Regular Meeting of the Madera City Council and Special Meeting of the Madera City Council as the Groundwater Sustainability Agency

205 W. 4th Street, Madera, California 93637

JOINT MEETING NOTICE AND AGENDA

Wednesday, February 19, 2020
6:00 p.m.

Council Chambers
City Hall

CALL TO ORDER

ROLL CALL: **Mayor Andrew J. Medellin**
Mayor Pro Tem Santos Garcia, District 5
Council Member Cece Gallegos, District 1
Council Member Jose Rodriguez, District 2
Council Member Steve Montes, District 3
Council Member Derek O. Robinson Sr., District 4
Council Member Donald E. Holley, District 6

INVOCATION: Pastor Joyce Lane – Glory of Zion Church

PLEDGE OF ALLEGIANCE:

APPROVAL OF AGENDA:

PUBLIC COMMENT:

The first fifteen minutes of the meeting are reserved for members of the public to address the Council on items which are within the subject matter jurisdiction of the Council. Speakers shall be limited to three minutes. Speakers will be asked, but are not required, to identify themselves and state the subject of their comments. If the subject is an item on the Agenda, the Mayor has the option of asking the speaker to hold the comment until that item is called. Comments on items listed as a Public Hearing on the Agenda should be held until the hearing is opened. The Council is prohibited by law from taking any action on matters discussed that are not on the Agenda, and no adverse conclusions should be drawn if the Council does not respond to public comment at this time.

WRITTEN COMMUNICATIONS:

1. Consideration of a Request by Nutrien Ag Solutions to Allow for Connection to the City's Water Systems and Direction to Staff (Report by Keith Helmuth)

PRESENTATIONS:

1. Eagle Scout Recognition (Presentation by Mayor Medellin)
2. Road to 2020 Census (Presentation by Leticia Medina, Census)
3. Employee Recognition for Years of Service - Viola Rodriguez, Code Enforcement Supervisor and Mariane Croxen, Public Safety Dispatcher (Presentation by Chief Lawson)

INTRODUCTIONS:

A. WORKSHOP
None

B. CONSENT CALENDAR

Matters listed under the Consent Calendar are considered routine and will be enacted by one motion and one vote. There will be no separate discussion of these items. If discussion is desired, a member of the public or a member of the Council may request an item be removed from the Consent Calendar and it will be considered separately.

B-1 Minutes – 2/5/2020

B-2 Informational Report on Register Audited Demands 1/25/20 – 2/7/20 (Report by Roger Sanchez)

B-3 Consideration of a Resolution Authorizing Submittal of an Application to the California Department of Resources Recycling and Recovery for Beverage Container Recycling City/County Payment Program and Authorizing the City Manager to Execute All Grant Documents (Report by Jim Howell)

B-4 Consideration of Adopting a Resolution to enter into the Madera-Mariposa-Merced Unit 2020 Local Government Assistance by Hire Agreement to Augment CAL Fire Resources should the need arise (Report by Matt Watson)

B-5 Consideration of Adopting a Resolution Approving an Amendment to the Tyler Technologies License And Services Agreement for $35,015 for the Brazos eCitation System to include Equipment, Licensing and Software Access and Authorizing the Mayor to Execute the Amendment on Behalf of the City (Report by Dino Lawson)

B-6 Consideration of a Resolution Approving a Memorandum of Understanding between the Madera County Transportation Commission and the City of Madera Regarding the Coordination of Ongoing Transit Planning and Programming Federal Funds that Support the Ongoing and Future Deployment of Transit Services by the City of Madera (Report by Ivette Iraheta)

B-7 Actions Relating to Final Map for Linden Street Residential Complex (Tract No. 19-S-05):

1) Consideration of a Resolution of the City of Madera Approving the Final Map for Linden Street Residential Complex Subdivision (Tract No. 19-S-05) and Improvement Agreement (Agreement) Affecting Land Development and Authorizing the Mayor to Execute the Agreement on Behalf of the City; and

2) Consideration of a Resolution of the City of Madera Approving Annexation of the Linden Street Residential Complex Subdivision (Tract No. 19-S-05) into Zone of Benefit 4; Confirming the Diagram and Assessments for City Wide Landscape and Lighting Assessment District Zone of Benefit 4 For Fiscal Year (FY) 2020/2021; Authorizing the Mayor to Execute the Covenant on behalf of the City and Authorizing the City Clerk to file the Diagram and Assessment with the Madera County Auditor

B-8 Waive Full Reading and Consider Adoption of an Ordinance of the City of Madera, California Amending Title VIII: Finance, Revenue, and Taxation, Chapter 7: Municipal Code, Sections 8-7.09, 8-7.10, and 8-7.14 of the Madera Municipal Code Relating to Discontinuation of Service, Delinquent Accounts, and Noticing Prior to Termination of Water Service (Report by Vicki Crow)

B-9 Consideration of a Resolution Approving Submission of the 2019 Infill Infrastructure Grant Program to the California State Department of Housing and Community Development for Funding in an Amount Not to Exceed $1,000,000 for the Downtown Madera Veterans and Family Housing Project located on the Northwest and Southeast corners of 5th and C Streets in Downtown Madera (Report by Arnoldo Rodriguez)

C. PUBLIC HEARINGS

None

D. PETITIONS, BIDS, RESOLUTIONS, ORDINANCES, AND AGREEMENT

D-1 Consideration of Adopting a Resolution Approving Award of an Agreement for Landscape Maintenance Services for the Downtown District, Certain City Facilities, and Median Islands in the amount of $200,880.00 to EMTS Professional Landscape Services Inc. and Authorizing the Mayor to Execute the Agreement on behalf of the City (Report by John Scarborough)

D-2 Consideration of a Resolution Approving Acceptance of Grant Deed for Property Located at 16557 Austin Street, Madera, California 93638 offered by Current Property Owners for Future Park development and Authorizing City Clerk to Execute and Record the Grant Deed and Certificate of Acceptance (Report by John Scarborough)

D-3 Consideration of a Resolution Approving an Agreement with Crescendo Consulting Group for Preparation of the Community Development Block Grant (CDBG) 2020/2024 Five-Year Consolidated Plan, Citizen Participation Plan, Strategic Plan, Analysis of Impediments to Fair Housing Choice and the 2020/2021 Annual Action Plan for a Not to Exceed Amount of $60,000 (Report by Ivette Iraheta)

E. ADMINISTRATIVE REPORTS

E-1 Presentation of the Intersection Control Evaluation Report for the Lake Street/4th Street/Central Avenue Intersection and Direction to Staff (Report by Keith Helmuth)

E-2 Mid-Valley Disposal Third and Fourth Quarter Updates (Report by Annette Kwock)

F. COUNCILMEMBER REPORTS/ANNOUNCEMENTS/FUTURE AGENDA ITEMS

This portion of the meeting is reserved for the Mayor and Councilmembers (i) to make brief reports on boards, committees, and other public agencies, and at public events, (ii) to request updates, (iii) to initiate future agenda items., and (iv) to take action on matters initiated under this section of the agenda. Under this section the Council may take action only on items specifically agendized and which meet other requirements for action.

G. CLOSED SESSION

G-1 Liability Claim Pursuant to Government Code §54956.95
Agency Claimed Against: City of Madera
Claimant: Garza, Eva Solis

G-2 Conference with Legal Counsel – Existing Litigation pursuant to Government Code §54956.9(d)(1)
Name of Case: MCA 1803 LLC v. City of Madera

G-3 Public Employee Performance Evaluation – Pursuant to Government Code Section 54957(b)(1)
Title: City Clerk

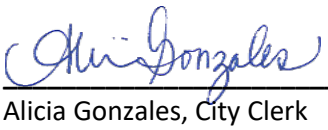
G-4 Public Employee Performance Evaluation – Pursuant to Government Code Section 54957(b)(1)
Title: City Attorney

ADJOURNMENT – Next regular meeting on March 4, 2020

- Please silence or turn off cell phones and electronic devices while the meeting is in session.
- Regular meetings of the Madera City Council are held the 1st and 3rd Wednesday of each month at 6:00 p.m. in the Council Chambers at City Hall.
- Any writing related to an agenda item for the open session of this meeting distributed to the City Council less than 72 hours before this meeting is available for inspection at the City of Madera Office of the City Clerk, 205 W. 4th Street, Madera, California 93637 during normal business hours.
- The meeting room is accessible to the physically disabled, and the services of a translator can be made available. Request for additional accommodations for the disabled, signers, assistive listening devices, or translators needed to assist participation in this public meeting should be made at least seventy-two (72) hours prior to the meeting. Please call the Human Resources Office at (559) 661-5401. Those who are hearing impaired may call 711 or 1-800-735-2929 for TTY Relay Service.

- Questions regarding the meeting agenda or conduct of the meeting, please contact the City Clerk's office at (559) 661-5405.
- Para asistencia en Español sobre este aviso, por favor llame al (559) 661-5405.

I, Alicia Gonzales, City Clerk for the City of Madera, declare under penalty of perjury that I posted the above agenda for the Regular Meeting of the Madera City Council for February 19, 2020 near the front entrances of City Hall and on the City's website www.madera.gov at 7:30 p.m. on February 13, 2020.



Alicia Gonzales, City Clerk

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Department Director

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: WC-1

SUBJECT:

Consideration of a Request by Nutrien Ag Solutions to Allow for Connection to the City's Water Systems and Direction to Staff

RECOMMENDATION:

Staff recommends that the City Council (Council) review the information presented in this report, and if it determines that unique circumstances exist to justify the use of City domestic water services by Nutrien Ag Solutions, direct staff to work with Nutrien in drafting an extra-territorial service agreement and establishing the requisite improvements necessary to take domestic water services and establish a connection with the City water system.

SUMMARY:

Nutrien has submitted a written request for City authorization to establish one or more domestic water service connections to the City's water system. Typical requests for connection to the City utility services are for water service and are usually the result of a failing or failed well at a single residential dwelling. This request is unique in that the Nutrien facility is industrial in nature with a significantly higher demand than a single residential dwelling.

DISCUSSION:

Nutrien Ag Solutions Request (originally submitted under the name Crop Production Services)

The Nutrien Facility is located in the County on the south side of Pecan Avenue (Avenue 13), west of Granada Drive (Road 25; refer to Attachment 1). Because Nutrien is in the County and has not previously, to staff's knowledge, made a request to receive domestic water service, it utilizes two wells to accommodate their water demands. At present, Nutrien does have a physical connection to the City's water system. That connection, however, is solely for the

purpose of ensuring adequate fire flow. No demands are placed on the City's water system unless there is a fire.

Nutrien's request is not, at present borne out of a failed well. Rather, one of Nutrien's water wells experienced a casing collapse in 2018. Nutrien attempted to repair the well with the installation of sand filters, new pumps, and a new riser pipe. When the casing was deemed unrepairable, they decided to abandon the well altogether. As such, they are unsure of the longevity of the current well and therefore feel they need to connect to the City's water system.

Current Connection Policy

While the City has a well-practiced procedure, it does not have a formalized policy for the approval or rejection of connections to City services from outside the City limits. The vast majority of such requests are for individual residential properties with most being approved. It would probably be most accurate to conclude that the key factor to securing an approval rests primarily with the City's ability to accommodate the new connection without creating negative effects on the existing systems or future users already located within the City limits.

Because typical requests tend to focus on individual residential dwelling units, impacts on the City's ability to accommodate the impact are incremental and relatively easy to absorb into the system so long as single requests do not evolve into dozens within short time frames. This is because capacity in the water systems can only be increased with large capital expenditures which are subject to the availability of funding. As such, this element of the current request from Nutrien is unique wherein it represents the equivalent of multiple smaller requests. The decision of Council may therefore result in general guidance for future requests like this one, though all requests such as this will continue to be brought to Council.

Water Consumption

The average capacity of a City well at present is approximately 1,300 gallons per minute and can vary depending on several factors including the season and current drought conditions. The average demand from Nutrien is estimated at approximately 76 gallons per minute or about 6 percent of the average City well or the equivalent of about 84 equivalent single-family dwelling units (ESFD). It is noted by Nutrien that this will be a steady consumption. In other words, there is no defined peak demand.

Potential Benefits Associated with Approving the Request

It is in the City's best interest in limiting the number of water wells or straws into the underground aquifer. If on the City's water system, the City has a better understanding of various water user's usage patterns and whether the water is being used efficiently in times of drought. It also reduces the number of uncontrolled points wherein contamination can be introduced directly into the water table.

Potential Drawbacks Associated with Approving the Request

It is currently estimated that the City has reserve well capacity in excess of 1,000 ESFD. On- going and planned residential, commercial and industrial activity suggest this reserve will diminish more rapidly than believed even a year or two ago. With that in mind, if the City were to consider connecting another outside entity to the water service then it may be placed in a position where other connections in the City may not be able to connect until new capacity is provided.

As noted previously, staff has not provided a recommendation with regard to this request. Staff, however, can offer several options to be considered that may assist in allowing Council in its determination as to whether Nutrien's request should be granted.

Potential options include:

- Nutrien pays the higher of:
    - Their fair share portion of a well at current estimates cost utilizing a verified value for peak water usage or,
    - The cost that which would be calculated using the Development Impact Fee for an industrial land use.
- Nutrien make application to LAFCO (Local Agency Formation Commission) for annexation into the City of Madera.

FINANCIAL IMPACT:

The monetary impact is difficult to establish but in general, it can be assumed that new users pay for their impacts through the payment of impact fees making any connections minimal or cost neutral in their impacts. At present, however, impact fees placed on the facilities that use a well are not enough to fully fund a well. Based on information from a little over a year ago, the average well at $2,000,000 with a capacity of 1,300 gallons per minute can service approximately 1,400 ESFD or a cost of about $1,429 per ESFD. At present, the fee for a single-family dwelling unit is $562.34. Financial impact would be mitigated based on fee options presented previously.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

Depending on the decision of City Council, consistency with the Vision 2025 Plan is either met or not met relative to: Action 434.1 - Increase water-usage monitoring through meter reading and water-patrol to increase conservation.

ALTERNATIVES:

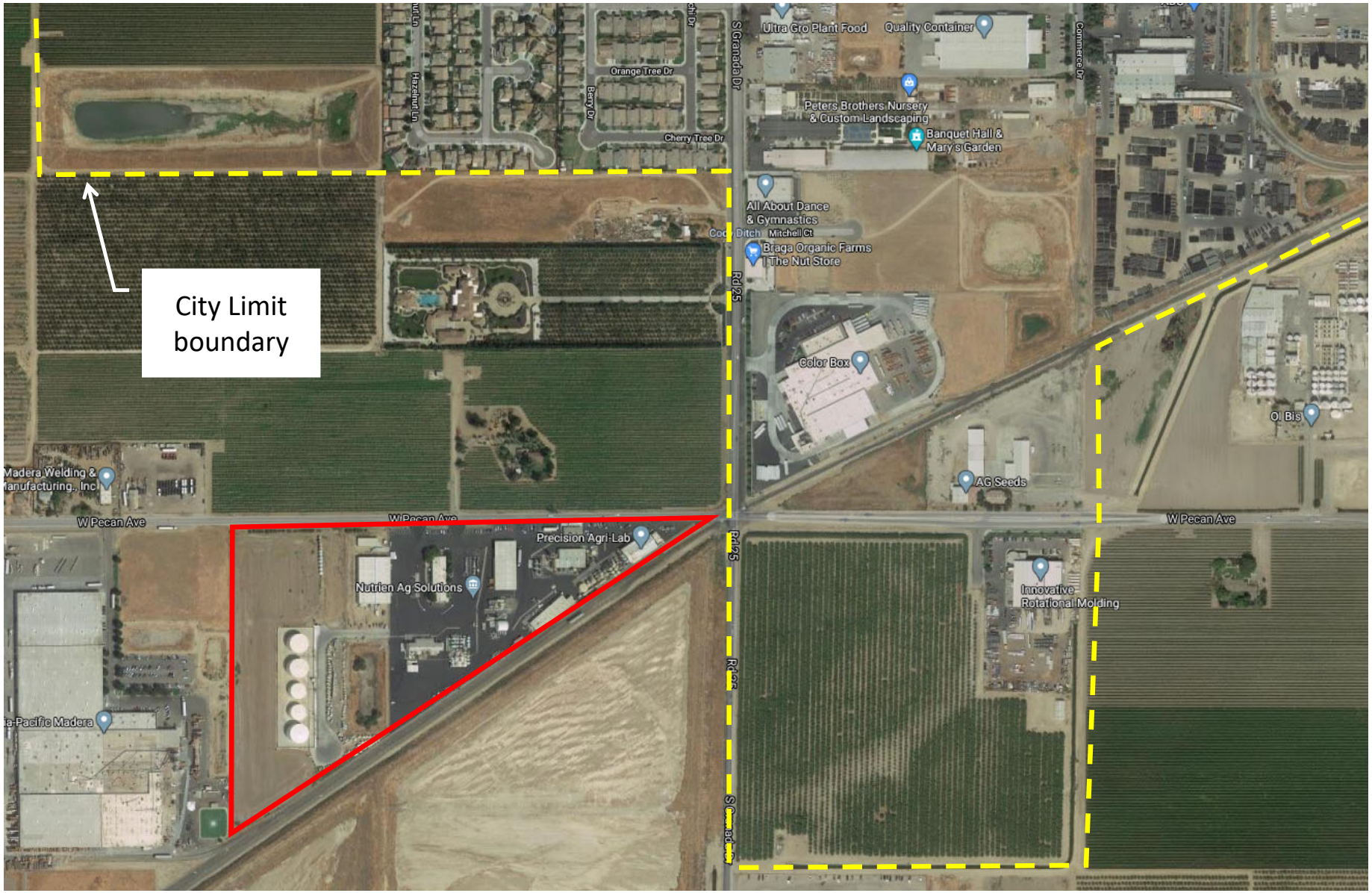
Council may choose from the options previously discussed or deny the request for water connection.

ATTACHMENTS:

1. Map of the subject site
2. Letter of Request

Attachment 1

Map


City Limit boundary
Ultra Gro Plant Food
Quality Container
Peters Brothers Nursery & Custom Landscaping
Banquet Hall & Mary's Garden
All About Dance & Gymnastics
Braga Organic Farms | The Nut Store
Color Box
AG Seeds
Precision Agri-Lab
Nutrien Ag Solutions
Innovative Rotational Molding
W Pecan Ave
Rd 25
S Granada Dr
Commerce Dr
Orange Tree Dr
Cherry Tree Dr
Berry Dr
Hazelnut Ln
Mitchell Ct

Attachment 2

Letter of Request

Apco-Ettner, Inc.
5588 N. Palm Ave.
Fresno, Ca. 93704
559-269-3303
scottettner@comcast.net

RECEIVED
APR O 4 2018
CITY OF MADERA
ENG.INEERJNG DEPARTMENT

1 April 2018

City of Madera
Keith Helmuth P.E
City Engineer
Water Service Request

Request For **a New** Water Service

Location: Crop Production Services
24730 Avenue 13
Madera,Ca.93637

We would like to express our need for a water service to our facility. The City does have a water main that runs down the center of avenue 13.
Please consider our location to be a part of your water system. And Please contact us, If there is anything we can help you with to move this procedure along.
Thank you, Scott E.

Thank you, Lance Chisholm
Crop Production Services

Contact Info:
Scott Ettner Apco-Ettner, Inc.
559-269-3303

scottettner@comcast.net

Contact Info:
Lance Chisholm C.P.S.
lance.chisholm@cpsagu.com

RETURN TO AGENDA

Item:	B-1
Minutes for:	02/05/2020
Adopted:	_____

**MINUTES OF A REGULAR MEETING OF THE MADERA CITY COUNCIL,
SPECIAL MEETING OF THE MADERA CITY COUNCIL AS THE GROUNDWATER SUSTAINABILITY AGENCY,
AND REGULAR MEETING OF MADERA PUBLIC FINANCING AUTHORITY BOARD**

February 5, 2020 **Council Chambers**
6:00 p.m. **City Hall**

CALL TO ORDER – The meeting was called to order at 6:00 p.m.

ROLL CALL:

Present: **Mayor Andrew J. Medellin**
Mayor Pro Tem Santos Garcia, District 5
Council Member Cece Foley Gallegos, District 1
Council Member Jose Rodriguez, District 2
Council Member Steve Montes, District 3
Council Member Derek O. Robinson Sr., District 4
Council Member Donald E. Holley, District 6

Absent: **None**

Others present were City Manager Arnoldo Rodriguez, City Clerk Alicia Gonzales, City Attorney Hilda Montoy Cantu, Police Chief Dino Lawson, Chief Building Official Steve Woodworth, Finance Director Roger Sanchez, Parks Director John Scarborough, City Engineer Keith Helmuth, Police Commander Gino Chiaramonte, Lieutenant Daniel Foss, Grant Administrator Ivette Iraheta, Human Resources Director Wendy Silva, Information Services Manager Mark Souders, Interim Finance Director Vicki Crow, Interim Planning Manager Darrell Unruh, Assistant Planner Jesus Orozco, Housing Authority Interim Executive Director Sally Bomprezzi

INVOCATION: Council Member Donald Holley

PLEDGE OF ALLEGIANCE: Mayor Medellin

APPROVAL OF AGENDA

No revisions were made by council or staff.

ON MOTION BY COUNCIL MEMBER HOLLEY AND SECONDED BY COUNCIL MEMBER ROBINSON, THE AGENDA WAS APPROVED BY A VOTE OF 7/0. AYES: MAYOR MEDELLIN, COUNCIL MEMBERS MONTES, GALLEGOS, GARCIA, AND RODRIGUEZ. NOES: NONE. ABSENT: NONE. ABSTAIN: NONE.

PUBLIC COMMENT

The first fifteen minutes of the meeting are reserved for members of the public to address the Council on items which are within the subject matter jurisdiction of the Council. Speakers shall be limited to

three minutes. Speakers will be asked, but are not required, to identify themselves and state the subject of their comment. If the subject is an item on the Agenda, the Mayor has the option of asking the speaker to hold the comment until that item is called. Comments on items listed as a Public Hearing on the Agenda should be held until the hearing is opened. The Council is prohibited by law from taking any action on matters discussed that are not on the Agenda, and no adverse conclusions should be drawn if the Council does not respond to public comment at this time.

Khalid Chaudry expressed his support for the City of Madera Animal Ordinance.

Bill Hawford announced the Warbirds Fly-In event on May 9, 2020 and the Bob Hope Show on May 8, 2020.

Ubaldo Garcia discussed three different pro-formas for the new apartment complex project and provided a handout to Council.

Velvet Rhodes thanked the Council and City Manager for adding the animal control presentation to the agenda and looks forward to working with Council in keeping the over-population of animals down.

WRITTEN COMMUNICATIONS: None.

PRESENTATIONS:

1. Maternity Honor Roll Recognition - Madera Community Hospital (City Council)

Council Member Gallegos presented report and recognition certificates to Madera Community Hospital Doctors and Staff.

2. Victim Services Department (Tina Rodriguez, CAPMC)

Tina Rodriguez, CAPMC presented report.

3. Informational Report Regarding the $3,168,814 remaining in the 2010 Water Bond Project Fund discussed at the Madera Public Financing Authority on December 18, 2019 (Vicki Crow)

Vicki Crow presented report.

INTRODUCTIONS:

1. Roger Sanchez, Director of Financial Services

City Manager Arnoldo Rodriguez provided introduction.

2. David Dybas, Grants Program Manager

Grants Administrator Ivette Iraheta provided introduction.

3. Brianna Cebollero & Silas Varela, Public Safety Dispatchers
4. Reynard Camp, Police Officer

Chief Dino Lawson provided introduction.

A. WORKSHOP:

A-1 Presentation on City of Madera Animal Control and Direction from Council (Report by Dino Lawson)

Lieutenant Daniel Foss presented report.
Discussion followed.

B. CONSENT CALENDAR

Matters listed under the Consent Calendar are considered routine and will be enacted by one motion and one vote. There will be no separate discussion of these items. If discussion is desired, a member of the public or a member of the Council may request an item be removed from the Consent Calendar and it will be considered separately.

ON MOTION BY COUNCIL MEMBER HOLLEY, AND SECONDED BY COUNCIL MEMBER ROBINSON, THE CONSENT CALENDAR, WAS ADOPTED BY A VOTE OF 7/0. AYES: MAYOR MEDELLIN, COUNCIL MEMBERS MONTES, GALLEGOS, GARCIA AND RODRIGUEZ. NOES: NONE. ABSENT: NONE. ABSTAIN: NONE.

B-1 Minutes – 1/8/2020s, 1/15/2020

B-2 Informational Report on Register Audited Demands 12/7/19 – 1/8/20 (Report by Roger Sanchez)

B-3 Informational Report on Register Audited Demands 1/9/20 – 1/24/20 (Report by Roger Sanchez)

B-4 Informational Report on Personnel Activity (Report by Wendy Silva)

B-5 Informational Report on Contract City Attorney Service Expenditures (Report by Wendy Silva)

B-6 Consideration of a Minute Order Authorizing the City Manager to Execute a Partial Proof of Loss for Repair of Police Unit 6014 and Replacement of Police Unit 6010 in the Amount of $30,448.59 and Authorizing the City Manager to Submit and Execute any further Related Documents to Finalize the Insurance Claim (Report by Wendy Silva)

B-7 Consideration of a Resolution Approving a $2,900 Contract with Nichols Consulting for the Preparation and Filing of the State Mandated Cost Claims for the Period from Execution of Contract until June 30, 2020 and Authorizing the Mayor to sing the Contract on behalf of the City (Report by Vicki Crow)

C. PUBLIC HEARINGS:

C-1 Continued Public Hearing and Consideration of:

1) A Resolution of the City Council (Council) of the City of Madera, California (City), Authorizing the Annexation of Territory to Community Facilities District No. (CFD) 2005-01 and Authorizing the Levy of a Special Tax and Submitting the Levy of Tax to the Qualified Electors.

2) A Resolution of the Council of the City, calling a Special Election and Submitting to the Voters of Annexation No. 6 of the City's CFD 2005-01 Propositions Regarding the Annual Levy of Special Taxes within Annexation No. 7 to Finance Police Protection Services, Fire Protection and Suppression Services, Park Maintenance, and Storm Drainage System Operation and Maintenance Within the District.

Assistant Planner Jesus Orozco presented report.

Mayor opened public hearing at 8:12 p.m.
Mayor closed public hearing at 8:12 p.m.

ON MOTION BY COUNCIL MEMBER RODRIGUEZ, AND SECONDED BY COUNCIL MEMBER MONTES, ITEM C-1(1), RES NO. 20-07 AND C-1 (2) RES NO. 20-08, WAS ADOPTED UNANIMOUSLY BY A VOTE OF 7/0. AYES: MAYOR MEDELLIN, COUNCIL MEMBERS GALLEGOS, GARCIA, ROBINSON, AND HOLLEY. NOES: NONE. ABSENT: NONE. ABSTAIN: NONE.

RES. NO. 20-07 RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, AUTHORIZING THE ANNEXATION OF TERRITORY TO COMMUNITY FACILITIES DISTRICT NO. 2005-01 AND AUTHORIZING THE LEVY OF A SPECIAL TAX AND SUBMITTING THE LEVY OF TAX TO THE QUALIFIED ELECTORS

RES. NO. 20-08 RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, CALLING A SPECIAL ELECTION AND SUBMITTING TO THE VOTERS OF ANNEXATION NO. 7 OF CITY OF MADERA COMMUNITY FACILITIES DISTRICT NO. 2005-01 THE PROPOSITION REGARDING THE ANNUAL LEVY OF SPECIAL TAXES WITHIN ANNEXATION NO. 7 TO FINANCE POLICE PROTECTION SERVICES, FIRE PROTECTION AND SUPPRESSION SERVICES, PARK MAINTENANCE, AND STORM DRAINAGE SYSTEM OPERATION AND MAINTENANCE WITHIN THE DISTRICT

Conducting of:

3) A Special Election of the Qualified Electors of Annexation No. 7 of the City's CFD 2005-01 and Declaration and Certification of the Results Thereof

Mayor opened public hearing at 8:13 p.m.
Mayor closed public hearing at 8:13 p.m.

Consideration of:

4) A Resolution of the Council of the City, Making Certain Findings, Certifying the Results of an Election and Adding the Territory Identified as Annexation No. 7 to CFD 2005-01 (Report by Jesus Orozco)

ON MOTION BY COUNCIL MEMBER HOLLEY, AND SECONDED BY COUNCIL MEMBER ROBINSON, ITEM C-1(4), RES NO. 20-09, WAS ADOPTED BY A VOTE OF 7/0. AYES: MAYOR MEDELLIN, COUNCIL MEMBERS MONTES, GALLEGOS, GARCIA AND RODRIGUEZ. NOES: NONE. ABSENT: NONE. ABSTAIN: NONE.

RES. NO. 20-09 **RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, MAKING CERTAIN FINDINGS, CERTIFYING THE RESULTS OF A SPECIAL ELECTION AND ADDING THE TERRITORY IDENTIFIED AS ANNEXATION NO. 7 TO COMMUNITY FACILITIES DISTRICT NO. 2005-01**

D. PETITIONS, BIDS, RESOLUTIONS, ORDINANCES, AND AGREEMENT

D-1 Intent Meeting and Consideration of:

1) A Resolution Adopting a Boundary Map Showing the Territory Proposed for Annexation to City of Madera Community Facilities District No. 2005- 01; and

2) A Resolution Declaring the City's Intention to Authorize the Annexation of Territory into City of Madera Community Facilities District No. 2005-01 (Report by Jesus Orozco)

Assistant Planner Jesus Orozco presented report.

Mayor opened public hearing at 8:18 p.m.
Mayor closed public hearing at 8:18 p.m.

ON MOTION BY COUNCIL MEMBER HOLLEY, AND SECONDED BY COUNCIL MEMBER ROBINSON, ITEM D-1(1), RES NO. 20-10, WAS ADOPTED BY A VOTE OF 7/0. AYES: MAYOR MEDELLIN, COUNCIL MEMBERS MONTES, GALLEGOS, GARCIA AND RODRIGUEZ. NOES: NONE. ABSENT: NONE. ABSTAIN: NONE.

RES. NO. 20-10 **RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, ADOPTING A BOUNDARY MAP SHOWING TERRITORY PROPOSED FOR ANNEXATION TO CITY OF MADERA COMMUNITY FACILITIES DISTRICT NO. 2005-01**

ON MOTION BY COUNCIL MEMBER HOLLEY, AND SECONDED BY COUNCIL MEMBER ROBINSON, ITEM D-1(2), RES NO. 20-11, WAS ADOPTED BY A VOTE OF 7/0. AYES: MAYOR MEDELLIN, COUNCIL MEMBERS MONTES, GALLEGOS, GARCIA AND RODRIGUEZ. NOES: NONE. ABSENT: NONE. ABSTAIN: NONE.

RES. NO. 20-11 **A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, DECLARING ITS INTENTION TO ANNEX TERRITORY (RANCHO SANTA FE) TO A COMMUNITY FACILITIES DISTRICT AND TO AUTHORIZE THE LEVY OF SPECIAL TAXES THEREIN, THE CITY OF MADERA COMMUNITY FACILITIES DISTRICT NO. 2005-01 (PUBLIC SERVICES) ANNEXATION NO. 8**

D-2 Consideration of a Resolution Approving the Memorandum of Understanding with Respect to the Cost Sharing in The Implementation of The Madera Subbasin Joint Groundwater Sustainability Plan (MOU) (Report by Keith Helmuth)

City Engineer Keith Helmuth presented report.

Mayor Medellin opened public hearing at 8:26 p.m.
Mayor Medellin closed public hearing at 8:26 p.m.

ON MOTION BY COUNCIL MEMBER GALLEGOS, AND SECONDED BY COUNCIL MEMBER ROBINSON, ITEM D-2, GSA RES NO. 20-02, WAS ADOPTED BY A VOTE OF 7/0. AYES: MAYOR MEDELLIN, COUNCIL MEMBERS MONTES, GARCIA, RODRIGUEZ, AND HOLLEY. NOES: NONE. ABSENT: NONE. ABSTAIN: NONE.

GSA RES. NO. 20-02 **RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, APPROVING THE MEMORANDUM OF UNDERSTANDING WITH RESPECT TO THE COST SHARING IN THE IMPLEMENTATION OF THE MADERA SUBBASIN JOINT GROUNDWATER SUSTAINABILITY PLAN**

E. ADMINISTRATIVE REPORTS:

E-1 Consideration of a Minute Order Approving the Madera County Economic Development Commission 2020/2021 Annual Basic Service Level Budget (Report by Bobby Kahn)

Bobby Kahn Executive Director of Madera County Economic Development Commission (EDC) presented report.

ON MOTION BY COUNCIL MEMBER HOLLEY, AND SECONDED BY COUNCIL MEMBER ROBINSON, MINUTE ORDER WAS APPROVED BY A VOTE OF 7/0. AYES: MAYOR MEDELLIN, COUNCIL MEMBERS MONTES, GALLEGOS, GARCIA AND RODRIGUEZ. NOES: NONE. ABSENT: NONE. ABSTAIN: NONE.

F. COUNCIL REPORTS

This portion of the meeting is reserved for the Mayor and Councilmembers (i) to make brief reports on boards, committees, and other public agencies, and at public events, (ii) to request updates, (iii) to initiate future agenda items., and (iv) to take action on matters initiated under this section of the agenda. Under this section the Council may take action only on items specifically agendized and which meet other requirements for action.

Council member Robinson reported that he attended the League of Cities Housing Community and Economic Development on January 24, 2020.

Mayor Pro Tem Garcia reported that he enjoyed the Martin Luther King Jr. event. He requested to agendize the City's participation and outreach for the upcoming Census.

Council member Holley reported that he attended the Martin Luther King Jr. event. He reported that he will not attend the February 12, 2020 Housing Authority meeting.

Council member Rodriguez stated that he agreed with the request made by Mayor Pro Tem Garcia and the importance of the City's participation in the 2020 Census. He requested to agendize a tax measure for cannabis at a future meeting.

Council member Montes reported that he and Council member Gallegos participated in the Homeless Point-In-Time Count and thanked everyone that participated. He added a reminder to all voters to go out and vote in the Primary Election in March.

Mayor Medellin provided updates on the Municipal Golf Course ad-hoc committee and Downtown Planning meeting. He also reported on the Downtown Business District.

G. CLOSED SESSION:

G-1 Conference with Labor Negotiators - Pursuant to Government Code §54957.6
Agency Designated Representatives: Che Johnson, Arnoldo Rodriguez, and Wendy Silva
Employee Organization: Madera Police Officers' Association

G-2 Public Employee Performance Evaluation – Pursuant to Government Code Section 54957(b)(1)
Title: City Manager

City Attorney Hilda Cantu Montoy made the Closed Session Announcement.

Council adjourned to Closed Session at 9:08 p.m.

Council returned from closed session at 11:17 p.m. with Mayor Medellin, Council Members Gallegos, Rodriguez, Montes, Garcia present.

City Attorney Hilda Cantu Montoy reported that there was no reportable action.

ADJOURNMENT – The meeting was adjourned at 11:17 p.m. Next regular meeting February 19, 2020.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN

Approval of the minutes is not addressed in the vision or action plans; the requested action is also not in conflict with any of the actions or goals contained in that plan.

ALICIA GONZALES, City Clerk

ANDREW J. MEDELLIN, Mayor

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Department Director

City Manager

Council Meeting of: February 19, 2020

Agenda Number: B-2

SUBJECT:

Informational Report on Register of Audited Demands

RECOMMENDATION:

Review Register of Audited Demands Report for January 25, 2020 to February 7, 2020.

SUMMARY:

The Register of Audited Demands for the City covering obligations paid during the period of January 25, 2020 to February 7, 2020 is contained in the attachment and summarized in the following tables.

Table 1: *Warrant Distribution Summary*		
Description	*Check #'s*	*Amount*
General Warrant	24865 - 25049	$1,444,811.86

Table 2: *Wire Transfer Summary*		
Description	*Vendor*	*Amount*
Payroll and Taxes	Union Bank	$608,942.54
SDI	EDD	$2,193.80
CalPERS Payment	CalPERS	$119,816.32

DISCUSSION:

Warrant requests are processed weekly based on the adopted Fiscal Year 2019/2020 budget and released for payment every Friday. Each demand has been audited and the Finance Director hereby certifies as to their accuracy and that there were sufficient funds for their payment. Per the request of City Council, we have included the departments from which each of

the respective warrants were requested as well as the fund/division description from which they were paid.

FINANCIAL IMPACT:

Demands for payments are made within the constraints of the approved 2019/2020 budget.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

These expenditures were spent considering Strategy 115: Economic Resource Provision: Ensure sufficient economic resources to provide adequate City services and prepare for future growth.

ALTERNATIVES:

Informational only.

ATTACHMENTS:

Register of Audited Demands

CITY OF MADERA

REGISTER OF AUDITED DEMANDS FOR BANK #1-UNION BANK GENERAL ACCOUNT

February 19, 2020

CHECK	PAY DATE	DEPARTMENT	PAID FROM ORG	ISSUED TO	DESCRIPTION	AMOUNT
24865	01/28/2020	FINANCE	PAYROLL TRUST	ADMINISTRATIVE SOLUTIONS INC.	ADMIN FEES FOR JANUARY 2020	144.00
24866	01/28/2020	FINANCE	PAYROLL TRUST	ADMINISTRATIVE SOLUTIONS INC.	MEDICAL & CHILD CARE EXP	1,091.01
24867	01/28/2020	FINANCE	PAYROLL TRUST	ADMINISTRATIVE SOLUTIONS INC.	ASI MEDICAL PART A FOR CLAIMS JANUARY	31,068.96
24868	01/28/2020	ENGINEERING	LTF- STREETS	ALERT-O-LITE	TRAFFIC SAFETY EQUIPMENT	4,173.35
24869	01/28/2020	UB/WATER	FINANCE	AMERICAN BUSINESS MACHINES	TONER	820.97
24870	01/28/2020	FINANCE	VARIOUS	AT&T	12/19 CALNET 3 SERVICES	12,187.92
24871	01/28/2020	ENGINEERING	MEAS T - RTP	BADGER DAYLIGHTING CORP	HYDRO VAC EXCAVATION PROJ R-10	13,038.00
24872	01/28/2020	FINANCE	WWTP BOND	BANK OF NEW YORK MELLON	TRUSTEE FEES WATER/WW REVENUE BONDS	4,240.00
24873	01/28/2020	HR	CITY ADMIN	BLUE SHIELD OF CALIFORNIA	CITY PAID RETIREE MED BILL FEB- D. TOOLEY	146.00
24874	01/28/2020	ENGINEERING	PROP 1B PTMISEA	BMY CONSTRUCTION GROUP	CONSTRUCTION MADERA TRANSIT CENTER	82,017.76
24875	01/28/2020	WWTP	WWTP	BSK ASSOCIATES	WATER SAMPLES	4,540.50
24876	01/28/2020	WWTP	WWTP	BSK ASSOCIATES	PERMIT COMPLIANCE LAB	682.50
24877	01/28/2020	PD ADMIN	PD ADMIN	BURNS, THOMAS	PER DIEM TRAINING MANAGER COURSE	248.50
24878	01/28/2020	PD ADMIN	MEAS K - PD	BUSHEY, SHAWN	PER DIEM SLI #2	231.00
24879	01/28/2020	FINANCE	PAYROLL TRUST	CA DEPARTMENT OF CHILD SUPPORT	CHILD SUPPORT DEDUCTIONS	1,801.00
24880	01/28/2020	WWTP	WWTP	CALIFORNIA BOILER INC.	DIGESTER BOILER REPAIRS	1,665.60
24881	01/28/2020	PD ADMIN	VARIOUS	CA DEPARTMENT OF JUSTICE	DECEMBER 2019 SERVICES	1,730.00
24882	01/28/2020	FACILITIES	FAC MAINT	CA DEPARTMENT OF TRANSPORTATION	SHARED COSTS- HIT & RUN 12/05/19	4,921.71
24883	01/28/2020	ENGINEERING	STREETS CAP	CA SURVEYING AND DRAFTING SUPPLY	DECEMBER SUBSCRIPTION	210.00
24884	01/28/2020	PURCHASING	VARIOUS	CANON FINANCIAL SERVICES	JANUARY 2020 CONTRACT CHARGES	3,797.54
24885	01/28/2020	PD ADMIN	PD ADMIN	CENTER FOR EDUCATION & EMPLOYMT LAW	1 YR SUBSCRIPTION	159.00
24886	01/28/2020	GRANTS	INTERMODAL	CITY OF MADERA	SMART IRR CONTROLLER REBATE	1,349.87
24887	01/28/2020	FINANCE	AIRPORT OPS	CITY OF MADERA	TRANSFER DEPOSIT TO AR ACCOUNT	200.00
24888	01/28/2020	UB/WATER	WATER CONS	CITY OF MADERA	DISHWASHER REBATE	200.00
24889	01/28/2020	UB/WATER	WATER CONS	CITY OF MADERA	TOILET REBATE	99.00
24890	01/28/2020	HR	CITY ADMIN	CNA SURETY	CITY MANAGER BOND	3,500.00
24891	01/28/2020	FINANCE	PAYROLL TRUST	COLONIAL LIFE & ACCIDENT INSURANCE	EMPLOYEE LIFE INSURANCE	1,087.79
24892	01/28/2020	FINANCE	VARIOUS	COMCAST	CITY INTERNET CONNECTION	1,372.25
24893	01/28/2020	PD ADMIN	PD ADMIN	COMCAST	01/14/19-02/13/20 SVS 8155500320092096	122.66
24894	01/28/2020	HR	HR/RISK MGT	CONCENTRA MEDICAL CENTERS	PRE-EMPLOYMENT PHYSICAL	153.50
24895	01/28/2020	CODE ENF	CODE ENF	CORELOGIC INFORMATION SOLUTIONS	REALQUEST SERVICES	175.00
24896	01/28/2020	FLEET	FLEET ACQ	CRAFCO, INC.	KM INTERNATIONAL 4 TON HOT BOX	267.39
24897	01/28/2020	ENGINEERING	MEAS K - FIRE	DAVIS MORENO CONSTRUCTION, INC.	CONSTRUCTION OF FIRE STATION NO. 58	456,947.63
24898	01/28/2020	WATER	WATER QC	DELLAVALLE LABORATORY,INC.	WATER SAMPLES	1,596.00
24899	01/28/2020	PARKS	COMM & REC	DIAMOND COMMUNICATIONS	FIRE ALARM MONITORING	36.00
24900	01/28/2020	CODE ENF	CODE ENF	EPPLER TOWING	TOWING SERVICE	400.00
24901	01/28/2020	PD ADMIN	PD ADMIN	FADLEY, SHAWN	PER DIEM INTERMEDIATE TC INVEST COURSE	280.50
24902	01/28/2020	BUILDING	BUILDING	FIRE SAFETY SOLUTIONS, LLC	FIRE PROTECTION ENG SVS	10,556.25

CHECK	PAY DATE	DEPARTMENT	PAID FROM ORG	ISSUED TO	DESCRIPTION	AMOUNT
24903	01/28/2020	PD ADMIN	MEAS K - PD	GLOCK, INC	SUPPLIES	270.63
24904	01/28/2020	ENGINEERING	VARIOUS	GOLDEN STATE OVERNIGHT	OVERNIGHT SHIPPING	77.59
24905	01/28/2020	GRANTS	PARKING OPS	GUARDIAN WESTERN SWEEPING INC.	DECEMBER POWER SWEEPING	569.00
24906	01/28/2020	PD ADMIN	PD ADMIN	KELLOM, JOEL	PER DIEM INTERMEDIATE TC INVEST COURSE	280.50
24907	01/28/2020	PD ADMIN	PD ADMIN	KER'S GAS & LUBE, INC.	DECEMBER 2019 PD CAR WASHES	219.00
24908	01/28/2020	ENGINEERING	LTF- PARKS	LARS ANDERSEN & ASSOCIATES, INC.	ENGINEERING SERVICES UPRR/GATEWAY CIP	57.90
24909	01/28/2020	PD ADMIN	PD ADMIN	TIM J LAW	EMPLOYMENT BACKGROUND	350.00
24910	01/28/2020	PD ADMIN	PD ADMIN	LYNN PEAVEY COMPANY	SUPPLIES	175.00
24911	01/28/2020	FINANCE	PAYROLL TRUST	M A C E A	JANUARY 2020 MONTHLY DUES	2,225.00
24912	01/28/2020	FINANCE	PAYROLL TRUST	M P O A	JANUARY 2020 MONTHLY DUES	7,685.44
24913	01/28/2020	FINANCE	PAYROLL TRUST	M.C.E.A.	JANUARY 2020 MONTHLY DUES	380.00
24914	01/28/2020	PD ADMIN	SUPP LAW ENF	MADERA ANIMAL HOSPITAL	VETERINARY SERVICES	331.04
24915	01/28/2020	ENGINEERING	LTF- STREETS	MADERA COUNTY	AMTRAK 50/50 MAINT 1ST QTR FY 19/20	941.82
24916	01/28/2020	FINANCE	COMM PROMO	MADERA COUNTY E D C	EDC 3RD QTR CONTRIBUTION	44,389.20
24917	01/28/2020	UB/WATER	PD ADMIN	MADERA COUNTY TREASURER	COUNTY SHARE PARKING PENALTIES DEC	1,590.50
24918	01/28/2020	HR	HR/RISK MGT	MADERA TRIBUNE	RECRUITMENT AD	214.80
24919	01/28/2020	GRANTS	TRANS- DAR/FIXED	MADERA UNIFIED SCHOOL DISTRICT	DECEMBER CNG FUEL USAGE	648.90
24920	01/28/2020	PD ADMIN	PD ADMIN	MAHONEY, ROBERT	REIMBURSEMENT FOR UNIFORM PANTS	118.76
24921	01/28/2020	ENGINEERING	LTF- STREETS	MARK THOMAS & COMPANY, INC.	ENGINEERING DESIGN SERVICES FOR SR 145	49,791.09
24922	01/28/2020	FINANCE	PAYROLL TRUST	MID-MGMT EMPLOYEE GROUP	JANUARY 2020 MONTHLY DUES	620.00
24923	01/28/2020	ENGINEERING	MEAS K - FIRE	MOORE TWINING ASSOCIATES, INC	LAB & MATERIALS TESTING FIRE STATION 58	7,141.74
24924	01/28/2020	FINANCE	PAYROLL TRUST	N.P.C.-ORCHARD TRUST COMPANY	DEFERRED COMP CONTRIBS	2,986.72
24925	01/28/2020	FINANCE	PAYROLL TRUST	N.P.C.-ORCHARD TRUST COMPANY	DEFERRED COMP CONTRIBS	8,251.33
24926	01/28/2020	ENGINEERING	LTF- STREETS	ON POINT GRADING & PAVING, INC.	GOLDEN STATE BLVD SHOULDER PAVING	6,638.80
24927	01/28/2020	PW ADMIN	VARIOUS	ROLLINS, INC	PEST CONTROL SERVICE	465.00
24928	01/28/2020	WATER OPS	WATER CONS	LONGORIA, ELENA	TURF REPLACEMENT REBATE	804.00
24929	01/28/2020	FINANCE	ZONE 34B	PACIFIC GAS & ELECTRIC	12/19 SERVICE 0443905948-8	10.51
24930	01/28/2020	UB/WATER	FINANCE	PHOENIX GROUP INFO SYS	CITATIONS FOR DECEMBER 2019	414.25
24931	01/28/2020	PARKS	COMM & REC	PRESTIGE CUSTOM GLASS	WINDOW REPLACEMENT	600.94
24932	01/28/2020	ENGINEERING	MEAS T - RTP	QUAD-KNOPF ENGINEERING	ENGINEERING SERVICES FOR RULE 20B	489.00
24933	01/28/2020	HR	SEWER OPS	REGENCE BLUECROSS BLUESHIELD OF UTAH	CITY PAID RETIREE PRES BILL FEB- CHUMLEY	334.00
24934	01/28/2020	PD ADMIN	PD ADMIN	RON'S TOWING & ROAD SERVICE	TOWING SERVICE	65.00
24935	01/28/2020	HR	FINANCE	SEABURY COPLAND & ANDERSON INS	CRIME POLICY RENEWAL	4,477.00
24936	01/28/2020	FINANCE	PAYROLL TRUST	STATE OF CALIFORNIA	FRANCHISE TAX DEDUCTIONS	211.44
24937	01/28/2020	PW ADMIN	WATER QC	SWRCB	GRADE D4 RENEWAL FOR E. BROOKS	105.00
24938	01/28/2020	WATER OPS	WATER OPS	STATEWIDE TRAFFIC SAFETY AND SIGNS	ROAD CLOSURE	1,627.50
24939	01/28/2020	PURCHASING	VARIOUS	TESEI PETROLEUM INC.	FUEL FOR CITY VEHICLES 01/01/20- 01/10/20	22,577.99
24940	01/28/2020	PD ADMIN	PD ADMIN	CRISCOM PUBLIC RELATIONS, INC.	GRANT RESEARCH & WRITING SERVICES	4,000.00
24941	01/28/2020	PD ADMIN	PD ADMIN	TRILOGY MEDWASTE WEST LLC	REUSABLE TUB	139.00
24942	01/28/2020	UB/WATER	WATER FUND	SANTOS JORGE M MORENO REYMUNDA R	UTILITY BILLING CREDIT REFUND	214.81
24943	01/28/2020	ENGINEERING	LTF- PARKS	UNION PACIFIC RAILROAD CO.	PLAN REVIEW NEW TRAIL UNDERCROSSING	544.16

CHECK	PAY DATE	DEPARTMENT	PAID FROM ORG	ISSUED TO	DESCRIPTION	AMOUNT
24944	01/28/2020	FINANCE	GENERAL FUND	UNITED MUNICIPAL SECURITY	CD PURCHASE FEES	747.68
24945	01/28/2020	FINANCE	PAYROLL TRUST	VANTAGEPOINT TRANSFER AGENTS-457	DEFERRED COMP CONTRIBS	22,091.84
24946	01/28/2020	FINANCE	SOLID WASTE	VERIZON WIRELESS	CITY CELL PHONE CHARGES DEC 11- JAN 10	7,364.28
24947	01/28/2020	PARKS	PARKS	VILLA GARDENING SERVICE INC	DECEMBER LAWN SERVICE	310.00
24948	01/28/2020	PD ADMIN	PD ADMIN	HARRY D. WILSON INC.	REPLACEMENT PARTS	248.44
24949	02/03/2020	HR	UB/GARBAGE	ACRO SERVICE CORPORATION	INTERIM FINANCIAL SERVICES DIRECTOR	5,034.55
24950	02/03/2020	HR	INS/RISK MGT	ADMINISTRATIVE SOLUTIONS INC.	MONTHLY ADMIN FEE JANUARY 2020	4,235.50
24951	02/03/2020	PARKS	PARKS	MILTON RAY POORE	GOPHER/MOLE TREATMENT	2,375.00
24952	02/03/2020	HR	INS/RISK MGT	AMERITAS LIFE INSURANCE CORP.	FEBRUARY 2020 DENTAL INSURANCE	14,217.60
24953	02/03/2020	WATER QC	WATER QC	THIRKETTLE CORPORATION	TRIMBLE HANDHELD PROGRAMMERS	6,386.66
24954	02/03/2020	FINANCE	VARIOUS	AT&T	01/20 CALNET 3 SERVICE	2,050.10
24955	02/03/2020	ENGINEERING	WATER CAP	BEYAZ & PATEL, INC.	ENGINEERING DESIGN SERVICES	27,706.50
24956	02/03/2020	BUILDING	BUILDING	VIVINT SOLAR DEVELOPER	CANCELLED PERMIT	163.01
24957	02/03/2020	HR	INS/RISK MGT	BLUE SHIELD OF CALIFORNIA	CITY PAID EE HEALTHCARE FEBRUARY 2020	244,698.03
24958	02/03/2020	FINANCE	WATER CONS	CITY OF MADERA	DISHWASHER REBATE	400.00
24959	02/03/2020	ENGINEERING	LTF- STREETS	CLEAN CUT LANDSCAPING	CONSTRUCTION OF SUNSET AVE SIDEWALK	50,262.74
24960	02/03/2020	WATER	WATER QC	DELLAVALLE LABORATORY,INC.	WATER SAMPLES	589.00
24961	02/03/2020	FINANCE	GENERAL FUND	DIVISION OF THE STATE ARCHITECT	SB 1186 FEES QTR 2 FY 19/20	34.00
24962	02/03/2020	ENGINEERING	DRAINAGE DEV	DMP DEVELOPMENT CORP.	DEVELOPER REIMBMT VARBELLA ESTATES	99,627.62
24963	02/03/2020	PARKS	SR CITIZEN	FRESNO MADERA AREA AGENCY ON AGING	12/19 UNSERVED MEALS	262.24
24964	02/03/2020	HR	PAYROLL TRUST	LINCOLN FINANCIAL	LIFE AND LTD INSURANCE FEBRUARY 2020	7,688.53
24965	02/03/2020	PLANNING	GENERAL TRUST	LSA ASSOCIATES, INC	VILLAGE D- EIR DECEMBER 2019	54,508.42
24966	02/03/2020	FINANCE	COMM PROMO	MADERA COUNTY ARTS COUNCIL	ANNUAL PLEDGE FY 19/20	5,000.00
24967	02/03/2020	UB/WATER	PD ADMIN	MADERA COUNTY TREASURER	COUNTY SHARE OF PARKING PENALTIES	2,259.50
24968	02/03/2020	PLANNING	WATER OPS	MADERA IRRIGATION DISTRICT	MEMBERSHIP DUES	2,500.00
24969	02/03/2020	PD ADMIN	MEAS K - PD	MAXIM DEFENSE INDUSTRIES, LLC	2 MAXIM MDX 505 PDX 5.56 NATO RIFLES	4,079.50
24970	02/03/2020	ENGINEERING	RSTP - FED EX	OVERLAND, PACIFIC & CUTLER LLC	RELOCATION CONSULTING SERVICES	2,113.75
24971	02/03/2020	UB/WATER	PD ADMIN	MORENO, ALEX	REFUND OVERPAYMENT	40.00
24972	02/03/2020	UB/WATER	PD ADMIN	RAMIREZ, ADELINA	REFUND OVERPAYMENT	40.00
24973	02/03/2020	FINANCE	VARIOUS	PACIFIC GAS & ELECTRIC	12/19 SERVICE 1950349675-4	4,189.07
24974	02/03/2020	ENGINEERING	TRAFFIC SIGNAL	PETERS ENGINEERING GROUP	ENGINEERING DESIGN SERVICES	3,650.40
24975	02/03/2020	FINANCE	VARIOUS	PETTY CASH - FINANCE DEPT.	PETTY CASH REIMBURSEMENT	349.70
24976	02/03/2020	PD ADMIN	VARIOUS	PETTY CASH - POLICE DEPT.	PETTY CASH REIMBURSEMENT	846.94
24977	02/03/2020	UB/WATER	FINANCE	PHOENIX GROUP INFO SYS	CITATIONS FOR NOVEMBER 2019	391.05
24978	02/03/2020	WWTP	WWTP	POLYDYNE INC.	SLUDGE DEWATERING POLYMER	6,373.76
24979	02/03/2020	WATER QC	WATER QC	PROVOST & PRITCHARD CONSULTING	WATER LOSS AUDIT	2,496.00
24980	02/03/2020	ENGINEERING	MEAS T- LTP	RMA GEOSCIENCE, INC.	LAB/MATERIAL TESTING FOR 2018-19 SB-1	10,208.75
24981	02/03/2020	ENGINEERING	FAU CMAQ	SALEM ENGINEERING GROUP	LAB/ MATERIAL TESTING FOR ALLEY PAVING	4,090.00
24982	02/03/2020	PW ADMIN	VARIOUS	SERVICEMASTER BY J&C BROWN	CARPET CLEANING	262.80
24983	02/03/2020	HR	INS/RISK MGT	SUPERIOR VISION INSURANCE INC.	FEBRUARY 2020 VISION INSURANCE	2,237.64
24984	02/03/2020	WWTP	WWTP	SYNAGRO WEST, INC.	BIOSOLIDS DISPOSAL	9,082.06

CHECK	PAY DATE	DEPARTMENT	PAID FROM ORG	ISSUED TO	DESCRIPTION	AMOUNT
24985	02/03/2020	WWTP	WWTP	TESEI PETROLEUM INC.	VEHICLE & EQUIPMENT FUEL	842.54
24986	02/03/2020	PARKS	COMM & REC	THYSSENKRUPP ELEVATOR CORP	YC ELEVATOR SERVICE	276.22
24987	02/03/2020	UB/WATER	WATER FUND	AGUILAR HORACIO	UTILITY BILLING CREDIT REFUND	243.64
24988	02/03/2020	UB/WATER	WATER FUND	ARMENTA ANAKAREN	UTILITY BILLING CREDIT REFUND	89.18
24989	02/03/2020	UB/WATER	WATER FUND	ARMSTRONG DEANNA	UTILITY BILLING CREDIT REFUND	208.70
24990	02/03/2020	UB/WATER	WATER FUND	BASS BETTY SUE	UTILITY BILLING DEPOSIT REFUND	21.44
24991	02/03/2020	UB/WATER	WATER FUND	BERRY CONSTRUCTION	UTILITY BILLING DEPOSIT REFUND	428.54
24992	02/03/2020	UB/WATER	WATER FUND	CARRERA DAVID	UTILITY BILLING CREDIT REFUND	195.35
24993	02/03/2020	UB/WATER	WATER FUND	CASTILLO MANUEL	UTILITY BILLING CREDIT REFUND	240.22
24994	02/03/2020	UB/WATER	WATER FUND	CASTRO RICKY	UTILITY BILLING DEPOSIT REFUND	0.98
24995	02/03/2020	UB/WATER	WATER FUND	CRUZ VERONICA	UTILITY BILLING CREDIT REFUND	50.36
24996	02/03/2020	UB/WATER	WATER FUND	CRUZ-AMBROCIO HENEREYDA	UTILITY BILLING DEPOSIT REFUND	0.97
24997	02/03/2020	UB/WATER	WATER FUND	D R HORTON CA3 INC - RPC UTILITIES	UTILITY BILLING CREDIT REFUND	152.86
24998	02/03/2020	UB/WATER	WATER FUND	DENIZ RAFAEL OR CITY OF MADERA	UTILITY BILLING CREDIT REFUND	153.29
24999	02/03/2020	UB/WATER	WATER FUND	DIAZ SANDRA	UTILITY BILLING DEPOSIT REFUND	0.97
25000	02/03/2020	UB/WATER	WATER FUND	ELTAREB MELONY	UTILITY BILLING DEPOSIT REFUND	1.01
25001	02/03/2020	UB/WATER	WATER FUND	ESCAMILLA AMPARITO OR CITY	UTILITY BILLING DEPOSIT REFUND	1.36
25002	02/03/2020	UB/WATER	WATER FUND	ESPINOZA CONSOLACION AND MARIA	UTILITY BILLING CREDIT REFUND	204.47
25003	02/03/2020	UB/WATER	WATER FUND	FROIDEVAUX NICOLE OR CITY OF MADERA	UTILITY BILLING CREDIT REFUND	154.34
25004	02/03/2020	UB/WATER	WATER FUND	FUTURE INVESTMENTS LTD	UTILITY BILLING DEPOSIT REFUND	57.44
25005	02/03/2020	UB/WATER	WATER FUND	GALLEGOS ALFRED	UTILITY BILLING DEPOSIT REFUND	0.97
25006	02/03/2020	UB/WATER	WATER FUND	GARCIA CARLOS MACIEL	UTILITY BILLING CREDIT REFUND	151.11
25007	02/03/2020	UB/WATER	WATER FUND	GARCIA EUSTAQUIO	UTILITY BILLING CREDIT REFUND	150.07
25008	02/03/2020	UB/WATER	WATER FUND	GOMEZ SERNA MANUEL	UTILITY BILLING DEPOSIT REFUND	0.96
25009	02/03/2020	UB/WATER	WATER FUND	GONZALEZ RAFAEL	UTILITY BILLING CREDIT REFUND	253.85
25010	02/03/2020	UB/WATER	WATER FUND	HART JUDY OR CITY OF MADERA	UTILITY BILLING DEPOSIT REFUND	7.35
25011	02/03/2020	UB/WATER	WATER FUND	HATHORN MARY	UTILITY BILLING DEPOSIT REFUND	172.44
25012	02/03/2020	UB/WATER	WATER FUND	HERNANDEZ DOLORES MICHAEL	UTILITY BILLING CREDIT REFUND	94.42
25013	02/03/2020	UB/WATER	WATER FUND	HOUSE DELTHIA A COOLEY WM L	UTILITY BILLING DEPOSIT REFUND	72.08
25014	02/03/2020	UB/WATER	WATER FUND	HUMPAL HARDIP HUMPAL AMARJIT	UTILITY BILLING CREDIT REFUND	82.94
25015	02/03/2020	UB/WATER	WATER FUND	ISIDOR-MUNOZ SILVIA OR CITY	UTILITY BILLING CREDIT REFUND	311.57
25016	02/03/2020	UB/WATER	WATER FUND	JANDRO ANGIE	UTILITY BILLING CREDIT REFUND	228.64
25017	02/03/2020	UB/WATER	WATER FUND	KANG AMANDEEP SHARANDEEP KAUR	UTILITY BILLING CREDIT REFUND	117.16
25018	02/03/2020	UB/WATER	WATER FUND	KAUR SARBJIT KAUR BHAJAN	UTILITY BILLING DEPOSIT REFUND	0.99
25019	02/03/2020	UB/WATER	WATER FUND	LEHMAN JACKIE	UTILITY BILLING CREDIT REFUND	105.55
25020	02/03/2020	UB/WATER	WATER FUND	LETOOURNEANU FRANKIE	UTILITY BILLING CREDIT REFUND	201.66
25021	02/03/2020	UB/WATER	WATER FUND	LOPEZ DANIEL E	UTILITY BILLING DEPOSIT REFUND	1.40
25022	02/03/2020	UB/WATER	WATER FUND	LOPEZ MARIA CRUZ	UTILITY BILLING CREDIT REFUND	40.36
25023	02/03/2020	UB/WATER	WATER FUND	LOPEZ VERONICA OR CITY OF MADERA	UTILITY BILLING CREDIT REFUND	154.35
25024	02/03/2020	UB/WATER	WATER FUND	LUNA VIDAL E LUNA ANNA M	UTILITY BILLING DEPOSIT REFUND	0.98
25025	02/03/2020	UB/WATER	WATER FUND	MAZON JOSEFINA RODRIGUEZ OR CITY	UTILITY BILLING CREDIT REFUND	86.08

CHECK	PAY DATE	DEPARTMENT	PAID FROM ORG	ISSUED TO	DESCRIPTION	AMOUNT
25026	02/03/2020	UB/WATER	WATER FUND	MCCOLLISTER MARIAN	UTILITY BILLING DEPOSIT REFUND	44.95
25027	02/03/2020	UB/WATER	WATER FUND	MONTES MARIA	UTILITY BILLING CREDIT REFUND	79.65
25028	02/03/2020	UB/WATER	WATER FUND	MOOSIOS JEFFREY	UTILITY BILLING CREDIT REFUND	170.83
25029	02/03/2020	UB/WATER	WATER FUND	MORA HERBERTO	UTILITY BILLING CREDIT REFUND	131.91
25030	02/03/2020	UB/WATER	WATER FUND	NIEVES ANTONIO OR CITY OF MADERA	UTILITY BILLING CREDIT REFUND	98.56
25031	02/03/2020	UB/WATER	WATER FUND	OAKLEY KATHY	UTILITY BILLING DEPOSIT REFUND	13.96
25032	02/03/2020	UB/WATER	WATER FUND	OLARTE TOMASA JUANA OR CITY	UTILITY BILLING CREDIT REFUND	19.60
25033	02/03/2020	UB/WATER	WATER FUND	PETTERSON BRITTANY LIND MICHELA	UTILITY BILLING CREDIT REFUND	16.46
25034	02/03/2020	UB/WATER	WATER FUND	PINEDA FATIMA Y OR CITY OF MADERA	UTILITY BILLING CREDIT REFUND	153.82
25035	02/03/2020	UB/WATER	WATER FUND	POWELL LINDA C/O JERRIE POWELL	UTILITY BILLING CREDIT REFUND	198.39
25036	02/03/2020	UB/WATER	WATER FUND	RAMOS GEREMIA C	UTILITY BILLING CREDIT REFUND	89.47
25037	02/03/2020	UB/WATER	WATER FUND	ROCHA JOHN	UTILITY BILLING CREDIT REFUND	43.00
25038	02/03/2020	UB/WATER	WATER FUND	S AND K LLC	UTILITY BILLING CREDIT REFUND	539.40
25039	02/03/2020	UB/WATER	WATER FUND	SAFEGUARD MINI STORAGE	UTILITY BILLING CREDIT REFUND	248.07
25040	02/03/2020	UB/WATER	WATER FUND	SMITH FAMILY GRACE CHAPEL	UTILITY BILLING CREDIT REFUND	951.37
25041	02/03/2020	UB/WATER	WATER FUND	VALDEZ SONIA	UTILITY BILLING CREDIT REFUND	117.47
25042	02/03/2020	UB/WATER	WATER FUND	VAN BURGH JAMES	UTILITY BILLING CREDIT REFUND	126.56
25043	02/03/2020	UB/WATER	WATER FUND	VELASCO CESAR	UTILITY BILLING CREDIT REFUND	142.16
25044	02/03/2020	UB/WATER	WATER FUND	WILHITE GERRY WILHITE JOYCE	UTILITY BILLING CREDIT REFUND	142.10
25045	02/03/2020	UB/WATER	WATER FUND	WOLF RENEE OR CITY OF MADERA	UTILITY BILLING CREDIT REFUND	153.08
25046	02/03/2020	UB/WATER	WATER FUND	ZUBER MICHAEL	UTILITY BILLING CREDIT REFUND	197.13
25047	02/03/2020	PD ADMIN	PD ADMIN	VELASQUEZ, JOSEPH	PER DIEM INTERMEDIATE TC INVEST COURSE	280.50
25048	02/03/2020	PD ADMIN	PD ADMIN	VERIZON WIRELESS	PD AIRCARDS DEC 11- JAN 10	308.43
25049	02/03/2020	PARKS ADMIN	ZONE 6A/PARKS	WEST COAST ARBORISTS, INC.	TREE REMOVAL	3,480.00

BANK #1 - UNION BANK GENERAL ACCOUNT TOTAL **1,444,811.86**

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Jim Howell, Interim Public Works Director

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: B-3

SUBJECT:

Consideration of a Resolution Authorizing Submittal of an Application to the California Department of Resources Recycling and Recovery for Beverage Container Recycling City/County Payment Program and Authorizing the City Manager to Execute All Grant Documents

RECOMMENDATION:

It is recommended that City Council (Council) adopt the Resolution authorizing submission of an application to the California Department of Resources Recycling and Recovery (CalRecycle) for the Beverage Container Recycling City/County Payment Program and authorizing the City Manager to execute all grant documents.

SUMMARY:

This Resolution will allow City staff to prepare annual applications for the Beverage Container Recycling City/County Payment Program and grant the City Manager authorization to execute all grant documents. The Beverage Container Recycling City/County Payment Program is an annual grant administered by CalRecycle to provide opportunities for beverage container recycling. The City is expected to qualify for $16,543.00 for the Fiscal Year (FY) 2019/20 grant cycle.

DISCUSSION:

The City has been participating in the Beverage Container Recycling City/County Payment Program for several years. Resolution No. 16-15, adopted in February 2016, allowed ongoing City participation in this program. However, when the job title of City Administrator was amended to City Manager in November 2018, CalRecycle requested that the City update their Resolution to reflect this change to the signature authority's title.

Historically, approximately $16,000.00 has been awarded each year by this grant. CalRecycle grants these funds to assist the City in efforts to educate the public regarding the benefits of

properly recycling beverage containers. Eligible actives under this grant include the purchase of bins/litter reduction receptacles, advertising and promotion of beverage container recycling, and community education and outreach on proper methods to recycle beverage containers. Cities are eligible to submit a funding request for the Beverage Container Recycling City/County Payment Program each year in March. Funding amounts are determined by population. Funds are typically received by July of each year and the City has two fiscal years to expend them. Oversight of this grant is currently managed by the City's hauler, Mid Valley Disposal.

FINANCIAL IMPACT:

All revenues and expenditures for the Beverage Container Recycling City/County Payment Program occur within the Beverage Container Recycling ORG – 47603640. The funding request due in March 2020 qualifies the City for $16,543.00. If awarded, funds will be budgeted into the City's FY 2020/21 budget. There will be no financial impact to the General Fund.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

Action 437: Recycling Programs: Promote recycling through multiple programs.

ALTERNATIVES:

Potential Council options include:

- Adopt the Resolution as recommended by staff
- Request additional information.
- Deny the Resolution. Should Council elect to not adopt the Resolution, the City Manager will not be granted authority to execute Beverage Container Recycling City/County Payment Program applications or grant documents on behalf of the City. Consequently, the City would no longer be eligible to participate in these grants through CalRecycle.

ATTACHMENTS:

1. Resolution – Authorizing City Manager to Execute FAA and Caltrans Grants Beverage Container Recycling City/County Payment Program

RESOLUTION NO. 20-____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, AUTHORIZING SUBMITTAL OF AN APPLICATION TO THE CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY FOR BEVERAGE CONTAINER RECYCLING CITY/COUNTY PAYMENT PROGRAM AND AUTHORIZING THE CITY MANAGER TO EXECUTE ALL GRANT DOCUMENTS

WHEREAS, pursuant to Public Resources Code section § 48000 et seq., 14581, and 42023.1(g), the Department of Resources Recycling and Recovery (CalRecycle) has established various payment programs to make payments to qualifying jurisdictions; and

WHEREAS, in furtherance of this authority CalRecycle is required to establish procedures governing the administration of the Beverage Container Recycling City/County Payment Program; and

WHEREAS, the City has been participating in the Beverage Container Recycling City/County Payment Program for several years and Resolution No. 16-15, adopted in February 2016, allowed ongoing City participation in this program. However, when the job title of City Administrator was amended to City Manager in November 2018, CalRecycle requested that the City update their Resolution to reflect this change to the signature authority's title.

WHEREAS, CalRecycle's procedures for administering payment programs require, among other things, an applicant's governing body to declare by resolution certain authorizations related to the administration of the Beverage Container Recycling City/County Payment Program.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MADERA HEREBY finds orders and resolves as follows:

1. The above recitals are true and correct.
2. The City of Madera is authorized to submit Beverage Container Recycling City/County Program applications to CalRecycle.
3. The City Manager is hereby authorized as Signature Authority to execute all documents necessary to implement and secure payment under the Beverage Container Recycling City/County Payment Program.
4. This authorization is effective until rescinded by the Signature Authority or the City Council.
5. This resolution is effective immediately upon adoption.

****

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Department Director

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: B-4

SUBJECT:

Consideration of Adopting a Resolution to Enter into the Madera-Mariposa-Merced Unit 2020 Local Government Assistance by Hire Agreement to Augment CAL Fire Resources Should the Need Arise

RECOMMENDATION:

Staff recommends that the City Council (Council) adopt the Resolution entering into the agreement and authorizing the Mayor to execute said agreement on behalf of the City.

SUMMARY:

Agreement between the City and the CAL Fire Madera-Mariposa-Merced Unit (MMU) that allows the latter to deploy City personnel and equipment to Statewide emergencies (e.g. wildfires). The City would be eligible for reimbursement for use of its equipment and personnel.

DISCUSSION:

The supporting document is an agreement between the MMU and the City for reimbursement of utilization of local government firefighting resources to augment CAL Fire in support of the State's mission within the State Responsibility Areas (SRA) of the MMU as the need arises. Should the State Department of Emergency Services or CAL Fire determine that there is a need for additional equipment or personnel, the agreement stipulates that the City would be eligible to be reimbursed. Reimbursement rates are updated every January 1. The agreement is for three years.

In short, the agreement outlines:

- How rates for personnel and apparatus are determined.
- Apparatus condition, liability, and repairs.
- Consumables and damaged and/or destroyed supplies.

- Personnel training requirements, staffing levels, and logistical support.

As noted, apparatus rates are determined by equipment type. For example, the attached MMU Assistance by Hire Agreement Form notes the following rates for City equipment:

- Engine 56: $78.90/hr (pumping capacity of 1,500 gallons per minute)
- Engine 57: $81.40/hr (pumping capacity of 2,000 gallons per minute)
- Truck 58: 78.90/hr (pumping capacity of 1,500 gallons per minute)

The rates are partially based on the gallon per minute pump capacity rating. The greater the pumping capacity, the greater the reimbursement rate. Utility vehicles are rated on various criteria.

It is noted that apparatus is not limited to the original locality, rather it is made available for statewide response as may be needed.

FINANCIAL IMPACT:

The potential financial impact to the City is positive given that should the need arise, the City would be reimbursed at a rate consistent statewide for assistance to wildland fire emergencies in the State Responsibility Areas (SRA) in the MMU.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

The agreement is consistent with the Vision Madera 2025 plan.

ALTERNATIVES:

Potential Council options include:

1. Approve the request as outlined above.
2. Council may direct staff to conduct additional research.
3. Elect to not enter into the agreement. As a result, City equipment would not respond to Statewide emergencies and would not be eligible for reimbursement.

ATTACHMENTS:

1. Resolution
    a. CAL Fire Madera-Mariposa-Merced Unit 2020 Local Government Assistance by Hire Agreement

RESOLUTION NO. 20-_____

CONSIDERATION OF ADOPTING A RESOLUTION TO ENTER INTO THE MADERA-MARIPOSA-MERCED UNIT 2020 LOCAL GOVERNMENT ASSISTANCE BY HIRE AGREEMENT TO AUGMENT CAL FIRE RESOURCES SHOULD THE NEED ARISE

WHEREAS, the City of Madera Fire Department (MFD)is tasked with the fire protection services of the City of Madera; and

WHEREAS, MFD assists CALFIRE during emergency wildland fires; and

WHEREAS, the City has an existing agreement with CALFIRE to provide fire protection services; and

WHEREAS, the parties agree to reimburse the City for use of resources during emergency incidents;

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF MADERA HEREBY finds, orders and resolves as follows:

1. The above recitals are true and correct.
2. The Amendment ABH attached here to as Exhibit 1 and incorporated by reference, is approved.
3. The Mayor is authorized to execute the amendment on behalf of the City of Madera.
4. The resolution is effective immediately.

* * * * * * * *

CAL FIRE
Madera-Mariposa-Merced Unit
2020 Local Government
Assistance by Hire Agreement

Madera-Mariposa-Merced Unit
2020 Local Government Assistance by Hire Agreement

Purpose

The Madera-Mariposa-Merced Unit (MMU) desires to have local agreements that provide for Assistance by Hire (ABH) utilization of local government firefighting resources to augment CAL FIRE resources in support of the State's mission within the State Responsibility Areas (SRA) of MMU when the need arises.

To provide direction to CAL FIRE Incident Commanders and local government cooperating agencies within and adjacent to MMU in regards to the appropriate utilization of local government firefighting resources for State mission purposes on CAL FIRE controlled incidents; and the terms under which they will or will not be reimbursed.

Parties to this agreement agree that local government firefighting resources have commonly understood and/or mandated local responsibilities within their jurisdiction that may have concurrent, overlapping and/or adjacent State and local initial attack resource response to what may be a CAL FIRE controlled incident.

Per this agreement during these incidents local government resources will only be reimbursed by CAL FIRE if they meet the terms of this agreement and are assigned by the CAL FIRE Incident Commander to support State mission.

MMU Local Government ABH Reimbursement "Time Threshold"

Reimbursement

Reimbursement for local government resources under this agreement, when assigned to State mission, will begin January 1, 2020, two (2) hours after initial response and be retroactive back to the time of initial response of the individual resource assigned to the primary task of wildland suppression.

When CAL FIRE staff's local government resources for station coverage they will be reimbursed from the time they are staffed until they are released from the station coverage assignment.

Water Tenders that respond on the Initial Dispatch would be compensated after being assigned to an incident two (2) hours after initial response and be retroactive back to the time of initial response of the individual resource.

Non-Reimbursement

CAL FIRE cannot reimburse for apparatus that has been assigned under the Federal or State Excess Property Programs. This apparatus is "on loan" and remain the property of the lending level of government.

CAL FIRE cannot reimburse for resources assigned to local government fire departments by Cal OES.

MMU Local Government ABH Agreement Procedures

Initiating Agreement

Local Government Fire Departments shall contact the designated MMU Hired Equipment Coordinator to request participation in the MMU Assistance by Hire (ABH) Program. Local government apparatus and personnel to be included in the program are required to be under agreement prior to utilization as identified on the MMU ABH Agreement Form. See attached.

Agreements and Rates shall be renewed every three years on January 1. Updates and/or edits can be initiated annually as needed between January 1 and March 31.

Establishing Rates

The MMU Local ABH reimbursement rates for both equipment and personnel shall be based on those effective in the CFAA and Cal OES Salary Survey on January 1. These rates will not change if the CFAA and/or Cal OES Salary Survey or equipment rates are updated mid year. See attached.

Cal OES link:
https://www.caloes.ca.gov/FireRescueSite/Documents/2017_Final_Rate_Letter_PDF_October_1_2017.pdf

MMU ABH Agreement and Form

The local government agency to provide ABH will verify the engine and water tender gallon per minute pump capacity rating (GPM) so the hourly rate for each may be calculated and entered on the MMU ABH Agreement Form. CAL FIRE reserves the right to have the local government agency bring the resource to a state facility to have it pump tested.

The agreement number shall be the MMU Units "three letter identifier" followed by the eight digit CAL FIRE vendor number. If the vendor number is not available, a CAL FIRE Payee Data Record STD-204 must be completed.

Both the MMU Unit Chief and the local government agency representative completing the MMU ABH Agreement Form will sign the agreement. A copy will go to the MMU Hired Equipment Coordinator and the MMU Assistant Chief – Administration.

The local government agency to provide ABH will receive a copy of this signatory agreement and the MMU ABH Agreement Form for each apparatus and personnel to be included in the ABH program.

It is the responsibility of the local government agency desiring to provide ABH to read and ensure compliance with all provisions of this agreement and each applicable MMU ABH Agreement Form.

MMU Local Government ABH Payment Procedures

Time Keeping

It will be the responsibility of the Incident Commander or designee to assure the appropriate timekeeping forms for all apparatus and personnel are completed.

The only acceptable timekeeping documentation is the CAL FIRE-297 Shift Ticket with evaluation or a Form FC33. See attached.

The CAL FIRE Incident Commander or designee, responsible for assigning the local government resource shall also be responsible for compiling, auditing and processing all timekeeping and payment documentation in a timely manner.

Payment Documents

A CAL FIRE-93 will be used to pay the local government agency providing ABH. It will have as attachments a copy of the MMU ABH Agreement Form, completed CAL FIRE-297 Shift Ticket and a completed CAL FIRE-20. In addition, a CAL FIRE ME-15 and ME-107 may be attached as required. See Sample Pay Documents Package.

MMU Local Government ABH Apparatus

Apparatus Condition

Apparatus must be in good mechanical condition and can sustain arduous duty assignments. CAL FIRE reserves the right to perform safety compliance inspections of local government apparatus prior to acceptance of apparatus to be hired under this agreement.

Apparatus Liability

CAL FIRE assumes no liability for any damages to any local government equipment. No local government official or fire department may obligate the State to financial liability.

Apparatus Repairs

Minor damage caused by the incident or operating conditions may be reimbursed by CAL FIRE and documented on a CAL FIRE ME-107 form. Major damage will be addressed through the California Victim Compensation and Government Claims Board procedures. Driver negligent damage is the responsibility of the local government agency providing the ABH. Any inspection will be documented on a CAL FIRE ME-15 form.

CAL FIRE must be notified of any damage to local government apparatus hired under this agreement prior to release from the incident.

Unstaffed versus Staffed ABH Guidelines

Unstaffed

When local government owned, apparatus is hired unstaffed, the apparatus will be staffed by CAL FIRE personnel to meet CAL FIRE operational needs. When hired unstaffed, local government fire apparatus is considered to be a State resource. Apparatus will not be limited to the original locality of hire and will be available for statewide response as needed.

When hired unstaffed, the State furnishes fuel, oil and lube at no cost to the local government agency. Mechanic services and/or parts are chargeable back to the local government agency when routine wear and tear repairs are necessary. In the event of accident or mechanical breakdown to the apparatus, CAL FIRE will repair apparatus to condition at initial time of hire. Engines hired unstaffed should be equipped with Self Contained Breathing Apparatus (SCBA) of the current CAL FIRE specification prior to being placed in service. Utilizing the SCBA under the current CAL FIRE specification will allow for CAL FIRE personnel to maintain compliance under Federal OSHA 29CFR1910.134.

Staffed

When apparatus is hired staffed, the apparatus with personnel is hired to assist CAL FIRE based on operational need. The crew must be trained as outlined in the training section of this policy and adhere to CAL FIRE staffing levels required for response at all times. As with apparatus hired unstaffed, local government fire apparatus and personnel hired staffed is considered to be a State resource. Apparatus and personnel will not be limited to the original locality of hire and will be available for statewide response as needed. Engines will be staffed 3.0 or 4.0. Water Tenders will be staffed 1.0 or 2.0. At no time, will CAL FIRE pay for 2 operators to staff the Water Tender at the same time. One operator should be off shift resting away from the Water Tender.

When hired staffed, the local government agency providing ABH retains responsibility for fuel, oil and lube until such time as this agreement is replaced by another, such as the CFAA and/or the resource continues to be committed into the second operational period.

Mechanic services and/or parts are chargeable back to the local government agency if and when routine wear and tear repairs are necessary.

On apparatus hired staffed, Personnel shall have all mandated wildland and structural personal protective clothing (PPE) while under hire. A second set of wildland clothing (PPE) is recommended.

Consumables & Damaged and/or Destroyed Supplies

If local government owned supplies are damaged and/or destroyed through no fault of local government and verified by a CAL FIRE line supervisor, CAL FIRE may replace it with like kind. Consumables, such as highway flares, rations, drinking water, batteries, fuel, fuel mix, lubricants and firefighting foam utilized under CAL FIRE direction will be replaced by CAL FIRE.

All items consumed, damaged and/or destroyed under hire shall be documented on appropriate forms to be approved by an authorized CAL FIRE representative. These forms include the

Incident Replacement Requisition (FC-315) and Property Certification of Location or Damage (CAL FIRE-101). See attached Sample Replacement Forms package.

CAL FIRE shall be notified of any used consumables and/or damaged and/or destroyed equipment and local government agencies hired under this agreement must obtain an approved FC-315 signed by the IC or appropriate designee prior to release from the incident.

Local government agencies providing ABH and claiming replacement of incident consumables and/or damaged and/or destroyed equipment have no more than twenty calendar (20) days from the date of the incident to provide all required and appropriately completed and signed documentation to the MMU Service Center to effect replacement.

*** Fuel, refer to page 4 Staffed second paragraph***

Communications

It is the responsibility of the local government agency providing ABH to ensure the apparatus has adequate communications capability. Personnel and apparatus, which cannot adequately and effectively communicate with other resources on the incident will be released and not paid. All radios will be Narrow band capable & programmable with current CAL FIRE radio frequency load; CAL FIRE ECC can assist if needed.

MMU Local Government ABH Personnel Standards

Training

Agencies providing ABH under this agreement shall ensure all personnel be qualified for their respective position including the appropriate level per Wildland Fire Qualification NWCG 310-1 Sub System Guide or the California Incident Command Certification System (CICCS). All apparatus driver/operators shall have the appropriate driver's license for the apparatus being operated.

It will be the responsibility of the local government agency providing ABH to maintain all records of the above required training, certification and/or licensing and provide copies of certifications and training upon request.

Respiratory Protection Standards

All local government personnel providing ABH shall fully meet CAL OSHA Title 8 Section 5144. Additionally, all local government personnel providing ABH shall be fully compliant with the Federal OSHA 29CFR1910.134 Respiratory Protection (fit test) Standard within the past year.

Local Government Personnel Feeding

Local government agency personnel providing ABH assigned to a "going" incident shall be provided meals by CAL FIRE at no cost to local government personnel.

Local government personnel on apparatus under hire assigned to station coverage of a MMU CAL FIRE station may obtain meals at the CAL FIRE facility being covered at no cost to the local government personnel. These meals shall be documented on the CAL FIRE "Fireline Meal Sheet" available at the station being covered with names, dates and incident numbers as

required.

Restaurant feeding for local government resources providing ABH under this agreement shall only be authorized by either the Incident Commander if assigned to an incident or the MMU Duty Chief (or designee) if assigned to station coverage.

MMU Local Government ABH Apparatus Staffing Standards

Engine Staffing Levels

Fire engine staffing in this agreement shall meet the minimum standards as follows:

Type I engines shall have a minimum of (3) person staffing to include one (1) Company Officer/Engine Boss and two (2) Firefighters.

Type II engines shall have three (3) person staffing to include one (1) Company Officer/Engine Boss and two (2) Firefighters.

Type III Engines shall have three (3) person staffing to include one (1) Company Officer/Engine Boss and two (2) Firefighters.

Type VI Engines shall have three (3) person staffing to include one (1) Company Officer/Engine Boss and two (2) Firefighters.

There will be only one (1) Company Officer/Engine Boss compensated per apparatus, regardless of their rank in local government department.

Water Tender Staffing Levels

Staffing for initial attack water tenders shall typically be one (1) Apparatus Operator. Twelve (12) hour "planned need" staffing shall typically be one (1) Apparatus Operator per twelve (12) hour operational shift. In addition to the Apparatus Operator, water tender staffing for both initial attack and "planned need" can include one (1) Firefighter.

For extended operations exceeding sixteen (16) hours and/or planned need twenty-four (24) hour operational shift assignments, a Relief Operator and Firefighter are required.

Logistical Support Personnel

Staffing shall be one (1) Firefighter with a shift not to exceed sixteen (16) hours. For extended operations exceeding sixteen (16) hours, a Relief Firefighter is required.

Trained firefighters with full PPE will be required due to potential for line assignments. Duties may include, but not be limited to, fireline delivery of food, drinks, ice and supplies.

Madera-Mariposa-Merced Unit
2020 Local Government Assistance by Hire Agreement

The 2020 Madera-Mariposa-Merced Unit Local Government Assistance by Hire Agreement with attachments has been approved and authorized by the individuals found on the accompanying signatory page. See attached.

Attachments

1. Madera-Mariposa-Merced Unit Assistance by Hire Agreement Form
2. Current Cal OES CFAA Rate Letter
3. Sample CAL FIRE-297 Shift Ticket
4. Sample FC-315,
5. Sample CAL FIRE-93
6. Sample CAL FIRE-20
7. Sample CAL FIRE ME-15
8. Sample CAL FIRE ME-107
9. Sample Fireline Meal Sheet

The 2020 Madera-Mariposa-Merced Unit Local Government Assistance by Hire Agreement with attachments has been approved and authorized by the following:

Mike van Loben Sels, Unit Chief
CAL FIRE
Madera-Mariposa-Merced Unit
5366 Highway 49 North
Mariposa, Ca. 95338

XXXXXXX
Mariposa County Board of Supervisors

Madera-Mariposa-Merced Unit
Assistance by Hire Agreement Form

ORDERING OFFICE:		AGREEMENT NUMBER:
CAL FIRE 5366 Highway 49 North Mariposa, CA 95338		MMU- 55172-00 DATE: 1/01/20 - 12/31/22
Department/District Name and Address:		EIN/SSN:
Madera City 256 W. 4th Street Madera, CA 93637		It is the responsibility of the local government agency providing ABH to ensure compliance with all provisions of the MMU Assistance by Hire Agreement. Only CAL FIRE requested and agreed to equipment and staffing will be reimbursed.
Telephone Number (day):	(559) 661-5499	
Telephone Number (night):	(209) 966-3803	
Fax Number:		

	ITEM DESCRIPTION (make, model, year, serial number, etc.)	RATE (Hourly or Daily)
a.	Battalion 10, 3/4 Ton 4x4 Pickup 2016 Ford, Ca. Lic. # 1519546 Veh. I. D. # 1FT7X2B61HEC32645	$96.00 per day, daily max 16 hrs.
b.	Utility 7, 3/4 Ton 4x4 Pickup 2006 Chevy, Ca. Lic. # 1225567 Veh. I. D. # 1GCHK29U26E205345	$96.00 per day, daily max 16 hrs.
c.	Engine 56, Type II, 1500 GPM 2016 Spartan, Ca. Lic. # 1544430 Veh. I. D. # 4S7CT2D9AGC080905	$78.90 Hr. Daily max 16 hrs. plus staffing 3.0 = $93.12 Hr. 4.0 = $124.16 Hr.
d.	Engine 57, Type II, 2000 GPM 2008 Smeal, Ca. Lic. # 1152849 Veh. I. D. # 4S7CT2D978C066806	$81.40 Hr. Daily max 16 hrs. plus staffing 3.0 = $93.12 Hr. 4.0 = $124.16 Hr.
e.	Engine 256, Type II, 1500 GPM 2001 Spartan, Ca. Lic. # 1123542 Veh. I. D. # 4S7AT33942C040444	$78.90 Hr. Daily max 16 hrs. plus staffing 3.0 = $93.12 Hr. 4.0 = $124.16 Hr.
f.	Engine 257, Type II, 1500 GPM 1991 Grrumman, Ca. Lic. # 288793 Veh. I. D. # 1G9PSFA6LRO88084	$78.90 Hr. Daily max 16 hrs. plus staffing 3.0 = $93.12 Hr. 4.0 = $124.16 Hr.
g.	Engine 656, Type 6, 250 GPM Ford/Hi-Tech, Ca. Lic. # 1247287 Veh. I. D. # 1FDAX57P56ED89595	$68.00 Hr. Daily max 16 hrs. plus staffing 3.0 = $93.12 Hr. 4.0 = $124.16 Hr.
	Truck 58, 1500 GPM 2017 Rosenbauer, Ca. Lic. # 1411765 Veh. I. D. # 54F2CC608JWM12000	$78.90 Hr. Daily max 16 hrs. plus staffing 3.0 = $93.12 Hr. 4.0 = $124.16 Hr.

Special Provisions: Type I engines shall have a minimum of 3 person staffing to include 1 Company Officer and 2 Firefighters. 4 person staffing to include an Engineer is desirable. Type II and III engines shall have a minimum 3 person staffing to include 1 Company Officer and 2 Firefighters. Water Tenders may have a single Operator during initial attack or on 12 hour shifts. Planned need Water Tenders shall include a Firefighter. A second Water Tender Relief Operator shall be required after 16 hours or on 24 hour shifts. There is no rate for foam use but foam used shall be replaced.

Department Chief or Authorized Agent's Signature	Date	Print Name And Title
CAL FIRE Signature	**Date**	**Print Name And Title**

EMERGENCY SHIFT TICKET and EVALUATION FORM

The responsible Government Officer will complete this form each shift

Incident or Project Name	Incident Number	Request Number

Agreement Number

Equipment Make	Equipment Model / Type

Serial Number	License Number

Equipment Use

Date Mo / Day	Start	Stop	(Circle) Hours / Days / Miles Work	Assignment

Contractor Name	
Operator #1	Operator #2

Operator Furnished By: ☐ Contractor ☐ Government

Operating Supplies Furnished By: ☐ Contractor ☐ Government

Equipment Status

☐ Inspected ☐ Under Agreement
☐ Released by Government
☐ Withdrawn by Contractor

Remarks/Comments **

Vendor Rating

	Poor*	Avg.	Good	Exc.	N/A
Met Performance Expectations					
Equipment in Safe Working Condition					
Operator Skill Level					
Operates Safely					
Operator's Cooperation Level					
Overall Performance					

Govt. Rep. Name and Position - PRINT

Govt. Rep. Signature

Contractor Signature

Date Time

* NOTE: Any rating of POOR requires an explanation in Comment Section.
**Final evaluation or for more documentation, use an ICS Form 230 or equivalent.

CAL FIRE 297
(Rev 3-2011)

Pink - Finance Blue - Home Unit HE Coordinator Yellow - Vendor White - Govt Representative

STATE OF CALIFORNIA
DEPARTMENT OF FORESTRY AND FIRE PROTECTION
INCIDENT REPLACEMENT REQUISITION
FC-315 (11/05) Formerly Optional Form - Page 1 of 3

INCIDENT REPLACEMENT REQUISITION

INCIDENT ORDER NUMBER	ISSUE NUMBER (FOR CACHE USE)
INCIDENT NAME	ACCOUNTING/MANAGEMENT CODE
AGENCY BILLING ADDRESS NAME	AGENCY SHIPPING ADDRESS NAME
UNIT NAME	UNIT NAME
BILLING ADDRESS	ADDRESS (NO P.O. BOX)
CITY, STATE, ZIP	CITY, STATE, ZIP
AUTHORIZED BY (NAME AND TITLE)	PERSON ORDERING (NAME AND TITLE)
TELEPHONE NUMBER	TELEPHONE NUMBER
DATE/TIME ORDERED	DATE/TIME ORDERED
REQUESTED METHOD OF DELIVERY	

REQUEST NUMBER	NFES NO.	QUANTITY	U/I	ITEM DESCRIPTION PAGE OF PAGE

STATE OF CALIFORNIA, NATURAL RESOURCES AGENCY
DEPARTMENT OF FORESTRY AND FIRE PROTECTION

SERVICE ORDER

CAL FIRE-93 (REV. 01/19)

1. AGENCY DOCUMENT/INVOICE NUMBER				
		UI		
2. CONTRACTOR (Name and Address)	3. PHONE:	4. SUPPLIER ID.	5.BILLING CODE/CAN #	PAGE OF PAGE
S/B ☐ M/B ☐ DVBE ☐	6. ADMINISTRATIVE UNIT FOR PAYMENT			
7. ☐ CAL FIRE-20 CONTRACTOR CERTIFICATION CLAUSES SIGNED (REQUIRED) ☐ CAL FIRE-501 CONTRACTOR CERTIFICATION CLAUSES SIGNED (IF APPLICABLE)				

8. CONTRACTOR agrees to provide the STATE with the following services:

Agreement Term: Start Date: to End Date:

Detailed description of work to be performed:

9. WAS P- CARD USED FOR THIS PURCHASE? ☐ YES ☐ NO

NOTE: Contract release for and in consideration of receipt of payment in the amount shown on line 14. Contractor hereby releases the State from any and all claims arising under this agreement except as reserved below (item 15)	10. Total Amount Due (This Page)	
	11. Sales Tax	
	12. Gross Amount Due	
15. REMARKS No damage/No claim	13. Deductions	
	14. Net Amount Due	

16. INDICATE STATE PURPOSE

Amount	Appropriation Ref	Fund	ENY	Account	Alt Account

Program	Project ID	Activity	Rptg Structure	Svc Location

17. CONTRACTORS SIGNATURE	PRINT NAME AND TITLE	DATE
18. RECEIVING OFFICER'S SIGNATURE	PRINT NAME AND TITLE	DATE
19. PURCHASE AUTHORIZED By (Signature)	TITLE	PHONE

STATE OF CALIFORNIA
Department of Forestry and Fire Protection

Contractor Certification Clauses for Services

CAL FIRE-20 (Rev. 05/15) (Page 1 of 3)

I, the official named below, CERTIFY UNDER PENALTY OF PERJURY that I am duly authorized to legally bind the prospective Contractor to the clause(s) listed below. This certification is made under the laws of the State of California.

Contractor/Firm Name (Printed)	*Federal ID Number*
By (Authorized Signature)	
Printed Name and Title of Person Signing	
Date Executed	*Executed in the County of*

ATTENTION CONTRACTOR: Please be sure to initial clauses, where required.

1. DARFUR CONTRACTING ACT VENDOR CERTIFICATION FORM CAL FIRE-720: Under the Darfur Contracting Act (Public Contract Code Sections 10475-10481), if a company that currently, or within the previous three years, has had business activities or other operations outside of the United States submits a bid or proposal for a State of California contract for goods or services, the State agency must require the company to certify that it is not a *scrutinized* company as defined in Public Contract Code Section 10476, or that it is a scrutinized company that has been granted permission by the California Department of General Services to submit a bid or proposal for the contract.

CONTRACTOR: You MUST INITIAL either line (a) or (b) below, to indicate your company's current certification requirement:

____ (a) We currently have, or have had within the previous three years, business activities or other operations outside of the United States, and, therefore, are REQUIRED to and shall complete and submit a form CAL FIRE-720 (Darfur Contracting Act Vendor Certification) with our bid or proposal for this contract for goods or services.

OR

____ (b) We currently do not have, and have not had within the previous three years, business activities or other operations outside of the United States, and, therefore, are NOT REQUIRED to complete and submit a form CAL FIRE-720 (Darfur Contracting Act Vendor Certification) with our bid or proposal for this contract for goods or services.

2. STATEMENT OF COMPLIANCE: Contractor has, unless exempted, complied with the nondiscrimination program requirements. (Gov. Code §12990 (a-f) and CCR, Title 2, Section 8103) (Not applicable to public entities.)

3. DRUG-FREE WORKPLACE REQUIREMENTS: Contractor will comply with the requirements of the Drug-Free Workplace Act of 1990 and will provide a drug-free workplace by taking the following actions:

a. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.
b. Establish a Drug-Free Awareness Program to inform employees about:
   1) the dangers of drug abuse in the workplace;
   2) the person's or organization's policy of maintaining a drug-free workplace;
   3) any available counseling, rehabilitation and employee assistance programs; and,
   4) penalties that may be imposed upon employees for drug abuse violations.
c. Every employee who works on the proposed Agreement will:
   1) receive a copy of the company's drug-free workplace policy statement; and,
   2) agree to abide by the terms of the company's statement as a condition of employment on the Agreement.

Failure to comply with these requirements may result in suspension of payments under the Agreement or termination of the Agreement or both and Contractor may be ineligible for award of any future State agreements if the department determines that any of the following has occurred: the Contractor has made false certification, or violated the certification by failing to carry out the requirements as noted above. (Gov. Code §8350 et seq.)

STATE OF CALIFORNIA
DEPARTMENT OF FORESTRY AND FIRE PROTECTION
REPORT OF EQUIPMENT INSPECTION
ME-15 (Rev. 7/93)

REPORT OF EQUIPMENT INSPECTION

TYPE OF INSPECTION: ☐ SAFETY ☐ COMPLIANCE ☐ DEMOB

Incident # _____ Strike Team _____ Date: _____

Department/Administrative Unit _____

Vehicle # _____ License # _____ Radio # _____

Make _____ Body Type _____ Mileage _____

	OK	REP		OK	REP
1. Engine & Accessories	☐	☐	10. Tires & Wheels	☐	☐
2. Lights, Code 3, Wipers	☐	☐	11. Springs & "U" Bolts	☐	☐
3. Clutch	☐	☐	12. Cab, Paint & Glass	☐	☐
4. Brake Components	☐	☐	13. Auxiliary Motor Unit	☐	☐
5. Brake Adjustment	☐	☐	14. Pump	☐	☐
6. Air System Test/Leak Down. Etc.	☐	☐	15. Vehicle Connection Device	☐	☐
7. Steering & Front End	☐	☐	16.	☐	☐
8. Transmission	☐	☐	17.	☐	☐
9. Differential	☐	☐	18.	☐	☐

REPAIRS NEEDED & REMARKS FROM ABOVE:

INSPECTOR

Name _____ Title _____

OPERATOR

Name _____ Title _____

White-Unit Yellow-Vehicle Pink-Incident

STATE OF CALIFORNIA
DEPARTMENT OF FORESTRY AND FIRE PROTECTION

FORESTRY MOBILE EQUIPMENT WORK ORDER

ME-107 (3/89) (MSW 3/89)

SHOP STOCK

QTY.	DESCRIPTION	UNIT COST	COST
	TOTAL		
	TIRES		
	BATTERIES		
	LUBRICANTS		
	AUTO. TRANS. FLD. - QTS.		
	GEAR OIL - PTS.		

ROUTING

WHITE:.... ADM UNIT
PINK: .....FEM
HARD/COPY: ...SHOP

FORESTRY MOBILE EQUIPMENT WORK ORDER No.

REGION _____ ADM. UNIT _____ DATE _____
MFG. _____ YR. MODEL _____ TYPE _____
CHASSIS NO. _____ ENG. TYPE AND NO. _____
LICENSE NO. _____ CAL FIRE NO _____ X _____ MILEAGE _____
WORK AUTHORIZED BY _____ TITLE _____

DESCRIPTION OF WORK

LABOR RECORD	
FEM	
HEM	
HFEO	
CAPTAIN	
ENG.	
TOTAL HRS	

DATE COMPLETED _____ INSPECTED BY _____

CALIFORNIA DEPARTMENT OF FORESTRY
AND FIRE PROTECTION
MADERA-MARIPOSA-MERCED UNIT

FIRELINE MEAL REPORT
(Non-Pay Meals)

STATION: MPSA HQ October 2019 For CC-3 Posting

DATE	INC. IDENTIFER	INCIDENT#	PCA CODE	AUTHORIZED BY	TALLY	NO.	Used for CC Posting
	CAMMU	000001	0900-907-908	PRINT NAME AND TITLE			Name & Date

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Gino Chiaramonte

Dino Lawson, Chief of Police

Arnoldo Rodriguez

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: B-5

SUBJECT:

Consideration of Adopting a Resolution Approving an Amendment to the Tyler Technologies License And Services Agreement for $35,015 for the Brazos eCitation System to include Equipment, Licensing and Software Access and Authorizing the Mayor to Execute the Amendment on Behalf of the City.

RECOMMENDATION:

Staff recommends that the City Council (Council) adopt the resolution approving the contract amendment with Tyler Technologies, Inc. to purchase the Brazos eCitation system to include hardware, software, and services.

SUMMARY:

One of the responsibilities of the Madera Police Department (MPD) is enforcement of traffic law violations. MPD has a dedicated traffic motor unit (motorcycle officers) dedicated to traffic enforcement. The motor unit currently uses three-part, hand-written traffic citation booklets to issue traffic tickets. Once issued, the tickets are manually entered into the MPD system by Records Division staff. MPD has researched modern ticket writing devices and is recommending the City move from hand-written tickets to electronically printed tickets. After review of available systems, it is recommended the City proceed with the Brazos eCitation system. If approved, this will include hardware, software, training, and support services.

DISCUSSION:

The Police Department received a grant award of $110,000 from the State of California Office of Traffic Safety (OTS) in October 2019. The grant allocated $25,000 for the purchase of an electronic citation data collection system.

In an effort to improve efficiencies, staff evaluated options currently available on the market for an electronic citation data collection system. Currently, MPD manually writes traffic infractions which are then provided to Records staff which manually input information into the City's system.

Based on this review, the Brazos eCitation system was identified as the best product to meet MPD's needs. Another benefit is that the Brazos system was recently purchased by Tyler Technologies, the provider of the City's Enterprise Resource System. The Brazos eCitation system by Tyler Technologies, Inc. integrates with both our records management system (Alliance) and the City's financial system (Tyler Munis). After exhaustive research, it appears that this is the most compatible system that integrates with our records management system (Alliance).

A benefit of moving to an electric system is that the program will directly download citations to the MPD record management system eliminating the need for manual data entry by Records staff. MPD averages 400 citations a month, each of which is entered manually which absorbs a tremendous amount of staff time. Not only will the eCitation system result in significant time savings for Records staff, it will also reduce the time an officer spends on an enforcement stop by being able to scan a driver's license, allowing the system to auto populate the driver's personal information and vehicle registration data.

The City has an existing agreement with Tyler Technologies, Inc. In order to proceed with the purchase of the Brazos eCitation system, the City is required to execute an amendment to the agreement to add the Brazos system.

All equipment provided by Tyler Technologies, Inc. is warranted for one year and includes parts and labor.

FINANCIAL IMPACT:

The total cost of the system is $35,015. The OTS grant will cover $25,000 of the purchase. The remaining balance of $10,015 will be paid using funds in the approved Fiscal Year 2019-20 Measure K budget.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

The requested action is not in conflict with the Vision Madera 2025 Plan.

ALTERNATIVES:

Potential Council options include:

1. Approve the request as outlined above.
2. Council may direct the MPD to continue to issue handwritten citations on triplicate forms.
3. Council may direct staff to review alternative systems.

ATTACHMENTS:

1. Resolution

a. Exhibit 1: Tyler Technologies First Amendment To License And Services Agreement
    i. Exhibit 1: Investment Summary
    ii. Exhibit 2: Hosting Services
        1. Schedule 1: Service Level Agreement

RESOLUTION NO. 20-_____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, APPROVING AN AMENDMENT TO THE TYLER TECHNOLOGIES LICENSE AND SERVICES AGREEMENT FOR $35,015 FOR THE BRAZOS eCITATION SYSTEM TO INCLUDE EQUIPMENT, LICENSING AND SOFTWARE ACCESS AND AUTHORIZING THE MAYOR TO EXECUTE THE AMENDMENT ON BEHALF OF THE CITY

WHEREAS, the City of Madera Police Department (MPD)is tasked with enforcement of traffic laws within the City of Madera; and

WHEREAS, MPD has a need for equipment and related software to aid in the issuance of citations for traffic violations; and

WHEREAS, the City has an existing agreement with Tyler Technologies, Inc. for the City's Enterprise Resource System; and

WHEREAS, Tyler Technologies, Inc. offers eCitation equipment and related software that integrates with current equipment and the City's existing software systems; and

WHEREAS, the City wishes to purchase eCitation equipment from Tyler Technologies, Inc, and implement the related software for the efficient and effective enforcement of traffic violations; and

WHEREAS, the parties wish to amend the existing agreement to include eCitation equipment and services.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF MADERA HEREBY finds, orders and resolves as follows:

1. The above recitals are true and correct.

2. The Amendment to the Tyler Technologies License And Services Agreement between the City of Madera and Tyler Technologies, Inc., attached hereto as Exhibit 1 and incorporated by reference, is approved.

3. The Mayor is authorized to execute the amendment on behalf of the City of

Madera.

4. The resolution is effective immediately.

* * * * * * * *

FIRST AMENDMENT TO LICENSE AND SERVICES AGREEMENT

This First Amendment to License and Services Agreement ("Amendment") is effective as of the date of signature of the last party to sign as indicated below ("Amendment Effective Date"), by and between Tyler Technologies, Inc. with offices at One Tyler Drive, Yarmouth, Maine 04096 ("Tyler") and the City of Madera, CA, with offices at 205 West Fourth Street; Madera, CA 93637 ("Client").

WHEREAS, Tyler and the Client are parties to aa License and Services Agreement dated August 18, 2015 ("Agreement"); and

WHEREAS, Tyler and Client desire to amend the terms of the Agreement as provided herein.

NOW THEREFORE, in consideration of the mutual promises hereinafter contained, Tyler and the Client agree as follows:

1. The items set forth in the sales quotation attached as Exhibit 1 to this Amendment are hereby added to the Agreement as of the Amendment Effective Date. Payment of fees and costs for such items shall conform to the following terms:
    a. **License Fees.** License fees will be invoiced when Tyler makes the software added to the Agreement pursuant to this Amendment available for download (for the purpose of this Amendment, the "Available Download Date").
    a. **Maintenance Fees.** Year 1 annual maintenance and support fees are due on the Available Download Date. Subsequent annual maintenance fees are invoiced annually in advance of each anniversary thereof. Your fees for each subsequent year will be set at our then-current rates.
    b. **Services Fees & Expenses.** Services added to the Agreement pursuant to this Amendment, along with applicable expenses, shall be invoiced as provided and/or incurred.
    c. **Hardware Fees.** Fees for Hardware are due on delivery of the respective Hardware.
    d. **Hosting Fees.** Hosting Fees are invoiced annually in advance, beginning on the Amendment Effective Date. Subsequent annual Hosting Fees are invoiced annually in advance of each anniversary thereof. Your fees for each subsequent year will be set at our then-current rates.

2. Hosting Services. We will host the Tyler Software in accordance with the terms and conditions set forth in the Hosting Services Exhibit, attached hereto as Exhibit 2, and the Service Level Agreement, attached hereto as Schedule 1 to Exhibit 2.

3. This Amendment shall be governed by and construed in accordance with the terms and conditions of the Agreement.

4. Except as expressly indicated in this Amendment, all other terms and conditions of the Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the dates set forth below.

Tyler Technologies, Inc.	City of Madera, CA
By:	By:
Name: Rob Kennedy-Jensen	Name:
Title: Director of Contracts	Title:
Date: 02/04/2020	Date:



Exhibit 1
Investment Summary

The following Investment Summary details the software and services to be delivered by us to you under the Agreement. This Investment Summary is effective as of the Effective Date. Capitalized terms not otherwise defined will have the meaning assigned to such terms in the Agreement.

In the event a comment in the following sales quotation conflicts with a provision of this Amendment, the provision in this Amendment shall control.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

tyler technologies

Quoted By:	Seth Dinehart
Quote Expiration:	2/30/2020
Quote Name:	City of Madera Police Department - Brazos eCitation
Quote Number:	2018-54707-6
Quote Description:	5 Brazos eCitation Licenses, eParking Module, Interface to Munis, Install on Zebra ZQ70x HH Devices, Zebra ZQ520 Printers, Charging Hardware, Interface to Cyrun RMS and Sustain CMS

Sales Quotation For
Sgt. Tom Burns
City of Madera Police Department
330 S C St
Madera , CA 93638-3727
Phone: +1 (559) 675-4200

Tyler Software

Description	Quantity	License	Software Total	Year One Maintenance
Brazos				
Interface: RMS	1	$3,250	$3,250	$683
Interface: Sustain Technologies - Prosecutor's Case Mgmt System	1	$3,250	$3,250	$683
eCitation - Brazos Rapid Extension Framework - PDA	5	$4,250	$4,250	$893
Interface: Tyler Munis Enterprise Resource Planning (financial) System	1	$0	$0	$0
Task: eParking: Standard (non-customized) Parking Task	1	$3,250	$3,250	$683
Sub-Total:			*$14,000*	*$2,942*
Less Discount:			*$3,250*	
TOTAL:			**$10,750**	**$2,942**

Tyler Software and Related Services - Annual

Description	Quantity	Unit Price	Annual Fee
Brazos			
Brazos Hosting Fee	1	$980	$980
TOTAL:			**$980**

Professional Services

Description	Quantity	Unit Price	Extended Price
Brazos Project Mgmt (plus per diem as needed if not remote)	1	$1,000	$1,000
Set Up & Config	1	$10,000	$10,000
Training	2	$1,000	$2,000
Munis Interface: Set Up & Configuration	1	$0	$0
TOTAL:			**$13,000**

Third Party Hardware, Software and Services

Description	Quantity	Unit Price	Unit Discount	Total Price	Maintenance
AC18177-5 / Zebra, ZQ500/RW QUAD Battery Charger	2	$305	$0	$610	$0
P1031365-059 / Zebra, ZQ520, Battery	5	$64	$0	$320	$0
LD-R4KN5B / Zebra, ZQ520/RW420, Paper, 36 rolls per case	1	$92	$0	$92	$0
ZQ52-AUE0000-00 / Zebra, Printer, ZQ520	5	$588	$0	$2,940	$0
BTRY-TC7X-46MAH / Zebra EVM, TC7X Battery	5	$57	$0	$285	$0
SAC-TC7X-4BTYPP / Zebra EVM, TC7X, 4 Slot Battery Charger	2	$122	$0	$244	$0
CRD-TC7X-SE5EU1-01 / Zebra EVM, TC7X, 5 Bay Ethernet Cradle	1	$472	$0	$472	$0
CBL-DC-382A1-01 / Zebra EVM, TC7X, MC67, US DC Line Cord, Multi-Slot CRD	1	$19	$0	$19	$0
PWR-BGA12V50W0WW / Zebra EVM, TC7X, Power Supply for Battery Charger	2	$34	$0	$68	$0
PWR-BGA12V108W0WW / Zebra EVM, TC7X, Power Supply, Multi-Slot CRD	1	$67	$0	$67	$0
CBL-DC-375A1-01 / Zebra EVM, US DC Line Cord for Battery Charger	2	$9	$0	$18	$0
TC700K-02B22B0-US / Zebra EVM, TC70X	5	$1,220	$0	$6,100	$0
23844-00-00R / Zebra EVM, US AC Line Cord, grounded	3	$10	$0	$30	$0
TOTAL:				**$11,265**	

Summary	One Time Fees	Recurring Fees
Total Tyler Software	$10,750	$2,942
Total Tyler Annual	$0	$980
Total Tyler Services	$13,000	$0
Total Third Party Hardware, Software and Services	$11,265	$0
Summary Total	**$35,015**	**$3,922**
Contract Total	**$38,937**	

Comments

Brazos Proposal Includes:

5 eCitation Licenses installed on Zebra TC70x HH Devices
Task: eParking
Task: AB953 Module (Automatically included as part of eCitation package)
Interface: Tyler Munis
Interface: Cyrun RMS
Interface: Sustain CMS

5 Zebra TC70x Android HH Devices with charging accessories
5 Zebra ZQ520 printer with charging accessories

Agency is responsible for paying applicable CA state taxes



Exhibit 2
Hosting Services

Tyler Hosting Services (also referred to as SaaS Services) for the Tyler Software will be provided subject to the following terms and conditions.

SECTION A – DEFINITIONS

- **"Data"** means your data necessary to utilize the Tyler Software.
- **"Data Storage Capacity"** means the contracted amount of storage capacity for your Data identified in the Investment Summary.
- **"Defined Users"** means the number of users that are authorized to use the SaaS Services. The Defined Users for the Agreement are as identified in the Investment Summary.
- **"Hosting Fees"** means the fees for the SaaS Services identified in the Investment Summary. Hosting Fees may also be referred to as SaaS Fees.
- **"SaaS Services"** means software as a service consisting of system administration, system management, and system monitoring activities that Tyler performs for the Tyler Software, and includes the right to access and use the Tyler Software, receive maintenance and support on the Tyler Software, including Downtime resolution under the terms of the SLA, and Data storage and archiving. SaaS Services may also be referred to as Hosting Services. SaaS Services do not include support of an operating system or hardware, support outside of our normal business hours, or training, consulting or other professional services.
- **"SLA"** means the Service Level Agreement. A copy of our current SLA is attached hereto as Schedule 1.

SECTION B – SAAS SERVICES APPLICABLE TO TYLER SOFTWARE

1. Rights Granted. We grant to you the non-exclusive, non-assignable limited right to use the SaaS Services solely for your internal business purposes for the number of Defined Users only. The Tyler Software will be made available to you according to the terms of the SLA. You acknowledge that we have no delivery obligations and we will not ship copies of the Tyler Software as part of the SaaS Services. You may use the SaaS Services to access updates and enhancements to the Tyler Software, as further described in Exhibit C of the Agreement. The foregoing notwithstanding, to the extent we have sold you perpetual licenses for Tyler Software, if and listed in the Investment Summary, for which you are receiving SaaS Services, your rights to use such Tyler Software are perpetual, subject to the

terms and conditions of this Agreement including, without limitation, Section B(1). We will make any such software available to you for download.

2. Hosting Fees. You agree to pay us the annual Hosting Fees. Those amounts are payable as set forth in Section D below and in accordance with our Invoicing and Payment Policy. The Hosting Fees are based on the number of Defined Users and amount of Data Storage Capacity. You may add additional users or additional data storage capacity on the terms set forth in Section I(1) of the Agreement. In the event you regularly and/or meaningfully exceed the Defined Users or Data Storage Capacity, we reserve the right to charge you additional fees commensurate with the overage(s).

3. Ownership.
   3.1. We retain all ownership and intellectual property rights to the SaaS Services, the Tyler Software, and anything developed by us under this Agreement.

   3.2. The Documentation is licensed to you and may be used and copied by your employees for internal, non-commercial reference purposes only.

   3.3. You retain all ownership and intellectual property rights to the Data. You expressly recognize that except to the extent necessary to carry out our obligations contained in this Agreement, we do not create or endorse any Data used in connection with the SaaS Services.

4. Restrictions. You may not: (a) make the Tyler Software or Documentation resulting from the SaaS Services available in any manner to any third party for use in the third party's business operations; (b) modify, make derivative works of, disassemble, reverse compile, or reverse engineer any part of the SaaS Services; (c) access or use the SaaS Services in order to build or support, and/or assist a third party in building or supporting, products or services competitive to us; or (d) license, sell, rent, lease, transfer, assign, distribute, display, host, outsource, disclose, permit timesharing or service bureau use, or otherwise commercially exploit or make the SaaS Services, Tyler Software, or Documentation available to any third party other than as expressly permitted by this Agreement.

5. SaaS Services.
   5.1. Our SaaS Services are audited at least yearly in accordance with the AICPA's Statement on Standards for Attestation Engagements ("SSAE") No. 18. We have attained, and will maintain, SOC 1 and SOC 2 compliance, or its equivalent, for so long as you are timely paying for SaaS Services. Upon execution of a mutually agreeable Non-Disclosure Agreement ("NDA"), we will provide you with a summary of our compliance report(s) or its equivalent. Every year thereafter, for so long as the NDA is in effect and in which you make a written request, we will provide that same information.

   5.2. You will be hosted on shared hardware in a Tyler data center or in a third-party data center. In either event, databases containing your Data will be dedicated to you and

inaccessible to our other customers.

5.3. Our Tyler data centers have fully-redundant telecommunications access, electrical power, and the required hardware to provide access to the Tyler Software in the event of a disaster or component failure. In the event any of your Data has been lost or damaged due to an act or omission of Tyler or its subcontractors or due to a defect in Tyler's software, we will use best commercial efforts to restore all the Data on servers in accordance with the architectural design's capabilities and with the goal of minimizing any Data loss as greatly as possible. In no case shall the recovery point objective ("RPO") exceed a maximum of twenty-four (24) hours from declaration of disaster. For purposes of this subsection, RPO represents the maximum tolerable period during which your Data may be lost, measured in relation to a disaster we declare, said declaration will not be unreasonably withheld.

5.4. In the event we declare a disaster, our Recovery Time Objective ("RTO") is twenty-four (24) hours. For purposes of this subsection, RTO represents the amount of time, after we declare a disaster, within which your access to the Tyler Software must be restored.

5.5. We conduct annual penetration testing of either the production network and/or web application to be performed. We will maintain industry standard intrusion detection and prevention systems to monitor malicious activity in the network and to log and block any such activity. We will provide you with a written or electronic record of the actions taken by us in the event that any unauthorized access to your database(s) is detected as a result of our security protocols. We will undertake an additional security audit, on terms and timing to be mutually agreed to by the parties, at your written request. You may not attempt to bypass or subvert security restrictions in the SaaS Services or environments related to the Tyler Software. Unauthorized attempts to access files, passwords or other confidential information, and unauthorized vulnerability and penetration test scanning of our network and systems (hosted or otherwise) is prohibited without the prior written approval of our IT Security Officer.

5.6. We test our disaster recovery plan on an annual basis. Our standard test is not client-specific. Should you request a client-specific disaster recovery test, we will work with you to schedule and execute such a test on a mutually agreeable schedule. At your written request, we will provide test results to you within a commercially reasonable timeframe after receipt of the request.

5.7. We will be responsible for importing back-up and verifying that you can log-in. You will be responsible for running reports and testing critical processes to verify the returned Data.

5.8. We provide secure Data transmission paths between each of your workstations and our servers.

5.9. Tyler data centers are accessible only by authorized personnel with a unique key entry. All other visitors to Tyler data centers must be signed in and accompanied by authorized personnel. Entry attempts to the data center are regularly audited by internal staff and external auditors to ensure no unauthorized access.

5.10. Where applicable with respect to our applications that take or process card payment data, we are responsible for the security of cardholder data that we possess, including functions relating to storing, processing, and transmitting of the cardholder data and affirm that, as of the Effective Date, we comply with applicable requirements to be considered PCI DSS compliant and have performed the necessary steps to validate compliance with the PCI DSS. We agree to supply the current status of our PCI DSS compliance program in the form of an official Attestation of Compliance, which can be found at https://www.tylertech.com/about-us/compliance, and in the event of any change in our status, will comply with applicable notice requirements.

SECTION C – SAAS TERM AND TERMINATION of SAAS SERVICES

1. Term. The term for Tyler SaaS Services will commence on the Amendment Effective Date and will remain in effect for one (1) year. Thereafter, the term will renew automatically for additional one (1) year terms at our then-current Hosting Fees unless terminated in writing by either party at least sixty (60) days prior to the end of the then-current term. Your right to access or use the SaaS Services will terminate at the end of the term for SaaS Services.
2. Failure to Pay Hosting Fees. You acknowledge that continued access to the SaaS Services is contingent upon your timely payment of the Hosting Fees. If you fail to timely pay the Hosting Fees, we may discontinue the SaaS Services and deny your access to the Tyler Software. We may also terminate this Agreement if you don't cure such failure to pay within forty-five (45) days of receiving written notice of our intent to terminate.

SECTION D – PAYMENT OF HOSTING FEES

1. Hosting Fees. Hosting Fees are invoiced annually in advance, beginning on the Amendment Effective Date. Subsequent annual Hosting Fees are invoiced annually in advance of each anniversary thereof. Your fees for each subsequent year will be set at our then-current rates.

SECTION E – PROFESSIONAL (E&O) LIABILITY/CYBER LIABILITY

1. Tyler shall maintain Professional Liability, Technology Errors & Omissions Liability and Network Security & Privacy Liability insurance with limits of two million ($2,000,000) per claim and in the aggregate. Tyler will list Client as an additional insured party under this insurance policy. Coverage shall include: (i) Failure to prevent unauthorized access to, use of or tampering with computer systems/networks, including denial of service, unless directly caused by a

mechanical or electrical failure, (ii) Unauthorized disclosure of personal or confidential information, (iii) liability arising out Xylem' professional errors and/or omissions resulting in the introduction of a computer virus or other malicious code causing damage to Customer's computer system, network or similar related property and the data, software and programs thereon, (iv) liability for intellectual property infringement claims and for indemnification and legal defense of any claims of intellectual property infringement, including infringement of copyright, or trade mark, brought against Client for the Brazos System, (v) government investigations and associated fines/penalties, if insurable by law, resulting from the alleged or actual disclosure of personal or confidential information or security breach, (vi) liability for Client's non-physical business interruption due to a security failure of a Tyler computer system, network, hardware or software or Tylers' professional services. The policy will have a retroactive date of no later than the effective date of this Amendment and coverage shall be maintained for an additional period of three (3) years following termination of the Amendment.



Exhibit 2
Schedule 1
SERVICE LEVEL AGREEMENT

I. Agreement Overview

This SLA operates in conjunction with, and does not supersede or replace any part of, the Agreement. It outlines the information technology service levels that we will provide to you to ensure the availability of the application services that you have requested us to provide. All other support services are documented in the Support Call Process.

II. Definitions. Except as defined below, all defined terms have the meaning set forth in the Agreement.

Attainment: The percentage of time the Tyler Software is available during a calendar quarter, with percentages rounded to the nearest whole number.

Client Error Incident: Any service unavailability resulting from your applications, content or equipment, or the acts or omissions of any of your service users or third-party providers over whom we exercise no control.

Downtime: Those minutes during which the Tyler Software is not available for your use. Downtime does not include those instances in which only a Defect is present.

Service Availability: The total number of minutes in a calendar quarter that the Tyler Software is capable of receiving, processing, and responding to requests, excluding maintenance windows, Client Error Incidents and Force Majeure.

III. Service Availability

The Service Availability of the Tyler Software is intended to be 24/7/365. We set Service Availability goals and measures whether we have met those goals by tracking Attainment.

a. Your Responsibilities

Whenever you experience Downtime, you must make a support call according to the procedures outlined in the Support Call Process. You will receive a support incident number.

You must document, in writing, all Downtime that you have experienced during a calendar quarter. You must deliver such documentation to us within 30 days of a quarter's end.

The documentation you provide must evidence the Downtime clearly and convincingly. It must include, for example, the support incident number(s) and the date, time and duration of the Downtime(s).

b. Our Responsibilities

When our support team receives a call from you that Downtime has occurred or is occurring, we will work with you to identify the cause of the Downtime (including whether it may be the result of a Client Error Incident or Force Majeure). We will also work with you to resume normal operations.

Upon timely receipt of your Downtime report, we will compare that report to our own outage logs and support tickets to confirm that Downtime for which we were responsible indeed occurred.

We will respond to your Downtime report within 30 day(s) of receipt. To the extent we have confirmed Downtime for which we are responsible, we will provide you with the relief set forth below.

c. Client Relief

When a Service Availability goal is not met due to confirmed Downtime, we will provide you with relief that corresponds to the percentage amount by which that goal was not achieved, as set forth in the Client Relief Schedule below.

Notwithstanding the above, the total amount of all relief that would be due under this SLA per quarter will not exceed 5% of one quarter of the then-current SaaS Fee. The total credits confirmed by us in one or more quarters of a billing cycle will be applied to the SaaS Fee for the next billing cycle. Issuing of such credit does not relieve us of our obligations under the Agreement to correct the problem which created the service interruption.

Every quarter, we will compare confirmed Downtime to Service Availability. In the event actual Attainment does not meet the targeted Attainment, the following Client relief will apply, on a quarterly basis:

Targeted Attainment	Actual Attainment	Client Relief
100%	98-99%	Remedial action will be taken.
100%	95-97%	4% credit of fee for affected calendar quarter will be posted to next billing cycle
100%	<95%	5% credit of fee for affected calendar quarter will be posted to next billing cycle

You may request a report from us that documents the preceding quarter's Service Availability, Downtime, any remedial actions that have been/will be taken, and any credits that may be issued.

IV. Applicability

The commitments set forth in this SLA do not apply during maintenance windows, Client Error Incidents, and Force Majeure.

We perform maintenance during limited windows that are historically known to be reliably low-traffic times. If and when maintenance is predicted to occur during periods of higher traffic, we

will provide advance notice of those windows and will coordinate to the greatest extent possible with you.

V. Force Majeure

You will not hold us responsible for not meeting service levels outlined in this SLA to the extent any failure to do so is caused by Force Majeure. In the event of Force Majeure, we will file with you a signed request that said failure be excused. That writing will at least include the essential details and circumstances supporting our request for relief pursuant to this Section. You will not unreasonably withhold its acceptance of such a request.

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Department Director

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: B-6

SUBJECT:

Consideration of a Resolution Approving a Memorandum of Understanding between the Madera County Transportation Commission and the City of Madera for the Coordination of Ongoing Transit Planning and Programming of Federal Funds that Support the Ongoing and Future Development of Transit Services by the City

RECOMMENDATION:

Staff recommends City Council (Council) approve the Resolution.

SUMMARY:

The Madera County Transportation Commission (MCTC) is required to enter into a memorandum of understanding (MOU) with operators of public transit services that must comply with cooperative procedures for carrying out transportation planning and programming. This MOU will ensure that the City of Madera (City) actively coordinates transit planning with MCTC on a continuous and cooperative basis to promote efficient and effective transit operations. It also will identify specific agency responsibilities related to planning and programming of federal transit funds, including Federal Transit Administration (FTA) funds, federal Congestion, Mitigation and Air Quality (CMAQ), Measure T, and other sources.

DISCUSSION:

The City proposes to comply with federal requirements to coordinate and cooperate with the MCTC on a continuous basis. This MOU will ensure that the City and MCTC conduct transit planning and programming responsibilities per federal requirements and that those responsibilities are clearly delineated and properly addressed.

As with former MOUs, the purpose of this MOU is to:

1. Foster a cooperative and mutually beneficial working relationship between MCTC and the City to ensure comprehensive, effective, and coordinated transit planning between the two entities; and
2. Identify transit planning responsibilities in coordination with the State of California, including CalTrans for the purpose of programming federal funds within the MCTC Federal Transportation Improvement Program (FTIP), compliance with Federal Transit Administration (FTA), and to maximize pursuit and management of funding opportunities for regional transit services.

FINANCIAL IMPACT:

Entering into the proposed MOU will not impact the City's general fund. MCTC receives external funding to carry out the functions identified in the MOU, which include State and local sources of grant funds and thereby this MOU does not include a cost to either party.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

The approval of this MOU supports Strategy 121. Multi-model transportation: Develop a city-wide multi-modal transportation plan to ensure safe, affordable and convenient transportation modes for residents and businesses within Madera.

ALTERNATIVES:

Potential Council alternatives include:

- Not enter into the proposed MOU with MCTC
- Change conditions on the MOU to reflect Council's direction on changes to conditions

ATTACHMENTS:

1. Resolution
2. Memorandum of Understanding

Resolution No. 20-____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, APPROVING A MEMORANDUM OF UNDERSTANDING BETWEEN THE MADERA COUNTY TRANSPORTATION COMMISSION AND THE CITY OF MADERA FOR THE COORDINATION OF ONGOING TRANSIT PLANNING AND PROGRAMMING OF FEDERAL FUNDS THAT SUPPORT THE ONGOING AND FUTURE DEVELOPMENT OF TRANSIT SERVICES BY THE CITY

WHEREAS, the City of Madera (City) is established under the laws of California and was incorporated as a General Law City in 1907; and

WHEREAS, the City is a designated urbanized area, is a public transportation provider that is eligible to apply for and receive Federal Transit Administration (FTA) Section 5307 and other FTA funding for capital, operating, and planning assistance for the delivery of public mass transportation; and

WHEREAS, the City wishes to enter a memorandum of understanding with Madera County Transportation Commission (MCTC) for coordination of ongoing transit planning and programming federal funds that support the ongoing and future deployment of transit services by the City; and

WHEREAS, The MCTC is the Metropolitan Planning Organization (MPO), the Regional Comprehensive Planning Agency, the Regional Transportation Planning Agency (RTPA), and the Local Transportation Commission for Madera County designated pursuant to Title 3, Division 3, Chapter 2, Article II, Section 29532 of the California Government Code; and

WHEREAS, FTA federal guidelines 23 CFR 450.314 (h) requires a written agreement between MCTC and MADERA describing mutual responsibilities for carrying out performance-based planning and programming in the metropolitan areas.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MADERA DOES HEREBY FIND, ORDER AND RESOLVE AS FOLLOWS:

1. In consideration of the mutual benefits to the parties hereto, and in consideration of the covenants and conditions herein contained, the parties agree to enter into the Memorandum of Understanding to foster a cooperative and mutually beneficial working relationship between CITY and MCTC for the provision of comprehensive, effective, and coordinated transit planning on behalf of the region's transportation system.
2. The City Council authorizes the Mayor to execute the memorandum of understanding to enter into a partnership between City and MCTC.
3. This resolution if effective immediately upon adoption.

* * *

MEMORANDUM OF UNDERSTANDING

BETWEEN THE

MADERA COUNTY TRANSPORTATION COMMISSION

AND

CITY OF MADERA

"Regarding the Coordination of Ongoing Transit Planning and Programming Federal Funds that Support the Ongoing and Future Deployment of Transit Services by the City of Madera".

This Memorandum of Understanding (MOU) is entered into between the MADERA COUNTY TRANSPORTATION COMMISSION, hereinafter referred to as (MCTC), and the CITY OF MADERA, hereinafter referred to as (MADERA), a public transportation provider, as of this ___ day of _____ 2020. The purpose of this MOU is to:

1. Foster a cooperative and mutually beneficial working relationship between MCTC and MADERA for the provision of comprehensive, effective, and coordinated transit planning on behalf of MADERA'S public mass transportation system; and
2. Identify the transit planning responsibilities in coordination with the State of California for the purpose of programming federal funds within the MCTC Federal Transportation Improvement Program (FTIP).

WITNESS THAT:

WHEREAS, MADERA was incorporated as a General Law city in 1907; and

WHEREAS, MADERA as a designated urbanized area, is a public transportation provider that is eligible to apply for and receive Federal Transit Administrative (FTA) Section 5307 and other FTA funding for capital, operating, and planning assistance for the delivery of public mass transportation; and,

WHEREAS, MCTC is the Metropolitan Planning Organization (MPO), the Regional Comprehensive Planning Agency, the Regional Transportation Planning Agency (RTPA), and the Local Transportation Commission for Madera County designated pursuant to Title 3, Division 3, Chapter 2, Article II, Section 29532 of the California Government Code; and

WHEREAS, MCTC is directed by a six-member board, composed of six locally elected officials: three members of the Madera County Board of Supervisors, two members of the Madera City Council, and one member of the Chowchilla City Council; and

WHEREAS, MCTC has developed a committee structure that advises the MCTC Board on all planning and policy questions. These committees include the Technical Advisory Committee (TAC) and the Social Services Transportation Advisory Council (SSTAC); and

WHEREAS, 23 CFR 450.310 (b) and 450.312 require MPOs to work cooperatively with public transit operators to develop Regional Transportation Plans (RTPs) and Transportation Improvement Programs (TIPs) for their designated areas. These plans and programs are intended to further the national interest to encourage and promote the safe and efficient management, operation, and development of surface transportation systems. These systems should serve the

mobility of people and freight, and foster economic growth and development within and through urbanized areas, while minimizing transportation-related fuel consumption and air pollution; and

WHEREAS, 23 CFR 450.314 (h) requires a written agreement between MCTC and MADERA describing mutual responsibilities for carrying out performance-based planning and programming in metropolitan areas; and

WHEREAS, 23 CFR 450.306 (d)(2)(iii) – The selection of performance targets that address performance measures described in 49 U.S.C. 5236 (c) and 49 U.S.C. 5329 (d) shall be coordinated, to the maximum extent practicable, with public transportation providers to ensure consistency with the performance targets that public transportation providers establish under 49 U.S.C. 5236 (c) and 49 U.S.C. 5329 (d); and

WHEREAS, 49 CFR 625.45 (b)(1) requires transit providers and group TAM plan sponsors to set state of good repair (SGR) performance targets, as required; and

WHEREAS, MCTC and MADERA rely upon a cooperative relationship to foster comprehensive regional transit planning which feeds directly into State and national planning.

NOW, THEREFORE, in consideration of the mutual benefits to the parties hereto, and in consideration of the covenants and conditions herein contained, the parties agree as follow:

SECTION 1: Responsibilities of MCTC and MADERA

1.1 Communication

A critical component of this relationship involves open and productive communication, which leads to setting project priorities and federal funding needs. MCTC is required to update the FTIP every even numbered year. The need to ensure responsive communication between the two parties is imperative in order to meet this federal programming mandate.

As a designated urbanized area, MADERA is eligible to apply for FTA Section 5307 and other FTA funding for capital, operating, and planning assistance for the delivery of public mass transportation. Projects will be programmed and constrained based on the annual FTA appropriation and/or other awarded grants.

As the federally designated MPO, MCTC is responsible for allocating certain federal formula transit funds to MADERA, City of Chowchilla and the County of Madera. MCTC shall allocate the federal transit funds based on a formula developed cooperatively with the local jurisdictions.

The Executive Director of MCTC and the City Manager of MADERA are the primary individuals responsible for ensuring that the provisions specified in this MOU are followed.

1.2 Representation on MCTC Board and Committees

MADERA shall:

a) Appoint one (1) representative and alternate to serve on the TAC. The TAC meetings are held on the second Monday of every month.
b) Appoint one (1) representative and alternate to serve as a voting member of the MCTC SSTAC. The SSTAC meeting notices are mailed in advance of meetings.

SECTION 2: Transit Planning

2.1 Short-Range Transit Plan

In accordance with the planning regulations and Federal Transit Administration (FTA) guidance, MADERA and/or MCTC may prepare a five (5) year short-range transit plan to support sound financial and operational decision-making in transit planning and programming. In the development of short-range transit plans, the local jurisdictions included in the plan will provide a draft list of projects for FTA funding. The list shall:

a) Identify and describe the scope of the specific projects and services, which address ongoing and increased transit demands. These projects and services are to include Americans with Disabilities Act (ADA), and Transportation Control Measures (TCM) with sufficient detail (design, concept, and scope) to permit air quality conformity analysis to be performed by MCTC.
b) Provide qualitative and quantitative analysis showing how the project addresses transit needs.
c) Identify the amount and type of federal and non-federal funds required to support the projects for each year represented in the plan. In addition, identify anticipated discretionary funding estimates for the FTIP.

2.2 Long Range Transit Plan

The transit action element of the RTP should assess the transportation needs of MADERA and sets forth improvements necessary to address those needs over a twenty (20) year period and updated every four (4) years.

2.3 Planning Assistance

MCTC will provide input into the development of the transit planning documents produced by MADERA. In addition, MCTC will work cooperatively with and assist MADERA in its efforts to generate planning and forecasting information needed to establish and maintain transit-planning documents. The type of assistance provided by MCTC may include, but is not limited to, the following:

a) Obtain and analyze data from various sources to develop concrete demographic, growth, and use assumptions for the purpose of transit forecasting and development (e.g. trip generation tables, census information, maps, performance targets).
b) Assist in securing funds to conduct transit demand studies and in-depth analysis.
c) Assist MADERA in obtaining State and federal funding of projects consistent with the MCTC Regional Transportation Plan (e.g. facilitating FTIP amendments).
d) Establish performance targets that address the performance measures or standards established by the State or by establishing quantifiable targets for these measures agreed upon by MADERA and MCTC.
e) Establish report process and deadlines for performance data.

A final copy of all transit planning documents, including State and/or federal reviews, National Transit Database, and State Controller Reports, as well as the transit asset

management plans, State of Good Repair, and the Public Transportation Agency Safety Plan will be forwarded by MADERA to MCTC. This will assist MCTC in overall transit planning coordination, as well as ensuring that FTA and FHWA transit funds are used as planned, per FTA and FHWA requirements.

2.4 FTIP Programming Criteria

As part of the FTIP updating process, federally funded projects are programmed by MCTC on behalf of all transit providers receiving federal funds through the FTIP. For proposed transit projects, the criteria used for the programming of federal funds within the MCTC FTIP are essential. MCTC and MADERA may employ the following selection criteria to establish priorities for transit funding.

a) Project purpose and need;
b) Anticipated benefits;
c) Degree to which a project will improve transit availability;
d) Degree to which a project will improve level of service performance standards;
e) Degree to which a project will, once implemented, make progress toward achieving performance targets;
f) Air Quality benefits;
g) Overall cost effectiveness; and
h) Leveraging of other funding sources.

2.5 Regional Planning

MCTC will provide a forum that will foster partnerships wherein the development of public transit services through Madera County will be accomplished. As part of the coordinated regional transportation system, MCTC will expand the continuing, cooperative, and comprehensive planning of the transportation system in MADERA.

MCTC will be responsible for the development of the regional planning documents such as the Regional Transportation Plan and the analysis and determination of Unmet Transit Needs. MADERA will have the opportunity to provide technical advice during the development of these regional planning documents through the MCTC committee structure.

As a critical part of the regional planning process, MADERA will assist MCTC with efforts to achieve regional goals including the requirement to assist in the attainment of federal air quality standards and performance targets.

2.6 Application for Transit Funding

MADERA will prepare applications to the FTA for federal transit funding. MCTC will review the applications, consistency of projects with FTIP programming, and prepare a letter of concurrence if information is accurate. MADERA's application for federal funding shall be consistent with the MCTC Regional Transportation Plan as required by federal guidelines. MADERA shall work with MCTC to develop consistent funding requests from all potential transit funding sources in order to prevent funding delays.

2.7 Transit Asset Management Plan

MADERA must develop a transit asset management (TAM) plan if it owns, operates, or manages capital assets used to provide public transportation and receives federal financial assistance under 49 U.S.C. Chapter 53 as a recipient or subrecipient. A TAM plan must be updated in its entirety at least every four years, and it must cover a horizon period of at least four years. The selection of targets that address transit asset management shall be coordinated, to the maximum extent practicable with MCTC to ensure consistency with the performance targets that public transportation providers establish.

2.8 Public Transportation Agency Safety Plan

MADERA must develop a Public Transportation Agency Safety Plan (PTASP) plan if receives federal financial assistance under 49 U.S.C. Chapter 53, Section 5307 as a recipient or subrecipient. The plan must include performance targets. A PTASP must be updated and certified by the transit agency annually.

SECTION 3: FTIP Project Monitoring and Maintenance

3.1 Progress Reporting

The MCTC will be responsible for tracking the overall progress of all projects in the FTIP. MCTC will prepare an annual list of projects for which federal funds have been obligated in the preceding year and will ensure that it is made available for public review.

MADERA will assist MCTC's effort to track the overall progress of FTIP projects by submitting an annual report that addresses the status of each project receiving federal funds. At a minimum, the report will do the following:

a) Identify and correlate the documentation of projects to individual categories as identified in the FTIP (e.g., Operations, Planning, Capital Purchase, Facility Maintenance, Planning).
b) Document the state of project implementation.
c) If the project is behind schedule, include the reasons for the delay.
d) Status of amount of federal funding obligated, received and used to support projects.
e) Identify the need for a FTIP amendment.

In addition to provide the above supporting documents, MADERA will forward to MCTC a final copy of all planning documents produced as a result of receiving FTA funding. This will assist MCTC in overall transit planning and ensure that FTA funds were used accordingly for planning purposes as per FTA's requirements. Documents need to be sent to the following address:

Attention: Patricia Taylor, Executive Director
Madera County Transportation Commission
2001 Howard Road, Suite 201
Madera, California 93637

3.2 FTIP Amendments

MCTC's Executive Director will exercise the authority delegated by the MCTC Policy Board to process minor administrative amendments, involving for example, minor changes in the project scope, shifting of federal funds between project phases within the quadrennial element of the FTIP.

As part of the annual report, or sooner if required, MADERA will alert MCTC to the need to amend the FTIP. In general, reasons for FTIP amendment includes, for example, funding shortfalls, delays in project implementation and/or new projects that need to be included in the document.

SECTION 4: MOU Amendment

This MOU may be amended by the written consent of both parties.

SECTION 5: MOU Termination

Either party upon thirty (30) days of written notification to the other may terminate this MOU.

SECTION 6: Authorization of MOU

4.1 Authorization

By signature, we agree that the responsibilities outlined in this MOU foster healthy collaboration for the purpose of fostering transit planning and programming federal funds within the MCTC Federal Transportation Improvement Program.

_____	_____
ANDREW J. MEDELLIN Date	Date PATRICIA TAYLOR Date
Mayor, City of Madera	Executive Director, MCTC

APPROVE AS TO FORM:

_____

City Attorney, City of Madera Date

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Keith Helmuth, P.E., Department Director

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: B-7

SUBJECT:

Actions Relating to Final Map for Linden Street Residential Complex (Tract No. 19-S-05):

1. Consideration of a Resolution of the City of Madera Approving the Final Map for Linden Street Residential Complex Subdivision (Tract No. 19-S-05) and Improvement Agreement (Agreement) Affecting Land Development and Authorizing the Mayor to Execute the Agreement on Behalf of the City; and
2. Consideration of a Resolution of the City of Madera Approving Annexation of the Linden Street Residential Complex Subdivision (Tract No. 19-S-05) into Zone of Benefit 4; Confirming the Diagram and Assessments for City Wide Landscape and Lighting Assessment District Zone of Benefit 4 For Fiscal Year (FY) 2020/2021; Authorizing the Mayor to Execute the Covenant on Behalf of the City and Authorizing the City Clerk to file the Diagram and Assessment with the Madera County Auditor

RECOMMENDATION:

Staff recommends that the City Council (Council) adopt the following Resolutions:

1. Resolution No. 20-_____which provides:
   a. Approving the Final Map for the Linden Street Residential Complex Subdivision.
   b. Approving Agreement for the Construction of Improvements for the Linden Street Residential Complex Subdivision (Tract No. 19-S-05).
   c. Authorizing staff to record the Final Map and Agreement for the Construction of Improvements for the Linden Street Residential Complex Subdivision (Tract No. 19-S-05).
   d. Accepting the Dedication of Land for Public Use.
2. Resolution No. 20-_____ which provides:
   a. Approving Annexation of Linden Street Residential Complex Subdivision (Tract No. 19-S-05) into Landscape and Lighting Assessment District Zone of Benefit 4 of City-Wide Landscape Maintenance District; confirming the Diagram and Assessment for FY 2020/2021; Authorizing the Mayor to Execute the Covenant on Behalf of the City, and

Authorizing the City Clerk to File the Diagram and Assessment with the Madera County Auditor.

SUMMARY:

On April 9, 2019, the City's Planning Commission approved Tentative Subdivision Map No. TSM 2018-06 and Precise Plan (PPL) for the Linden Street Residential Complex Subdivision ("Project"). The Subdivider is now ready to proceed with development of the Project.

DISCUSSION:

The Final Map for Linden Street Residential Complex Subdivision has been checked and approved by the City Engineer. The Final Map substantially complies with the approved tentative map. All taxes will be paid prior to recording of the Final Map. Bonds and insurance requirements will be provided prior to recordation of the Final Map or as part of an application to construct off-site improvements in advance of the approval of the Improvement Agreement.

The Subdivider, Tommy Lee Jarrell, has signed a Landowner's Consent for annexation into Zone of Benefit 4 of City-Wide Landscape Maintenance District. Pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15268(b)(3), approval of final subdivision maps is a ministerial action and is exempt from the requirements of CEQA.

FINANCIAL IMPACT:

The Subdivision is included in the City's Community Facilities District (CFD) to offset any impacts to the City's General Fund. The Subdivider will pay the required fees for the plan checking and inspection of the installation of required improvements for the subdivision prior to recordation of the Final Map.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

Subdivisions are not specifically addressed in the vision or action plans. However, some components are consistent.

Action 134.1: Consider establishment of design/landscape standards for neighborhoods and business construction - *Current landscape design standards have been enforced which aid in the establishment of Well-Planned Neighborhoods and Housing.*

ALTERNATIVES:

If Council does not approve the Final Map, the execution of the Agreement and the annexation of the parcels into the existing LMD zones, it would result in the inability to record the map and for the Subdivider to complete the project. Disapproval will require the Council make certain findings that specific conditions that have not been met.

ATTACHMENTS:

1. Resolution – Approving Final Map
    Exhibit A – Improvement Agreement
        Exhibit A – Legal Description
        Exhibit B – Development Impact Fees

2. Resolution – Confirmation of the Diagram and Assessments (Zone of Benefit 4)
    Exhibit A – Legal Description
    Exhibit B – Assessment Diagram (Zone 4)
    Exhibit C – Assessment Amounts
3. Covenant – LMD Zone 4
    Exhibit A – Legal Description
4. LMD Zone Map
5. Project Location Map

Attachment 1

Resolution
Final Map and Agreement

RESOLUTION NO. 20-___

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, APPROVING THE FINAL MAP FOR THE LINDEN STREET RESIDENTIAL COMPLEX SUBDIVISION (TRACT NO. 19-S-05) AND IMPROVEMENT AGREEMENT (AGREEMENT) AFFECTING LAND DEVELOPMENT AND AUTHORIZING THE MAYOR TO EXECUTE THE AGREEMENTS ON BEHALF OF THE CITY

WHEREAS, Tommy Lee Jarrell, has offered for approval a Final Map designated as Tract No. 19-S-05; and

WHEREAS, the Final Map for the Linden Street Residential Complex Subdivision, prepared by Dale G. Mell & Associates, for Tommy Lee Jarrell has been certified by the City Engineer that all provisions of the law and of Chapter 2 of Title 10 of the Madera Municipal Code have been complied with and that said subdivision as shown is substantially the same as it appears on the tentative map thereof heretofore approved by the Planning Commission of the City of Madera on April 9, 2019; and

WHEREAS, prior to the delivery of said map and prior to its recordation, the Owner and Subdivider of said subdivision shall enter into and execute an agreement between the City and said Owner and Subdivider for said subdivision which is on file in the office of the City Clerk entitled, "Improvement Agreement Linden Street Residential Complex Subdivision (Tract No. 19-S-05)," (hereafter "Improvement Agreement") wherein the Subdivider, in consideration of the approval of said map by the City and the acceptance by the City of the dedication of lands for public use therein contained, shall agree to construct and complete within the time specified in said Agreement all street and other improvements required of Subdivider under the provisions of Chapter 2 of Title 10 of the Madera Municipal Code relating to regulations and standards for the subdivision of lands in the City and the preparation of maps thereof, and such street or other improvements designated or mentioned in said Agreement and/or set forth in the plans and specifications for the improvements for the Linden Street Residential Complex Subdivision is on file in the office of the City Engineer; and

WHEREAS, Subdivider shall, and as a condition precedent to the recordation of said Final Map, furnish to the City and file with the City Clerk a good and sufficient improvement security in a form to be approved by the City Attorney, securing the faithful performance by said Subdivider of all work and the construction of all improvements designated as required in the Improvement Agreement, and also security in form to be approved by the City Attorney securing the payment by said Subdivider of all bills for labor and materials incurred in the construction of any and all said improvements, and the doing of all other work therein agreed to be done by said Subdivider, within the time therein specified, the amount of said improvement securities to be not less than Sixty-One Thousand Eight Hundred Ninety-Four Dollars and Fifty Cents ($61,894.50); and

WHEREAS, Subdivider shall, and as a condition precedent to the recordation of said Final Map, furnish to the City and file with the City Clerk certificates or policies of public liability and property damage insurance as required in the Improvement Agreement.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MADERA hereby finds, orders and resolves as follows:

1. The above recitals are true and correct.

2. The Final Map for the Linden Street Residential Complex Subdivision (Tract No. 19-S-05) is approved.

3. The agreement entitled "Improvement Agreement Linden Street Residential Complex Subdivision (Tract No. 19-S-05)" for the construction of improvements for the Linden Street Residential Complex Subdivision is approved and attached as Exhibit "A." A copy of the Agreement shall be kept on file in the office of the City Clerk.

4. The Mayor is authorized to execute the Agreement on behalf of the City.

5. The Staff is authorized to record the Final Map and Agreement for the construction of improvements for the Linden Street Residential Complex Subdivision (Tract No. 19-S-05).

6. The dedication of lands for public use is accepted.

7. This resolution is effective immediately upon adoption.

* * * * * * * * * * *

Exhibit A

Agreement

RECORDING REQUESTED BY:

City of Madera
AFTER RECORDING RETURN TO:
City Clerk
City of Madera
205 W. 4th Street
Madera, CA 93637

_____

Fee Waived Per Section 27383 & 27388.1(a)(2)(D) of the Government Code

IMPROVEMENT AGREEMENT
LINDEN STREET RESIDENTIAL COMPLEX SUBDIVISION
(FINAL MAP. NO. 19-S-05)

THIS IMPROVEMENT AGREEMENT ("Agreement") is entered into this ___ day of _____, 2020, (the "Effective Date") by and between the City of Madera, a municipal corporation of the State of California, hereinafter called "City"; and Tommy Lee Jarrell, hereinafter called "Subdivider" or "Owner" (individually a "Party" and collectively the "Parties").

RECITALS

A. Owner has filed with City a certain subdivision map of a proposed division of land known as LINDEN STREET RESIDENTIAL COMPLEX TRACT 19-S-05, recorded _____, in Book ___, Pages ___ through ___, recorded as document no. _____ Madera County records, situated in the City of Madera, County of Madera, State of California (the "Subject Property") owned by Owner, located within the corporate limits of the City, and more particularly described as set forth in Exhibit "A." A copy of said Tentative Tract Map No. 2019-06 ("Tentative Map") is on file with the City Clerk.

B. The City has conducted the appropriate environmental review of the proposed subdivision; the Planning Commission has determined the proposed subdivision is consistent with the City's general plan in that the land use is compatible with the objectives, policies, general land uses, and programs specified in such a plan; and the Planning Commission has recommended approval of the proposed Tentative Map as conditioned.

C. City requires as a condition precedent to the acceptance and approval of the Final Tract Map the dedications or deeds of such streets, highways, and public places for all areas delineated on said map for street and other public purposes as required under the Madera Municipal Code, this Agreement, and the Tentative Map.

D. Owner is required to construct certain street, utility, and public improvements within the boundaries of said Final Tract Map. Owner shall, at the Owner's own cost and expense, construct all of the improvements, mentioned, all in accordance with and to the extent and as provided in those certain plans entitled, "Improvement Plans for Linden Street Complex", as approved by the City Engineer and on file with the City Engineer of the City of Madera and

the City of Madera Plans and Specifications, as amended. Said work shall include but shall not necessarily be limited to, all of the following: asphalt concrete paving, aggregate base, concrete curb and gutters, sidewalks, water and sewer mains, water and sewer services, storm drainage facilities, street lights, fire hydrants, gas, electric and communication lines, landscape district improvements, implementation of any and all Best Management Practices (BMP's) as outlined in the City's Storm Water Quality Management Program and Storm Water Pollution Prevention Plan on file in the office of the City Engineer, implementation of any and all BMP's to prevent the infiltration of storm water into the City's sanitary sewer collection system, and all other work, improvements or construction required by or mentioned in the above referenced plans and specifications and all appurtenances reasonably necessary to complete the aforementioned improvements. Except for streets not having direct residential access, installation of sidewalks may be deferred and constructed with residential development subsequent to the acceptance of the subdivision improvements so long as each and every house has an ADA accessible route to a collector or arterial adjacent to the subdivision prior to occupancy of any house.

E. Reference is made hereby to (a) that certain subdivision map entitled, "Linden Street Residential Complex Tract 19-S-05", (b) improvement construction plans, (c) those certain specifications on file in the office of the City Engineer entitled, "City of Madera Standard Plans and Specifications", and (d) "Madera Irrigation District Standards", as may be applicable this project, for a more particular description of the work and improvements generally outlined in this Agreement. Said subdivision map, plans and specifications referred to in this paragraph are hereby incorporated herein and made a part of this Agreement by reference thereto.

F. Owner desires and agrees to complete the improvements and subdivide the Subject Property through the Subdivision Map Act process.

G. City Council approval of said Final Tract Map to divide the property and acceptance of the dedications therein offered are subject to and on the condition precedent that Owner first enter into and execute this Agreement with the City, and provide the City with all other things as required herein and/or as required by the City.

H. Recordation of said Final Tract Map to divide the property therein offered are subject to and on the condition precedent that Owner first provide the City with such bonds, improvement securities, monies, insurance and Homeowners Association as required herein and/or as required by the City.

AGREEMENT

In consideration of the approval of the foregoing recitals which are made a substantive part of this Agreement and in consideration of the approval of the above-mentioned Final Tract Map by City for filing and recording as provided and required by law, Owner and City do hereby mutually agree as follows:

ARTICLE I. GENERAL PROVISIONS

A. AGREEMENT

This Agreement is entered into pursuant to California Government Code Section 66410 *et seq*. ("the Subdivision Map Act"), and Section 10-2.701 *et seq*. of Chapter 2 of Title X of the Madera Municipal Code. The provisions of this Agreement and the improvements to be constructed as required by the Subdivision Map Act and this Agreement are necessary and proper to safeguard and serve the public health, safety and welfare.

B. DEFINITIONS

Wherever used in the Agreement, the following words and phrases shall have the meaning herein given, unless the context requires a different meaning:

1. "Engineer" shall mean the City Engineer of the City of Madera, or duly authorized representative.
2. "Inspector" shall mean the City Engineer of the City of Madera, or his duly authorized representative.
3. "Standard Specifications" shall mean the City of Madera Standard Specifications, including attached details and amendments thereto.
4. "Division" shall mean and include the real property shown and described on the subdivision map as being divided into parcels, including street areas of adjacent existing public streets to the center lines thereof.
5. "Improvements" shall mean all work and improvements, including those depicted or required on the plans for the Final Map, which may include plans relating to sewer, water, streets, storm drainage, street lighting, concrete, paving, fencing, landscaping, irrigation, grading, and traffic signals.

C. DEVELOPMENT FEES

1. Development Impact Fees: Owner is obligated to pay all Development Impact Fees for sewer, wastewater treatment plant, water, storm drainage, parks, administrative, fire, general government, police, public works, streets, transportation and traffic signals in the amounts shown in the City's Master Fee Schedule, section "Development Impact Fees" on Exhibit "B" attached hereto and incorporated by reference. The impact fees shall be paid at time of application for each individual building permit in accordance with the fees in place at the time of application.

2. Other Fees: In addition, Owner is obligated to pay plan check, improvement inspection, grading permit, building permit, encroachment permit, and similar

miscellaneous fees as well as drainage and other utility fees required under the Madera Municipal Code and any resolution establishing fees and charges.

3. Fee Adjustments:
    a) Development Impact Fees - In the event impact fees are updated as a result of recommendation included within any future Development Impact fee Study Report, Owner shall pay those adjusted fees with each building permit secured following adoption of said fees by the City Council.
    b) Other Fees - In the event the improvements are not completed as set forth in Article II, Section D of this Agreement and an extension is secured by Owner, the City reserves the right to adjust the fees to those prevailing at the time of construction.

D. INDEMNIFICATION

Indemnity for Professional Liability: When the law establishes a professional standard of care for Owner's activities to the fullest extent permitted by law, Owner shall indemnify, protect, defend, and hold harmless City and any and all of its officials, employees and agents from and against any and all losses, liabilities, damages, costs, and expenses, including legal counsel's fees and costs but only to the extent the Owner (and its Subcontractors), are responsible for such damages, liabilities and costs on a comparative basis of fault between the Owner (and its Subcontractors) and the City in the performance of professional activities under this agreement.

Indemnity for Other Than Professional Liability: Other than in the performance of professional services and to the full extent permitted by law, Owner shall indemnify, defend, and hold harmless City, and any and all of its employees, officials and agents from and against any liability (including liability for claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses or costs of any kind, whether actual, alleged or threatened, including legal counsel's fees and costs, court costs, defense costs, and expert witness fees), where the same arise out of, are a consequence of, or are in any way attributable to, in whole or in part, the performance of this Agreement by Owner or by any individual or City for which Owner is legally liable, including, but not limited to officers, agents, employees, or subcontractors of Owner, except when caused by the active negligence, sole negligence, or willful misconduct of City.

E. INSURANCE

Prior to the recordation of the Final Map, Owner or Owner's contractors shall furnish to City satisfactory evidence of an insurance policy written upon a form and by a company which meets with the approval of City insuring City and the City Engineer, their officers, agents and employees against loss or liability which may arise during the work or which may result from any of the work herein required to be done, including all costs of defending any claim arising as a result thereof. The minimum limits of such policy shall be in the amount of Five Million Dollars ($5,000,000.00) per occurrence for bodily injury, personal injury, and property damage, including without limitation, blanket contractual liability. If a general aggregate limit applies, either the general aggregate limit

shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. The general liability policies shall be primary and shall not seek contribution from the City's coverage, and be endorsed using Insurance Services Office form CG 20 10 (or equivalent) to provide that Owner or its contractors and City and the City Engineer, their officers, agents and employees shall be additional insureds under such policies. An endorsement providing completed operations coverage for the additional insured, ISO form CG 20 37 (or equivalent), is also required. Any policy required by the Encroachment Permit shall include coverage for underground explosion and collapse. Said policy shall state by its terms and by an endorsement that said policy shall not be canceled until City shall have had at least thirty (30) days' notice in writing of such cancellation.

All insurance policies shall be issued by an insurance company currently authorized by the Insurance commissioner to transact business of insurance in the State of California, with an assigned policyholders' Rating of A- (or higher) and a Financial Size Category Class VII (or larger), in accordance with the latest edition of Best's Key Rating Guide.

F. NOTICE OF COMPLETION

The offers of dedication made on the Subdivision Map shall remain open, but will not be accepted by the City until the City Council accepts the Improvements and authorizes the recording of a Notice of Completion. The City may accept such offers in its sole discretion at any later date without further notice to Owner. Until such time as City formally accepts the Improvements and any lands, rights of way or easements, Owner shall be responsible to maintain such lands, rights of way, easements and improvements in a safe condition and good repair.

Owner agrees that the use of any or all streets and improvements specified in this Agreement shall be at all times, prior to the final acceptance of the subdivision by City, at the sole and exclusive risk of Owner, and the issuance of any occupancy permits by City for dwellings located within the subdivision shall not be construed in any manner to be an acceptance or approval of any or all of the streets and improvements in the subdivision, or that stage of development of the streets and improvements represented by their condition at the time of issuance of any occupancy permits, or any stage of their development reached during the period commencing with the issuance of any occupancy permit and terminating upon the final acceptance of the tract.

G. BONDS AND OTHER SECURITY

Prior to recording the Final Map, or unless otherwise indicated, Owner shall furnish to the City performance guarantees as provided herein. Bonds or other security instruments shall be maintained in full force and effect during the term of this Agreement and may be released, in whole or in part, only upon the written approval of the City Engineer whose actions shall be reasonable and consistent with the provisions of this Agreement. Owner shall provide the following as security:

1. Performance Security. Owner shall provide to City performance security in an amount no less than Forty-One Thousand Two Hundred Sixty-Three Dollars ($41,263.00) which amount is equal to one hundred percent (100%) of the total estimated cost of all required work to be completed as required in this Agreement. Said performance security shall be in the form of (i) a letter of credit, from a bank insured by FDIC, (ii) a performance bond issued by a surety authorized to conduct

business in the State of California, (iii) or cash. All required securities must be in a form approved by City's attorney.

2. Payment Security. Owner shall provide to City payment security in an amount no less than Twenty Thousand Six Hundred Thirty-One Dollars and Fifty Cents ($20,631.50) which amount is equal to fifty percent (50%) of the estimated cost of all required work to secure payment to the contractor, his or her subcontractors, and persons renting equipment or furnishing labor or materials for such improvements. Said amount shall be determined by the City Engineer at the time such payment security is due when a successor in interest acquires fee simple interest in any portion of the property. Said payment security shall be in the form of (i) a letter of credit, from a bank insured by FDIC, (ii) a performance bond issued by a surety authorized to conduct business in the State of California, (iii) or cash. All required securities must be in a form approved by City's attorney.

3. Warranty Security. Owner shall remedy any defective work, labor or materials related to the Improvements, and shall pay City for any damage to the Improvements resulting therefrom, which occur within a period of one (1) year from the date of acceptance of the Improvements by the City. To ensure Owner complies with these obligations, on acceptance of the required work by the City Engineer, warranty security in the amount of the ten percent (10%) of the estimated cost of all required work shall be furnished to City in an amount no less than Four Thousand One Hundred Twenty-Six Dollars and Thirty Cents ($4,126.30). The warranty security shall serve as a guarantee and warranty of the work for a period of one (1) year following acceptance against any defective work, labor or materials. The warranty security shall be released, less any amount required to be used for fulfillment of the warranty, one (1) year after final acceptance of the Improvements required under this Agreement.

H. MATERIALS AND LABOR

Owner and its contractors and subcontractors shall pay for any materials, provisions and other supplies or items used in, upon, for or about the performance of the work contracted to be done, and for any work or labor thereon of any kind and for amounts due under the Unemployment Insurance Act of the State of California, with respect to such work or labor, and shall file with the City pursuant to section 3800 of the Labor Code a Certificate of Worker's Compensation and shall maintain a valid policy of Worker's Compensation Insurance for the duration of the period of construction or provide under penalty of perjury a satisfactory demonstration of exemption from coverage.

I. LIGHTING AND LANDSCAPING DISTRICT

The Owner agrees to complete annexation to or establishment of a Lighting and Landscaping District Zone of Benefit 4 pursuant to California Streets and Highway Code section 22500, *et. seq*., and to maintain lighting and publicly landscaped areas until the City formally accepts the Improvements which are the subject of this Agreement. Prior to release and recordation of the Final Map, Owner shall, at Owner's sole cost and expense, submit to City all engineering reports, assessment data, and updated maps necessary to cause the Subject Property, to be annexed into

Zone of Benefit 4 of the City-Wide Landscape and Lighting Assessment District. The annexation of the property into Zone of Benefit 4 shall be considered for recording concurrently with the City Council's consideration and approval of the Final Map. If annexation into Zone of Benefit 4 is not possible for any reason, the Owner shall cooperate with the City in forming a new Zone of Benefit or identification of another existing zone into which this subdivision can be annexed.

J. EASEMENTS

Owner shall grant City an easement for maintenance, repair or reconstruction of any water main or sewer main or other City-operated improvement which is constructed outside a dedicated public street.

K. FAILURE OF PERFORMANCE; ATTORNEY'S FEES

In addition to any other remedies provided in this Agreement or by law, in the event Owner fails to perform one or more of the covenants or conditions of this Agreement, City shall have recourse to the security given to guarantee the performance of such acts. City may do, or cause to be done, those acts required of Owner, and shall have recourse against so much of the security as is necessary to discharge the responsibility of Owner. In the event City seeks recourse against a security, City shall also have recourse against Owner for any and all amounts necessary to complete the obligations of Owner in the event the security is insufficient to pay such amounts. All administrative costs, including reasonable attorney's fees pursuant to Gov. Code, § 66499.4 incurred by the City, in addition to the costs of the Improvements, shall be a proper charge against the security and Owner.

In the event it becomes necessary for either party to bring an action with respect to enforcement of the provisions of this Agreement, or the security therefor, the prevailing party in such action shall be awarded reasonable costs and attorney's fees as may be determined by the Court.

L. TIME OF THE ESSENCE

Time is of the essence of this Agreement, and the same shall bind and inure to the benefit of the parties hereto, their successors and assigns.

M. SUCCESSORS AND ASSIGNS; COVENANT RUNNING WITH LAND

This Agreement shall inure to the benefit of, and be binding upon, the successors and assigns of the respective parties. It shall be recorded in the Official Records of the County of Madera concurrently with final map of the Subdivision, and shall constitute a covenant running with the land and an equitable servitude upon the real property in the Subdivision.

N. INTEGRATION; INCORPORATION OF EXHIBITS

This Agreement is an integrated agreement, and includes the documents referenced herein and its Exhibits, which are included herewith and made a part of this Agreement. The Final Map

has been recorded separately, and a copy is on file with the City Clerk. This Agreement supersedes all prior negotiations, representation, or agreements, whether written or oral.

O. CONDITIONS OF APPROVAL

Owner shall comply with all conditions of approval set forth in TSM 2018-06 approving the Tract Map as adopted on April 9, 2019 by the Planning Commission, including the requirements and conditions of the City Engineer, and all specifications or requirements set forth on the Final Map, all of which are on file with the City Clerk.

P. COMPLIANCE WITH LAW

In performing obligations set forth in this Agreement, Owner shall comply with all applicable laws, regulations, and rules of all local, state and federal governmental agencies having jurisdiction including, without limitation, applicable federal and state labor standards and environmental laws and regulations. Owner shall comply with the codes or ordinances of the City including the Madera Municipal Code and Building Codes.

Q. PREVAILING WAGES

Owner shall: (i) be required to pay, and shall cause its contractor and subcontractors to pay, prevailing wages for the construction of those specific Improvements for which Owner receives credits or reimbursements, if any, and those Improvements, if any, that are "public works" under Chapter 1, Part 7, Division 2 of the California Labor Code, including Section 1720(a); and (ii) comply with any applicable provisions of California Labor Code Sections 1720 *et seq*. and implementing regulations of the Department of Industrial Relations. Owner shall or shall cause its contractor and subcontractors to keep and retain such records as are necessary to determine that prevailing wages have been paid as may be required by law. During the construction of the Improvements, if any, Owner shall, or shall cause its contractor to, post at the Subject Property the applicable prevailing rates of per diem wages. As required by Section D of this Agreement, Owner shall indemnify, hold harmless and defend (with counsel reasonably acceptable to the City) City against any claim for damages, compensation, fines, penalties or other amounts arising out of the failure or alleged failure of any person or entity (including Owner, its contractors and subcontractors) to pay prevailing wages as required by law or to comply with the other applicable provisions of California Labor Code Sections 1720 *et seq*. and the implementing regulations of the Department of Industrial Relations in connection with construction of any Improvements, if any, that are public improvements.

R. ENFORCEMENT OF OBLIGATIONS

City may enforce this Agreement in any manner available at law or in equity, including, but not limited to, reversion to acreage.

S. LIMITATIONS OF LEGAL ACTS

Except as provided by the following subsection entitled "Attorney's Fees and Legal Expenses," in no event shall the City, or its officers, agents or employees, be liable in damages for any breach

or violation of this Agreement, it being expressly understood and agreed Owner's sole legal remedy for breach or violation of this Agreement by City shall be a legal action in mandamus, specific performance or other injunctive or declaratory relief to enforce the provisions of this Agreement.

T. ATTORNEY'S FEES AND LEGAL EXPENSES

If either party is required to commence any proceeding or legal action to enforce or interpret any term or condition of this Agreement, the prevailing party in such proceeding or action shall be entitled to recover from the other party its reasonable attorney's fees and legal expenses. For the purposes of this Agreement, "attorneys' fees" and "legal expenses" include, without limitation, paralegals' fees and expenses, attorneys, consultants fees and expenses, expert witness fees and expenses, and all other expenses incurred by the prevailing party's attorneys in the course of the representation of the prevailing party in anticipation of and/or during the course of litigation, whether or not otherwise recoverable as "attorneys' fees" or as "costs" under California law, and the same may be sought and awarded in accordance with California procedure as pertaining to an award of contractual attorneys' fees.

U. OBLIGATION RUNNING WITH LAND

This Agreement shall burden the Subject Property described and constitute a covenant running with the land in favor of and for the benefit of City which shall be binding upon the successors, transferees, and heirs of Owner. Owner consents to the recordation of this Agreement with the Madera County Recorder.

V. WAIVER

The waiver by either party of a breach by the other of any provision of this Agreement shall not constitute a continuing waiver or a waiver of any subsequent breach of either the same or a different provision of this Agreement. No provisions of this Agreement may be waived unless in writing and signed by all parties to this Agreement. Waiver of any one provision herein shall not be deemed to be a waiver of any other provision herein.

W. SUBORDINATION

Owner hereby warrants that any and all parties having record title interest in the Final Map which may ripen into a fee have subordinated to this Agreement and all such instruments of subordination, if any, are attached hereto and made a part of this Agreement.

X. NO ASSIGNMENT

No assignment of this Agreement or of any duty or obligation of performance hereunder shall be made in whole or in part by Owner without the written consent of City.

Y. CAPTIONS

Section, paragraph and other captions or headings contained in this Agreement are inserted as a matter of convenience and for reference, and in no way define, limit, extend or otherwise

describe the scope or intent of the Agreement or any provision hereof and shall not affect in any way the meaning or interpretation of this Agreement.

Z. AMBIGUITIES OR UNCERTAINTIES

Any ambiguities or uncertainties herein shall be equally and fairly interpreted and construed without reference to the identity of the Party or Parties preparing this Agreement, on the express understanding and agreement the Parties participated equally in the negotiation and preparation of the Agreement, or have had equal opportunity to do so. Accordingly, the Parties hereby waive the benefit of California Civil Code §1654 and any successor or amended statute, providing that in cases of uncertainty, language of a contract should be interpreted most strongly against the Party who caused the uncertainty to exist.

AA. SEVERABLE PROVISIONS

The provisions of this Agreement are severable. The invalidity or unenforceability of any one provision in this Agreement shall not affect the validity or enforceability of the other provisions, which shall remain in full force and effect.

BB. RELEASE OF CONDITIONS

The conditions and obligations of this Agreement shall remain in full force and effect until such time as City Engineer issues a written release finding the conditions and obligations of this Agreement have been fully satisfied and are no longer required for public health and safety reasons and thereafter records such release with the Madera County Recorder.

CC. PIPES AND MONUMENTS

All pipes and monuments shown on the final subdivision map hereinafter referred to which are destroyed or displaced during construction operations shall be replaced by Subdivider at the time of the final inspection of the Improvements hereunder by City.

DD. OWNERSHIP OF IMPROVEMENTS

It is agreed that title and ownership of any public improvements constructed hereunder by Subdivider shall vest absolutely in City upon completion and acceptance of such Improvements by City.

EE. RELEASE OF BONDS AND SECURITIES

The release of bonds and securities called for herein shall not occur until: (1) the work provided for in this agreement and more specifically described in the plans and specifications herein referred to, is approved and accepted by the City Engineer; and (2), work not in conformance with said plans and specifications is removed from the project site to the satisfaction of the City Engineer.

FF. SUBDIVIDER NOT A CITY AGENT OR EMPLOYEE

It is mutually understood and agreed that neither Owner nor any of Owner's agents, contractors, or subcontractors are or shall be considered to be agents or employees of the City of Madera in connection with the performance of Owner's obligations under this Agreement.

GG. DEPOSIT FOR CORRECTION OF DEFICIENCIES

In addition to the improvement security hereinabove referred to, Subdivider shall concurrently deposit with the City not less than 1% of engineer's estimate in an amount no less than Four Hundred Seventeen Dollars and Twenty-Two Cents ($417.22), which may be used at the discretion of the City to correct deficiencies and conditions caused by Subdivider or Subdivider's contractors during or after construction of the subdivision. Any unexpended amount thereof will be returned to Subdivider when all other bonds or improvement securities are released.

HH. REIMBURSEMENTS/FAIRSHARE CONTRIBUTIONS DUE FROM SUBDIVIDER

The Owner hereby agrees to the following reimbursements or fair share contributions to be paid prior to recordation of the final map for Linden Street Residential Complex Subdivision No. 19-S-05 as noted herein below:

1. The Owner shall reimburse its fair share cost to the City for the previously constructed water main along the Linden Street project frontage.

II. REIMBURSEMENTS TO BE PROVIDED TO SUBDIVIDER

There are no public improvements being constructed through plans prepared by Dale G. Mell & Associates, for Linden Street Residential Complex Subdivision (Tract No. 19-S-05) that would be eligible for reimbursements.

JJ. TERMS OF REIMBURSEMENTS TO BE PROVIDED TO OWNER

The following terms shall apply to any and all reimbursements to be provided to Owner.

i. City agrees to reimburse Owner the City's proportionate share of the cost of improvements as determined by the City Engineer at his sole discretion and whose decision shall be final and as set forth below. At the discretion of the City Engineer any reimbursements shall be in the form of credits toward storm drainage, water main, water well, and street impact fees or from the collection of storm drainage, water main, water well and street impact fees or connection fees as applicable from other developments using said facilities as said fees are collected or a combination thereof. City shall not reimburse any expenses beyond the actual and reasonable cost of installing the improvements. All reimbursements are subject to the conditions precedent that the Owner shall have submitted a financial statement within ninety (90) days of the City's acceptance of the improvements,

showing evidence of the actual cost of the improvements described in this agreement. Evidence shall be provided in the form of receipted bills, canceled checks and/or construction contracts. Failure to timely submit evidence shall void the reimbursement agreement as to any items not timely submitted or not supported by such evidence. Any cost to be reimbursed for administration or overhead shall not exceed the usual and customary cost for such expenses in the industry, and in no event shall they exceed fifteen percent (15%). Such cost shall be determined in the sole discretion of the City Engineer.

ii. City does not guarantee reimbursement, where reimbursements are made from impact fees or connection fees as those fees are collected. The City shall have no responsibility for the delivery of the funds collected hereunder to Owner and only agrees to hold said funds collected and to make payment as directed by Owner upon contact by City. City will contact Owner within ninety (90) days of collection of funds at the address as specified in this agreement or as may thereafter be provided in writing to the City Clerk of the City. City shall have no obligation to locate or determine the true address of Owner other than the addresses provided under this Agreement. If no contact has been made at the address provided under this Agreement, City shall hold such funds collected hereunder for a period of one (1) year. Undistributed funds shall then be paid into the appropriate Impact or Connection Fee fund and all responsibilities and liabilities of City shall terminate. City cannot and does not pledge itself in advance that such charges will be collected or that they are valid or that there will be proceeds for reimbursement, but only that pursuant to this agreement City will, as a condition precedent to the issuance of permits for the development of such properties, levy such charges. Owner acknowledges that impact fees may be used to reimburse other developers based on a first in time payment process and additionally, may be pledged for the payment or repayment of other improvements to be constructed by or for City in advance of reimbursement to Owner. In no event shall reimbursement exceed the Subdivider's cost of construction as adjusted by the Engineering News Record Construction Cost Index (CCI) as determined by the City Engineer based upon duly verified records submitted to the city within 90 days from the completion of such facilities and approved by the City Engineer. For the purpose of determining the adjustment in the CCI, the time begins upon acceptance of improvements by City Council after execution of the Agreement.

KK. <u>ASSIGNABILITY OF AGREEMENT</u>

This Agreement shall not be assignable by Owner without the express written consent of City. Subject to the limitations on assignment, this Agreement shall inure to the interest of the Parties hereto.

LL. VENUE

This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding, however, any conflict of laws rule which would apply the law of another jurisdiction. Venue for purposes of the filing of any action regarding the enforcement or interpretation of this Agreement and any rights and duties hereunder shall be Madera County, California.

MM. ACKNOWLEDGEMENT OF CONTENT

Each Party acknowledges that they have read and fully understand the contents of this Agreement. This Agreement represents the entire and integrated agreement between the parties with respect to the subject matter hereof and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be modified only by written instrument duly authorized and executed by both City and Owner.

ARTICLE II. CONSTRUCTION REQUIREMENTS

A. STANDARD SPECIFICATIONS

All of the work and improvements and materials shall be performed, installed and provided in strict accordance with the City of Madera Standard Specifications incorporated herein by this reference, as though set forth in full. All of said work and improvements shall also comply with the requirements of the Madera Municipal Code. In case there are not any Standard specifications of the City for any said work, it is agreed that the same shall be done and performed in accordance with the standards and specifications of the State of California, Department of Transportation. All of said work and improvements and materials shall be done, performed and installed under the supervision of the City Engineer, under whose direction the work shall be inspected as it progresses.

Any work required under this Agreement shall also be performed, installed and provided in accordance with the standards of the State Water Resources Control Board, State Regional Water Quality Control Board, San Joaquin Unified Air Pollution Control District and those of other agencies identified in the Tentative Map Conditions of Approval insofar as they apply.

Until final acceptance of the Improvements, Owner shall give prominent and adequate warning to the public of each and every dangerous condition that may exist in the Subdivision, and shall take all reasonable actions to protect the public from any such dangerous condition.

B. SCOPE OF IMPROVEMENTS

The work and Improvements, including those depicted or required on the plans for the Final Map, which may include plans relating to sewer, water, streets, storm drainage, street lighting, landscape and irrigation, grading, traffic signals, etc., as well as those required by Conditions of

Approval (herein collectively referred to as "Improvements") are incorporated by reference and made a part of this Agreement.

C. APPROVED PLANS

Notwithstanding the fact that Owner's plans and specifications have been approved by the City, and that completion of the work and other acts are subject to approval of the City, it is understood and agreed that any approval by the City hereof shall in no way relieve Owner of satisfactorily performing said work or its obligations hereunder.

Owner agrees to perform and construct all work and improvements shown on the approved plans on file in the office of the City Engineer. Owner agrees it shall comply with Madera Municipal Code section 10-2.707(C), which gives the City the right to modify plans and specifications.

D. SCHEDULE

Owner shall perform the work and improvements hereinafter specified to the satisfaction of the City Engineer. Owner understands and agrees that the following schedule of work is intended to provide a guideline as to diligent prosecution of the work under this Agreement.

The Owner agrees to complete the improvements within 24 months from the recording of the Final Map as required by Madera Municipal Code Section 10-2.711.1 unless Owner requests an extension and is granted an extension by the City Council. Owner is responsible for following the extension request process under Madera Municipal Code Section 10-2.711.3.

If the construction of the Improvements shall be delayed without the fault of Owner, the time for completion thereof may be extended by the City in writing signed by the City Engineer for such period of time as City may deem reasonable. However, City reserves the right to not issue Certificates of Occupancies for any structures constructed within this tract until improvements are constructed to the satisfaction of the City Engineer. Without limitation of the foregoing sentence, it is agreed that City shall have right to determine whether to issue or withhold Certificates of Occupancy if there is then existing a breach or failure to properly perform the obligations of this agreement, or if issuance would not serve the public health, safety or welfare.

Concrete curbs and gutters, the sanitary sewer system and house connections, storm drainage pipeline and structures, together with water mains, gas mains and their respective service connection and all other underground services or facilities, shall be completed before starting the street surfacing.

E. COMPACTION AND MATERIALS TESTING

Compaction and soil tests shall be paid for by Owner and Owner shall contract with the soils lab directly. Street and utility trench tests shall be taken in varying locations, depths, and frequencies as required and directed by the City Engineer. Compaction shall meet all City requirements.

F. CODES AND PERMITS

Owner shall comply with Street, Plumbing, Building, Electrical and Zoning Codes and any other Codes of the City and Owner shall secure an Encroachment Permit from City and the necessary insurance policies required under said permit before working on any City right-of-way or property.

Owner shall install all street improvements in accordance with City of Madera Standard Specifications, applicable sections of the State Standard Specifications, and the construction plans.

G. COORDINATION OF CONTRACTORS

It shall be the responsibility of Owner to coordinate all work done by its contractors and subcontractors, such as scheduling the sequence of operations and the determination of liability if one operation delays another. In no case shall representatives of City be placed in the position of making decisions that are the responsibility of Owner. It shall further be the responsibility of Owner to give the Engineer written notice not less than two (2) working days in advance of the actual date on which work is to be started. Failure on the part of Owner to notify the City Engineer may cause delay for which Owner shall be solely responsible.

H. INSPECTION

Whenever Owner varies the period during which work is carried on each day, Owner shall give due notice to the City Engineer so that proper inspection may be provided. Any work done in the absence of the City Engineer will be subject to rejection. The inspection of the work shall not relieve Owner of any of his obligations to fulfill the Agreement as prescribed. Defective work shall be made good and unsuitable materials will be rejected, notwithstanding the fact that such defective work and unsuitable materials have been previously overlooked by the City Engineer or Inspector and accepted.

I. REPAIR OF DAMAGED IMPROVEMENTS

Any damage to the water or sewer systems, concrete work or street paving, or other facilities and improvements constructed in connection with the Agreement that occurs after installation and prior to Final Acceptance shall be repaired to the satisfaction of the City Engineer by Owner before release of bond or final acceptance of completed work. City may, at its sole option, perform such repair or replacement if Owner has failed to commence such repair within 20 days after City has mailed written notice of the need for repairs or replacement to Owner and to Owner's surety. In such event, Owner agrees to pay the cost of such repair and replacement by City, and City may at its option recover such cost as a lien against the Subdivision or the lands therein.

If City determines that public safety requires repairs or replacements to be made before Owner or surety can be notified, City may complete such repairs or replacements and recover the costs thereof as provided above.

J. DUST CONTROL

Adequate dust and mud control shall be maintained by Owner on all streets within and without the subdivision until the paving of the streets is completed. "Adequate dust control" as used herein shall mean the sprinkling of the streets with water with sufficient frequency to prevent the scattering of dust by wind or the activity of vehicles and equipment onto any street area or private property adjacent to the subdivision. Whenever in the opinion of the City Engineer adequate dust control is not being maintained on any street or streets as required by this paragraph, the City Engineer shall give notice to Owner to comply with the provision of the paragraph forthwith. Such notice may be personally served upon Owner or, if Owner is not an individual, upon any person who has signed this Agreement on behalf of Owner or a superintendent or foreman of Owner's or Owner's subcontractor at the subdivision or, at the election of the Engineer, such notice may be mailed to Owner at his address on file with the City Engineer. If within 24 hours after such personal service of such notice or within 48 hours after the mailing thereof as herein provided, Owner shall not have commenced to maintain adequate dust control or shall at any time thereafter fail to maintain adequate dust control, the City Engineer may, without further notice of any kind, cause any such street or streets to be sprinkled, as he may deem advisable to eliminate the scattering of dust, by equipment and personnel of City or by contract as the City Engineer shall determine, and City may deduct the cost thereof from any deposits which the Owner has placed with the City. When the surfacing on any existing street is disturbed, this surfacing shall be replaced with temporary or permanent surfacing within fourteen (14) calendar days, and the roadway shall be maintained in a safe and passable condition at all times between the commencement and final completion, and adequate dust control shall be maintained during these operations.

K. STREET SURFACING AND UNDERGROUNDING OF UTILITIES

Owner agrees all existing overhead utilities within the boundaries of this subdivision, and on adjacent streets and/or alleys to the centerlines thereof shall be relocated in underground installations except for transformers consistent with the Construction Plans for Linden Street Residential Complex Subdivision (Tract No. 19-S-05). All new utilities shall be undergrounded and all work shall be completed before installation of street surfacing, if any.

L. STREET SWEEPING

Owner shall pay for sweeping of streets within this tract following installation of paving and prior to acceptance of the Improvements by the City. City may provide such street sweeping services at its sole discretion and convenience. Owner shall keep streets and gutters free of any mud, debris or materials. If Owner fails to maintain streets in such condition which allows sweeping, City may remove any debris and deduct the cost thereof from any deposits which the Owner has placed with the City.

M. WARRANTY

Owner warrants that construction will not adversely affect any portion of adjacent properties.

N. PRECONSTRUCTION MEETING

Owner agrees to meet with the City at a preconstruction meeting upon request of the City. Subcontractors for public improvements shall be required to attend. Failure to do so may result in a stoppage of work until a preconstruction meeting is held.

O. BUILDING MATERIALS RECYCLING

Owner agrees to participate in any building materials recycling program as directed by the City. Participation shall also be required by all sub-contractors for both public improvements and home construction, to fullest extent possible.

ARTICLE III. SPECIAL PROVISIONS

A. SUCCESSORS IN INTEREST: Successors in interest to any portion of the Subject Property shall comply with all terms and conditions of this Agreement. In particular, they shall provide all required insurance, bonds, and security to the City for that portion of any remaining Improvements which may yet to be completed at the time of transfer. Said insurance, bonds, and security must be provided to the City within 30 days of obtaining a fee interest in a portion of the Subject Property.

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement.

CITY OF MADERA:

By: _____
Andrew J. Medellin, Mayor

APPROVED AS TO FORM:

By: _____
Hilda Cantú Montoy, City Attorney

ATTEST:

By: _____
Alicia Gonzales, City Clerk

APPROVED:

By: _____
Keith Helmuth, P.E., City Engineer

SUBDIVIDER/OWNER:

By: _____
Tommy Lee Jarrell, Owner

NOTARY ACKNOWLEDGEMENT REQUIRED

EXHIBIT “A”
Legal Description

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF MADERA, IN THE COUNTY OF MADERA, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

A PARCEL OF LAND IN THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL PLAT THEREOF, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF A TRACT OF LAND DESCRIBED IN A DEED RECORDED IN VOL. 369, PAGE 39 OFFICIAL RECORDS, MADERA COUNTY, SAID POINT BEARING EAST 484 FEET AND NORTH 0° 21' WEST 623.4 FEET FROM THE WEST 1/4 OF SAID SECTION 23; THENCE ALONG THE EAST LINE OF SAID TRACT, NORTH 0° 21' WEST 108.2 FEET; THENCE SOUTH 89° 32' WEST 317.2 FEET, MORE OR LESS TO A POINT WHICH IS 166.3 FEET EAST OF THE WEST LINE OF SAID SECTION 23; THENCE ALONG THE WEST LINE OF SAID TRACT, SOUTHERLY 108.6 FEET, MORE OR LESS, TO A POINT WHICH IS SOUTHERLY 686.9 FEET FROM THE NORTHWEST CORNER OF SAID TRACT; THENCE EASTERLY 317.3 FEET MORE OR LESS TO THE POINT OF BEGINNING.

WITH THE EXCLUSION OF

ALL THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, BEING MORE PARTICULARL Y DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT THAT LIES EAST, A DISTANCE OF 484.00 FEET, NORTH 00° 21' 00" WEST, A DISTANCE OF 623.40 FEET AND WESTERLY 317.30 FEET TO THE SOUTHWEST CORNER OF A PARCEL OF LAND AS DESCRIBED IN THE DEED RECORDED AUGUST 17, 1960 IN BOOK 777 AT PAGE 604, MADERA COUNTY RECORDS, SAID POINT BEING THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE NORTH 00° 21' 00" WEST ALONG THE WEST LINE OF SAID PARCEL, A DISTANCE OF 108.60 FEET; THENCE NORTH 89° 32' 00" EAST ALONG THE NORTH LINE OF SAID PARCEL, A DISTANCE OF 25.00 FEET, THENCE SOUTH 00° 21' 00" EAST, A DISTANCE OF 108.60 FEET, MORE OR LESS TO THE SOUTH LINE OF SAID PARCEL, THENCE WESTERLY, A DISTANCE OF 25.00 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH:

A PARCEL OF LAND IN THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH BEARS NORTH 89° 44' EAST 484 FEET AND NORTH 0° 21' WEST 731.6 FEET FROM THE WEST QUARTER CORNER OF SAID SECTION 23 (SAID POINT BEING ON THE EAST LINE OF A TRACT OF LAND DESCRIBED IN A DEED RECORDED AUGUST 29, 1945 IN VOL. 369 OFFICIAL RECORDS, PAGE 39, MADERA COUNTY, CALIFORNIA); THENCE FROM SAID POINT OF BEGINNING NORTH 0° 21' WEST 100 FEET; THENCE SOUTH 89° 32' WEST 317.7 FEET, MORE OR LESS TO A POINT WHICH IS 166.3 FEET, EAST OF THE WEST LINE OF SAID SECTION 23; THENCE SOUTH

AND PARALLEL TO THE SAID WEST LINE OF SECTION 23, A DISTANCE OF 100 FEET; THENCE NORTH 89° 32' EAST 317.7 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

WITH THE EXCLUSION OF

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PURSUANT TO NOTICE OF MERGER RECORDED APRIL 17, 2018 AS DOCUMENT NO. 2018008052, OF OFFICIAL RECORDS.

EXHIBIT "B"
Development Impact Fees

Impact Fee Category	SFD Fee	MFD Fee	Commercial Fee (sq.ft.)	Industrial Fee (sq.ft.)
Administrative impact fee	93.72	56.67	0.024	n/a
Fire department impact fees	336.75	247.38	0.036	0.0240
General government impact fees	231.04	168.92	0.012	n/a
Police department impact fee	541.63	398.87	0.072	0.0599
Parks department impact fee	2,652.57	1,945.29	n/a	n/a
Public Works impact fee	323.67	99.17	0.133	0.0970
Sewer additional obl. impact fee - northwest	185.27	134.05	0.048	[1]
Sewer additional obl. impact fee - northeast	992.81	724.72	0.169	[1]
Sewer additional obl. impact fee - southwest	569.97	381.43	0.193	[1]
Sewer additional obl. impact fee - southeast	1,495.21	1,093.07	0.278	[1]
Sewer additional obl. impact fee - SCCC	888.19	625.55	0.181	[1]
Sewer additional obl. impact fee - exist. area	135.14	93.72	0.024	[1]
Storm drain impact fee - northwest	2,028.12	1,044.03	1.330	0.5558
Storm drain impact fee - northeast	3,099.39	1,453.79	1.210	0.5558
Storm drain impact fee - southwest	1,250.00	559.07	1.188	0.5558
Storm drain impact fee - southeast	3,472.10	1,394.94	1.090	0.5558
Storm drain impact fee - existing service area	1,132.30	545.99	0.632	0.5558
Storm drain impact fee - SCCC	n/a	n/a	n/a	n/a
Sewer exist. obl. impact fee - northwest	272.45	272.45	0.036	$272/unit [1]
Sewer exist. obl. impact fee - northeast	272.45	272.45	0.036	$272/unit [1]
Sewer exist. obl. impact fee - southwest	272.45	272.45	0.036	$272/unit [1]
Sewer exist. obl. impact fee - southeast	716.00	716.00	0.085	$716/unit [1]
Sewer exist. obl. impact fee - SCCC	n/a	n/a	n/a	n/a
Streets 16 ft. arterial street median island	387.97	237.58	0.142	n/a
Streets 24 ft. collector street lane	697.47	428.29	0.251	n/a
Streets 12 ft. arterial street lane	697.47	428.29	0.251	n/a
Transportation facility impact fee - city wide	951.40	584.13	0.254	0.3869
Traffic signals	235.40	144.94	0.087	n/a
Water impact fees - pipes	283.33	151.48	0.133	n/a
Wastewater treatment plan impact fee	1,314.30	923.06	0.763	1.5148
Water impact fees - Wells	562.34	300.78	0.072	[2]

Industrial Fee Notes

[1] Westberry Blvd/Ellis Street interceptor to be based on a dwelling unit equivalency at $272 per unit.
Road 28 interceptor to be based on a dwelling unit equivalency at $716 per unit.

[2] A minimum of $413 or the amount determined by the City Engineer by multiplying $413 for water supply by either (1) the proposed users estimated daily use in gallons per day divided by 1050, or (2) the estimated number of employees divided by 6, whichever is greater.

Attachment 2

Resolution
Confirmation of the Diagram and Assessments for Zone of Benefit 4

RESOLUTION NO. 20-_____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA, APPROVING ANNEXATION OF LINDEN STREET RESIDENTIAL COMPLEX SUBDIVISION (TRACT NO. 19-S-05) INTO ZONE OF BENEFIT 4; CONFIRMING THE DIAGRAM AND ASSESSMENT FOR CITY WIDE LANDSCAPE AND LIGHTING ASSESSMENT DISTRICT ZONE OF BENEFIT 4 FOR FISCAL YEAR (FY) 2020/2021; AUTHORIZING THE MAYOR TO EXECUTE THE COVENANT ON BEHALF OF THE CITY AND AUTHORIZING THE CITY CLERK TO FILE THE DIAGRAM AND ASSESSMENT WITH THE MADERA COUNTY AUDITOR

WHEREAS, the City of Madera Landscape Maintenance District (District) was formed by Resolution No. 91-67, approved June 17, 1991, pursuant to Part 2 of Division 15 of the Streets and Highways Code (Landscape and Lighting Act of 1972), herein the "Act"; and

WHEREAS, the recommended assessments for FY 2020/2021 reflect the cost of landscape maintenance provided by the City for said fiscal year; and

WHEREAS, all of the owners of property proposed to be annexed to the Zone of Benefit 4 of said District consisting of Linden Street Residential Complex Subdivision (Tract No. 19-S-05), as described in Exhibit "A" attached hereto and incorporated herein by reference, have consented to said annexation and such annexation may be ordered without notice and hearing or filing of engineer's report, or both;

WHEREAS, the property owner has agreed that the annual assessment is proportional to, and no greater than, the special benefit conferred on the property by being annexed into the Landscape Maintenance District; and

WHEREAS, the property owner has consented to an annual change in the range of the assessment in the amount of the Engineering News Record Construction Cost (ENRCC) Index (Los Angeles), plus two percent (2%). The property owner agreed that if such change in the range of the assessment is implemented less frequently than an annual basis, the change may be based upon the ENRCC Index since the most recent change in the assessment plus two percent per year;

WHEREAS, the property owner further agrees that temporary decreases in assessment do not represent a waiver of other provisions of this covenant and that the assessment may later be reset to an amount consistent with the assessment prior to the reduction plus the total change in the ENRCC Index plus two percent per year but only to the degree necessary to cover actual and reasonable costs, provided such assessment is consistent with the terms of this covenant.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MADERA HEREBY, finds, orders and resolves as follows:

1. The above recitals are true and correct.

2. That the public interest and convenience require that certain property described in Exhibit “A” and as diagramed in Exhibit “B,” both of which are attached hereto and by reference incorporated herein, be annexed to City Landscape Maintenance District as Zone of Benefit 4 for the maintenance and servicing of landscaping facilities.

3. The Mayor is authorized to execute the Covenant Landscape Maintenance District Zone of Benefit 4 on behalf of the City.

4. The City Council hereby confirms the diagram and annual assessments and levies the assessments for FY 2020/2021 for the same, as identified in Exhibits “A,” “B” and “C,” and as set forth in the agreement “Covenant Landscape Maintenance District Zone of Benefit 4.”

5. Pursuant to Section 22641 of the Streets and Highways Code, the City Clerk is authorized and directed to forthwith file the diagram and assessments with Auditor of Madera County.

6. This resolution is effective immediately upon adoption.

* * * * * * * * * * * * *

Exhibit A

Legal Description

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF MADERA, IN THE COUNTY OF MADERA, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

A PARCEL OF LAND IN THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL PLAT THEREOF, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF A TRACT OF LAND DESCRIBED IN A DEED RECORDED IN VOL. 369, PAGE 39 OFFICIAL RECORDS, MADERA COUNTY, SAID POINT BEARING EAST 484 FEET AND NORTH 0° 21' WEST 623.4 FEET FROM THE WEST 1/4 OF SAID SECTION 23; THENCE ALONG THE EAST LINE OF SAID TRACT, NORTH 0° 21' WEST 108.2 FEET; THENCE SOUTH 89° 32' WEST 317.2 FEET, MORE OR LESS TO A POINT WHICH IS 166.3 FEET EAST OF THE WEST LINE OF SAID SECTION 23; THENCE ALONG THE WEST LINE OF SAID TRACT, SOUTHERLY 108.6 FEET, MORE OR LESS, TO A POINT WHICH IS SOUTHERLY 686.9 FEET FROM THE NORTHWEST CORNER OF SAID TRACT; THENCE EASTERLY 317.3 FEET MORE OR LESS TO THE POINT OF BEGINNING.

WITH THE EXCLUSION OF

ALL THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, BEING MORE PARTICULARL Y DESCRIBED AS FOLLOWS:

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TOGETHER WITH:

A PARCEL OF LAND IN THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, BOUNDED AND DESCRIBED AS FOLLOWS:

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AND PARALLEL TO THE SAID WEST LINE OF SECTION 23, A DISTANCE OF 100 FEET; THENCE NORTH 89° 32' EAST 317.7 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

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ALL THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

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PURSUANT TO NOTICE OF MERGER RECORDED APRIL 17, 2018 AS DOCUMENT NO. 2018008052, OF OFFICIAL RECORDS.

Exhibit B

Assessment Diagram

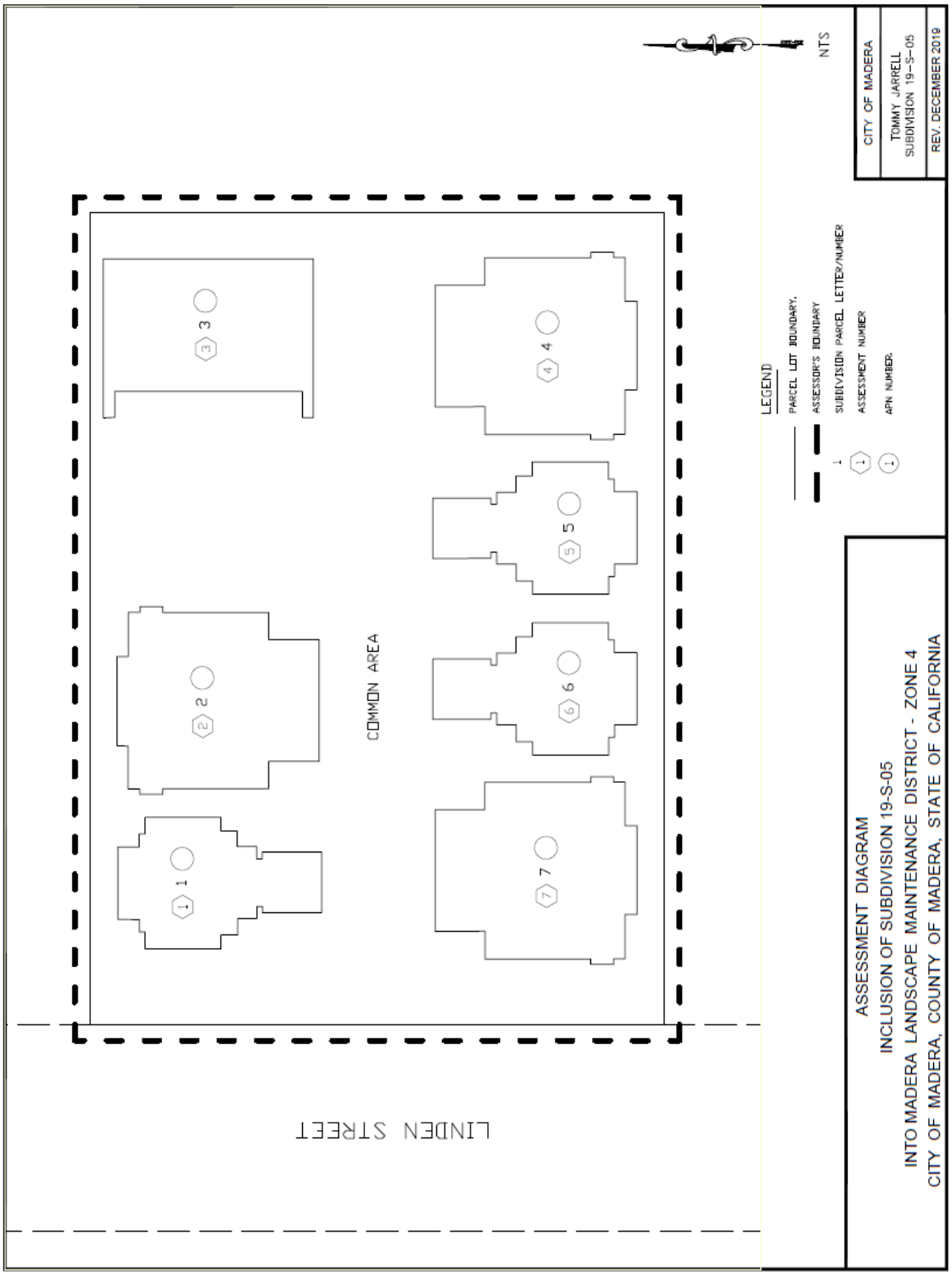


Exhibit C

Assessment Amounts

Lot	Owner	Assessment Amount (FY 2020/2021)
1	Tommy Lee Jarrell (Two (2) Dwelling Units)	$ 136.86
2	Tommy Lee Jarrell (Four (4) Dwelling Units)	$ 273.72
3	Tommy Lee Jarrell (Four (4) Dwelling Units)	$ 273.72
4	Tommy Lee Jarrell (Four (4) Dwelling Units)	$ 273.72
5	Tommy Lee Jarrell (Two (2) Dwelling Units)	$ 136.86
6	Tommy Lee Jarrell (Two (2) Dwelling Units)	$ 136.86
7	Tommy Lee Jarrell (Four (4) Dwelling Units)	$ 273.72

Attachment 3

LMD Covenant

RECORDING REQUESTED BY:
City of Madera
WHEN RECORDED RETURN TO:
City of Madera
205 W. 4th Street
Madera, CA 93637
Attention: City Clerk

Fee Waived per Section 27383 & 27388.1(a)(2)(D) of the Government Code

COVENANT
LANDSCAPE MAINTENANCE DISTRICT
ZONE OF BENEFIT 4

WHEREAS, **Tommy Lee Jarrell**, hereinafter referred to as "Covenantor", is the owner of the real property situated in the City of Madera, County of Madera, State of California, hereinafter referred to as "Subject Property" and more particularly described in attached Exhibit "A" which is incorporated by reference; and

WHEREAS, the Covenantor hereby warrants that any and all parties having record title interest in the Subject Property which may ripen into a fee have subordinated to this instrument; and

WHEREAS, all such instruments of Subordination, if any, are attached hereto and made a part of this instrument; and

WHEREAS, Covenantor is required by the City as a condition of Tentative Subdivision Map (TSM) 2018-06 & Precise Plan (PPL) 2017-04 approval and the Improvement Agreement to annex to the City's Landscape Maintenance District; and

WHEREAS, the Planning Commission on April 9, 2019 approved Tentative Subdivision Map TSM 2018-06 for the Linden Street Residential Complex Subdivision (Tract No. 19-S-05) which provided for the annexation of this subdivision into the aforementioned Zone of Benefit; and

WHEREAS, maintenance of the landscaping associated with the Subject Property shall be

the responsibility of the City's Landscape Maintenance District subject to acceptance of the subdivision and all improvements including said landscaping.

NOW, THEREFORE, it is agreed:

1. In consideration of the foregoing and the approval of the Precise Plan and Tentative Subdivision Map for the residential parcels, by the City of Madera, the undersigned hereby covenants, promises and agrees with the City of Madera for the benefit of said City.

2. The Covenantor consents to annexation of said Subject Property to the City's Landscape Maintenance District, has petitioned the City to annex said Subject Property to said district pursuant to Streets and Highways Code Section 22605, and pursuant to California Constitution Article, XIII D, section 5(b), waives any right to protest or object to such annexation.

3. The Covenantor agrees that the Subject Property receives a special benefit, as the term is defined in California Constitution Article, XIII D, section 2(i), from being annexed to Landscape Maintenance District, and that special benefit includes, but is not limited to, the right and ability to develop the Subject Property.

4. The Covenantor consents to an annual assessment on the Subject Property currently in an amount not to exceed $68.43 per each of the 22 dwelling constructed on 7 lots with each lot being assessed in accordance with the number of dwelling units constructed on that lot. The Covenantor agrees that this assessment is proportional to, and no greater than, the special benefit conferred on the Subject Property by being annexed into the Landscape Maintenance District. The Covenantor also consents to an annual change in the range of the assessment in the amount of the Engineering News Record Construction Cost Index (ENRCC), plus two percent (2%). The Covenantor agrees that if such change in the range of the assessment is implemented less frequently than an annual basis, the change may be based upon the total change in the ENRCC Index since the most recent change in the assessment plus two percent per year. The Covenantor

further agrees that temporary decreases in assessment do not represent a waiver of other provisions of this covenant and that the assessment may later be reset to an amount consistent with the assessment prior to the reduction plus the total change in the ENRCC Index plus two percent per year but only to the degree necessary to cover actual and reasonable costs.

5. The Covenantor agrees that he/she has received the written notice required by California Constitution Article, XIII D, Section 4(c).

6. The Covenantor agrees that this shall constitute a ballot in support of the proposed assessment pursuant to California Constitution Article, XIII D, Section 4(d).

7. Furthermore, should City hold a hearing notwithstanding such waiver, Covenantor waives the requirement of 45 days' notice of such hearing in favor of a five-day notice of such hearing.

8. The Covenantor shall fully disclose this covenant to every potential purchaser of the Subject Property.

9. It is the intention of the parties hereof that this document shall constitute a covenant in favor of the City of Madera and shall run with the land and be binding upon the undersigned, its grantees, heirs, successors and assigns.

10. The Covenant shall be released and be of no further effect upon written determination by the undersigned and the City Engineer of the City of Madera that its continued existence and enforcement are no longer necessary.

11. The provisions of this Covenant shall be deemed independent and severable and the validity or partial invalidity or unenforceability of any other provision or portion thereof shall not affect the validity or enforceability of any one provision thereof. Whenever the context of the Covenant so requires, in interpreting this Covenant, any gender includes the other genders, the singular includes the plural, and the plural includes the singular.

12. This Covenant shall be effective on February 19, 2020.

IN WITNESS WHEREOF, the parties duly executed this Covenant.

CITY OF MADERA:

By: _____
Andrew J. Medellin, Mayor

APPROVED AS TO FORM:

By: _____
Hilda Cantú Montoy, City Attorney

ATTEST:

By: _____
Alicia Gonzales, City Clerk

APPROVED:

By: _____
Keith B. Helmuth, P.E.,
City Engineer

COVENANTOR:

By: _____
Tommy Lee Jarrell, Owner

NOTARY ACKNOWLEDGEMENT REQUIRED

EXHIBIT “A”
Legal Description

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF MADERA, IN THE COUNTY OF MADERA, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

A PARCEL OF LAND IN THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL PLAT THEREOF, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF A TRACT OF LAND DESCRIBED IN A DEED RECORDED IN VOL. 369, PAGE 39 OFFICIAL RECORDS, MADERA COUNTY, SAID POINT BEARING EAST 484 FEET AND NORTH 0° 21' WEST 623.4 FEET FROM THE WEST 1/4 OF SAID SECTION 23; THENCE ALONG THE EAST LINE OF SAID TRACT, NORTH 0° 21' WEST 108.2 FEET; THENCE SOUTH 89° 32' WEST 317.2 FEET, MORE OR LESS TO A POINT WHICH IS 166.3 FEET EAST OF THE WEST LINE OF SAID SECTION 23; THENCE ALONG THE WEST LINE OF SAID TRACT, SOUTHERLY 108.6 FEET, MORE OR LESS, TO A POINT WHICH IS SOUTHERLY 686.9 FEET FROM THE NORTHWEST CORNER OF SAID TRACT; THENCE EASTERLY 317.3 FEET MORE OR LESS TO THE POINT OF BEGINNING.

WITH THE EXCLUSION OF

ALL THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, BEING MORE PARTICULARL Y DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT THAT LIES EAST, A DISTANCE OF 484.00 FEET, NORTH 00° 21' 00" WEST, A DISTANCE OF 623.40 FEET AND WESTERLY 317.30 FEET TO THE SOUTHWEST CORNER OF A PARCEL OF LAND AS DESCRIBED IN THE DEED RECORDED AUGUST 17, 1960 IN BOOK 777 AT PAGE 604, MADERA COUNTY RECORDS, SAID POINT BEING THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE NORTH 00° 21' 00" WEST ALONG THE WEST LINE OF SAID PARCEL, A DISTANCE OF 108.60 FEET; THENCE NORTH 89° 32' 00" EAST ALONG THE NORTH LINE OF SAID PARCEL, A DISTANCE OF 25.00 FEET, THENCE SOUTH 00° 21' 00" EAST, A DISTANCE OF 108.60 FEET, MORE OR LESS TO THE SOUTH LINE OF SAID PARCEL, THENCE WESTERLY, A DISTANCE OF 25.00 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH:

A PARCEL OF LAND IN THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH BEARS NORTH 89° 44' EAST 484 FEET AND NORTH 0° 21' WEST 731.6 FEET FROM THE WEST QUARTER CORNER OF SAID SECTION 23 (SAID POINT BEING ON THE EAST LINE OF A TRACT OF LAND DESCRIBED IN A DEED RECORDED AUGUST 29, 1945 IN VOL. 369 OFFICIAL RECORDS, PAGE 39, MADERA COUNTY, CALIFORNIA); THENCE FROM SAID POINT OF BEGINNING NORTH 0° 21' WEST 100 FEET; THENCE SOUTH 89° 32' WEST 317.7 FEET, MORE OR LESS TO A POINT WHICH IS 166.3 FEET, EAST OF THE WEST LINE OF SAID SECTION 23; THENCE SOUTH AND PARALLEL TO THE SAID WEST LINE OF SECTION 23, A DISTANCE OF 100 FEET; THENCE NORTH 89° 32' EAST 317.7 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

WITH THE EXCLUSION OF

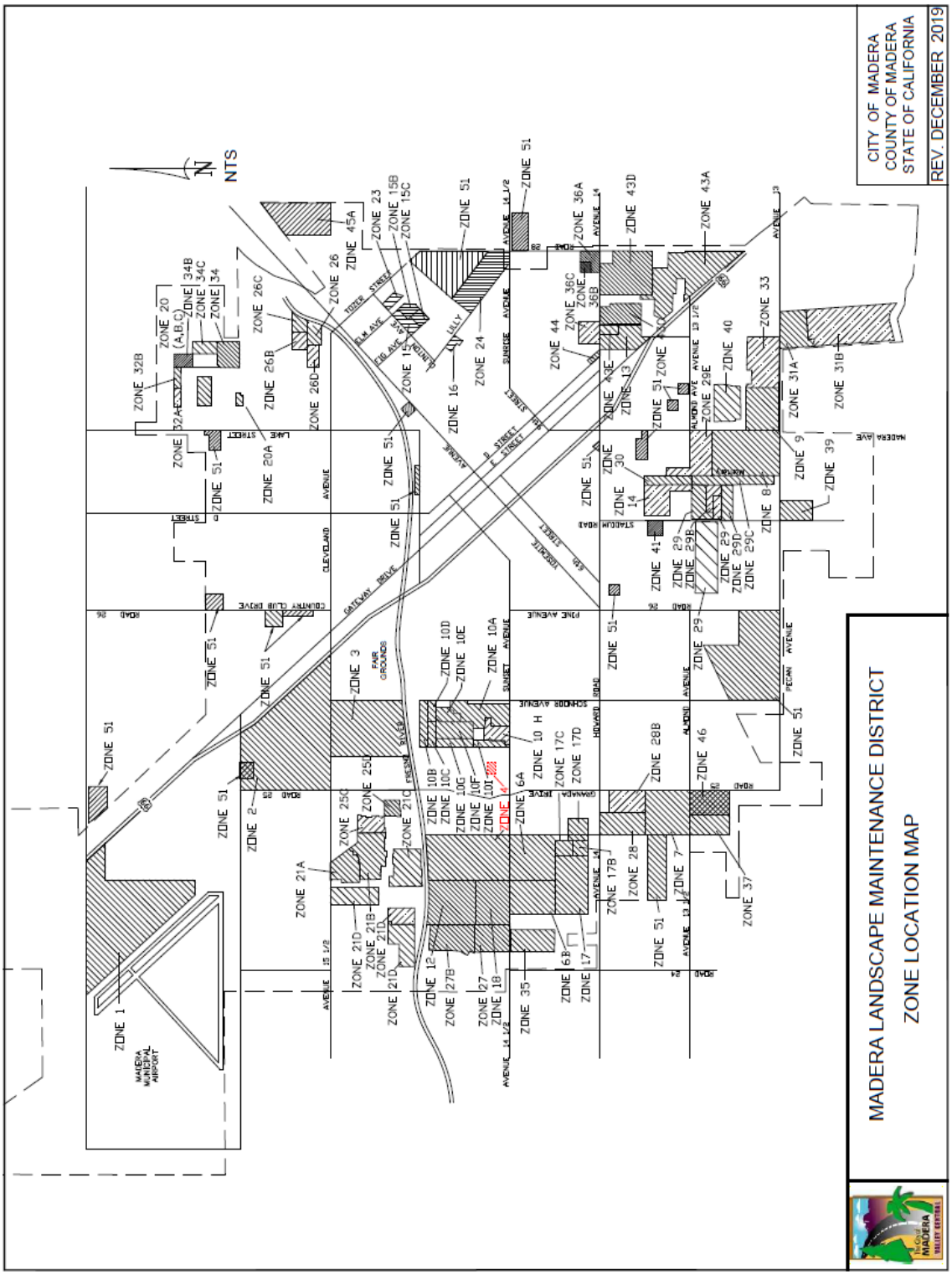
ALL THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 11 SOUTH, RANGE 17 EAST, MOUNT DIABLO BASE AND MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH BEARS NORTH 89° 44' EAST, A DISTANCE OF 484.00 FEET, NORTH 00° 21' WEST, A DISTANCE OF 731.60 FEET AND SOUTH 89° 32' WEST, A DISTANCE OF 317.70 FEET FROM THE WEST QUARTER CORNER OF SAID SECTION 23, SAID POINT BEING THE SOUTHWEST CORNER OF THAT CERTAIN PARCEL OF LAND DESCRIBED IN THE DEED RECORDED APRIL 25, 1962 IN BOOK 826, PAGE 650, MADERA COUNTY RECORDS AND BEING THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE NORTH AND PARALLEL TO THE WEST LINE OF SAID SECTION 23, A DISTANCE OF 100.00 FEET TO THE NORTHWEST CORNER OF SAID DESCRIBED PARCEL; THENCE NORTH 89° 32' EAST A DISTANCE OF 25.00 FEET; THENCE SOUTH AND PARALLEL TO THE WEST LINE OF SAID SECTION 23, A DISTANCE OF 100.00 FEET; THENCE SOUTH 89° 32' WEST, A DISTANCE OF 25.00 FEET TO THE POINT OF BEGINNING.

PURSUANT TO NOTICE OF MERGER RECORDED APRIL 17, 2018 AS DOCUMENT NO. 2018008052, OF OFFICIAL RECORDS.

Attachment 4

LMD Zone Map



Attachment 5

Project Location Map



CITY OF MADERA
ENGINEERING DEPARTMENT
205 W. 4TH STREET
MADERA, CA 93637

TOMMY JARRELL

SUBDIVISION 19-S-05

DR BY: EP
CH BY: TL
DATE: 12/24/19
SCALE: NTS
SHT 1 OF 1

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: B-8

SUBJECT:

Waive Full Reading and Consider Adoption of an Ordinance of the City of Madera, California amending Title VIII: Finance, Revenue, and Taxation, Chapter 7: Municipal Code, Sections 8-7.09, 8-7.10, and 8-7.14 of the Madera Municipal Code Relating to Discontinuation of Service, Delinquent Accounts, and Noticing Prior to Termination of Water Service.

RECOMMENDATION:

Waive full reading and adopt Ordinance of the City of Madera, California amending Title VIII: Finance, Revenue, and Taxation, Chapter 7: Municipal Code, Sections 8-7.09, 8-7.10, and 8-7.14 of the Madera Municipal Code Relating to Discontinuation of Service, Delinquent Accounts, and Noticing Prior to Termination of Water Service.

SUMMARY:

The State Senate enacted SB 998 (Dodd) titled the Water Shut Off Protection Act. The bill, signed into law September 28, 2018 (Health and Safety Code, Part 12 of Division 104), adds Chapter 6 Discontinuation of Residential Water Service. It is effective February 1, 2020. The law requires all public water systems (with more than 200 connections) to have a written policy on discontinuation of residential water services, provide that policy in multiple languages, and prohibit an urban and community water system from discontinuing residential service for nonpayment until delinquent for at least 60 days.

DISCUSSION:

SB 998 provides rules and procedures for urban and community water system to follow before they shut off residential water service. Residential water service includes service to a residential connection to a single-family, multi-family, and mobile homes including those in mobile home parks and farmworker housing.

The City is an urban supplier, so it must comply with SB 998 by February 1,2020. Per SB 998, the City will need to extend the number days before it shuts off service to at least 60 days. The City will need to make sure its notice to customers includes information required by SB 998.

The City currently has a policy regarding Delinquent Services; however, it must be amended to comply with the strict application of SB 998. Worth noting is that this agenda item addresses changes to residential policy and procedures only. It does not address changes to the commercial policy.

The Delinquent Service Policy for Residential customers has been updated and contains:

- Payment options, including a plan for deferred or reduced payments and alternative payment schedule; and
- A method to avoid discontinuation, including an appeal and a telephone number for a customer to contact to discuss options for averting discontinuation of residential service for nonpayment.

The City's policy must be available on the website.

The written notifications that service will be discontinued has been updated to be compliant with SB 998, and includes customer name/address, amount of delinquency, date by which payment or arrangement is required in order to avoid discontinuation of residential service, description of the process to apply for extension of time to pay the delinquent charges, description of the procedure to appeal the bill and description of procedure by which a customer may request an alternative payment schedule.

The City's proposed changes to the ordinance amends City of Madera's Ordinance, Title VIII: Finance, Revenue and Taxation, Chapter 7: Municipal Utilities to be in compliance with SB 998.

FINANCIAL IMPACT:

Failure to implement SB 998 by February 1, 2020 could result in the state water board assessing civil penalties not to exceed $1,000 per day to each day that a violation continues to occur.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

The ordinance amendment will further apply to core vision statements of the Vision Plan of "A Safe, Health Environment" by extending the number of days before termination of water services.

ALTERNATIVES:

Not to comply with (SB) Senate Bill 998 and leave the ordinance and policy as it currently exists.

ATTACHMENTS:

1. Ordinance

ORDINANCE NO. 20-

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA AMENDING TITLE VIII: FINANCE, REVENUE, AND TAXATION, CHAPTER 7: MUNICIPAL UTILITIES, SECTIONS 8-7.09, 8-710, AND 8-7.14 OF THE MADERA MUNICIPAL CODE RELATING TO DISCONTINUATION OF SERVICE, DELINQUENT ACCOUNTS, AND NOTICING PRIOR TO TERMINATION OF WATER SERVICE

THE CITY COUNCIL OF THE CITY OF MADERA DOES ORDAIN AS FOLLOWS:

SECTION 1. Section 8-7.09 of the Madera Municipal Code is amended to read as follows:

§ 8-7.09 DISCONTINUANCE OF SERVICE FOR NON-PAYMENT.

(A) Residential utility accounts remaining unpaid for at least sixty (60) calendar days after the due date shall be subject to disconnection from water utility services in the manner prescribed in the City Utility Services Policy and consistent with applicable sections of the California Public Utilities Code.

(B) Commercial utility accounts remaining unpaid after the due date shall be subject to disconnection from water utility services in the manner prescribed in the City Utility Services Policy and consistent with applicable sections of the California Public Utilities Code.

(C) Where more than one residence is billed under one multi-unit account, including but not limited to apartment units, mobile home parks, etc., accounts remaining unpaid for at least sixty (60) days after the due date shall be subject to disconnection from water utility services in the manner prescribed in the City Utility Services Policy and consistent with applicable sections of the California Public Utilities Code.

(D) In order to restore service to an account with discontinued service, payment in the form of check will not be accepted. Cash, debit, credit, or money order will be accepted.

SECTION 2. Section 8-7.10 of the Madera Municipal Code is amended to read as follows:

§ 8-7.10 DELINQUENT ACCOUNTS.

(A) In the event that a utility bill is not paid on or before the delinquent date, the following additional charges shall be added to each delinquent billing:

(1) The amount determined by resolution or, in the absence of such resolution, 10% of the delinquent balance of all utility charges.

(2) In addition, the delinquent balance, including additional charges, shall be charged interest at the rate of 1 1/2% per month.

(B) If water service had been discontinued for failure to pay a utility bill as set forth in § 8-7.09 of this chapter, the entire amount of the utility bill including all applicable penalties, interest, and deposit shall be paid before water service is restored, unless an amortization agreement for payment of the delinquent balance consistent with the Public Utilities Code and the City Policy under California Water Shut Off Act (SB 992: Health and Safety Code Sections 116900 to 116926) is arranged with the Finance Director or his or her designee. The City Policy is established by City Council Resolution as "City of Madera Utility Service Policy for Residential and Multi-Family Customers").

(C) A charge as determined by resolution of the Council shall be charged on all returned checks, plus any service charges assessed by the Bank. Accounts shall be subject to the following payment restrictions.

(1) Checks will not be accepted as payment when service has been interrupted because of a returned check.

(2) If account holder has two checks returned to the city from the issuing bank within a six- month period, no checks will be accepted as payment on that account for the six months following the last returned check.

(D) In addition to any other fees or charges provided in this section, any customer requesting a utility service, including but not limited to application for water service, service turn-on, or shut-off, on any Saturday, Sunday, legal holiday, or before the hour of 8:00 a.m. or after the hour of 5:00 p.m. of any day, shall pay an additional charge as determined by resolution of the Council for after hours or weekend or holiday service.

(E) Accounts shall be subject to collection of any delinquent fees and charges in the following manner:

(1) At the time the fees become delinquent and until such time as they are fully paid, the delinquent account balance, including late charges, shall constitute an unrecorded lien against the property and, as such, may be identified during a title search. In addition, commercial businesses' delinquent account balances, including late charges, may be considered an unrecorded lien against the business and/or owner of the business except that all procedures under the City of Madera Utility Service Policy for Residential and Multi-Family Residential Customers shall be followed first.

(2) Once a year, the Council shall cause to be prepared a report of current delinquent fees, including late charges, for that year. The Council shall fix a time, date and place for hearing the report and receiving any objections or protests thereto.

(3) The Council shall cause notice of the hearing to be mailed to the landowners listed on the report not less than 15 calendar days prior to the date set for hearing.

(4) At the hearing, the Council shall hear any objections or protests of landowners liable to be assessed for delinquent fees including late charges and administrative fees. The Council may then make revisions or corrections to the report as it deems just, after which, by resolution, the report shall be affirmed.

(5) The delinquent fees set forth in the report as confirmed shall constitute a lien against the respective parcels of land and are a lien on the property for the amount of such delinquent fees, including interest and late charges. A certified copy of the resolution affirming the assessments shall be filed with the County Recorder and the County Auditor-Controller/Tax Collector for the amounts of the respective assessments against the respective parcels as they appear on the current assessment roll. The lien created attaches upon filing. The assessments shall be collected at the same time and in the same manner as other property taxes and shall be subject to the same penalties and the same procedures and sale in case of delinquency as provided for such taxes. All laws applicable to the levy, collection and enforcement of property taxes shall be applicable to such assessments. However, if during the first year for which the charges are prescribed, the property served by the city has been transferred or conveyed to a bona fide purchaser for value, and attached thereon, prior to the date on which the first installment of county taxes would become delinquent, the charge shall not result in a lien against the real property, but shall become transferred to the unsecured roll for collection.

(6) In addition to, or alternatively to, imposing a lien, the city may file an action for the collection of any amounts due and unpaid. In any such action, the delinquent balances may also be processed through a collection agency.

(7) If the account of a commercial customer who is not the property owner remains delinquent for over 90 days, a billing will be rendered to the property owner so as to provide notice of the delinquency and lien on the property, as mandated in subsection (1) of this section, such that payment of the account can occur prior to applying subsections (2), (3), (4), (5), and (6) of this section. The charges for utility service referred to herein shall constitute a lien against the lot or parcel of land against which the charge was imposed if such charge remains delinquent for a period of 90 days. In the event that utility services are provided to property occupied by a non-owner/tenant, and payment for such service had been guaranteed by the property owner, the Director of Finance is authorized and directed to notify such owner of any delinquencies hereunder upon their occurrence.

(8) The city shall have the right to require that commercial property owners guarantee tenant accounts that are delinquent or have a history of delinquency.

(9) The provisions of this section shall be applicable, in addition to the fees and charges arising from service provided under Chapters 5-3, 5-4, and 5-5 of this municipal code.

SECTION 3. Section 8-7.14 of the Madera Municipal Code shall be amended to read as follows:

§ 8-7.14 NOTICING PRIOR TO TERMINATION OF SERVICE.

(A) Delinquent residential accounts and properties without an active account.

(1) Ten calendar days before an account becomes delinquent, a notice is to be forwarded to the account holder by mail, to the service address The notice will indicate that a penalty will be applied and the water will be shut off if the past due balance is not paid in full by the required payment date as established in the City of Madera Municipal Code. The notice is applicable to those accounts that are at least sixty (60) days past due and are not already under a payment agreement The notice will include (a) a customer's name and address, (b) amount past due, (c) date by which payment or payment arrangements are required to avoid termination of service, (d) description of the process to apply for payment arrangements, (e) description of the process to dispute or appeal a bill, and (f) City Finance Department's telephone number and a web link to the City Finance Utility Billing Department's written delinquent account policy.

(2) Ten calendar days prior to termination of service, a notice that water services will be discontinued is mailed to the customer. If the mailing address and the address of the property to which water service is provided are different, a second notice will be mailed to the service address and addressed to "Occupant." If unable to reach customer by telephone or the mailed notice has been returned undeliverable, the City will make every effort to hand deliver or post a notice in a conspicuous place regarding the shut off process. (3) City staff will proceed to shut off procedure if the account holder has made no response to the ten-day or 48-hour notices.

(B) Delinquent commercial accounts and properties without an active account.

(1) Ten calendar days prior to termination of service, a termination notice is to be forwarded to the account holder either by mail or posted in a conspicuous place at the service address. That notice will typically be provided on the customer's utility bill and will relate to the balance from the prior utility bill that has become delinquent. The notice will indicate that a penalty will be applied and the water will be shut off if the past due balance is not paid in full by the required payment date, as established in the City of Madera Municipal Code § 8-7.08(D). The ten-day notice is for those accounts that have not paid their balance from the prior utility bill and are not already under a special payment agreement. If the notice is mailed, the ten-day period will begin five days after the date of mailing the notice. If the notice is physically posted at the service address, the ten-day period will begin on the day of posting.

(2) Seven calendar days prior to termination of service, a 48-hour shut off notice will be forwarded to the customer by mail. The 48-hour period will begin five days after the mailing of the notice. At least 48 hours prior to termination of service city staff will make a reasonable attempt to contact an adult person residing at the premises by phone. In certain instances, this notice may be hand delivered or posted in a conspicuous place to expedite the shut off process once city staff has made a reasonable attempt to contact an adult at the premises by phone.

(3) Proceed to shut off procedure if the commercial account holder has not made an attempt to contact the office or if the account has not been brought to a current status.

(C) Delinquent multifamily accounts and properties without an active account.

(1) Ten calendar days before an account becomes delinquent, a notice is to be forwarded to the account holder by mail to the service address. The notice will indicate that a penalty will be applied and the water will be shut off if the past due balance is not paid in full by the required payment date as established in the City of Madera Municipal Code. The notice is applicable to those accounts that are at least sixty (60) calendar days past due and are not already under a payment agreement. The notice will include (a) a customer's name and address, (b) amount past due, (c) date by which payment or payment arrangements are required to avoid termination of service, (d) description of the process to apply for payment arrangements, (e) description of the process to dispute or appeal a bill, and (f) City Finance Department's telephone number and a web link to the City Finance Utility Billing Department's written delinquent account policy.

(2) Ten calendar days prior to termination of service, a notice that water service will be discontinued is mailed to the customer. If the mailing address and the address of the property to which water is provided are different, a second notice will be mailed to the service address and marked "Occupant." If unable to reach customer by telephone or the mailed notification has been returned undeliverable, the City will make every effort to hand deliver or post a notice in a conspicuous place regarding the shut off process.

(3) The notice will advise tenant/occupant that they have the right to become customers of the City without being required to pay the amount due on the delinquent account, as long as they are willing to assume financial responsibility for subsequent charges for water service at the address(es) served by master meters. Tenants must have the opportunity to transfer the account into their name.

(4) Proceed to the shut off procedure if all monies, including penalty and interest have not been paid within the required time frame.

(D) *Breached special payment agreements.*

(1) At least 48 hours prior to termination of service, city staff will make a reasonable attempt to contact the account holder by phone. If a phone call is unable to be completed, then a 48-hour notice will be posted at the service address.

(2) Service will be shut off if the account holder has made no response to the 48-hour notice.

SECTION 4. SEVERANCE. If any section, subsection, phrase, or clause of this ordinance is for any reason held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of this ordinance

SECTION 5. CEQA. The City Council finds this ordinance is not a project under the California Environmental Quality Act because it can be seen with certainty that it will not have a significant effect or physical change to the environment. See Title 14, California Code of Regulations, Section 15061 (b) (3).

SECTION 6. PUBLICATION. This ordinance shall be published in accordance with the provisions of Government Code Section 36933.

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Department Director

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: B-9

SUBJECT:

Consideration of a Resolution Approving Submission of the 2019 Infill Infrastructure Grant Program to the California State Department of Housing and Community Development for funding in an amount not to exceed $1,000,000 for the Downtown Madera Veterans and Family Housing project located on the northwest and southeast corners of 5th and C Streets in downtown Madera

LATE DISTRIBUTION:

The report for this item will be distributed after the initial posting of the agenda (e.g. Late Distribution).

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

John Scarborough, Parks & Community Services Director

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: D-1

SUBJECT:

Consideration of Resolution Approving an Agreement with EMTS Inc. for Landscape Maintenance Services for the Downtown District, Certain City Facilities, and Median Islands in the amount of $200,880.00 and Authorizing the Mayor to Execute the Agreement on behalf of the City.

RECOMMENDATIONS:

Staff recommends the City Council (Council) adopt the Resolution approving the Agreement for Landscape Maintenance Services for the downtown district, certain City facilities, and median islands in the amount of $200,880.00 to EMTS Inc. Staff further recommends Council authorize the Mayor to execute the Agreement on behalf of the City.

SUMMARY:

The City has historically retained contractors to perform landscape maintenance work at some City-owned properties. The previous contractor worked in the City for three years until their Agreement expired on November 14, 2019. In an effort to secure a new contractor, staff published a Request for Proposals (RFP) on December 3, 2019. Five proposals were received, but one was rejected after it was determined to be non-responsive. Of the four remaining proposals, one was considered to represent the best value for the City as they ranked at, or near the top, in categories such as references, approach to work, staffing, and fees. Staff recommends Council adopt the Resolution approving the Agreement with EMTS Inc. for landscape maintenance services.

The agreement is for three years and may be extended by mutual written consistent for an additional two years.

DISCUSSION:

The City currently maintains approximately 30 acres of landscaped areas that are not in a landscape assessment zone. The City has historically entered into multi-year agreements with professional landscape maintenance contractors for the work needed for these areas, inclusive of the downtown district, certain City facilities and median islands. Maps of these areas are shown in Attachment A to the proposed Agreement.

The landscape maintenance of these areas has historically been performed by a single contractor. The previous contractor has maintained the properties within this program since 2016. Their Agreement expired on November 14, 2019. As a result, on December 3, 2019, RFP 201920-08 for Landscape Maintenance Services was published. In order to allow smaller (local) firms to compete for the work, the RFP was divided into three groups corresponding with downtown, certain City facilities, and median islands. This allowed bidders to submit proposals for a single group or any combination of the three groups. Therefore, it was possible to award agreements to as few as one contractor or as many as three. One Madera County-based firm participated in the current solicitation and all responding firms submitted quotes for all three groups.

Responses to the RFP were due on January 13, 2020. The four firms outlined below submitted timely and complete proposals. A fifth proposal was received, but it was incomplete and deemed non-responsive by the City's Purchasing Department. The four remaining proposals were reviewed for compliance to bid requirements and completeness. They were then forwarded to a review committee for scoring and ranking. In order to ascertain the best value for the City, a committee of staff from the Parks and Community Services and Public Works Departments reviewed the proposals fees, as well as approach to the work, references, and other criteria. From these categories, staff generated a total score and rank for each proposal. The bid results, ranging from $200,880.00 to $541,803.60, were ranked by the review committee as well as detailed below in Table 1:

Table 1: *Landscape Maintenance Request for Proposal Ranking Summary*

Proposer	*Group 1 (Downtown)*	*Group 2 (City Facilities)*	*Group 3 (Medians)*	*Total Bid*	*Rank*
EMTS Professional Landscape	$5,460.00	$60,840.00	$134,580.00	$200,880.00	1
Villa Gardening Service	$22,560.00	$76,500.00	$297,000.00	$396,060.00	2
All Commercial Landscape Service	$48,600.00	$121,500.00	$332,550.00	$502,650.00	3
Joe's Landscape and Concrete	$59,670.00	$170,258.40	$311,875.20	$541,803.60	4

EMTS Inc. was ranked the highest by the review committee out of the four proposals, representing the best value for the City. They scored near the top in all categories. Additionally, their proposal was also the lowest bid.

FINANCIAL IMPACT:

The financial impact of the new agreement represents an increase of $24,240.00 per year from the previous agreement. This increase is broken down into three respective budgets as follows: $720.00 in City's Downtown (#41400000-6440), $8,040.00 in Parks Contracted Services (#10206100-6440), and $15,480.00 in Median Island (#10206120-6440).

Table 2: *Landscape Costs Comparisons*

	Group 1 (Downtown)	*Group 2 (City Facilities)*	*Group 3 (Medians)*	*Total Bid*
EMTS Professional Landscape Bid Result	$5,460.00	$60,840.00	$134,580.00	$200,880.00
Previous Contract Costs	$4,740.00	$52,800.00	$119,100.00	$176,640.00
Difference +/-	+$720.00	+$8,040.00	+$15,480.00	+$24,240.00

The previous agreement expired on November 14, 2019. Since that date, City staff have maintained the areas of responsibility utilizing part-time, temporary staff until an RFP could be published and awarded. As a result, each of the budgets represented by the three groups have incurred savings, which will allow the contract increases to be absorbed within the current fiscal year budgets. If the Agreement is approved, staff will include these increases during the annual budget process for FY 2020/21. The revenue sources for these increases will come from Gas Tax revenue, Downtown Association, and the City's General Fund.

Staff believe the increases between the previous agreement and the proposed agreement is a result of recent regulatory changes by the State Department of Industrial Relations subjecting landscape maintenance activities, like those represented in this Agreement, to Prevailing Wage rates. This additional cost of doing business usually results in higher bids and increased costs to the City.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

- *Action 121.10:* Add facilities and amenities for the public.
- *Action 126.4:* Develop financing plans for development and maintenance of landscape programs.
- *Action 134.1:* Consider establishment of design/landscape standards for neighborhoods.

ALTERNATIVES:

1. Council may direct staff to reject all bids and recirculate the RFP to secure a new/different contractor and associated bid.
2. Council may direct staff to explore alternative service delivery models.

ATTACHMENTS:

1. Resolution - Approving Agreement

   Exhibit 1 - Agreement

   Exhibit A - Maps of Landscape Maintenance Areas

   Exhibit B - Insurance Requirements

Resolution No. 20- _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA APPROVING AN AGREEMENT WITH EMTS INC. FOR LANDSCAPE MAINTENANCE SERVICES FOR THE DOWNTOWN DISTRICT, CERTAIN CITY FACILITIES, AND MEDIAN ISLANDS IN THE AMOUNT OF $200,880.00 AND AUTHORIZING THE MAYOR TO EXECUTE THE AGREEMENT ON BEHALF OF THE CITY

WHEREAS, the City of Madera ("City") is a municipal Corporation which provides services and facilities to the citizens of the community; and

WHEREAS, the City is in need of landscape maintenance services for the Downtown District, certain City facilities, and median islands; and

WHEREAS, the City requires the services of a professional landscape maintenance firm to provide the services; and

WHEREAS, the City circulated a Request for Proposals to solicit bids and select a qualified firm to provide landscape maintenance services; and

WHEREAS, EMTS Inc. ("Contractor") is a firm qualified to provide said landscape maintenance services and submitted a complete timely bid that was ranked number one (1) by the proposal review committee; and

WHEREAS, the City has prepared an Agreement with the Contractor that details the responsibilities and requirements of each party; and

WHEREAS, the Agreement is in the best interests of the City, the Contractor, and the citizens of Madera.

NOW THEREFORE, THE COUNCIL OF THE CITY OF MADERA HEREBY finds orders and resolves:

1. The above recitals are true and correct.
2. The Agreement between the City and EMTS Inc., attached hereto as Exhibit 1, is approved.
3. The Mayor is authorized to execute the Agreement on behalf of the City.
4. This Resolution is effective immediately upon adoption.

****

Exhibit 1

CITY OF MADERA

LANDSCAPE MAINTENANCE SERVICES

THIS AGREEMENT made and entered into the 19th day of February , 2020, by and between the CITY OF MADERA, a municipal corporation of the State of California, hereinafter called "City" and EMTS Inc. hereinafter called "Service Provider";

RECITALS

A. The City is in need of Landscape Maintenance services and the City has issued a Request for Proposals (RFP) for Landscape Maintenance Service.

B. City requires a Landscape Maintenance Services Agreement from a qualified professional service provider.

C. Service Provider is a firm having the necessary experience and qualifications to provide services under this Landscape Maintenance Agreement.

D. After conducting an RFP process for Landscape Maintenance services and after review and consideration, City desires to retain Service Provider to provide said services.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants and agreements herein contained, it is agreed by and between the City and the Service Provider as follows:

1. Services. The City hereby contracts with Service Provider to provide Landscape Maintenance services, herein set forth at the compensation and upon the terms and conditions herein expressed, and Service Provider hereby agrees to perform such services for said compensation, and upon said terms and conditions City hereby authorizes Service Provider to commence work on March 01, 2020. The City Director of Parks and Community Services or his designee shall be the City Contact under this Agreement.

2. Obligations, duties and responsibilities of Service Provider. It shall be the duty, obligation and responsibility of the Service Provider, in a skilled and professional manner, to perform, furnish and supply to the City the services and supplies in accordance with the minimum service requirements as listed below:

2.1. Scope of Maintenance Services. Service Provider shall provide and coordinate all services necessary for the proper maintenance of the Maintenance Area as defined in Attachment A. The specific services of Service Provider shall include, but not be limited to the following:

a. Prepare a preliminary estimate for material and labor costs associated with needed services not directly covered by this Agreement.

b. Provide itemized monthly statement showing all services performed.

2.2 Labor, Tools, Equipment

Service Provider shall furnish all labor, tools, equipment, fertilizers, herbicides, and materials necessary for performance

of the maintenance work and services in the manner specified herein for each of the maintenance areas of service.

2.3. General Requirements. Service Provider shall thoroughly complete each task in a professional, workmanlike manner. To this end, they will use equipment and materials that comply with all current regulations. The safety of workers, passersby, and the public shall be paramount.

Service Provider shall provide the labor, materials, and equipment necessary for the provision of grounds and landscape maintenance services, except as otherwise specified hereinafter. Tasks shall be performed in accordance with standards contained herein, at no less than the frequencies set forth herein.

Service Provider is hereby required to render and provide grounds maintenance services including, but not limited to, turf mowing, edging, trimming, over seeding, reseeding, fertilization, aeration, irrigation, hand watering and bleeding of valves as necessary during emergencies when automatic systems are not functioning, pruning and renovation of turf and shrub areas as well as provide weed control, disease control, tree maintenance, maintenance of irrigation systems, repair of walkways, pumps, walkway lighting systems and the necessary maintenance of any appurtenant structures and equipment pursuant to specifications and frequencies as set forth herein or revised by City.

Service Provider shall not perform any operations, particularly during periods of inclement weather, which may destroy or damage groundcover or turf areas.

The Service Provider recognizes, that during the course of this Agreement, other activities and operations may be conducted by City work forces and other contracted parties. These activities may include but not be limited to, landscape refurbishment, irrigation system modification or repair, construction and/or storm related operations. The Service Provider may be required to modify or curtail certain tasks and operations and shall promptly comply with any request by the City to modify or curtail impacted tasks covered by this Agreement.

Service Provider shall, during the hours and days of maintenance service, as identified in Section II.H, respond to all emergencies within two (2) hours of notification.

Service Provider shall be required to identify equipment and vehicles used at City facilities with decals identifying the Service Provider's name, and phone number.

2.4. Description of Work and Services.

a. All areas of the Maintenance Area shall be maintained in accordance to the preservation of the quality of standard landscaping practices of the intended design concept. Maintenance will occur in such a manner that will not alter the existing ground area from the natural state. All areas will be kept weed free leaving a clean and manicured appearance. Such maintenance to occur at the following minimum intervals and shall comply with procedures for standard landscaping practices leaving these grounds in a clean and desirable condition.

1) If turf exists within the Maintenance Areas, turf shall be cut or mowed with conventional mowing equipment of a type which will not damage the turf, such mowing to occur at the following minimum intervals and shall comply with standard practices and procedures for mowing and maintaining turf in a healthy and presentable condition.

2) The maintenance shall occur at a minimum of one time per week, between March 1 and October 31. Maintenance may be performed a minimum of twice per month for all other months provided

minimum standards per specifications contained herein are maintained.

3) The maintenance services will be provided Monday through Friday, between the hours of 7:00 a.m. and 5:00 p.m.

b. All trees and shrubs shall be inspected, trimmed and adjusted to facilitate complete maintenance, provide neat appearance and protect said trees and shrubs from damage by site maintenance operations. Said trimming shall comply with standard practices and procedures to maintain trees and shrubs in a healthy and presentable condition. The standard trimming of all trees and shrubs within the scope of this contract shall be a minimum 7 feet above ground level over pedestrian pathways and 14 feet above vehicle travel ways such as streets, alleys, etc. Said standard trimming is specific to facilitating maintenance and differs from major trimming as described under the Extra Work provision in this RFP. The determination of major trimming shall be at the sole discretion of City. Service Provider shall be responsible for maintaining all tree staking and should adjust, modify or remove as required to promote acceptable growth requirements.

c. Service Provider shall maintain the perimeter of all landscape areas, including but not limited to curb, parking areas or affiliated grounds. Service Provider may use the application of herbicides at the Service Provider's discretion. Service Provider shall comply with all applicable laws, regulations and ordinances and shall be responsible for the securing of any and all permits, which may be required for the performance of the work and services herein provided. All herbicide to be used shall be approved prior to application and only by written notice as detailed in the draft agreement included in this RFP. Weed eating around trees will not be permitted and damage to trees caused by such activity will be justification for damages being assessed to Service Provider, termination of contract or tree replacement at Service Providers expense.

d. All trash and debris which has accumulated, or which may in the future accumulate within the boundaries of the specific areas, including, but not limited to, sidewalks, play areas, driveways, fence lines and property boundaries shall be removed from the site. Grass clippings, weeds, trash, debris and other waste and refuse materials collected within the sites shall be disposed of in an approved manner off-site. Trash and debris shall be removed by Service Provider and at the Service Provider's expense at a frequency concurrent with maintenance.

e. All landscaping irrigation areas shall be checked concurrent with maintenance (when applicable) in accordance to standard irrigation practices and the automatic sprinkling systems located within each landscape area shall be maintained in adjustment and repaired so as to ensure proper operation and coverage to the end that all such landscaping shall be properly irrigated. Sprinklers shall be adjusted so as not to throw water on streets or adjacent properties. Maintenance as provided in this work description includes all parts and labor for repair and adjustment of all irrigation system components downstream of the Vacuum Breaker including, but not limited to valves, heads and clocks. The system shall be maintained and adjusted at a frequency concurrent with maintenance or turf mowing. Irrigation controller schedules shall be set to comply with local watering ordinances.

f. When damage occurs to sprinkler systems outside of the above specified area of responsibility, turf or other plantings through no fault or activity of Service Provider, Service Provider shall notify City of the extent of damage within twenty- four (24) hours of discovery. Upon written request by the City, Service Provider will perform repairs, materials including, but not limited to irrigation parts, trees or shrubs may be provided either by City or Service Provider at the City's discretion. Service Provider will not be compensated for any overhead for materials so provided. Service Provider shall be compensated at the rate specified for extra work performed by the Service Provider for such repairs or replacements if he/she is selected to complete the repairs. Damage to sprinkling systems, plantings, fences, gates, or other property affixed to or located in any area, or damage to adjacent properties caused by or resulting from any activities of maintenance Service Provider, shall be repaired by said Service Provider at their sole cost and expense within twenty-four (24) hours of receipt of written notification by City. If the Service Provider fails to respond within this time City shall have the repairs completed by others and all expenses associated with the repair will be charged to the responsible Service Provider.

g. All landscape maintenance areas shall be inspected monthly to determine whether any damage has occurred to property, including, but not limited to, fences, sidewalks, equipment, structures, plants,

turf, trees or other improvements. Service Provider shall report to City within twenty-four (24) hours of discovery of any damage to site which adversely impacts the functioning of the site, improvements, security, and/or safety thereof.

h. All landscape maintenance areas shall be fertilized and kept weed free. Fertilizers and herbicides will be provided by Service Provider and shall be applied in such manner that non target species are protected. Any grasses or plants damaged or destroyed through application of fertilizers, herbicides or other chemicals shall be replaced at Service Provider's sole cost and expense.

i. Service Provider shall be responsible for the maintenance of all locks and chains on all back-flow preventer enclosures, gates, structures and other improvements requiring such security. Or at the request of City personnel, City will provide Service Provider with replacement locks and chains as may be required.

j. Service Provider shall submit signed detailed work reports no later than the fifth day of each month describing all work and services performed on each landscape maintenance area during the preceding month. Without limitation to scope or detail, Service Provider shall include in said report a general description of the work and services performed; the date or dates on which each landscape area was inspected and work performed; information concerning damages, repairs, or replacements required, including, but not limited to locks or chains and unusual or special conditions which require special attention in order to preserve the functional and/or security and integrity of the landscape areas. The report shall include Service Provider's recommendations for measures to correct any deficient condition reported. However, this report does not exempt Service Provider from notification of conditions that exist as specified in No. 5 and No. 6 above. All work reports must be submitted to City prior to/or with the monthly payment request forms. If monthly work reports are not submitted, payment shall be held until City receives the monthly work reports.

2.5. Description of Extra Work. Service Provider shall, from time-to-time, be required to perform Extra Work of varying types. The following, though not inclusive, represents specific types of Extra Work that may be required and the conditions governing performance. In all cases of Extra Work, no such work may be performed without prior written authorization from City. City, at its discretion, may choose to provide all necessary materials or have Service Provider provide materials and reimburse Service Provider for all authorized costs.

a. Service Provider may be required to eradicate pests and rodents, such as ground squirrels, gophers, moles, etc. Pursuit of such eradication measures and the use of pesticides and other chemicals or eradication techniques shall be in accordance with all local, state and federal regulations governing the use of such agents or techniques. In no event shall the actions of Service Provider in effecting such eradication result in a danger to humans, domestic animals or plant life. Service Provider shall be responsible for any damages that result from a violation of local, state, or federal regulations governing eradication agents or techniques and/or improper or negligent use of such agents or techniques.

b. Service Provider may be required to perform major tree pruning or removal of trees and/or shrub growth located on or adjoining City sites, so that said trees do not present a danger to persons or improvements of City. Such responsibility may include planting, watering, treatment, fertilizing, the cutting away and removal of dead, diseased, broken or otherwise impaired branches, and the complete removal of those trees and shrubs whose location or state of health demand such removal. Such work is considered Extra Work in scope above the normal tree and shrub trimming requirements identified in Section II.C.2 of this Description of Work and Services. City shall be the sole determinate of what constitutes normal or extra work.

c. Service Provider may be required to eradicate weeds, plants and undesirable growth within adjacent properties. The work and services necessary to accomplish the foregoing shall be coordinated with the control activities of any governmental agencies concerned with the work. Elimination of undesirable weeds or specific ground plantings may be accomplished by means of appropriate herbicides and pesticides after prior written approval of City. The elimination process shall be performed in such manner as not to endanger or damage existing turf and other plantings within City sites or plant or animal life on adjacent properties.

d. Service Provider may be required to plant flowers, plants, and place bark or mulch.

e. All extra work shall commence on the specified date established and Service Provider shall proceed diligently to complete said work within the time allotted.

f. City retains the right at all times to accept, re-negotiate or decline bids for extra work and further retains the right to negotiate with third party companies to perform extra work.

2.6. Damage by Service Provider. All damages incurred to existing facilities by the Service Provider's operation shall be repaired or replaced at the Service Provider's expense. All such repairs or replacements shall be completed within the following time limits:

a. Irrigation damage shall be repaired or replaced within one watering cycle.

b. All damages to shrubs, trees, turf or groundcover shall be repaired or replaced within five (5) working days.

c. Minor damage to trees such as bark lost from impact of mowing equipment shall be remedied by a qualified tree surgeon or arborist. If damage results in loss of a tree, the damaged tree shall be removed and replaced to comply with the specific instructions of City.

d. Minor damage to shrubbery may be corrected by appropriate pruning as required in Section II. Major damage shall be corrected by removal of the damaged shrub and replacement.

e. All damage resulting from chemical operation, such as spray-drift or lateral-leaching, shall be corrected in accordance with the aforementioned maintenance practices and the soil conditioned to ensure its ability to support plant life.

f. All damage caused to components of the sites such as pumps, pump houses, doors, drainage structures, walkways, fences, light fixtures etc. from accidents or cumulative effects of incidents caused by the carelessness of Service Provider's staff shall be immediately corrected at the Service Provider's expense.

2.7. Inquiries and Complaints. The Service Provider shall maintain a written log of all complaints, the date and time thereof and the action taken pursuant thereto or the reason for non-action. The log of complaints shall be open to the inspection of the City at all reasonable times.

All complaints shall be abated as soon as possible after notification; but in all cases within 24 hours, to the satisfaction of the City. If any complaint is not abated within 24 hours, the City shall be notified immediately of the reason for not abating the complaint followed by a written report to the City within five (5) days. If the complaints are not abated within the time specified or to the satisfaction of the City, the City may correct the specific complaint and the total cost incurred by the City will be deducted and forfeit from the payments owing to the Service Provider from the City.

2.8. Safety. Service Provider agrees to perform all work outlined in this Agreement in such a manner as to meet all accepted standards for safe practices. Service Provider shall safely maintain stored equipment, machines, and materials or other hazards consequential or related to the work; and agrees additionally to accept the sole responsibility for complying with all local, City, State or other legal requirements including but not limited to, full compliance with the terms of the applicable O.S.H.A. and CAL-O.S.H.A. Safety Orders at all times so as to protect all persons, including Service Provider's employees, agents of the City, vendors, members of the public or others from foreseeable injury, or damage to their property. Service Provider shall inspect for potential hazards at the various sites covered by this RFP and keep a log indicating date inspected and action taken.

It shall be the Service Provider's responsibility to inspect, and identify, any condition(s) that renders any portion of the area unsafe, as well as any unsafe practices occurring thereon. The City shall be notified immediately of any unsafe condition that requires major correction. Service Provider shall be responsible for making minor corrections including, but not limited to; filling holes in turf areas and paving, using barricades or traffic cones to

alert the public of the existence of hazards, replacing valve box covers, and securing the area so as to protect members of the public or others from injury. Service Provider shall obtain emergency medical care for any member of the public who is in need thereof, because of illness or injury occurring within the landscape easement area. Service Provider shall cooperate fully with City in the investigation of any accidental injury or death occurring on the premises, including a complete written report thereof to the City within five (5) days following the occurrence.

2.9. Hours and Days of Maintenance Services. The basic daily hours of maintenance service shall be from 7:00 a.m. to 5:00 p.m. A work week is typically described as Monday through Friday, but City may approve requests from Service Provider to work infrequent Saturdays due to wet weather or other anomalies. Requests must be submitted to City in writing 48 hours prior to the Saturday workday.

Service Provider shall provide adequate staffing to perform the required maintenance services during the prescribed hours five (5) days per week. Any changes in the days and hours of operation heretofore prescribed shall be subject to approval by the City.

Per State of California Labor Code, Service Provider is directed to the following prescribed requirement with respect to the hours of employment. Eight (8) hours of labor under this Agreement shall constitute a legal day's work and said Service Provider shall not require or permit any laborer, worker or mechanic, or any subcontractor employed by him to perform any of the work described herein to labor more than eight (8) hours during any one day or more than forty, (40) hours during any one calendar week, except as authorized by Labor Code Section 1815, under penalty of paying to the City the sum of Twenty-Five Dollars ($25) for each laborer, worker or mechanic employed in the execution of said Agreement by him, or any subcontractor under him, upon any of the work included in said Agreement for each calendar day during which such laborer, worker, technician, specialist or mechanic is required or permitted to labor more than eight (8) hours in any one calendar day or forty (40) hours in any one calendar week, in violation of the provisions of Section 1811 to 1815, inclusive, of the Labor Code of the State of California.

2.10. Maintenance Schedules. Service Provider shall, within ten (10) days after the effective date of this Agreement, submit a work schedule to the City for review and approval. Said work schedule shall be set on an annual calendar identifying and delineating the time frames for the required functions by the day of the week, morning and afternoon. In addition, Service Provider shall notify the City, in writing, at least two (2) weeks prior to the scheduled date and time for the eradication process of rodents.

The Service Provider shall submit revised schedules when actual performance differs substantially from planned performance. Said revisions shall be submitted to the City for review, and if appropriate approval, within five (5) working days prior to scheduled time for the work.

The above provisions are not construed to eliminate the Service Provider's responsibility in complying with the requirements to notify the City for Specialty Type maintenance as set forth immediately hereafter.

Service Provider shall notify the City, in writing, at least two (2) weeks prior to the date and time of all "Specialty Type" maintenance operations. "Specialty Type" operations are defined as:

a. Fertilization
b. Turf renovation/reseeding
c. Micro-Nutrients/soil amendments
d. Spraying of trees, shrubs or turf

e. Aesthetic tree pruning
f. Other items as determined by the City

2.11. Service Provider's Staff. The Service Provider shall provide sufficient personnel to perform all work in accordance with the specifications set forth herein. Service Provider's employees, whether assigned to any one area or as part of a crew serving any number of areas, shall include at least one individual who speaks and comprehends the English language.

The City may at any time give Service Provider written notice to the effect that the conduct or action of a designated employee of Service Provider is, in the reasonable belief of the City, detrimental to the interest of the public within the landscape easement area. Service Provider shall meet with representatives of the City to consider the appropriate course of action with respect to such matters and Service Provider shall take reasonable measures to assure the City that the conduct and activities of Service Provider's employees will not be detrimental to the interest of the public within the landscape easement area.

The City requires the Service Provider to establish an identification system for personnel their which clearly indicates to the public the name of the individual employee responsible for the landscape and grounds maintenance services. The identification system shall be furnished at the Service Provider's expense and may include appropriate attire and/or name badges as specified by the City.

The Service Provider shall require each of his employees to adhere to basic public works standards of appropriate working attire. These are basically: uniforms, proper shoes and other gear required by State Safety Regulations, and proper wearing of the clothing. Shirts shall be worn at all times and buttoned. It is Service Providers sole responsibility to assure its employees are provided the proper personnel protective equipment (PPE) that each specific duty requires.

2.12. Signs/Improvements. Service Provider shall not post signs or advertising matter upon the premises or improvements unless they are proper men working signs, without the City's prior approval.

2.13. Utilities. The City shall pay for all utilities within the Maintenance Area with the exception of telephone. However, water usage shall not exceed amount required to comply with irrigation schedules established by the City. Service Provider shall pay for all excessive utility usage due to Service Provider's failure to monitor irrigation system malfunctions or unauthorized increases in the frequency of irrigation. The excess cost will be determined by comparing current usage with historical usage for the same time period. The excess cost factor to be deducted from payments to Service Provider by the City will be presented to the Service Provider by the City 15 days prior to actual deduction.

2.14. Non-Interference. Service Provider shall not interfere with the public use of the premises and shall conduct its operations as to offer the least possible obstruction and inconvenience to the public or disruption to the peace and quiet of the area within which the services are performed.

2.15. Use of Chemicals. All work involving the use of chemicals shall comply with all Federal, State and local laws and will be accomplished by a Qualified Applicator under the direction of a Licensed Pest Control Advisor. Service Provider, in complying with the California Food and Agricultural Code, shall provide a copy of a valid Pest Control Business License, a valid Pest Control Advisor's License and a Qualified Applicator's License prior to using any and all applicable chemicals within the area(s) to be maintained.

Service Provider, in addition to complying with the California Food and Agricultural Code, must be registered with the County of Madera Agricultural Commission. Service Provider shall also be certified in categories D and E of the

Pest Control Advisor's License and in category B of the Qualified Applicator's License. If Service Provider does not possess a valid Pest Control Advisor's License with appropriate categories, Service Provider, upon written consent of the City per Section 13 of the Agreement, may subcontract this service. If the chemical application is performed without the necessary approvals, including registration, licenses and permits, City may deduct pro rata from Service Provider's invoice applicable costs for chemical spraying.

The action above shall not be construed as a penalty but as an adjustment of payment to Service Provider due to the failure of the Service Provider to complete or comply with the provisions of this Agreement.

A listing of proposed chemicals to be used including commercial name, application rates and type of usage shall be submitted to the City for approval at the commencement of the Agreement. No chemical applications shall begin until written approval of use is obtained from the City. Chemicals shall only be applied by those persons possessing a valid California Certified Applicator's license. Application shall be in strict accordance with all governing regulations.

Records of all operations stating dates, times, methods of application, chemical formulations, applicators names and weather conditions shall be made and retained in an active file for a minimum of three (3) years. Service Provider shall provide a chemical use report that is site specific with the monthly billing. A copy of the Pest Control Advisor's recommendation for each application that is site specific shall be provided to the monitor and applicator prior to each application. This shall be in addition to the copy of the usage summary that is provided to the Madera County Agricultural Commissioner. All chemicals requiring a special permit for use must be registered with the County Agricultural Commissioner and a permit obtained with a copy to the City of Madera Department of Parks and Community Services prior to application. All regulations and safety precautions listed in the Pesticide Information and Safety Manual published by the University of California shall be adhered to.

2.16. Maintenance, Repairs and Replacements Due to Extraordinary Incidents. Service Provider shall be responsible for performing maintenance, repairs and replacement, when the need for such work arises out of Acts of God and third-party negligence in accordance with the provisions of this Section. The Service Provider shall repair or replace:

a. Damaged, diseased (untreatable) or dead shrubs, ground cover and trees in accordance with Sections 2.18 (h) and 2.19 (e) and,

b. Inoperable irrigation equipment described in Section 2.22 (a, b, c)

The Service Provider shall submit a written estimate of the cost for performing such work. The City may, upon review and approval of such estimate, authorize the Service Provider to perform said work by return of a signed copy of Service Providers estimate. After submittal of the bill, the Service Provider shall be reimbursed only for the agreed upon cost estimate. In the event that the Service Provider's written estimate is not approved, then the City reserves the right to contract with a third party to perform such work.

2.17. Turf Care. The Service Provider shall perform at his/her sole expense the following services:

Mowing: Turf shall be mowed with an adequately sharpened rotary or reel-type mower, equipped with rollers, to ensure a smooth surface appearance without scalping. All cool season grasses (Blue Grass and Fescues) to be cut at 2-1/2 inches during March through November and at 2 inches during December to February of each year. The mowing heights will be adjusted by the City during periods of renovation. All grass clippings will be collected and removed from the site on the same day the area is mowed. A mowing schedule will be established and maintained. This schedule will provide that all areas will be mowed not less than once a week during the warm season of March to November and once every two weeks during the cool season of December to February. This schedule will be submitted to the City for approval.

a. Power Edge: With each mowing, the edge of the grass along sidewalks, curbs, shrub and flower beds, and walls shall be trimmed to a neat and uniform line. Where trees and shrubs occur in turf areas, all grass shall be removed 6 inches from the trunks of trees and away from the drip line of shrubs by use of power scythe, approved chemicals, or small mowers as required. Trim around all sprinkler heads as necessary in order to provide maximum water coverage. Edging will be done concurrent with each mowing. The edge of the turf shall be trimmed around valve boxes, meter boxes, backflow devices or any structures located within the turf areas. All turf edges are to be maintained to prevent grass invasion into adjacent shrub, flower, and ground cover bed areas. All clippings shall be removed from the site the same day area is edged. After mowing and edging is completed all adjacent walkways shall be cleaned to remove accumulated debris and limit hazardous conditions.

b. Weed Control: Control turf weeds as needed in accordance with industry standard to maintain turf stands that are 90 % weed free. Hand removal of noxious weeds or grasses will be required as necessary as they occur.

c. Insect, Ants and Disease Control: Eliminate all insect, ants and disease affecting turf areas

d. Aerification: City may request aerification at several or all sites depending upon existing conditions. Expenses related to aerification processes may be billed as Additional Work as specified.

e. Thatch Removal: Verticut all cool season grasses once annually prior to the over-seeding operation. Equipment will consist of standard renovating or vertical mowing types. City is to be notified at least two (2) weeks prior to the exact date of renovation.

f. Irrigation: Irrigation, including hand watering and bleeding of valves during an emergency situation, as required to maintain adequate growth rate and appearance and in accordance with a schedule most conducive to plant growth. Service Provider shall be proficient with Toro Sentinel Field Controllers. Service Provider shall contact the manufacturer for service and training on an as-needed basis. Service Provider to provide City with a quarterly written irrigation report. City shall have the ability to change the irrigation schedule at any time. Adequate soil moisture will be determined by programming the automatic sprinkler controllers as follows:

1) Consideration must be given to the soil conditions, season temperatures, wind conditions, humidity, minimizing runoff and the relationship of conditions which affect day and night watering. This may include daytime watering during winter weather to prevent icy conditions and manual operation of the irrigation system during periods of windy or inclement weather. During freezing and/or windy conditions, automatic irrigation will be discontinued.

2) In areas where wind creates problems of spraying water onto private property or a road right-of-way the controllers shall be set to operate during the period of lowest wind velocity which would normally occur at night (between the hours of 7:00 p.m. and 6:00 a.m.).

3) The Service Provider shall be responsible for monitoring all systems within the jurisdiction of this specification and correct for: coverage, adjustment, clogging of lines, and removal of obstacles, including plant materials which obstruct the spray.

4) Check systems and adjust and/or repair any sprinkler heads causing excessive runoff, including slope areas, or which throw directly onto roadway paving or walks (where sprinkler heads can be adjusted) within the Zone.

5) All controllers shall be adjusted to consider the water requirements of each season, plant community, and adverse weather changes and local watering ordinances.

6) Irrigation system will be controlled by Service Provider in such a way as not to cause an excessively wet area which could interfere with the Service Provider's ability to mow all turf.

7) The Service Provider shall observe and note any deficiencies occurring from the original design and review these findings with the City, so necessary improvements can be considered.

8) Service Provider shall repair all leaking or defective valves immediately upon occurrence, or within twenty-four (24) hours following notification from the City of such a deficiency.

9) Service Provider shall file a monthly statement with the Department of Parks and

Community Services, certifying that all irrigation systems are functioning properly and provide an irrigation schedule on a quarterly basis.

10) The bleeding of valves and hand watering are to be used only in emergency situations.

g. Fertilization: Turf shall be fertilized twice (2 times) a year with Best – Triple Twelve 12-12-12 during the months of May and September. All fertilizer used shall be inorganic and granular. Rate for each application shall be one (1) pound of actual available nitrogen per one thousand (1,000) square feet of turf area. In addition to the balanced type commercial fertilization, the Service Provider shall fertilize all turf areas with Best – Turf Supreme 16-6-8 four times a year during March (after aeration), April, October and November of each calendar year at a rate of one (1) pound of actual available nitrogen per one thousand (1,000) square feet. All turf areas fertilized shall be thoroughly soaked immediately after fertilization. Soil tests shall be taken by Service Provider one (1) time per year during the month of March. Fertilizer materials and rates may be adjusted by City based on test results.

i: Turf Reseeding: Service Provider as needed, shall over-seed all turf area bare spots to reestablish turf to an acceptable quality. When Service Provider reseeds turf, he will aerify, renovate, or verticut, seed and mulch (spread evenly over the entire area to a uniform depth of ¼ inch) in this sequence. The City may require the use of sod when deemed necessary. Service Provider shall be entitled to additional compensation for the cost of the sod only provided loss of turf was not due to the negligence of the Service Provider. Over-seeding shall be sown at a rate of five (5) pounds per one thousand (1,000) square feet and reseeding of bare areas shall be sown at a rate of eight (8) pounds per one thousand (1,000) square feet. The following seed specifications shall be used for all over-seeding and reseeding and may be adjusted at the City's discretion.

Three Way Tall Fescue LOL	Proportion by Weight Purity Germination
Durana Tall Fescue Grass	44.30% 85%
Helix Tall Fescue	32.50% 85%
Prospect Tall Fescue	21.00% 85%

2.18. Shrub, Ground Cover and Vine Care: The Service Provider shall perform at his sole expense the following services:

a. Pruning (with hand pruners/loppers/saws) as indicated by the City, prune shrubbery between the months of January and March to encourage healthy growth habits pertaining to each individual species of plant, and for an overall balanced shape and appearance. All shrubs shall be free of dead wood, weak, diseased, insect-infested, and damaged limbs shall at all times. In general, selective thinning cuts should be made; not "heading" or tipping" cuts. Some growth will need to be thinned or lifted slightly, one foot (1') to two feet (2'), to allow all sprinklers to spray freely. Remove all clippings the same day shrubbery is pruned.

b. Trimming (with hedge shears or hand-pruners) restrict growth by trimming shrubbery and ground covers to area behind curbs and walkways, within planter beds and away from walls, fences and utilities as necessary, or upon written notice by the City. Keep ground cover trimmed two feet (2') diameter from the base of shrubs. For all high-branches, open shrubbery and all trees, keep ground cover trimmed one foot (1') away from outer perimeter of trunks. For all trees in turf areas, spray a two-foot (2') radius clearing out from perimeter of trunk and mulch. Do not use string trimmers around trees and shrubs. Trim designated formal hedges and/or shrubs to heights indicated by the City. Trim clinging vines (e.g., Ivy, Ficus, Virginia Creeper) to stay on block wall surfaces - not on buildings (except as designated) nor entangled in groundcover, shrubs or trees.

c. Renovate ground covers (e.g. Rosemary, Acacia) according to prescribed practices in the industry as needed to maintain a healthy vigorous appearance and growth rate. All Rosemary ground cover to be renovated and lowered once per year during the months of February through March. Ground cover height shall be at the discretion of the City.

d. Maintain shrub areas to be free of disease, insects and ants.

e. Weed Control: All ground cover and shrub beds are to be kept weed free at all times. Methods for control can incorporate one or all three of the following:

1) Hand removal
2) Cultivation
3) Chemical eradication (mainly within point irrigated areas). Use chemical eradication twice a year.

f. Fertilization: Mechanically broadcast or individually apply (point irrigation) fertilizer three (3) times per year during the months of March (Best – Triple Twelve 12-12-12), May (Best – Supreme 16-6-8), and September (Best – Supreme 16-6-8). Individually apply Best Triple Twelve 12-12-12 at the rate of 1 cup per plant, to all plants serviced by a point irrigation system. Service Provider will cultivate into soil. Soil tests shall be taken by Service Provider one (1) time per year during the month of March. One soils test with complete analysis and recommendation(s) shall be taken for every five acres of designated landscape areas. Test site(s) to be determined by the City. Fertilizer materials and rates may be adjusted by City based on test results. The Service Provider shall provide the City with a fertilization schedule, with two (2) weeks' notification prior to the proposed fertilization.

g. Irrigation: Irrigation will be programmed in conjunction with automatic controllers or manual control valves servicing turf or ground cover and shrub areas in accordance with the requirements of this specification.

h. Shrub and Ground Cover Replacement: All damaged, diseased (untreatable) or dead shrubs and ground covers will be replaced as needed with the same material of similar size that existed and as required by the City unless otherwise notified by the City in writing. Shrubs and ground covers damaged or lost due to Service Provider negligence shall be replaced at Service Provider's expense. Shrubs and ground covers permanently damaged or lost due to vandalism may be covered at City expense. Service Provider shall be responsible to get City approval in writing prior to removal and/or replacement. Substitutions for any plant materials must have prior approval in writing by the City. Original plans and specifications should be consulted to determine correct identification of species. All shrubs shall be guaranteed to live and remain in healthy condition for no less than six (6) months from the date of acceptance of the job by the City.

2.19. Tree Care. The Service Provider shall perform at his sole expense the following services:

a. Tree Maintenance

1) Maintain seven (7) foot clearance for branches overhanging walks and fourteen (14) foot clearance for branches overhanging beyond curb line into the paved section of streets where applicable.

2) Control insects and diseases as needed.

3) Stake and support all replacement trees and replace stakes which have been broken or damaged on existing trees as required. Tree stakes shall be pentachlorophenol treated lodge pole pine not less than eight (8) feet in length for five (5) gallon size trees and not less than ten (10) feet for fifteen (15) gallon trees sizes, (two (2) per tree). Guy wires where required and plant ties will be of pliable, zinc-coated ten (10) gauge wire (two (2) ties per tree). Hose for covering wire to be either new or used garden hose at least one-half (1/2) inch in diameter (hose ties should allow for minimum of three (3) additional inches of clearance beyond the diameter of the branch or trunk being secured).

4) Stakes will not be placed closer than eight (8) inches from trunk of the tree.

5) Stakes and ties will be placed so no chafing of bark occurs and shall be checked frequently and retied to prevent girdling.

b. New Tree Pruning. During the first three (3) years of a tree's life, head back lower branches and prune all trees, including those on the slopes, for correct branching structure. Thereafter trees shall

be maintained in accordance with section 2.19 (a) above.

c. Fertilization. Apply/install tree fertilizer tablets (Best – Best Tabs 20-10-5) within drip line of tree two times per year (during the months of May and October).

d. Irrigation. Irrigation will be programmed in conjunction with automatic controllers or manual control valves servicing turf or ground cover and shrub areas in accordance with the requirements of these Specifications.

e. Tree Replacement. All trees permanently damaged will be replaced as needed with the identical species of tree unless otherwise notified in writing by the City. The need for and the size of replacement will be determined by the City. Size of the replacement shall be a minimum size of a 15-gallon container. Substitutions will require prior written approval by the City. Original plans and specifications should be consulted to insure correct identification of species. Trees permanently damaged or lost due to vandalism may be replaced at City expense. Service Provider shall be responsible to get City approval in writing prior to removal and/or replacement of these trees.

2.20. Use of Chemicals (Pesticides) for Disease and Pest Control. The Service Provider shall perform at his/her sole expense the following services:

a. Chemical Application. All work involving the use of chemicals will be accomplished by a State of California licensed pest control operator.

b. Permits. All chemicals requiring a special permit for use must be registered by the Service Provider with the County Agricultural Commissioner's office and a permit obtained with a copy to the City of Madera Department of Parks and Community Services prior to use. A copy of all forms submitted to the County Agricultural Commissioner shall be given to the City on a timely basis.

c. Compliance with Regulations. All regulations and safety precautions listed in the "Pesticide Information and Safety Manual" published by the University of California will be adhered to.

d. Pest Control. Control of ground squirrels, gophers, and other burrowing rodents by trapping and/or eradication will be provided by City. The Service Provider is not responsible for this service; however, when Service Provider sees evidence of such activity, they are to notify the City immediately by providing written notice to the City's designated contact. Whenever holes are visible upon the surface, these holes shall be filled and securely tamped to avoid moisture runoff entering the holes. This procedure shall be followed in all areas especially within all slope areas.

2.21. General Cleanup. The Service Provider shall perform at his sole expense the following services:

a. Trash Removal

b. Policing of Areas: All areas under maintenance and other designated areas will have above identified trash removed in conjunction with the approved maintenance schedule for each maintenance area on a weekly basis, with the exception of the Downtown District, where all trash receptacles are to be emptied 3 TIMES A WEEK.

c. Concrete/Asphalt Median Strip Maintenance. Service Provider is responsible for weed and grass removal within concrete asphalt median strip areas.

d. Curb and Gutter Maintenance. Service Provider is responsible for removal of weeds and grass from curbs, gutters, sidewalks asphalt cracks and expansion joints located adjacent to designated maintenance areas at all times.

e. Removal of Leaves. Accumulations of leaves shall be removed from all areas not less than once per week.

2.22. Irrigation System Management. All irrigation systems within the landscaped areas designated in

this Specification will be repaired and maintained as required for operation, by the Service Provider at his sole expense in the following manner:

a. Scope of Responsibility. The Service Provider shall maintain or repair and keep operable all irrigation equipment downstream of the backflow device including but not limited to sprinkler heads, drip systems, remote control valves, quick couplers, and risers. Repairs to automatic controllers, booster pumps, and backflow prevention devices may be performed at City Expense. Service Provider shall be responsible to get City approval in writing prior to removal and/or replacement of these irrigation system components.

b. Replacement Requirements. Replacements will be of original materials or substitutes approved by the City in writing prior to any installation.

c. Extent of Responsibility. The Service Provider will be responsible for immediate maintenance (repair or replacement) of all irrigation system components including those damaged due to vandalism. Service Provider will be responsible at all times for hand watering and the bleeding of valves in emergency situations as required to sustain and prevent loss of turf, trees, plants, and ground covers when automatic systems are not functioning.

2.23. Maintenance and Repair of Drainage Systems and Miscellaneous Improvements.

a. Drainage Systems: The following services shall be provided by the Service Provider at his expense except as otherwise provided for:

1) All surface drains ("V" ditches); if any, shall be kept clear of debris and overgrown planting so that water will have an unimpeded passage to its outlet. Service Provider will repair or replace concrete portions as necessary. Service Provider may request additional compensation for this added work. This compensation will be negotiated per standards set forth in Section 2.5 Additional Work.

2) All sub-surface drains (except storm drains), if any, shall be periodically flushed with water to avoid build-up of silt and debris. All inlets to sub-surface drains shall be kept clear of leaves, paper and other debris to ensure unimpeded passage of water. Service Provider shall replace all broken or stolen sections of pipe, catch basin boxes and grates. Service Provider may request additional compensation for this added work. This compensation will be negotiated per standards set forth in Section 2.5 Additional Work.

b. Miscellaneous Improvements: It will be the responsibility of the Service Provider to repair or replace mowing strips within the Zone unless otherwise specified. Service Provider shall be entitled to additional compensation for this added work.

2.24. Maintenance Inspections. The Service Provider shall:

a. Weekly perform a maintenance inspection during daylight hours of all facilities within the Maintenance Area. Such inspection shall be both visual and operational. The visual inspection shall include observation of all turf, trees, shrubs, and appurtenances to the Maintenance Area to ensure compliance with the above maintenance standards and to ensure the Maintenance Area remains visually appealing. The operational inspection shall include operation of all irrigation and other mechanical systems to check for proper operational condition and reliability.

b. Monthly meet on site with an authorized representative of the City for a walk-through inspection. Said meeting shall be at the convenience of the City and may include residents of the community. The City shall notify the appropriate local representatives of the time and place of each walk-through inspection at least one (1) week prior to such inspection. In addition, interim inspections may be made by the City. The Service Provider will be provided with a written notice including specified time frames to correct any deficiencies identified in the performance of this Agreement. It should be noted that a leaking valve must be repaired within twenty-four (24) hours following verbal and/or written notification.

2.24. Natural Areas Maintenance. Natural areas are open space areas that have minimal usage due to the sloping character of the land and the rugged landscape materials that are native to the land. Service Provider will provide periodic maintenance consisting of debris and litter removal only as directed by the City.

2.25. Playgrounds. Playgrounds shall be inspected weekly. At the time of inspection, Service Provider shall inspect each component to verify safe, proper operation. Playground components shall at all times meet or exceed standards set forth in ASTM 1487 and ASTM 1292. Inspection reports shall be submitted to City representative monthly.

Any equipment which is considered unsafe at the time of the inspection must be repaired or marked and taken out of service immediately. City representative must be notified in writing when components or playgrounds are removed from service.

More serious faults shall be immediately reported to the City representative. Any repair work, or replacement found to be necessary which in the opinion of the Service Provider does not result from normal usage/wear and tear must be immediately reported.

Additional repairs, renewals or replacements of playground equipment or components which in the opinion of the Service Provider are not due to normal wear and tear will be subject to the terms expressed in Section 2.5 Additional Work.

Service Provider will perform the following tasks weekly:

- Inspect soft fall material for proper depth as required by ASTM 1292 standards; rake soft fall material into low spots to achieve smooth, level surface.
- Inspect and clean/repair signage.
- Inspect playground components for structural integrity and safety compliance per ASTM 1487 standards.
- Tighten, adjust and lubricate all fixtures and fasteners and take immediate remedial action to correct any minor faults.
- Inspect and repair amenities adjacent to playground such as benches, trash receptacles and drinking fountains.
- Empty trash receptacles.
- Remove all trash from site.
- Inspect lighting and repair if necessary.
- Remove graffiti on playground equipment and adjacent structures.

3. Service Provider's fees and compensation: amount, how and when payable.

3.1 Fees. For all the work and services, including supplies and equipment, pertaining to the Landscape Maintenance Agreement and supplies required to be furnished by the Service Provider to the City, City agrees to pay to Service Provider and Service Provider agrees to accept and receive as payment in full the following fees and compensation which shall be known as the "Fee" to be paid as hereinafter set forth.

Exhibit 1

a. Cost Schedule

Group #1 Downtown Maintenance

Map #	Designation	Location	Monthly	Annual
1	Downtown	Downtown District	455	5460
			Group Total	5460

Group #2 Non-Median Maintenance

4	City Hall	205 West 4th Street	560	6720
5	Corporation Yard	1030 S. Gateway Drive	390	4680
6	Frank Bergon Center	238 South D Street	430	5160
7	WAC & Youth Hut	113 South Q Street	340	4080
8	Kennedy Pond	Kennedy Pond	290	3480
9	Mex-Am Center	716 Columbia	290	3480
10	Cleveland Linear	South side of Cleveland from Granada west to Glade	1785	21420
11	Granada Linear	West side of Granada from Cleveland to Foxglove (excluding Veterans Hall property)	720	8640
11A	Police Department	330 South C Street	265	3180
			Group Total	60,840

Group #3 Median Maintenance

12	Yosemite Ave Islands	Median island on Yosemite from Gateway west to Howard	415	4980
13	Gateway Dr	Islands & Park Strips – Cleveland to Fresno River	510	6120
14	Howard Road	Islands & Park Strips – Schnoor to west of Autumn	1035	12420
15	West Cleveland Islands	West from Schnoor to Granada	435	5220
16				
17	Hopy Island	Cypress and Yosemite	260	3120
18	Sunrise Island	Sunrise & Lake Street	240	2880
19	Barsotti Islands	Park Lane, Park Drive, Park South, North Park	865	10380
20	Mainberry Islands	Mainberry, Third, and Westgate	1500	18000
21	West Park	West Park	175	2100
22	Terrace Place	Terrace Place Island, North of Central	220	2640
23	4th & Sunset	4th & Sunset	195	2340
24	Renway Island	Renway Cul-de-sac	195	2340
25	Riverview Strips	Riverview East and West of Granada	415	4980
26	Gateway Tree Planters	East and West Side of Gateway Drive, Fresno River to Olive Avenue	290	3480
27	Roosevelt Planter Boxes	Roosevelt and 13th	195	2340
28	Kennedy Wall	Kennedy, East of Kennedy Pond	325	3900
29	Olive Avenue Islands	Olive Ave, Yosemite to Hwy 145	300	3600
30	East Cleveland Islands	Cleveland Ave, Gateway Dr. to Tozer	600	7200
32	Ave 17/Airport Median	Ave 17 West of Airport Dr.	230	2760
33	Yosemite Tozer (Crossroads)	Tozier Ave. South of Yosemite	230	2760
34	Cleveland Center Median	Cleveland median islands from Glade Ave west to Westberry	590	7080

35	Industrial Schnoor	Industrial Avenue between Granada and Schnoor Avenue and Schnoor Avenue between Howard Road and Industrial	405	4860
36	Lake Street	Lake Street from Cleveland to Ellis	325	3900
37	Ave 13 Median Island-Parkwood	Ave 13 Median Island in front of Parkwood School	290	3480
38	Ave 13 Median Island-Valero	Ave 13 West of Hwy 145 in front of Valero Station	210	2520
39	Sunset Wall	Sunset East of Schnoor Avenue	220	2640
40	Madera South H.S. Medians	Avenue 13 (Pecan) between Stadium and Pine	265	3180
41	4th Street Medians	4th Street from Lake Street West to Sunset	280	3360
			Group Total	134,580

b. Square Foot Rate for extra work $ .12

Hourly Rate for extra work $ $40.00

4. Term of Agreement. This Agreement shall be effective on February 19, 2020, after approval by the City Council at a duly scheduled meeting thereof and shall continue in full force and effect through February 19, 2023, unless otherwise terminated earlier by one of the parties pursuant to Section 8 of this Agreement. This Agreement may be extended by mutual written consent annually thereafter, not to exceed two (2) additional years, by providing such notice to the parties as identified in Section 8 of this Agreement.

5. Hold Harmless and Insurance Requirements.

5.1 Independent Service Provider. In the furnishing of the services provided herein, the Service Provider is acting as an independent Service Provider and not as an employee of the City. Service Provider acknowledges and agrees that at all times, Service Provider or any agent or employee of Service Provider shall be deemed at all times to be an independent contractor and is wholly responsible for the manner in which it performs the services and work requested by City under this Agreement. Service Provider, its agents, and employees will not represent or hold themselves out to be employees of the City at any time. Service Provider or any agent or employee of Service Provider shall not have employee status with City, not be entitled to participate in any plans, arrangements, or distributions by City pertaining to or in connection with any retirement, health or other benefits that City may offer its employees. Service Provider or any agent or employee of Service Provider is liable for the acts and omissions of itself, its employees, and its agents. Service Provider shall be responsible for all obligations and payments, whether imposed by federal, state, or local laws, including, but not limited to, FICA, income tax withholdings, unemployment compensation, insurance, and other similar responsibilities related to Service Provider's performing services and work, or any agent or employee of Service Provider providing same. Nothing in this Agreement shall be construed as creating an employment or agency relationship between City and Service Provider or any agent or employee of Service Provider. Any terms in this Agreement referring to direction from City shall be construed as providing for direction as to policy and the result of Service Provider's work only, and not as to the means by which such a result is obtained. City does not retain the right to control the means or the method by which Service Provider performs work under this Agreement

5.2 Indemnification and Waivers. Service Provider shall indemnify, defend, and hold harmless the City, and its officers, employees, and agents ("City indemnitees"), from and against any and all causes of action, claims, liabilities, obligations, judgments, or damages, including reasonable legal counsels' fees and costs of litigation ("claims"), arising out of the Service Provider's performance of its obligations under this agreement or out of the operations conducted by Service Provider, except for such loss or damage arising from the sole active negligence or willful misconduct of the City. In the event the City indemnitees are made a party to any action,

lawsuit, or other adversarial proceeding arising from Service Provider's performance of this agreement, the Service Provider shall provide a defense to the City indemnitees, or at the City's option, reimburse the City indemnitees their costs of defense, including reasonable legal counsels' fees, incurred in defense of such claims. Service Provider shall and does hereby waive any claim against the City of Madera, its officers, volunteers and employees, for any damage to equipment or other property connected with Service Provider's operations under this Agreement arising from any cause.

5.3 Insurance. During the term of this Agreement, Service Provider shall maintain, keep in force and pay all premiums required to maintain and keep in force insurance, the limits of which shall be as required by the City of Madera. A copy of the City's requirements for such insurance coverage is attached hereto as Attachment "B".

6. Attorney's Fees/Venue. In the event that any action is brought to enforce the terms of this Agreement, the party found by the court to be in default agrees to pay reasonable attorney's fees to the successful party in an amount to be fixed by the Court. The venue for any claim being brought for breach of this Agreement shall be in Madera County.

7. Governing Law. The laws of the State of California shall govern the rights and obligations of the parties under this Agreement, including the interpretation of the Agreement. If any part of the Agreement is adjudged to be invalid or unenforceable, such invalidity shall not affect the full force and effect of the remainder of the Agreement.

8. Termination.

8.1 This Agreement may be terminated at any time by either party upon fifteen (15) calendar days written notice. In the event the Agreement is terminated by either party, Service Provider shall be compensated for services performed to the date of termination based upon the compensation rates and subject to the maximum amounts payable agreed to together with such additional services performed after termination which are authorized in writing by the City representative to wind up the work performed to date of termination.

8.2 City may immediately suspend or terminate this Agreement in whole or in part by written notice where, if in the determination of City, there is:

a. A failure by Service Provider to comply with any material term of this Agreement;
b. A substantially incorrect or incomplete report submitted by Service Provider to City.

In no event shall any payment by City or acceptance by Service Provider constitute a waiver by such party of any breach of this Agreement or any default which may then exist on the part of either party. Neither shall such payment impair or prejudice any remedy available to either party with respect to such breach or default. City shall have the right to demand of Service Provider the repayment to City of any funds disbursed to Service Provider under this Agreement which, as determined by the appropriate court or arbitrator, were not expended in accordance with the terms of this Agreement.

All notices shall be mailed to the City:

City of Madera
Director of Parks & Community Services
701 E. 5th Street
Madera, CA 93638

To Service Provider: EMTS Inc.
2972 Larkin Ave.
Clovis, CA. 93612
(559) 292-7760

9. Compliance with Laws. In performance of this Agreement, Service Provider shall comply with all applicable local, state, and federal laws and regulations. In particular, Service Provider shall comply with laws listed below.

9.1 Laws Incorporated by Reference. The full text of the laws listed in this Section, including enforcement and penalty provisions, are incorporated by reference into this Agreement.

9.2 Conflict of Interest. By executing this Agreement, Service Provider certifies that it does not know of any fact which constitutes a violation of Title 9, Chapter 7 of the California Government Code (Section 87100 et seq.), or Title 1, Division 4, Chapter 1, Article 4 of the California Government Code (Section 1090 et seq.), and further agrees promptly to notify the City if it becomes aware of any such fact during the term of this Agreement.

9.3. Proprietary Information. In the performance of Services, Service Provider may have access to City's proprietary or confidential information, the disclosure of which to third parties may damage City. If City discloses proprietary or confidential information to Service Provider, such information must be held by Service Provider in confidence and used only in performing the Agreement. Service Provider shall exercise the same standard of care to protect such information as a reasonably prudent Service Provider would use to protect its own proprietary or confidential information.

9.4. Nondiscrimination Requirements. Service Provider shall comply with all state and federal laws in the administration of this Agreement.

9.5. Alcohol and Drug-Free Workplace. City reserves the right to deny access to, or require Service Provider to remove from, City facilities personnel of any Service Provider or subcontractor who City has reasonable grounds to believe has engaged in alcohol or drug abuse or illegal drug activity which in any way impairs City's ability to maintain safe work facilities or to protect the health and well-being of City employees and the general public. City shall have the right of final approval for the entry or re-entry of any such person previously denied access to, or removed from, City facilities. Illegal drug activity means possessing, furnishing, selling, offering, purchasing, using or being under the influence of illegal drugs or other controlled substances for which the individual lacks a valid prescription. Alcohol abuse means possessing, furnishing, selling, offering, or using alcoholic beverages, or being under the influence of alcohol. Drug abuse means being under the influence of prescription or over-the-counter drugs which the individual may have obtained legally but which impair the individual's ability to safely perform the job at hand or endangers others. Drug abuse also means the illegal or unauthorized use of, or intentional misuse of, prescription or over-the-counter drugs.

9.6. Public Records Act. Service Provider acknowledges that this Agreement and all records related to its formation, Service Provider's performance of services, and City's payment are subject to the California Public Records Act, (California Government Code §6250 et seq.). Such records are subject to public inspection and copying unless exempt from disclosure under federal, state, or local law.

10. Notices. All notices and communications from the Service Provider shall be to Director of Parks and Community Services. Verbal communications shall be confirmed in writing. All written notices shall be

provided and addressed as indicated above.

11. Assignment. Neither the City nor the Service Provider will assign its interest in this Agreement without the written consent of the other.

12. Entire Agreement. This contract sets forth the entire Agreement between the parties and supersedes all other oral or written provisions. Any changes to this Agreement requested by either City or Service Provider may only be effected if mutually agreed upon in writing by duly authorized representatives of the parties hereto. This Agreement shall not be modified or amended or any rights of a party to it waived except by such a writing.

13. Venue. The formation, interpretation, and performance of this Agreement shall be governed by the laws of the State of California. Venue for all litigation relative to the formation, interpretation, and performance of this Agreement shall be in the County of Madera.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement at Madera, California, the day and year first above written.

CITY OF MADERA

BY: _____
Andrew Medellin, Mayor

EMTS Inc.

BY: _____
Derik Jakusz, Account Manager

ATTEST:

_____
Alicia Gonzales, City Clerk

APPROVED AS TO FORM

_____
Hilda Cantú Montoy, City Attorney`

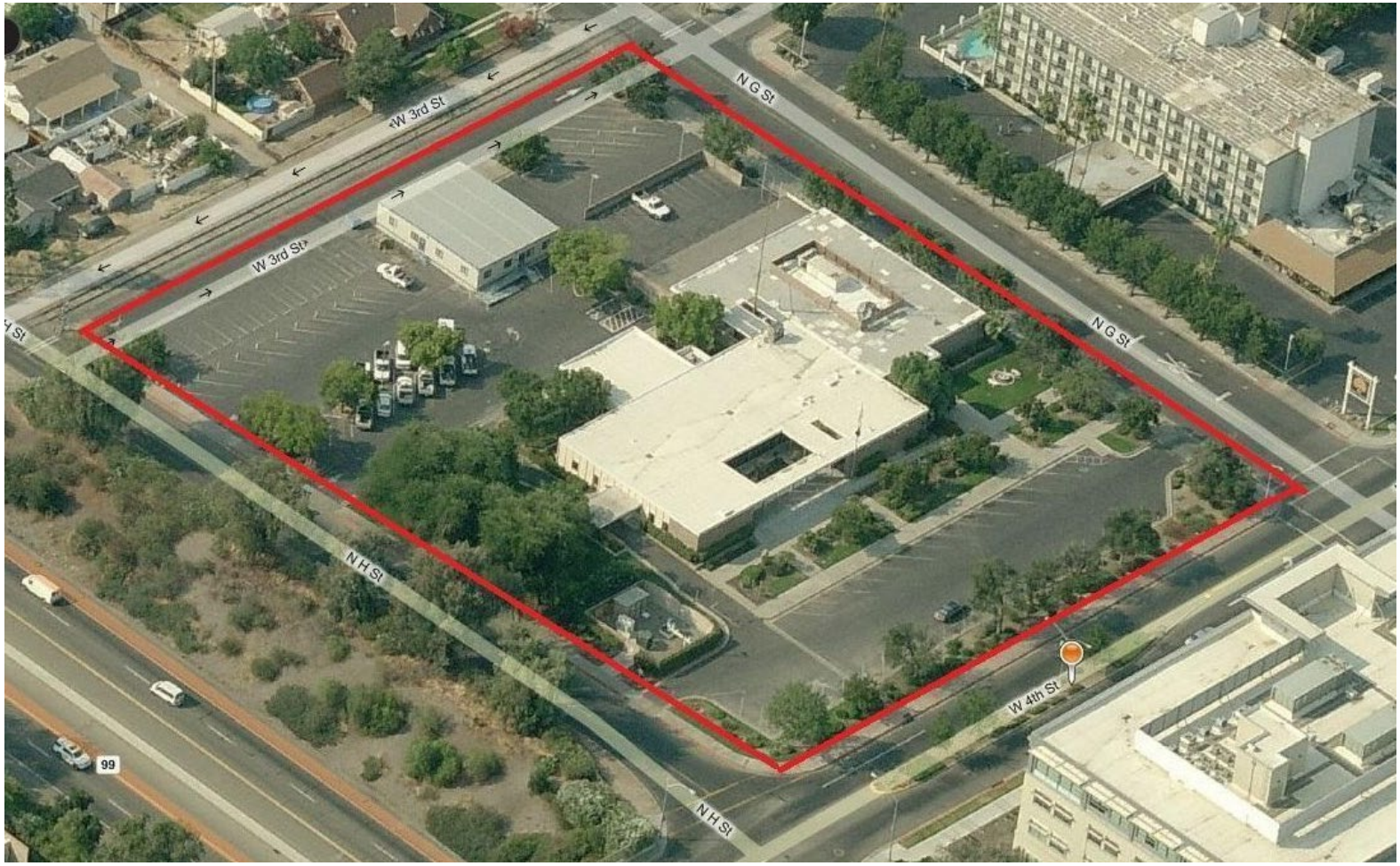
Attachment A

Group #1 – Downtown Maintenance



Map #1 – Downtown

Group #2 – Non-Median Maintenance



Map #4 – City Hall
205 W. 4th Street



Map #5 – Corporation Yard
1030 S. Gateway Drive



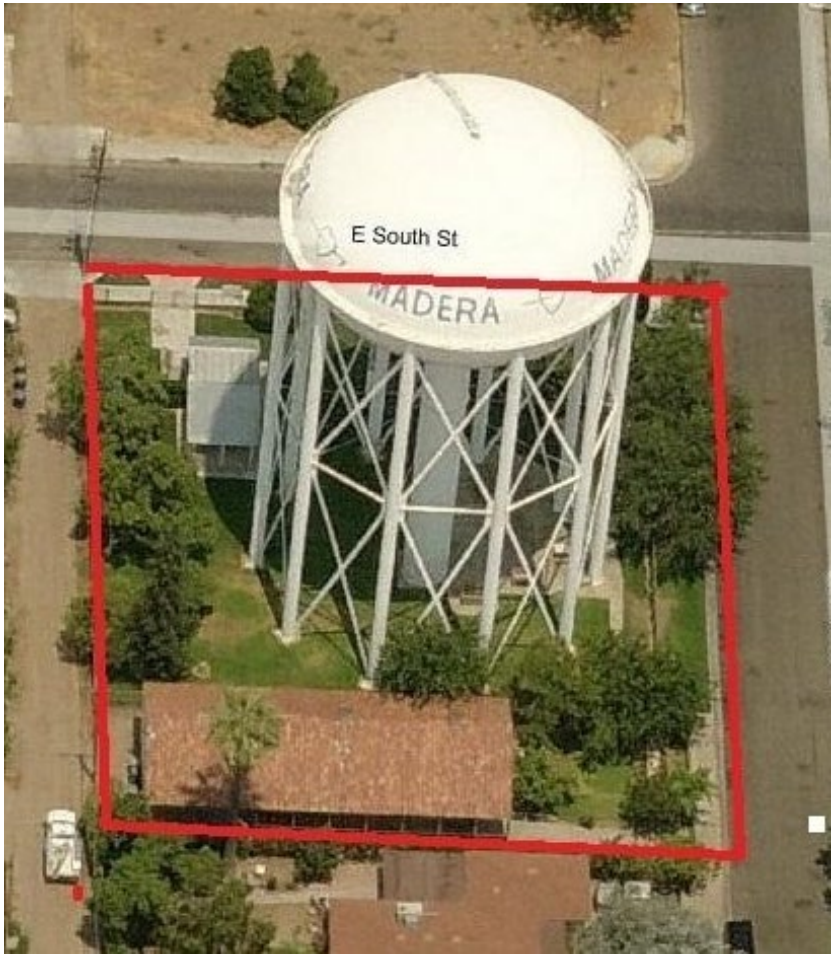
Map # 6 – Frank Bergon Senior Center
238 S. D Street



Map #7 – Westside Activity Center & Rotary Youth Hut
1124 E. Yosemite Ave. & 113 S. Q Street



Map # 8 – Kennedy Pond



Map #9 – Mexican-American Activity Center
716 Columbia



Map #10 – Cleveland Linear
South side of Cleveland from Granada west to Glade



Map #11 – Granada Linear

West side of Granada from Cleveland to Foxglove (Excluding Veterans Hall)



Map #11A – Police Station
330 South C Street

Group #3 – Median Maintenance



Map #12 – Yosemite Avenue Islands
Median island on Yosemite from Gateway west to Howard



Map #13 – Gateway Drive
Islands & Park Strips – Cleveland to Fresno River



Map #14 – Howard Road

Islands & Park Strips – Schnoor to west of Autumn



Map #15 – West Cleveland Islands
West from Schnoor to Granada



Map # 17 – Hopy Island
Cypress and Yosemite



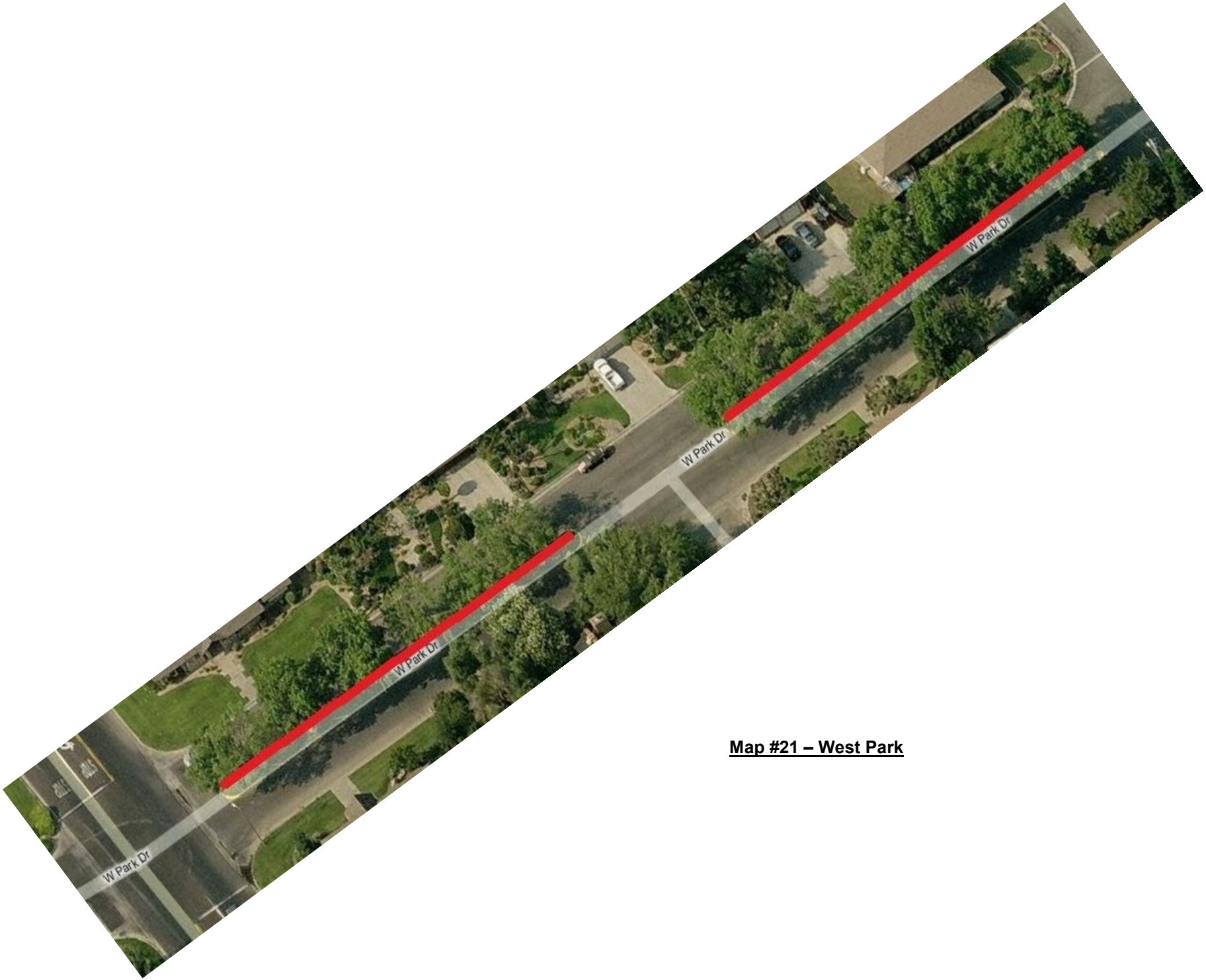
Map #18 – Sunrise Island
Sunrise & Lake Street



Map #19 – Barsotti Islands
Park Lane, Park Drive, Park South, North Park



Map #20 – Mainberry Islands
Mainberry, Third, and Westgate



Map #21 – West Park



Map #22 – Terrace Place
Terrace Place Island north of Central



Map#23 – 4th & Sunset



Map #24 – Renway Island
Renway Cul-de-sac



Map #25 – Riverview Strip
Riverview East and West of Granada



Map#26 – Gateway Tree Planter

East and West Side of Gateway Drive, Fresno River to Olive Avenue



Map #27 – Roosevelt Planter Boxes

Roosevelt and 13th



Map #28 – Kennedy Wall
Kennedy, East of Kennedy Pond



Map #29 – Olive Avenue Islands

Olive Ave, Yosemite to Hwy 145



Map #30 – East Cleveland Islands
Cleveland Ave, Gateway Drive to Tozer



Map #32 – Avenue 17 / Airport Median
Avenue 17 West of Airport Drive



Map #33 – Yosemite/Tozer (Crossroads)
Tozer Avenue South of Yosemite



Map #34 –Cleveland Center Median
Cleveland median islands from Granada Ave. west to Glade



Map #35 – Industrial / Schnoor

Industrial Avenue between Granada and Schnoor Avenue and
Schnoor Avenue between Howard Road and Industrial



Map #36 – Lake Street
Lake Street from Cleveland Avenue to Ellis Street



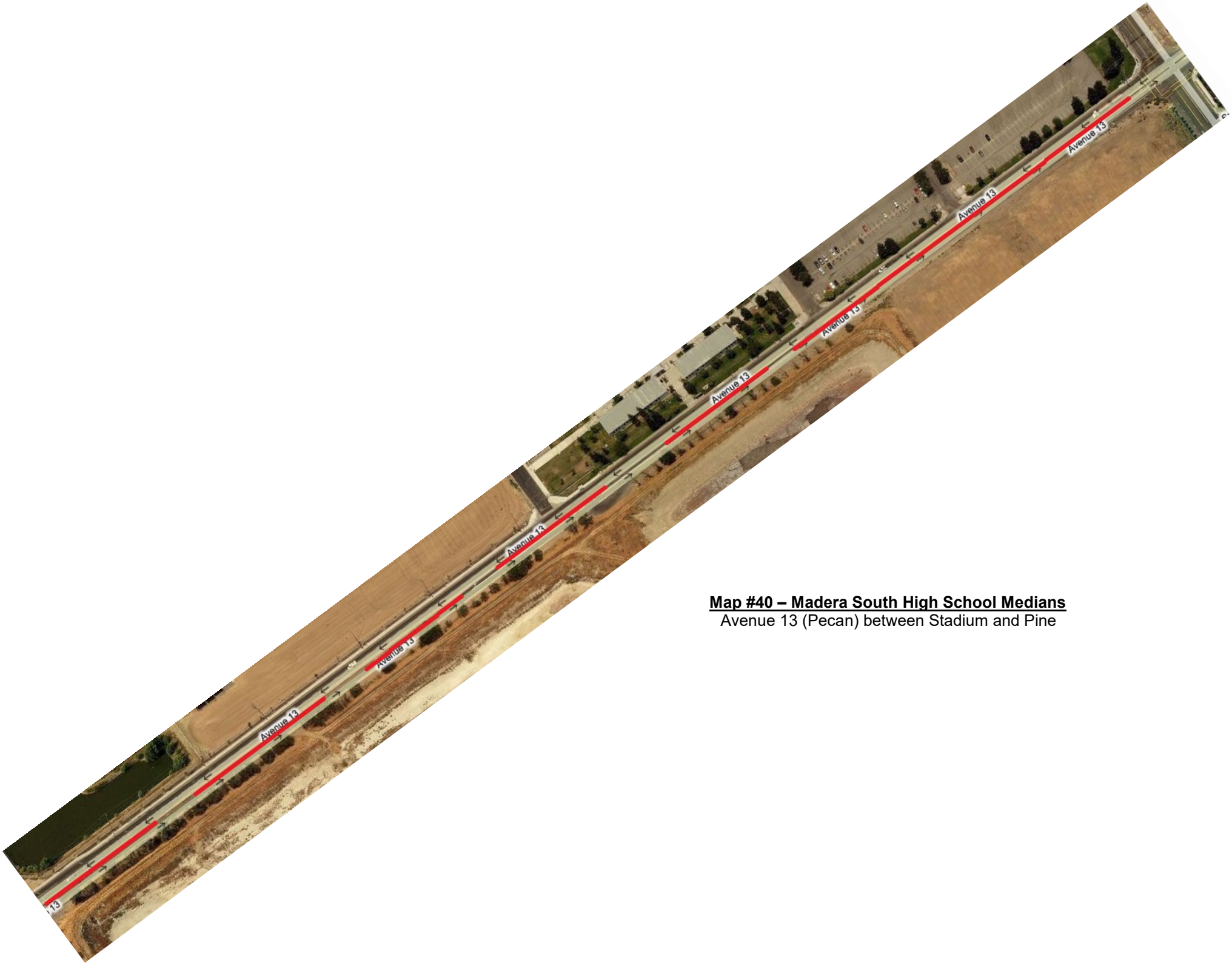
Map #37 – Avenue 13 Median Island – Parkwood
Avenue Median Island in front of Parkwood School



Map # 38 – Avenue 13 Median Island – Valero
Avenue 13 West of Hwy 145 in front of Valero Station



Map #39 – Sunset Wall
Sunset East of Schnoor Avenue



Map #40 – Madera South High School Medians
Avenue 13 (Pecan) between Stadium and Pine



Map #41 – 4th Street Medians
4th Street between Lake and Sunset

Attachment B

Insurance Requirements for Landscape Maintenance Service Provider

Without limiting Service Provider's indemnification of City, and prior to commencement of Work, Service Provider shall obtain, provide, and continuously maintain at its own expense during the term of the Agreement, and shall require any and all Subcontractors and Subconsultants of every Tier to obtain and maintain, policies of insurance of the type and amounts described below and in form satisfactory to the City.

Minimum Scope and Limits of Insurance

Service Provider shall maintain limits no less than:

- $2,000,000 **General Liability** (including operations, products and completed operations) per occurrence, $4,000,000 general aggregate, for bodily injury, personal injury and property damage, including without limitation, blanket contractual liability. Coverage shall be at least as broad as Insurance Services Office (ISO) Commercial General Liability coverage form CG 00 01. General liability policies shall be endorsed using ISO forms CG 20 10 o provide that the City and its officers, officials, employees and agents shall be additional insureds under such policies.
- $2,000,000 **Automobile Liability** combined single limit per accident for bodily injury or property damage at least as broad as ISO Form CA 00 01 for all activities of Service Provider arising out of or in connection with Work to be performed under this Agreement, including coverage for any owned, hired, non-owned or rented vehicles. Automobile Liability policies shall be endorsed to provide that the City and its officers, officials, employees and agents shall be additional insureds under such policies.
- **Worker's Compensation** as required by the State of California and $1,000,000 **Employer's Liability** per accident for bodily injury or disease. Service Provider shall submit to the City, along with the certificate of insurance, a Waiver of Subrogation endorsement in favor of the City, it's officers, agents, employees, and volunteers.

Maintenance of Coverage

Service Provider shall procure and maintain, for the duration of the contract, insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the Work hereunder by Service Provider, his agents, representatives, employees, subcontractors or subconsultants as specified in this Agreement.

Proof of Insurance

Service Provider shall provide to the City certificates of insurance and endorsements, as required, as evidence of the insurance coverage required herein, along with a waiver of subrogation endorsement for workers' compensation. Insurance certificates and endorsements must be approved by the City prior to commencement of performance. Current evidence of insurance shall be kept on file with the City at all times during the

term of this Agreement. Agency reserves the right to require complete, certified copies of all required insurance policies, at any time.

Acceptable Insurers
All insurance policies shall be issued by an insurance company currently authorized by the Insurance commissioner to transact business of insurance in the State of California, with an assigned policyholders' Rating of A- (or higher) and a Financial Size Category Class VII (or larger), in accordance with the latest edition of Best's Key Rating Guide.

Waiver of Subrogation
All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against the City, its elected or appointed officers, agents, officials, employees, and volunteers, or shall specifically allow Service Provider, or others providing insurance evidence in compliance with these specifications, to waive their right of recovery prior to a loss. Service Provider hereby waives its own right of recovery against the City and shall require similar written express waivers and insurance clauses from each of its subconsultants or subcontractors.

Enforcement of Contract Provisions (non-estoppel)
Service Provider acknowledges and agrees that any actual or alleged failure on the part of the Agency to inform Service Provider of non-compliance with any requirement imposes no additional obligations on the City, nor does it waive any rights hereunder.

Specifications not Limiting
Requirements of specific coverage features or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type. If Service Provider maintains higher limits than the minimums required above, the entity shall be entitled to coverage at the higher limits maintained by Service Provider.

Notice of Cancellation
Service Provider agrees to oblige its insurance agent or broker and insurers to provide to the City with thirty (30) calendar days' notice of cancellation (except for nonpayment for which ten (10) calendar days' notice is required) or nonrenewal of coverage for each required coverage.

Self-insured Retentions
Any self-insured retentions must be declared to and approved by the City. The City reserves the right to require that self-insured retentions be eliminated, lowered or replaced by a deductible. Self-insurance will not be considered to comply with these specifications unless approved by the City's Risk Manager.

Attachment B

Timely Notice of Claims
Service Provider shall give the City prompt and timely notice of claims made or suits instituted that arise out of or result from Service Provider's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies.

Additional Insurance
Service Provider shall also procure and maintain, at its own cost and expense, any additional kinds of insurance, which in its own judgement may be necessary for its proper protection and prosecution of the Work.

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

John Scarborough, Parks and Community Services Director

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: D-2

SUBJECT:

Consideration of Resolution Approving Acceptance of Grant Deed for Property Located at 16557 Austin Street, Madera, California 93638 Offered by Current Property Owners for Future Park development and Authorizing City Clerk to Execute and Record the Grant Deed and Certificate of Acceptance

RECOMMENDATION:

Staff recommends adoption of Resolution of the City of Madera, California Accepting the Grant Deed from Thakor Joe Pandit and Vanleela Pandit, Trustees of VIP Trust, created on September 19, 1979; Urmikant P. Mody and Madhurika U. Mody, as Co-Trustees of the Mody 1994 Living Trust; Arvind P. Mody and Ellen P. Mody, as Co-Trustees of the Mody 1988 Living Trust; Hemlatta M. Nirmal, Trustee of the Nirmal Family Trust, dated August 6, 2003; Divya Shah, Trustee of the Shah Family Trust dated 7/25/89; Ramesh Shah and Veena Shah, as Co-Trustees of the Ramesh B. Shah Revocable Living Trust, and Anil A. Desai, a married man as his sole and separate property and Authorizing the City Clerk to execute the Certificate of Acceptance for said Grant Deed and cause it to be recorded.

SUMMARY:

The owners of the property located at 16557 Austin Street have offered to donate 8.1 acres of their property to the City, with a commitment from the City that the property will eventually be developed into a new community park for the City. The requested action contemplated in this report would accept the Grant Deed and cause it to be recorded, transferring ownership of the land from the current owners to the City.

DISCUSSION:

Approximately two years ago, Mr. Joe Pandit and fellow owners approached City staff with an offer to donate 8.1 acres of their property if the City would agree that the property would ultimately be developed into a new City park. The property is located at 16557 Austin Street, Madera, California. The property is in the County, just north of the City Limits; however, within the Sphere of Influence.

Unfortunately, the dedication process has taken some time due to various factors including multiple owners (six owners with one-sixth ownership, including trusts) and staff turnover. There are no conditions attached to the proposed donation. However, the owners informally requested that any park built on the real property be named "India Park".

The following provides a summary of the process.

The City and County both received letters from Joe Pandit about two years ago offering the 8.1 acres for a park. The City took various steps necessary for acquiring the property. These steps included:

- Presenting the acquisition to the Planning Commission as required by the Government Code Section 65402 for a determination as to conformance with the General Plan. The Planning Commission held a public hearing and made a finding of General Plan conformity.
- The City retained Krazan and Associates to conduct an environmental assessment. Krazan completed a Phase I Environmental Site Assessment (ESA) followed by a Phase II ESA. The City is satisfied with those findings.
- The City commissioned an appraisal. The appraisal reflects a value of $311,500.00.

In the intervening period there were various staffing changes coupled with the unfortunate passing of one of the property owners. Additionally, some ownership interests also included Trust documents that needed to be reviewed by the Title Company.

City staff and the City Attorney's office have worked to bring this matter to the forefront and have opened escrow. The Title Company has been diligent in its efforts. At this time, the property owners and City staff are prepared to proceed. The escrow instructions include the following conditions which must be satisfied prior to the closing of Escrow (collectively, the "Conditions Precedent"):

1. Exception No. 5 must be removed from the Preliminary Report issued by Fidelity National Title on December 13, 2019, which questions whether the VIP Trust is capable of acquiring and holding title to the real property. The Title Company has requested that the VIP provide a Trust Certification declaring that the VIP Trust is authorized to acquire and hold real property, which will eliminate this exception before the close of escrow.

2. Escrow Officer shall be in a position to issue a CLTA policy of title insurance insuring the Grant Deed to the City, in an amount equal to the Property's appraised value of $311,500.00.

3. Any and all fees relating to title and escrow will be paid by the City.

4. The City will pay the pro-rated second installment property taxes due between the period of January 1, 2020 and the close of escrow, which are estimated at $5.65 per day.

5. Upon satisfaction of the above Conditions Precedent, Escrow Officer shall cause a Grant Deed to be recorded in the Official Records of Madera County, vesting absolute fee title to the City, in accordance with the legal process and procedure required by municipalities for accepting and recording deeds.

Upon approval of the resolution, the grant deeds will be executed, escrow will close, and the City Clerk will execute the Certificate of Acceptance and cause it to be recorded.

FINANCIAL IMPACT:

The escrow fees and title insurance premium are estimated at $3,000.00 and the pro-rated taxes are estimated to be $300.00. Upon accepting the property, staff will be required to maintain the site.

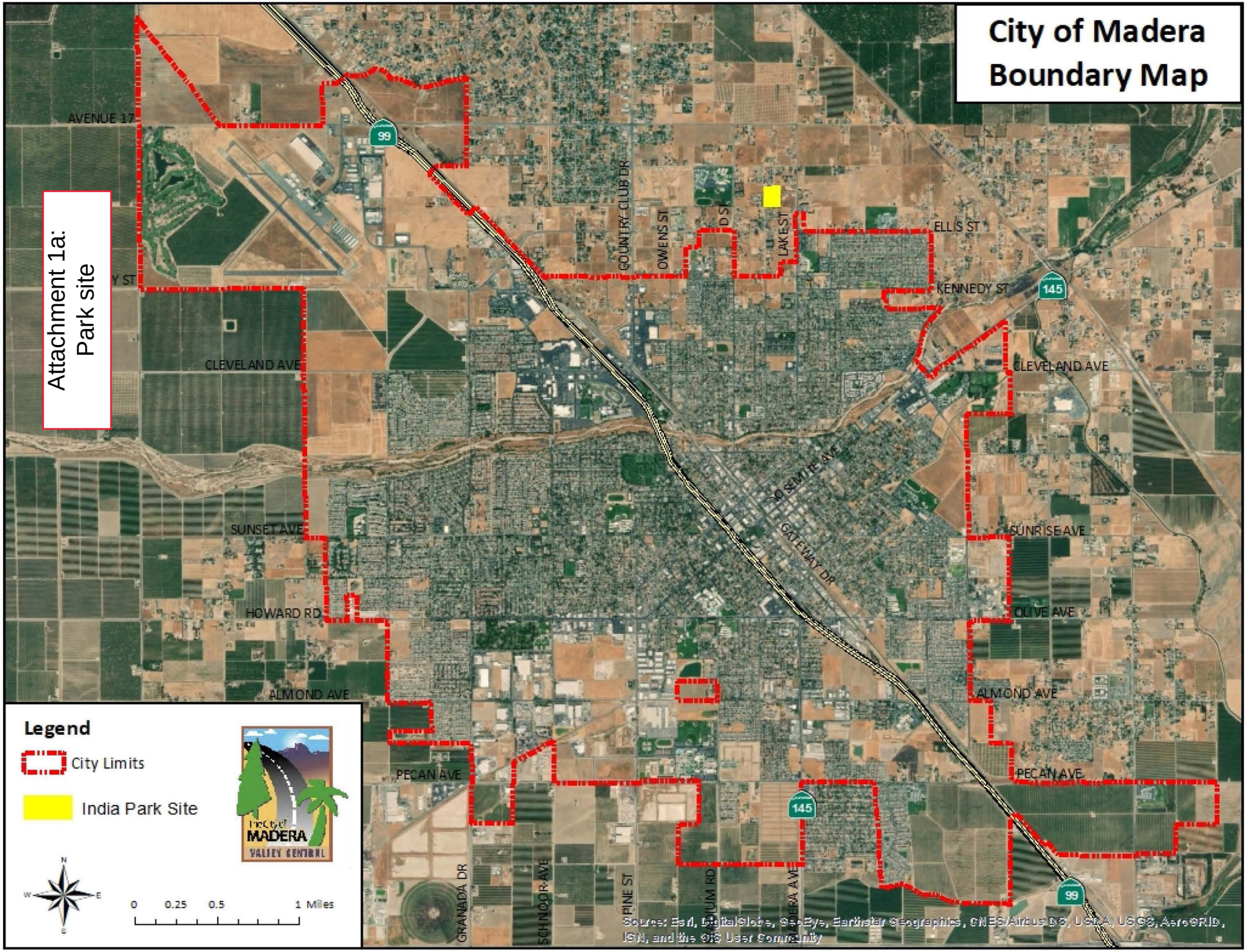
ALTERNATIVES:

Potential Council options include:

1. Approve the dedication of real property as outlined above.
2. Request additional information or clarifying information.
3. Reject the donation. Worth noting is that the City does not hold title to real property in the immediate area for park space.

ATTACHMENTS:

1. Aerial Map (2 maps)
2. Resolution
3. Exhibit A- Grant Deed


City of Madera
Boundary Map
Attachment 1a:
Park site
AVENUE 17
Y ST
CLEVELAND AVE
SUNSET AVE
HOWARD RD
ALMOND AVE
PECAN AVE
COUNTRY CLUB DR
OWENS ST
D ST
LAKE ST
ELLIS ST
KENNEDY ST
CLEVELAND AVE
YOSEMITE AVE
GATEWAY DR
SUNRISE AVE
OLIVE AVE
ALMOND AVE
PECAN AVE
GRANADA DR
SCHNOOR AVE
PINE ST
SUNNYSIDE AVE
99
145
Legend
City Limits
India Park Site
The City of MADERA
VALLEY CENTRAL
N
W
E
S
0
0.25
0.5
1 Miles
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Attachment 1b: Park site



RESOLUTION NO. 20 - _ _

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA APPROVING ACCEPTANCE OF GRANT DEED FOR PROPERTY LOCATED AT 16557 AUSTIN STREET, MADERA, CALIFORNIA 93638 OFFERED BY CURRENT PROPERTY OWNERS FOR FUTURE PARK DEVELOPMENT AND AUTHORIZING CITY CLERK TO EXECUTE AND RECORD THE GRANT DEED AND CERTIFICATE OF ACCEPTANCE

WHEREAS, Thakor Joe Pandit and Vanleela Pandit, Trustees of VIP Trust, created on September 19, 1979; Urmikant P. Mody and Madhurika U. Mody, as Co-Trustees of the Mody 1994 Living Trust; Arvind P. Mody and Ellen P. Mody, as Co-Trustees of the Mody 1988 Living Trust; Hemlatta M. Nirmal, Trustee of the Nirmal Family Trust, dated August 6, 2003; Divya Shah, Trustee of the Shah Family Trust dated 7/25/89; Ramesh Shah and Veena Shah, as Co-Trustees of the Ramesh B. Shah Revocable Living Trust, and Anil A. Desai, a married man as his sole and separate property (hereafter "Property Owners") own the property located at 1657 Austin Street; and

WHEREAS, Property Owners have offered real property located at 16557 Austin Street, Madera, CA 93638 for future park development; and

WHEREAS, Property Owners have offered a grant deed for the real property at no cost to City; and

WHEREAS, the Property Owners informally requested that any park built on the real property be named "India Park"; and

WHEREAS, on August 08, 2017, the Planning Commission held a public hearing and made a finding of General Plan conformity; and

WHEREAS, the City retained Krazan and Associates to conduct an environmental assessment. Krazan completed a Phase I Environmental Site Assessment (ESA) followed by a Phase II ESA. The City is satisfied with those findings; and

WHEREAS, any and all fees relating to title and escrow will be paid by the City; and

WHEREAS, the City will pay the pro-rated second installment property taxes due between the period of January 1, 2020 and the close of escrow; and

WHEREAS, the City Council has considered the offer and wishes to accept the grant deed.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF MADERA HEREBY finds, orders and resolves as follows:

1. The above recitals are true and correct.
2. The City Council approves acceptance of a Grant Deed from Property Owners which shall be in a form as that set forth in Exhibit A which is incorporated by reference.

3. The City Manager is authorized to accept non-material edits to the escrow documents and grant deed; the City Clerk is hereby authorized and directed to execute and cause to be recorded the Grant Deed and Certificate of Acceptance as authorized by Resolution No. 1572 adopted November 21, 1960.
4. This resolution is effective immediately upon adoption.

* * * * * * * * * *

EXHIBIT A
GRANT DEED (ATTACHED)

RECORDING REQUESTED BY:
Fidelity National Title Company

When Recorded Mail Document and Tax Statement To:
City of Madera
205 W. 4th Street
Madera, CA 93637

SPACE ABOVE THIS LINE FOR RECORDER'S USE

Escrow Order No.: FFOM-2011906343

The document is executed or recorded by the Federal government in accordance with the Uniform Federal Lien Registration Act (GC 27383 & 27388.1(a)(2)(D)).

Property Address: 16557 Austin Street
Madera, CA 93638
APN/Parcel ID(s): 038-030-027-000

GRANT DEED

The undersigned grantor(s) declare(s)

☐ This transfer is exempt from the documentary transfer tax.
No Fee-Gov't Code Sections 6103 and 27383
☐ The documentary transfer tax is $_____ and is computed on:
☐ the full value of the interest or property conveyed.
☐ the full value less the liens or encumbrances remaining thereon at the time of sale.
The property is located in ☐ an Unincorporated area.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, Thakor Joe Pandit and Vanleela Pandit, Trustees of VIP Trust, created on September 19, 1979; Urmikant P. Mody and Madhurika U. Mody, as Co-Trustees of the Mody 1994 Living Trust; Arvind P. Mody and Ellen P. Mody, as Co-Trustees of the Mody 1988 Living Trust; Hemlatta M. Nirmal, Trustee of the Nirmal Family Trust, dated August 6, 2003; Divya Shah, Trustee of the Shah Family Trust dated 7/25/89; Ramesh Shah and Veena Shah, as Co-Trustees of the Ramesh B. Shah Revocable Living Trust and Anil A. Desai, a married man as his sole and separate property

hereby GRANT(S) and gifts to City of Madera, a municipal corporation

the following described real property in the Unincorporated Area of the County of Madera, State of California:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

Dated: January 14, 2020

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

Thakor Joe Pandit and Vanleela Pandit, Trustees of VIP Trust, created on September 19, 1979

BY:_____
Thakor Joe Pandit, Trustee

BY:_____
Vanleela Pandit, Trustee

Urmikant P. Mody and Madhurika U. Mody, as Co-Trustees of the Mody 1994 Living Trust

BY:_____
Urmikant P. Mody, Co-Trustee

BY:_____
Madhurika U. Mody, Co-Trustee

Arvind P. Mody and Ellen P. Mody, as Co-Trustees of the Mody 1988 Living Trust

BY:_____
Arvind P. Mody, Co-Trustee

BY:_____
Ellen P. Mody, Co-Trustee

Hemlatta M. Nirmal, Trustee of the Nirmal Family Trust, dated August 6, 2003

BY:_____
Hemlatta M. Nirmal,Trustee

Divya Shah, Trustee of the Shah Family Trust dated 7/25/89

BY:_____
Divya Shah, Trustee

Ramesh Shah and Veena Shah, as Co-Trustees of the Ramesh B. Shah Revocable Living Trust

BY:_____
Ramesh Shah, Co-Trustee

BY:_____
Veena Shah, Co-Trustee

BY:_____
Anil A. Desai

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of _____

County of _____

On _____ before me, _____, Notary Public,
(here insert name and title of the officer)

Personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Signature

For APN/Parcel ID(s): **038-030-027-000**

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE UNINCORPORATED AREA IN COUNTY OF MADERA, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE UNINCORPORATED AREA, COUNTY OF MADERA, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

PARCEL NO. 1:

A PARCEL OF LAND LYING ALL IN THE NORTHEAST QUARTER (NE 1/4) OF SECTION TWELVE (12), TOWNSHIP ELEVEN (11) SOUTH, RANGE SEVENTEEN (17) EAST, MOUNT DIABLO BASE & MERIDIAN, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH BEARS NORTH 89° 42' WEST 508.42 FEET FROM A PORTION ON THE EAST LINE OF THE SAID SECTION 12, SAID POINT ON SAID EAST LINE BEARING SOUTH 0° 03' EAST 1941.45 FEET FROM THE NORTHEAST CORNER OF THE SAID SECTION 12, THENCE FROM SAID POINT OF BEGINNING, SOUTH 0° 03-1/2 EAST 702.2 FEET NORTH 89° 40-1/2' WEST 248.24 FEET, NORTH 0° 3-1/2' WEST 701.8 FEET AND SOUTH 89° 42' EAST 248.24 FEET TO THE POINT OF BEGINNING.

PARCEL NO. 2:

ALL THAT PORTION OF THE SOUTH HALF OF THE NORTHEAST QUARTER (S 1/2 OF NE 1/4) OF SECTION TWELVE (12), TOWNSHIP ELEVEN (11) SOUTH, RANGE SEVENTEEN (17) EAST MOUNT DIABLO BASE AND MERIDIAN, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTH LINE OF THE SAID SOUTH HALF (S 1/2) OF THE NORTHEAST QUARTER (NE 1/4), WHICH BEARS NORTH 89° 40-1/2' WEST 756.62 FEET FROM THE SOUTHEAST CORNER THEREOF THENCE CONTINUING ALONG SAID SOUTH LINE NORTH 89° 40-1/2' WEST 329.6 FEET, THENCE NORTH 0° 3-1/2' WEST 660.6 FEET, THENCE SOUTH 89° 41' EAST 329.6 FEET, THENCE SOUTH 0° 30-1/2' EAST 660.7 FEET TO THE POINT OF BEGINNING.

RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Department Director

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: D-3

SUBJECT:

Consideration of a Resolution Approving an Agreement with Crescendo Consulting Group for Preparation of the Community Development Block Grant (CDBG) 2020/2024 Five-Year Consolidated Plan, Citizen Participation Plan, Strategic Plan, Analysis of Impediments to Fair Housing Choice and the 2020/2021 Annual Action Plan for a not to exceed amount of $60,000

RECOMMENDATION:

Staff recommends the City Council (Council)

1) Approve a Resolution to enter into an agreement with Crescendo Consulting Group for consulting services to prepare City of Madera's (City's) CDBG 2020/2024 Consolidated Plan, Citizen Participation Plan, Strategic Plan, Analysis of Impediments to Fair Housing Choice and the 2020/2021 Annual Action Plan; and

2) Authorize the Mayor to execute the agreement on behalf of the City.

SUMMARY:

A Consolidated Plan serves as a recipient's HUD CDBG comprehensive planning document to use to identify the overall needs for affordable and supportive housing and community and economic development and outlines a strategy to address these needs in order to achieve one or more national objective. The Consolidated Plan is required by HUD in order for the City to continue to receive CDBG funds and is updated every five years. Therefore, the City should develop its next Consolidated Plan, should it intend to continue to pursue CDBG funding. Worth noting is that any plan developed by the City is required to be consistent with HUD regulations. More specifically, HUD has three adopted national objectives. They are:

- Benefit to low- and moderate-income persons and households;
- Aid in the prevention or elimination of slums or blights; and
- Meet a need having a particular urgency.

DISCUSSION:

The City's prior Consolidated Plan (Plan) covered Fiscal Years 2015 through 2019. As part of development of the Consolidated Plan, a community needs assessment was prepared that identified various needs. Upon the completion of the implementation of that Plan, several objectives to improve the quality of life of City residents, consistent with the priorities identified by the Plan were achieved, including:

- Provision of continued senior services,
- Provision of youth after school and college preparation programs,
- Economic development,
- Code enforcement,
- Graffiti removal and
- Several capital projects/public improvements.

The 2020/2024 Consolidated Plan will focus on identifying a narrower set of needs in comparison to the 2015/2019 Plan. Staff anticipates collecting data, in partnership with the Consultant from: residents, non-profit service providers, service providers for the homeless and persons at risk of homelessness, government entities such as Madera County and the Housing Authority of the City of Madera, City staff, First 5, the Community Action Partnership of Madera County, Faith-based organizations, local schools, and other local networks. Moreover, the Plan will include an analysis of U.S. Census information for local Census tracks and incorporate HUD's directives and guidance.

Consultant Selection Process

A competitive Request for Proposals (RFP) for Consultant services was released on December 24, 2019 which ran through January 28, 2020. Table 1 provides the names of the two Consultants that responded to the RFP and their respective bid amounts. Table 2 provides the names of the proposal reviewers/interview panel, who rated and ranked the Consultants. Based on the combined scores between the RFP responses and the interviews, Crescendo Consulting Group was determined to be the highest and qualified to develop the City's Consolidated Plan. The proposal/interview panel concluded that an agreement be presented to Council for consideration of approval between City and Crescendo Consulting Group.

***Table 1**: Consultants Names and Bid Amounts*

Consultant	*Bid Amount*
Crescendo Consulting Group	$76,039
TDA Consulting	$76,176

Table 2: *Proposal Reviewers*	
Name	*Title*
Ivette Iraheta	Grants Administrator
Vicki Crow	Interim Financial Services Director through January 24, 2020
Jorge Rojas	Program Manager – Grants
DJ Becker	Block Grant Commissioner
Olga P. Garcia	Block Grant Commissioner

FINANCIAL IMPACT:

The CDBG Administrative budget for the FY 2019/2020 allocated $60,000 for Contracted Services. Grants Department staff negotiated with Crescendo Consulting Group to lower the final bid amount, to ensure that the budget for the proposal does not exceed the available $60,000. Therefore, this agreement has no impact to the City's General Fund and does not trigger a CDBG administrative budget amendment.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

This action is consistent with the Vision principle for a "Well Planned City" Strategy 101.7: Create an assessment of existing housing inventory to determine the gap between affordability and income. Strategy 101.8: Promote and encourage development and redevelopment of low and moderate-cost housing. Strategy 101.9: Promote development of new affordable housing oriented to the senior market. Strategy 101.10: Ensure adequate supply of affordable housing by promoting programs to assist in home ownership and owner-occupied residential rehabilitation.

Completion of the 2020/2024 Consolidated Plan, Citizen Participation Plan, Strategic Plan, Analysis of Impediments to Fair Housing Choice and the 2020/2021 Annual Action Plan help the City to realize this Vision.

ALTERNATIVES:

Potential Council alternatives include:

- Not to approve the Resolution for the Agreement.
- Direct staff to re-release a Request for Proposal for the 2020/2024 Consolidated Plan.
- Make modifications to the Agreement, per the direction of Council and per continued negotiations with Crescendo Consulting Group

ATTACHMENTS:

1. Resolution
2. Agreement with Crescendo Consulting Group

RESOLUTION NO. ____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA, CALIFORNIA APPROVING AN AGREEMENT WITH CRESCENDO CONSULTING GROUP FOR THE PREPARATION OF THE COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) 2020/2024 FIVE-YEAR CONSOLIDATED PLAN, CITIZEN PARTICIPATION PLAN, STRATEGIC PLAN, ANALYSIS OF IMPEDIMENTS TO FAIR HOUSING CHOICE AND 2020/2021 ANNUAL ACTION PLAN FOR A NOT TO EXCEED AMOUNT OF $60,000

WHEREAS, the City is in need of a qualified and experienced consulting firm to develop a series of plans and analysis in order to prepare the City of Madera's CDBG 2020/2024 Consolidated Plan, Citizen Participation Plan, Strategic Plan, Analysis of impediments to Fair Housing Choice and 2020/2021 Annual Action Plan; and

WHEREAS, the City released a request for proposals on December 24, 2019, seeking experienced and qualified community development consultant firms to assist the City in the preparation of the City's CDBG 2020/2024 Consolidated Plan, Citizen Participation Plan, Strategic Plan, Analysis of impediments to Fair Housing Choice and 2020/2021 Annual Action Plan; and

WHEREAS, the City received two responses to its Request for Proposal (RFP); and

WHEREAS, the City completed a thorough unbiased review of two proposals to complete the required CDBG 2020/2024 Consolidated Plan, Citizen Participation Plan, Strategic Plan, Analysis of Impediments to Fair Housing Choice and 2020/2021 Annual Action Plan; and

WHEREAS, City's review concluded the most qualified applicant to complete the CDBG 2020/2024 Consolidated Plan, Citizen Participation Plan, Strategic Plan, Analysis of impediments to Fair Housing Choice and 2020/2021 Annual Action Plan is Crescendo Consulting Group who is the unanimous choice of the City's selection committee; and

WHEREAS, City has prepared an Agreement with Crescendo Consulting Group for the completion of the CDBG 2020/2024 Consolidated Plan, Citizen Participation Plan, Strategic Plan, Analysis of impediments to Fair Housing Choice and 2020/2021 Annual Action Plan and such Agreement is on file in the office of the City Clerk and referred to for more particulars.

NOW, THEREFORE, the City of Madera hereby finds, determines, resolves and orders as follows:

1. The recitals listed above are true and correct.
2. The Agreement as described above is approved.
3. The Mayor of the City of Madera is authorized to execute the Agreement on behalf of the City.
4. This resolution is effective immediately upon adoption.

*** * ***

AGREEMENT BETWEEN CITY OF MADERA AND CRESCENDO CONSULTING GROUP FOR PROFESSIONAL CONSULTING SERVICES TO INCLUDE THE COMPLETION OF THE COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) 2020/2024 CONSOLIDATED PLAN, CITIZEN PARTICIPATION PLAN, STRATEGIC PLAN, ANALYSIS OF IMPEDIMENTS TO FAIR HOUSING AND ANNUAL ACTION PLAN

PARTIES:

The City of Madera hereafter referred to as "CITY", and Crescendo Consulting Group hereafter referred to as the "CONTRACTOR."

This Agreement made and entered into this 20th day of February 2020, between City and CONTRACTOR.

RECITALS:

WHEREAS, the CITY has been designated as the sponsoring agency to administer and implement the program for the Community Development Block Grant (CDBG) activities of the CITY, and in accordance with the provisions of Title I of the Housing and Community Development Act of 1974, as amended, and the laws of the State of California; and

WHEREAS, In compliance with the Department of Housing and Urban Development's (HUD) regulations to required entitlement jurisdictions to submit a Five-Year Consolidated Plan for 2020/2024, Citizen Participation Plan, Strategic Plan, Analysis of Impediments to Fair Housing Choice to identify specific non-housing, housing HUD, Department of Housing and Community Development (HCD) HOME and CalHome Programs (the PROJECT) is eligible for funding under 24 CFR Part 570.201(c); and

WHEREAS, CITY has determined that services of a qualified consulting firm are required to complete the PROJECT; and

WHEREAS, the CONTRACTOR has submitted a project plan and budget to provide in-depth expertise to carry out the PROJECT consistent with the intent and purpose of the provisions of Title I of the Housing and Community Development Act of 1974, as amended, and which has been approved by the CITY Council.

WHEREAS, CONTRACTOR is dedicated to establishing a partnership with the community and to assist CITY in preparing the PROJECT; and

NOW THEREFORE, the parties hereto agree as follows:

1. Services

CONTRACTOR shall provide all services and responsibilities as set forth in the Scope of Work and Budget, which is attached to this Agreement, marked as Exhibit "A," and incorporated herein by reference.

2. Funding and Method of Payment

a. Compensation

Payments shall be made after receipt and verification of actual expenditures incurred by the CONTRACTOR in the performance of this Agreement and shall be documented to the CITY by the fifteenth (15^{th}) day of the month following the end of the current month. Allowable expenditures under this Agreement are specifically established and attached hereto marked Exhibit “A" and incorporated herein by reference. The total obligation of the CITY under this Agreement shall not exceed $60,000 in fiscal year 2019/2020. Any compensation not consumed by expenditures of the CONTRACTOR by the expiration of this Agreement shall automatically revert to the CITY.

b. Public Information

CONTRACTOR shall disclose in all public information its funding source.

c. Lobbying Activity

CONTRACTOR shall not directly or indirectly use any of the funds provided under this Agreement for publicity, lobbying, or propaganda purposes designed to support or defeat legislation pending before the Congress of the United States or the Legislature of the State of California.

d. Political Activity

CONTRACTOR shall not directly or indirectly use any of the funds under this Agreement for any political activity or to further the election or defeat of any candidate for public office.

3. Fiscal Compliance

CONTRACTOR shall be subject to the same fiscal regulations imposed on CITY by the U. S. Department of Housing and Urban Development for the use of Community Development Block Grant funds.

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4. Compliance With Laws

If the CONTRACTOR receives CDBG funding under this Agreement, CONTRACTOR shall comply with all rules and regulations established pursuant by the Housing and Community Development Act of 1974 and its amendments. The CONTRACTOR and any subcontractors shall comply with all applicable local, State and Federal regulations, including but not limited to those requirements listed in Exhibit "B" attached hereto and incorporated herein by reference.

5. Contract Administrator

CITY shall retain the right to administer this Agreement so as to verify that CONTRACTOR is performing its obligations in accordance with the terms and conditions thereof. CONTRACTOR and CITY shall comply with all applicable provisions of law and the rules and regulations, if any, of governmental authorities having jurisdiction over matters the subject thereof.

6. Period of Performance

The CONTRACTOR shall commence performance under this contract February 20, 2020, and shall end its performance May 21, 2020, unless terminated sooner as provided for elsewhere in this Agreement. Agreement may be extended upon written approval of the CITY.

7. Time of Completion

a. The parties hereto agree to the schedule set forth in Exhibit "A," including the deadlines specified therein for submission of Final PROJECT document the HUD.

b. CONTRACTOR shall not be held responsible for delays caused by CITY review, or by reasons beyond CONTRACTOR's control. CONTRACTOR shall not stop work on the PROJECT, including work in areas unrelated to any extra services request, unless it can be shown the PROJECT work cannot proceed while a claim or request for extra service is being evaluated.

c. Time is of the essence in the completion of the services covered by this Agreement. Failure to CONTRACTOR to comply with the above time schedule by more than thirty (30) calendar days, unless the delay is not attributable to CONTRACTOR or is attributable to CITY, is sufficient cause to terminate this Agreement, at the option of CITY, in accordance with Paragraph 13.

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8. Records

a. Record Establishment and Maintenance

CONTRACTOR shall establish and maintain records in accordance with those requirements prescribed by CITY, with respect to all matters covered by this Agreement. CONTRACTOR shall retain all fiscal books, account records, and client files for services performed under this Agreement for at least three (3) years from the date of the final payment under this Agreement or until all State and Federal audits are completed for that fiscal year, whichever is later. Pursuant to State and Federal law, it is the intent of the parties to this Agreement that the CONTRACTOR shall be reimbursed for actual costs incurred in the performance of this Agreement but that no profit is to accrue to the CONTRACTOR on account of such performance.

b. Reports/Required Notifications

The CONTRACTOR shall submit reimbursement claims with substantiating invoices. The CONTRACTOR shall also furnish to the CITY such statements, records, reports, data, and information as the CITY may request pertaining to matters covered by this Agreement. In the event that the CONTRACTOR fails to provide such reports, it shall be deemed sufficient cause for the CITY to withhold payment until there is compliance. In addition, the CONTRACTOR shall provide written notification and explanation to the CITY within five (5) days of any funds received from another source to conduct the same services covered by this Agreement.

CITY shall notify CONTRACTOR in writing within thirty (30) days of any potential State or Federal exception discovered during an examination. Where findings indicate that program requirements are not being met and State and Federal participation in this program may be imperiled in the event that corrections are not accomplished by CONTRACTOR within thirty (30) days, written notification shall constitute CITY's intent to terminate this Agreement.

CONTRACTOR shall report to CITY promptly and in written detail, each notice of claim of copyright infringement received by CONTRACTOR with respect to all subject data delivered under this Agreement. CONTRACTOR shall not affix any restrictive markings upon any data. If markings are affixed, CITY shall have the right at any time to modify, remove, obliterate, or ignore such markings.

c. CDBG Reporting Requirements

The CITY will inform CONTRACTOR in writing if CDBG funds are provided under this Agreement, which require CONTRACTOR to submit an application or to complete a record as an integral part of receiving these funds.

CONTRACTOR shall submit with each invoice copies of paid invoices/receipts, copies of cash receipts or checks used to pay each invoice submitted for reimbursement.

9. Assignment

CITY and CONTRACTOR may not assign or transfer their obligation of this Agreement or any rights hereunder without the prior written consent of the other party.

10. Subcontracts

If the CONTRACTOR should propose to subcontract with one or more third parties to carry out a portion of those services described in Exhibit "A" insofar as it deems proper or efficient, any such subcontract shall be in writing and approved as to form and content by the CITY prior to execution and implementation. Any such subcontract, together with all other activities performed, or caused by the CONTRACTOR, shall not allow compensation greater than the total project budget contained in Exhibit "A." An executed copy of any such subcontract shall be received by the CITY before any implementation and shall be retained by the CITY.

The CONTRACTOR shall be responsible to the CITY for the proper performance of any subcontract. Any subcontractor shall be subject to all of the same terms and conditions that the CONTRACTOR is subject to under this Agreement. No officer or director of the CONTRACTOR shall have any direct monetary interest in any subcontract made by the CONTRACTOR. A direct monetary interest contrary to this paragraph shall be deemed to exist, if an officer or director of the CONTRACTOR is also an owner, officer, or director of a corporation, association, or partnership subcontracting with the CONTRACTOR.

In addition, if the CONTRACTOR receives CDBG funds under this Agreement, the subcontractor shall be subject to CDBG federal regulations, including those listed in Exhibit "B."

11. Conflict of Interest

No officer, employee, or agent of the CITY who exercises any function or responsibility for planning and carrying out of the services provided under this Agreement shall have any direct or indirect personal financial interest in this Agreement. The CONTRACTOR shall comply with all Federal, State and local conflict of interest laws, statutes, and regulations, which shall be applicable to all parties and beneficiaries under this Agreement and any officer, employee, or agent of the CITY.

12. Discrimination

a Eligibility for Services

The CONTRACTOR shall prepare and make available to the CITY and to the public all eligibility requirements to participate in the program plan set forth in Exhibit "A." No person shall, on the grounds of race, color, national origin, sex, religion, age, or disability status, be excluded from participation in, and denied the benefits of, or be subjected to discrimination with respect to the services funded under this Agreement.

b. Employment Opportunity

The CONTRACTOR shall comply with the CITY policy, the Community Development Block Grant regulations, and the Equal Employment Commission guidelines, which forbids discrimination against any person on the grounds of race, color, national origin, sex, religion, age, familial status or disability status in employment practices. Such practices include retirement, recruitment advertising, hiring, layoff, termination, upgrading, demotion, transfer, rates of pay or other forms of compensation, use of facilities, and other terms and conditions of employment.

c. Suspension of Compensation

If an allegation of discrimination occurs, the CITY shall withhold all further funds until the CONTRACTOR can show by clear and convincing evidence to the satisfaction of the CITY that funds provided under this Agreement were not used in connection with the alleged discrimination.

d. Nepotism

Except by written consent of the CITY, no person shall be employed by the CONTRACTOR who is related by blood or marriage or who is a member of the Board of Directors or an officer of the CONTRACTOR. In the event HUD determines a CDBG-funded CONTRACTOR'S organization/agency operations violate federal rules and regulations with regard to nepotism and/or conducts business and a conflict of interest issue arises, then CONTRACTOR shall accept all responsibility to return any CDBG funds received from CITY.

13. Termination

a. This Agreement may be immediately terminated by CITY for cause where in the determination of CITY, any of the following conditions exist: (1) an illegal or improper use of funds, (2) failure to comply with any terms of this Agreement, (3) a materially incorrect or incomplete report, (4) an improper performance of services.

b. Any one of or combination of the above conditions will constitute grounds for suspension or termination of the Agreement. In no event shall any payment by the CITY hereunder constitute a waiver by the CITY of any breach of this Agreement or any default which may then exist on the part of the CONTRACTOR, nor shall such payment impair or prejudice any remedy available to the CITY with respect to the breach of default. When there is a breach of this Agreement, as defined by this section, the CITY may, in its sole discretion, immediately suspend or terminate this Agreement.

c. CITY shall have the option to terminate this Agreement without obligation of CITY to reimburse CONTRACTOR from the date the Federal or State Government withholds or fails to disburse funds to CITY, in the event such government withholds or fails to disburse funds, CITY shall give CONTRACTOR notice of such funding limitation or termination within a reasonable time after CITY receives notices of same.

d. Upon thirty (30) days written notice to the other party, either party may terminate this Agreement without cause. Notice shall be deemed served upon mailing.

14. Amendments

Adjustment of any line item within the total approved budget contained in Exhibit “A” or changes in the nature or scope of the program plan set forth in Exhibit “A” may be approved in writing by the City Administrator, or his designee.

15. Administration

The City of Madera Grants Department shall administer this Agreement.

16. Evaluation

The CITY shall monitor and evaluate the performance of the CONTRACTOR under this Agreement to determine to the best possible degree the success or failure of the services provided under this Agreement and the adequacy of the program plan contained in Exhibit "A." The CONTRACTOR shall participate in evaluation of the program.

CONTRACTOR shall cooperate fully with CITY, State and Federal agencies, which shall have the right to monitor and audit all work performed under this Agreement.

17. Audits and Inspections Access

CONTRACTOR shall, upon reasonable notice and at any time during regular business hours, and as often as CITY may deem necessary, make available to CITY or its authorized representative for examination all of its records and data with respect to matters covered by this Agreement. CONTRACTOR shall permit CITY to audit and inspect all invoices, materials, payrolls, records of

personnel, conditions of employment and other data relating to matters covered by this Agreement.

18. Governing Law

Any controversy or claim arising out of or relating to this Agreement which cannot be amicably settled without court action shall be litigated only in the County of Madera, California. The rights and obligations of the parties and all interpretations and performance of this Agreement shall be governed in all respects by the laws of the State of California.

19. Reversion of Assets

The CONTRACTOR must obtain prior written approval from the CITY whenever there is any modification or change in the use of any property acquired or improved, in whole or in part, using CDBG funds. If any real or personal property acquired or improved with CDBG funds is sold and/or is utilized by the CONTRACTOR for a use which does not qualify under the CDBG program, the CONTRACTOR shall reimburse the CITY in an amount equal to the current fair market value of the property, less any portion thereof attributable to expenditures of non-CDBG funds. These requirements shall continue in effect for the life of the property. In the event the CDBG program is closed-out, the requirements of this Section shall remain in effect for activities or property funded with CDBG funds, unless action is taken by the Federal government to relieve the CITY of these obligations.

20. Breach of Agreement

In the event the CONTRACTOR fails to comply with any of the terms of this Agreement, the CITY may, at its option, deem the CONTRACTOR's failure as a material breach of this Agreement and utilize any of the remedies set forth in 24 CFR 85.43 or that it deems appropriate. Should the CITY deem a breach of this Agreement material, the CITY shall immediately be relieved of its obligations to make further payment as provided herein. In addition to the Agreement being terminated by the CITY in accord with a material breach of this Agreement by the CONTRACTOR, this Agreement may also be terminated for convenience by the CITY in accord with 24 CFR 85.44.

21. No Third-Party Beneficiaries

This Agreement is not intended to create and does not create any rights in or benefits to any third party, nor will it be deemed to confer rights or remedies upon any person or legal entity not a party to this Agreement.

22. Indemnification

CONTRACTOR shall indemnify, defend, and hold harmless the City, its officers, employees, agents and volunteers ("City indemnitees"), from and against any and all causes of action, claims, liabilities, obligations, judgments, or damages, including reasonable legal counsels' fees and costs of litigation ("claims"), arising out of the CONTRACTOR'S performance of its obligations under this agreement or out of the operations conducted by CONTRACTOR, except for such loss or damage arising from the sole negligence or willful misconduct of the City. In the event the City indemnitees are made a party to any action, lawsuit, or other adversarial proceeding arising from CONTRACTOR'S performance of this agreement, the CONTRACTOR shall provide a defense to the City indemnitees, or at the City's option, reimburse the City indemnitees their costs of defense, including reasonable legal counsels' fees, incurred in defense of such claims.

23. Entire Agreement

This Agreement constitutes the entire agreement between CONTRACTOR and CITY with respect to the subject matter hereof and supersedes all previous negotiations, proposals, commitments, writings, advertisements, publications and understandings of any nature whatsoever unless expressly included in this Agreement.

24. Insurance Requirements

Without limiting Service Provider's indemnification of City, and prior to commencement of Work, Service Provider shall obtain, provide, and continuously maintain at its own expense during the term of the Agreement, and shall require any and all Subcontractors and Subconsultants of every Tier to obtain and maintain, policies of insurance of the type and amounts described below and in form satisfactory to the City.

Minimum Scope and Limits of Insurance

Service Provider shall maintain limits no less than:

- $1,000,000 **General Liability** (including operations, products and completed operations) per occurrence, $2,000,000 general aggregate, for bodily injury, personal injury and property damage, including without limitation, blanket contractual liability. Coverage shall be at least as broad as Insurance Services Office (ISO) Commercial General Liability coverage form CG 00 01.General liability policies shall be endorsed using ISO form CG 20 10 that the City and its officers, officials, employees and agents shall be additional insureds under such policies.
- $1,000,000 **Automobile Liability** combined single limit per accident for bodily injury or property damage at least as broad as ISO Form CA 00 01 for all activities of Service Provider arising out of or in connection with Work to be performed under this Agreement, including coverage for any owned, hired, non-owned or rented vehicles. Automobile Liability policies

shall be endorsed to provide that the City and its officers, officials, employees and agents shall be additional insureds under such policies.

- **Worker's Compensation** as required by the State of California and $1,000,000 **Employer's Liability** per accident for bodily injury or disease. Service Provider shall submit to the City, along with the certificate of insurance, a Waiver of Subrogation endorsement in favor of the City, it's officers, agents, employees, and volunteers.
- **$1,000,000 Professional Liability (Errors and Omissions)** per claim and in the aggregate. CONTRACTOR shall maintain professional liability insurance that insures against professional errors and omission that may be made in performing the Services to be rendered in connection with this Agreement. Any policy inception date, continuity date, or retroactive date must be before the effective date of this Agreement, and CONTRACTOR agrees to maintain continuous coverage through a period no less than three years after completion of the services required by this Agreement. The cost of such insurance shall be included in CONTRACTOR'S bid.

Maintenance of Coverage
Service Provider shall procure and maintain, for the duration of the contract, insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the Work hereunder by Service Provider, its agents, representatives, employees, subcontractors or subconsultants as specified in this Agreement.

Proof of Insurance
Service Provider shall provide to the City certificates of insurance and endorsements, as required, as evidence of the insurance coverage required herein, along with a waiver of subrogation endorsement for workers' compensation. Insurance certificates and endorsements must be approved by the City prior to commencement of performance. Current evidence of insurance shall be kept on file with the City at all times during the term of this Agreement. Agency reserves the right to require complete, certified copies of all required insurance policies, at any time.

Acceptable Insurers
All insurance policies shall be issued by an insurance company currently authorized by the Insurance commissioner to transact business of insurance in the State of California, with an assigned policyholders' Rating of A- (or higher) and a Financial Size Category Class VII (or larger), in accordance with the latest edition of Best's Key Rating Guide.

Waiver of Subrogation
All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against the City, its elected or appointed officers, agents, officials, employees, and volunteers, or shall specifically allow Service Provider, or others providing insurance evidence in compliance with these specifications, to waive their right of recovery prior to a loss. Service Provider hereby waives its own right of recovery against the City and shall require similar written express waivers and insurance clauses from each of its subconsultants or subcontractors.

Enforcement of Contract Provisions (non estoppel)
Service Provider acknowledges and agrees that any actual or alleged failure on the part of the Agency to inform Service Provider of non-compliance with any requirement imposes no additional obligations on the City, nor does it waive any rights hereunder.

Specifications not Limiting
Requirements of specific coverage features, or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type. If Service Provider maintains higher limits than the minimums required above, the entity shall be entitled to coverage at the higher limits maintained by Service Provider.

Notice of Cancellation
Service Provider agrees to oblige its insurance agent or broker and insurers to provide to the City with thirty (30) calendar day's notice of cancellation (except for nonpayment for which ten (10) calendar day's notice is required) or nonrenewal of coverage for each required coverage.

Self-insured Retentions
Any self-insured retentions must be declared to and approved by the City. The City reserves the right to require that self-insured retentions be eliminated, lowered or replaced by a deductible. Self-insurance will not be considered to comply with these specifications unless approved by the City's Risk Manager.

Timely Notice of Claims
Service Provider shall give the City prompt and timely notice of claims made or suits instituted that arise out of or result from Service Provider's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies.

Additional Insurance
Service Provider shall also procure and maintain, at its own cost and expense, any additional kinds of insurance, which in its own judgement may be necessary for its proper protection and prosecution of the Work.

25. Notices

All notices and other communications contemplated shall be in writing and shall be deemed given when personally delivered or received by mail and email, and shall be personally delivered or mailed by certified mail, return receipt requested, with postage and fees paid, as follows:

Lessor:	Jorge Antonio Rojas Program Manager – Grants CITY OF MADERA 205 W. 4th Street Madera, CA 93637 jrojas@madera.gov 559-661-3693
Lessee:	Scott Good Managing Principal CRESCENDO CONSULTING GROUP 48 Free Street Portland, Maine 04101 scottg@crescendocg.com 207-774-2345 ext-115

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their respective officers thereunto duly authorized on the date first written above.

CITY OF MADERA: **Crescendo Consulting Group**

By: _____ By: _____
Andrew J. Medellin, Mayor Scott Good, Managing Principal

Date: _____ Date:_____

ATTEST: **APPROVED AS TO LEGAL FORM:**

By: _____ By: _____
Alicia Gonzalez, City Clerk Hilda Cantú Montoy, City Attorney

Date: _____ Date:_____

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EXHIBIT A

SCOPE OF SERVICES AND BUDGET

[Insert scope of work and budget]

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EXHIBIT B

SOCIAL/PUBLIC SERVICE REQUIREMENTS

A. Federal Common Rule Requirements, including, but not limited to, Executive Order 11246, as amended by Executive Orders 11375 and 120860 and implementing regulations issued at 41 CFR Chapter 60; Davis-Bacon Act as amended (40 U.S.C. 276 a to a-7 and 29 CFR, Part 5); Copeland "Anti-Kick Back" Act (18 U.S.C. 874 and 29 CFR, Part 3); Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330 and 29 CFR, Part 5); Section 306 of the Clean Air Act (42 U.S.C. 0857 (h); Section 506 of the Clean Water Act (33 U.S.C. 1368); Executive Order 11738; Environmental Protection Agency Regulations (40 CFR Part 15); and applicable sections of 24 CFR 85. Also, in the common rule are mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with Energy Policy and Conservation Act (Pub L. 94 - 163).

B. Office of Management and Budget Circulars No. -21, A-102 revised, A-87, A-110, A-122 and A-128 as they relate to the acceptance and use of Federal funds under this program.

C. Executive Order 11063, as amended by Executive Order 11259, and implementing regulations at 24 CFR Part 107, as they relate to non-discrimination in housing.

D. The Architectural Barriers Act of 1968 (42 U.S.C. 4151).

E. Clean Air Act of 1970 (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.).

F. Bidding requirements contained in the California Public Contracts Code.

G. The relocation requirements of Title II and the acquisition requirements of Title III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) and HUD implementing regulations, 24 CFR Part I as it relates to prohibiting discriminatory action under any activity receiving Federal funds.

H. Provisions of the California Water Code Section 55350 et. sequens.

I. Title VI of the Civil Rights Act of 1964 (Pub. L. 88-352) and implementing regulations 24 CFR Part I as it relates to prohibiting discriminatory action under any activity receiving Federal funds.

J. Title VIII of the Civil Rights Act of 1968, (Pub. L. 90-284) as amended and implementing regulations 24 CFR 107 as it relates to fair housing.

K. Section 504 of the Rehabilitation Act of 1973 (Pub. L. 93-112) as amended and implementing regulations when published for effect as they relate to non-discrimination against the handicapped.

L. The Age Discrimination Act of 1975, (Pub. L. 94-135) as amended, and implementing regulations contained in 10 CFR Part 1040 and 45 CFR Part 90.

M. The lead-based paint requirements of 24 CFR Part 35 Subpart B issued pursuant to the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4801 et.seq.).

N. Section 109 of the Housing and Community Development Act of 1974, as amended, and the regulations issued pursuant thereto (24 CFR Section 570.601) as it relates to prohibiting discriminatory actions and activities funded by Community Development Funds.

O. Section 3 of the Housing and Urban Development Act of 1968, as amended and implementing regulations at 24 CFR Part 135.

P. Executive Order 11988 relating to the evaluation of flood hazards and Executive Order 11288 relating to the prevention, control and abatement of water pollution.

Q. The flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (Pub. L. 93-234).

R. No member, officer or employee of the Grantee, or its designees or agents, no member of the governing body of the locality in which the program is situated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the program during his/her tenure or for one year thereafter, shall have any interest, direct or indirect, in any contract or subcontract, or the proceeds thereof, and that it shall incorporate, or cause to be incorporated, in all such contracts or subcontracts a provision prohibiting such interest pursuant to the purposes of this certification.

S. Additionally, all conflict requirements noted in 24 CFR 570.611 shall be complied with by all parties.

T. Title I of Section 104(b)(5) of the Housing and Community Development Act as amended and implementing regulations at 24 CFRE 570.200 relating to Special Assessments.

U. Section 106 of the National Historic Preservation Act and implementing regulations at 36 CFR Part 800.

V. The Endangered Species Act of 1973, as amended, and implementing regulations at 50 CFR Part 402.

W. Title I of the Housing and Community Development Act of 1974, as amended, and implementing regulations contained in 24 CFR Part 570 and in 24 CFR Part 85.

X The use of CDBG funds by a religious organization shall be subject to those conditions as prescribed by HUD for the use of CDBG funds by religions organizations in accordance with Section 570.200(j) of the Federal CDBG regulations.

Y. All contracts shall include a "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions" as required by 29 CFR Part 98.

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RETURN TO AGENDA

REPORT TO CITY COUNCIL

Approved by:

Keith Helmuth, City Engineer

Arnoldo Rodriguez, City Manager

Council Meeting of: February 19, 2020

Agenda Number: E-1

SUBJECT:

Presentation of the Intersection Control Evaluation Report for the Lake Street/4th Street/Central Avenue Intersection and Direction to Staff

RECOMMENDATION:

Staff recommends that the City Council (Council) consider the information within the Intersection Control Evaluation Report (Report) and provide direction to staff regarding course of future activity for this intersection.

SUMMARY:

The City received a Congestion Management and Air Quality (CMAQ) grant fund of $500,000 for the possible signalization of the intersection of Lake Street, Central Avenue and 4th Street. In determination of the most suitable form of traffic control, the City retained a transportation engineering firm to evaluate the location based upon existing and future traffic conditions as well as the physical characteristics of the intersection. Given the unique physical characteristic as well as the proximity of adjacent residential housing, the selection of the preferred method of controlling the intersection is not clear cut.

Three Alternatives were analyzed for this intersection. The Alternatives include (*in no particular order*):

- Leaving the intersection as is;
- Installing a Traffic Signal; or
- Constructing a Roundabout.

Though less efficient, staff is currently recommending a traffic signal at this intersection but still wishes to seek direction from Council on the preferred Alternative.

DISCUSSION:

A well-designed intersection is intended to:

a. Provide adequate visibility;
b. Limit vehicular congestion; and
c. Limit the occurrence of conflicts between all intersection users to the greatest degree possible, including vehicles and pedestrians.

The intersection of Lake Street, 4th Street and Central Avenue is not ideal given its current physical geometry and the fact that it currently operates with 5-way stop control.

Over the years, the City has received various complaints and concerns regarding the effectiveness of the all-way stop sign control at this intersection. Due to its unique configuration, a traffic signal did not appear to be a clear solution during early reviews of the intersection without significant physical changes to several of the vehicular approaches. Because of this, the City hired a consultant, Omni-Means (now known as GHD) to identify viable alternatives to improve safety, reduce delay, and enhance mobility for all modes of travel. Given the early reviews, GHD was also tasked to evaluate the relative merits of traffic signals and roundabouts, identify environmental concerns, and note impacts of right-of-way (ROW) acquisition before a recommendation for the preferred traffic control solution is made.

Three alternatives were studied as part of the Report prepared by GHD. The first is a No-Build Alternative that does not propose making any changes to the intersection. The remaining two alternatives are a Traffic Signal and a Roundabout. GHD conducted their analysis of this intersection based on Caltrans Traffic Operations Policy Directive 13-02. This policy is used to evaluate impacts to intersection traffic to identify the most effective and comprehensive alternatives. Its fundamental objective is to balance the needs of all modes and users with system performance goals rather than simply addressing traffic flow. A copy of the complete Report is included in Attachment 1.

Two scenarios were analyzed with the Traffic Signal and Roundabout alternatives: keeping the intersection as a 5-legged intersection and closing the northeast leg of 4th Street east of Lake Street to make the intersection a 4-leg intersection. Closing the northeast leg of 4th Street was considered given it's need has been substantially reduced in recent years due to the necessity to reduce cut through traffic and associated speeding and safety concerns on Flume Street adjacent to the John Wells Youth Center.

Using traffic data from Madera County Transportation Commission and computer modelling, the traffic operations of the intersection for the Alternatives were analyzed for the AM (7 am – 9 am)and PM (4 pm – 6 pm) peak hours under existing (2017) and design (2040) year conditions. Traffic volumes are forecasted to increase by approximately 150 percent over the next 20 years due to planned development within the City. This will result in increased vehicle delays and worsening intersection operations. By 2040, vehicle delays are estimated to be approximately 3 times longer than current conditions.

No-build Alternative

This alternative leaves the existing lane configuration and all-way stop control in place. From the analysis, this alternative is projected to provide acceptable intersection Level of Service (LOS) during the AM peak hour but will not provide acceptable LOS during the PM peak hour in the 2040 Design Year. However, queuing for southbound Lake Street right turns and the eastbound 4th Street left turns will exceed available storage capacity in both the AM and PM peak hours. The queues for northbound Lake Street will exceed available storage in the PM hours, as well. The intersection is projected to operate at a LOS C in the AM and E in the PM peak hours.

Traffic Signal Alternative

With this alternative, the intersection is signalized, and the lane geometry is modified to accommodate the 2040 Design Year traffic volumes. Changes to the intersection include:

- Eliminating the left turn pocket for east to northbound 4th Street and converting the existing through lane into the left turn lane,
- Constructing a narrow median for northbound Lake Street,
- Terminating the northeast leg of 4th Street at the alley, east of the intersection,
- Elimination of approximately 34 on-street parking spaces along Lake Street and 4th Street.

See Attachment 2 for the Preliminary Layout for the Traffic Signal Alternative. Impacts to on-street parking are highlighted on this drawing.

The analysis showed that for the 2040 Design Year, the AM LOS and delay is estimated to be slightly worse than the No-Build Alternative. The LOS and delay for the PM Peak Hour will improve over the No-Build Alternative with the Traffic Signal Alternative. This is consistent with both the 5-Leg and the 4-Leg scenarios. Queuing will be acceptable for all movements except northbound Lake Street during the PM Peak Hour in which vehicles may occasionally back into and block the 5th Street intersection. This is better than it would be under the No-Build Alternative

From the Preliminary Layout, additional ROW is expected to be required at the northwest corner of Lake Street and Central Avenue. The ROW will be necessary for a larger radius curb return to accommodate truck turning movements.

The narrow median identified on the preliminary layout will impact the use of two driveways on Lake Street, south of the intersection. These driveways are located at the second and third properties from of the intersection on the east side of Lake Street. Adjustments to the storm drainage inlets may also be required by this Alternative to accommodate any change in drainage patterns. The new curb return at the northwest corner will also require the relocation of an existing fire hydrant.

The construction cost estimate for the Traffic Signal Alternative is $1,050,000. This does not include design, ROW, and construction management costs.

Roundabout Alternative

This alternative would reconfigure the intersection and construct a single lane roundabout that will accommodate the 2040 Design Year traffic volumes. This alternative will significantly alter the intersection by constructing a circular central island and roadway. See Attachment 3 for this Preliminary Layout.

The same 5-leg and 4-leg scenarios studied with the Traffic Signal Alternative were analyzed with this Alternative, as well. For the 2040 Design Year, the Roundabout Alternative will operate better than both the No-Build Alternative and the Traffic Signal Alternative for both the AM and PM Peak Hours. Queuing will not exceed available storage and is an improvement over the other Alternatives. LOS is expected to be B for the AM and PM peak hour for the 2040 Design year.

From the Preliminary Layout, additional ROW will be required. Depending upon the final configuration of the intersection design, the City may be required to fully purchase three properties at this intersection. Additional ROW will be needed at the remaining two properties, as well. At this time, it is difficult to estimate the ROW costs with this Alternative. For purposes of discussion, it is estimated that ROW will cost $750,000 or more with this Alternative. Approximately 62 on-street parking spaces will be eliminated with this Alternative along all legs of the intersection to accommodate the revised configuration. The construction cost estimate is $1,620,000. This does not include design, ROW, and construction management costs.

A raised median island will be constructed with this Alternative in all legs of the intersection to channel traffic. This will have an impact on the use of the two driveways south of the intersection on Lake Street by the property owners. The existing drainage inlets at the intersection will require adjustments or relocation due to improvements with this Alternative.

Safety Considerations

Safety considerations were included in the analysis of this Report. Safety is a key evaluation factor and one of the goals of the previously mentioned Caltrans Policy Directive 13-02 which is to identify projects that will ensure a reasonable level of safety and operational performance for all users.

Historically, the use of roundabouts has been demonstrated to be a proven safety strategy for improving intersection safety by eliminating or altering conflict types, reducing crash severity and causing drivers to reduce speeds as they proceed into and through the intersection. By their geometric design elements, roundabouts have fewer conflicting points when compared to other intersection types. In a typical 4-legged intersection, traffic signals have 32 conflicting points, where roundabouts have 8. Figure 1 below shows the various vehicle conflict points for signalized and roundabout controlled intersections.

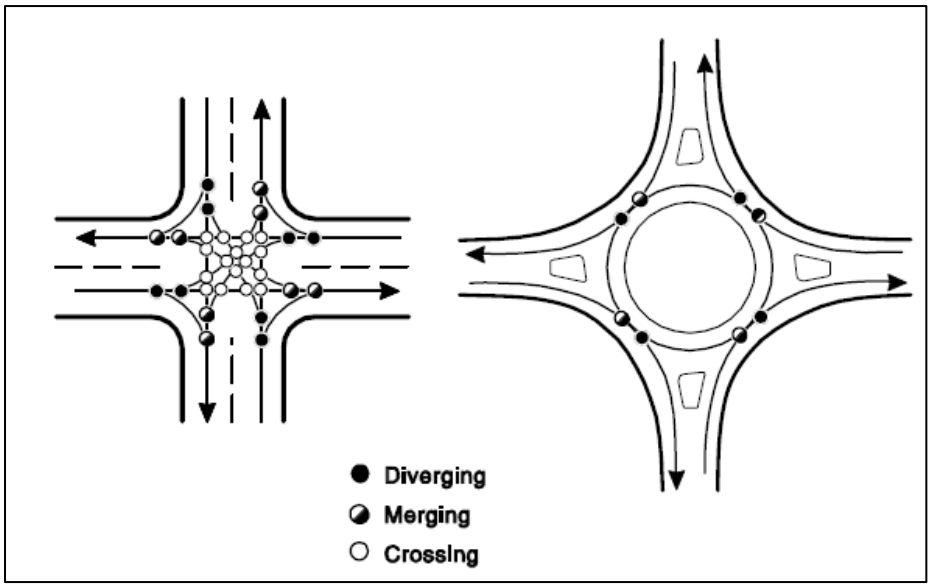


Figure 1
Vehicle Conflict Point Comparison

Project Cost Estimates

As previously noted, construction costs for the two alternatives are $1,050,000 for the traffic signal and $1,620,000 for the roundabout without including design, ROW and construction management. With design and right of way costs added, total costs are estimated at $1,311,500 and $2,872,800 for the two alternatives.

The City was awarded a Federal CMAQ grant to partially fund the project. Additional sources of funding include Local Transportation Funds (LTF), Measure T and Regional Surface Transportation Program (RSTP) sources. Funding presently committed to completing this project is up to $1,313,500. A funding shortfall exists for either project alternative. For the Traffic Signal, an additional $16,900 is needed. For the Roundabout, an additional $1,560,000 is needed based on the preliminary project cost estimates. Potential funding sources might include LTF, Measure T and/or RSTP. Any selection would likely result in delay of other Capital Improvement Program projects

Table 1 summarizes the estimated project expenses and revenue.

Table 1: *Project Expenses & Revenue*		
Project Costs &Revenue	Traffic Signal Alternative	Roundabout Alternative
Project Costs (Design, Right of Way, & Construction)		
Design, including staff costs	$96,000	$234,800
Right of Way, including staff costs	$8,000	$775,000
Construction, including staff costs	$1,207,500	$1,863,000
Total	**$1,311,500**	**$2,872,800**
Project Revenue currently committed		
Congestion Mitigation & Air Quality (CMAQ)	$441,100	$460,000
Regional Surface Transportation Program (RSTP)	$688,000	$688,000
Measure T	$161,500	$161,500
Local Transportation Funds (LTF)	$4,000	$4,000
Total	**$1,294,600**	**$1,313,500**
Funding Shortfall	$16,900	$1,559,300

Comparison of Alternatives

Based on the analysis, the No-Build Alternative will not provide acceptable intersection LOS and delay for either the AM or PM peak hour for the 2040 Design Year. Projected queues will substantially exceed available storage capacity within the project limits. Based on these criteria, the No-Build Alternative is not acceptable and would typically be removed from further consideration.

The Traffic Signal Alternative will perform better than the No-Build Alternative in both the AM and PM peak hours, though queuing may impact the 5th Street intersection. To build this Alternative, additional ROW will be needed to construct a new curb return at the northwest corner. On-street parking will be impacted by this Alternative. It is estimated 34 parking spaces would need to be eliminated along the approach roadways to accommodate additional turn lanes. Construction costs are estimated at $1,050,000.

The Roundabout Alternative will perform substantially better than the Traffic Signal Alternative. This Alternative will cause the greatest impact to the intersection, however. Full ROW takes may be required on three properties and partial ROW acquisition will be required on two parcels. Approximately 64 on-street parking spaces will be lost on the approach roadways to accommodate the proposed curb alignments. This Alternative will also have a greater impact to City facilities, including storm drain, water, and sewer improvements. Construction costs are estimated at $1,620,000.

The conclusion of the Intersection Control Evaluation Report is that the Roundabout Alternative is the preferred option from an operational standpoint. Regardless of this determination, staff does not feel it justifies the significant additional costs and impacts to the existing neighborhood.

Staff is seeking direction from Council on whether the Traffic Signal Alternative or the Roundabout Alternative is the preferred solution for this intersection.

On January 16, 2020, the City held a meeting to discuss project alternatives with the public. Fifteen people attended this meeting. Some of the attendees expressed concern over the elimination of on-street parking and one attendee provided a history of the intersection. A summary of questions asked and a copy of the letter describing the intersection history are included in Attachment 4.

Lake Street and 4th Street are designated as arterials in the City's General Plan. When traffic volumes increase, 4th Street will be re-striped with 2 lanes in each direction and on-street parking will be eliminated to accommodate that increased volume. Property owners along Lake Street have parking areas that can be accessed from the alleys behind their homes.

FINANCIAL IMPACT:

Project funding will come from a federal grant and local transportation funding sources mentioned previously. This project will not require funding from the City's General Fund.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

Strategy 101.6 – Ensure infrastructure can sustain population growth in the development of the General Plan.

ALTERNATIVES:

Three alternatives were analyzed with the Intersection Control Evaluation Report.

ATTACHMENTS:

1. Intersection Control Evaluation Report
2. Preliminary Layout – Traffic Signal Alternative
3. Preliminary Layout – Roundabout Alternative
4. Comments from Public Meeting

ATTACHMENT 1

Lake Street/4th Street/Central Avenue

Intersection Control Evaluation (ICE)
Report

City of Madera

Lake Street/4th Street/Central Avenue

Intersection Control Evaluation (ICE) Report

Prepared for:

City of Madera
205 W. Fourth Street
Madera, CA 93637

Prepared by:

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February 2019

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Appendix B – Traffic Signal Alternative

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Appendix D – Benefit/Cost Ratio Back-Up

Appendix E – Alternatives Comparison Back-Up

1. Introduction

1.1 Purpose

This document has been prepared to present the results of a conceptual alternatives analysis performed by Omni-Means for the City of Madera in support of the Intersection Control Evaluation (ICE) process. The analysis evaluates potential alternative improvements at the Lake Street/4th Street/Central Avenue intersection. Though this intersection is not on the state highway system, this analysis has been conducted consistent with guidelines provided in Caltrans Traffic Operations Policy Directive 13-02 for intersection improvements on the state highway system.

The purpose of the study is to identify viable alternatives (project) to improve safety, reduce delay, and enhance mobility for all travel modes at the intersection of Lake Street/4th Street/Central Avenue. The project would improve traffic circulation, access, and safety for all modes of transportation. It would relieve anticipated future traffic congestion associated with planned development in the City and improve local traffic circulation.

The intersection of Lake Street/4th Street/Central Avenue is located in the northeast quadrant of the City of Madera, in the urbanized City limits, south of the Fresno River, east of SR 99 and northwest of Highway 145. Although this intersection currently does not experience severe delay or congestion, traffic forecast data shows this intersection reaching an LOS of E in the PM peak hour by the year 2040. There are five approaches to the intersection (as shown in Figure 1) and the 5-legged nature of this intersection presents unique design challenges.



Figure 1: Study Area

This document contains a description of the following sections consistent with the Caltrans ICE document guidelines including:

- Screening Objectives;
- Screening Criteria;
- Capacity Assessment/Analysis;
- Footprint Development & Assessment;
- Safety Considerations
- Life-Cycle Costs; and
- Recommendations & Documentation.

1.2 Project Setting/ Land Use

The intersection of Lake Street/4th Street/Central Avenue is located in the northeast quadrant of the City of Madera, east of SR 99 and northwest of Highway 145. Lake Street serves as a north-south arterial in the City. About half a mile to the southwest Lake Street intersects Sunrise Avenue, and at the study intersection Lake Street turns and continues due north well beyond the City limits. The southwest leg of 4th Street is an arterial and has an interchange with SR 99 about half a mile southwest of the study intersection. The northeast leg of 4th Street is a local road that terminates at Flume Street after one block. Central Avenue is an east/west collector street that extends from H Street to Lake Street.

The primary land use directly adjacent to the study intersection is single family residential. Centennial Park is located northeast of the intersection at the end of 4th Street. It includes a pool, youth and community center, and a community garden. City of Madera Fire Station #6 is located north of the study intersection on Lake Street. Although there are residential homes located at each corner of the intersection, there are not a significant number of driveways. Most properties in this area have their access off of an alley that serves as a communal driveway for an entire block of houses. This will result in minimal impacts to property access, even if there are other property impacts around the intersection. There is also a significant heavy vehicle presence at this intersection during the morning peak hour.

Lake Street crosses the Fresno River approximately 400 feet north of the study intersection. The bridge at this location is a constraint and any impacts to it should be avoided.

2. Screening Objectives

In August 2013, Caltrans issued Traffic Operations Policy Directive (TOPD) 13-02 regarding Intersection Control Evaluation (ICE). According to this directive, all proposals to install or modify intersection control on state highways must consider all three intersection control strategies (traffic signal, yield control roundabout, and all-way stop control) and the supporting design configurations during the ICE screening process. Consistent with the intent of this Directive, the objective of this report is to determine which of these intersection control strategies are context-appropriate, practical to implement, and merit further consideration.

2.1 Project Analysis Scenarios

This section contains a brief description of the time frames for which the traffic operations analysis was conducted. The project design alternatives (discussed within the next section) were analyzed for Existing Year (Year 2017) and Design Year (Year 2040) conditions. The analysis was

conducted for both the AM and PM peak hour conditions. The peak hour turning movement volumes are summarized on Figure 2.

Comparing the traffic data, the AM and PM peak hours are fairly balanced, but there are about 10% more vehicles entering the intersection in the PM peak hour. Northbound Lake Street and eastbound 4th Street have significantly more vehicles in the PM peak hour than in the AM Peak Hour. The other three legs are more balanced between the two peak hours.

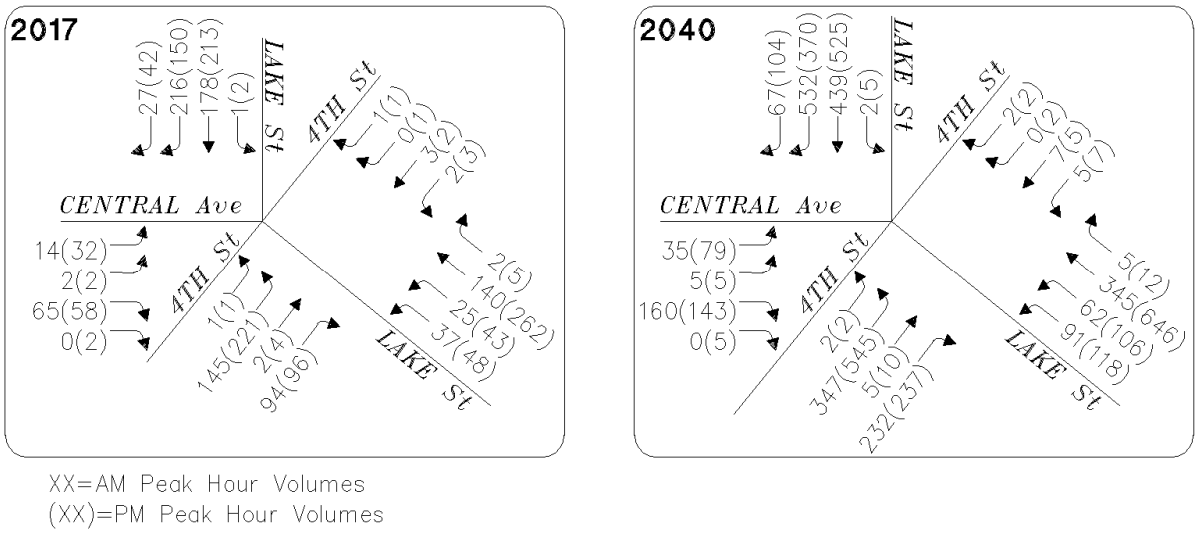


Figure 2: Peak Hour Traffic Volumes

A comparison of volumes by directionality (NB and SB on the corridor) indicated that, in general, the northbound traffic volumes (northbound Lake Street and 4th Street) are higher than the southbound Lake Street volumes. This trend is more significant in the PM peak hour.

One of the primary objectives of TOPD 13-02 is to balance the needs of all modes and users with system performance goals. For that reason, volumes for pedestrians and bicycles were also collected and analyzed. There were 6 cyclists using the study intersection during the AM peak hour and 10 in the PM peak hour. In the AM peak hour, about half of the cyclists were approaching from Central Avenue. In the PM peak hour, about half were approaching from the northeast leg of 4th Street. About 24 pedestrians used the intersection during the AM peak hour and about 27 pedestrians in the PM peak hour. Pedestrians cross on each leg of the intersection during both peak hours.

2.1.1 Existing Year (2017)

Traffic volumes collected in February 2017 during both AM and PM peak hours are utilized in this study. Pedestrian, cyclist, and truck volumes were measured as part of the counts, and peak hour factors were determined. These volumes were used as a base line for future year projections. See Figure 2 for a summary of the turning movement volumes for the study intersection.

2.1.2 Design Year (2040)

Omni-Means received year 2035 forecast volumes from the Madera County Transportation Commission (MCTC) Regional Travel Demand Model (RTDM) on February 22, 2017. The forecast volumes were link-based volumes; therefore, Omni-Means converted the existing traffic

count data to approach volumes, in order to compare them to the data provided by MCTC. The growth rates between the existing traffic counts and MCTC's 2035 traffic forecast volumes were calculated for each leg of the intersection and were found to be about 4%.

As a 4%/year growth rate seemed high, Omni-Means requested existing year volumes that were used in the MCTC RTDM. Omni-Means received the requested 2017 link based traffic volumes from the RTDM and determined that these traffic volumes had an average annual growth rate of about 0-1.1% between the RTDM's 2017 and 2035 volumes. Based on this determination, Omni-Means used a 1% annual growth rate applied on the existing turning movements' counts to the year 2040. See Figure 2 for the forecasted 2040 traffic volumes.

2.2 Project Design Alternatives

This study analyzes three alternatives. The first is a No Build Alternative that assumes existing lane geometrics and all-way stop control. The second alternative is signalization with modified lane geometrics. The third alternative is a yield-control roundabout with modified lane geometrics.

2.2.1 No Build Alternative

The No-Build Alternative leaves the existing lane geometrics and all-way stop-control in place.

2.2.2 Traffic Signal Alternative

With this alternative, the intersection is signalized and the lane geometrics have been modified to accommodate the Design Year volumes. The northeast leg of 4th Street will be terminated at the alley, and the intersection will only feature 4 legs. The Signal Alternative lane geometrics can be found on Figure 3 and is provided in Appendix B of this report.

2.2.3 Roundabout Alternative

This alternative would replace the intersection with a modern single lane roundabout designed to accommodate the Design Year traffic forecast volumes. The northeast leg of 4th Street will be terminated at the alley, and the intersection will only feature 4 legs. The Roundabout Alternative layout shown on Figure 4 and is provided in Appendix C of this report.

3. Screening Criteria

The traffic operations for the No-Build Alternative, Signal Alternative, and Roundabout Alternative were analyzed for the AM and PM peak hours under existing (2017) and design (2040) year conditions.

Both the No-Build and Signal Alternatives were analyzed using Synchro 9 and SimTraffic analysis software. Synchro 9 is a macroscopic analysis and optimization application that reports the Level of Service (LOS) and delay as per the Highway Capacity Manual (HCM) 2010 methodologies. SimTraffic is a traffic micro-simulation application that individually tracks and records each vehicle in the model simulating real world conditions. SimTraffic was used to record queuing characteristics for the No-Build and Traffic Signal Alternatives.

SIDRA analysis software was used for the Roundabout Alternative to determine the LOS, volume to capacity ratio (V/C), delay, and the 95th percentile queues. The volume to capacity ratio (V/C) compares roadway demand (vehicle volume) with roadway carrying capacity. A V/C of 1.00 indicates that a roadway facility is operating at full capacity.

3.1 Traffic Operations Analysis

Traffic operations have been quantified through the determination of LOS. LOS is a qualitative measure of traffic conditions, whereby a letter grade "A" through "F" is assigned to an intersection or roadway segment representing progressively worsening traffic conditions. LOS definitions for different types of intersection controls are outlined in Table 1.

TABLE 1
LEVEL-OF-SERVICE (LOS) CRITERIA

LOS	Type of Flow	Delay	Maneuverability	Stopped Delay/Vehicle	
				Signal/ Rndbt	Unsig-nalized
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	< 10.0	< 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10.0 and < 20.0	>10.0 and < 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20.0 and < 35.0	>15.0 and < 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35.0 and < 55.0	>25.0 and < 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55.0 and < 80.0	>35.0 and < 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 80.0	> 50.0

In the City's General Plan Circulation and Infrastructure Element, Policy CI-22 states that "in the Downtown District (as defined in the Land Use Element of this General Plan), the City shall seek to maintain LOS D." This intersection is located within the Downtown District; therefore, LOS "D"

is assumed to represent the appropriate LOS target.

In addition to providing acceptable LOS and delay, a goal of the build alternatives will be to reduce standing queues on all approaches.

3.2 Analysis Factors

The following criteria are incorporated in the analysis in order to most accurately reflect intersection operating conditions:

- The peak hour factor (PHF) was calculated based on data from the traffic counts collected in February 2017. The PHF represents how constant vehicle volumes are during the peak hour and is equal to the peak hour volume divided by 4 times the peak 15-minute volume. A PHF of 0.81 was used for the AM peak hour, and a PHF of 0.98 was used for the PM peak hour.
- Truck percentages were calculated based on data from counts collected in February 2017. The AM peak hour experiences about 4% heavy vehicles, and about 1% in the PM peak hour.
- SIDRA software includes an environmental factor that modifies capacity reflecting driver response times, standard of intersection geometry, visibility, operating speeds, vehicle sizes, pedestrian interference, parking, buses stopping, etc. For the analysis performed for this report, an environmental factor of 1.02 was used for roundabout analysis.

4. Capacity Assessment/Analysis – Existing Intersection (5-Leg)

Section 4 includes a capacity assessment and analysis of the existing 5-legged Lake Street/4th Street/Central Avenue intersection for the No Build Alternative as well as for a Traffic Signal Alternative and for a Roundabout Alternative. Each alternative is evaluated under both Existing (2017) and Design Year (2040) conditions. LOS worksheets for each alternative are provided in Appendix A.

4.1 No Build Analysis

The following section summarizes the traffic operations analysis and results for the No-Build Alternative under Existing (2017) and Design Year (2040) conditions. LOS worksheets for each analysis condition are provided in Appendix A.

4.1.1 Existing Year (2017)

Tables 2A and 2B present the Existing Condition peak hour intersection LOS and delay for the No Build Alternative.

TABLE 2A
NO BUILD - EXISTING YEAR (2017) AM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	Delay (sec)[2]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection	***10.2***	***B***	**--**	
Northbound Lake Street Left/Thru/Right	9.9	A	350	75
Southbound Lake Street Left/Thru	15.9	B	660	190
Southbound Lake Street Right			65	20
Eastbound 4th Street Left	7.4	A	60	50
Eastbound 4th Street Thru			320	10
Eastbound 4th Street Right			75	40
Eastbound Central Avenue Left/Thru/Right	11.5	B	445	70
Westbound 4th Street Left/Thru/Right	8.4	A	325	25

1.V/C ratio not available for 5-leg AWSC intersection.

2. Traffic Operation outputs calculated using SimTraffic simulation results.

As shown in Table 2A, the No Build Alternative is currently providing acceptable intersection LOS and delay for the study intersection during the AM peak hour. The No Build Alternative has acceptable 95th percentile queues for all movements.

TABLE 2B
NO BUILD - EXISTING YEAR (2017) PM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	Delay (sec)[2]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection	***14.8***	***B***	**--**	
Northbound Lake Street Left/Thru/Right	18.2	B	350	170
Southbound Lake Street Left/Thru	20.1	C	660	175
Southbound Lake Street Right			65	20
Eastbound 4th Street Left	12.5	C	**60**	**75**
Eastbound 4th Street Thru			320	20
Eastbound 4th Street Right			75	35
Eastbound Central Avenue Left/Thru/Right	13.2	C	445	75
Westbound 4th Street Left/Thru/Right	5.8	A	325	30

1.V/C ratio not available for 5-leg AWSC intersection.

2. Traffic Operation outputs calculated using SimTraffic simulation results.

As shown in Table 2B, the No Build Alternative is currently providing acceptable intersection LOS and delay the study intersection during the PM peak hour. The No Build Alternative has acceptable 95th percentile queues for all movements, except for the following:

- The queue for the eastbound 4th Street left-turn exceeds the available storage.

4.1.2 Design Year (2040)

Tables 3A and 3B present the Design Year Condition peak hour intersection LOS and delay for the No Build Alternative.

TABLE 3A
NO BUILD - DESIGN YEAR (2040) AM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	Delay (sec)[2]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection	***23.0***	***C***	**--**	
Northbound Lake Street Left/Thru/Right	15.1	B	350	125
Southbound Lake Street Left/Thru	**42.3**	**E**	660	420
Southbound Lake Street Right			**65**	**195**
Eastbound 4th Street Left	10.6	B	**60**	**70**
Eastbound 4th Street Thru			320	20
Eastbound 4th Street Right			75	50
Eastbound Central Avenue Left/Thru/Right	12.7	B	445	90
Westbound 4th Street Left/Thru/Right	8.0	A	325	20

1.V/C ratio not available for 5-leg AWSC intersection.

2. Traffic Operation outputs calculated using SimTraffic simulation results.

As shown in Table 3A, the No Build Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the AM peak hour. The projected 95th percentile queues are accommodated for all movements, except for the following:

- The projected queue for the southbound Lake Street right-turn exceeds the available storage.
- The queue for the eastbound 4th Street left-turn exceeds the available storage.

TABLE 3B
NO BUILD - DESIGN YEAR (2040) PM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	Delay (sec)[2]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection	***43.4***	***E***	**--**	
Northbound Lake Street Left/Thru/Right	**53.4**	**F**	**350**	**380**
Southbound Lake Street Left/Thru	**59.6**	**F**	660	415
Southbound Lake Street Right			**65**	**240**
Eastbound 4th Street Left	**39.7**	**E**	**60**	**125**
Eastbound 4th Street Thru			320	260
Eastbound 4th Street Right			**75**	**135**
Eastbound Central Avenue Left/Thru/Right	15.2	B	445	70
Westbound 4th Street Left/Thru/Right	14.0	B	325	30

1.V/C ratio not available for 5-leg AWSC intersection.

2. Traffic Operation outputs calculated using SimTraffic simulation results.

As shown in Table 3B, the No Build Alternative is not projected to provide acceptable intersection LOS or delay for the study intersection during the PM peak hour. The projected 95th percentile

queues are accommodated for all movements, except for the following:

- The projected queue for the northbound Lake Street exceeds the available storage and would spill back into the intersection of 5th Street.
- The projected queue for the southbound Lake Street right-turn lane exceeds the available storage.
- The queues for the eastbound 4th Street left-turn and right-turn lanes exceed the available storages.

4.2 Traffic Signal Analysis

This section provides a summary of the AM and PM peak hour intersection operations associated with installation of a traffic signal with the existing 5-legged intersection under Existing Year (2017) and Design Year (2040) conditions. LOS worksheets for each analysis condition and lane geometrics used for this analysis are provided in Appendix A.

4.2.1 Existing Year (2017)

Tables 4A and 4B show the projected volume/capacity (V/C) ratio, delay, LOS, and 95th percentile queues for Existing Year conditions during AM and PM peak hour conditions, respectively.

TABLE 4A
SIGNAL - EXISTING YEAR (2017) AM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio[1]	Delay (sec)[1]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection	***0.46***	***20.4***	***C***	**--**	
Northbound Lake Street Left	0.43	17.7	B	200	30
Northbound Lake Street Thru/Right				350	65
Southbound Lake Street Left	0.49	18.8	B	100	0
Southbound Lake Street Thru				660	105
Southbound Lake Street Right				200	135
Eastbound 4th Street Left	0.39	22.8	C	150	40
Eastbound 4th Street Left				320	110
Eastbound 4th Street Thru/Right				320	25
Eastbound Central Avenue Left/Thru/Right	0.52	28.8	C	445	85
Westbound 4th Street Left	0.01	21.3	C	100	0
Westbound 4th Street Thru/Right				325	10

1.Traffic Operation outputs calculated using Synchro 9 (Queues/Signalized Intersection Summary - HCM 2000)

As shown in Table 4A, the Traffic Signal Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the AM peak hour. The Traffic Signal Alternative has acceptable 95th percentile queues for all movements.

TABLE 4B
SIGNAL - EXISTING YEAR (2017) PM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio[1]	Delay (sec)[1]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection	***0.45***	***20.2***	***C***	**--**	
Northbound Lake Street Left/Thru/Right	0.47	18.0	B	200	105
Northbound Lake Street Thru/Right				350	155
Southbound Lake Street Left	0.44	18.8	B	100	5
Southbound Lake Street Left/Thru				660	100
Southbound Lake Street Right				200	60
Eastbound 4th Street Left	0.44	22.2	C	150	40
Eastbound 4th Street Left				320	145
Eastbound 4th Street Thru/Right				320	25
Eastbound Central Avenue Left/Thru/Right	0.50	28.2	C	445	85
Westbound 4th Street Left	0.01	20.3	C	100	5
Westbound 4th Street Thru/Right				325	15

1.Traffic Operation outputs calculated using Synchro 9 (Queues/Signalized Intersection Summary - HCM 2000)

As shown in Table 4B, the Traffic Signal Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the PM peak hour. The Traffic Signal Alternative has acceptable 95th percentile queues for all movements.

4.2.2 Design Year (2040)

Tables 5A & 5B show the projected volume/capacity (V/C) ratio, delay, LOS, and 95th percentile queues for Design Year conditions during AM and PM peak hour conditions, respectively.

TABLE 5A
SIGNAL - DESIGN YEAR (2040) AM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio[1]	Delay (sec)[1]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection	***0.56***	***25.7***	***C***	**--**	
Northbound Lake Street Left	0.53	21.9	C	200	95
Northbound Lake Street Thru/Right				360	155
Southbound Lake Street Left	0.63	24.2	C	100	5
Southbound Lake Street Thru				660	125
Southbound Lake Street Right				200	155
Eastbound 4th Street Left	0.51	29.4	C	150	115
Eastbound 4th Street Left				320	65
Eastbound 4th Street Thru/Right				320	15
Eastbound Central Avenue Left/Thru/Right	0.50	31.8	C	445	90
Westbound 4th Street Left	0.02	27.0	C	100	0
Westbound 4th Street Thru/Right				325	15

1.Traffic Operation outputs calculated using Synchro 9 (Queues/Signalized Intersection Summary - HCM 2000)

As shown in Table 5A, the Traffic Signal Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the AM peak hour. The Traffic Signal Alternative

has acceptable 95th percentile queues for all movements. Although the intersection delay and LOS are acceptable, they are worse than those projected for the No Build Alternative. The main long-term benefit of the Traffic Signal Alternative is the reduction in 95th percentile queues and delay on the southbound Lake Street approach.

TABLE 5B
SIGNAL - DESIGN YEAR (2040) PM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio[1]	Delay (sec)[1]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection	***0.55***	***26.4***	***C***	**--**	
Northbound Lake Street Left/Thru/Right	0.49	21.6	C	200	110
Northbound Lake Street Thru/Right				360	260
Southbound Lake Street Left	0.55	25.1	C	100	5
Southbound Lake Street Left/Thru				660	150
Southbound Lake Street Right				200	130
Eastbound 4th Street Left	0.60	31.0	C	150	110
Eastbound 4th Street Left				320	200
Eastbound 4th Street Thru/Right				320	45
Eastbound Central Avenue Left/Thru/Right	0.52	34.2	C	445	140
Westbound 4th Street Left	0.02	27.0	C	100	10
Westbound 4th Street Thru/Right				325	15

1.Traffic Operation outputs calculated using Synchro 9 (Queues/Signalized Intersection Summary - HCM 2000)

As shown in Table 5B, the Traffic Signal Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the PM peak hour. The Traffic Signal Alternative also has acceptable 95th percentile queues for all movements. For the design year PM peak hour, the Traffic Signal Alternative operates better than the No Build Alternative by reducing intersection delay from 43.4 seconds to 26.4 seconds and eliminates all 95th percentile queuing impacts.

4.3 Roundabout Analysis

This section provides a summary of the AM and PM peak hour intersection operations associated with installation of a roundabout with the existing 5-legged intersection under Existing Year (2017) and Design Year (2040) conditions. LOS worksheets for each analysis condition and lane geometrics used for this analysis are provided in Appendix A.

4.3.1 Existing Year (2017)

Tables 6A and 6B show the projected volume/capacity (V/C) ratio, delay, LOS, and 95th percentile queues for Existing Year conditions during AM and PM peak hour conditions, respectively.

TABLE 6A
ROUNDABOUT - EXISTING YEAR (2017) AM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio	Delay (sec)	Level of Service[1]	Available Storage	95th Percentile Queue (ft)
Intersection	***0.49***	***7.4***	***A***	**--**	
Northbound Lake Street	0.23	5.4	A	350	35
Southbound Lake Street	0.49	9.1	A	660	100
Eastbound 4th Street	0.30	6.7	A	320	50
Eastbound Central Avenue	0.13	6.0	A	445	20
Westbound 4th Street	0.01	4.1	A	325	0

1.Lane LOS values are based on average delay and v/c ratio per lane.

As shown in Table 6A, the Roundabout Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the AM peak hour. The Roundabout Alternative has acceptable 95th percentile queues for all movements.

TABLE 6B
ROUNDABOUT - EXISTING YEAR (2017) PM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio	Delay (sec)	Level of Service[1]	Available Storage	95th Percentile Queue (ft)
Intersection	***0.44***	***7.4***	***A***	**--**	
Northbound Lake Street	0.44	8.5	A	350	80
Southbound Lake Street	0.36	7.1	A	660	60
Eastbound 4th Street	0.34	7.0	A	320	55
Eastbound Central Avenue	0.11	5.1	A	445	15
Westbound 4th Street	0.01	4.6	A	325	0

1.Lane LOS values are based on average delay and v/c ratio per lane.

As shown in Table 6B, the Roundabout Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the PM peak hour. The Roundabout Alternative has acceptable 95th percentile queues for all movements.

For both the AM and PM peak hours, the Roundabout Alternative operates better than the No Build Alternative by improving LOS from B to A and significantly reducing the 95th percentile queues.

4.3.2 Design Year (2040)

Tables 7A & 7B show the projected volume/capacity (V/C) ratio, delay, LOS, and 95th percentile queues for Design Year conditions during AM and PM peak hour conditions, respectively.

TABLE 7A
ROUNDABOUT - DESIGN YEAR (2040) AM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio	Delay (sec)	Level of Service[1]	Available Storage	95th Percentile Queue (ft)
Intersection	***0.67***	***10.5***	***B***	**--**	
Northbound Lake Street	0.67	14.0	B	350	195
Southbound Lake Street	0.31	6.6	A	660	50
Eastbound 4th Street	0.42	8.9	A	320	75
Eastbound Central Avenue	0.20	8.2	A	445	35
Westbound 4th Street	0.01	4.5	A	325	0

1.Lane LOS values are based on average delay and v/c ratio per lane.

As shown in Table 7A, the Roundabout Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the AM peak hour. The Roundabout Alternative has acceptable 95th percentile queues for all movements. The Roundabout Alternative is projected to improve the design year intersection LOS from a C to a B and reduces the projected queues.

TABLE 7B
ROUNDABOUT - DESIGN YEAR (2040) PM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio	Delay (sec)	Level of Service[1]	Available Storage	95th Percentile Queue (ft)
Intersection	***0.60***	***10.3***	***B***	**--**	
Northbound Lake Street	0.60	12.6	B	350	150
Southbound Lake Street	0.49	9.5	A	660	95
Eastbound 4th Street	0.47	9.5	A	320	85
Eastbound Central Avenue	0.17	6.4	A	445	25
Westbound 4th Street	0.02	5.6	A	325	0

1.Lane LOS values are based on average delay and v/c ratio per lane.

As shown in Table 7B, the Roundabout Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the PM peak hour. The Roundabout Alternative has acceptable 95th percentile queues for all movements. The Roundabout Alternative is projected to improve the design year intersection LOS from a E to a B and reduces the projected queues.

5. Build Alternatives Footprint Development & Assessment

The following section summarizes the development of preliminary concept layouts of both a Traffic Signal Alternative and for a Roundabout Alternative. The layouts are useful for preliminary right-of-way needs for each alternative and also to illustrate truck-turning movements. The lane geometry for the alternatives is the same for all analysis scenarios and include terminating the northeast leg of 4th Street at the alley in advance of the intersection. Termination of this leg was discussed with and agreed to by the City.

5.1 Traffic Signal Alternative

The Traffic Signal Alternative features converting the intersection of Lake Street/4th Street/Central Avenue from a 5-way all-way stop-control to a 4-way traffic signal as shown in Figure 3. The Lake Street bridge over the Fresno River will be retained with no impacts to the structure. In order to accommodate the design vehicle turning movements, all five curb returns will need to be reconstructed. Other intersection lane geometrics improvements are illustrated in Figure 3 and are listed below:

- The northbound 4th Street approach shows the existing left-turn lane eliminated, and the existing through lane converted to a left-turn lane.
- The northbound Lake Street approach features a narrow median with a separate left-turn lane and a shared through/right-turn lane.
- The southbound 4th Street approach is terminated at the alley in advance of the intersection.
- The southbound Lake Street approach remains two lanes at the intersection.
- Central Avenue remains a single lane approach.
- The traffic signal footprint encroaches beyond the right-of-way on the northwest corner of Central Avenue and Lake Street.

5.1.1 Traffic Signal Performance Checks

The following design criteria were used to analyze the geometrics and safety performance of the proposed Traffic Signal Alternative:

- The “WB-40” design vehicle from the American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, 5th Edition (updated 2004), shall be accommodated on all movements.
- The “S-BUS-40” design vehicle from the American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, 5th Edition (updated 2004), shall be accommodated on all movements.

Exhibits illustrating the truck turns for each condition are provided in Appendix B.

Traffic Signal Alternative: Preliminary Layout

LEGEND:

- EXISTING RIGHT-OF-WAY AND PROPERTY LINES
- PROPOSED IMPROVEMENTS
- RIGHT-OF-WAY IMPACTS
- ESTIMATED LIMITS FOR NEW PAVEMENT SECTION

LAKE Street

CONSTRUCT 25' RADIUS RETURN. CONSTRUCT RAMP TO ADA STANDARDS

CONSTRUCT SIDEWALK CONNECTION

ELBOW ENDING 4TH STREET INTO THE ALLEY.

4TH Street

CENTRAL Avenue

ø1

ø4 ø4

DEMO 4TH STREET AND PROVIDE LANDSCAPING

CONSTRUCT CURB, GUTTER, AND SIDEWALK TO END 4TH STREET ACCESS.

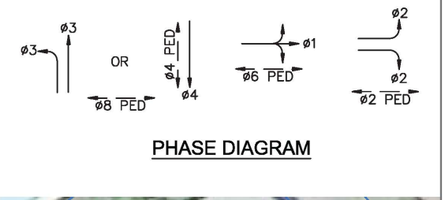
ø3 ø3

ø2 ø2

RAISED MEDIAN

4TH Street

LAKE Street



PHASE DIAGRAM

NORTH

0 50

Scale: 1"= 50

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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure 3

Madera, California

omni·means A GHD Company

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5.2 Roundabout Alternative

The Roundabout Alternative features converting the intersection of Lake Street/4th Street/Central Avenue from a 5-way all-way stop-control to a modern 4-leg single lane roundabout as shown on Figure 4. All approaches to the intersection are shown with shared lane markings, consistent with Madera County 2011 Regional Bicycle Transportation Plan. The Lake Street bridge over the Fresno River will be retained with no impacts to the structure. The roundabout has an inscribed circle diameter of 116' with an 84' diameter central island, 16' circulatory roadway, and an 8' truck apron. The shared-use path has a width of 10' with a minimum landscaped buffer of 3'-5'. Pedestrian crossings are shown a minimum of 20'-25' from the circulatory roadway, and the pedestrian refuges at the splitter islands are at least 6' wide. Other intersection lane geometrics improvements are illustrated in Appendix C and are listed below:

- The roundabout was centered in between the existing structures located on each corner, in order to minimize right-of-way impacts.
- The northbound 4th Street approach shows a wider median, in order to provide speed control on this entry.
- In order to accommodate a right-turning truck, a truck blister was added to the northwest and southern corners of the roundabout. The truck blister is constructed out of the same material as the truck apron and allows the back tires of the truck's trailer to off-track onto it as the truck completes the right turn.
- The approach roadways are shown with splitter islands, which provide necessary deflection and speed control for entering vehicles.
- The roundabout footprint encroaches beyond the right-of-way in four of the five corners with impacts to the adjacent properties. Property impacts could be reduced by modifying the minimum width of the proposed shared-use path and landscape buffer. The National Cooperative Highway Research Program (NCHRP) Report 672 entitled "Roundabouts: An Informational Guide, 2nd edition" is the design guide used to design roundabouts. This guide recommends a shared-use path width of 10’ with 8’ being the minimum, and a landscape buffer of 5’ with 3’ being the minimum. Removing the landscape buffer can be done, but a vertical barrier would be required between the circulatory roadway and the shared-use path, in order to be ADA compliant.
- In addition to direct property impacts due to the construction footprint, there are other property impacts due to sight distance requirements. As illustrated on Figure 4, these property impacts encroach into three corners, and buildings on the west side restrict the available sight distance.

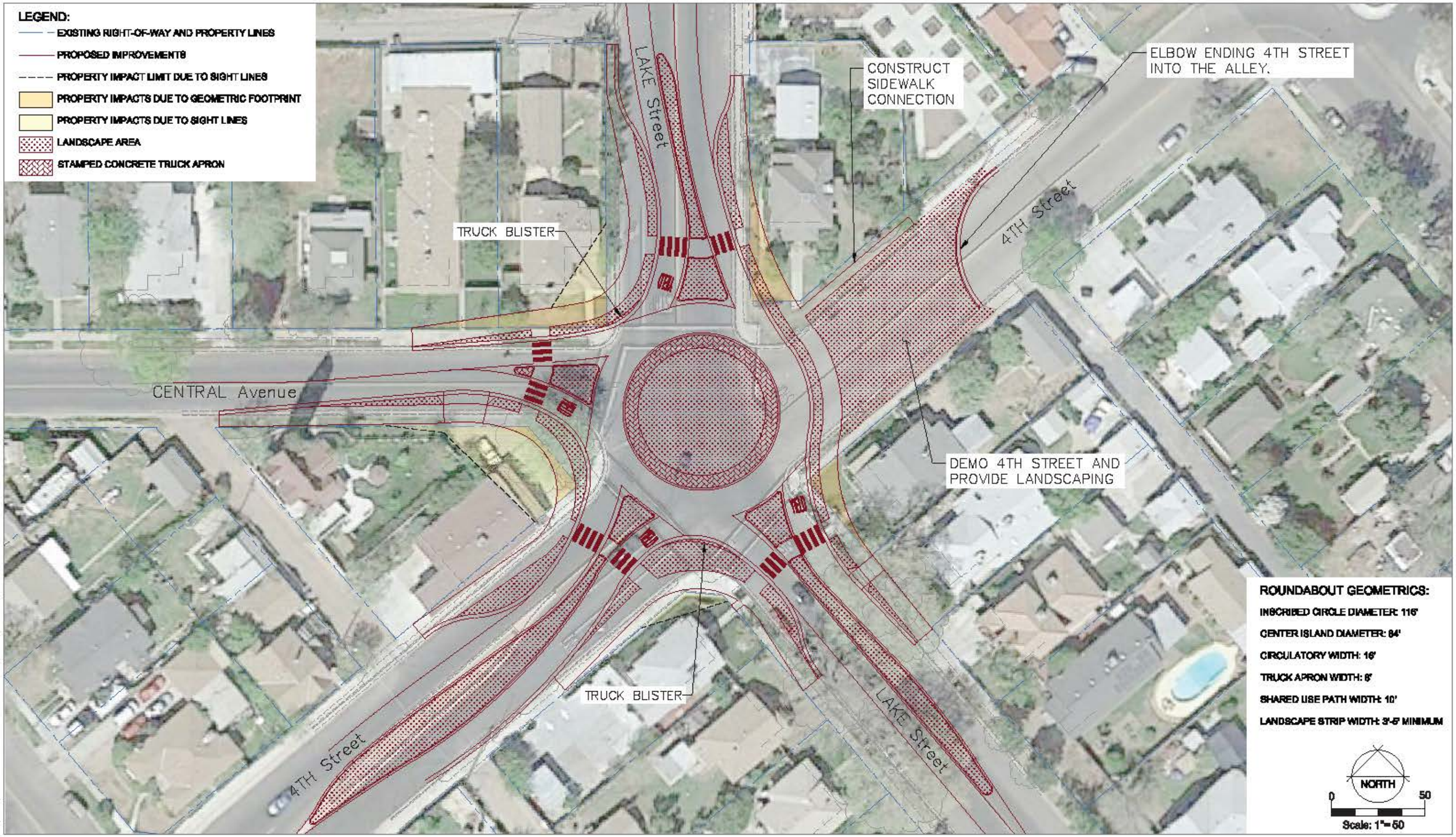
5.2.1 Roundabout Performance Checks

Due to the complexity in the design, several performance checks have been conducted to verify the Roundabout's feasibility. These performance checks meet current Caltrans TOPD 13- 02 and HDM 405.10 which mandates conformance with the National Cooperative Highway Research Program (NCHRP) Report 672 entitled "Roundabouts: An Informational Guide, 2nd edition".

The following design criteria were used to analyze the geometrics and safety performance of the proposed Roundabout Alternative:

- Criteria and methodologies to be consistent with Caltrans DIB 80-01, Caltrans Highway Design Manual, and Report 672 of the National Cooperative Highway Research Program (NCHRP) titled *Roundabouts: An Informational Guide (Second Edition).* This document

Roundabout Alternative: Preliminary Layout



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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure 4

omni·means A GHD Company

Madera, California

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supersedes the original roundabout guide published by the FHWA in 2000.

- The “WB-40” design vehicle from the American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, 5th Edition (updated 2004), shall be accommodated on all movements. This vehicle shall be accommodated such that the tractor portion of the vehicle does not need to mount any truck aprons.
- The “S-BUS-40” design vehicle from the American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, 5th Edition (updated 2004), shall be accommodated on all movements. This vehicle shall be accommodated such that the bus does not need to mount any truck aprons.
- Fast path entry speeds on single lane roundabout approaches should be 25 mph or less.
- Minimum stopping sight distance for posted speed limits should be provided for vehicles approaching roundabout entrances and pedestrian crosswalks.
- View angles for all legs of the roundabout should be no more than 15 degrees.
- Entry angles for all legs of the roundabout should be between 20 and 40 degrees.

Exhibits illustrating the truck turns for each condition and the fastest path analysis, stopping sight and intersection sight distance analysis, and intersection view angle exhibits are provided in Appendix C.

5.2.2 Fastest Path and Vehicle Speed Checks

The “Fastest Path” represents the path that the most aggressive drivers could take through the roundabout and assumes no other traffic to be within the intersection. NCHRP Report 672 indicates that the recommended maximum vehicle entry speeds along the fastest path should be less than 25 mph at urban single-lane roundabouts. NCHRP Report 672 also indicates that the differential speed between consecutive or conflicting projected fast path speeds should be less than 15 mph.

Fastest path speeds are determined for five locations per approach. These include entry speeds (referred to as V1); through movement circulating speeds (V2); exiting speeds (V3); left turn movement circulating speeds (V4); and right turn speeds (V5). A diagram of the described locations is shown in Figure 5.

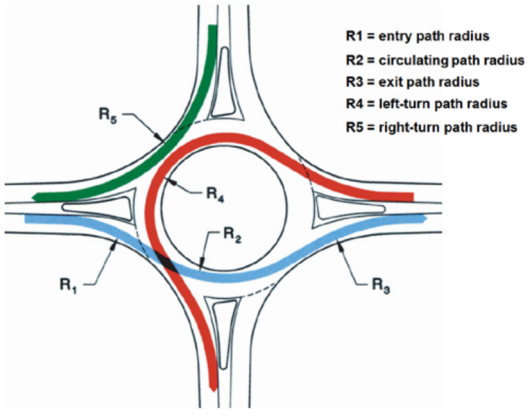


Figure 5 - Fast Path Critical Speed Locations

Fastest path speeds for the Roundabout Alternative are shown in Table 8. Exhibits illustrating the fastest path analysis can be found in Appendix C.

TABLE 8: FASTEST PATH SPEEDS (MPH)

MOVEMENT	NB LAKE STREET (N#)	SB LAKE STREET (S#)	NEB 4TH STREET (NE#)	EB CENTRAL AVENUE (E#)
ENTERING (R1)	21.9	22.4	21.8	20.8
CIRCULATING (R2	22.5	24.4		31.2
EXITING (R3)	31.4	21.7		38.1
LEFT TURN (R4)	14.6		14.8	14.0
RIGHT TURN (R5)		13.4	15.7	15.4

Notes:
All values are in miles per hour
V3 exiting speeds are derived from vehicle acceleration formulas in NCHRP 672
V3 fast path speed measured at exit crosswalk or 100 feet downstream from V2.
N/A = Fastest path speed does not exist for this approach
2% cross-slope assumed for determining Fastest path

As shown in Table 8, the fastest path entering and right-turn speeds are less than the maximum speed of 25 mph for a single lane approach. Therefore, these fastest path speeds are acceptable for this ICE planning document. Because the Roundabout Alternative naturally slows vehicles to 25 mph or less, the vehicle traffic will be quieter than the Traffic Signal Alternative.

5.2.3 Sight Distance

Intersection sight distance differs at roundabouts versus other intersections. Drivers must be able to see potentially conflicting oncoming traffic from the left as they approach the roundabout entry. NCHRP Report 672 provides methodologies to establish the required sight distance triangles for conflicting traffic, as well as pedestrians in crosswalks, for both the entering and circulating vehicle movements. The stopping and intersection sight distance triangles were overlaid onto the proposed Roundabout Alternative to show clear vision areas for the intersection. Sight distance lengths vary according to vehicle fast path vehicle speeds. Intersection sight distances were calculated using a critical headway time t_c of 5.0 seconds, unless noted otherwise.

Table 9 presents the required intersection sight distances with the corresponding sight triangles shown in Appendix C.

TABLE 9: INTERSECTION SIGHT DISTANCE

LEG	APPROACH		CONFLICTING SPEED (MPH)	SIGHT TRIANGLE LENGTH (FT)
NB LAKE STREET	NEB 4TH STREET	ENTERING LEG (D1)	21.8	159.9
	EB CENTRAL AVENUE	CIRCULATING LEG (D2)	14.0	103.0
SB LAKE STREET	NB LAKE STREET	CIRCULATING LEG (D2)	14.6	107.1
NEB 4TH STREET	EB CENTRAL AVENUE	ENTERING LEG (D1)	26.0	183.2*
	SB LAKE STREET	CIRCULATING LEG (D2)	24.4	178.8
EB CENTRAL AVENUE	SB LAKE STREET	ENTERING LEG (D1)	23.4	163.8**

Notes: Intersection Stopping Sight Distance criteria obtained from NCHRP Report 672 with 5 second Critical Headway (tc)
*Critical Headway = 4.8 seconds.
**Critical Headway = 4.77 seconds.

Required stopping sight distances at the entries to the roundabout are provided in Table 10 and

the pedestrian crossing stopping distances are provided in Table 11.

TABLE 10: STOPPING SIGHT DISTANCE TO ENTRY

APPROACH	INITIAL SPEED (MPH)	STOPPING SIGHT DISTANCE (FT)
NB LAKE STREET	35.0	247.3
SB LAKE STREET	35.0	247.3
NEB 4TH STREET	35.0	247.3
EB CENTRAL AVENUE	35.0	247.3

TABLE 11: STOPPING SIGHT DISTANCE TO PEDESTRIAN CROSSING

LEG	APPROACH		CONFLICTING SPEED (MPH)	SIGHT TRIANGLE LENGTH (FT)
NB LAKE STREET	NB LAKE STREET	INITIAL SPEED	35.0	247.3
	NEB 4TH STREET	RIGHT TURN (V5)	15.7	81.8
	EB CENTRAL AVENUE	CIRCULATING SPEED (V2)	26.0	161.0
SB LAKE STREET	SB LAKE STREET	INITIAL SPEED	35.0	247.3
	NB LAKE STREET	CIRCULATING SPEED (V2)	22.2	129.2
NEB 4TH STREET	NEB 4TH STREET	INITIAL SPEED	35.0	247.3
	EB CENTRAL AVENUE	RIGHT TURN (V5)	15.4	79.6
	SB LAKE STREET	CIRCULATING SPEED (V2)	23.4	139.0
EB CENTRAL	EB CENTRAL AVENUE	INITIAL SPEED	35.0	247.3
	SB LAKE STREET	RIGHT TURN (V5)	13.4	66.3

From Tables 9, 10, and 11 and the corresponding figures in Appendix C, the proposed Roundabout Alternative provides sufficient sight distance. Special consideration to landscaping features in the sight triangles will be necessary to ensure proper sight distance at the intersections.

5.2.4 View Angles

The angle between consecutive entries must not be overly acute in order to allow drivers to comfortably turn their heads to the left to view oncoming traffic from the adjacent upstream entry. Guidance from the NCHRP section 6.7.4 recommends a minimum 75° intersection angle (15° view angle). All approaches have view angles that are less than 15°; see Appendix C for the figure showing the view angles.

6. Build Alternatives Capacity Assessment/ Analysis

Section 6 includes a capacity assessment and analysis of the 4-leg Lake Street/4th Street/Central Avenue intersection for the Traffic Signal Alternative and for the Roundabout Alternative. Each alternative is evaluated under both Existing (2017) and Design Year (2040) conditions.

6.1 Traffic Signal Alternative Analysis

This section provides a summary of the AM and PM peak hour intersection operations associated with the Traffic Signal Alternative under Existing Year (2017) and Design Year (2040) conditions. LOS worksheets for each analysis condition and lane geometrics used for this analysis are

provided in Appendix B.

6.1.1 Existing Year (2017)

Tables 12A and 12B show the projected volume/capacity (V/C) ratio, delay, LOS, and 95th percentile queues for Existing Year conditions during AM and PM peak hour conditions, respectively.

TABLE 12A
TRAFFIC SIGNAL ALTERNATIVE - EXISTING YEAR (2017) AM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio[1]	Delay (sec)[1]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection		***23.8***	***C***	**--**	
Northbound Lake Street Thru	0.86	40.0	D	350	160
Northbound Lake Street Left	0.40			200	65
Southbound Lake Street Thru	0.59	17.4	B	400	190
Southbound Lake Street Right	0.39			200	100
Eastbound 4th Street Left	0.67	21.8	C	320	105
Eastbound 4th Street Right	0.08			200	0
Eastbound Central Avenue Left/Thru/Right	0.54	22.6	C	445	65

1.Traffic Operation outputs calculated using Synchro 9 (Queues/Signalized Intersection Summary - HCM 2000)

As shown in Table 12A, the Traffic Signal Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the AM peak hour. The Traffic Signal Alternative has acceptable 95th percentile queues for all movements.

TABLE 12B
TRAFFIC SIGNAL ALTERNATIVE - EXISTING YEAR (2017) PM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio[1]	Delay (sec)[1]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection		***24.3***	***C***	**--**	
Northbound Lake Street Thru	0.74	26.7	C	350	300
Northbound Lake Street Left	0.27			200	90
Southbound Lake Street Thru	0.58	21.8	C	400	145
Southbound Lake Street Right	0.13			200	45
Eastbound 4th Street Left	0.66	23.2	C	320	185
Eastbound 4th Street Right	0.07			200	0
Eastbound Central Avenue Left/Thru/Right	0.57	28.6	C	445	85

1.Traffic Operation outputs calculated using Synchro 9 (Queues/Signalized Intersection Summary - HCM 2000)

As shown in Table 12B, the Traffic Signal Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the PM peak hour. The Traffic Signal Alternative has acceptable 95th percentile queues for all movements.

6.1.2 Design Year (2040)

Tables 13A & 13B show the projected volume/capacity (V/C) ratio, delay, LOS, and 95th percentile

queues for Design Year conditions during AM and PM peak hour conditions, respectively.

TABLE 13A
TRAFFIC SIGNAL ALTERNATIVE - DESIGN YEAR (2040) AM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio[1]	Delay (sec)[1]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection		***28.2***	***C***	**--**	
Northbound Lake Street Thru	0.90	49.7	D	350	220
Northbound Lake Street Left	0.42			200	85
Southbound Lake Street Thru	0.60	21.6	C	400	190
Southbound Lake Street Right	0.56			200	180
Eastbound 4th Street Left	0.57	20.7	C	320	160
Eastbound 4th Street Right	0.09			200	15
Eastbound Central Avenue Left/Thru/Right	0.63	30.6	C	445	95

1.Traffic Operation outputs calculated using Synchro 9 (Queues/Signalized Intersection Summary - HCM 2000)

As shown in Table 13A, the Traffic Signal Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the AM peak hour. The Traffic Signal Alternative has acceptable 95th percentile queues for all movements. Although the intersection delay and LOS are acceptable, they are worse than those projected for the No Build Alternative. The main long term benefit of the Traffic Signal Alternative is the reduction in 95th percentile queues and delay on the southbound Lake Street approach.

TABLE 13B
TRAFFIC SIGNAL ALTERNATIVE - DESIGN YEAR (2040) PM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio[1]	Delay (sec)[1]	Level Of Service	Available Storage	95th Percentile Queue (ft)
Intersection		***38.3***	***D***	**--**	
Northbound Lake Street Thru	0.86	39.5	D	**350**	**375**
Northbound Lake Street Left	0.31			200	115
Southbound Lake Street Thru	0.84	37.4	D	400	290
Southbound Lake Street Right	0.49			200	140
Eastbound 4th Street Left	0.85	38.5	D	320	320
Eastbound 4th Street Right	0.09			200	35
Eastbound Central Avenue Left/Thru/Right	0.63	37.6	D	445	115

1.Traffic Operation outputs calculated using Synchro 9 (Queues/Signalized Intersection Summary - HCM 2000)

As shown in Table 13B, the Traffic Signal Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the PM peak hour. The Traffic Signal Alternative has acceptable 95th percentile queues for all movements except the northbound Lake Street through movement and vehicles queuing on this approach may occasionally back into and block the 5th Street intersection. For the design year PM peak hour, the Traffic Signal Alternative operates better than the No Build Alternative by reducing intersection delay from 43.4 seconds to 38.3 seconds and eliminates 95th percentile queuing impacts except as noted above.

6.2 Roundabout Alternative Analysis

This section provides a summary of the AM and PM peak hour intersection operations associated with the Roundabout Alternative under Existing Year (2017) and Design Year (2040) conditions. LOS worksheets for each analysis condition and lane geometrics used for this analysis are provided in Appendix C.

6.2.1 Existing Year (2017)

Tables 14A and 14B show the projected volume/capacity (V/C) ratio, delay, LOS, and 95th percentile queues for Existing Year conditions during AM and PM peak hour conditions, respectively.

TABLE 14A
ROUNDABOUT ALTERNATIVE - EXISTING YEAR (2017) AM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio	Delay (sec)	Level of Service[1]	Available Storage	95th Percentile Queue (ft)
Intersection	***0.49***	***7.4***	***A***	**--**	
Northbound Lake Street	0.23	5.4	A	350	35
Southbound Lake Street	0.49	9.0	A	660	100
Eastbound 4th Street	0.30	6.7	A	320	50
Eastbound Central Avenue	0.13	5.9	A	445	20

1.Lane LOS values are based on average delay and v/c ratio per lane.

As shown in Table 14A, the Roundabout Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the AM peak hour. The Roundabout Alternative has acceptable 95th percentile queues for all movements.

TABLE 14B
ROUNDABOUT ALTERNATIVE - EXISTING YEAR (2017) PM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio	Delay (sec)	Level of Service[1]	Available Storage	95th Percentile Queue (ft)
Intersection	***0.43***	***7.3***	***A***	**--**	
Northbound Lake Street	0.35	7.0	A	350	60
Southbound Lake Street	0.43	8.4	A	660	80
Eastbound 4th Street	0.33	6.9	A	320	55
Eastbound Central Avenue	0.11	5.1	A	445	15

1.Lane LOS values are based on average delay and v/c ratio per lane.

As shown in Table 14B, the Roundabout Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the PM peak hour. The Roundabout Alternative has acceptable 95th percentile queues for all movements.

For both the AM and PM peak hours, the Roundabout Alternative operates better than the No Build Alternative by improving LOS from B to A and significantly reducing the 95th percentile

queues.

6.2.2 Design Year (2040)

Tables 15A & 15B show the projected volume/capacity (V/C) ratio, delay, LOS, and 95th percentile queues for Design Year conditions during AM and PM peak hour conditions, respectively.

TABLE 15A
ROUNDABOUT ALTERNATIVE - DESIGN YEAR (2040) AM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio	Delay (sec)	Level of Service[1]	Available Storage	95th Percentile Queue (ft)
Intersection	***0.66***	***10.3***	***B***	**--**	
Northbound Lake Street	0.30	6.5	A	350	50
Southbound Lake Street	0.66	13.6	B	660	190
Eastbound 4th Street	0.41	8.7	A	320	75
Eastbound Central Avenue	0.20	8.0	A	445	35

1.Lane LOS values are based on average delay and v/c ratio per lane.

As shown in Table 15A, the Roundabout Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the AM peak hour. The Roundabout Alternative has acceptable 95th percentile queues for all movements. The Roundabout Alternative is projected to improve the design year intersection LOS from a C to a B and reduces the projected queues.

TABLE 15B
ROUNDABOUT ALTERNATIVE - DESIGN YEAR (2040) PM PEAK HOUR TRAFFIC OPERATIONS

Intersection/Approach	V/C Ratio	Delay (sec)	Level of Service[1]	Available Storage	95th Percentile Queue (ft)
Intersection	***0.59***	***10.1***	***B***	**--**	
Northbound Lake Street	0.48	9.2	A	350	90
Southbound Lake Street	0.59	12.3	B	660	145
Eastbound 4th Street	0.46	9.2	A	320	85
Eastbound Central Avenue	0.16	6.3	A	445	25

1.Lane LOS values are based on average delay and v/c ratio per lane.

As shown in Table 15B, the Roundabout Alternative is projected to provide acceptable intersection LOS and delay for the study intersection during the PM peak hour. The Roundabout Alternative has acceptable 95th percentile queues for all movements. The Roundabout Alternative is projected to improve the design year intersection LOS from a E to a B and reduces the projected queues.

7. Safety Considerations

Safety is a key evaluation factor brought forth in the Directive, and one of the goals of the ICE process is to identify projects that will ensure a reasonable level of safety and operational performance for all users.

7.1 Historic Collision Data

Historical collision data for a five-year interval (2011 through 2016) was obtained from the Statewide Integrated Traffic Records System (SWITRS). Table 16 provides the summary of the type of collisions that happened in that time period at the study intersections.

TABLE 16
COLLISION DATA

Intersections	Property Damage Only	Fatal	Injury (Severe)	Injury (Other visible)	Injury (Complaint of Pain)
Lake Street/4th Street/Central Avenue	9	0	0	0	1

As shown in Table 12, there were no fatal or severe injury collisions at the study intersection within the five-year interval. Most collisions resulted in property damage only, but there was one reported injury collision. Of the total 10 collisions, 4 were broadside or head-on collisions.

7.2 Safety Analysis

7.2.1 Crash Modification Factors

The technical report publication titled “Desktop Reference for Crash Reduction Factor” by the Federal Highway Administration (FHWA) documents Crash Modification Factors (CMF). The publication contains CMF values for conversion of an all-way stop control to a roundabout or traffic signal or a traffic signal to a roundabout. The CMF factors for both Total Collisions and Fatal/Severe Injury Collisions are reproduced below:

Total Collisions

- CMF for converting all-way stop control to a roundabout: 72% with +/- 6% standard error
- CMF for converting all-way stop control to a traffic signal: -17%

Fatal/Severe Injury Collisions

- CMF for converting all-way stop control to a roundabout: 88% with +/- 8% standard error.
- CMF for converting all-way stop control to a traffic signal: -23% with +/- 22% standard error.

As can be seen, statistics have shown that, in general, the conversion of a stop-controlled intersection to a signal results in a negative CMF (increase in crashes) for both total number and fatal/severe injury collisions. Conversely, roundabouts have proven to result in fewer total collisions and fewer injury collisions compared to the stop-controlled and signalized intersections they replace.

7.2.2 Number of Conflicting Points

CMF factors do not account for the 5-legged intersection, which needs a detailed examination of conflict point parameters for both the Signal Alternative and Roundabout Alternatives the number of conflicting points within an intersection directly correlates to the risk of an incident, especially at intersections. Conflicting points are locations at which a roadway user can cross, merge, diverge, etc. with another roadway user. A diagram of conflict locations at typical 4-legged intersections are provided in Figure 6.

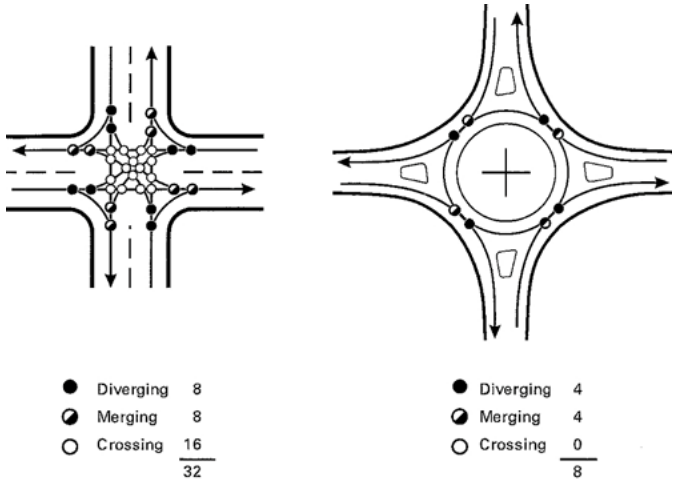


Figure 6 – Typical Conflict Points at Typical Intersections

The number of conflicting points for each of the proposed alternatives are provided below:

Traffic Signal Alternative= **32** Conflicts
Roundabout Alternative=**8** Conflicts

The analysis above illustrates the advantages that the Roundabout Alternative provides by significantly reducing the number of conflict points between vehicles and further justifies the higher CMF values as the exposure to risk is significantly reduced at roundabout intersections.

7.2.3 Reduced Speed Potential and Crash Severity Potential

Typically, the roundabout geometric design requires the driver to reduce the speed in the intersection to 15-25 MPH. Conversely, drivers can travel through a signalized intersection at speeds higher than posted speed limits due to lack of geometric constraints. Due to reduced travel speeds through the intersection and expected reduction in crashes, the Roundabout Alternative is likely to eliminate most severe crash types.

7.2.4 Pedestrian and Bike Safety

Bicycle and pedestrian safety features have been incorporated into the design of both alternatives. The Traffic Signal Alternative includes high-visibility crosswalks and a reconstructed curb ramp. According to the City's Bike Plan, all entering legs to this intersection are identified as Class 3 shared roadways. For this reason, no bike lanes were shown on either concept.

The Roundabout Alternative includes several safety enhancements for both pedestrians and

cyclists. Cyclists have two options when using a roundabout: they can exit the roadway via a bike ramp to use the shared use path with pedestrians, or they can take the lane and ride through the roundabout with the vehicles. Cyclists may feel more comfortable taking the lane due to the slower speeds that a roundabout provides; the average vehicle speed is nearly the same speed as a cyclist. The shared-use path is separated from the circulatory roadway with a landscaped buffer. This buffer screens pedestrians from the moving vehicles and also directs pedestrians to the correct crossing location. The crosswalks are split into two stages with the provision of pedestrian refuges in the splitter island. This means pedestrians only need to cross one direction of traffic at a time and they reduce the amount of sustained time a pedestrian is in potential conflict with motorized vehicles by limiting the length of each crossing.

Compared to the Roundabout Alternative, where a pedestrian only has to cross one lane of traffic at a time, with the Traffic Signal Alternative pedestrians will need to cross up to four lanes of traffic at a time.

8. Alternatives Comparison

8.1 Traffic Signal Alternative

Based on the geometric concept shown on Figure 3 and also provided in Appendix B, the Traffic Signal Alternative has the following potential impacts and considerations:

- The intersection improvements under this alternative would encroach into the adjacent property at the northwest corner of the intersection. Partial or full acquisition of this parcel would be required.
- Reconstructed curb return with ADA compliant pedestrian ramps will be provided on the northwest return.
- The northeast leg of 4th Street will be terminated at the alley and will no longer be part of the intersection. A sidewalk connection will be provided between Lake Street and the existing sidewalk on this leg of 4th Street.
- Approximately 29 on-street parking spaces will be eliminated on the approach roadways to accommodate the additional turn lanes. Eleven of these spaces are part of the northeast leg of 4th Street that will be removed.
- The intersection will be converted from all-way stop control, and a traffic signal will be installed.

8.2 Roundabout Alternative

Based on the geometric concept shown on Figure 4 and also provided in Appendix C, Roundabout Alternative has the following potential impacts and considerations:

- The intersection improvements under this alternative would encroach into the adjacent properties at the corners of the intersection. Partial or full acquisition of each parcel would be required.
- The northeast leg of 4th Street will be terminated at the alley and will no longer be part of the intersection. A sidewalk connection will be provided between Lake Street and the existing sidewalk on this leg of 4th Street.
- Shared-use paths (10') are proposed to be provided on each corner of the intersection with landscaped buffers.
- Approximately 40 on-street parking spaces will be eliminated on the approach roadways

to accommodate the proposed curb alignments. Eleven of these spaces are part of the northeast leg of 4th Street that will be removed.

9. Life-Cycle Analysis

9.1 Collision Costs

Costs associated with each crash type have been quantified using the expected crash reduction (CMF) for the intersection type as noted in the previous section and the number of accidents shown in the Collision history section. Transportation Planning Department of Caltrans provides the costs associated with accident types in Life-Cycle Benefit-Cost Analysis Economic Parameter 2016 webpage (www.dot.ca.gov/hq/tpp/offices/eab/benefit_cost/LCBCAeconomic_parameters.html). The costs are as follows:

- Fatal Accident $10,800,000
- Injury Accident: $148,800
- Property Damage (PDO) Accidents: $9,700
- Average Cost per Accident: $185,600

At the study intersection, there were a total of 10 reported collisions in the 5 year (2011- 2016) period. Out of those 10 collisions, one (1) collision was an injury collision and the remaining collisions were property damage collisions. As such, the total collision cost is calculated to be $236,100 [($148,800 x 1) + ($9,700 x 9)]. The annual collision cost is calculated to be $47,220.

- Using the CRF reduction of 17%, the cost reduction for the Signal Alternative is approximately $8,000/year.
- Using the CRF reduction of 56%, the cost reduction for the Roundabout Alternative is $26,400/year.

Therefore, the Roundabout Alternative will result in lower collision costs when compared to the Signal Alternative.

9.2 Fuel Costs

To calculate the fuel cost for the alternatives, the vehicle operating costs were quantified for the project. The fuel costs (vehicle operating costs) were computed using the delay for the AM and PM peak hour periods for both the Signal and Roundabout alternatives. The output files showing the cost for all alternatives can be found in Appendix D.

The vehicle operating cost parameters were obtained from Life-Cycle Benefit-Cost Analysis Economic Parameters 2016 published by Caltrans. The cost of average fuel price was documented as $3.18 for regular unleaded which was utilized for analysis purpose.

- The average fuel cost for the Signal Alternative is $21,000/year.
- The average fuel cost for the Roundabout Alternative is $20,000/year.

Therefore, it can be concluded that the Roundabout Alternative will result in slightly lower fuel costs when compared to the Traffic Signal Alternative.

9.3 Environmental Costs

To calculate the environmental cost for the alternatives, the greenhouse gas emissions costs were quantified for the project. The fuel costs (vehicle operating costs) were computed using the delay for the AM and PM peak hour periods for both the Signal and Roundabout alternatives. The output files showing the cost for the alternatives can be found in Appendix C. The vehicle operating cost parameters were obtained from Life-Cycle Benefit-Cost Analysis Economic Parameters 2016 published by Caltrans. The cost of Carbon Monoxide (CO) in California urban area was stated to be $80/ton. The cost of Nitrogen Oxide (NOx) in California urban area was stated to be $18,700/ton.

- The average environmental cost for the Signal Alternative is $1,505/year.
- The total environmental cost for the Roundabout Alternative is $1,505/year.

Therefore, it can be concluded that both alternatives will result in the same greenhouse emission costs.

9.4 Capital Costs

9.4.1 Construction Costs

Preliminary estimated construction costs have been developed for both the Traffic Signal Alternative and the Roundabout Alternative with copies of these preliminary cost estimates provided in Appendix B and C. The estimated construction costs for each alternative are provided below.

- **$1.05 Million** for Traffic Signal Alternative
- $**1.62 Million** for Roundabout Alternative

As shown, the construction costs, which represent an initial project capital investment, will be lower for the Traffic Signal Alternative when compared to the Roundabout Alternative.

9.4.2 Right-of-Way Costs

Preliminary ball-park costs for right-of-way were estimated and are provided in Table 17. For this study, $10 per square foot was assumed for partial right of way takes. For the Roundabout Alternative, there are three properties identified in Table 17 as full takes. These full takes are per discussions with the City and are based on property impacts due to both roundabout geometric and sight line impacts. It was also agreed that $250,000 per full take was a reasonable ball-park cost estimate for this study.

TABLE 17
PRELIMINARY RIGHT-OF-WAY IMPACTS AND COSTS

Property	Traffic Signal Alternative (SQFT/COST)	Roundabout Alternative (SQFT/COST)
NW Corner of Lake Street and Central Avenue	160 / $1,600	Full Take / $250,000
SW Corner of Central Avenue and 4th Street	-	Full Take / $250,000
North Side Central Avenue West of Lake Street	-	149 / $1,490
SE Corner of 4th Street and Lake Street	-	392 / $3,920
NE Corner of 4th Street and Lake Street	-	Full Take / $250,000
Estimated Right-of-Way Costs	**$1,600**	**$755,410**

As shown in Table 17, the Roundabout Alternative has a much larger impact on the adjacent properties and results in much greater right-of-way impacts and costs when compared to the Traffic Signal Alternative. These costs also represent and initial project capital investment.

9.5 Other Costs

Besides the collision, environmental and mobility cost, a significant portion of cost associated with both alternatives will be related to its operation & maintenance and pavement rehabilitation costs.

9.5.1 Operation & Maintenance Cost

The maintenance and operation cost for a traffic signal includes providing power service to the signal and street lighting ($1,500 annually), signal retiming ($3,000 every three years), and signal maintenance for power outages/new detector loops/etc. ($1,500 annually) for a total annual cost of $4,000 per year.

The roundabout alternative would incur much lower operation and maintenance costs limited to the cost to power street lighting, which is estimated at $750 annually.

9.5.2 Landscape Maintenance Cost

It is difficult to quantify the landscape maintenance cost at this level since the cost is directly proportional to the area covered by the landscape. Roundabouts typically have a central island covered by landscaping, as well as other landscaping features not typical for a signal.

The landscape maintenance cost is projected to be $1,500 per year for the Roundabout Alternative. The Traffic Signal Alternative is assumed to have no landscaping that will need to be maintained; therefore, a cost of $0 per year per signal was used for landscape maintenance cost.

9.5.3 Pavement Rehabilitation

It is necessary for the function of a roadway to keep the pavement in good condition and maintain roadway striping and markings to assist motorists to navigate through an intersection/corridor safely and efficiently.

Intersections with traffic signals experience a lot of differential loading and pavement heaving

perpendicular to the direction of travel. This is caused by frequent stopping and starting of vehicles at the intersection.

Roundabout intersections experience less severe pavement heaving due to the lack of differential loading, but when heaving does occur at roundabouts, it is typically parallel to the direction of travel and occurs near the outer edge of the roadway, along the curb line. This is caused by the constant angular forces experienced in and near the circulatory roadway. As a result, roundabout intersection do not typically require structural section reconstruction just resurfacing.

Proper maintenance of the roadway profiles and cross slopes also ensure proper drainage flow and friction levels with a vehicle's tires and a roadway is typically resurfaced every 5-10 years. For the purpose of this report pavement rehabilitation is expected to occur in the study area every 8 years.

The costs associated with pavement rehabilitation include removing and reconstructing the roadway structural section, resurfacing, and pavement delineation. Traffic signal rehabilitation projects typically require more structural section reconstruction than roundabout intersections, but roundabout intersections require more labor intensive control when replacing the pavement delineation (striping and markings).

9.6 Service Life

The roundabout and traffic signal alternatives proposed for the ultimate design year are projected to provide equal levels of service for the Design Year 2040; however, the roundabout alternative is projected to operate with lower delays and shorter queues for the Ultimate Design Year than the Traffic Signal Alternative.

It can be concluded that the Roundabout Alternative will provide increased benefit with regards to service life, when compared to the Traffic Signal Alternative.

10. Summary of Findings

The traffic forecast volumes for the Lake Street/4th Street/Central Avenue intersection show growth in this area. The No Build Alternative analysis shows congestion and delay in the design year (2040) indicating that significant improvements would need to be made to the study intersection. Table 18 summarizes and compares the performance for both the Traffic Signal Alternative and the Roundabout Alternative.

TABLE 18
ALTERNATIVE PERFORMANCE COMPARISON

Performance Measure	Traffic Signal Alternative	Roundabout Alternative
Cumulative Condition		
Delay - All approaches LOS "D" or better LOS A rated at 5 and E rated at 1.	2.4 ✓	**4.8** ✓✓
95th % Queue - Adequate queue storage	✓	✓✓
Future Investment Needs		
Service Life – function past the design year	D ✓	**B** ✓✓
Costs		
Operations & Maintenance - Annualized	$3,000	**$1,700** ✓
Collision Costs - Annualized	$150,100	**$100,800** ✓
Delay Costs - Annualized	$36,000	**$11,000** ✓
Fuel Costs - Annualized	$21,000	**$20,000** ✓
Environmental Costs - Annualized	$1,505	$1,505
Capital Costs - Annualized	**$48,000** ✓	$119,000
Truck Accommodations		
Serves design vehicle for all movements	✓	✓
Safety		
Predictive Measures - Greatest crash reduction potential for expected fatal and injury crashes	17%	**56%** ✓
Vehicle Conflicts - The number of potential conflict points that may occur at the intersection based on layout geometry	32	**8** ✓
Pedestrian Safety - Exposure to traffic in terms of number of lanes, conflict points, crossing times, and expected vehicular speeds.	4 35-45 mph	**1** **15-25mph** ✓✓
Bicycle Safety - Exposure to traffic in terms of number of lanes, conflict points, and speed differential		✓
Property Impacts		
Property Impacts	✓✓	
Local Access		
Maintains local access and circulation	✓	✓
Total Performance Measures Met	**8**	**17**

Table 19 provides a summary of the life cycle costs for the two alternatives.

TABLE 19
LIFE CYCLE COST SUMMARY PERFORMANCE COMPARISON

Life Cycle Costs (20 year design)	Traffic Signal Alternative	Roundabout Alternative
Collision and Mobility Costs		
Collision Costs of predicted crashes	$3,002,000	$2,016,000
Delay Costs	$860,000	$260,000
Fuel and GHG Costs	$537,000	$506,000
Project Costs including design, construction and maintenance		
Operations and Maintenance Costs	$60,000	$34,000
Project Costs (including R/W)	$1,172,299	$2,609,802
Total Life Cycle Costs (Opening Year $ - Net Present Value)	**$5,631,299**	**$5,425,802**

11. Conclusions

As shown in Table 18, 17 performance measure points were assigned to the Roundabout Alternative, as compared to 8 for the Traffic Signal Alternative. As shown in Table 19, when compared to the Traffic Signal Alternative, implementation of the Roundabout Alternative will result in lower life cycle costs. Based on these results, the Roundabout Alternative would provide superior performance at a lower overall cost then the Traffic Signal Alternative for the Lake Street/4th Street/Central Avenue intersection.

Appendix

APPENDIX A – CAPICITY ASSESSMENT/ANALYSIS EXISTING 5-LEG INTERSECTION

- NO BUILD ANALYSIS
- SIGNAL ANALYSIS
- ROUNDABOUT ANALYSIS

APPENDIX B – TRAFFIC SIGNAL ALTERNATIVE

- SIGNAL LAYOUT & TRUCK TURN EXHIBITS
- SYNCHRO/SIMTRAFFIC ANALYSIS
- CONSTRUCTION COST ESTIMATE

APPENDIX C – ROUNDABOUT ALTERNATIVE

- ROUNDABOUT LAYOUT, FASTEST PATH, & TRUCK TURN EXHIBITS
- SIDRA 7 ANALYSIS
- CONSTRUCTION COST ESTIMATE

APPENDIX D – BENEFIT/COST RATIO BACK-UP

APPENDIX E – ALTERNATIVES COMPARISON BACK-UP

APPENDIX A – CAPACITY ASSESSMENT/ANALYSIS EXISTING 5-LEG INTERSECTION

NO BUILD ANALYSIS

SIGNAL ANALYSIS

ROUNDABOUT ANALYSIS

APPENDIX A – NO BUILD ANALYSIS

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	153	157	163	161	161	159
Vehs Exited	158	156	151	162	160	157
Starting Vehs	10	8	6	11	12	8
Ending Vehs	5	9	18	10	13	9
Travel Distance (mi)	27	27	27	28	28	28
Travel Time (hr)	1.9	1.7	1.7	1.7	1.8	1.8
Total Delay (hr)	0.7	0.5	0.6	0.5	0.6	0.6
Total Stops	155	157	163	160	161	159
Fuel Used (gal)	1.5	1.4	1.4	1.4	1.4	1.4

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:10
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	153	157	163	161	161	159
Vehs Exited	158	156	151	162	160	157
Starting Vehs	10	8	6	11	12	8
Ending Vehs	5	9	18	10	13	9
Travel Distance (mi)	27	27	27	28	28	28
Travel Time (hr)	1.9	1.7	1.7	1.7	1.8	1.8
Total Delay (hr)	0.7	0.5	0.6	0.5	0.6	0.6
Total Stops	155	157	163	160	161	159
Fuel Used (gal)	1.5	1.4	1.4	1.4	1.4	1.4

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR2	NBL2	NBL	NBT	NBR	SBT	SBR	SBR2
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.8	0.1	3.8	0.1	0.1	0.2	0.2	0.2		0.4	0.5	2.7
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	7.4	4.6	5.3	8.4	1.4	8.6	9.9	9.0		15.9	12.2	3.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Stop Del/Veh (s)	5.8	2.7	5.7	5.1	1.4	5.5	7.7	5.1		11.6	11.3	3.0

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	SEL2	SEL	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.2		0.1	1.3
Total Delay (hr)	0.0	0.0	0.0	0.5
Total Del/Veh (s)	11.5		7.8	10.2
Stop Delay (hr)	0.0	0.0	0.0	0.4
Stop Del/Veh (s)	9.0		7.3	8.3

Intersection: 2: N Lake St & E 4th St & Central Ave

Movement	EB	EB	EB	WB	NB	SB	SB	SE
Directions Served	<L	T	R	LTR>	<LTR	LTR	>	<LR
Maximum Queue (ft)	47	7	38	26	69	162	16	58
Average Queue (ft)	32	2	20	7	42	99	6	40
95th Queue (ft)	50	10	42	25	76	189	20	70
Link Distance (ft)		362		330	430	406		473
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	60		75				65	
Storage Blk Time (%)	0		0			20		
Queuing Penalty (veh)	0		0			5		

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	193	199	215	191	191	197
Vehs Exited	199	186	196	194	194	193
Starting Vehs	12	6	7	14	18	12
Ending Vehs	6	19	26	11	15	13
Travel Distance (mi)	34	34	36	34	34	35
Travel Time (hr)	2.3	2.6	2.6	2.1	2.4	2.4
Total Delay (hr)	0.9	1.2	1.2	0.7	1.0	1.0
Total Stops	198	199	216	187	193	198
Fuel Used (gal)	1.8	1.8	1.9	1.7	1.8	1.8

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:10
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	193	199	215	191	191	197
Vehs Exited	199	186	196	194	194	193
Starting Vehs	12	6	7	14	18	12
Ending Vehs	6	19	26	11	15	13
Travel Distance (mi)	34	34	36	34	34	35
Travel Time (hr)	2.3	2.6	2.6	2.1	2.4	2.4
Total Delay (hr)	0.9	1.2	1.2	0.7	1.0	1.0
Total Stops	198	199	216	187	193	198
Fuel Used (gal)	1.8	1.8	1.9	1.7	1.8	1.8

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBT
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.5	0.1	3.7		0.1			0.2	0.3	0.2	0.1	0.4
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
Total Del/Veh (s)	12.5	9.0	4.4		5.8			17.4	17.6	18.2	9.5	20.1
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
Stop Del/Veh (s)	10.9	6.4	4.8		4.0			15.2	15.5	14.1	9.2	16.1

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	SBR	SBR2	SEL2	SEL	SER	SER2	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.6	3.1	0.2		0.1		1.3
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.8
Total Del/Veh (s)	15.8	3.8	13.2	5.6	9.5		14.8
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.7
Stop Del/Veh (s)	15.4	3.6	10.8	4.7	9.0		12.6

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.3
Total Delay (hr)	0.9
Total Del/Veh (s)	16.3
Stop Delay (hr)	0.7
Stop Del/Veh (s)	13.1

Intersection: 2: N Lake St & E 4th St & Central Ave

Movement	EB	EB	EB	WB	NB	SB	SB	SE
Directions Served	<L	T	R	LTR>	<LTR	LTR	>	<LR>
Maximum Queue (ft)	71	18	35	26	143	147	16	64
Average Queue (ft)	43	4	10	7	89	91	7	39
95th Queue (ft)	77	22	33	32	169	177	18	75
Link Distance (ft)		351		330	430	406		462
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	60		75				65	
Storage Blk Time (%)	5	0				26		
Queuing Penalty (veh)	5	0				11		

Network Summary

Network wide Queuing Penalty: 17

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	200	211	220	202	203	207
Vehs Exited	193	196	200	204	195	198
Starting Vehs	11	8	9	16	12	12
Ending Vehs	18	23	29	14	20	19
Travel Distance (mi)	34	36	36	35	35	35
Travel Time (hr)	3.4	2.9	3.6	2.4	2.6	3.0
Total Delay (hr)	1.9	1.5	2.1	0.9	1.1	1.5
Total Stops	196	212	219	198	205	205
Fuel Used (gal)	2.0	1.9	2.0	1.8	1.8	1.9

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:10
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	200	211	220	202	203	207
Vehs Exited	193	196	200	204	195	198
Starting Vehs	11	8	9	16	12	12
Ending Vehs	18	23	29	14	20	19
Travel Distance (mi)	34	36	36	35	35	35
Travel Time (hr)	3.4	2.9	3.6	2.4	2.6	3.0
Total Delay (hr)	1.9	1.5	2.1	0.9	1.1	1.5
Total Stops	196	212	219	198	205	205
Fuel Used (gal)	2.0	1.9	2.0	1.8	1.8	1.9

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR2	NBL2	NBL	NBT	NBR	SBT	SBR	SBR2
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.6	0.1	3.7	0.1		0.3	0.2	0.2	0.1	0.7	0.7	3.1
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.5	0.5	0.0
Total Del/Veh (s)	10.6	3.8	7.1	8.0		15.1	12.6	13.7	2.0	42.3	37.5	5.0
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.5	0.0
Stop Del/Veh (s)	8.9	2.6	7.3	5.1		12.6	9.9	9.5	2.1	40.2	38.5	4.1

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	SEL2	SEL	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.2	0.1	0.2	1.3
Total Delay (hr)	0.0	0.0	0.1	1.4
Total Del/Veh (s)	12.4	6.6	12.7	23.0
Stop Delay (hr)	0.0	0.0	0.1	1.3
Stop Del/Veh (s)	10.4	5.6	12.1	21.6

Intersection: 2: N Lake St & E 4th St & Central Ave

Movement	EB	EB	EB	WB	NB	SB	SB	SE
Directions Served	<L	T	R	LTR>	<LTR	LTR	>	<LR
Maximum Queue (ft)	61	14	46	16	125	347	83	71
Average Queue (ft)	43	3	22	4	68	219	34	49
95th Queue (ft)	70	22	48	20	123	421	195	90
Link Distance (ft)		362		330	430	406		473
Upstream Blk Time (%)						2		
Queuing Penalty (veh)						0		
Storage Bay Dist (ft)	60		75				65	
Storage Blk Time (%)	3	0				62		
Queuing Penalty (veh)	3	0				21		

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	231	245	249	237	230	237
Vehs Exited	225	225	210	222	232	222
Starting Vehs	20	17	20	16	25	18
Ending Vehs	26	37	59	31	23	33
Travel Distance (mi)	39	41	39	40	41	40
Travel Time (hr)	5.4	4.4	5.3	4.0	4.9	4.8
Total Delay (hr)	3.8	2.8	3.7	2.4	3.3	3.2
Total Stops	235	244	242	230	234	237
Fuel Used (gal)	2.7	2.4	2.6	2.3	2.6	2.5

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:10
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	231	245	249	237	230	237
Vehs Exited	225	225	210	222	232	222
Starting Vehs	20	17	20	16	25	18
Ending Vehs	26	37	59	31	23	33
Travel Distance (mi)	39	41	39	40	41	40
Travel Time (hr)	5.4	4.4	5.3	4.0	4.9	4.8
Total Delay (hr)	3.8	2.8	3.7	2.4	3.3	3.2
Total Stops	235	244	242	230	234	237
Fuel Used (gal)	2.7	2.4	2.6	2.3	2.6	2.5

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.9	0.5	3.7	0.1	0.1			0.5	0.4	0.4	0.1	
Total Delay (hr)	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.8	0.0	0.0
Total Del/Veh (s)	39.7	19.3	11.1	5.6	14.0			52.7	50.4	53.4	27.0	
Stop Delay (hr)	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.8	0.0	0.0
Stop Del/Veh (s)	38.9	17.0	10.8	4.7	10.6			52.0	50.2	51.6	27.3	

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	SBT	SBR	SBR2	SEL2	SEL	SER	SER2	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.7	0.8	3.6	0.2	0.1	0.2		1.6
Total Delay (hr)	0.7	0.4	0.0	0.0	0.0	0.0	0.0	3.0
Total Del/Veh (s)	59.6	51.6	6.2	14.7	15.2	13.5		43.4
Stop Delay (hr)	0.7	0.4	0.0	0.0	0.0	0.0	0.0	2.9
Stop Del/Veh (s)	58.2	53.2	5.2	12.4	13.8	12.7		42.5

Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.6
Total Delay (hr)	3.1
Total Del/Veh (s)	43.5
Stop Delay (hr)	3.0
Stop Del/Veh (s)	41.9

Intersection: 2: N Lake St & E 4th St & Central Ave

Movement	EB	EB	EB	WB	NB	SB	SB	SE
Directions Served	<L	T	R	LTR>	<LTR	LTR	>	<LR>
Maximum Queue (ft)	99	159	72	30	312	327	154	56
Average Queue (ft)	82	76	33	9	217	235	49	43
95th Queue (ft)	127	262	135	32	380	417	242	69
Link Distance (ft)		351		330	430	406		462
Upstream Blk Time (%)		2			1	2		
Queuing Penalty (veh)		0			0	0		
Storage Bay Dist (ft)	60		75				65	
Storage Blk Time (%)	44	1				78		
Queuing Penalty (veh)	55	3				42		

Network Summary

Network wide Queuing Penalty: 99

APPENDIX A – TRAFFIC SIGNAL ANALYSIS



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	1	145	2	94	2	3	1	37	25	140	2	1
Future Volume (vph)	1	145	2	94	2	3	1	37	25	140	2	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	16	12	12	13	13	12	12
Total Lost time (s)		4.5	4.5		4.5	4.5			4.5	4.5		4.5
Lane Util. Factor		0.97	1.00		1.00	1.00			1.00	1.00		1.00
Frpb, ped/bikes		1.00	0.98		1.00	1.00			1.00	1.00		1.00
Flpb, ped/bikes		0.99	1.00		0.99	1.00			1.00	1.00		0.99
Frt		1.00	0.85		1.00	0.97			1.00	1.00		1.00
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		0.95
Satd. Flow (prot)		3156	1444		1622	1896			1699	1785		1621
Flt Permitted		0.75	1.00		0.68	1.00			0.95	1.00		0.95
Satd. Flow (perm)		2506	1444		1163	1896			1699	1785		1621
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	1	179	2	116	2	4	1	46	31	173	2	1
RTOR Reduction (vph)	0	0	95	0	0	4	0	0	0	1	0	0
Lane Group Flow (vph)	0	180	23	0	2	1	0	0	77	174	0	1
Confl. Peds. (#/hr)	6				9			3				1
Confl. Bikes (#/hr)				1			5				2	
Turn Type	Perm	Perm	NA		Perm	NA		Prot	Prot	NA		Prot
Protected Phases			2			6		3	3	8		7
Permitted Phases	2	2			6							
Actuated Green, G (s)		11.8	11.8		11.8	11.8			6.8	25.5		0.7
Effective Green, g (s)		11.8	11.8		11.8	11.8			6.8	25.5		0.7
Actuated g/C Ratio		0.18	0.18		0.18	0.18			0.11	0.40		0.01
Clearance Time (s)		4.5	4.5		4.5	4.5			4.5	4.5		4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)		462	266		214	349			180	711		17
v/s Ratio Prot			0.02			0.00			c0.05	0.10		0.00
v/s Ratio Perm		c0.07			0.00							
v/c Ratio		0.39	0.09		0.01	0.00			0.43	0.25		0.06
Uniform Delay, d1		22.9	21.6		21.3	21.3			26.8	12.8		31.3
Progression Factor		1.00	1.00		1.00	1.00			1.00	1.00		1.00
Incremental Delay, d2		0.5	0.1		0.0	0.0			1.6	0.2		1.5
Delay (s)		23.5	21.8		21.3	21.3			28.4	13.0		32.8
Level of Service		C	C		C	C			C	B		C
Approach Delay (s)			22.8			21.3				17.7		
Approach LOS			C			C				B		

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR	SBR2	SEL2	SEL	SER
Lane Configurations						
Traffic Volume (vph)	178	216	27	14	2	65
Future Volume (vph)	178	216	27	14	2	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5			4.5	
Lane Util. Factor	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00			1.00	
Frt	1.00	0.85			0.89	
Flt Protected	1.00	1.00			0.99	
Satd. Flow (prot)	1731	1440			1527	
Flt Permitted	1.00	1.00			0.99	
Satd. Flow (perm)	1731	1440			1527	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	220	267	33	17	2	80
RTOR Reduction (vph)	0	88	0	0	0	0
Lane Group Flow (vph)	220	212	0	0	99	0
Confl. Peds. (#/hr)				8		
Confl. Bikes (#/hr)			1			
Turn Type	NA	Perm		Prot	Prot	
Protected Phases	4			9	9	
Permitted Phases		4				
Actuated Green, G (s)	19.4	19.4			8.0	
Effective Green, g (s)	19.4	19.4			8.0	
Actuated g/C Ratio	0.30	0.30			0.12	
Clearance Time (s)	4.5	4.5			4.5	
Vehicle Extension (s)	3.0	3.0			3.0	
Lane Grp Cap (vph)	524	436			190	
v/s Ratio Prot	0.13				c0.06	
v/s Ratio Perm		c0.15				
v/c Ratio	0.42	0.49			0.52	
Uniform Delay, d1	17.8	18.2			26.2	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	0.5	0.9			2.6	
Delay (s)	18.4	19.1			28.8	
Level of Service	B	B			C	
Approach Delay (s)	18.8				28.8	
Approach LOS	B				C	

Intersection Summary

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	178	169	150	150	150	158
Vehs Exited	167	175	153	153	148	159
Starting Vehs	6	18	14	12	5	11
Ending Vehs	17	12	11	9	7	10
Travel Distance (mi)	30	31	27	26	26	28
Travel Time (hr)	2.1	2.1	1.9	1.7	1.8	1.9
Total Delay (hr)	1.0	1.0	0.9	0.8	0.8	0.9
Total Stops	123	124	111	106	115	115
Fuel Used (gal)	1.8	1.8	1.5	1.5	1.5	1.6

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:10
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	178	169	150	150	150	158
Vehs Exited	167	175	153	153	148	159
Starting Vehs	6	18	14	12	5	11
Ending Vehs	17	12	11	9	7	10
Travel Distance (mi)	30	31	27	26	26	28
Travel Time (hr)	2.1	2.1	1.9	1.7	1.8	1.9
Total Delay (hr)	1.0	1.0	0.9	0.8	0.8	0.9
Total Stops	123	124	111	106	115	115
Fuel Used (gal)	1.8	1.8	1.5	1.5	1.5	1.6

2: N Lake St & E 4th St & Central Ave Performance by approach

Approach	EB	WB	NB	SB	SE	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.2	0.1	1.5	2.5	0.2	1.5
Total Delay (hr)	0.2	0.0	0.2	0.3	0.1	0.8
Total Del/Veh (s)	13.8	6.9	21.2	16.0	22.6	16.9
Stop Delay (hr)	0.2	0.0	0.2	0.3	0.1	0.6
Stop Del/Veh (s)	12.1	5.4	17.2	12.7	21.0	14.0

Intersection: 2: N Lake St & E 4th St & Central Ave

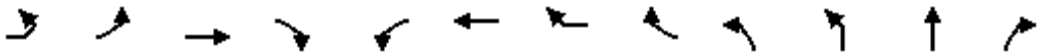
Movement	EB	EB	WB	NB	NB	SB	SB	SB	SE
Directions Served	L	TR	TR>	<L	TR	L	T	R>	<LR
Maximum Queue (ft)	87	23	13	47	100	1	76	92	74
Average Queue (ft)	52	9	3	29	62	0	40	44	42
95th Queue (ft)	105	28	15	52	105	2	86	106	82
Link Distance (ft)	352	352	307		436		387		452
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)				200		100		200	
Storage Blk Time (%)							0		
Queuing Penalty (veh)							1		

Intersection: 2: N Lake St & E 4th St & Central Ave

Phase	2	3	4	6	7	8	9
Movement(s) Served	EBTL	NBL	SBT	WBTL	SBL	NBT	SEL
Maximum Green (s)	31.4	18.5	41.5	31.4	5.0	55.0	20.6
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None	None	None
Avg. Green (s)	12.0	6.9	14.7	12.0	0.0	20.6	10.5
g/C Ratio	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	15	42	8	15	100	42	42
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	0	0	0	0	0	0	0
Cycles with Peds (%)	8	0	0	0	0	0	8

Controller Summary

Average Cycle Length (s): NA
Number of Complete Cycles : 0



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	1	221	4	96	3	2	1	1	48	43	262	5
Future Volume (vph)	1	221	4	96	3	2	1	1	48	43	262	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	16	12	12	12	13	13	12
Total Lost time (s)		4.5	4.5		4.5	4.5				4.5	4.5	
Lane Util. Factor		0.97	1.00		1.00	1.00				1.00	1.00	
Frpb, ped/bikes		1.00	0.98		1.00	0.99				1.00	1.00	
Flpb, ped/bikes		0.99	1.00		0.99	1.00				1.00	1.00	
Frt		1.00	0.86		1.00	0.93				1.00	1.00	
Flt Protected		0.95	1.00		0.95	1.00				0.95	1.00	
Satd. Flow (prot)		3250	1493		1670	1852				1750	1836	
Flt Permitted		0.76	1.00		0.69	1.00				0.95	1.00	
Satd. Flow (perm)		2583	1493		1215	1852				1750	1836	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1	226	4	98	3	2	1	1	49	44	267	5
RTOR Reduction (vph)	0	0	78	0	0	1	0	0	0	0	1	0
Lane Group Flow (vph)	0	227	24	0	3	3	0	0	0	93	271	0
Confl. Peds. (#/hr)	6				9				3			
Confl. Bikes (#/hr)				1				5				2
Turn Type	Perm	Perm	NA		Perm	NA			Prot	Prot	NA	
Protected Phases			2			6			3	3	8	
Permitted Phases	2	2			6							
Actuated Green, G (s)		12.8	12.8		12.8	12.8				7.3	24.4	
Effective Green, g (s)		12.8	12.8		12.8	12.8				7.3	24.4	
Actuated g/C Ratio		0.20	0.20		0.20	0.20				0.11	0.38	
Clearance Time (s)		4.5	4.5		4.5	4.5				4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)		519	300		244	372				200	704	
v/s Ratio Prot			0.02			0.00				c0.05	c0.15	
v/s Ratio Perm		c0.09			0.00							
v/c Ratio		0.44	0.08		0.01	0.01				0.47	0.39	
Uniform Delay, d1		22.2	20.6		20.3	20.3				26.3	14.2	
Progression Factor		1.00	1.00		1.00	1.00				1.00	1.00	
Incremental Delay, d2		0.6	0.1		0.0	0.0				1.7	0.4	
Delay (s)		22.8	20.7		20.4	20.3				28.0	14.5	
Level of Service		C	C		C	C				C	B	
Approach Delay (s)			22.2			20.3					18.0	
Approach LOS			C			C					B	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	63.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Traffic Volume (vph)	2	213	150	42	32	2	58	2
Future Volume (vph)	2	213	150	42	32	2	58	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5			4.5		
Lane Util. Factor	1.00	1.00	1.00			1.00		
Frpb, ped/bikes	1.00	1.00	0.98			0.99		
Flpb, ped/bikes	0.99	1.00	1.00			1.00		
Frt	1.00	1.00	0.85			0.91		
Flt Protected	0.95	1.00	1.00			0.98		
Satd. Flow (prot)	1672	1782	1483			1586		
Flt Permitted	0.95	1.00	1.00			0.98		
Satd. Flow (perm)	1672	1782	1483			1586		
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	2	217	153	43	33	2	59	2
RTOR Reduction (vph)	0	0	91	0	0	0	0	0
Lane Group Flow (vph)	2	217	105	0	0	96	0	0
Confl. Peds. (#/hr)	1				8			
Confl. Bikes (#/hr)				1				1
Turn Type	Prot	NA	Perm		Prot	Prot		
Protected Phases	7	4			9	9		
Permitted Phases			4					
Actuated Green, G (s)	0.7	17.8	17.8			7.7		
Effective Green, g (s)	0.7	17.8	17.8			7.7		
Actuated g/C Ratio	0.01	0.28	0.28			0.12		
Clearance Time (s)	4.5	4.5	4.5			4.5		
Vehicle Extension (s)	3.0	3.0	3.0			3.0		
Lane Grp Cap (vph)	18	498	415			192		
v/s Ratio Prot	0.00	0.12				c0.06		
v/s Ratio Perm			0.07					
v/c Ratio	0.11	0.44	0.25			0.50		
Uniform Delay, d1	31.1	18.8	17.8			26.1		
Progression Factor	1.00	1.00	1.00			1.00		
Incremental Delay, d2	2.7	0.6	0.3			2.0		
Delay (s)	33.9	19.4	18.1			28.2		
Level of Service	C	B	B			C		
Approach Delay (s)		18.8				28.2		
Approach LOS		B				C		

Intersection Summary

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	212	211	200	217	199	205
Vehs Exited	207	206	190	207	199	202
Starting Vehs	19	13	11	17	8	12
Ending Vehs	24	18	21	27	8	20
Travel Distance (mi)	37	37	34	37	35	36
Travel Time (hr)	2.7	3.0	2.6	2.9	2.4	2.7
Total Delay (hr)	1.3	1.6	1.3	1.5	1.2	1.4
Total Stops	148	163	153	165	140	154
Fuel Used (gal)	2.2	2.2	2.0	2.2	2.0	2.1

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:10
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	212	211	200	217	199	205
Vehs Exited	207	206	190	207	199	202
Starting Vehs	19	13	11	17	8	12
Ending Vehs	24	18	21	27	8	20
Travel Distance (mi)	37	37	34	37	35	36
Travel Time (hr)	2.7	3.0	2.6	2.9	2.4	2.7
Total Delay (hr)	1.3	1.6	1.3	1.5	1.2	1.4
Total Stops	148	163	153	165	140	154
Fuel Used (gal)	2.2	2.2	2.0	2.2	2.0	2.1

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.5	0.2					3.4	3.6	0.6	0.8	
Total Delay (hr)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.0	0.0
Total Del/Veh (s)	25.1	19.9	5.0					25.0	25.6	21.6	10.4	
Stop Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
Stop Del/Veh (s)	21.6	13.7	5.1					22.2	22.6	16.3	8.5	

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	SBT	SBR	SBR2	SEL2	SER	SER2	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	1.0	3.5	3.4	0.2	0.2		1.2
Total Delay (hr)	0.2	0.1	0.0	0.0	0.1	0.0	1.2
Total Del/Veh (s)	20.4	18.0	11.8	24.8	26.2		20.8
Stop Delay (hr)	0.2	0.1	0.0	0.0	0.1	0.0	1.0
Stop Del/Veh (s)	15.3	15.7	10.9	22.1	24.9		17.3

Intersection: 2: N Lake St & E 4th St & Central Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB	SB	SE
Directions Served	<L	L	TR	L	TR>	<L	TR	L	T	R>	<LR>
Maximum Queue (ft)	22	123	32	3	16	63	200	1	110	78	91
Average Queue (ft)	6	79	9	1	4	42	116	0	54	41	53
95th Queue (ft)	38	137	38	5	16	72	218	2	121	88	98
Link Distance (ft)		341	341		307		436		387		438
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150			100		200		100		200	
Storage Blk Time (%)		0					3		2		
Queuing Penalty (veh)		0					2		4		

Intersection: 2: N Lake St & E 4th St & Central Ave

Phase	2	3	4	6	7	8	9
Movement(s) Served	EBTL	NBL	SBT	WBTL	SBL	NBT	SEL
Maximum Green (s)	31.4	18.5	41.5	31.4	5.0	55.0	20.6
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None	None	None
Avg. Green (s)	18.0	8.7	16.6	18.0	0.0	31.4	10.0
g/C Ratio	NA	-0.01	NA	NA	-0.01	-0.01	-0.01
Cycles Skipped (%)	0	13	0	0	100	25	11
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	0	0	0	0	0	0	0
Cycles with Peds (%)	13	0	11	13	0	0	0

Controller Summary

Average Cycle Length (s): NA
Number of Complete Cycles : 0



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	1	182	3	118	3	4	1	47	31	176	3	1
Future Volume (vph)	1	182	3	118	3	4	1	47	31	176	3	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	16	12	12	13	13	12	12
Total Lost time (s)		4.5	4.5		4.5	4.5			4.5	4.5		4.5
Lane Util. Factor		0.97	1.00		1.00	1.00			1.00	1.00		1.00
Frpb, ped/bikes		1.00	0.98		1.00	1.00			1.00	1.00		1.00
Flpb, ped/bikes		0.99	1.00		0.98	1.00			1.00	1.00		0.98
Frt		1.00	0.85		1.00	0.97			1.00	1.00		1.00
Flt Protected		0.95	1.00		0.95	1.00			0.95	1.00		0.95
Satd. Flow (prot)		3148	1446		1619	1907			1699	1783		1617
Flt Permitted		0.75	1.00		0.59	1.00			0.95	1.00		0.95
Satd. Flow (perm)		2498	1446		1012	1907			1699	1783		1617
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	1	225	4	146	4	5	1	58	38	217	4	1
RTOR Reduction (vph)	0	0	120	0	0	5	0	0	0	1	0	0
Lane Group Flow (vph)	0	226	30	0	4	1	0	0	96	220	0	1
Confl. Peds. (#/hr)	6				9			3				1
Confl. Bikes (#/hr)				1			5				2	
Turn Type	Perm	Perm	NA		Perm	NA		Prot	Prot	NA		Prot
Protected Phases			2			6		3	3	8		7
Permitted Phases	2	2			6							
Actuated Green, G (s)		14.2	14.2		14.2	14.2			8.5	33.6		0.7
Effective Green, g (s)		14.2	14.2		14.2	14.2			8.5	33.6		0.7
Actuated g/C Ratio		0.18	0.18		0.18	0.18			0.11	0.42		0.01
Clearance Time (s)		4.5	4.5		4.5	4.5			4.5	4.5		4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)		445	257		180	339			181	751		14
v/s Ratio Prot			0.02			0.00			c0.06	0.12		0.00
v/s Ratio Perm		c0.09			0.00							
v/c Ratio		0.51	0.12		0.02	0.00			0.53	0.29		0.07
Uniform Delay, d1		29.6	27.5		27.0	26.9			33.7	15.2		39.2
Progression Factor		1.00	1.00		1.00	1.00			1.00	1.00		1.00
Incremental Delay, d2		0.9	0.2		0.0	0.0			3.0	0.2		2.2
Delay (s)		30.5	27.7		27.1	26.9			36.7	15.4		41.3
Level of Service		C	C		C	C			D	B		D
Approach Delay (s)			29.4			27.0				21.9		
Approach LOS			C			C				C		

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	79.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR	SBR2	SEL2	SEL	SER
Lane Configurations						
Traffic Volume (vph)	224	272	34	18	3	82
Future Volume (vph)	224	272	34	18	3	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5			4.5	
Lane Util. Factor	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00			1.00	
Frt	1.00	0.85			0.89	
Flt Protected	1.00	1.00			0.99	
Satd. Flow (prot)	1731	1440			1529	
Flt Permitted	1.00	1.00			0.99	
Satd. Flow (perm)	1731	1440			1529	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	277	336	42	22	4	101
RTOR Reduction (vph)	0	85	0	0	0	0
Lane Group Flow (vph)	277	293	0	0	127	0
Confl. Peds. (#/hr)				8		
Confl. Bikes (#/hr)			1			
Turn Type	NA	Perm		Prot	Prot	
Protected Phases	4			9	9	
Permitted Phases		4				
Actuated Green, G (s)	25.8	25.8			13.2	
Effective Green, g (s)	25.8	25.8			13.2	
Actuated g/C Ratio	0.32	0.32			0.17	
Clearance Time (s)	4.5	4.5			4.5	
Vehicle Extension (s)	3.0	3.0			3.0	
Lane Grp Cap (vph)	560	466			253	
v/s Ratio Prot	0.16				c0.08	
v/s Ratio Perm		c0.20				
v/c Ratio	0.49	0.63			0.50	
Uniform Delay, d1	21.7	22.9			30.3	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	0.7	2.6			1.6	
Delay (s)	22.4	25.5			31.8	
Level of Service	C	C			C	
Approach Delay (s)	24.2				31.8	
Approach LOS	C				C	

Intersection Summary

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	210	205	199	199	178	199
Vehs Exited	209	209	204	209	180	202
Starting Vehs	19	19	19	17	16	18
Ending Vehs	20	15	14	7	14	13
Travel Distance (mi)	37	37	35	36	31	35
Travel Time (hr)	2.6	2.9	2.5	2.4	2.2	2.5
Total Delay (hr)	1.3	1.5	1.2	1.1	1.1	1.2
Total Stops	136	147	143	143	137	140
Fuel Used (gal)	2.1	2.2	2.0	2.1	1.8	2.0

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:10
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	210	205	199	199	178	199
Vehs Exited	209	209	204	209	180	202
Starting Vehs	19	19	19	17	16	18
Ending Vehs	20	15	14	7	14	13
Travel Distance (mi)	37	37	35	36	31	35
Travel Time (hr)	2.6	2.9	2.5	2.4	2.2	2.5
Total Delay (hr)	1.3	1.5	1.2	1.1	1.1	1.2
Total Stops	136	147	143	143	137	140
Fuel Used (gal)	2.1	2.2	2.0	2.1	1.8	2.0

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR2	NBL2	NBL	NBT	NBR	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2		0.3		0.1		3.8	3.5	0.4	0.3	1.2	3.3
Total Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.3
Total Del/Veh (s)	21.8		4.6		14.0		29.3	27.6	15.1	2.6	18.5	19.2
Stop Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.2
Stop Del/Veh (s)	18.3		4.4		11.4		26.3	25.1	11.3	1.3	13.7	16.1

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	SBR2	SEL2	SEL	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	3.5	0.3		0.2	1.4
Total Delay (hr)	0.0	0.0	0.0	0.1	1.1
Total Del/Veh (s)	11.7	32.0		25.3	18.4
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.9
Stop Del/Veh (s)	10.4	28.5		23.9	15.2

Intersection: 2: N Lake St & E 4th St & Central Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB	SE
Directions Served	<L	L	TR	L	TR>	<L	TR	T	R>	<LR
Maximum Queue (ft)	6	89	59	3	14	72	121	113	138	87
Average Queue (ft)	1	58	17	1	3	44	74	69	83	53
95th Queue (ft)	8	106	63	5	16	76	132	135	174	96
Link Distance (ft)		352	352		307		436	387		452
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			100		200			200	
Storage Blk Time (%)								2	1	
Queuing Penalty (veh)								7	2	

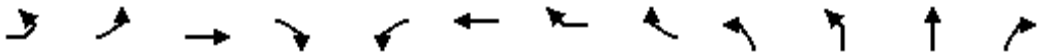
Intersection: 2: N Lake St & E 4th St & Central Ave

Phase	2	3	4	6	7	8	9
Movement(s) Served	EBTL	NBL	SBT	WBTL	SBL	NBT	SEL
Maximum Green (s)	31.4	18.5	41.5	31.4	5.0	55.0	20.6
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None	None	None
Avg. Green (s)	15.8	8.7	18.4	15.8	0.0	27.7	12.6
g/C Ratio	NA	-0.01	NA	NA	-0.01	-0.01	-0.01
Cycles Skipped (%)	0	33	0	0	100	22	25
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	0	0	0	0	0	0	0
Cycles with Peds (%)	11	0	0	11	0	0	13

Controller Summary

Average Cycle Length (s): NA

Number of Complete Cycles : 0



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	1	278	5	121	4	3	1	1	60	54	329	6
Future Volume (vph)	1	278	5	121	4	3	1	1	60	54	329	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	16	12	12	12	13	13	12
Total Lost time (s)		4.5	4.5		4.5	4.5				4.5	4.5	
Lane Util. Factor		0.97	1.00		1.00	1.00				1.00	1.00	
Frpb, ped/bikes		1.00	0.98		1.00	0.99				1.00	1.00	
Flpb, ped/bikes		0.99	1.00		0.98	1.00				1.00	1.00	
Frt		1.00	0.86		1.00	0.94				1.00	1.00	
Flt Protected		0.95	1.00		0.95	1.00				0.95	1.00	
Satd. Flow (prot)		3240	1493		1665	1885				1750	1837	
Flt Permitted		0.75	1.00		0.63	1.00				0.95	1.00	
Satd. Flow (perm)		2573	1493		1109	1885				1750	1837	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1	299	5	130	4	3	1	1	65	58	354	6
RTOR Reduction (vph)	0	0	105	0	0	1	0	0	0	0	1	0
Lane Group Flow (vph)	0	300	30	0	4	4	0	0	0	123	359	0
Confl. Peds. (#/hr)	6				9				3			
Confl. Bikes (#/hr)				1				5				2
Turn Type	Perm	Perm	NA		Perm	NA			Prot	Prot	NA	
Protected Phases			2			6			3	3	8	
Permitted Phases	2	2			6							
Actuated Green, G (s)		16.0	16.0		16.0	16.0				11.8	35.3	
Effective Green, g (s)		16.0	16.0		16.0	16.0				11.8	35.3	
Actuated g/C Ratio		0.19	0.19		0.19	0.19				0.14	0.43	
Clearance Time (s)		4.5	4.5		4.5	4.5				4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)		497	288		214	364				249	784	
v/s Ratio Prot			0.02			0.00				c0.07	0.20	
v/s Ratio Perm		c0.12			0.00							
v/c Ratio		0.60	0.10		0.02	0.01				0.49	0.46	
Uniform Delay, d1		30.5	27.5		27.0	27.0				32.7	16.9	
Progression Factor		1.00	1.00		1.00	1.00				1.00	1.00	
Incremental Delay, d2		2.1	0.2		0.0	0.0				1.5	0.4	
Delay (s)		32.5	27.6		27.0	27.0				34.2	17.3	
Level of Service		C	C		C	C				C	B	
Approach Delay (s)			31.0			27.0					21.6	
Approach LOS			C			C					C	

Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	82.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Traffic Volume (vph)	3	268	189	53	40	3	73	3
Future Volume (vph)	3	268	189	53	40	3	73	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5			4.5		
Lane Util. Factor	1.00	1.00	1.00			1.00		
Frpb, ped/bikes	1.00	1.00	0.98			0.99		
Flpb, ped/bikes	0.99	1.00	1.00			1.00		
Frt	1.00	1.00	0.85			0.91		
Flt Protected	0.95	1.00	1.00			0.98		
Satd. Flow (prot)	1669	1782	1483			1586		
Flt Permitted	0.95	1.00	1.00			0.98		
Satd. Flow (perm)	1669	1782	1483			1586		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	3	288	203	57	43	3	78	3
RTOR Reduction (vph)	0	0	89	0	0	0	0	0
Lane Group Flow (vph)	3	288	171	0	0	127	0	0
Confl. Peds. (#/hr)	1				8			
Confl. Bikes (#/hr)				1				1
Turn Type	Prot	NA	Perm		Prot	Prot		
Protected Phases	7	4			9	9		
Permitted Phases			4					
Actuated Green, G (s)	0.7	24.2	24.2			12.7		
Effective Green, g (s)	0.7	24.2	24.2			12.7		
Actuated g/C Ratio	0.01	0.29	0.29			0.15		
Clearance Time (s)	4.5	4.5	4.5			4.5		
Vehicle Extension (s)	3.0	3.0	3.0			3.0		
Lane Grp Cap (vph)	14	521	433			243		
v/s Ratio Prot	0.00	c0.16				c0.08		
v/s Ratio Perm			0.12					
v/c Ratio	0.21	0.55	0.39			0.52		
Uniform Delay, d1	40.7	24.7	23.4			32.2		
Progression Factor	1.00	1.00	1.00			1.00		
Incremental Delay, d2	7.6	1.3	0.6			2.0		
Delay (s)	48.3	26.0	24.0			34.2		
Level of Service	D	C	C			C		
Approach Delay (s)		25.1				34.2		
Approach LOS		C				C		

Intersection Summary

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	270	255	256	243	259	256
Vehs Exited	261	247	250	235	276	254
Starting Vehs	15	22	18	14	28	19
Ending Vehs	24	30	24	22	11	21
Travel Distance (mi)	47	44	44	42	47	45
Travel Time (hr)	3.9	3.3	3.3	3.1	4.3	3.6
Total Delay (hr)	2.2	1.7	1.7	1.6	2.5	1.9
Total Stops	202	180	181	168	194	183
Fuel Used (gal)	2.8	2.5	2.6	2.4	3.0	2.7

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:10
Total Time (min)	10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	270	255	256	243	259	256
Vehs Exited	261	247	250	235	276	254
Starting Vehs	15	22	18	14	28	19
Ending Vehs	24	30	24	22	11	21
Travel Distance (mi)	47	44	44	42	47	45
Travel Time (hr)	3.9	3.3	3.3	3.1	4.3	3.6
Total Delay (hr)	2.2	1.7	1.7	1.6	2.5	1.9
Total Stops	202	180	181	168	194	183
Fuel Used (gal)	2.8	2.5	2.6	2.4	3.0	2.7

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.1	0.2	2.5				3.6	3.0	0.7	0.5	
Total Delay (hr)	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.0	0.0
Total Del/Veh (s)	35.2	22.9	6.7	5.7				34.6	34.2	17.4	25.3	
Stop Delay (hr)	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0
Stop Del/Veh (s)	30.8	20.3	6.5	4.9				31.4	30.9	13.0	23.5	

2: N Lake St & E 4th St & Central Ave Performance by movement

Movement	SBT	SBR	SBR2	SEL2	SEL	SER	SER2	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	1.1	3.4	3.4	0.1	0.2	0.2		1.2
Total Delay (hr)	0.3	0.2	0.0	0.1	0.0	0.1	0.0	1.8
Total Del/Veh (s)	20.0	21.2	14.0	33.0	59.8	30.6		23.4
Stop Delay (hr)	0.2	0.2	0.0	0.1	0.0	0.1	0.0	1.5
Stop Del/Veh (s)	14.9	18.6	12.4	29.1	56.4	28.5		19.7

Intersection: 2: N Lake St & E 4th St & Central Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB	SB	SE
Directions Served	<L	L	TR	L	TR>	<L	TR	L	T	R>	<LR>
Maximum Queue (ft)	118	173	27	5	9	102	188	2	129	130	124
Average Queue (ft)	42	117	10	1	2	67	124	0	78	64	77
95th Queue (ft)	149	198	32	6	11	122	235	3	136	142	136
Link Distance (ft)		341	341		307		436		387		438
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150			100		200		100		200	
Storage Blk Time (%)	0	4					3		4		
Queuing Penalty (veh)	0	6					4		9		

Intersection: 2: N Lake St & E 4th St & Central Ave

Phase	2	3	4	6	7	8	9
Movement(s) Served	EBTL	NBL	SBT	WBTL	SBL	NBT	SEL
Maximum Green (s)	31.4	18.5	41.5	31.4	5.0	55.0	20.6
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	None	None	None	None
Avg. Green (s)	20.9	10.8	25.8	20.9	0.0	39.6	13.3
g/C Ratio	NA	-0.01	NA	NA	-0.01	NA	NA
Cycles Skipped (%)	0	17	0	0	100	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	14	0	0	14	0	0	0
Cycles with Peds (%)	0	0	14	14	0	0	0

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

APPENDIX A – ROUNDABOUT ANALYSIS

LANE SUMMARY

Site: 1 [2017 AM Peak Hour]

4th Street/Lake Street/Central Avenue
2017 AM Peak Hour
Roundabout

Lane Use and Performance	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
SouthEast: North Lake Street													
Lane 1[d]	252	4.0	1092	0.231	100	5.4	LOS A	1.4	36.1	Full	360	0.0	0.0
Approach	252	4.0		0.231		5.4	LOS A	1.4	36.1				
NorthEast: 4th Street													
Lane 1[d]	9	4.0	907	0.010	100	4.1	LOS A	0.0	1.3	Full	325	0.0	0.0
Approach	9	4.0		0.010		4.1	LOS A	0.0	1.3				
North: North Lake Street													
Lane 1[d]	521	4.0	1056	0.493	100	9.1	LOS A	3.9	99.6	Full	730	0.0	0.0
Approach	521	4.0		0.493		9.1	LOS A	3.9	99.6				
West: East Central Avenue													
Lane 1[d]	101	4.0	770	0.131	100	6.0	LOS A	0.8	20.9	Full	450	0.0	0.0
Approach	101	4.0		0.131		6.0	LOS A	0.8	20.9				
SouthWest: 4th Street													
Lane 1[d]	299	4.0	987	0.303	100	6.7	LOS A	1.9	49.1	Full	320	0.0	0.0
Approach	299	4.0		0.303		6.7	LOS A	1.9	49.1				
Intersection	1181	4.0		0.493		7.4	LOS A	3.9	99.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

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LANE SUMMARY

Site: 1 [2017 PM Peak Hour]

4th Street/Lake Street/Central Avenue
2017 PM Peak Hour
Roundabout

Lane Use and Performance													
	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
SouthEast: North Lake Street													
Lane 1[d]	385	1.0	1063	0.362	100	7.1	LOS A	2.5	61.8	Full	360	0.0	0.0
Approach	385	1.0		0.362		7.1	LOS A	2.5	61.8				
NorthEast: 4th Street													
Lane 1[d]	8	1.0	792	0.010	100	4.6	LOS A	0.1	1.3	Full	325	0.0	0.0
Approach	8	1.0		0.010		4.6	LOS A	0.1	1.3				
North: North Lake Street													
Lane 1[d]	438	1.0	1003	0.436	100	8.5	LOS A	3.2	80.4	Full	730	0.0	0.0
Approach	438	1.0		0.436		8.5	LOS A	3.2	80.4				
West: East Central Avenue													
Lane 1[d]	101	1.0	891	0.113	100	5.1	LOS A	0.7	17.3	Full	450	0.0	0.0
Approach	101	1.0		0.113		5.1	LOS A	0.7	17.3				
SouthWest: 4th Street													
Lane 1[d]	346	1.0	1022	0.339	100	7.0	LOS A	2.2	55.9	Full	320	0.0	0.0
Approach	346	1.0		0.339		7.0	LOS A	2.2	55.9				
Intersection	1277	1.0		0.436		7.4	LOS A	3.2	80.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: 1 [2040 AM Peak Hour]

4th Street/Lake Street/Central Avenue
2040 AM Peak Hour
Roundabout

Lane Use and Performance	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
SouthEast: North Lake Street													
Lane 1[d]	317	4.0	1032	0.307	100	6.6	LOS A	2.0	52.0	Full	360	0.0	0.0
Approach	317	4.0		0.307		6.6	LOS A	2.0	52.0				
NorthEast: 4th Street													
Lane 1[d]	11	4.0	816	0.014	100	4.5	LOS A	0.1	1.9	Full	325	0.0	0.0
Approach	11	4.0		0.014		4.5	LOS A	0.1	1.9				
North: North Lake Street													
Lane 1[d]	656	4.0	984	0.666	100	14.0	LOS B	7.5	194.1	Full	730	0.0	0.0
Approach	656	4.0		0.666		14.0	LOS B	7.5	194.1				
West: East Central Avenue													
Lane 1[d]	128	4.0	629	0.204	100	8.2	LOS A	1.4	35.7	Full	450	0.0	0.0
Approach	128	4.0		0.204		8.2	LOS A	1.4	35.7				
SouthWest: 4th Street													
Lane 1[d]	375	4.0	902	0.416	100	8.9	LOS A	2.9	74.8	Full	320	0.0	0.0
Approach	375	4.0		0.416		8.9	LOS A	2.9	74.8				
Intersection	1488	4.0		0.666		10.5	LOS B	7.5	194.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: 1 [2040 PM Peak Hour]

4th Street/Lake Street/Central Avenue
2040 PM Peak Hour
Roundabout

Lane Use and Performance													
	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
SouthEast: North Lake Street													
Lane 1[d]	483	1.0	988	0.489	100	9.5	LOS A	3.7	93.8	Full	360	0.0	0.0
Approach	483	1.0		0.489		9.5	LOS A	3.7	93.8				
NorthEast: 4th Street													
Lane 1[d]	10	1.0	656	0.015	100	5.6	LOS A	0.1	2.2	Full	325	0.0	0.0
Approach	10	1.0		0.015		5.6	LOS A	0.1	2.2				
North: North Lake Street													
Lane 1[d]	552	1.0	918	0.601	100	12.6	LOS B	6.0	150.0	Full	730	0.0	0.0
Approach	552	1.0		0.601		12.6	LOS B	6.0	150.0				
West: East Central Avenue													
Lane 1[d]	128	1.0	773	0.166	100	6.4	LOS A	1.1	27.2	Full	450	0.0	0.0
Approach	128	1.0		0.166		6.4	LOS A	1.1	27.2				
SouthWest: 4th Street													
Lane 1[d]	435	1.0	937	0.465	100	9.5	LOS A	3.4	86.0	Full	320	0.0	0.0
Approach	435	1.0		0.465		9.5	LOS A	3.4	86.0				
Intersection	1608	1.0		0.601		10.3	LOS B	6.0	150.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

APPENDIX B – TRAFFIC SIGNAL ALTERNATIVE

SIGNAL LAYOUT & TRUCK TURN EXHIBITS

SYNCHRO/SIMTRAFFIC ANALYSIS

CONSTRUCTION COST ESTIMATE

Traffic Signal Alternative: Preliminary Layout

LEGEND:

- EXISTING RIGHT-OF-WAY AND PROPERTY LINES
- PROPOSED IMPROVEMENTS
- RIGHT-OF-WAY IMPACTS
- ESTIMATED LIMITS FOR NEW PAVEMENT SECTION

LAKE Street

CONSTRUCT 25' RADIUS RETURN. CONSTRUCT RAMP TO ADA STANDARDS

CONSTRUCT SIDEWALK CONNECTION

ELBOW ENDING 4TH STREET INTO THE ALLEY.

4TH Street

CENTRAL Avenue

ø1

ø4 ø4

DEMO 4TH STREET AND PROVIDE LANDSCAPING

CONSTRUCT CURB, GUTTER, AND SIDEWALK TO END 4TH STREET ACCESS.

ø3 ø3

ø2 ø2

RAISED MEDIAN

4TH Street

LAKE Street

ø3 OR ø8 PED ø4 PED ø4 ø1 ø6 PED ø2 ø2 PED

PHASE DIAGRAM

NORTH

0 50

Scale: 1"= 50

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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure B1

omni·means A GHD Company

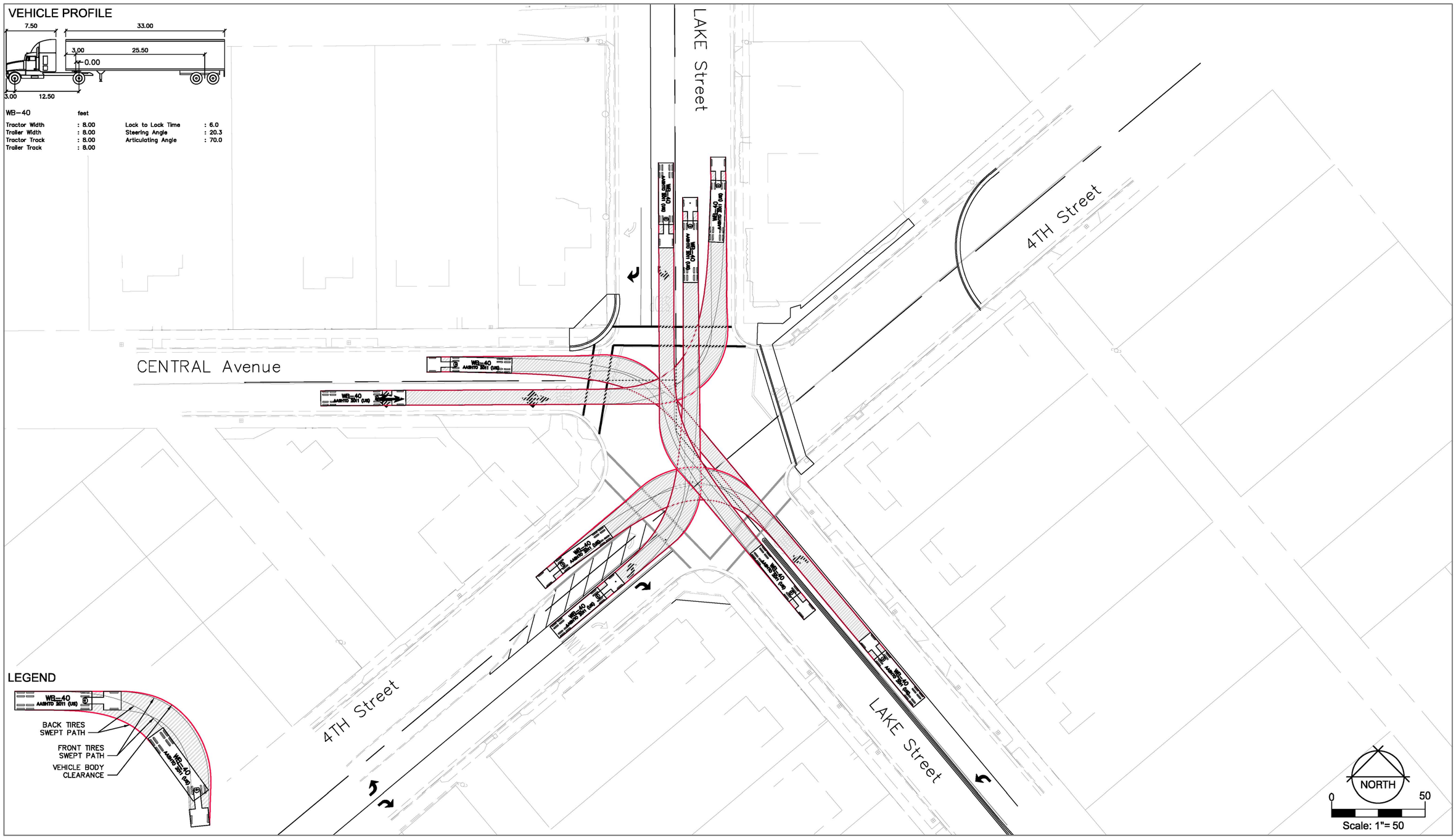
Madera, California

2264EX006.dwg

WB-40 Truck Turn (Left-Turn Movement Only)

VEHICLE PROFILE

WB-40	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		



LEGEND

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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

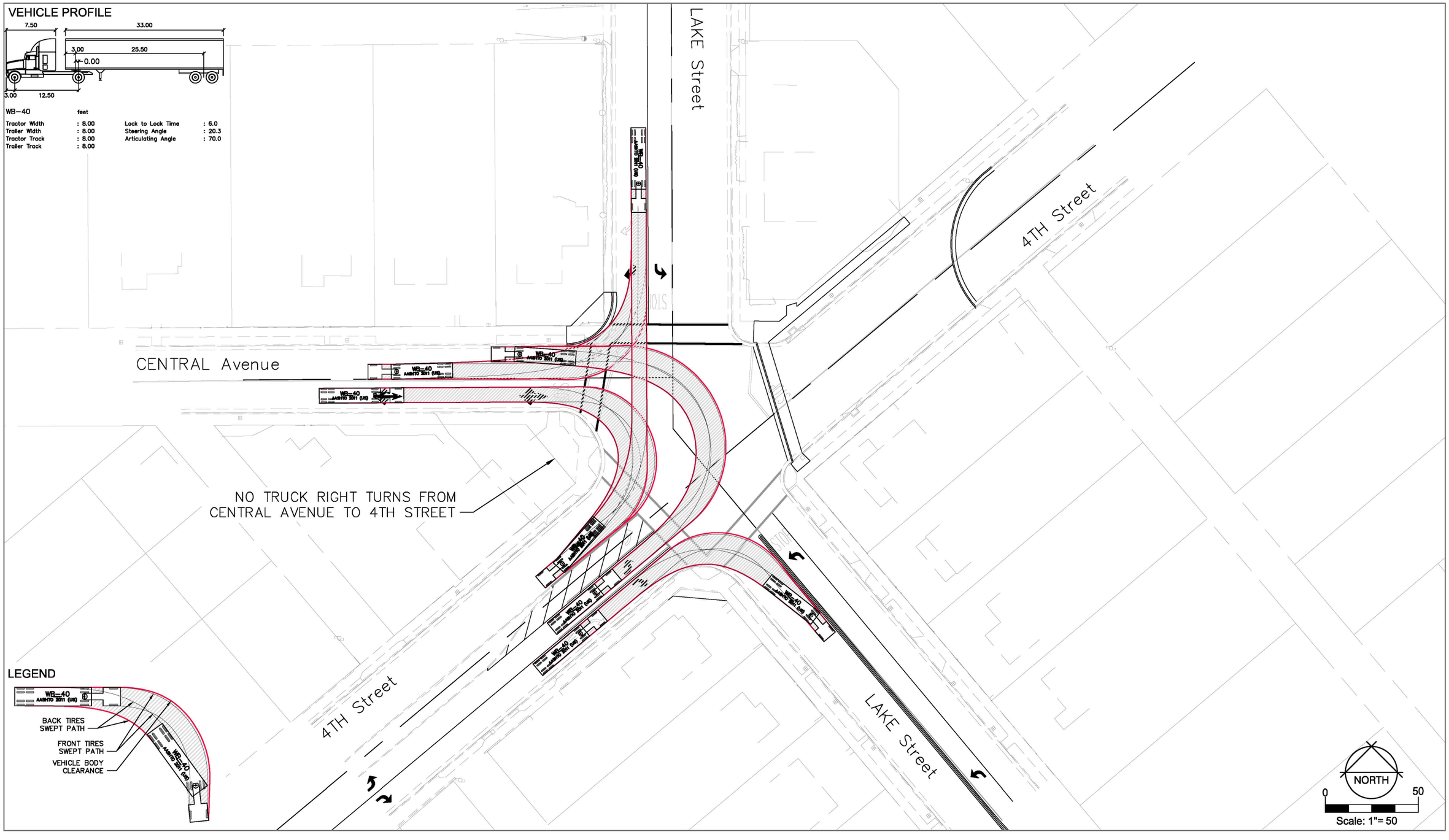
Figure B2

Madera, California

omni·means A GHD Company

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WB-40 Truck Turn (Right-Turn Movement Only)



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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure B3

Madera, California

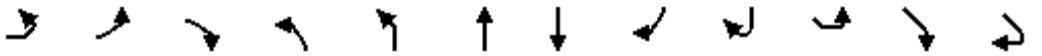
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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	SEL
Lane Group Flow (vph)	199	128	85	191	243	333	112
v/c Ratio	0.56	0.28	0.28	0.60	0.60	0.69	0.43
Control Delay	31.0	2.9	29.6	38.0	30.1	19.6	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	2.9	29.6	38.0	30.1	19.6	31.3
Queue Length 50th (ft)	67	0	28	66	79	44	39
Queue Length 95th (ft)	158	15	85	#220	189	#182	95
Internal Link Dist (ft)	442			427	397		458
Turn Bay Length (ft)	200		200			200	
Base Capacity (vph)	425	517	344	362	517	563	280
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.25	0.25	0.53	0.47	0.59	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL2	EBL	EBR	NBL2	NBL	NBT	SBT	SBR	SBR2	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	1	182	118	47	31	176	224	272	34	18	82	3
Future Volume (vph)	1	182	118	47	31	176	224	272	34	18	82	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	13	13	12	12	12	12	12	12
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5		
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00		
Frpb, ped/bikes		1.00	0.98		1.00	1.00	1.00	0.98		0.99		
Flpb, ped/bikes		0.99	1.00		1.00	1.00	1.00	1.00		1.00		
Frt		1.00	0.85		1.00	1.00	1.00	0.85		0.89		
Flt Protected		0.95	1.00		0.95	1.00	1.00	1.00		0.99		
Satd. Flow (prot)		1629	1439		1699	1788	1731	1439		1508		
Flt Permitted		0.95	1.00		0.95	1.00	1.00	1.00		0.99		
Satd. Flow (perm)		1629	1439		1699	1788	1731	1439		1508		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	198	128	51	34	191	243	296	37	20	89	3
RTOR Reduction (vph)	0	0	101	0	0	0	0	147	0	0	0	0
Lane Group Flow (vph)	0	199	27	0	85	191	243	186	0	112	0	0
Confl. Peds. (#/hr)	6			3						8		
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	Perm	Perm	Split	Split	NA	NA	Perm		Prot		
Protected Phases				3	3	3	4			1		
Permitted Phases	2	2	2					4				
Actuated Green, G (s)		12.2	12.2		6.8	6.8	13.3	13.3		6.8		
Effective Green, g (s)		12.2	12.2		6.8	6.8	13.3	13.3		6.8		
Actuated g/C Ratio		0.21	0.21		0.12	0.12	0.23	0.23		0.12		
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)		348	307		202	212	403	335		179		
v/s Ratio Prot					0.05	c0.11	c0.14			c0.07		
v/s Ratio Perm		c0.12	0.02					0.13				
v/c Ratio		0.57	0.09		0.42	0.90	0.60	0.56		0.63		
Uniform Delay, d1		20.1	18.0		23.3	24.8	19.5	19.3		23.9		
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00		
Incremental Delay, d2		2.3	0.1		1.4	35.9	2.5	2.0		6.7		
Delay (s)		22.4	18.1		24.7	60.7	22.1	21.3		30.6		
Level of Service		C	B		C	E	C	C		C		
Approach Delay (s)		20.7				49.7	21.6			30.6		
Approach LOS		C				D	C			C		

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	57.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

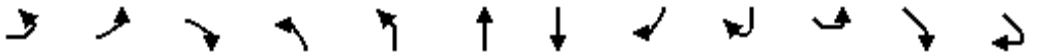
c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	SEL
Lane Group Flow (vph)	180	116	77	173	220	300	99
v/c Ratio	0.48	0.23	0.25	0.53	0.59	0.61	0.35
Control Delay	24.8	1.0	25.9	33.8	32.6	14.7	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	1.0	25.9	33.8	32.6	14.7	25.2
Queue Length 50th (ft)	49	0	20	49	60	18	28
Queue Length 95th (ft)	107	0	64	#159	#189	#100	65
Internal Link Dist (ft)	442			427	397		458
Turn Bay Length (ft)	200		200			200	
Base Capacity (vph)	442	557	337	355	436	533	279
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.21	0.23	0.49	0.50	0.56	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL2	EBL	EBR	NBL2	NBL	NBT	SBT	SBR	SBR2	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	1	145	94	37	25	140	178	216	27	14	65	2
Future Volume (vph)	1	145	94	37	25	140	178	216	27	14	65	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	13	13	12	12	12	12	12	12
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5		
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00		
Frpb, ped/bikes		1.00	0.98		1.00	1.00	1.00	0.98		0.99		
Flpb, ped/bikes		0.99	1.00		1.00	1.00	1.00	1.00		1.00		
Frt		1.00	0.85		1.00	1.00	1.00	0.85		0.89		
Flt Protected		0.95	1.00		0.95	1.00	1.00	1.00		0.99		
Satd. Flow (prot)		1631	1438		1699	1788	1731	1439		1507		
Flt Permitted		0.95	1.00		0.95	1.00	1.00	1.00		0.99		
Satd. Flow (perm)		1631	1438		1699	1788	1731	1439		1507		
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	1	179	116	46	31	173	220	267	33	17	80	2
RTOR Reduction (vph)	0	0	97	0	0	0	0	179	0	0	0	0
Lane Group Flow (vph)	0	180	19	0	77	173	220	121	0	99	0	0
Confl. Peds. (#/hr)	6			3						8		
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	Perm	Perm	Split	Split	NA	NA	Perm		Prot		
Protected Phases				3	3	3	4			1		
Permitted Phases	2	2	2					4				
Actuated Green, G (s)		7.7	7.7		5.3	5.3	10.2	10.2		5.7		
Effective Green, g (s)		7.7	7.7		5.3	5.3	10.2	10.2		5.7		
Actuated g/C Ratio		0.16	0.16		0.11	0.11	0.22	0.22		0.12		
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)		267	236		191	202	376	312		183		
v/s Ratio Prot					0.05	c0.10	c0.13			c0.07		
v/s Ratio Perm		c0.11	0.01					0.08				
v/c Ratio		0.67	0.08		0.40	0.86	0.59	0.39		0.54		
Uniform Delay, d1		18.4	16.6		19.3	20.4	16.5	15.7		19.4		
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00		
Incremental Delay, d2		6.6	0.1		1.4	28.1	2.3	0.8		3.2		
Delay (s)		25.0	16.7		20.7	48.6	18.8	16.5		22.6		
Level of Service		C	B		C	D	B	B		C		
Approach Delay (s)		21.8				40.0	17.4			22.6		
Approach LOS		C				D	B			C		

Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	46.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		

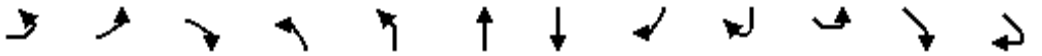
c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	SEL
Lane Group Flow (vph)	303	132	124	358	291	263	125
v/c Ratio	0.85	0.30	0.32	0.87	0.84	0.64	0.63
Control Delay	52.8	6.0	28.8	52.1	53.4	21.0	47.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	6.0	28.8	52.1	53.4	21.0	47.9
Queue Length 50th (ft)	134	0	47	158	132	45	58
Queue Length 95th (ft)	#321	36	113	#377	#290	138	115
Internal Link Dist (ft)	442			427	397		458
Turn Bay Length (ft)	200		200			150	
Base Capacity (vph)	387	461	425	447	362	423	197
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.29	0.29	0.80	0.80	0.62	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL2	EBL	EBR	NBL2	NBL	NBT	SBT	SBR	SBR2	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	1	278	121	60	54	329	268	189	53	40	73	3
Future Volume (vph)	1	278	121	60	54	329	268	189	53	40	73	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	13	13	12	12	12	12	12	12
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5		
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00		
Frpb, ped/bikes		1.00	0.98		1.00	1.00	1.00	0.98		0.99		
Flpb, ped/bikes		0.99	1.00		1.00	1.00	1.00	1.00		1.00		
Frt		1.00	0.85		1.00	1.00	1.00	0.85		0.91		
Flt Protected		0.95	1.00		0.95	1.00	1.00	1.00		0.98		
Satd. Flow (prot)		1672	1482		1750	1842	1782	1482		1582		
Flt Permitted		0.95	1.00		0.95	1.00	1.00	1.00		0.98		
Satd. Flow (perm)		1672	1482		1750	1842	1782	1482		1582		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	302	132	65	59	358	291	205	58	43	79	3
RTOR Reduction (vph)	0	0	104	0	0	0	0	123	0	0	0	0
Lane Group Flow (vph)	0	303	28	0	124	358	291	140	0	125	0	0
Confl. Peds. (#/hr)	6			3						8		
Confl. Bikes (#/hr)			1						1			1
Turn Type	Perm	Perm	Perm	Split	Split	NA	NA	Perm		Prot		
Protected Phases				3	3	3	4			1		
Permitted Phases	2	2	2					4				
Actuated Green, G (s)		16.1	16.1		16.9	16.9	14.6	14.6		9.4		
Effective Green, g (s)		16.1	16.1		16.9	16.9	14.6	14.6		9.4		
Actuated g/C Ratio		0.21	0.21		0.23	0.23	0.19	0.19		0.13		
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)		358	318		394	415	346	288		198		
v/s Ratio Prot					0.07	c0.19	c0.16			c0.08		
v/s Ratio Perm		c0.18	0.02					0.09				
v/c Ratio		0.85	0.09		0.31	0.86	0.84	0.49		0.63		
Uniform Delay, d1		28.3	23.6		24.2	27.9	29.1	26.9		31.2		
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00		
Incremental Delay, d2		16.6	0.1		0.5	16.7	16.6	1.3		6.4		
Delay (s)		44.9	23.7		24.7	44.6	45.7	28.1		37.6		
Level of Service		D	C		C	D	D	C		D		
Approach Delay (s)		38.5				39.5	37.4			37.6		
Approach LOS		D				D	D			D		

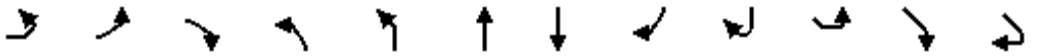
Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	SEL
Lane Group Flow (vph)	227	98	93	267	182	196	94
v/c Ratio	0.66	0.21	0.27	0.74	0.58	0.45	0.44
Control Delay	33.5	1.0	26.4	40.3	32.3	7.5	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	1.0	26.4	40.3	32.3	7.5	32.0
Queue Length 50th (ft)	69	0	26	81	57	0	30
Queue Length 95th (ft)	183	0	90	#301	146	46	83
Internal Link Dist (ft)	442			427	397		458
Turn Bay Length (ft)	200		200			200	
Base Capacity (vph)	385	500	383	403	335	453	216
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.20	0.24	0.66	0.54	0.43	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL2	EBL	EBR	NBL2	NBL	NBT	SBT	SBR	SBR2	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	1	221	96	48	43	262	178	150	42	32	58	2
Future Volume (vph)	1	221	96	48	43	262	178	150	42	32	58	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	13	13	12	12	12	12	12	12
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5		
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00		
Frpb, ped/bikes		1.00	0.98		1.00	1.00	1.00	1.00		0.99		
Flpb, ped/bikes		0.99	1.00		1.00	1.00	1.00	1.00		1.00		
Frt		1.00	0.85		1.00	1.00	1.00	0.85		0.91		
Flt Protected		0.95	1.00		0.95	1.00	1.00	1.00		0.98		
Satd. Flow (prot)		1677	1482		1750	1842	1782	1515		1583		
Flt Permitted		0.95	1.00		0.95	1.00	1.00	1.00		0.98		
Satd. Flow (perm)		1677	1482		1750	1842	1782	1515		1583		
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1	226	98	49	44	267	182	153	43	33	59	2
RTOR Reduction (vph)	0	0	78	0	0	0	0	161	0	0	0	0
Lane Group Flow (vph)	0	227	20	0	93	267	182	35	0	94	0	0
Confl. Peds. (#/hr)	6			3						8		
Confl. Bikes (#/hr)			1						1			1
Turn Type	Perm	Perm	Perm	Split	Split	NA	NA	Prot		Prot		
Protected Phases				3	3	3	4	4		1		
Permitted Phases	2	2	2									
Actuated Green, G (s)		11.6	11.6		11.1	11.1	10.0	10.0		5.9		
Effective Green, g (s)		11.6	11.6		11.1	11.1	10.0	10.0		5.9		
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.18	0.18		0.10		
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5		
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)		343	303		343	361	314	267		165		
v/s Ratio Prot					0.05	c0.14	c0.10	0.02		c0.06		
v/s Ratio Perm		c0.14	0.01									
v/c Ratio		0.66	0.07		0.27	0.74	0.58	0.13		0.57		
Uniform Delay, d1		20.7	18.1		19.3	21.4	21.4	19.6		24.1		
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00		
Incremental Delay, d2		4.7	0.1		0.4	7.7	2.6	0.2		4.5		
Delay (s)		25.4	18.2		19.7	29.1	24.0	19.9		28.6		
Level of Service		C	B		B	C	C	B		C		
Approach Delay (s)		23.3				26.7	21.8			28.6		
Approach LOS		C				C	C			C		

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Preliminary Opinion of Costs (Construction Costs Only)

4th Street/Lake Street/Central Avenue Intersection - **Signal Alternative**

City of Madera

1/12/2018

55-4549-03/2264

No.	*Item Description*	*Units*	*Quantity*	*Unit Cost*	*Total*
1	Traffic Control System	LS	1	$60,000.00	$60,000.00
2	Remove Thermoplastic Traffic Stripe	LF	200	$4.25	$850.00
3	Remove Thermoplastic Pavement Marking	SQFT	50	$12.50	$625.00
4	Remove Roadside Sign	EA	10	$155.00	$1,550.00
5	Remove Concrete Sidewalk	SQYD	30	$31.50	$945.00
6	Remove Concrete (Curb & Gutter)	LF	340	$12.50	$4,250.00
7	Roadway Excavation	CY	560	$32.00	$17,920.00
8	Class 2 Aggregate Base	CY	150	$53.00	$7,950.00
9	Hot Mix Asphalt (Type B)	TON	140	$90.00	$12,600.00
10	Minor Concrete (Median Curb)	CY	20	$770.00	$15,400.00
11	Minor Concrete (Curb and Gutter)	CY	10	$355.00	$3,550.00
12	Minor Concrete (Medians)	SQFT	150	$6.00	$900.00
13	Minor Concrete (Sidewalk)	CY	20	$540.00	$10,800.00
14	Thermoplastic Traffic Stripe	LF	1000	$2.00	$2,000.00
15	Thermoplastic Pavement Marking	SQFT	840	$7.00	$5,880.00
16	Landscape	SQFT	7800	$5.00	$39,000.00
17	Signs	EA	20	$380.00	$7,600.00
18	Signals and Lighting	LS	1	$350,000.00	$350,000.00
19	Storm Drain System	LS	1	$50,000.00	$50,000.00
20	Mobilization	LS	1	$53,200.00	$53,200.00
	Subtotal (Construction Costs)				$ 645,020.00
	Minor/ Supplemental Items			30%	$ 194,000.00
	Construction Contingency			25%	$ 210,000.00
	Total Construction Costs				**$ 1,049,020.00**
	Rounded				**$ 1,050,000.00**

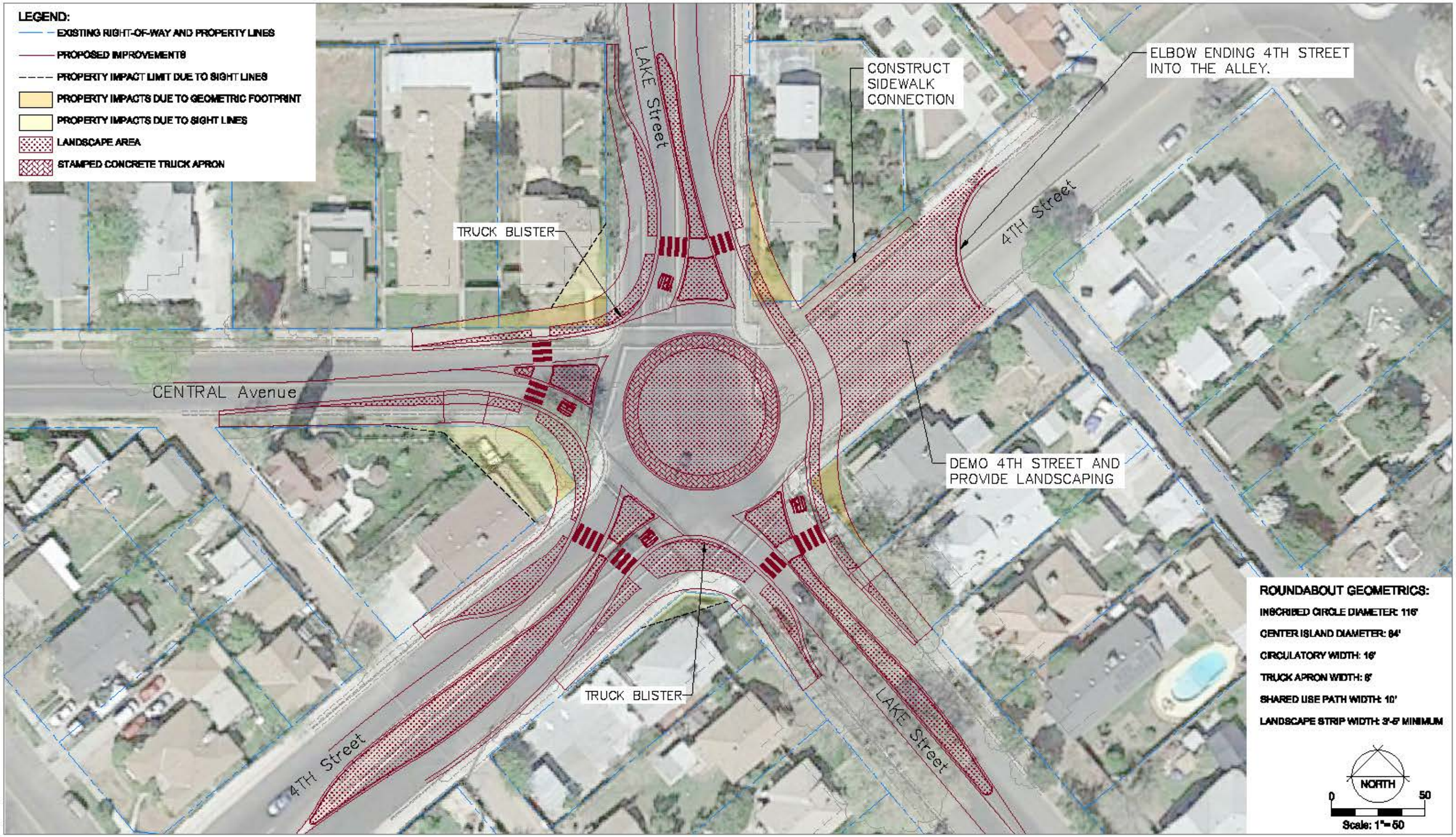
APPENDIX C – ROUNDABOUT ALTERNATIVE

ROUNDABOUT LAYOUT, FASTEST PATH, & TRUCK TURN EXHIBITS

SIDRA 7 ANALYSIS

CONSTRUCTION COST ESTIMATE

Roundabout Alternative: Preliminary Layout



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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure C1

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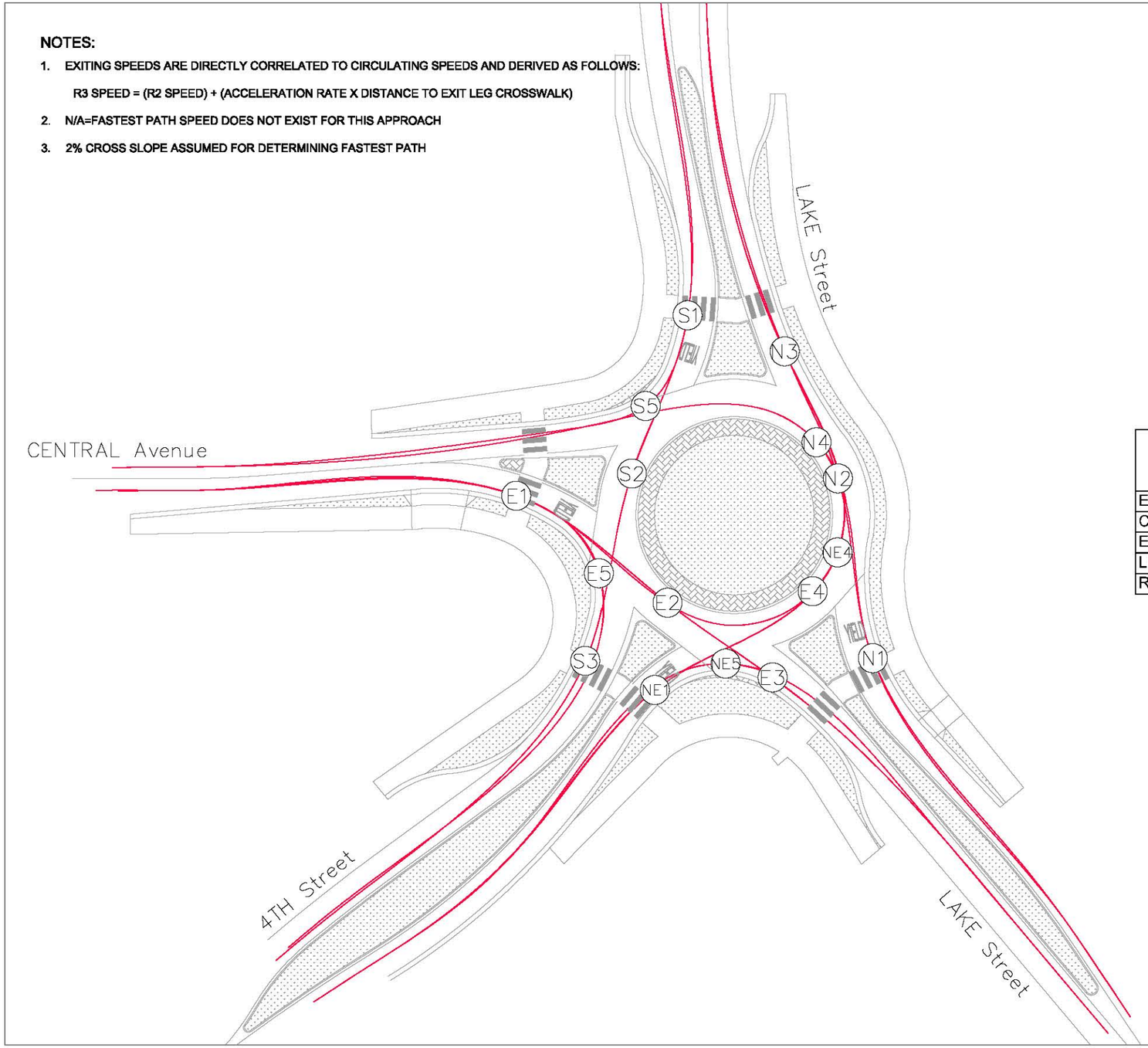
Madera, California

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Fastest Path Design

NOTES:

1. EXITING SPEEDS ARE DIRECTLY CORRELATED TO CIRCULATING SPEEDS AND DERIVED AS FOLLOWS:
   R3 SPEED = (R2 SPEED) + (ACCELERATION RATE X DISTANCE TO EXIT LEG CROSSWALK)
2. N/A=FASTEST PATH SPEED DOES NOT EXIST FOR THIS APPROACH
3. 2% CROSS SLOPE ASSUMED FOR DETERMINING FASTEST PATH



FASTEST PATH RADIUS (FT)

MOVEMENT	NB LAKE STREET (N#)	SB LAKE STREET (S#)	NEB 4TH STREET (NE#)	EB CENTRAL AVENUE (E#)
ENTERING (R1)	120.7	128.4	119.1	105.0
CIRCULATING (R2	162.7	202.7		399.4
EXITING (R3)	543.7	118.0		505.0
LEFT TURN (R4)	50.2		51.8	45.2
RIGHT TURN (R5)		33.5	51.3	48.5

FASTEST PATH SPEED (MPH)

MOVEMENT	NB LAKE STREET (N#)	SB LAKE STREET (S#)	NEB 4TH STREET (NE#)	EB CENTRAL AVENUE (E#)
ENTERING (R1)	21.9	22.4	21.8	20.8
CIRCULATING (R2	22.5	24.4		31.2
EXITING (R3)	31.4	21.7		38.1
LEFT TURN (R4)	14.6		14.8	14.0
RIGHT TURN (R5)		13.4	15.7	15.4

NORTH
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Scale: 1"= 50

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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

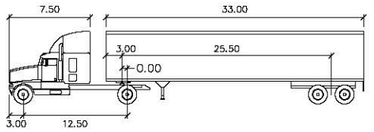
Figure C2

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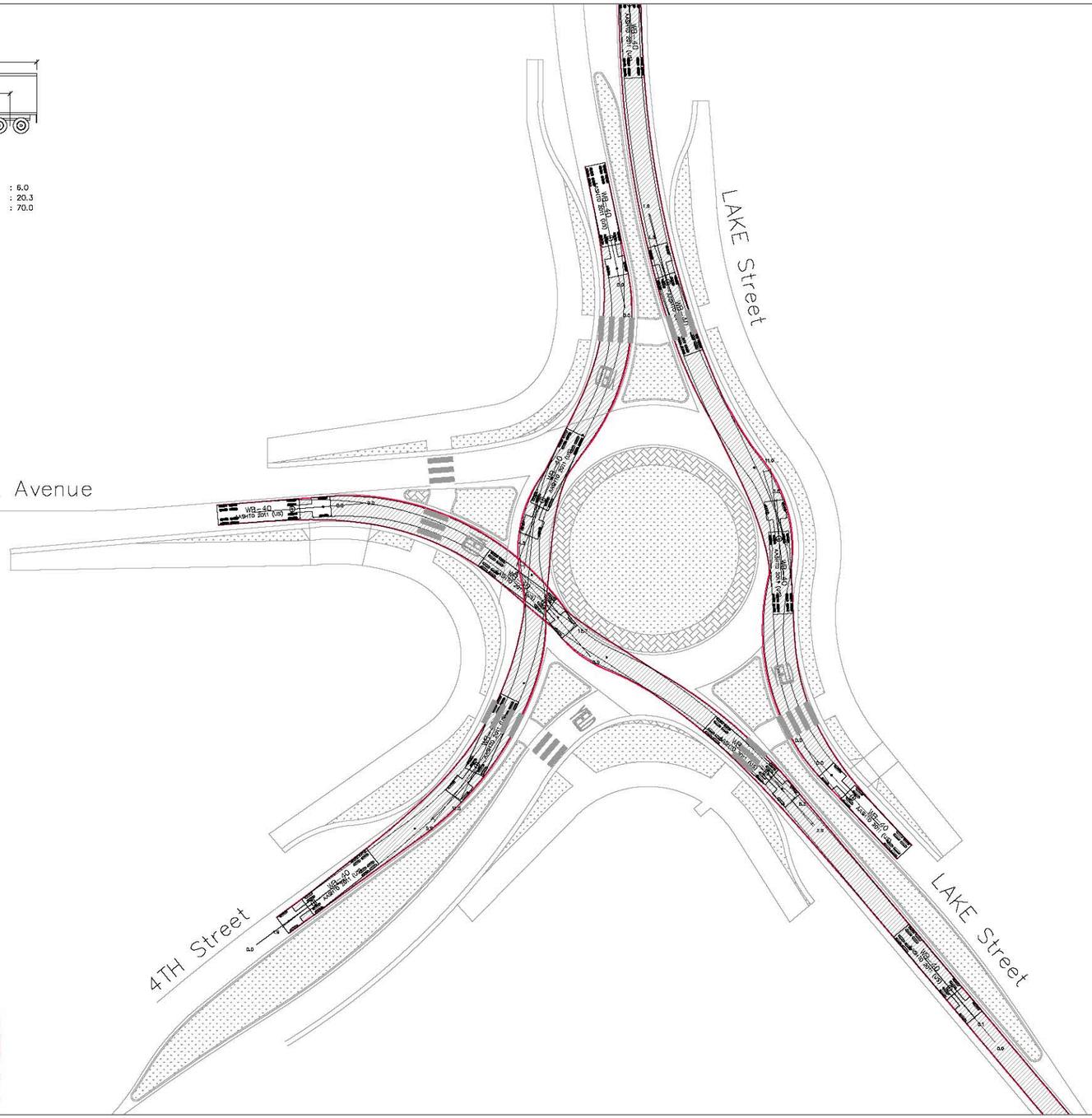
WB-40 Truck Turn (Through Movement Only)

VEHICLE PROFILE

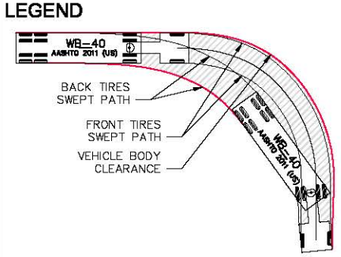


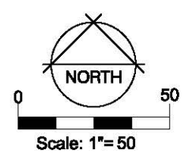
WB-40 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		



LEGEND





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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure C3

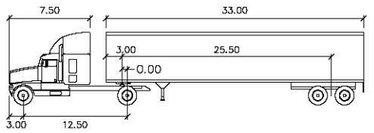
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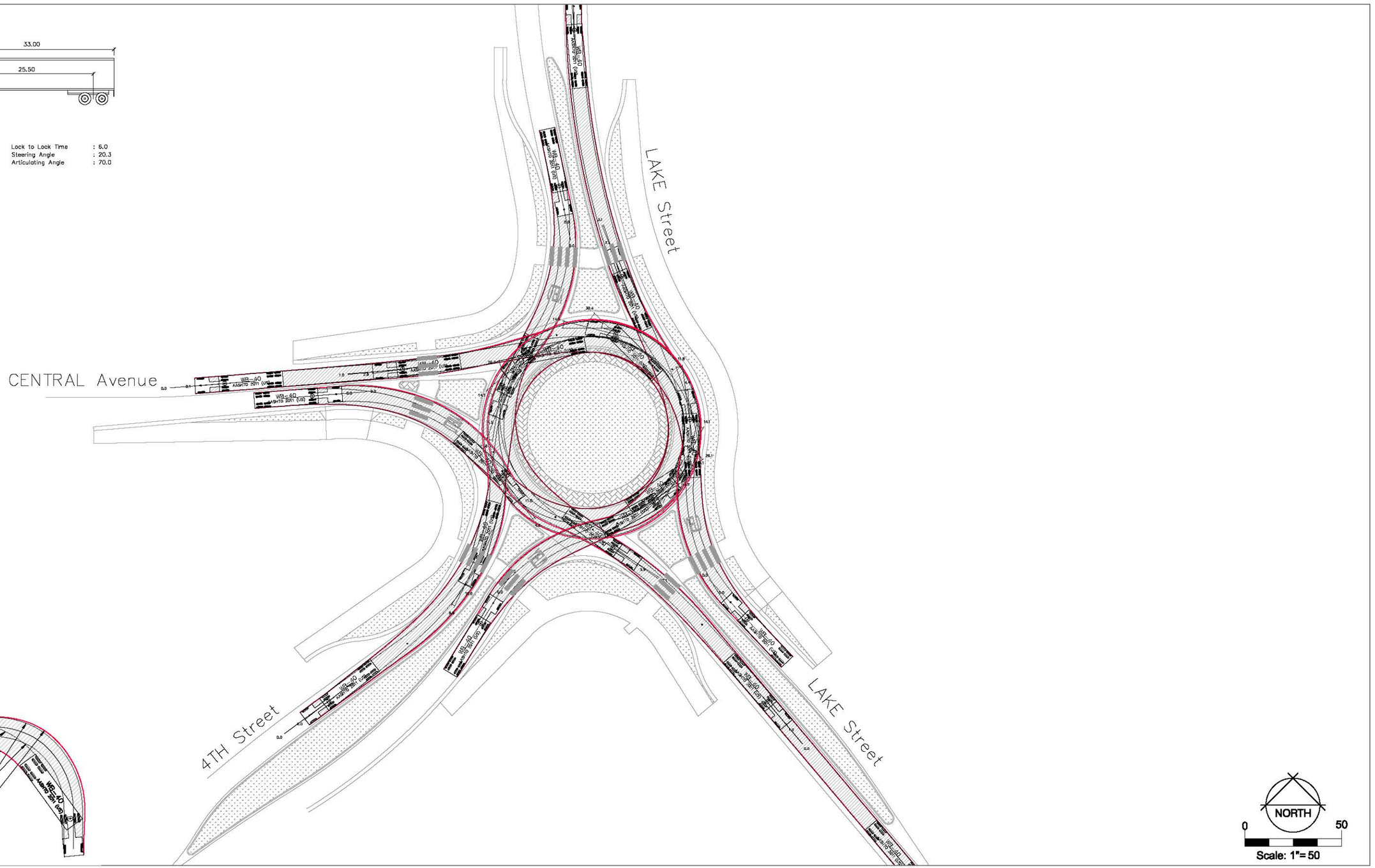
WB-40 Truck Turn (Left-Turn Movement Only)

VEHICLE PROFILE

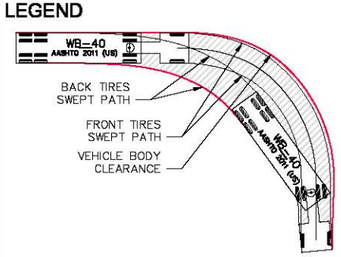


WB—40 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		



LEGEND



NORTH

0 50

Scale: 1"= 50

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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure C4

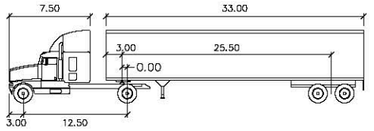
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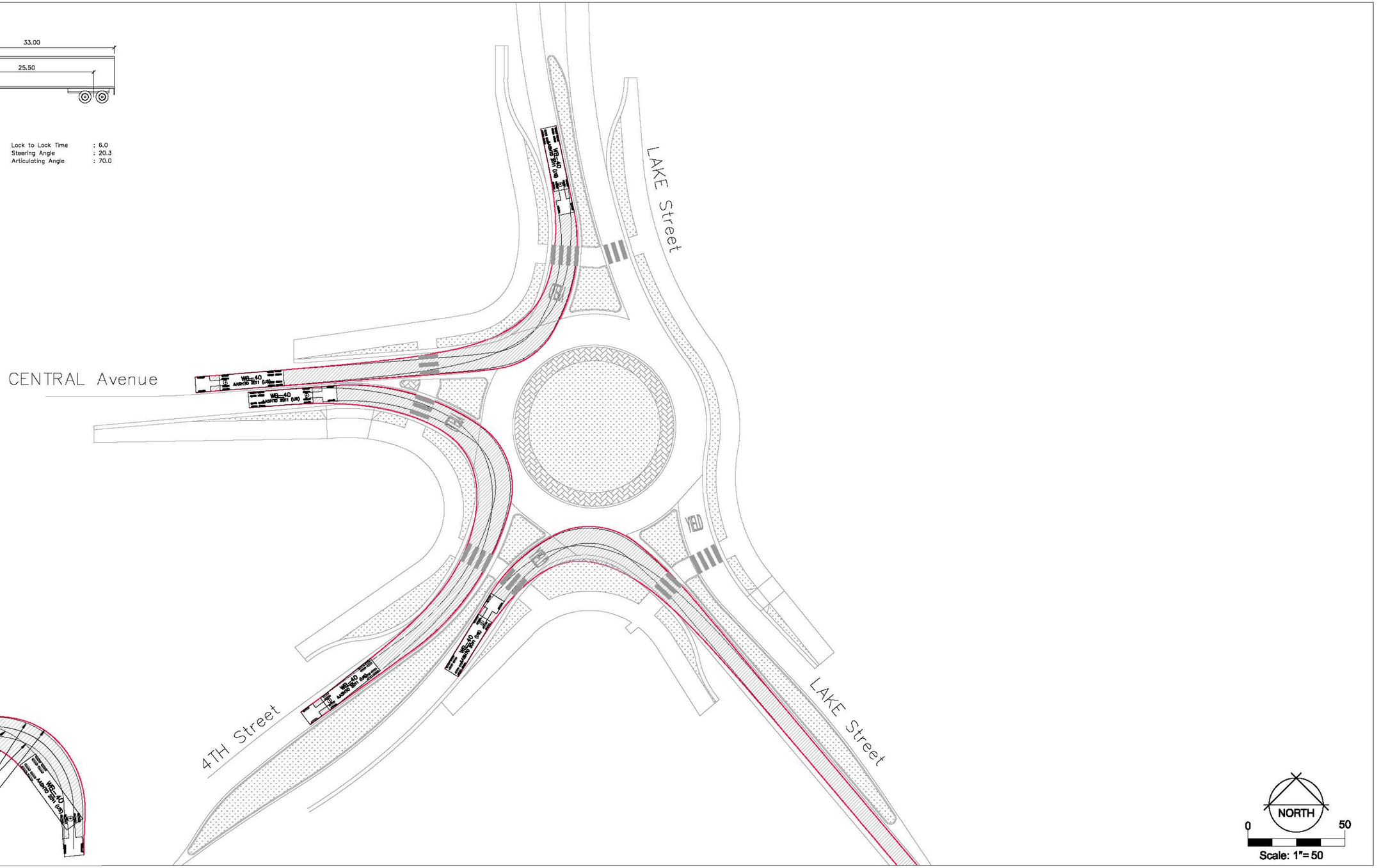
WB-40 Truck Turn (Right-Turn Movement Only)

VEHICLE PROFILE

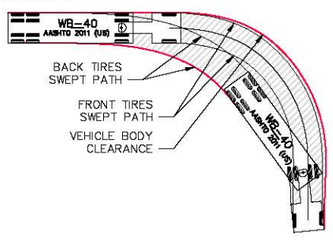


WB-40 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		



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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure C5

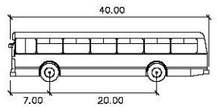
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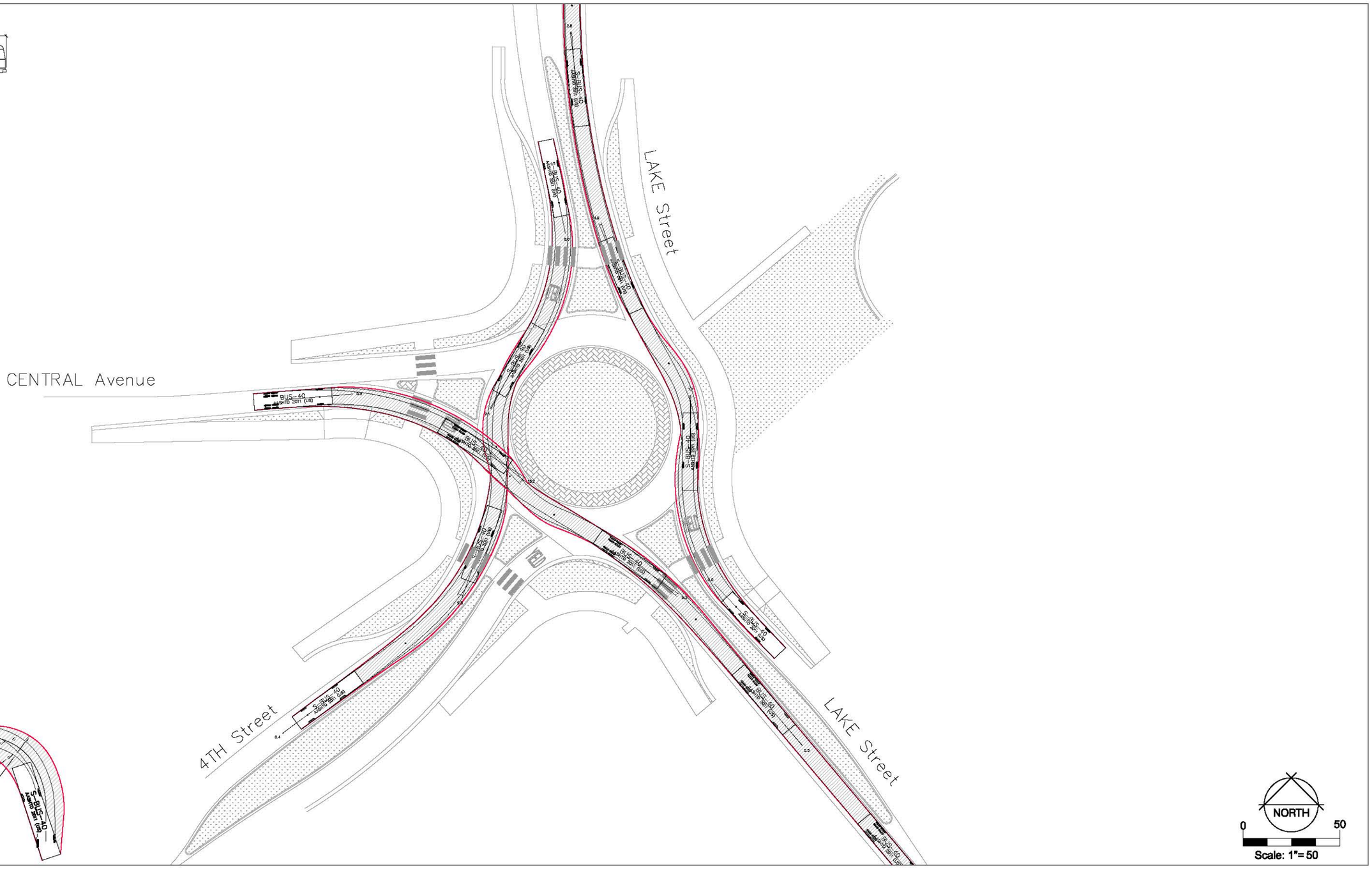
Bus 40 VehicleTurn (Through Movement Only)

VEHICLE PROFILE

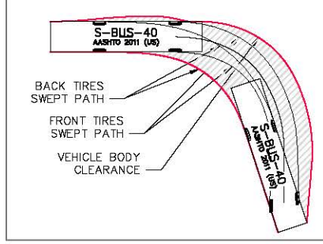


S-BUS-40
feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 34.4



LEGEND



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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure C6

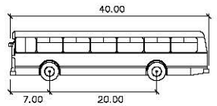
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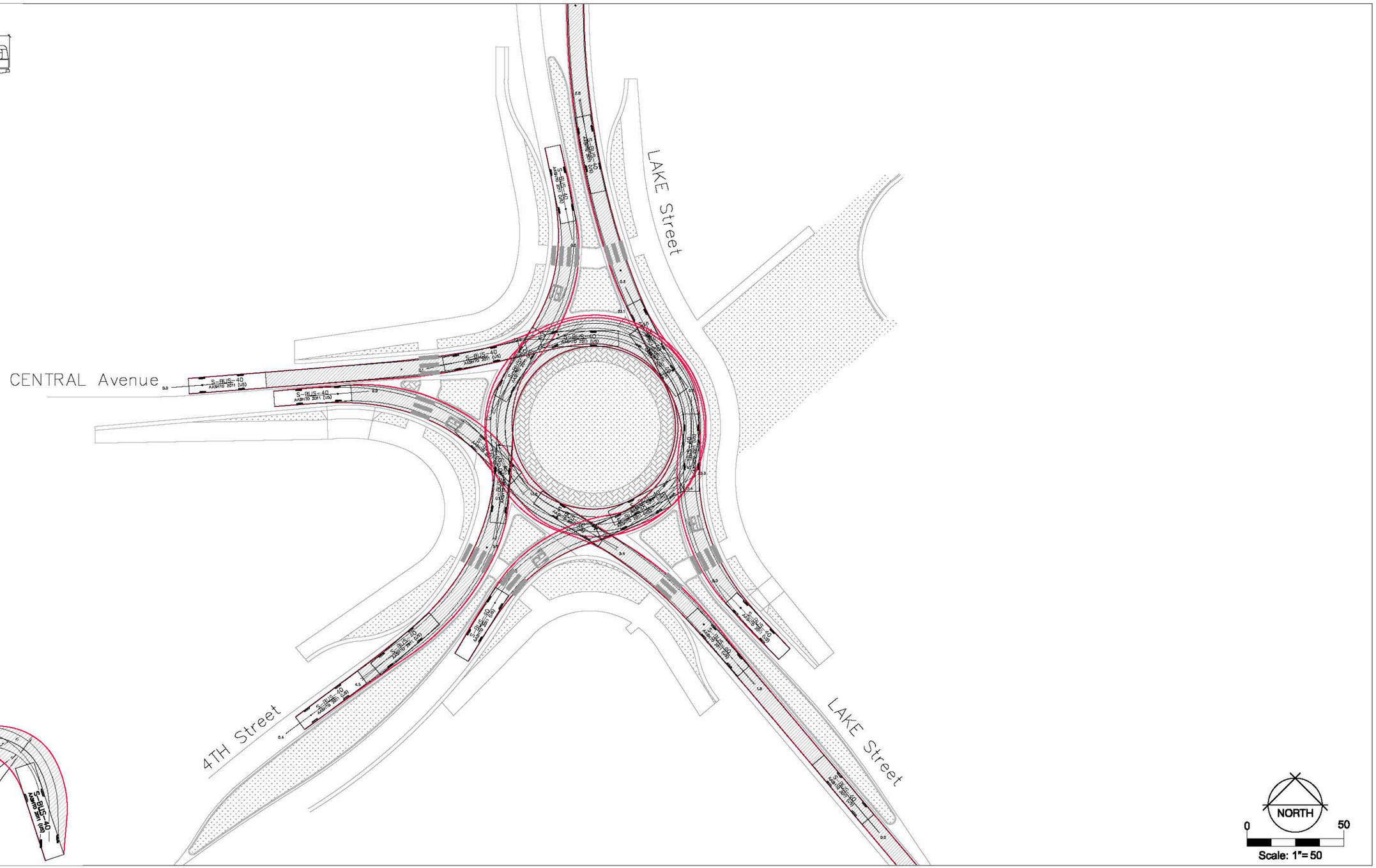
Bus 40 VehicleTurn (Left-Turn Movement Only)

VEHICLE PROFILE

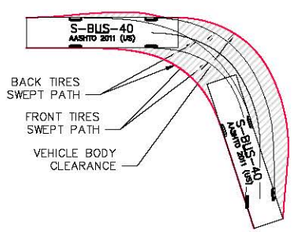


S-BUS-40
feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 34.4



LEGEND



NORTH
0 50
Scale: 1"= 50

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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure C7

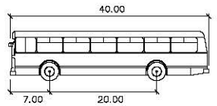
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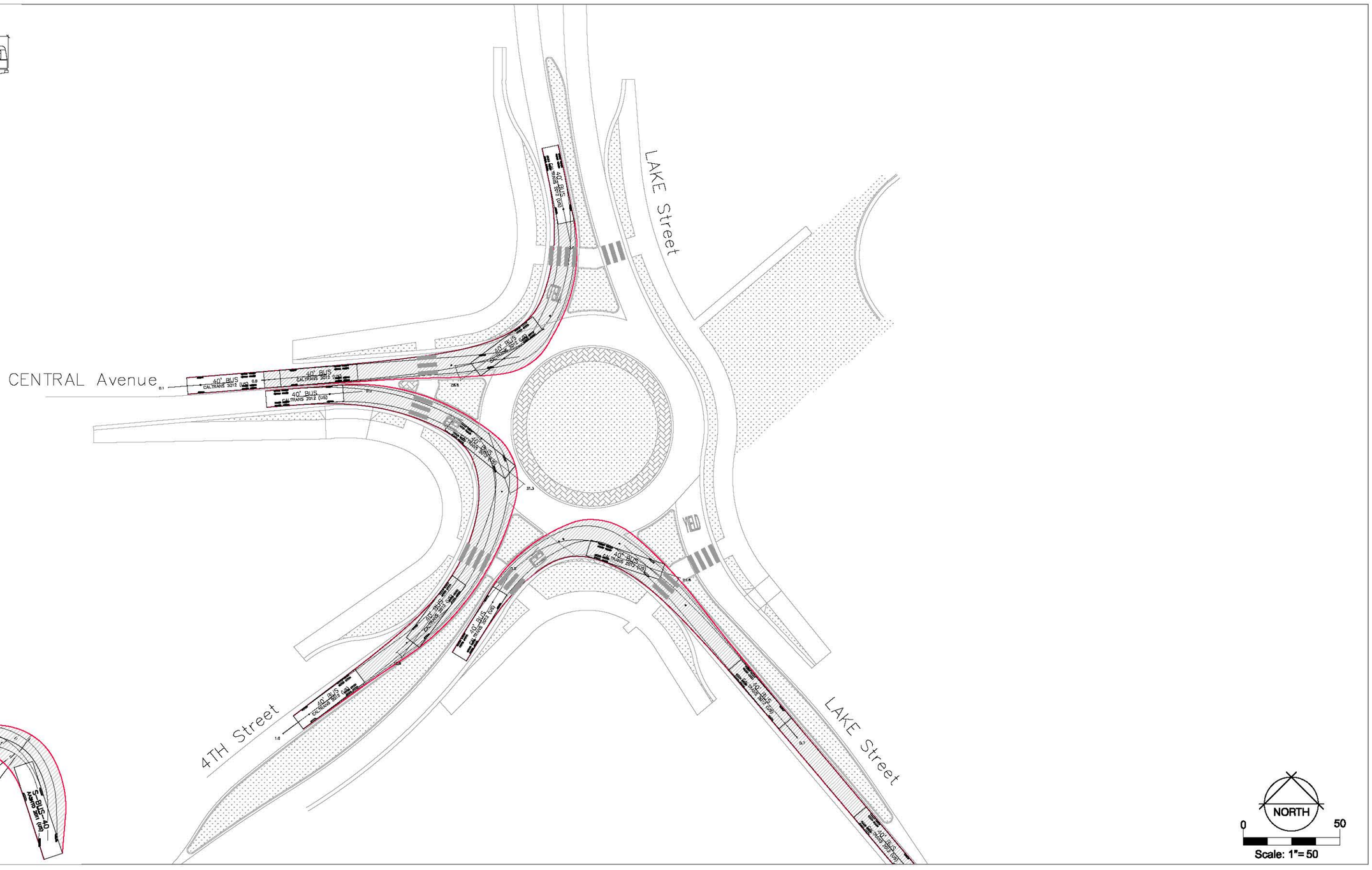
Bus 40 VehicleTurn (Right-Turn Movement Only)

VEHICLE PROFILE

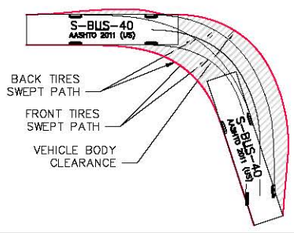


S-BUS-40
feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 34.4



LEGEND



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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

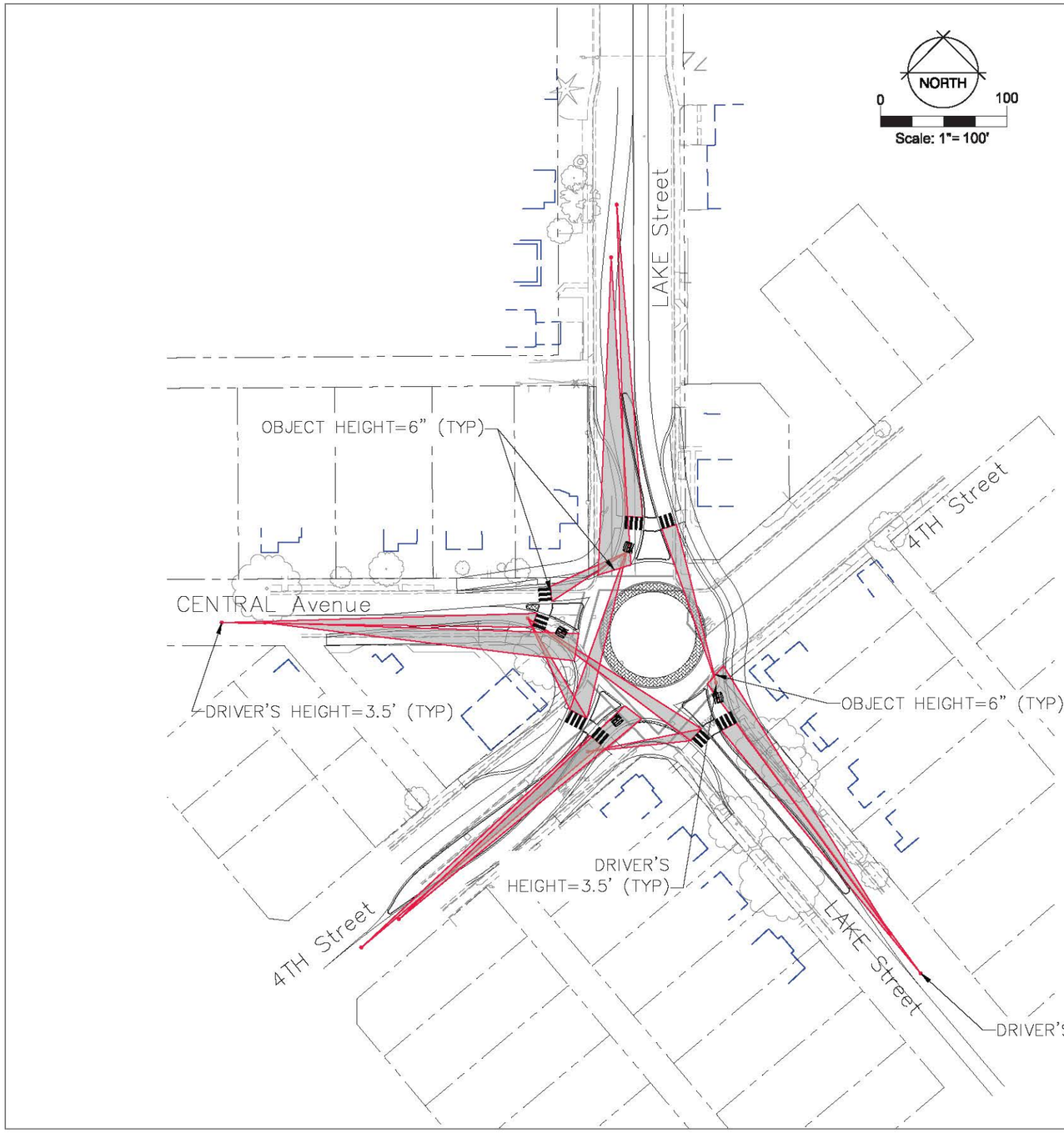
Figure C8

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Stopping Sight Distance



NOTES:

1. STOPPING SIGHT DISTANCE CRITERIA OBTAINED FROM NCHRP REPORT 672
2. STOPPING SIGHT DISTANCE IS MEASURED USING AN ASSUMED DRIVER'S EYE HEIGHT OF 3.5 FT AND AN ASSUMED OBJECT HEIGHT OF 6 INCHES.

SSD - ENTRY

APPROACH	INITIAL SPEED (MPH)	STOPPING SIGHT DISTANCE (FT)
NB LAKE STREET	35.0	247.3
SB LAKE STREET	35.0	247.3
NEB 4TH STREET	35.0	247.3
EB CENTRAL AVENUE	35.0	247.3

SSD - PEDESTRIAN CROSSING

LEG	APPROACH	CONFLICTING SPEED (MPH)	SIGHT TRIANGLE LENGTH (FT)
NB LAKE STREET	NB LAKE STREET INITIAL SPEED	35.0	247.3
	NEB 4TH STREET RIGHT TURN (V5)	15.7	81.8
	EB CENTRAL AVENUE CIRCULATING SPEED (V2)	26.0	161.0
SB LAKE STREET	SB LAKE STREET INITIAL SPEED	35.0	247.3
	NB LAKE STREET CIRCULATING SPEED (V2)	22.2	129.2
NEB 4TH STREET	NEB 4TH STREET INITIAL SPEED	35.0	247.3
	EB CENTRAL AVENUE RIGHT TURN (V5)	15.4	79.6
	SB LAKE STREET CIRCULATING SPEED (V2)	23.4	139.0
EB CENTRAL	EB CENTRAL AVENUE INITIAL SPEED	35.0	247.3
	SB LAKE STREET RIGHT TURN (V5)	13.4	66.3

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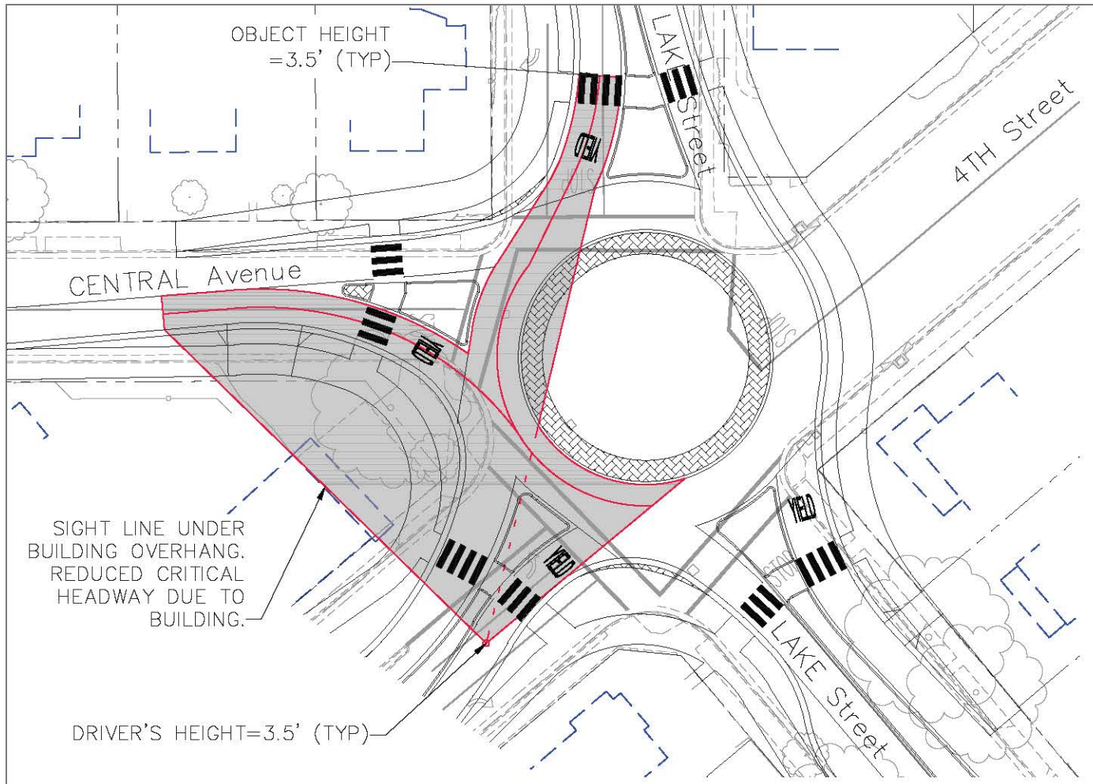
LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

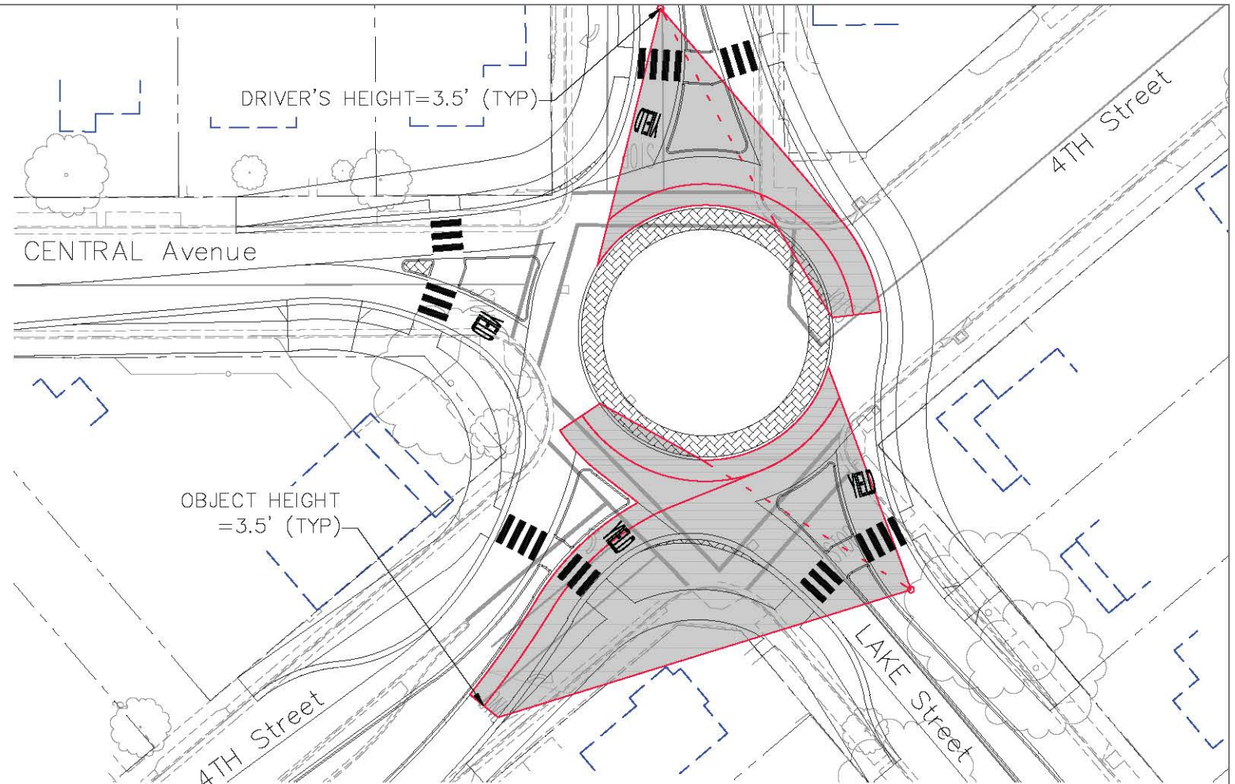
Figure C9

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Intersection Sight Distance

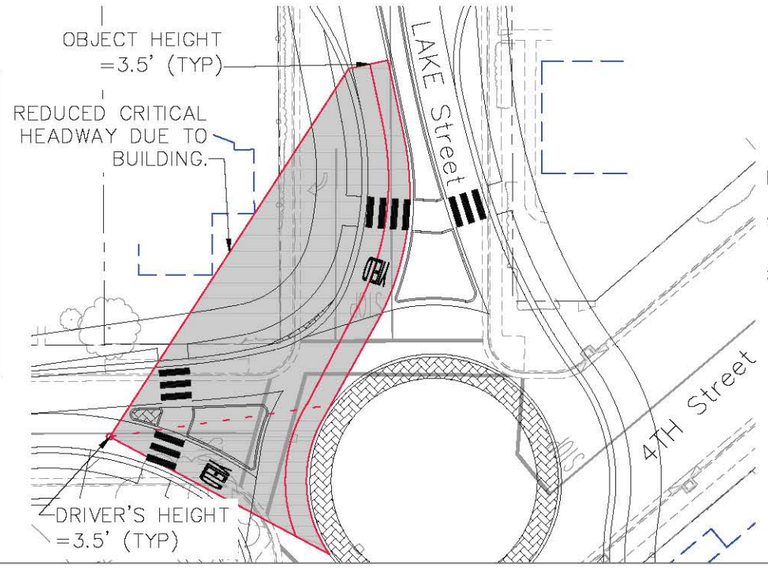




INTERSECTION SIGHT DISTANCE

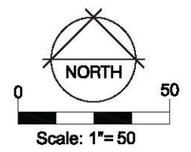
LEG	APPROACH		CONFLICTING SPEED (MPH)	SIGHT TRIANGLE LENGTH (FT)
NB LAKE STREET	NEB 4TH STREET	ENTERING LEG (D1)	21.8	159.9
	EB CENTRAL AVENUE	CIRCULATING LEG (D2)	14.0	103.0
SB LAKE STREET	NB LAKE STREET	CIRCULATING LEG (D2)	14.6	107.1
NEB 4TH STREET	EB CENTRAL AVENUE	ENTERING LEG (D1)	26.0	183.2*
	SB LAKE STREET	CIRCULATING LEG (D2)	24.4	178.8
EB CENTRAL AVENUE	SB LAKE STREET	ENTERING LEG (D1)	23.4	163.8**

* CRITICAL HEADWAY=4.8 SECONDS
** CRITICAL HEADWAY=4.77 SECONDS



NOTES:

1. INTERSECTION SIGHT DISTANCE IS MEASURED USING AN ASSUMED DRIVER'S EYE HEIGHT OF 3.5 FT AND AN ASSUMED OBJECT HEIGHT OF 3.5 FT.
2. INTERSECTION SIGHT DISTANCE CRITERIA OBTAINED FROM NCHRP REPORT 672 WITH 5 SECOND CRITICAL HEADWAY (tc), UNLESS NOTED OTHERWISE.



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LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

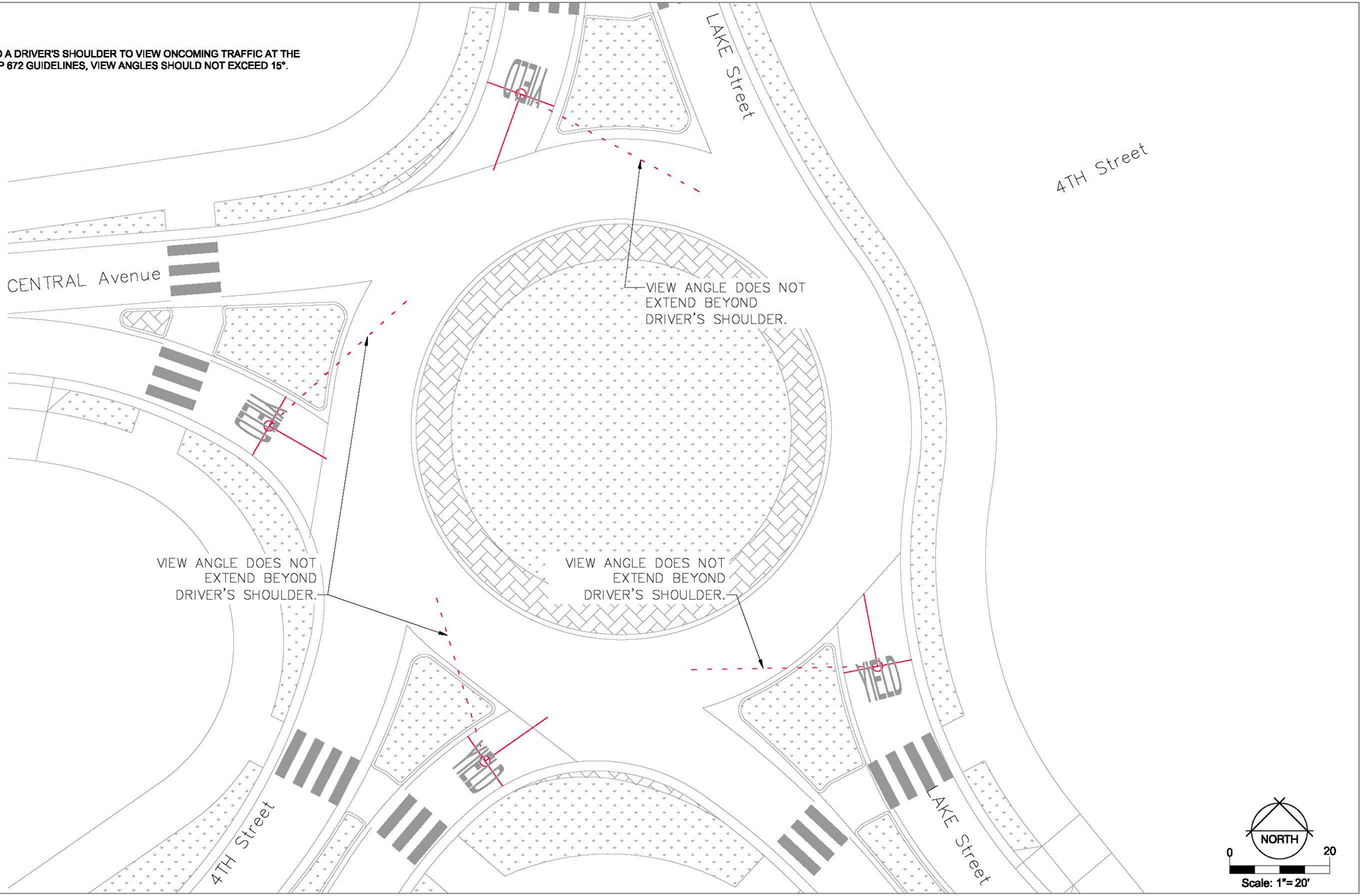
Figure C10

Madera, California

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View Angles

NOTE
VALUE SHOWN IS THE ANGLE BEYOND A DRIVER'S SHOULDER TO VIEW ONCOMING TRAFFIC AT THE ROUNDABOUT ENTRANCE. PER NCHRP 672 GUIDELINES, VIEW ANGLES SHOULD NOT EXCEED 15°.



12/29/2017 11:18 AM O:\PRJ\2264\2264EX007.DWG

LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Figure C11

Madera, California

omni·means A GHD Company

2264EX007.dwg

LANE SUMMARY

Site: 1 [2017 AM Peak Hour]

4th Street/Lake Street/Central Avenue
2017 AM Peak Hour
Roundabout

Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist ft		ft	%	%
SouthEast: North Lake Street													
Lane 1[d]	249	4.0	1098	0.227	100	5.4	LOS A	1.4	35.5	Full	360	0.0	0.0
Approach	249	4.0		0.227		5.4	LOS A	1.4	35.5				
North: North Lake Street													
Lane 1[d]	520	4.0	1064	0.488	100	9.0	LOS A	3.8	98.6	Full	730	0.0	0.0
Approach	520	4.0		0.488		9.0	LOS A	3.8	98.6				
West: East Central Avenue													
Lane 1[d]	99	4.0	777	0.127	100	5.9	LOS A	0.8	20.1	Full	450	0.0	0.0
Approach	99	4.0		0.127		5.9	LOS A	0.8	20.1				
SouthWest: 4th Street													
Lane 1[d]	296	4.0	992	0.299	100	6.7	LOS A	1.9	48.3	Full	320	0.0	0.0
Approach	296	4.0		0.299		6.7	LOS A	1.9	48.3				
Intersection	1164	4.0		0.488		7.4	LOS A	3.8	98.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: 1 [2017 PM Peak Hour]

4th Street/Lake Street/Central Avenue
2017 PM Peak Hour
Roundabout

Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist ft		ft	%	%
SouthEast: North Lake Street													
Lane 1[d]	380	1.0	1071	0.354	100	7.0	LOS A	2.4	60.1	Full	360	0.0	0.0
Approach	380	1.0		0.354		7.0	LOS A	2.4	60.1				
North: North Lake Street													
Lane 1[d]	435	1.0	1010	0.431	100	8.4	LOS A	3.1	79.3	Full	730	0.0	0.0
Approach	435	1.0		0.431		8.4	LOS A	3.1	79.3				
West: East Central Avenue													
Lane 1[d]	99	1.0	897	0.110	100	5.1	LOS A	0.7	16.7	Full	450	0.0	0.0
Approach	99	1.0		0.110		5.1	LOS A	0.7	16.7				
SouthWest: 4th Street													
Lane 1[d]	342	1.0	1028	0.333	100	6.9	LOS A	2.2	54.6	Full	320	0.0	0.0
Approach	342	1.0		0.333		6.9	LOS A	2.2	54.6				
Intersection	1256	1.0		0.431		7.3	LOS A	3.1	79.3				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: 1 [2040 AM Peak Hour]

4th Street/Lake Street/Central Avenue
2040 AM Peak Hour
Roundabout

Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist ft		ft	%	%
SouthEast: North Lake Street													
Lane 1[d]	314	4.0	1040	0.301	100	6.5	LOS A	2.0	50.8	Full	360	0.0	0.0
Approach	314	4.0		0.301		6.5	LOS A	2.0	50.8				
North: North Lake Street													
Lane 1[d]	654	4.0	994	0.658	100	13.6	LOS B	7.3	188.0	Full	730	0.0	0.0
Approach	654	4.0		0.658		13.6	LOS B	7.3	188.0				
West: East Central Avenue													
Lane 1[d]	125	4.0	638	0.196	100	8.0	LOS A	1.3	34.0	Full	450	0.0	0.0
Approach	125	4.0		0.196		8.0	LOS A	1.3	34.0				
SouthWest: 4th Street													
Lane 1[d]	372	4.0	909	0.409	100	8.7	LOS A	2.8	73.2	Full	320	0.0	0.0
Approach	372	4.0		0.409		8.7	LOS A	2.8	73.2				
Intersection	1464	4.0		0.658		10.3	LOS B	7.3	188.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: 1 [2040 PM Peak Hour]

4th Street/Lake Street/Central Avenue
2040 PM Peak Hour
Roundabout

Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist ft		ft	%	%
SouthEast: North Lake Street													
Lane 1[d]	476	1.0	998	0.477	100	9.2	LOS A	3.6	90.9	Full	360	0.0	0.0
Approach	476	1.0		0.477		9.2	LOS A	3.6	90.9				
North: North Lake Street													
Lane 1[d]	548	1.0	926	0.592	100	12.3	LOS B	5.8	145.2	Full	730	0.0	0.0
Approach	548	1.0		0.592		12.3	LOS B	5.8	145.2				
West: East Central Avenue													
Lane 1[d]	125	1.0	782	0.160	100	6.3	LOS A	1.0	26.1	Full	450	0.0	0.0
Approach	125	1.0		0.160		6.3	LOS A	1.0	26.1				
SouthWest: 4th Street													
Lane 1[d]	430	1.0	946	0.455	100	9.2	LOS A	3.3	83.5	Full	320	0.0	0.0
Approach	430	1.0		0.455		9.2	LOS A	3.3	83.5				
Intersection	1580	1.0		0.592		10.1	LOS B	5.8	145.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

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Preliminary Opinion of Costs (Construction Costs Only)

4th Street/Lake Street/Central Avenue Intersection Improvements - **Roundabout Alternative**

City of Madera

1/2/2018

55-4549-03/2264

No.	*Item Description*	*Units*	*Quantity*	*Unit Cost*	*Total*
1	Traffic Control System	LS	1	$90,000.00	$90,000.00
2	Remove Tree	EA	5	$800.00	$4,000.00
3	Remove Fence	LF	220	$20.00	$4,400.00
4	Remove Thermoplastic Traffic Stripe	LF	570	$4.25	$2,422.50
5	Remove Thermoplastic Pavement Marking	SQFT	50	$12.50	$625.00
6	Remove Roadside Sign	EA	20	$155.00	$3,100.00
7	Remove Concrete Curb	LF	500	$19.50	$9,750.00
8	Remove Concrete Sidewalk	SQYD	560	$31.50	$17,640.00
9	Remove Concrete (Curb & Gutter)	LF	1900	$12.50	$23,750.00
10	Roadway Excavation	CY	2400	$32.00	$76,800.00
11	Class 2 Aggregate Base	CY	770	$53.00	$40,810.00
12	Hot Mix Asphalt (Type B)	TON	720	$90.00	$64,800.00
13	Minor Concrete (Stamped Concrete -Truck Apron)	CY	40	$690.00	$27,600.00
14	Minor Concrete (Median Curb)	CY	40	$770.00	$30,800.00
15	Minor Concrete(Curb-Truck Apron)	CY	10	$780.00	$7,800.00
16	Minor Concrete (Curb and Gutter)	CY	80	$355.00	$28,400.00
17	Minor Concrete (Sidewalk)	CY	140	$405.00	$56,700.00
18	Thermoplastic Traffic Stripe	LF	3800	$2.00	$7,600.00
19	Thermoplastic Pavement Marking	SQFT	640	$7.00	$4,480.00
20	Landscape	SQFT	20000	$5.00	$100,000.00
21	Signs	EA	30	$380.00	$11,400.00
22	Lighting and Sign Illumination	LS	1	$250,000.00	$250,000.00
23	Storm Drain System	LS	1	$50,000.00	$50,000.00
24	Mobilization	LS	1	$82,300.00	$82,300.00
	Subtotal (Construction Costs)				$ 995,177.50
	Minor/ Supplemental Items			30%	$ 299,000.00
	Construction Contingency			25%	$ 324,000.00
	Total Construction Costs				**$ 1,618,177.50**
	Rounded				**$ 1,620,000.00**

APPENDIX D – BENEFIT/COST RATIO BACK-UP

Intersection Control Evaluation
Collision Cost Analysis and B/C

-- Fill in tan boxes along with 'Area' --

County	Rte	Postmile	Location Description
Madera	N/A	N/A	4th/Lake/Central

Area
- ○ Rural
- ◉ Suburban
- ◉ Urban

Intersection Types:
- F - Four-Legged
- M - Multi-Legged
- S - Offsett -Tee
- Y - "Y" Wye
- Z - Others

Existing Condition	# of Years for Analysis	Rate Group
All Way Stop, Type F, M or S	23	I8

Existing ADT (x1000)		Future ADT (x1000)			
Mainline	Cross St	Mainline	Cross St	Average ADT	VCF
8.3	6.4	10.5	8.0	16.6	1.13

Est. Capital Cost (x1000) for Desired Improvement			
Desired Improvement	Const	R/W	Total
Yield Control (Roundabout 1-Lane)	$ 1,620	$ 755	$ 2,375
Yield Control (Roundabout 2-Lane)		$ -	$ -
Traffic Signal, Type F, M or S	$ 1,050	$ 2	$ 1,052

Existing Collision Data			
Number of Years	5	Total Collisions	10
Injury	1	PDO	9
Fatal		Fat + Inj	1

	Collision Cost (x1000)					B/C
	Existing Condition		Desired Improvement		Projected Savings	
1	All Way Stop, Type F, M or S	$6,973	Yield Control (Roundabout 1-Lane)	$2,330	$4,644	1.95
2	All Way Stop, Type F, M or S	$6,973	Yield Control (Roundabout 2-Lane)	$3,450	$3,524	0.00
3	All Way Stop, Type F, M or S	$6,973	Traffic Signal, Type F, M or S	$7,872	($898)	-0.85

v1.00

NOTE: Only average collision costs are used for calculation purposes.

NOTE: Collision costs reported are costs for anticipated collisions over the number of years of analysis (20 years)

Fill in Orange Cells.

Delay Entry

Enter average vehicle occupancy. This is used to convert vehicle delay to person delay.

Vehicle Occupancy	1.15	From Caltrans Life-Cycle Benefit-Cost Analysis - Economic Parameters 2016

Enter the duration in hours of each time period of the day. If delay data is not available for a time period, enter a duration of

	Weekday		Weekend	
AM	1			
PM	1			
Midday				
Off-Peak1				This could be us
Off-Peak2				This could be us
Total	2		0	

Total for weekday and weekend should equal 24 for analysis of all hours of the week, or should equal less than 24 for analysis of certain time periods only. Full day analysis for weekdays and weekends is recommended if sufficient data is available.

Enter the hourly volume (total entering vehicles) for each time period of the day. This is used to convert average delay per v
If analysis of certain time periods is not desired, leave cells for that time period blank

	Weekday		Weekend	
	Existing Year	Design Year	Opening Year	Design Year
AM	955	1203		
PM	1188	1495		
Midday				
Off-Peak1				
Off-Peak2				
ADT	**Requires 24**	**hour data**	**Requires 24**	**hour data**

Orange cells in tables below can be left blank if consideration of time period is not desired.
For example, if it is desired to only analyze peak hours, delay entries for midday and off-peak may be left blank.
Enter the delay from SIDRA outputs.

Weekday

Roundabout Alternative

	AM	PM	Midday	Off-Peak1	Off-Peak2
	Delay	**Delay**	**Delay**	**Delay**	**Delay**
	sec/veh	sec/veh	sec/veh	sec/veh	sec/veh
2017	**7.4**	**7.3**			
2040	**10.3**	**10.1**			

Enter the delay from Synchro/SimTraffic outputs.

Signal Alternative

	AM	PM	Midday	Off-Peak1	Off-Peak2
	Delay	**Delay**	**Delay**	**Delay**	**Delay**
	sec/veh	sec/veh	sec/veh	sec/veh	sec/veh
2017	**23.8**	**24.3**			
2040	**28.2**	**38.3**			

These cells calculate average weekday peak hour totals. No data entry here.

Roundabout Alternative

	Average Week Day Peak Hour Totals	
	Vehicle Delay	**Person Delay**
	(in sec)	(in sec)
2017	7,870	9,050
2040	13,745	15,807

Signal Alternative

	Average Week Day Peak Hour Totals	
	Vehicle Delay	**Person Delay**
	(in sec)	(in sec)
2017	25,799	29,669
2040	45,592	52,430

Annual Costs	Roundabout Alternative		Traffic Signal Alternative	
Safety	**Predicted Annual Crashes**	**Safety Cost**	**Predicted Annual Crashes**	**Safety Cost**
Predicted Fatal/Injury Crashes	Safety Data Omitted	0	Safety Data Omitted	0
Predicted PDO Crashes	Safety Data Omitted	0	Safety Data Omitted	0
	Annual Costs of Predicted Crashes	**$ 135,695**	***Annual Costs of Predicted Crashes***	**$ 202,062**
Delay	**Annual Intersection Delay (person-hrs)**	**Delay Cost**	**Annual Intersection Delay (person-hrs)**	**Delay Cost**
Average Annual Person (in Vehicle) Delay	898	**$ 11,000**	2965	**$ 36,000**
Operation and Maintenance	**Operation and Maintenance**	**O&M Cost**	**Operation and Maintenance**	**O&M Cost**
Annualized Cost of Signal Retiming		$ -	Signal Retiming Every 3 Years	$ 1,000
Annual Cost of Power for Signal		$ -	Power for Signal	$ 750
Annual Cost of Illumination	Intersection Illumination	$ 750	Intersection Illumination	$ 750
Annual Cost of Maintenance	Landscaping Costs	$ 1,500	Signal Maintenance Costs (power outage, detection, etc.)	$ 1,500
	Total Annual Operation and Maintenance Costs	**$ 2,250**	***Total Annual Operation and Maintenance Costs***	**$ 4,000**
Initial Capital Costs	**Total Capital Costs**	**Cost**	**Total Capital Costs**	**Cost**
Preliminary Engineering		$ 234,392		$ 120,699
Right-of-way and Utilities		**$ 755,410**		**$ 1,600**
Construction		**$ 1,620,000**		**$ 1,050,000**

***Delay cost is based upon an average of the AM and PM peak hours**.

Total Discounted Life Cycle Costs (2017 - 2040)	Roundabout Alternative		Traffic Signal Alternative	
Safety	**Total Predicted Crashes**	**Safety Cost**	**Total Predicted Crashes**	**Safety Cost**
Predicted Fatal/Injury Crashes	Safety Data Omitted	$ -	Safety Data Omitted	$ -
Predicted PDO Crashes	Safety Data Omitted	$ -	Safety Data Omitted	$ -
	Total Costs of Predicted Crashes	**$ 2,016,000**	***Total Costs of Predicted Crashes***	**$ 3,002,000**
Delay	**Total Intersection Delay (person-hrs)**	**Delay Cost**	**Total Intersection Delay (person-hrs)**	**Delay Cost**
Total Person (in Vehicle) Delay	21543	**$ 260,000**	71152	**$ 860,000**
Fuel and GHG Cost	**Fuel and Green House Gas Cost**		**Fuel and Green House Gas Cost**	
		$ 505,120		**$ 536,123**
Operation and Maintenance	**Operation and Maintenance**	**O&M Cost**	**Operation and Maintenance**	**O&M Cost**
Annualized Cost of Signal Retiming		$ -	Signal Retiming Every 3 Years	$ 14,857
Annual Cost of Power for Signal		$ -	Power for Signal	$ 11,143
Annual Cost of Illumination	Intersection Illumination	$ 11,143	Intersection Illumination	$ 11,143
Annual Cost of Maintenance	Landscaping Costs	$ 22,285	Signal Maintenance Costs (power outage, detection, etc.)	$ 22,285
	Total Annual Operation and Maintenance Costs	**$ 33,428**	***Total Annual Operation and Maintenance Costs***	**$ 59,427**
Initial Capital Costs	**Total Capital Costs**	**Cost**	**Total Capital Costs**	**Cost**
Preliminary Engineering		$ 234,392		$ 120,699
Right-of-way and Utilities		$ 755,410		$ 1,600
Construction		$ 1,620,000		$ 1,050,000
	Total Initial Capital Costs	**$ 2,609,802**	***Total Initial Capital Costs***	**$ 1,172,299**
Total Life Cycle Costs (Opening Year $)	**Net Present Value**	**$ 4,919,230**	**Net Present Value**	**$ 5,093,726**

***Delay cost is based upon an average of the AM and PM peak hours**.

Roundabout Alternative

Traffic Signal Alternative

Life Cycle Benefit/Cost Ratio

Roundabout Alt vs. Signal Alt	
Safety Benefit	$ 986,000
Delay Reduction Benefit	$ 600,000
Fuel and GHG Benefit	$ 31,004
Total Benefits	**$ 1,617,004**
Added Operations&Maintenance Costs	$ (25,999)
Added Capital Costs	$ 1,437,503
Total Costs	**$ 1,411,504**
Life Cycle Benefit/Cost Ratio	**1.1**

Roundabout Preferred

QUANTITIES

Travel Time (pers-hr)		Intersection Performance-Annual Values (From SIDRA Intersection Summary Reports)					
		Fuel (gal/yr)		Carbon Monoxide (kg/yr)		Nitrogen Oxide (kg/yr)	
Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative
2,143	654	**7,741**	**7,319**	**66.5**	**63.5**	**93.0**	**86.5**
3,787	1,142	**12,611**	**11,883**	**118.5**	**116.0**	**132.0**	**131.5**
2017				0.07	0.07	0.10	0.10
2040			Convert to tons/yr	0.13	0.13	0.15	0.14

		Travel Time (pers-hr)		Fuel (gal/yr)		Carbon Monoxide (ton/yr)		Nitrogen Oxide (kg/yr)	
		Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative
Year 0	2017	2143	654	7741.00	7319.00	0.07	0.07	0.10	0.10
Year 1	2018	2214	675	7952.74	7517.43	0.08	0.07	0.10	0.10
Year 2	2019	2286	696	8164.48	7715.87	0.08	0.08	0.11	0.10
Year 3	2020	2357	717	8376.22	7914.30	0.08	0.08	0.11	0.10
Year 4	2021	2429	738	8587.96	8112.74	0.08	0.08	0.11	0.10
Year 5	2022	2500	760	8799.70	8311.17	0.09	0.08	0.11	0.11
Year 6	2023	2572	781	9011.43	8509.61	0.09	0.09	0.11	0.11
Year 7	2024	2643	802	9223.17	8708.04	0.09	0.09	0.12	0.11
Year 8	2025	2715	823	9434.91	8906.48	0.09	0.09	0.12	0.11
Year 9	2026	2786	845	9646.65	9104.91	0.10	0.09	0.12	0.11
Year 10	2027	2857	866	9858.39	9303.35	0.10	0.10	0.12	0.12
Year 11	2028	2929	887	10070.13	9501.78	0.10	0.10	0.12	0.12
Year 12	2029	3000	908	10281.87	9700.22	0.10	0.10	0.12	0.12
Year 13	2030	3072	929	10493.61	9898.65	0.11	0.10	0.13	0.12
Year 14	2031	3143	951	10705.35	10097.09	0.11	0.11	0.13	0.13
Year 15	2032	3215	972	10917.09	10295.52	0.11	0.11	0.13	0.13
Year 16	2033	3286	993	11128.83	10493.96	0.11	0.11	0.13	0.13
Year 17	2034	3358	1014	11340.57	10692.39	0.12	0.11	0.13	0.13
Year 18	2035	3429	1036	11552.30	10890.83	0.12	0.12	0.14	0.13
Year 19	2036	3501	1057	11764.04	11089.26	0.12	0.12	0.14	0.14
Year 20	2037	3572	1078	11975.78	11287.70	0.12	0.12	0.14	0.14
Year 21	2038	3644	1099	12187.52	11486.13	0.13	0.12	0.14	0.14
Year 22	2039	3715	1120	12399.26	11684.57	0.13	0.13	0.14	0.14
Year 23	2040	3787	1142	12611.00	11883.00	0.13	0.13	0.15	0.14
Total		**71152**	**21543**	**244224.00**	**230424.00**	**2.45**	**2.37**	**2.98**	**2.88**
Average		**2965**	**898**	**10176.00**	**9601.00**	**0.10**	**0.10**	**0.12**	**0.12**

COSTS

Life-Cycle Benefit-Cost Analysis

Travel Time Parameter	Fuel (gal/yr)	Carbon Monoxide (kg/yr)	Nitrogen Oxide (kg/yr)
Auto/Truck Composite (Weighted Average)	Average Fuel Price for Regular Unleaded (Auto)	CA Urban Area	CA Urban Area
($/per-hr)	($/Gal)	($/Ton)	($/Ton)
$18.95	**$3.18**	**$80.00**	**$18,700.00**

Travel Time (pers-hr)		Fuel (gal/yr)		Carbon Monoxide (ton/yr)		Nitrogen Oxide (kg/yr)			
Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative		
$40,605	$12,386	$24,616	$23,274	$6	$6	$1,917	$1,783	0	1.00000
$41,959	$12,788	$25,290	$23,905	$6	$6	$1,952	$1,823	1	0.96154
$43,314	$13,190	$25,963	$24,536	$6	$6	$1,987	$1,864	2	0.92456
$44,668	$13,592	$26,636	$25,167	$6	$6	$2,022	$1,904	3	0.88900
$46,022	$13,994	$27,310	$25,799	$7	$6	$2,057	$1,944	4	0.85480
$47,377	$14,396	$27,983	$26,430	$7	$7	$2,092	$1,985	5	0.82193
$48,731	$14,799	$28,656	$27,061	$7	$7	$2,127	$2,025	6	0.79031
$50,086	$15,201	$29,330	$27,692	$7	$7	$2,162	$2,065	7	0.75992
$51,440	$15,603	$30,003	$28,323	$7	$7	$2,197	$2,106	8	0.73069
$52,795	$16,005	$30,676	$28,954	$8	$7	$2,232	$2,146	9	0.70259
$54,149	$16,407	$31,350	$29,585	$8	$8	$2,267	$2,186	10	0.67556
$55,503	$16,809	$32,023	$30,216	$8	$8	$2,302	$2,227	11	0.64958
$56,858	$17,211	$32,696	$30,847	$8	$8	$2,336	$2,267	12	0.62460
$58,212	$17,613	$33,370	$31,478	$8	$8	$2,371	$2,307	13	0.60057
$59,567	$18,015	$34,043	$32,109	$9	$8	$2,406	$2,348	14	0.57748
$60,921	$18,417	$34,716	$32,740	$9	$9	$2,441	$2,388	15	0.55526
$62,276	$18,819	$35,390	$33,371	$9	$9	$2,476	$2,428	16	0.53391
$63,630	$19,221	$36,063	$34,002	$9	$9	$2,511	$2,469	17	0.51337
$64,984	$19,623	$36,736	$34,633	$9	$9	$2,546	$2,509	18	0.49363
$66,339	$20,025	$37,410	$35,264	$10	$9	$2,581	$2,549	19	0.47464
$67,693	$20,427	$38,083	$35,895	$10	$10	$2,616	$2,590	20	0.45639
$69,048	$20,829	$38,756	$36,526	$10	$10	$2,651	$2,630	21	0.43883
$70,402	$21,232	$39,430	$37,157	$10	$10	$2,686	$2,670	22	0.42196
$71,757	$21,634	$40,103	$37,788	$10	$10	$2,721	$2,711	23	0.40573
$1,348,336	$408,237	$ 776,632	$ 732,748	$ 196	$ 190	$ 55,656	$ 53,924		
$56,181	$17,010	$32,360	$30,531	$8	$8	$2,319	$2,247		

ADJUSTED COSTS

Average Yearly Costs							
Travel Time (pers-hr)		Fuel (gal/yr)		Carbon Monoxide (ton/yr)		Nitrogen Oxide (kg/yr)	
Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative
$36,000	$11,000	$21,000	$20,000	$5	$5	$1,500	$1,500

Environmental Costs

Signal Alternative	$1,505
Roundabout Alternative	$1,505

Travel Time (pers-hr)		Fuel (gal/yr)		Carbon Monoxide (ton/yr)		Nitrogen Oxide (kg/yr)	
Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative	Signal Alternative	Roundabout Alternative
$40,605	$12,386	$24,616	$23,274	$6	$6	$1,917	$1,783
$40,345	$12,296	$24,317	$22,986	$6	$6	$1,877	$1,753
$40,046	$12,195	$24,004	$22,685	$6	$6	$1,837	$1,723
$39,710	$12,084	$23,680	$22,374	$6	$6	$1,797	$1,693
$39,340	$11,962	$23,344	$22,053	$6	$5	$1,758	$1,662
$38,940	$11,833	$23,000	$21,723	$6	$5	$1,719	$1,631
$38,513	$11,695	$22,648	$21,386	$6	$5	$1,681	$1,600
$38,061	$11,551	$22,288	$21,043	$6	$5	$1,643	$1,569
$37,587	$11,401	$21,923	$20,695	$5	$5	$1,605	$1,539
$37,093	$11,245	$21,553	$20,342	$5	$5	$1,568	$1,508
$36,581	$11,084	$21,179	$19,986	$5	$5	$1,531	$1,477
$36,054	$10,919	$20,802	$19,628	$5	$5	$1,495	$1,446
$35,513	$10,750	$20,422	$19,267	$5	$5	$1,459	$1,416
$34,961	$10,578	$20,041	$18,905	$5	$5	$1,424	$1,386
$34,398	$10,403	$19,659	$18,542	$5	$5	$1,390	$1,356
$33,827	$10,226	$19,277	$18,179	$5	$5	$1,356	$1,326
$33,249	$10,048	$18,895	$17,817	$5	$5	$1,322	$1,297
$32,666	$9,868	$18,514	$17,456	$5	$5	$1,289	$1,267
$32,078	$9,687	$18,134	$17,096	$5	$5	$1,257	$1,239
$31,487	$9,505	$17,756	$16,738	$5	$4	$1,225	$1,210
$30,894	$9,323	$17,381	$16,382	$4	$4	$1,194	$1,182
$30,300	$9,141	$17,008	$16,029	$4	$4	$1,163	$1,154
$29,707	$8,959	$16,638	$15,679	$4	$4	$1,133	$1,127
$29,114	$8,777	$16,271	$15,332	$4	$4	$1,104	$1,100
$860,000	$260,000	$ 500,000	$ 470,000	$ 123	$ 120	$ 36,000	$ 35,000
$36,000	$11,000	$21,000	$20,000	$5	$5	$1,500	$1,500

Roundabout Alternative to Signal Alternative

Life Cycle Costs (20 year design)	Traffic Signal Alternative	Roundabout Alternative
Collision and Mobility Costs		
Collision Costs of predicted crashes	$3,002,000	$2,016,000
Delay Costs	$860,000	$260,000
Fuel and GHG Costs	$537,000	$506,000
Project Costs including design, construction and maintenance		
Operations and Maintenance Costs	$60,000	$34,000
Project Costs (including R/W)	$1,172,299	$2,609,802
Total Life Cycle Costs (Opening Year $ - Net Present Value)	**$5,631,299**	**$5,425,802**

INTERSECTION SUMMARY

Site: 1v [2017 AM Peak Hour - Conversion]

4th Street/Lake Street/Central Avenue
2017 AM Peak Hour
Signals - Pretimed Isolated Cycle Time = 50 seconds (User-Given Cycle Time)

Intersection Performance - Hourly Values				
Performance Measure	**Vehicles**		**Persons**	
Travel Speed (Average)	15.0	mph	15.0	mph
Travel Distance (Total)	229.3	veh-mi/h	275.1	pers-mi/h
Travel Time (Total)	15.3	veh-h/h	18.3	pers-h/h
Demand Flows (Total)	1165	veh/h	1399	pers/h
Percent Heavy Vehicles (Demand)	4.0	%		
Degree of Saturation	0.682			
Practical Spare Capacity	31.9	%		
Effective Intersection Capacity	1708	veh/h		
Control Delay (Total)	6.82	veh-h/h	8.19	pers-h/h
Control Delay (Average)	21.1	sec	21.1	sec
Control Delay (Worst Lane)	27.2	sec		
Control Delay (Worst Movement)	27.2	sec	27.2	sec
Geometric Delay (Average)	0.0	sec		
Stop-Line Delay (Average)	21.1	sec		
Idling Time (Average)	16.8	sec		
Intersection Level of Service (LOS)	LOS C			
95% Back of Queue - Vehicles (Worst Lane)	7.5	veh		
95% Back of Queue - Distance (Worst Lane)	192.8	ft		
Queue Storage Ratio (Worst Lane)	0.23			
Total Effective Stops	930	veh/h	1116	pers/h
Effective Stop Rate	0.80	per veh	0.80	per pers
Proportion Queued	0.95		0.95	
Performance Index	76.8		76.8	
Cost (Total)	280.89	$/h	280.89	$/h
Fuel Consumption (Total)	17.0	gal/h		
Carbon Dioxide (Total)	152.3	kg/h		
Hydrocarbons (Total)	0.015	kg/h		
Carbon Monoxide (Total)	0.147	kg/h		
NOx (Total)	0.280	kg/h		

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values				
Performance Measure	**Vehicles**		**Persons**	
Demand Flows (Total)	559,407	veh/y	671,289	pers/y
Delay	3,274	veh-h/y	3,929	pers-h/y
Effective Stops	446,557	veh/y	535,868	pers/y
Travel Distance	110,045	veh-mi/y	132,054	pers-mi/y
Travel Time	7,327	veh-h/y	8,793	pers-h/y
Cost	134,828	$/y	134,828	$/y
Fuel Consumption	8,153	gal/y		
Carbon Dioxide	73,080	kg/y		
Hydrocarbons	7	kg/y		
Carbon Monoxide	70	kg/y		
NOx	134	kg/y		

INTERSECTION SUMMARY

Site: 1v [2017 PM Peak Hour - Conversion]

4th Street/Lake Street/Central Avenue
2017 PM Peak Hour
Signals - Pretimed Isolated Cycle Time = 55 seconds (User-Given Cycle Time)

Intersection Performance - Hourly Values				
Performance Measure	**Vehicles**		**Persons**	
Travel Speed (Average)	14.8	mph	14.8	mph
Travel Distance (Total)	230.1	veh-mi/h	276.1	pers-mi/h
Travel Time (Total)	15.5	veh-h/h	18.6	pers-h/h
Demand Flows (Total)	1156	veh/h	1387	pers/h
Percent Heavy Vehicles (Demand)	1.0	%		
Degree of Saturation	0.658			
Practical Spare Capacity	36.9	%		
Effective Intersection Capacity	1758	veh/h		
Control Delay (Total)	7.18	veh-h/h	8.62	pers-h/h
Control Delay (Average)	22.4	sec	22.4	sec
Control Delay (Worst Lane)	24.4	sec		
Control Delay (Worst Movement)	24.4	sec	24.4	sec
Geometric Delay (Average)	0.0	sec		
Stop-Line Delay (Average)	22.4	sec		
Idling Time (Average)	18.2	sec		
Intersection Level of Service (LOS)	LOS C			
95% Back of Queue - Vehicles (Worst Lane)	7.4	veh		
95% Back of Queue - Distance (Worst Lane)	185.9	ft		
Queue Storage Ratio (Worst Lane)	0.32			
Total Effective Stops	910	veh/h	1092	pers/h
Effective Stop Rate	0.79	per veh	0.79	per pers
Proportion Queued	0.95		0.95	
Performance Index	79.7		79.7	
Cost (Total)	267.60	$/h	267.60	$/h
Fuel Consumption (Total)	15.3	gal/h		
Carbon Dioxide (Total)	136.1	kg/h		
Hydrocarbons (Total)	0.013	kg/h		
Carbon Monoxide (Total)	0.130	kg/h		
NOx (Total)	0.108	kg/h		

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values				
Performance Measure	**Vehicles**		**Persons**	
Demand Flows (Total)	554,939	veh/y	665,927	pers/y
Delay	3,448	veh-h/y	4,138	pers-h/y
Effective Stops	436,731	veh/y	524,078	pers/y
Travel Distance	110,447	veh-mi/y	132,536	pers-mi/y
Travel Time	7,457	veh-h/y	8,949	pers-h/y
Cost	128,447	$/y	128,447	$/y
Fuel Consumption	7,328	gal/y		
Carbon Dioxide	65,329	kg/y		
Hydrocarbons	6	kg/y		
Carbon Monoxide	63	kg/y		
NOx	52	kg/y		

INTERSECTION SUMMARY

Site: 1 [2017 AM Peak Hour]

4th Street/Lake Street/Central Avenue
2017 AM Peak Hour
Roundabout

Intersection Performance - Hourly Values				
Performance Measure	**Vehicles**		**Persons**	
Travel Speed (Average)	23.1	mph	23.1	mph
Travel Distance (Total)	243.6	veh-mi/h	292.3	pers-mi/h
Travel Time (Total)	10.5	veh-h/h	12.7	pers-h/h
Demand Flows (Total)	1164	veh/h	1397	pers/h
Percent Heavy Vehicles (Demand)	4.0	%		
Degree of Saturation	0.385			
Practical Spare Capacity	120.8	%		
Effective Intersection Capacity	3023	veh/h		
Control Delay (Total)	1.96	veh-h/h	2.36	pers-h/h
Control Delay (Average)	6.1	sec	6.1	sec
Control Delay (Worst Lane)	6.5	sec		
Control Delay (Worst Movement)	6.5	sec	6.5	sec
Geometric Delay (Average)	0.0	sec		
Stop-Line Delay (Average)	6.1	sec		
Idling Time (Average)	4.1	sec		
Intersection Level of Service (LOS)	LOS A			
95% Back of Queue - Vehicles (Worst Lane)	3.0	veh		
95% Back of Queue - Distance (Worst Lane)	77.4	ft		
Queue Storage Ratio (Worst Lane)	0.06			
Total Effective Stops	327	veh/h	392	pers/h
Effective Stop Rate	0.28	per veh	0.28	per pers
Proportion Queued	0.44		0.44	
Performance Index	27.2		27.2	
Cost (Total)	218.18	$/h	218.18	$/h
Fuel Consumption (Total)	15.6	gal/h		
Carbon Dioxide (Total)	140.1	kg/h		
Hydrocarbons (Total)	0.013	kg/h		
Carbon Monoxide (Total)	0.135	kg/h		
NOx (Total)	0.255	kg/h		

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values				
Performance Measure	**Vehicles**		**Persons**	
Demand Flows (Total)	558,815	veh/y	670,578	pers/y
Delay	943	veh-h/y	1,132	pers-h/y
Effective Stops	156,735	veh/y	188,082	pers/y
Travel Distance	116,907	veh-mi/y	140,288	pers-mi/y
Travel Time	5,062	veh-h/y	6,074	pers-h/y
Cost	104,727	$/y	104,727	$/y
Fuel Consumption	7,499	gal/y		
Carbon Dioxide	67,232	kg/y		
Hydrocarbons	6	kg/y		
Carbon Monoxide	65	kg/y		

NOx	122	kg/y

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INTERSECTION SUMMARY

Site: 1 [2017 PM Peak Hour]

4th Street/Lake Street/Central Avenue
2017 PM Peak Hour
Roundabout

Intersection Performance - Hourly Values				
Performance Measure	**Vehicles**		**Persons**	
Travel Speed (Average)	23.2	mph	23.2	mph
Travel Distance (Total)	258.1	veh-mi/h	309.7	pers-mi/h
Travel Time (Total)	11.1	veh-h/h	13.3	pers-h/h
Demand Flows (Total)	1218	veh/h	1462	pers/h
Percent Heavy Vehicles (Demand)	1.0	%		
Degree of Saturation	0.353			
Practical Spare Capacity	140.7	%		
Effective Intersection Capacity	3450	veh/h		
Control Delay (Total)	2.07	veh-h/h	2.48	pers-h/h
Control Delay (Average)	6.1	sec	6.1	sec
Control Delay (Worst Lane)	6.9	sec		
Control Delay (Worst Movement)	6.9	sec	6.9	sec
Geometric Delay (Average)	0.0	sec		
Stop-Line Delay (Average)	6.1	sec		
Idling Time (Average)	4.0	sec		
Intersection Level of Service (LOS)	LOS A			
95% Back of Queue - Vehicles (Worst Lane)	2.4	veh		
95% Back of Queue - Distance (Worst Lane)	59.3	ft		
Queue Storage Ratio (Worst Lane)	0.07			
Total Effective Stops	390	veh/h	468	pers/h
Effective Stop Rate	0.32	per veh	0.32	per pers
Proportion Queued	0.48		0.48	
Performance Index	28.6		28.6	
Cost (Total)	216.00	$/h	216.00	$/h
Fuel Consumption (Total)	14.9	gal/h		
Carbon Dioxide (Total)	132.6	kg/h		
Hydrocarbons (Total)	0.012	kg/h		
Carbon Monoxide (Total)	0.130	kg/h		
NOx (Total)	0.107	kg/h		

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values				
Performance Measure	**Vehicles**		**Persons**	
Demand Flows (Total)	584,774	veh/y	701,729	pers/y
Delay	992	veh-h/y	1,191	pers-h/y
Effective Stops	187,234	veh/y	224,681	pers/y
Travel Distance	123,875	veh-mi/y	148,650	pers-mi/y
Travel Time	5,335	veh-h/y	6,402	pers-h/y
Cost	103,682	$/y	103,682	$/y
Fuel Consumption	7,139	gal/y		
Carbon Dioxide	63,648	kg/y		
Hydrocarbons	6	kg/y		
Carbon Monoxide	62	kg/y		

NOx	51	kg/y

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INTERSECTION SUMMARY

Site: 1v [2040 AM Peak Hour - Conversion]

4th Street/Lake Street/Central Avenue
2040 AM Peak Hour
Signals - Pretimed Isolated Cycle Time = 50 seconds (User-Given Cycle Time)

Intersection Performance - Hourly Values				
Performance Measure	**Vehicles**		**Persons**	
Travel Speed (Average)	11.9	mph	11.9	mph
Travel Distance (Total)	276.3	veh-mi/h	331.6	pers-mi/h
Travel Time (Total)	23.2	veh-h/h	27.8	pers-h/h
Demand Flows (Total)	1464	veh/h	1757	pers/h
Percent Heavy Vehicles (Demand)	4.0	%		
Degree of Saturation	0.891			
Practical Spare Capacity	1.0	%		
Effective Intersection Capacity	1643	veh/h		
Control Delay (Total)	12.84	veh-h/h	15.41	pers-h/h
Control Delay (Average)	31.6	sec	31.6	sec
Control Delay (Worst Lane)	50.2	sec		
Control Delay (Worst Movement)	50.2	sec	50.2	sec
Geometric Delay (Average)	0.0	sec		
Stop-Line Delay (Average)	31.6	sec		
Idling Time (Average)	26.0	sec		
Intersection Level of Service (LOS)	LOS C			
95% Back of Queue - Vehicles (Worst Lane)	11.3	veh		
95% Back of Queue - Distance (Worst Lane)	291.1	ft		
Queue Storage Ratio (Worst Lane)	0.38			
Total Effective Stops	1332	veh/h	1598	pers/h
Effective Stop Rate	0.91	per veh	0.91	per pers
Proportion Queued	0.98		0.98	
Performance Index	112.3		112.3	
Cost (Total)	445.08	$/h	445.08	$/h
Fuel Consumption (Total)	25.5	gal/h		
Carbon Dioxide (Total)	228.4	kg/h		
Hydrocarbons (Total)	0.024	kg/h		
Carbon Monoxide (Total)	0.242	kg/h		
NOx (Total)	0.378	kg/h		

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values				
Performance Measure	**Vehicles**		**Persons**	
Demand Flows (Total)	702,815	veh/y	843,378	pers/y
Delay	6,165	veh-h/y	7,398	pers-h/y
Effective Stops	639,207	veh/y	767,049	pers/y
Travel Distance	132,642	veh-mi/y	159,170	pers-mi/y
Travel Time	11,115	veh-h/y	13,338	pers-h/y
Cost	213,639	$/y	213,639	$/y
Fuel Consumption	12,239	gal/y		
Carbon Dioxide	109,625	kg/y		
Hydrocarbons	12	kg/y		
Carbon Monoxide	116	kg/y		
NOx	181	kg/y		

INTERSECTION SUMMARY

Site: 1v [2040 PM Peak Hour - Conversion]

4th Street/Lake Street/Central Avenue
2040 PM Peak Hour
Signals - Actuated Isolated Cycle Time = 75 seconds (User-Given Phase Times)

Intersection Performance - Hourly Values				
Performance Measure	**Vehicles**		**Persons**	
Travel Speed (Average)	9.8	mph	9.8	mph
Travel Distance (Total)	302.7	veh-mi/h	363.3	pers-mi/h
Travel Time (Total)	30.8	veh-h/h	37.0	pers-h/h
Demand Flows (Total)	1597	veh/h	1916	pers/h
Percent Heavy Vehicles (Demand)	1.0	%		
Degree of Saturation	0.813			
Practical Spare Capacity	10.7	%		
Effective Intersection Capacity	1964	veh/h		
Control Delay (Total)	19.71	veh-h/h	23.65	pers-h/h
Control Delay (Average)	44.4	sec	44.4	sec
Control Delay (Worst Lane)	55.1	sec		
Control Delay (Worst Movement)	55.1	sec	55.1	sec
Geometric Delay (Average)	0.0	sec		
Stop-Line Delay (Average)	44.4	sec		
Idling Time (Average)	40.6	sec		
Intersection Level of Service (LOS)	LOS D			
95% Back of Queue - Vehicles (Worst Lane)	14.9	veh		
95% Back of Queue - Distance (Worst Lane)	376.0	ft		
Queue Storage Ratio (Worst Lane)	0.64			
Total Effective Stops	1270	veh/h	1524	pers/h
Effective Stop Rate	0.80	per veh	0.80	per pers
Proportion Queued	0.95		0.95	
Performance Index	160.7		160.7	
Cost (Total)	540.71	$/h	540.71	$/h
Fuel Consumption (Total)	27.0	gal/h		
Carbon Dioxide (Total)	241.0	kg/h		
Hydrocarbons (Total)	0.026	kg/h		
Carbon Monoxide (Total)	0.251	kg/h		
NOx (Total)	0.172	kg/h		

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values				
Performance Measure	**Vehicles**		**Persons**	
Demand Flows (Total)	766,435	veh/y	919,722	pers/y
Delay	9,460	veh-h/y	11,352	pers-h/y
Effective Stops	609,616	veh/y	731,539	pers/y
Travel Distance	145,314	veh-mi/y	174,377	pers-mi/y
Travel Time	14,795	veh-h/y	17,754	pers-h/y
Cost	259,540	$/y	259,540	$/y
Fuel Consumption	12,982	gal/y		
Carbon Dioxide	115,694	kg/y		
Hydrocarbons	12	kg/y		
Carbon Monoxide	121	kg/y		
NOx	83	kg/y		

INTERSECTION SUMMARY

Site: 1 [2040 AM Peak Hour]

4th Street/Lake Street/Central Avenue
2040 AM Peak Hour
Roundabout

Intersection Performance - Hourly Values				
Performance Measure	**Vehicles**		**Persons**	
Travel Speed (Average)	19.3	mph	19.3	mph
Travel Distance (Total)	297.7	veh-mi/h	357.2	pers-mi/h
Travel Time (Total)	15.4	veh-h/h	18.5	pers-h/h
Demand Flows (Total)	1464	veh/h	1757	pers/h
Percent Heavy Vehicles (Demand)	4.0	%		
Degree of Saturation	0.658			
Practical Spare Capacity	29.2	%		
Effective Intersection Capacity	2225	veh/h		
Control Delay (Total)	4.21	veh-h/h	5.05	pers-h/h
Control Delay (Average)	10.3	sec	10.3	sec
Control Delay (Worst Lane)	13.6	sec		
Control Delay (Worst Movement)	13.6	sec	13.6	sec
Geometric Delay (Average)	0.0	sec		
Stop-Line Delay (Average)	10.3	sec		
Idling Time (Average)	6.2	sec		
Intersection Level of Service (LOS)	LOS B			
95% Back of Queue - Vehicles (Worst Lane)	9.1	veh		
95% Back of Queue - Distance (Worst Lane)	235.6	ft		
Queue Storage Ratio (Worst Lane)	0.13			
Total Effective Stops	950	veh/h	1141	pers/h
Effective Stop Rate	0.65	per veh	0.65	per pers
Proportion Queued	0.73		0.73	
Performance Index	53.8		53.8	
Cost (Total)	347.98	$/h	347.98	$/h
Fuel Consumption (Total)	24.6	gal/h		
Carbon Dioxide (Total)	219.9	kg/h		
Hydrocarbons (Total)	0.022	kg/h		
Carbon Monoxide (Total)	0.237	kg/h		
NOx (Total)	0.372	kg/h		

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values				
Performance Measure	**Vehicles**		**Persons**	
Demand Flows (Total)	702,815	veh/y	843,378	pers/y
Delay	2,019	veh-h/y	2,423	pers-h/y
Effective Stops	456,215	veh/y	547,458	pers/y
Travel Distance	142,897	veh-mi/y	171,476	pers-mi/y
Travel Time	7,404	veh-h/y	8,885	pers-h/y
Cost	167,029	$/y	167,029	$/y
Fuel Consumption	11,785	gal/y		
Carbon Dioxide	105,567	kg/y		
Hydrocarbons	11	kg/y		
Carbon Monoxide	114	kg/y		

NOx	179	kg/y

INTERSECTION SUMMARY

Site: 1 [2040 PM Peak Hour]

4th Street/Lake Street/Central Avenue
2040 PM Peak Hour
Roundabout

Intersection Performance - Hourly Values				
Performance Measure	**Vehicles**		**Persons**	
Travel Speed (Average)	19.3	mph	19.3	mph
Travel Distance (Total)	327.6	veh-mi/h	393.2	pers-mi/h
Travel Time (Total)	16.9	veh-h/h	20.3	pers-h/h
Demand Flows (Total)	1597	veh/h	1916	pers/h
Percent Heavy Vehicles (Demand)	1.0	%		
Degree of Saturation	0.602			
Practical Spare Capacity	41.3	%		
Effective Intersection Capacity	2654	veh/h		
Control Delay (Total)	4.56	veh-h/h	5.47	pers-h/h
Control Delay (Average)	10.3	sec	10.3	sec
Control Delay (Worst Lane)	12.6	sec		
Control Delay (Worst Movement)	12.6	sec	12.6	sec
Geometric Delay (Average)	0.0	sec		
Stop-Line Delay (Average)	10.3	sec		
Idling Time (Average)	6.4	sec		
Intersection Level of Service (LOS)	LOS B			
95% Back of Queue - Vehicles (Worst Lane)	6.9	veh		
95% Back of Queue - Distance (Worst Lane)	175.1	ft		
Queue Storage Ratio (Worst Lane)	0.11			
Total Effective Stops	1065	veh/h	1278	pers/h
Effective Stop Rate	0.67	per veh	0.67	per pers
Proportion Queued	0.75		0.75	
Performance Index	55.1		55.1	
Cost (Total)	368.43	$/h	368.43	$/h
Fuel Consumption (Total)	25.0	gal/h		
Carbon Dioxide (Total)	222.5	kg/h		
Hydrocarbons (Total)	0.023	kg/h		
Carbon Monoxide (Total)	0.245	kg/h		
NOx (Total)	0.176	kg/h		

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Intersection LOS value for Vehicles is based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Intersection Performance - Annual Values				
Performance Measure	**Vehicles**		**Persons**	
Demand Flows (Total)	766,435	veh/y	919,722	pers/y
Delay	2,187	veh-h/y	2,624	pers-h/y
Effective Stops	511,127	veh/y	613,352	pers/y
Travel Distance	157,271	veh-mi/y	188,725	pers-mi/y
Travel Time	8,133	veh-h/y	9,760	pers-h/y
Cost	176,849	$/y	176,849	$/y
Fuel Consumption	11,981	gal/y		
Carbon Dioxide	106,781	kg/y		
Hydrocarbons	11	kg/y		
Carbon Monoxide	118	kg/y		

NOx	84	kg/y

APPENDIX E – ALTERNATIVES COMPARISON BACK-UP

Alternatives Performance Comparison

Performance Measure	Traffic Signal Alternative	Roundabout Alternative
Cumulative Condition		
Delay - All approaches LOS "D" or better LOS A rated at 5 and E rated at 1.	2.4 ✓	**4.8** ✓✓
95th % Queue - Adequate queue storage	✓	✓✓
Future Investment Needs		
Service Life – function past the design year	D ✓	**B** ✓✓
Costs		
Operations & Maintenance - Annualized	$3,000	**$1,700** ✓
Collision Costs - Annualized	$150,100	**$100,800** ✓
Delay Costs - Annualized	$36,000	**$11,000** ✓
Fuel Costs - Annualized	$21,000	**$20,000** ✓
Environmental Costs - Annualized	$1,505	$1,505
Capital Costs - Annualized	**$48,000** ✓	$119,000
Truck Accommodations		
Serves design vehicle for all movements	✓	✓
Safety		
Predictive Measures - Greatest crash reduction potential for expected fatal and injury crashes	17%	**56%** ✓
Vehicle Conflicts - The number of potential conflict points that may occur at the intersection based on layout geometry	32	**8** ✓
Pedestrian Safety - Exposure to traffic in terms of number of lanes, conflict points, crossing times, and expected vehicular speeds.	4 35-45 mph	**1** **15-25mph** ✓✓
Bicycle Safety - Exposure to traffic in terms of number of lanes, conflict points, and speed differential		✓
Property Impacts		
Property Impacts	✓✓	
Local Access		
Maintains local access and circulation	✓	✓
Total Performance Measures Met	**8**	**17**

Performance Measures Procedures/Definitions

Except where noted, a check mark will be placed in each category for the alternative that performs the best. In instances where both alternatives meet the criteria, each will receive a check mark.

Delay: Level of Service (LOS) A will be rated at 5.0 and E will be rated at 1.0. The average score is shown as a composite of each approach's AM and PM LOS score. A check mark is given to the alternative that has all approaches scoring a LOS of D or higher in both peak hours. Another check mark is given to the alternative with the highest score.

95th Percentile Queue: Adequate queue storage provided to prevent blocking of turning movements by approach will get a check mark.

Service Life: Will the alternative function acceptably beyond the design year.

Operations and Maintenance: Total annualized cost for landscape maintenance, electrical service, signal maintenance, and pavement rehabilitation.

Crash Costs: Derived from applying crash reduction factors (CRF) per FHWA "Desktop Reference for Crash Reduction Factors".

Delay Costs: Cumulative vehicle delay derived from SIDRA multiplied by $18.95/hr; per Caltrans Life-Cycle Benefit-Cost Analysis Economic Parameters 2016.

Fuel Costs: Derived from SIDRA: fuel consumption * $3.18/gal per Caltrans Life-Cycle Benefit-Cost Analysis Economic Parameters 2016.

Environmental Costs: Emissions derived from SIDRA: CO * $80/ton, and NOx * $18,700/ton; per Caltrans Life-Cycle Benefit-Cost Analysis Economic Parameters 2016.

Capital Cost (Annualized): Total Construction + ROW Cost divided by Service Life (20 yr).

Serves Design Vehicle for All Movements: Check mark if all movements are served for the design vehicle

Safety Predictive Measures: Greatest crash reduction potential based on fatal and injury crashes between the alternatives.

Vehicle Conflicts: Number of conflict points.

Pedestrian Safety: Most # of lanes crossed at a time, expected vehicle speeds

Bicycle Safety: Access, exposure to traffic, and speed differential (# conflict points * (vehicle speed - 15 mph average bicycle speed)).

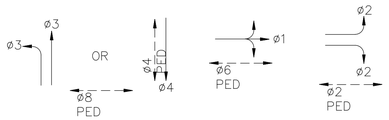
Maintains existing access and circulation: Percentage of existing access/turning movements maintained.

ATTACHMENT 2

Traffic Signal Alternative: Preliminary Layout

LEGEND:

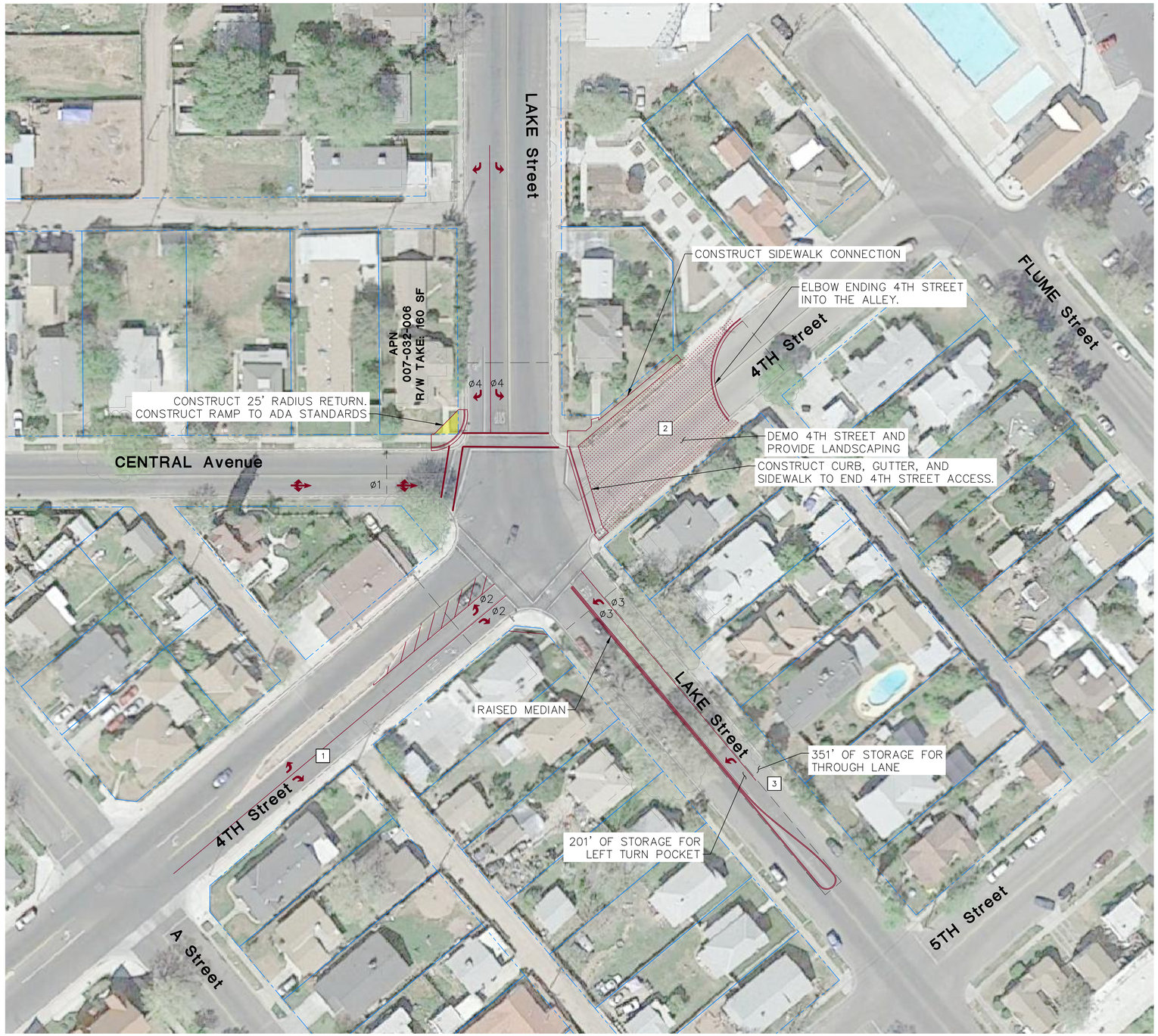
- EXISTING RIGHT-OF-WAY AND PROPERTY LINES
- PROPOSED IMPROVEMENTS
- RIGHT-OF-WAY IMPACTS
- ESTIMATED LIMITS FOR NEW PAVEMENT SECTION

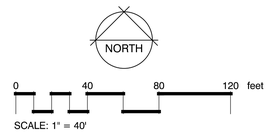


PHASE DIAGRAM

POTENTIAL ON-STREET PARKING IMPACTS (APPROX. 34 PARKING SPACES ELIMINATED)

1. ±10 PARKING SPACES BETWEEN A Street AND LAKE Street
2. ±11 PARKING SPACES BETWEEN LAKE Street AND FLUME Street
3. ±13 PARKING SPACES BETWEEN 5TH Street AND 4TH Street





The City of MADERA

LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Madera, California

GHD
30 River Park Place West Suite 200
Fresno, CA 93720 USA
W www.ghd.com

GHD Inc. January 9th, 2020 2264EX006.dwg

ATTACHMENT 3

Roundabout Alternative: Preliminary Layout

LEGEND:

- EXISTING RIGHT-OF-WAY AND PROPERTY LINES
- PROPOSED IMPROVEMENTS
- PROPERTY IMPACT LIMIT DUE TO SIGHT LINES
- PROPERTY IMPACTS DUE TO GEOMETRIC FOOTPRINT
- PROPERTY IMPACTS DUE TO SIGHT LINES
- LANDSCAPE AREA
- STAMPED CONCRETE TRUCK APRON

ROUNDABOUT GEOMETRICS:

INSCRIBED CIRCLE DIAMETER: 116'

CENTER ISLAND DIAMETER: 84'

CIRCULATORY WIDTH: 16'

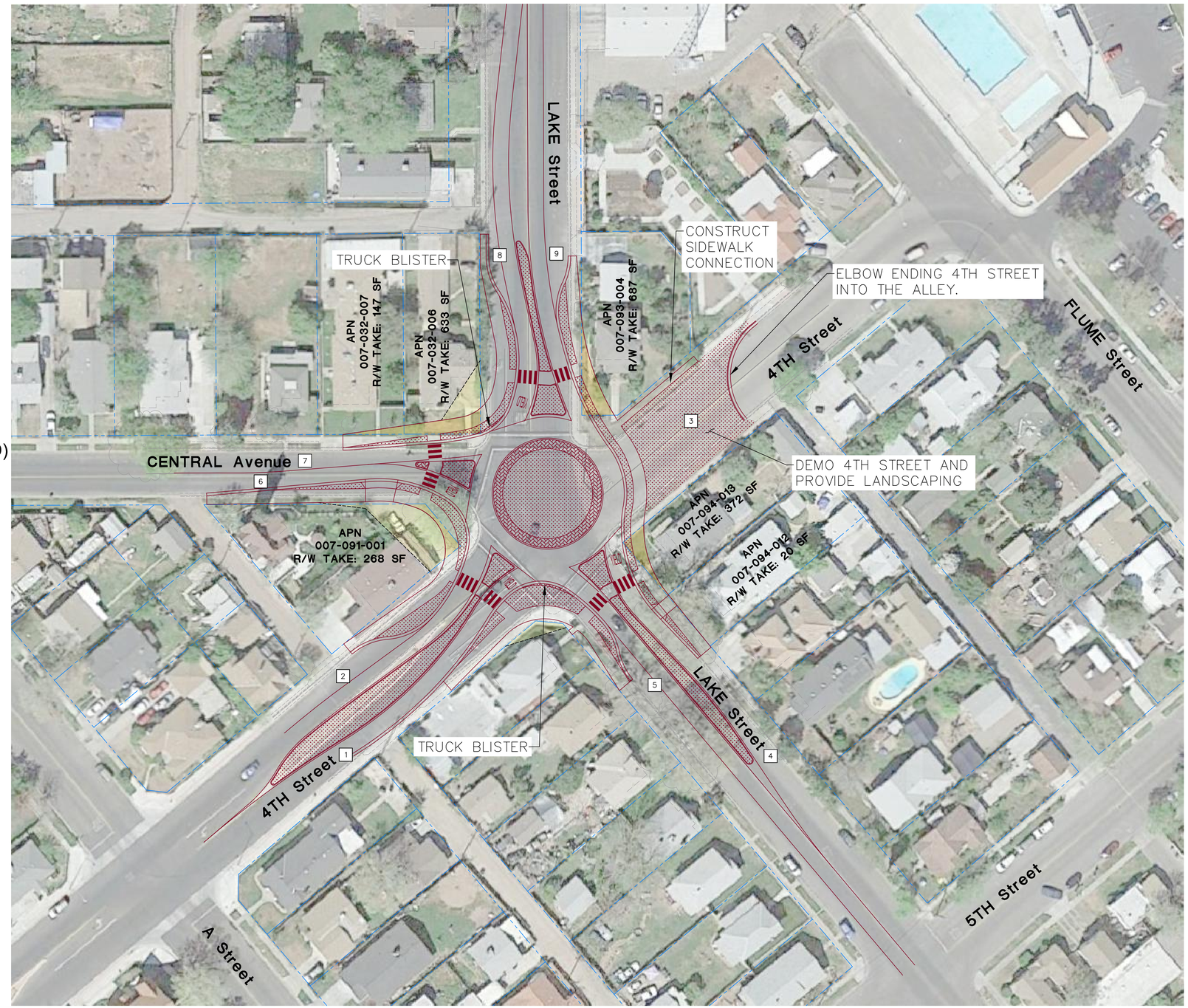
TRUCK APRON WIDTH: 8'

SHARED USE PATH WIDTH: 10'

LANDSCAPE STRIP WIDTH: 3'-5' MINIMUM

POTENTIAL ON-STREET PARKING IMPACTS (APPROX. 62 PARKING SPACES ELIMINATED)

1. ±10 PARKING SPACES BETWEEN A Street AND LAKE Street
2. ±5 PARKING SPACES BETWEEN LAKE Street AND A Street
3. ±11 PARKING SPACES BETWEEN LAKE Street AND FLUME Street
4. ±10 PARKING SPACES BETWEEN 5TH Street AND 4TH Street
5. ±3 PARKING SPACES BETWEEN 4TH Street AND 5TH Street
6. ±4 PARKING SPACES BETWEEN A Street AND LAKE Street
7. ±7 PARKING SPACES BETWEEN LAKE Street AND A Street
8. ±8 PARKING SPACES WEST SIDE NORTH OF CENTRAL Avenue
9. ±4 PARKING SPACES EAST SIDE NORTH OF CENTRAL Avenue



NORTH

0 40 80 120 feet

SCALE: 1" = 40'

The City of MADERA

LAKE St/4TH St/CENTRAL Ave INTX IMPROVEMENTS

Madera, California

GHD

30 River Park Place West Suite 200
Fresno, CA 93720 USA
W www.ghd.com

GHD Inc.

January 9th, 2020

2264EX008.dwg

ATTACHMENT 4

	NAME	ADDRESS	E-MAIL	PHONE
1	Keth Helmuth	205 W. 4th St	Khelmuth@madera.gov	661-5418
2	DAVID BELL	"	rbell@madera.gov	661-5089
3	KATHY CHARLTONS	221 North Lake	Kasprin@msn.com	217-7525
4	GEORGE HATFIELD	215 N LAKE ST		673 4319
5	[illegible]	22 N E St	—	479 625
6	LILI AGUILAR	719 Riverside CT		871-7467
7	Jessica Leon	817 Bloker St	JVALE94@GMAIL.com	395-3566
8	Juliana Leon	817 Bloker St.		871-1349
9	Omair Jawad	17149 Road 400	ojawad90@gmail.com	706-0808
10	Mike Zaglout	601 East 7th		
11	I Corral Salinas	515 Sunset ave		
12	Steven Montes	205 w 4th st	Smontes@madera.gov	559-871-5255
13	Wendy Alexander	Madera Tribune	Wendya@maderatribune.net.	
14	ESTEVAN CALAC	13718 Rd 29 1/4	ARSTEVE59@GMAIL.com	2329608
15	Alex Salazar	300 N Gateway #100	Alex.Sells59@gmail.com	
16	Saim Mohammad	300 N Gateway Dr #106	saim.realtr@gmail.com	
17	Esther Carrillo	623 E 4th St	Madera	CA 93638
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Public outreach meeting Jan. 16, 2020
John Wells Youth Center

Summary of Comments (verbal and written):

• The roundabout and traffic signal proposals are both great and either one will help mitigate traffic in that intersection. That specific intersection is dangerous and something must be done to prevent more accidents. More than half the time cars do rolling stops and do not give right-of-way to pedestrians. (No name provided)

• A comment was made that the traffic light will improve traffic flow however, dedicated turn lanes will cause congestion.

• A comment was made with the traffic signal alternative as to where they would park.

• A question was raised regarding whether a traffic signal would result in parking loss and how can that be mitigated.

• The following attendees who also live adjacent to the project (APN or Street Number) specifically noted on the roundabout layout plan that they were opposed to the roundabout:

- APN 007-093-004
- APN 007-094-012
- 215 N. Lake Street

• A comment noted on the roundabout plan in support of the roundabout due to traffic flow, no turns, no congestion and less pedestrian and intersection accidents.

• Numerous attendees expressed concerns regarding 'takes' of their property with the roundabout option.

• Concerns were raised regarding the location of the fire station and how fire trucks would navigate a roundabout.

• Attendees concerned about safety asked about designated walking routes for children with the roundabout alternative. A particular concern was children who cross the intersection to the swimming pool complex located on Flume Street A comment was made about providing a separate grade separate pedestrian crossing.

• A suggestion was made that outreach be provided to teach residents how to drive the roundabout and how pedestrians cross the roads

• Questions were raised regarding the source of funding, parking and noise

• Questions were also raised specifically about loss of parking in the roundabout scenario.

Public outreach meeting Jan. 16, 2020
John Wells Youth Center

- A resident asked when the recommended alternative would be heard at Council

- A resident asked how long the consultants had been working on developing the plans for the two alternatives

1-16-20

History of the northeast corner of Lake Street, 4th Street and Central Avenue - the property at that time consisted of Lake Street to the Fresno River, 4th Street to all of the Swimming Pool Park and Lake Street to A Street to the west. The property was owned by my grandfather, George Zoerb, who was a building contractor that built many of the older beautiful homes on D Street and throughout Madera, including the one on the southeast corner of Lake and 4th. Construction started on the house at 601 East 4th Street at the northeast corner of the intersection in 1904 and finished in 1905. My mother, Gertrude Saburit, was born in that house on April 30, 1905 before the City of Madera existed in 1907.

My grandfather deeded the land to the City to create Lake Street to the Fresno River and 4th Street to Flume Street in the 1900's. In 1962 or 1963 the City of Madera purchased the land behind 601 East 4th - a project at one time - to build City of Madera's new Station I Fire Station. In 1968 the City of Madera decided to replace the old Lake Street wooden bridge and to widen Lake Street from 4th and Central to Cleveland Avenue for the purpose of traffic flow to Raymond, CA,, and Lake Madera per City Engineer Jake McKee at the time. Needless to say, we lost several footage on the west side of Lake Street. At the time I was a member of the Madera City Fire Dept., and our chief at the time was Alden T. Potter, who wasn't too pleased with the loss of property. That is the reason when you drive by and see them working on a fire engine it is half on the structure and half out. The ramp is too short to support the length of the engine.

HISTORY OF ACCIDENTS, INJURIES AND DEATHS:

There have been numerous accidents -

1950's: One man died heading north on Lake Street hitting a pepper tree on the northwest corner of Central and Lake.

1970's: One person killed after hitting the bridge at the fire station going north on Lake

1980's: One killed - burned to death after hitting tree on the southwest corner of lake and 4th Street. The scar is still on the back of the tree.

Also, on the northwest corner a home garage owned by Alice Blakemore was hit and totally destroyed. The garage was located midway down Lake Street just before the alley. This happened because the stop sign was removed from Lake Street.

WITH A GREEN LIGHT OR ROUND ABOUT IT WILL CREATE AN "ACCIDENT LOOING FOR A PLACE TO HAPPEN, NOT KNOWING IF ~~OR~~ But WHEN IT HAPPENS".

ACCIDENTS - 601 East 4th Street - northeast corner:

1) Driver east-bound on 4th ran a stop sign and took out hedge and orange tree.

2) Driver heading north on Lake Street took out side of tree and damaged house.

3) Driver heading north on Lake Street lost control, went between two trees and took out fence and water spikett at the fire dept. line.

4) Southwest corner hit many times. Before 4th Street was widened the corner house was hit so many times they resorted in installing big boulders and 12" pipe filled with concrete to stop impact. These have since been removed and are waiting for the next crash without them.

5) I lived at 601 East 4th Street from 1947 to 1971, and now my son Doug resides there. There are so many accidents that I can't remember. Most of the accidents occurred when the City wanted to speed up traffic flow and started by removing the stop signs north and south bound LANES Lake Street and and again at Lincoln and Lake Streets which made it pretty much a "freeway". That lasted several years and then they reinstalled the signs and made it a 5-way stop again. Accidents went down. For some reason they took down the signs again in the 1980's and accidents went up, but left sign up at Lincoln and Lake. Accidents slowed down a little, but still wrecks and property damage. Finally got signs back in the late 1980's or early-mid 1990's. There is much improvement but still wrecks and property damage, but not as much.

I am totally against a round-about, because most people don't know how to use them, plus the desecration that it would do to an older neighborhood that has existed before the City of Madera existed. At the present time we are trying tp get historical status and refurbish 601 East 4th St. to its once grandier.

In my opinion there should be an overhead signal flashing red 24-seven at all five points. Also, if you must put in signals, block off or dead-end Central or mske a cul-de-sac on Central Street.

By having a signal system - green-amber-red you are going to create more of a hazard than we have now, especially in the north south corridor of Lake Street, as going north or south its almost a 45 deg. angle and speed and over-correction on a green light and potentially hitting a fire truck pulling out of the station going on a call or backing in . I can see t-bone roll overs and deaths and property damage to homes and parked vehicals and fires to cars with high pressure fuel pumps. Also, this intersection is very dangerous at night, and thank God we haven't had the fog like it was in the 1950's and 1960'sand 1970's. With a green light all kinds or problems will break out. Also, this intersection is only bad from 7:00 to 8:00 AM and 4:00 to 6:00 PM.

LEAVE THE INTERSECTION THE WAY IT IS ONLY WITH A RED FLASHING OVERHEAD SIGNAL!

Mike Z. Saburit

MIKE Z. SABURIT

1-16-20