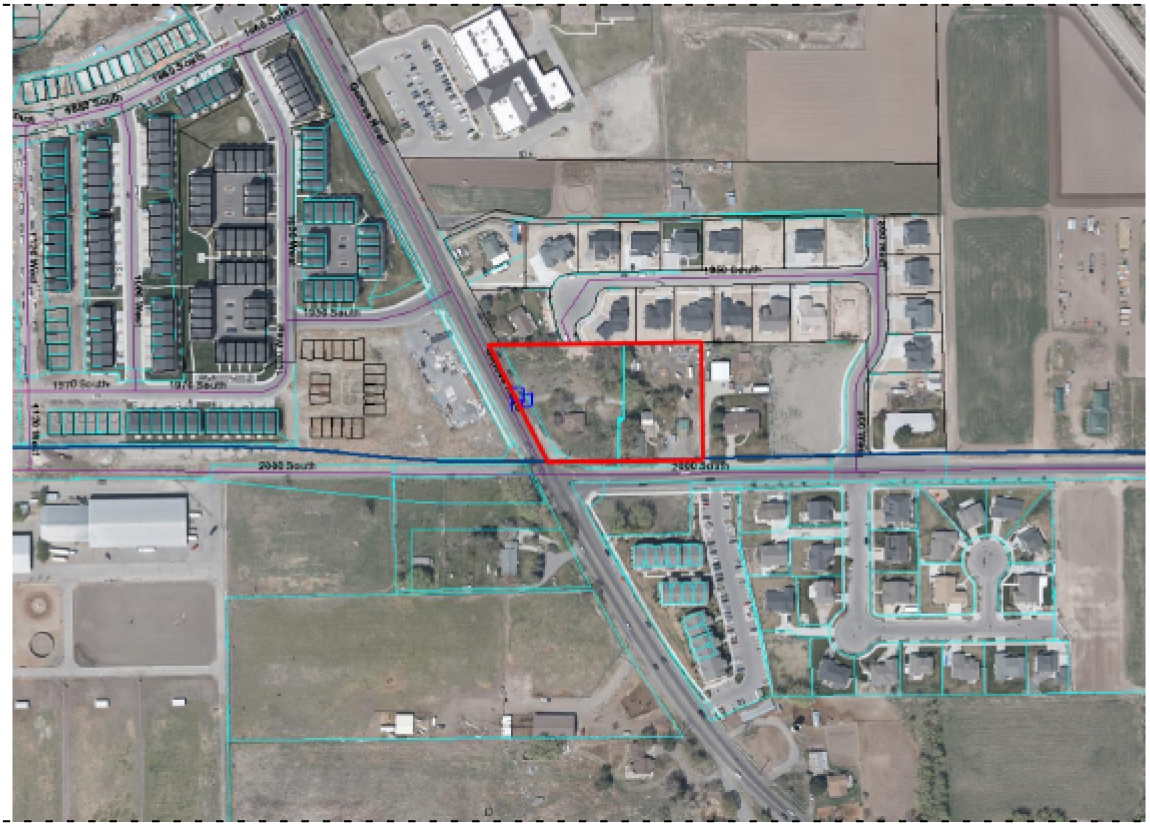
***** IMPORTANT DEVELOPMENT NOTICE *****

APPEAL – The applicant requests the Board of Adjustment hear an appeal pertaining to the City of Orem's determination that their DRC application was incomplete for a Holiday Oil gas station and convenience store located generally at 1981 South Geneva Road in the C2 zone.

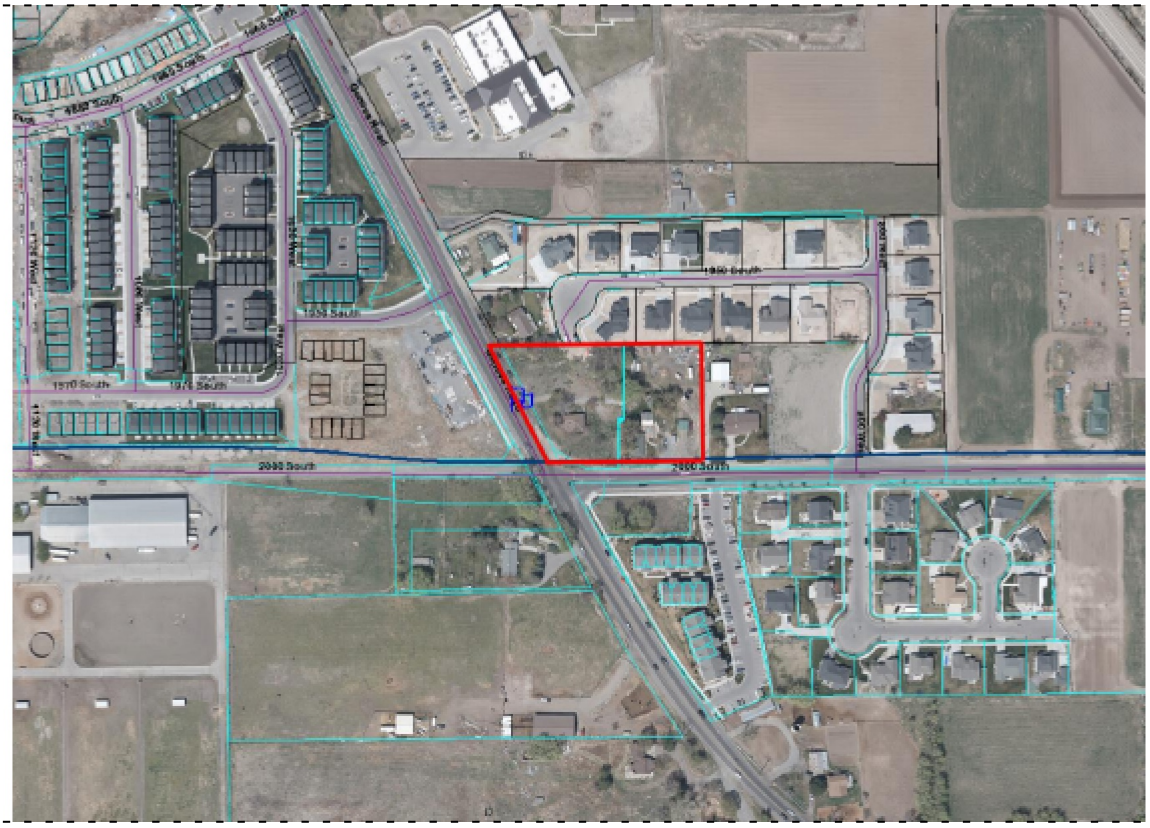
Additional information can be viewed on orem.org/planning under "Current Planning (Public Hearing Notices)" tab.

Board of Adjustment
Wed, Nov 29, 2023
6:00 pm

CHURCH, MATTHEW J & MELISSA K (ET AL)
5501 W 10600 N
HIGHLAND, UT 84003



orem.org/planning under "Current Planning (Public Hearing Notices)" tab



orem.org/planning under "Current Planning (Public Hearing Notices)" tab

UTAH DEPARTMENT OF
TRANSPORTATION
%RIGHT OF WAY FOURTH FLOOR
PO BOX 148420
SALT LAKE CITY, UT 84114

PROVO CITY CORPORATION
PO BOX 1859
PROVO, UT 84603

BRINKERHOFF, WALTER A & CONI JO
(ET AL)
70 BIG MEADOW LN
LOVELOCK, NV 89419

COMMON AREA
100 E CENTER ST
PROVO, UT 84606

JEFF LAMBSON
156 E 1060 N
OREM, UT 84057

DAVE YOUNG
173 S COUNTRYSIDE LANE
OREM, UT 84058

MILLHAVEN CONSTRUCTION LLC
272 W 200 N STE 100
LINDON, UT 84042

LANAE MILLETT
288 W 1500 N
OREM, UT 84057

PROVO CITY
351 W CENTER ST
PROVO, UT 84601

PETERSON, JEREMY & AMANDA
459 W 1840 S
OREM, UT 84058

THOMAS MACDONALD
489 NORTH PALISADES DR
OREM, UT 84097

HEATON, GERRY L & KAYE B
501 W MAIN CANYON RD
WALLSBURG, UT 84082

GENEVA ROAD 44 LLC
519 W STATE ST STE 202
PLEASANT GROVE, UT 84062

DEBBY LAURET
641 S 1920 W
OREM, UT 84059

BROWN, BARRY E & LINDA B (ET AL)
782 W 2000 S
OREM, UT 84058

VARGAS, LEANDRO DAVID & ALISSA
KITCHEN
819 W 1950 S
OREM, UT 84058

PULHAM, KURT TERRY
822 W 1950 S
OREM, UT 84058

TRONSON, TANNER DON (ET AL)
827 W 1950 S
OREM, UT 84058

GRIFFIN, SKYLER REED (ET AL)
830 W 1950 S
OREM, UT 84058

MORRILL, JENNIFER
835 W 1950 S
OREM, UT 84058

GROO, DENIS E & NANCY M
838 W 2000 S
OREM, UT 84058

FONG, THOMAS & SHARON
840 W 1950 S
OREM, UT 84058

DAMERON, SYDNEY K & BRONSON
M
849 W 1950 S
OREM, UT 84058

ANDERTON, PARKER (ET AL)
854 W 1950 S
OREM, UT 84058

PORTER, JOHN M & CONNIE M (ET
AL)
861 W 1950 S
OREM, UT 84058

BERNIER, ADAM & JENNY
866 W 1950 S ST
OREM, UT 84058

WAGSTAFF INVESTMENTS LLC
--OR CURRENT RESIDENT--
868 W 2000 SOUTH
OREM, UT 84058

PRICE, ZACHARIAH LEE & CARLYN
871 W 1950 S
OREM, UT 84058

SLS2 LLC
%BERRETT, CRAE
878 W 1950 S
OREM, UT 84058

CAMPBELL, TREVIN JOSEPH
890 W 1950 S
OREM, UT 84058

DAVID SPENCER
899 NORTH 550 EAST
OREM, UT 84097

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1006 W 1950 SOUTH
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1008 W 1950 SOUTH
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1014 W 1950 DS
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1018 W 1950 SOUTH
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1022 W 1950 SOUTH
OREM, UT 84058

CHOWDHARY, PRATAPRAI R & KIRAN B
--OR CURRENT RESIDENT--
1033 W 1970 SOUTH
OREM, UT 84058

THOMPSON, BEAU
1036 W 1970 S
OREM, UT 84057

FQU HOLDINGS LLC
--OR CURRENT RESIDENT--
1037 W 1970 SOUTH
OREM, UT 84058

VINDEL, JOSUE MORENO & KELLY MORENO
1038 W 1970 S
OREM, UT 84058

TERRY PETERSON
1125 LYNNWOOD DRIVE
OREM, UT 84097

RYAN CLARK
1405 N. 1430 WEST
PLEASANT GROVE, UT 84062

MORGAN, SANDRA C (ET AL)
1476 N LAKE SHORE DR
PROVO, UT 84604

UTAH AUTISM ACADEMY
1875 S GENEVA RD
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1893 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1897 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1899 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1901 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1903 S 1030 WEST
OREM, UT 84058

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 103
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 104
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 105
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 106
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 203
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 204
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 205
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 206
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 303
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1906 N GENEVA RD UNIT# 304
PROVO, UT 84601

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1907 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1909 S 1030 WEST
OREM, UT 84058

JASON BENCH
1911 N MAIN STREET
OREM, UT 84057-2101

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1911 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1913 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1917 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1919 S 1030 WEST
OREM, UT 84058

HEATON, GERRY L & KAYE B
--OR CURRENT RESIDENT--
1921 N GENEVA RD
PROVO, UT 84601

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1921 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1923 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1927 S 1030 WEST
OREM, UT 84058

VILLAGE OF LAKEVIEW FIELDS LLC THE
--OR CURRENT RESIDENT--
1929 S 1030 WEST
OREM, UT 84058

OYANEDEL, ANGEL PATRICIO
1929 S GENEVA RD
OREM, UT 84058

NIELSON, LINDA E
1931 N 3100 W
PROVO, UT 84601

CISNEROS, JESUS JR & CHRISTIAN A
1936 N 3100 W
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 101
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 102
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 103
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 104
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 201
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 202
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 203
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 204
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 301
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 302
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 303
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1936 N GENEVA RD UNIT# 304
PROVO, UT 84601

JOHNSON, BLAINE E
1939 N 3100 W
PROVO, UT 84601

ROYLANCE, SHAUNA L (ET AL)
1941 S 800 W
OREM, UT 84058

NORDSTROM, MACKENZIE & TANNER
1942 N 3100 W
PROVO, UT 84601

FQU HOLDINGS LLC
1945 N 1120 W
PROVO, UT 84604

BARNEY, THOMAS & APRIL (ET AL)
1948 S 1030 W # 431
OREM, UT 84058

MOOSE, ALAN L & PAMELA C
1949 S 800 W
OREM, UT 84058

THENOT, JODY R
1953 N 3050 W
PROVO, UT 84601

FLYGARE, KELLY
1959 N 3100 W
PROVO, UT 84601

LARSEN, JENNIFER C (ET AL)
1960 S 800 W
OREM, UT 84058

MAHEDY, PAUL PATRICK & PAULA ALICE
1963 S 800 W
OREM, UT 84058

MERRILL, SETH & BROOKE
1965 N 3050 W
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 101
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 102
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 103
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 104
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 105
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 106
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 201
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 202
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 203
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 204
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 205
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 206
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 301
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 302
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 303
PROVO, UT 84601

GENEVA ROAD 44 LLC
--OR CURRENT RESIDENT--
1966 N GENEVA RD UNIT# 304
PROVO, UT 84601

BAHR, DON F & VONDA P
1969 N GENEVA RD
PROVO, UT 84601

NARCISO, DAVID L JR & TATIANA H
1971 N 3100 W
PROVO, UT 84601

BACKUS, KRISTOPHER C & JILL R
1975 S 800 W
OREM, UT 84058

HERNANDEZ, GABRIELA COMPRES & GABRIELA
1979 N 3100 W
PROVO, UT 84601

HERIFORD, HANK & AUBREY
1987 N 3100 W
PROVO, UT 84601

GERMAN, EDWARD & JEANNETTE VARGAS
1988 N 3100 W
PROVO, UT 84601

VILLAGE OF LAKEVIEW FIELDS LLC THE
2825 E COTTONWOOD PKWY # 500
SALT LAKE CITY, UT 84121

LAKEVIEW FIELDS HOMEOWNERS ASSOCIATION
%ROBLES, LIZ
3089 W 1930 N
PROVO, UT 84601

JAUREGUI, JOSE ARMANDO
3103 W 1930 N
PROVO, UT 84601

WAGSTAFF INVESTMENTS LLC
%TAX DEPARTMENT
3115 W 2100 S
SALT LAKE CITY, UT 84119

WAGSTAFF INVESTMENTS LLC
3115 W 2100 S
WEST VALLEY CITY, UT 84119

CHOWDHARY, PRATAPRAI R & KIRAN B
3465 W 111TH LOOP
WESTMINSTER, CO 80031

ALVARENGA, BORIS & JOSIE
4393 SHADYHOLLOW LOOP
LEHI, UT 84043

UTAH DEPARTMENT OF TRANSPORTATION
4501 S 2700 W
SALT LAKE CITY, UT 84114

SWITZLER, AL
5082 OLD OAK LN
HIGHLAND, UT 84003

CHURCH, MATTHEW J & MELISSA K (ET AL)
5501 W 10600 N
HIGHLAND, UT 84003

BOARDWALK INDUSTRIES LLC
6955 UNION PARK CTR # 160
MIDVALE, UT 84047

HOLLAND, CINDY B (ET AL)
7107 DREAM INN LN
ROSEVILLE, CA 95747

CITY OF OREM
DRAFT BOARD OF ADJUSTMENT MINUTES
May 24, 2023

STUDY SESSION

Place: City Council Conference Room

At 5:30 p.m. Chair Jeffreys called the Study Session to order.

Those present: Ott Dameron, Carlos Iglesias, Karen Jeffreys, David Moulton and Leslie Nelson, Board of Adjustment members; Jason Bench, Assistant Development Services Director; Cheryl Vargas and Makayla Wagstaff, Associate Planners, Grant Allen, Senior Planner; Gary McGinn, Legal Counsel

Those excused:

The Board members and staff reviewed the agenda items and June 22, 2022 minutes, and adjourned at 5:50 p.m. to the City Council Chambers for the regular meeting.

REGULAR MEETING

Place: City Council Chambers

At **6:00 p.m**. Chair Jeffreys called the meeting to order and asked Mr. Dameron to give the invocation.

Those present: Ott Dameron, Carlos Iglesias, Karen Jeffreys, David Moulton and Leslie Nelson, Board of Adjustment members; Jason Bench, Assistant Development Services Director; Cheryl Vargas and Makayla Wagstaff, Associate Planners, Grant Allen, Senior Planner; Gary McGinn, Legal Counsel

Those excused:

Chair Jeffreys asked Mr. Bench to introduce **Agenda Item 3.1**.

Mr. Bench introduced **Agenda Item 3.1** as follows: (click here for recording)

Agenda Item 3.1 is a request by Sean Hadlock for the Board of Adjustment to grant a variance for property located at 2501 East Provo Canyon Road to Section 10-5-1 by allowing a septic tank system to be installed and not require the new structure to connect to the City's sanitary sewer system.

Staff Presentation: The applicant is requesting to rebuild a structure on a parcel located at 2501 East Provo Canyon Road. The parcel contains an older one-story structure built in 1924 containing 285 square feet which will be removed. The applicant is hoping to build a new home containing approximately 1,500 square feet according to a concept floor plan submitted.

The parcel is located in the Flood Plain (adjacent to the Provo River) and is designated as Zone A on the Flood Insurance Rate Map (FIRM) dated June19, 2020. Development in the flood plain is regulated by Orem City Code Chapter 10. *Flood Damage Prevention* and requires strict development standards within the flood plain. The ordinance requires (Section 10-3-3) that "No structure or land shall hereafter be constructed, located, extended, or altered or have its use changed without full compliance with the terms of this Chapter and other applicable regulations."

Section 10-3-5 (*Interpretation)* outlines how the ordinances in Chapter 10 should be interpreted:

In the interpretation of this Chapter, all provisions shall be:

A. Considered as minimum requirements;
B. Liberally construed in favor of the governing body; and
C. Deemed neither to limit nor repeal any other powers granted under State statutes.

In order for the applicant to construct a new home at this location the Board of Adjustment must grant a variance to Section 10-5-1 as outlined below:

Section 10-5-1 states that "All new construction shall be required to connect to City's sanitary sewer system." Since this parcel is located approximately two (2) miles from the nearest connection it seems impracticable to require the applicant to connect to an existing sewer line. The current older cabin is using an existing septic system. The applicant suggests that *"Without a variance for connecting to the city sanitary waste system, we cannot build, add on or renovate on this property, and neither could any of the homeowners on Provo Canyon Road."* The applicant has received approval from the Utah County Health Department to keep the existing 1,000-gallon septic tank and install 70 feet of new drain field. The final inspection of the drain field will be completed by the Health Department. The septic system permit is part of the report for your review.

The applicant has also provided detailed information concerning the base flood elevation of the proposed structure and how it relates to the surrounding area which complies with the standards outlined in the ordinance.

In addition, the applicant has received FEMA determination that the lot is not located within a Special Flood Hazard Area (SFHA); and, has provided verification of the actual elevation of the new structure in relation to mean sea level.

Furthermore, the site plan verifies that the lowest floor level is elevated one foot above the base flood elevation as drawn by a registered professional engineer.

Finally, the site plan shows the improvements, including any addition or new structure, will not result in any increase in flood levels during the occurrence of the base flood discharge as required.

Chapter 10 also outlines specific factors the Board of Adjustment must consider in the determination for granting variances to Chapter 10. The applicant has addressed these questions and the information provided is part of the staff report for your review.

Section 10-4-5:

"G. Prerequisites for granting variances:

1. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
2. Variances shall only be issued upon:
   a. showing a good and sufficient cause;
   b. a determination that failure to grant the variance would result in exceptional hardship to the applicant, and
   c. a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, the creation of nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
3. Any application to whom a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

Variances may be issued by the Board of Adjustment for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:

H. The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety."

Based on the factors outlined above the Board of Adjustment must decide whether the request for a variance meets the strict requirements for granting a variance in a flood plain.

Recommendation: Staff recommends the Board of Adjustment grant a variance for property located at 2501 East Provo Canyon Road to Section 10-5-1 by allowing a septic tank system to be installed and not require the new structure to connect to the City's sanitary sewer system.

Chair Jeffreys asked if the Board had any questions for Mr. Bench and invited the applicant to come forward. Sean Hadlock introduced himself. Ms. Jeffreys asked if the existing building was still on the lot. Mr. Hadlock said no, the building had been taken down. Mr. Iglesias thanked Mr. Hadlock all the work, time and money he had put into this. The distance to connect to the sewer system does not make sense. Septic tanks work and have worked for years. Mr. Moulton said he understood that the septic tank was relatively new. Mr. Hadlock said it had been replaced in the early 90's, but had inspected by the Utah County Health Department, had been pumped out and it is in good condition. The Health Dept. has issued a permit for that septic tank and approved the drain field.

Chair Jeffreys asked if the Board had any more questions for the applicant or staff. When no one did, she called for a motion.

Board of Adjustment Action: Mr. Moulton moved to grant a variance for property located at 2501 East Provo Canyon Road to Section 10-5-1 by allowing a septic tank system to be installed and not require the new structure to connect to the City's sanitary sewer system as per the staff report and the findings in the staff report (see attached). Mr. Iglesias seconded the motion. Those voting aye: Ott Dameron, Carlos Iglesias, Karen Jeffreys, David Moulton and Leslie Nelson. The motion passed unanimously.

Minutes: Chair Jeffreys called for a motion to approve the draft minutes of the June 22, 2022 meeting. Mr. Dameron moved to approve the meeting minutes for June 22, 2022. Ms. Jeffreys seconded the motion. Those voting aye: Ott Dameron, Carlos Iglesias, Karen Jeffreys, David Moulton and Leslie Nelson. The motion passed unanimously.

Adjourn: Chair Jeffreys called for a motion to adjourn. Mr. Iglesias moved to adjourn. Mr. Moulton seconded the motion. Those voting aye: Ott Dameron, Carlos Iglesias, Karen Jeffreys, David Moulton and Leslie Nelson. The motion passed unanimously.

Adjourn: 6:12 p.m.

_____

Jason Bench

Approved:

Item #: 3.1

Prepared By:
Jason Bench, AICP
Assistant Development Services Director

Board of Adjustment

May 24, 2023

Applicant: Sean Hadlock

VARIANCE – The applicant requests the Board of Adjustment grant a variance for property located at 2501 East Provo Canyon Road to Section 10-5-1 by allowing a septic tank system to be installed and not require the new structure to connect to the City's sanitary sewer system.

NOTICES:

- Posted in 2 public places
- Posted on City webpage and City hotline
- Faxed to newspapers
- E-mailed to newspapers
- Posted at utah.gov/pmn
- Mailed 24 notices on May 12, 2023

SITE INFORMATION:

- General Plan Designation: **Rural Density Residential**
- Current Zone: OS5
- Acreage: 0.28
- Neighborhood: **Unclassified**

ACTION:
The Board of Adjustment shall approve or deny the applicant's variance request

FIVE CRITERIA:

- Literal enforcement of the zoning ordinance would cause an unreasonable hardship for the applicant that is not necessary to carry out the general purpose of the zoning ordinance;
- There are special circumstances attached to the property that do not generally apply to other properties in the same district;
- Granting the variance is essential to the enjoyment of a substantial property right possessed by other

REQUEST: The applicant requests to rebuild an existing structure on a parcel located at 2501 East Provo Canyon Road.

BACKGROUND: The applicant is requesting to rebuild a structure on a parcel located at 2501 East Provo Canyon Road. The parcel contains an older one-story structure built in 1924 containing 285 square feet which will be removed. The applicant is hoping to build a new home containing approximately 1,500 square feet according to a concept floor plan submitted.

The parcel is located in the Flood Plain (adjacent to the Provo River) and is designated as Zone A on the Flood Insurance Rate Map (FIRM) dated June19, 2020. Development in the flood plain is regulated by Orem City Code Chapter 10. *Flood Damage Prevention* and requires strict development standards within the flood plain. The ordinance requires (Section 10-3-3) that "No structure or land shall hereafter be constructed, located, extended, or altered or have its use changed without full compliance with the terms of this Chapter and other applicable regulations."

Section 10-3-5 (*Interpretation)* outlines how the ordinances in Chapter 10 should be interpreted:

In the interpretation of this Chapter, all provisions shall be:

A. Considered as minimum requirements;
B. Liberally construed in favor of the governing body; and
C. Deemed neither to limit nor repeal any other powers granted under State statutes.

In order for the applicant to construct a new home at this location the Board of Adjustment must grant a variance to Section 10-5-1 as outlined below:

Section 10-5-1 states that "All new construction shall be required to connect to City's sanitary sewer system." Since this parcel is located approximately two (2) miles from the nearest connection it seems impracticable to require the applicant to connect to an existing sewer line. The current older cabin is using an existing septic system. The applicant suggests that *"Without a variance for connecting to the city sanitary waste system, we cannot build, add on or renovate on this property, and neither could any of the homeowners on Provo Canyon Road."* The applicant has received approval from the Utah County Health Department to keep the existing 1,000-gallon septic tank and install 70 feet of new drain field. The final inspection of the drain field will be completed by the Health Department. The septic system permit is part of the report for your review.

The applicant has also provided detailed information concerning the base flood elevation of the proposed structure and how it relates to the surrounding area which complies with the standards outlined in the ordinance.

property in the same district;
- The variance will not substantially affect the general plan and will not be contrary to the public interest; and
- The spirit of the zoning ordinance is observed and substantial justice done.

In addition, the applicant has received FEMA determination that the lot is not located within a Special Flood Hazard Area (SFHA); and, has provided verification of the actual elevation of the new structure in relation to mean sea level.

Furthermore, the site plan verifies that the lowest floor level is elevated one foot above the base flood elevation as drawn by a registered professional engineer.

Finally, the site plan shows the improvements, including any addition or new structure, will not result in any increase in flood levels during the occurrence of the base flood discharge as required.

Chapter 10 also outlines specific factors the Board of Adjustment must consider in the determination for granting variances to Chapter 10. The applicant has addressed these questions and the information provided is part of the staff report for your review.

Section 10-4-5:

G. "Prerequisites for granting variances:
   1. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
   2. Variances shall only be issued upon:
      a. showing a good and sufficient cause;
      b. a determination that failure to grant the variance would result in exceptional hardship to the applicant, and
      c. a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, the creation of nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
   3. Any application to whom a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

Variances may be issued by the Board of Adjustment for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:

H. The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety."

Based on the factors outlined above the Board of Adjustment must decide whether the request for a variance meets the strict requirements for granting a variance in a flood plain.

RECOMMENDATION: Staff recommends the Board of Adjustment grant a variance for property located at 2501 East Provo Canyon Road to Section 10-5-1 by allowing a septic tank system to be installed and not require the new structure to connect to the City's sanitary sewer system.

1
2

2024

JANUARY 2024						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY 2024						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

MARCH 2024						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

APRIL 2024						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY 2024						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE 2024						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

JULY 2024						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST 2024						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SEPTEMBER 2024						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER 2024						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER 2024						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DECEMBER 2024						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
3	4	10	11	12	13	14
10	11	17	18	19	20	21
17	18	24	25	26	27	28
29	30	31				

	BOA Scheduled Meetings		