ATTACHMENT F

Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Prepared for the City of Clearlake and the County of Lake

Submitted by
W-Trans

September 23, 2021

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Executive Summary

The proposed cannabis cultivation and support facilities would be located at 2185, 2160, 2050, and 1756 Ogulin Canyon Road to the east of SR 53. The two projects proposed at 2185 and 2160 Ogulin Canyon Road are at sites in the City of Clearlake and the two project sites at 2050 and 1756 are located in unincorporated Lake County. Cumulatively, the projects would include 749,995 square feet of cannabis cultivation area, 43,600 square feet of manufacturing, processing, and distribution facilities, and 8,000 square feet of office and delivery retail space. A maximum of 85 full- and part-time employees are anticipated during harvest seasons. The four proposed projects would be expected to result in a total of 259 new daily trips during the peak season, including 44 trips during the morning peak hour and 41 trips during the evening peak hour.

The operational analysis study area includes the intersection of SR 53 with Ogulin Canyon Road. Analysis indicates that the study intersection would be expected to operate acceptably at LOS A overall and LOS D or better on the stop-controlled Ogulin Canyon Road approach during both peak hours and under all scenarios evaluated, including with cumulative traffic from all four projects and upon buildout of the City of Clearlake General Plan. Each individual project was therefore determined to have an acceptable effect on operation of the surrounding roadway network.

As of the date of this analysis, the City of Clearlake and County of Lake have not yet adopted thresholds of significance related to VMT, though the *Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study* was prepared for Lake Area Planning Council (LAPC) in November 2020. Many of the recommendations in the Regional Baseline Study are consistent with guidance published by the California Governor's Office of Planning and Research (OPR) in the publication *Technical Advisory on Evaluating Transportation Impacts in CEQA,* 2018. As a result, individual project-related VMT impacts were assessed based on OPR guidance. Under this guidance, each of the four proposed projects can be presumed to have a less-than-significant transportation impact on VMT under the "small project" screening threshold since each individual project would result in fewer than 110 new daily trips during the peak season and even less when averaged over the course of the year.

There were no collisions recorded at the intersection of SR 53/Ogulin Canyon Road or on Ogulin Canyon Road during the most recent five-year study period indicating that there are no readily apparent safety issues in the study area. With the increase in trips from the four projects, the entirety of Ogulin Canyon Road would have an annual ADT below the AASHTO 400-trip threshold that defines a "Very Low Volume Roadway" and since the roadway has been operating acceptably in terms of safety, it is reasonable to expect the facility to continue doing so. Additionally, adequate stopping sight distance is available on Ogulin Canyon Road for the anticipated travel speeds at the project driveways. To maintain available sight lines, it is recommended that any new landscaping or signage planned for the project frontages be placed outside the driver's vision triangle at the driveways.

Although there are no pedestrian, transit, or bicycle facilities in the vicinity of the project sites, the existing condition is acceptable given that the project sites are located in an automobile-oriented rural area without any expected demand for walking or transit and limited demand for bicycling.

The City of Clearlake and County of Lake do not have published parking requirements for cannabis cultivation and support uses so the anticipated peak parking demand was estimated based on the proposed employee count and the number of company-owned vehicles proposed for the distribution uses. It was determined that the proposed parking supply for each project would be more than adequate to meet the anticipated peak parking demand.

Introduction

This report presents an analysis of the potential transportation impacts and traffic effects that would be associated with development of four cannabis cultivation projects on Ogulin Canyon Road, with two in the City of Clearlake and two in unincorporated Lake County. The traffic study was completed in accordance with the criteria established by the City of Clearlake and County of Lake, reflects a scope of work approved by City staff, and is consistent with standard traffic engineering techniques. While a single traffic study report has been prepared for all four of the proposed projects, the CEQA-related issues have been assessed for each project individually.

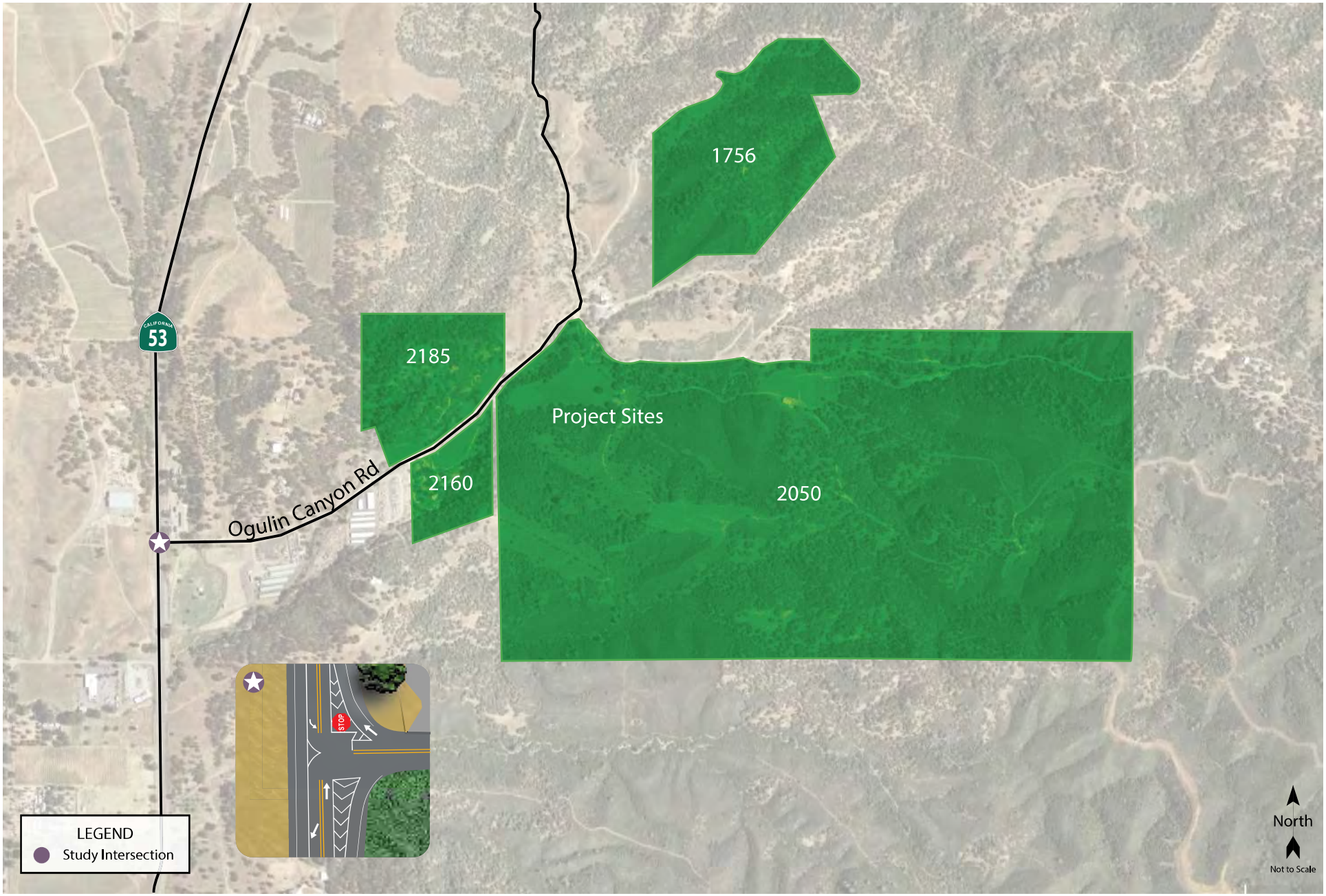
Prelude

The purpose of a traffic impact study is to provide Agency staff and policy makers with data they can use to make an informed decision regarding the potential transportation impacts and traffic effects of a proposed project, and any associated improvements that would be required to mitigate these impacts to a level of insignificance under CEQA or reduce an adverse effect to an acceptable level under the jurisdiction's General Plan or other policies. Impacts relative to access for pedestrians, bicyclists, and to transit are addressed in the context of the CEQA criteria. Consistent with SB 743, the project's transportation impacts were analyzed using VMT. While no longer a part of the CEQA review process, vehicular traffic service levels at a key intersection were evaluated for consistency with General Plan policies by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on anticipated travel patterns specific to the proposed project, then analyzing the effect the new traffic would be expected to have on the operation of the study intersection.

Project Profile

The four proposed cannabis cultivation projects would be located at 2185, 2160, 2050, and 1756 Ogulin Canyon Road to the east of SR 53. The two projects proposed at 2185 and 2160 Ogulin Canyon Road are in the City of Clearlake and the two projects at 2050 and 1756 are located in unincorporated Lake County. Cumulatively, the projects include 749,995 square feet of cannabis cultivation, 43,600 square feet of manufacturing, processing, and distribution facilities, and 8,000 square feet of office and delivery retail space. A maximum of 85 full- and part-time employees are anticipated during harvest seasons. Detailed descriptions for each of the individual projects are provided in the "Project Description" section of this report.

The study area and location of the four project sites are shown in Figure 1.



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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 1 – Study Area and Existing Lane Configurations

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Transportation Setting

Operational Analysis

Study Area and Periods

The operational analysis study area selected with input from City staff consists of the intersection of SR 53/ Ogulin Canyon Road. Operating conditions during the weekday a.m. and p.m. peak periods were evaluated to capture the highest potential volumes for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward-bound commute.

Study Intersection

SR 53/Ogulin Canyon Road is a tee intersection stop-controlled on the westbound Ogulin Canyon Road approach. The intersection has a left-turn lane on the southbound approach and channelized right-turn lanes on the northbound and westbound approaches. The westbound right-turn channelization feeds into a dedicated lane on northbound SR 53. Additionally, an acceleration lane is provided for traffic turning left from Ogulin Canyon Road onto southbound SR 53; this allows motorists to complete their left-turn movement in two stages.

The location of the study intersection and the existing lane configurations and control are shown in Figure 1.

Study Roadway

Ogulin Canyon Road is located on the east side of SR 53 and generally runs east-west with a width ranging between 16 and 25 feet. The section between SR 53 and the project driveway at the 2185 address is paved and does not have a posted speed limit. The section to the east of 2185 transitions to a mostly gravel surface with a speed limit of 15 miles per hour (mph) indicated by signing that appears to have been erected by landowners and not the County. Based on traffic count data collected on April 6, 2021 specifically for this study, Ogulin Canyon Road has an average daily traffic (ADT) volume of approximately 220 vehicles to the west of the mini storage facility and 60 vehicles to the east.

Collision History

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision records were obtained from the California Highway Patrol (CHP) as published in their Statewide Integrated Traffic Records System (SWITRS) reports. For the five-year study period between April 1, 2015 through March 31, 2020, there were no recorded collisions at the study intersection of SR 53/ Ogulin Canyon Road or on the entire segment of Ogulin Canyon Road, indicating that there are no readily apparent safety issues in the study area.

Alternative Modes

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. Consistent with the rural location of the study area, there are no dedicated pedestrian facilities in the vicinity of the project sites, nor would such facilities be appropriate in this setting.

Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2017, classifies bikeways into four categories:

- **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lane** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** – signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

There are no existing dedicated bicycle facilities on Ogulin Canyon Road or SR 53, nor are there any plans to provide such facilities in the *Active Transportation Plan for Lake County* (ATP), Lake County/ City Area Planning Council, December 2016. However, bicyclists are able to ride on the shoulders of SR 53 and share the roadway with motorists on Ogulin Canyon Road.

Transit Facilities

Transit Services in the City of Clearlake, and throughout Lake County, are provided by Lake Transit. The nearest transit stop is located approximately 2.5 miles southwest of the project sites near the intersection of Olympic Drive/Burns Valley Road, which is not within a walkable distance; therefore, the project sites are not readily accessible by transit.

Although there is a lack of transit service in the project vicinity, dial-a-ride, also known as paratransit or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. Lake Transit offers dial-a-ride service in Clearlake, Lower Lake, and Lakeport during the same days and hours as the local bus routes. Passengers certified as eligible for the Americans with Disabilities Act (ADA) paratransit service receive reservation priority when calling one day or more in advance. Additionally, passengers in areas that are not served by dial-a-ride can use the "flex-stop" service and the bus will travel up to one mile off of its regular route, as needed.

Capacity Analysis

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free-flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The Levels of Service for the intersection of SR 53/Ogulin Canyon Road were analyzed using the "Two-Way Stop-Controlled" intersection capacity method from the *Highway Capacity Manual* (HCM), Transportation Research Board, 6th Edition, 2018. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall average delay for the intersection.

The ranges of delay associated with the various levels of service are indicated in Table 1.

Table 1 – Two-Way Stop-Controlled Intersection Level of Service Criteria

LOS A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.
LOS B	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.
LOS C	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.
LOS D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.
LOS E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.
LOS F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.

Reference: *Highway Capacity Manual*, Transportation Research Board, 6th Edition, 2018

Traffic Operation Standards

City of Clearlake

The City of Clearlake established a Level of Service (LOS) Standard of LOS D for all intersections and roadways in Policy Cl 1.3.4 of *City of Clearlake 2040 General Plan Update,* City of Clearlake, 2017. Exceptions to this may be considered by the City Council when an unacceptable LOS (E or F) would result in clear public benefit. Such circumstances may include when improvements to achieve the LOS standard would result in impacts to unique historic resources or highly sensitive environmental areas; if right-of-way acquisition is infeasible; and/or if there are overriding economic or social circumstances.

Caltrans

While the study intersection is on a State highway, Caltrans does not have a standard of significance relative to operation as this is no longer a CEQA issue. The new *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (TISG), published in May 2020, replaced the *Guide for the Preparation of Traffic Impact Studies*, 2002. As

indicated in the TISG, the Department is transitioning away from requesting LOS or other vehicle operations analyses of land use projects and will instead focus on Vehicle Miles Traveled (VMT).

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the weekday a.m. and p.m. peak periods. This condition does not include project-generated traffic volumes. Volume data for the study intersection was collected on April 6, 2021. Peak hour factors (PHFs) were calculated based on the counts obtained and used in the analysis.

Intersection Levels of Service

Under Existing Conditions, SR 53/Ogulin Canyon Road operates acceptably at LOS A overall and LOS B or C on the stop-controlled westbound approach during both peak hours. A summary of the intersection Level of Service calculations is contained in Table 2, the Existing traffic volumes are shown in Figure 2, and copies of the Level of Service calculations for all evaluated scenarios are provided in Appendix A.

Table 2 – Existing Peak Hour Intersection Levels of Service

Study Intersection ***Approach***	**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
SR 53/Ogulin Canyon Rd	0.2	A	0.7	A
Westbound (OCR) Approach	*10.2*	*B*	*21.1*	*C*

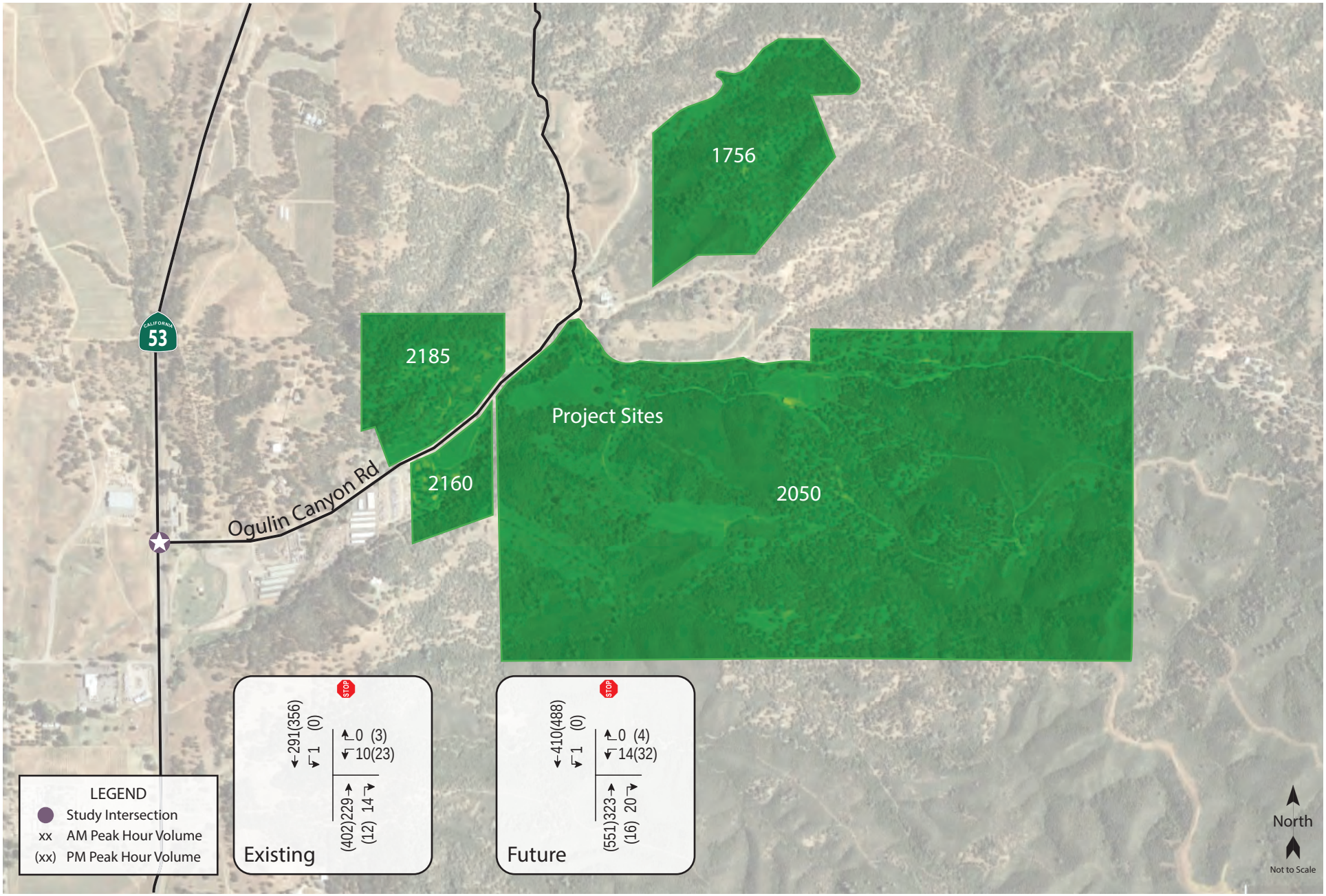
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; OCR = Ogulin Canyon Road

Future Conditions

Future volumes for the horizon year 2040 were developed for the study intersection using information contained in the traffic analysis that was prepared for the *City of Clearlake 2040 General Plan Update*. The study intersection was not analyzed as part of the General Plan update so a growth factor was calculated between existing and future volume projections for the nearest intersection on the SR 53 corridor that was analyzed in the General Plan analysis and then applied to the existing volumes at the study intersection in order to project likely future volumes. Anticipated General Plan buildout volumes for the intersection of SR 53/Olympic Drive, which is approximately one mile south of the study intersection, indicate a growth factor of 1.51 for the a.m. peak hour and 1.46 for the p.m. peak hour. After adjusting for the four years of growth that have already occurred since the General Plan analysis, a growth factor of 1.41 and 1.37 was applied to the existing 2021 counts in order to estimate 2040 volumes. The growth factors were applied uniformly to all movements at the study intersection. A spreadsheet indicating the growth factor calculations is provided in Appendix B.

Intersection Levels of Service

Under the anticipated Future volumes, the intersection of SR 53/Ogulin Canyon Road is expected to continue operating acceptably at LOS A overall and LOS D or better on stop-controlled westbound approach during both peak hours. Future volumes are shown in Figure 2 and operating conditions are summarized in Table 3.



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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 2 – Existing and Future Traffic Volumes

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Table 3 – Future Peak Hour Intersection Levels of Service				
Study Intersection ***Approach***	**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
SR 53/Ogulin Canyon Rd	0.2	A	0.9	A
Westbound (OCR) Approach	*10.8*	*B*	*28.3*	*D*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; OCR = Ogulin Canyon Road

Project Description

The four proposed cannabis cultivation projects would be located at 2185, 2160, 2050, and 1756 Ogulin Canyon Road; the 2185 and 2160 addresses are in the City of Clearlake, while the properties at 2050 and 1756 are in unincorporated Lake County. Following are detailed descriptions of each individual project:

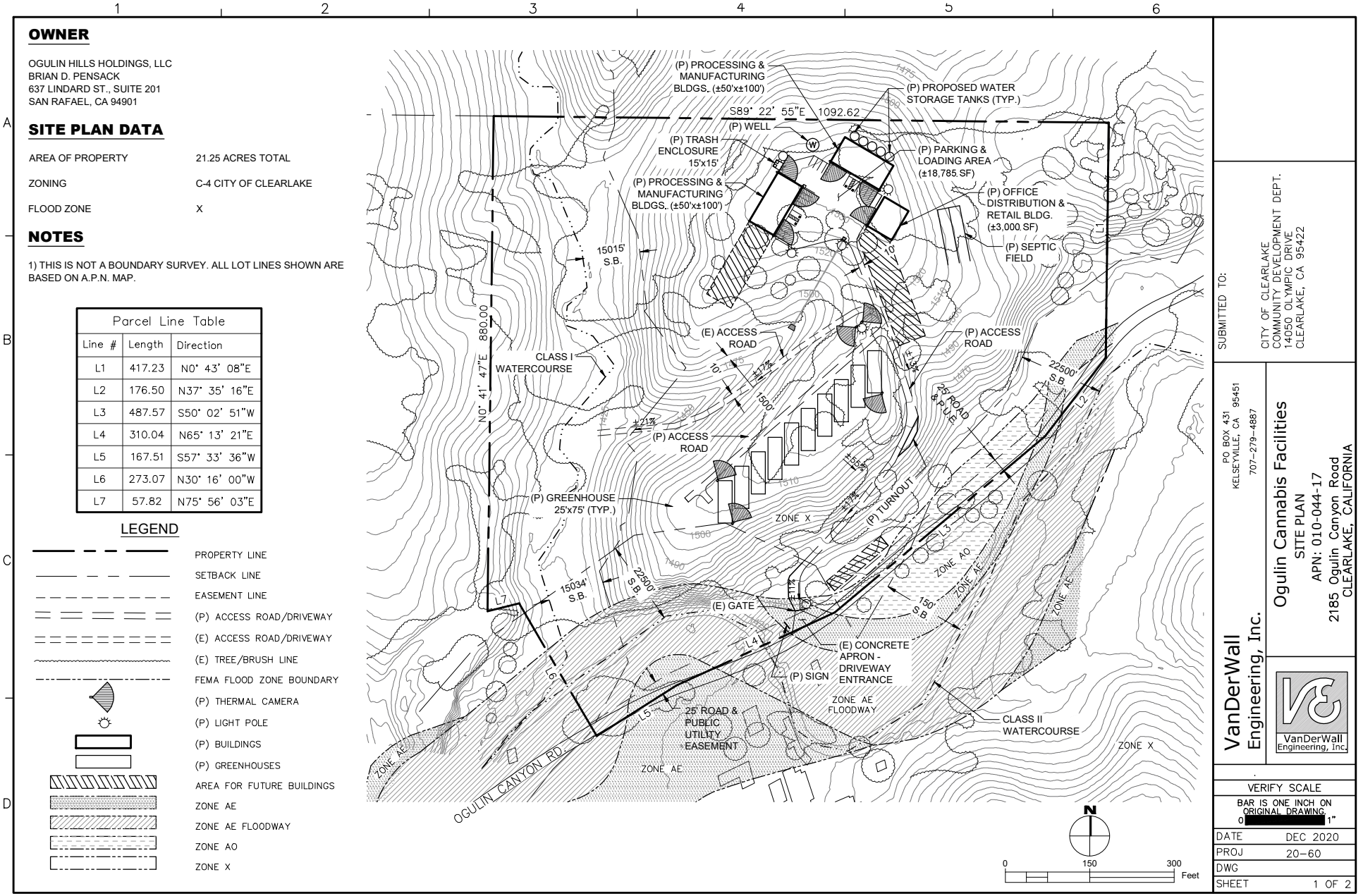
- **2185 Ogulin Canyon Road** – The first phase of the project includes 10,000 square feet of cannabis manufacturing, processing, and distribution uses, 3,000 square feet for office and retail delivery space, and ten greenhouses for mixed light cultivation totaling 18,750 square feet. During typical operation, an average of ten full-time employees are anticipated, which would increase to a total of 25 employees during harvest season.
- **2160 Ogulin Canyon Road** – The proposed project includes the development of 5,000 square feet of delivery and office space and 33,600 square feet of cannabis processing, manufacturing, and distribution uses. Five greenhouses are also proposed for indoor cannabis cultivation totaling 9,375 square feet. During the harvest season a maximum of 35 employees are anticipated.
- **2050 Ogulin Canyon Road** – The proposed Lake Vista Farms project includes 15 acres of outdoor cultivation canopy across five sites. There would be eight full-time employees during typical operation and up to 20 employees during the planting and harvesting seasons.
- **1756 Ogulin Canyon Road** – The proposed Blue Oaks Farm project consists of approximately two acres of cannabis canopy and associated storage facilities. During typical operation, there would be two employees on-site and an additional three crew members would be hired during the harvest season.

The project site plans are shown in Figures 3 through 6.

Trip Generation

To be consistent with traffic studies that have been prepared for other similar cannabis cultivation projects in Humboldt County and Sonoma County, the trip generation for the proposed projects were estimated using standard rates for "General Light Industrial" (Land Use #110) published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*, 10th Edition, 2017. Experience indicates that the application of rates using employees as the independent variable, rather than floor area, is better suited for cultivation projects since the cultivation, processing, manufacturing, and distribution of cannabis generally requires a substantially lower number of employees for a given floor area compared to other industrial uses. The proposed projects would be expected to generate more trips during harvest than non-harvest operation so as is typical for uses that have a "high season" the trip generation for the project was estimated using harvest employment projections considering both full-time and seasonal employees so that the resulting analysis reflects worst-case impacts during the peak season.

Based on a total of 85 employees across all four project sites, collectively the proposed projects would be expected to result in 259 trips per day on Ogulin Canyon Road during the peak season, including 44 trips during the weekday a.m. peak hour and 41 trips during the weekday p.m. peak hour. As is the case with all standard trip generation rates, although employees are the independent variable, trips generated by all aspects of the uses are included,



Source: VanDerWall Engineering, Inc. 7/2

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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 3 – 2185 Site Plan

OWNER

OGULIN ESTATES HOLDINGS, LLC
BRIAN D. PENSACK
637 LINDARD ST., SUITE 201
SAN RAFAEL, CA 94901

SITE PLAN DATA

AREA OF PROPERTY	9.56 ACRES TOTAL
ZONING	I - INDUSTRIAL
FLOOD ZONE	X, AE, AO

NOTES

1) THIS IS NOT A BOUNDARY SURVEY. ALL LOT LINES SHOWN ARE BASED ON A.P.N. MAP.

2.) EACH GREENHOUSE TO BE EQUIPED WITH A THERMAL CAMERA.

3.) ELECTRIC, PHONE, AND CABLE LINES ARE PROPOSED TO BE UNDERGROUND ON SITE.

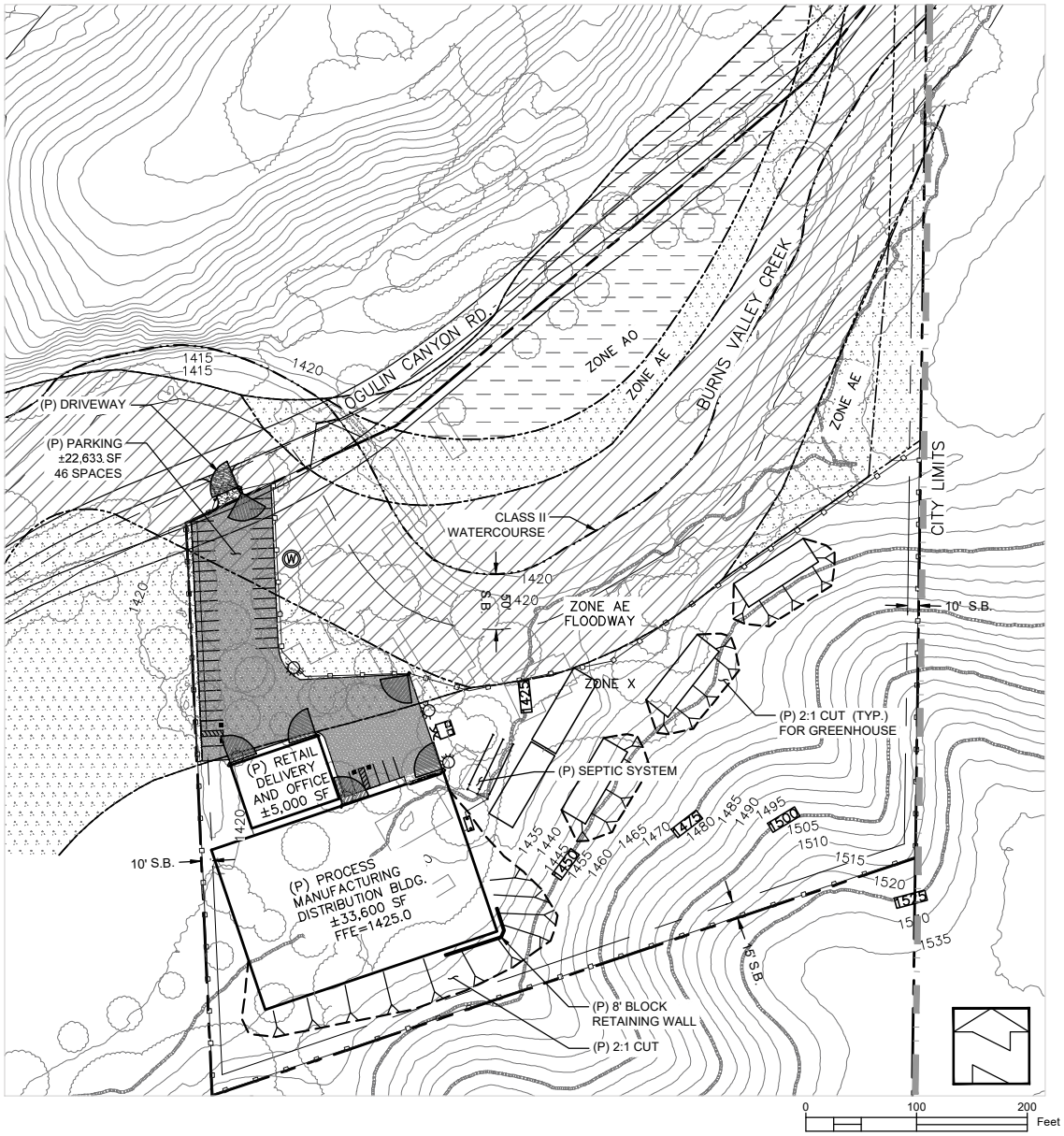
EARTHWORK QUANTITIES

CUT: 8,000 CY
FILL: 4,000 CY

NET: 4,000 CY EXPORT

LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- (P) ACCESS ROAD/DRIVEWAY
- (E) ACCESS ROAD/DRIVEWAY
- (E) TREE/BRUSH LINE
- FEMA FLOOD ZONE BOUNDARY
- (P) LANDSCAPE
- (P) 6' CHAIN LINKE FENCE
- (P) TRASH ENCLOSURE
- (P) THERMAL CAMERA
- (P) LIGHT POLE
- (P) GREENHOUSES (75'X25')
- ZONE AE
- ZONE AE FLOODWAY
- ZONE AO
- ZONE X



SUBMITTED TO:
CITY OF CLEARLAKE
COMMUNITY DEVELOPMENT DEPT.
14050 OLYMPIC DRIVE
CLEARLAKE, CA 95422

VanDerWall Engineering, Inc.
PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

Ogulin Cannabis Facilities II
SITE PLAN
APN: 010-044-21
2160 Ogulin Canyon Road
CLEARLAKE, CALIFORNIA

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	JAN. 2021
PROJ	21-02
DWG	
SHEET	OF 2

Source: VanDerWall Engineering, Inc. 7/2

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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 4 – 2160 Site Plan

COVER SHEET - Five (5) Cultivation Area Site Plans

APN'S: 010-053-01 & 02 2050 and 2122 OGULIN CANYON RD
CLEARLAKE, CA

SITE PLAN DATA

	010-053-01	010-053-02
AREA OF PROPERTY	145.81	156.64 acres
ZONING	RL	RL
FLOOD ZONE	D	D

CULTIVATION LICENSE

THE INTENTION OF THIS SITE MAP IS FOR THE SUBMITTAL OF AN APPLICATION FOR A MAJOR USE PERMIT SUBMITTAL TO LAKE COUNTY CALIFORNIA AND FOR CALIFORNIA STATE LICENSE FOR 5 ACRES OF OUTDOOR CANOPY.

NOTE:
1.) THIS IS NOT A RECORD OF SURVEY. THE BOUNDARY SHOWN IS APPROXIMATE AND BASED OFF OF ASSESSOR'S PARCEL MAPS. NO SURVEY MONUMENTS ARE FOUND NOR SHOWN.
2.) CONTOURS SHOWN WERE IMPORTED FROM LAKE CO GIS MAPPING DEPARTMENT AND ALL AERIAL PHOTOS BY GOOGLE EARTH.

PROPERTY OWNER

Brian D Pensack &
Garrett W. Burdick
637 Lindarost
Petaluma, CA 94952
(415) 637-6456
lakeviewfarms@gmail.com

APPLICANT

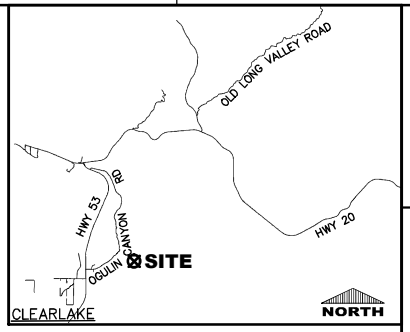
Lake Vista Farms LLC
Brian Pensack
141 Upham Street
Petaluma, CA 94952
(415) 317-2365

AGENT

Mike Mitzel, Consultant
3430 Gaddy Lane
Kelseyville, CA 95451
(707) 315-1764
konoctidag@gmail.com

WELL LOCATIONS

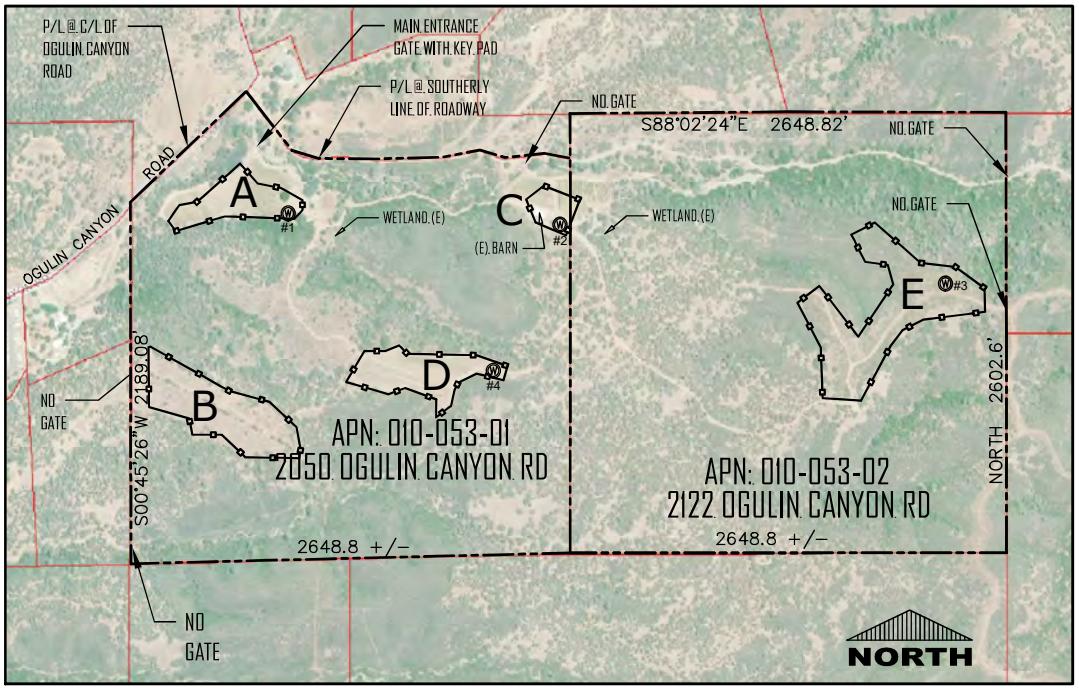
	LATITUDE	LONGITUDE
WELL #1	38°58'55.24"N....	122°35'59.64"W
WELL #2	38°58'55.32"N....	122°35'39.05"W
WELL #3	38°58'51.53"N....	122°35'10.39"W
WELL #4	38°58'46.45"N....	122°35'44.75"W
WELL #5		



LOCATION MAP

CULTIVATION AREA INDEX

NAME	CULTIVATION AREA	SHEETS
A Northwest Hops Field	3.4 ACRES	A-1 thru A-4
B Southwest Clearing	6.4 ACRES	B-1 thru B-4
C Northeast Hops Field	3.4 ACRES	C-1 thru C-5
D Central Hops Field	4.2 ACRES	D-1 thru D-4
E Chaparall Clearing	8.4 ACRES	E-1 thru E-4



SITE MAP

0 700 1400 Feet

LEGEND

- PROPERTY LINE
- CREEKS
- SETBACK LINE
- CULTIVATION FENCE (P)
- FENCE (E)
- ACCESS ROAD/DRIVEWAY
- TREE LINE
- WELL
- UTILITY POLE (P)
- TREE (E)
- LANDSCAPING TREE (P)
- STREET LIGHT (P)
- THERMAL CAMERA VIEW SHED (P)
- NON-THERMAL CAMERA VIEW SHED (P)

STORMWATER BMPS LEGEND*

- FIBER ROLLS (SE-5)
- SURFACE STABILIZATION (EC-2,6,7,8,15,16)
- SILT FENCE (SE-1)
- ROAD/PARKING LOT MGT (SC-40,43,44)
- STOCK PILE MGT (WE-1, WM-1,3)
- CHEMICAL HANDLING BMP (WM-1,2,3,4,5,6)
- SWALE MGT (EC-9, SE-6,8,9)
- WASTE MANAGEMENT (WM-5,6,7, SC-3,4)
- SEDIMENT TRAP/BASEIN (SE-2,3)
- WATER QUALITY MONITORING LOCATION

* ALL STORMWATER BMPS SHALL BE INSTALLED AND MAINTAINED AS PER CALIFORNIA STORMWATER BMP HANDBOOK.

SUBMITTED TO:
LAKE COUNTY
COMUNITY DEVELOPMENT DEPT
COUNTY OF LAKE
LAKEPORT, CA

VanDerWall Engineering, Inc.
PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

COVER SHEET
APN'S: 010-053-01 & 02
2050 & 2122 OGULIN CANYON RD
CLEARLAKE, CALIFORNIA

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPT 2019
PROJ	19-37
DWG	
SHEET	1

Source: VanDerWall Engineering, Inc. 7/2

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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities
Figure 5 – 2050 Site Plan

COVER SHEET - Blue Oaks Farms Cultivation Site Plan

1756 OGULIN CANYON RD. . CLEARLAKE CA . . . APN: 010-055-46

SITE PLAN DATA

AREA OF PROPERTY	46.52 +/- ACRES
CULTIVATION AREA	2.0 ACRE (P)
ZONING	RL - RURAL LANDS

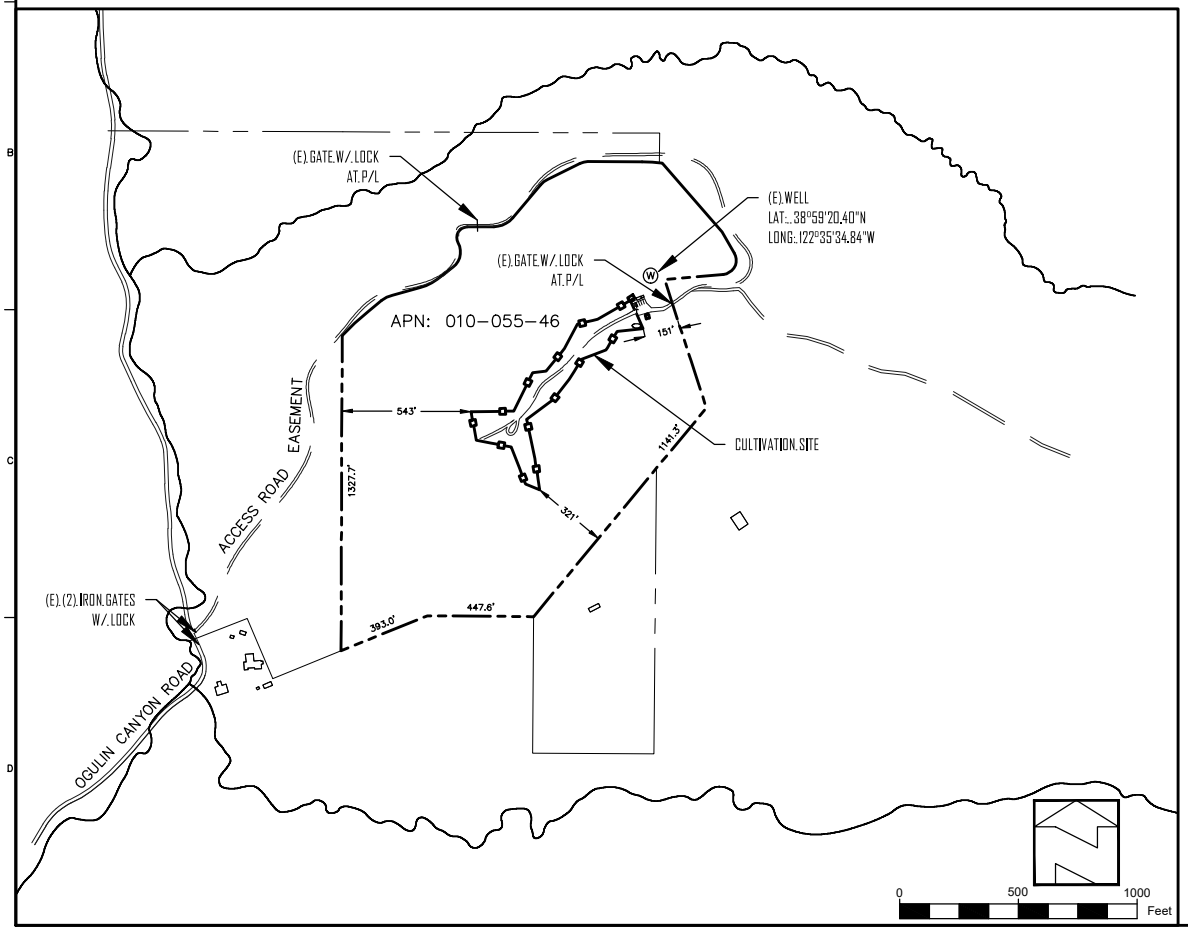
CULTIVATION LICENSE

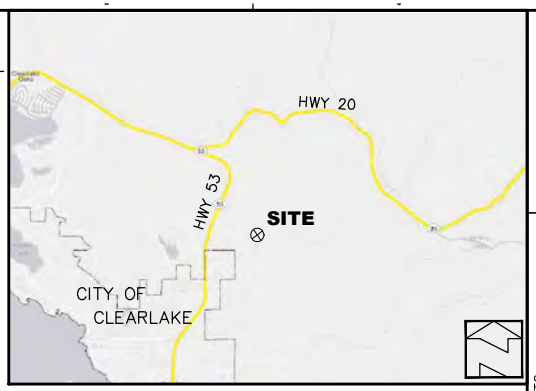
THE INTENTION OF THIS SITE MAP IS FOR THE SUBMITTAL APPLICATION FOR CALIFORNIA STATE LICENSE TYPE 3 OUTDOOR-SMALL OUTDOOR .

PROPERTY OWNER & APPLICANT

Brian Pensack, Kim Gardner
Blue Oaks Farms LLC
637 Lindaro Street Suite 201
San Rafael, CA 94901

PHONE: (415) 317-2345
EMAIL: homehelpforyou@gmail.com





LOCATION MAP

LEGEND

- PROPERTY LINE
- SETBACK LINE
- CULTIVATION FENCE (P)
- WIRE FENCE (E)
- ACCESS ROAD/DRIVEWAY
- TREE/BRUSH LINE
- W — IRRIGATION LINE (E)
- (W) IRRIGATION WELL
- SECURITY CAMERA

NOTE:
1.). THIS IS NOT A RECORD OF SURVEY. . THE BOUNDARY SHOWN IS APPROXIMATE AND BASED OFF OF ASSESSOR'S PARCEL MAPS. . NO SURVEY MONUMENTS ARE FOUND NOR SHOWN.

SITE PLAN INDEX

SUBMITTED TO:
LAKE COUNTY COMMUNITY DEVELOPEMENT DEPT.
COUNTY OF LAKE
LAKEPORT, CA

VanDerWall Engineering, Inc.
PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

Cover Sheet
Blue Oaks Farm
APN: 010-055-46
1756 OGULIN CANYON ROAD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	NOV 202
PROJ	19-38
DWG	
SHEET	1 C

Source: VanDerWall Engineering, Inc. 7/2

cle025.ai 7/21

Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 6 – 1756 Site Plan

so trips associated with deliveries, visitors, shipments, and other activities are reflected in the rate and resulting trip estimates. The trip generation estimates for each project, as well as the sum for all four projects, are summarized in Table 4.

Table 4 – Trip Generation Summary – Harvest Conditions

Land Use	Units	Daily		AM Peak			PM Peak		
		Rate	Trips	Trips	In	Out	Trips	In	Out
2185 Ogulin Canyon Rd									
General Light Industrial	25 empl	3.05	76	13	11	2	12	3	9
2160 Ogulin Canyon Rd									
General Light Industrial	35 empl	3.05	107	18	15	3	17	4	13
2050 Ogulin Canyon Rd (Lake Vista Farms)									
General Light Industrial	20 empl	3.05	61	10	9	1	10	2	8
1756 Ogulin Canyon Rd (Blue Oaks Farm)									
General Light Industrial	5 empl	3.05	15	3	2	1	2	1	1
Total Trips			**259**	**44**	**37**	**7**	**41**	**10**	**31**

Note: empl = employees

It should be noted that under typical non-harvest operations approximately 40 employees are anticipated across all four projects and would be expected to result in 122 daily trips on average, including 21 trips during the a.m. peak hour and 20 trips during the p.m. peak hour.

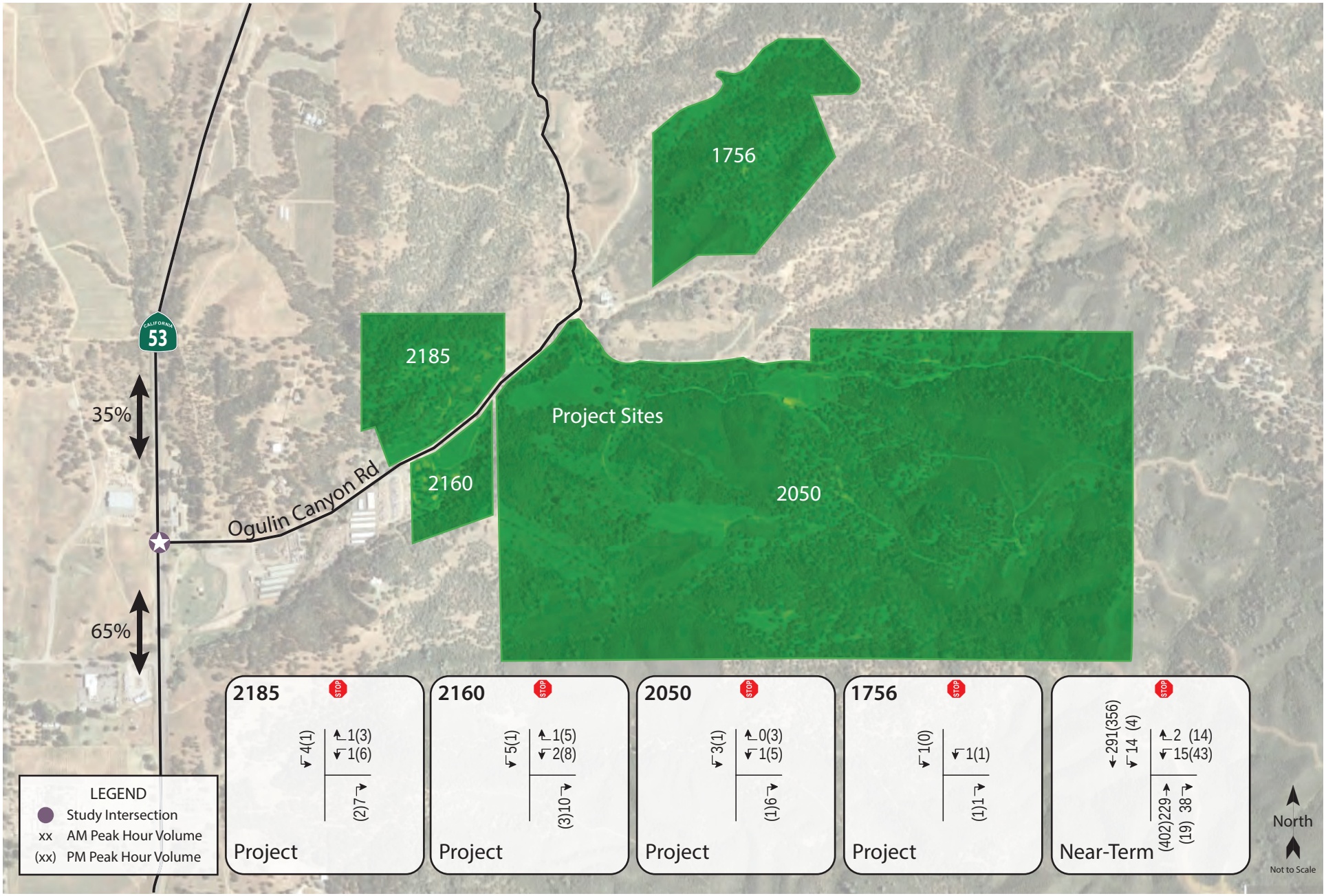
Trip Distribution

The pattern used to allocate new project trips to the street network was based on a review of the intersection turning movement volumes at SR 53/Ogulin Canyon Road and knowledge of the area and the surrounding region as well as the anticipated travel patterns for the project employees and deliveries. A distribution of 35 percent of the project trips were assigned to SR 53 north of Ogulin Canyon Road and 65 percent were assigned to the south. This information is shown on Figure 7 along with the individual project traffic volumes.

Intersection Operation

Existing plus Project Conditions

Upon adding trips associated with each individual project to Existing volumes, the study intersection of SR 53/Ogulin Canyon Road would be expected to continue operating acceptably at LOS A overall and LOS B or C on the Ogulin Canyon Road approach during both peak hours, with minor increases in delay. Individual project traffic volumes are shown in Table 5.



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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 7 – Project Traffic Volumes, Trip Distribution, and Near-Term Traffic Volumes

Table 5 – Existing and Existing plus Project Peak Hour Intersection Levels of Service at SR 53/Ogulin Canyon Road								
Project ***Approach***	**Existing Conditions**				**Existing plus Project**			
	AM Peak		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
2185 Ogulin Canyon Rd	0.2	A	0.7	A	0.3	A	0.9	A
Westbound (OCR) Approach	*10.2*	*B*	*21.1*	*C*	*10.2*	*B*	*20.8*	*C*
2160 Ogulin Canyon Rd	0.2	A	0.7	A	0.3	A	1.0	A
Westbound (OCR) Approach	*10.2*	*B*	*21.1*	*C*	*10.2*	*B*	*20.6*	*C*
2050 Ogulin Canyon Rd (Lake Vista Farms)	0.2	A	0.7	A	0.3	A	0.9	A
Westbound (OCR) Approach	*10.2*	*B*	*21.1*	*C*	*10.2*	*B*	*20.5*	*C*
1756 Ogulin Canyon Rd (Blue Oaks Farm)	0.2	A	0.7	A	0.2	A	0.7	A
Westbound (OCR) Approach	*10.2*	*B*	*21.1*	*C*	*10.2*	*B*	*21.2*	*C*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; OCR = Ogulin Canyon Road

Finding – The study intersection of SR 53/Ogulin Canyon Road would continue operating acceptably with trips from each individual project added to Existing volumes and all four projects would have an acceptable effect on operation of the surrounding roadway network.

Near-Term Conditions

Near-Term operating conditions were assessed with traffic from all four proposed projects added to the Existing volumes. As shown in Table 6, upon the cumulative addition of traffic associated with all four proposed cannabis facilities, SR 53/Ogulin Canyon Road is expected to operate acceptably at LOS A overall and LOS B or C on the stop-controlled westbound approach during both peak hours. Near-term traffic volumes are shown in Figure 7.

Table 6 – Near-Term Peak Hour Intersection Levels of Service				
Study Intersection ***Approach***	**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
SR 53/Ogulin Canyon Rd	0.5	A	1.5	A
Westbound (OCR) Approach	*10.3*	*B*	*21.3*	*C*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; OCR = Ogulin Canyon Road

Finding – Under Near-Term conditions with trips from all four proposed projects added, SR 53/Ogulin Canyon Road would be expected to continue operating acceptably.

Future plus Project Conditions

Under the future traffic volumes that would be expected upon buildout of the City's General Plan, and with cumulative traffic from the four proposed projects, the study intersection of SR 53/Ogulin Canyon Road is expected to continue operating acceptably at LOS A overall and at LOS D or better on the westbound approach during both peak hours. It should be noted that the proposed projects are consistent with the industrial land use assumptions applied in the General Plan traffic analysis, so project trips could reasonably be expected to be included in the Future traffic volumes; however, to provide a conversative assessment of the project's potential traffic effects, trips from all four projects were added to Future volumes. The Future plus Project operating conditions are summarized in Table 7.

Table 7 – Future and Future plus Project Peak Hour Intersection Levels of Service								
Study Intersection ***Approach***	**Future Conditions**				**Future plus Projects**			
	AM Peak		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
SR 53/Ogulin Canyon Rd	0.2	A	0.9	A	0.4	A	1.8	A
Westbound (OCR) Approach	*10.8*	*B*	*28.3*	*D*	*10.9*	*B*	*29.7*	*D*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; OCR = Ogulin Canyon Road

Finding – Under Future Conditions expected upon buildout of the City's General Plan and with the addition of traffic from all four projects, SR 53/Ogulin Canyon Road is expected to continue operating acceptably.

Alternative Modes

Pedestrian Facilities

Given the rural location of the project sites, the lack of existing facilities, and the nature of the proposed projects, employees are not expected to want to walk to the site.

Finding – The lack of existing dedicated facilities for pedestrians in the project vicinity is consistent with the rural setting and is therefore considered acceptable.

Bicycle Facilities

There are no bicycle facilities within the vicinity of the project sites including along SR 53 and Ogulin Canyon Road. Given the rural context, the existing condition wherein cyclists ride on the roadway shoulders of SR 53 or share the travel lanes with motorists on Ogulin Canyon Road is considered acceptable.

Finding – The lack of dedicated bicycle facilities in the vicinity of the project sites is considered acceptable for the minimal number of trips anticipated.

Transit

The lack of transit facilities serving the four projects does not result in an impact given the location and type of projects proposed.

Finding – There are no transit facilities serving the project sites; however, there is not anticipated to be any demand.

Access and Circulation

Site Access

All of the proposed projects would be accessed from existing gated driveways on Ogulin Canyon Road, except the project proposed at the 2160 address where a new driveway would be constructed. The projects in the City of Clearlake would be accessed from the segment of Ogulin Canyon Road that is paved, while the two projects in unincorporated Lake County would be accessed from the section further east with a gravel surface. The roadway has a width that varies between 16 and 25 feet and has turnouts before or after sections where the width is narrow to allow motorists to pass one another.

Very Low Volume Roadways

The daily volume for Ogulin Canyon Road is 220 vehicle trips to the west of the mini storage facility and 60 vehicle trips to the east. Roadways with volumes of 400 vehicles per day or less are considered "Very Low Volume Roadways" under criteria published by the American Association of State Highway and Transportation Officials (AASHTO). Collectively, the four projects are anticipated to result in 122 daily trips during typical operation and 259 trips during harvest conditions. Assuming that harvest conditions will account for three months out of the year, the projects would result in an annual ADT volume of 156 daily trips so even with the addition of new project trips the entire section of Ogulin Canyon Road would still have a daily volume below 400 and the designation as a "very low volume" roadway would be retained.

In the AASHTO *Guidelines for Geometric Design of Very Low-Volume Local Roads* published in 2001, design criteria are presented that are less restrictive than those applied to higher volume roads. These standards do not compromise safety, but discourage widening of lanes and shoulders, changes in horizontal and vertical alignment, and other roadside improvements except where such changes are likely to provide substantial safety benefits. To determine if the roadway has an existing safety issue that could be improved with widening, the collision history for the roadway was reviewed and it was determined that there were no collisions reported in the five-year period between April 1, 2015 and March 31, 2020, the most recent period for which data is available. While a roadway with a consistent width of at least 20 feet would be desirable, since users have been navigating the roadway safely under its current condition, no widening appears necessary.

Finding – With the increase in trips from the four projects, the entirety of Ogulin Canyon Road would have an annual ADT below the AASHTO threshold that defines a "Very Low Volume Roadway" and since the roadway has been operating acceptably in terms of safety, it is reasonable to expect the facility to continue doing so.

Sight Distance

Consideration was given to the adequacy of sight lines along Ogulin Canyon Road and the ability for opposing motorists to see one another in order to move to the side of the road for a passing maneuver to occur. Stopping sight distances were evaluated based on sight distance criteria published by AASHTO that are applicable for "Very Low Volume Roadways. These values are developed using a brake reaction time and driver deceleration that are in line with observed driver behavior on roadways with volumes below 400 vehicles per day. There is no posted speed limit on Ogulin Canyon Road between SR 53 and approximately 850 feet east of the driveway to the property at 2185 so a speed limit of 25 miles per hour (mph) was assumed for this section. The gravel section to the east has an indicated speed limit of 15 mph. For speeds of 15 and 25 mph, the recommended stopping sight distances needed for very low volume roadways are 65 and 125 feet, respectively. Based on a review of aerial photography, it was determined that sight lines between following and opposing motorists are expected to extend at least 150 feet along the paved roadway segment and 100 feet along the gravel section, which are both adequate for anticipated travel speeds.

Consideration was also given to adequacy of stopping sight distance at the project driveways. Sight lines were field measured at the two driveways within the City Limits and were determined to extend approximately 200 feet, which is more than adequate for anticipated travel speeds. Sight lines at the project driveways in unincorporated Lake County were measured using aerial imagery and determined to extend at least 100 feet, which is adequate for speeds of 15 mph, though it should be noted that given the low volume on this section of the roadway, turning movement conflicts would be minimal to non-existent.

Finding – Adequate stopping sight distance is available on Ogulin Canyon Road for the anticipated travel speeds and the very low volume roadway designation.

Recommendation – To maintain available sight lines on Ogulin Canyon Road, any new landscaping or signage planned for the project frontages should be placed outside the driver's vision triangle at the driveways.

Vehicle Miles Traveled

Background and Threshold of Significance

Senate Bill (SB) 743 established a change in the metric to be applied to determining transportation impacts associated with development projects. Rather than the delay-based criteria associated with a Level of Service (LOS) analysis, the change in Vehicle Miles Traveled (VMT) as a result of a project is now the basis for determining impacts with respect to transportation and traffic under CEQA. As of the date of this analysis, the City of Clearlake and County of Lake have not yet adopted thresholds of significance related to VMT, though the *Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study* was prepared for Lake Area Planning Council (LAPC) in November 2020. Many of the recommendations in the Regional Baseline Study are consistent with guidance published by the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018. As a result, individual project-related VMT impact were assessed based on OPR guidance.

Project Impact

The OPR Technical Advisory identifies several criteria that may be used by jurisdictions to identify certain types of projects that are unlikely to have a significant VMT impact and can be "screened" from further analysis. One of these screening criteria pertains to "small projects," which OPR identifies as generating fewer than 110 new vehicle trips per typical weekday. OPR specifies that VMT should be based on a typical weekday and averaged over the course of the year to take into consideration seasonal fluctuations. As shown in Table 4, each of the four individual proposed projects is anticipated to generate less than the small project threshold of 110 daily vehicle trips during the peak season, and even less during non-harvest conditions. As a result, it is reasonable to conclude that each project can be presumed to have a less-than-significant transportation impact on VMT.

Finding – Based on OPR guidance, all four projects can be presumed to have a less-than-significant transportation impact on VMT under the small project screening threshold.

Parking

Each of the four projects was analyzed to determine whether the proposed vehicle parking supply would be sufficient for the anticipated peak parking demand. Since the City of Clearlake and County of Lake do not have published parking requirements for cannabis cultivation and support uses, the anticipated peak parking demand was estimated based on the employee count as well as the number of company-owned vehicles proposed for distribution uses. It is recommended that a minimum of one parking space be provided for each full- and part-time employee during the largest shift. Further, for the distribution components proposed for the projects located at 2185 and 2160 Ogulin Canyon Road, it is suggested that one parking space be provided for each company-owned vehicle.

Based on these rates, a minimum of 27 parking spaces would need to be provided at 2185, 37 spaces at 2160, 20 spaces at 2050, and five spaces at 1765 Ogulin Canyon Road in order to satisfy the anticipated peak demand. As shown in Table 8, the proposed parking supplies for all four projects are more than adequate for the anticipated peak demand.

Table 8 – Parking Analysis

Project	Units	Rate	Estimated Peak Demand	Proposed Supply
2185 Ogulin Canyon Rd	25 empl & 2 veh	1 space/empl & 1 space/veh	27	**32**
2160 Ogulin Canyon Rd	35 empl & 2 veh	1 space/empl & 1 space/veh	37	**46**
2050 Ogulin Canyon Rd	20 empl	1 space/empl	20	**27**
1756 Ogulin Canyon Rd	5 empl	1 space/empl	5	**6**

Notes: empl = employee; veh = company vehicle

Finding – The proposed parking supply for each project would be adequate to meet the anticipated peak season parking demand based on the proposed employee count and number of company-owned vehicles.

Conclusions and Recommendations

Conclusions

- The four proposed projects would be expected to result in a total of 259 new daily trips during the peak season, including 44 trips during the morning peak hour and 41 trips during the evening peak hour.
- Under Existing Conditions, SR 53/Ogulin Canyon Road operates acceptably at LOS A overall and LOS B or C on the stop-controlled approach and would be expected to continue operating at the same service levels with the addition of traffic from each individual project.
- Under Near-Term Conditions, which includes cumulative traffic from all four projects added to Existing volumes, SR 53/Ogulin Canyon Road would be expected to operate acceptably at LOS A overall and LOS B or C on stop-controlled westbound approach during both peak hours.
- The study intersection of SR 53/Ogulin Canyon Road would be expected to operate at LOS A overall and LOS D or better on stop-controlled approach during both peak hours under the anticipated Future volumes and with cumulative traffic from all four projects added.
- Based on OPR guidance, all four projects can be presumed to have a less-than-significant transportation impact on VMT under the small project screening threshold.
- There were no collisions recorded at the intersection of SR 53/Ogulin Canyon Road or on Ogulin Canyon Road during the most recent five-year study period indicating that there are no readily apparent safety issues in the study area.
- Although there are no pedestrian, transit, or bicycle facilities in the vicinity of the project sites, the existing condition is acceptable given that the project sites are located in an automobile-oriented rural area without any expected demand for walking or transit and limited demand for bicycling.
- With the increase in trips from the four projects, the entirety of Ogulin Canyon Road would have an annual ADT below the AASHTO 400-trip threshold that defines a "Very Low Volume Roadway" and since the roadway has been operating acceptably in terms of safety, it is reasonable to expect the facility to continue doing so.
- Adequate stopping sight distance is available on Ogulin Canyon Road for the anticipated travel speeds.
- The proposed parking supplies for all four projects are more than adequate to meet the anticipated peak parking demand.

Recommendation

- To maintain available sight lines on Ogulin Canyon Road, any new landscaping or signage planned for the project frontages should be placed outside the driver's vision triangle at the driveways.

Study Participants and References

Study Participants

Principal in Charge	Dalene J. Whitlock, PE, PTOE
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Assistant Planner	Jade Kim
Graphics	Cameron Wong
Editing/Formatting	Alex Scrobonia, Cameron Wong, Hannah Yung-Boxdell
Quality Control	Dalene J. Whitlock, PE, PTOE

References

2016 Collision Data on California State Highways, California Department of Transportation, 2017

Active Transportation Plan for Lake County, Lake County/City Area Planning Council, 2016

California Manual on Uniform Traffic Control Devices for Streets and Highways, California Department of Transportation, 2014

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Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤ 400), American Association of State Highway and Transportation Officials, 2001

Highway Capacity Manual, 6th Edition, Transportation Research Board, 2018

Highway Design Manual, 6th Edition, California Department of Transportation, 2017

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Municipal Code of the City of Clearlake, Coded Systems LLC, 2017

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Statewide Integrated Traffic Records System (SWITRS), California Highway Patrol, 2015-2020

Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, 2018

Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017

Vehicle Miles Traveled-Focused Transportation Impact Study Guide, California Department of Transportation, 2020

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Appendix A

Intersection Level of Service Calculations

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Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	14	1	291	10	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	4	0	80	3	0
Total Analysis Volume [veh/h]	252	15	1	320	11	0
Pedestrian Volume [ped/h]	0		0		0	

Generated with PTV VISTRO
Version 2021 (SP 0-0)

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.78	0.00	10.18	9.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.05	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.06	0.00	1.19	0.00
d_A, Approach Delay [s/veh]	0.00		0.02		10.18	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.20					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	22.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.107

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	12	0	356	23	3
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	3	0	97	6	1
Total Analysis Volume [veh/h]	437	13	0	387	25	3
Pedestrian Volume [ped/h]	0		0		0	

Generated with PTV VISTRO
Version 2021 (SP 0-0)

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.11	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.24	0.00	22.29	10.84
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.36	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	8.89	0.36
d_A, Approach Delay [s/veh]	0.00		0.00		21.06	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.68					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4100	1.4100	1.4100	1.4100	1.4100	1.4100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	323	20	1	410	14	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	5	0	103	4	0
Total Analysis Volume [veh/h]	323	20	1	410	14	0
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.96	0.00	10.75	10.01
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.07	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.06	0.00	1.68	0.00
d_A, Approach Delay [s/veh]	0.00		0.02		10.75	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.21					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	30.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.184

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3700	1.3700	1.3700	1.3700	1.3700	1.3700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	551	16	0	488	32	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	138	4	0	122	8	1
Total Analysis Volume [veh/h]	551	16	0	488	32	4
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.18	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.58	0.00	30.35	11.79
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.65	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	16.33	0.57
d_A, Approach Delay [s/veh]	0.00		0.00		28.29	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	4	0	1	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	21	5	291	11	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	6	1	80	3	0
Total Analysis Volume [veh/h]	252	23	5	320	12	1
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.81	0.00	10.23	9.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.05	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.29	0.00	1.31	0.10
d_A, Approach Delay [s/veh]	0.00		0.12		10.18	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.28					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	23.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.138

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	1	0	6	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	14	1	356	29	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	4	0	97	8	2
Total Analysis Volume [veh/h]	437	15	1	387	32	7
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.14	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.25	0.00	22.96	10.88
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.47	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.07	0.00	11.76	0.86
d_A, Approach Delay [s/veh]	0.00		0.02		20.79	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	5	0	2	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	24	6	291	12	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	7	2	80	3	0
Total Analysis Volume [veh/h]	252	26	7	320	13	1
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.82	0.00	10.27	9.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.00	0.06	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.41	0.00	1.43	0.10
d_A, Approach Delay [s/veh]	0.00		0.17		10.22	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.32					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	23.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.146

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	1	0	8	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	15	1	356	31	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	4	0	97	8	2
Total Analysis Volume [veh/h]	437	16	1	387	34	9
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.15	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.25	0.00	23.14	10.90
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.50	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.07	0.00	12.61	1.11
d_A, Approach Delay [s/veh]	0.00		0.02		20.58	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.01					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	3	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	20	4	291	11	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	5	1	80	3	0
Total Analysis Volume [veh/h]	252	22	4	320	12	0
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.80	0.00	10.22	9.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.05	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.23	0.00	1.30	0.00
d_A, Approach Delay [s/veh]	0.00		0.10		10.22	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.25					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.129

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	1	0	5	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	13	1	356	28	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	4	0	97	8	2
Total Analysis Volume [veh/h]	437	14	1	387	30	7
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.13	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.25	0.00	22.79	10.88
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.44	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.07	0.00	10.94	0.86
d_A, Approach Delay [s/veh]	0.00		0.02		20.53	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.88					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	1	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	15	2	291	11	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	4	1	80	3	0
Total Analysis Volume [veh/h]	252	16	2	320	12	0
Pedestrian Volume [ped/h]	0		0		0	

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Version 2021 (SP 0-0)

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.78	0.00	10.20	9.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.05	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.12	0.00	1.30	0.00
d_A, Approach Delay [s/veh]	0.00		0.05		10.20	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.23					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.112

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	13	0	356	24	3
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	4	0	97	7	1
Total Analysis Volume [veh/h]	437	14	0	387	26	3
Pedestrian Volume [ped/h]	0		0		0	

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Version 2021 (SP 0-0)

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.11	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.24	0.00	22.37	10.84
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.37	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	9.28	0.36
d_A, Approach Delay [s/veh]	0.00		0.00		21.18	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.71					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	13	0	5	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	38	14	291	15	2
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	10	4	80	4	1
Total Analysis Volume [veh/h]	252	42	15	320	16	2
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.87	0.00	10.39	9.59
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.04	0.00	0.07	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.90	0.00	1.80	0.19
d_A, Approach Delay [s/veh]	0.00		0.35		10.30	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.47					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	24.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.205

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	4	0	20	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	19	4	356	43	14
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	5	1	97	12	4
Total Analysis Volume [veh/h]	437	21	4	387	47	15
Pedestrian Volume [ped/h]	0		0		0	

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Version 2021 (SP 0-0)

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.20	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	8.28	0.00	24.66	10.96
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.75	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.27	0.00	18.68	1.86
d_A, Approach Delay [s/veh]	0.00		0.08		21.34	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.49					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4100	1.4100	1.4100	1.4100	1.4100	1.4100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	13	0	5	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	323	44	14	410	19	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	11	4	103	5	1
Total Analysis Volume [veh/h]	323	44	14	410	19	2
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.06	0.00	10.99	10.03
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.04	0.00	0.09	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.89	0.00	2.37	0.21
d_A, Approach Delay [s/veh]	0.00		0.27		10.89	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.42					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	34.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.303

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3700	1.3700	1.3700	1.3700	1.3700	1.3700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	3	0	20	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	551	23	3	488	52	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	138	6	1	122	13	4
Total Analysis Volume [veh/h]	551	23	3	488	52	15
Pedestrian Volume [ped/h]	0		0		0	

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Version 2021 (SP 0-0)

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.30	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	8.61	0.00	34.81	11.94
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	1.21	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.23	0.00	30.14	2.16
d_A, Approach Delay [s/veh]	0.00		0.05		29.69	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	1.78					
Intersection LOS	D					

Appendix B

Growth Rate Calculations

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Future Growth Factor Calcuations

Traffic Impact Study for the the Ogulin Canyon Road Cannabis Cultivation Facilities

AM Peak Hour Volume

Intersection	Year	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
SR 53/Olympic Dr	2017	167	225	0	0	288	69	58	0	208	0	0	0	**1015**
SR 53/Olympic Dr	2040	235	400	0	0	440	95	80	0	285	0	0	0	**1535**

PM Peak Hour Volume

Intersection	Year	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
SR 53/Olympic Dr	2017	297	258	0	0	221	100	108	0	260	0	0	0	**1244**
SR 53/Olympic Dr	2040	370	445	0	0	415	125	135	0	330	0	0	0	**1820**

Source: City of Clearlake 2040 General Plan Update

Growth Rate Calculations

	AM	PM
Growth Factor (2017 to 2040)	1.51	1.46
Annual Growth Rate	1.8%	1.7%
Growth Factor (2021 to 2040)	1.41	1.37

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