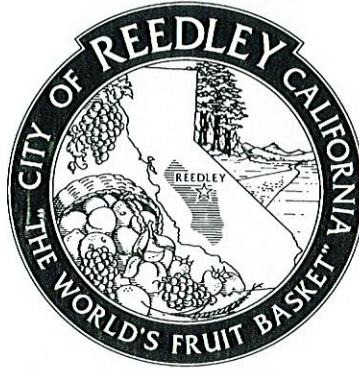


**EXHIBIT - A**

# **CITY OF REEDLEY**

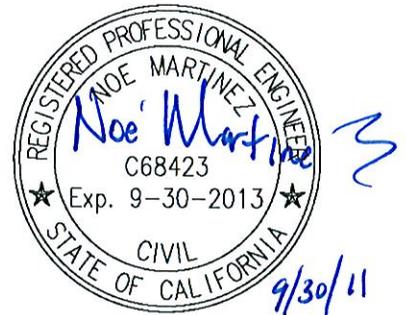
## **2011 RADAR SPEED ZONE ENGINEERING and TRAFFIC SURVEY**



**Public Works Department  
Engineering Division  
1733 9th Street  
Reedley, CA 93654  
Phone: (559) 637-4200 Ext. 229  
Fax: (559) 637-2139**

**FINAL REPORT**

**Approved by:  
Noe Martinez, P.E.  
City Engineer  
September 2011**



**RESOLUTION NO. 2011-043**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REEDLEY  
ACCEPTING THE RECOMMENDATIONS AND CERTIFYING THE 2011  
RADAR SPEED ZONE ENGINEERING AND TRAFFIC SURVEY AND  
AUTHORIZING THE REEDLEY POLICE DEPARTMENT TO ENFORCE  
THE POSTED SPEED LIMITS**

WHEREAS, the State of California Vehicle Code requires that all jurisdictions that enforce speed limit regulations with radar speed measuring devices perform studies to justify the posted speed limits; and

WHEREAS, the Vehicle Code allows jurisdictions to use radar speed measuring devices to enforce speed limits that are obeyed by at least eighty-five percent (85th percentile) of the drivers; and

WHEREAS, the Vehicle Code does not allow jurisdictions to use radar speed measuring devices to enforce posted speed limits where the 85th percentile of drivers drive at speeds greater than the posted limit unless it can be justified by a condition that mandates such posted speed to provide a roadway that is safe to travel upon; and

WHEREAS, the Reedley Police Department conducted speed surveys between February and March of 2010 on all the roadways with posted speed limits; and

WHEREAS, the Reedley Engineering Department reviewed the results of the speed zone surveys and determined the posted speeds based on the 85th percentile measurement of speeds; and

WHEREAS, the Reedley Engineering Department reviewed those roadways with posted speed limits that are not obeyed by the 85th percentile of drivers and determined that those roadways have conditions that justify the existing and/or proposed posted limits to provide safe routes.

NOW, THEREFORE, BE IT RESOLVED by the City of Reedley City Council that the following is approved:

1. The 2011 Radar Speed Zone Engineering and Traffic Survey, as presented in attached Exhibit A, has been reviewed, accepted and certified.

2. The Reedley Police Department is authorized to use radar speed measuring devices to enforce the posted speed limits.

3. The speed limits, as posted and presented in Exhibit A, 2011 Radar Speed Zone Engineering and Traffic Survey, are the lawful speed limits to be enforced by the Reedley Police Department.

The foregoing resolution is hereby approved this 13<sup>th</sup> day of September, 2011, by the following vote:

AYES: Chavez, Soleno, Betancourt, Fast.

NOES: None.

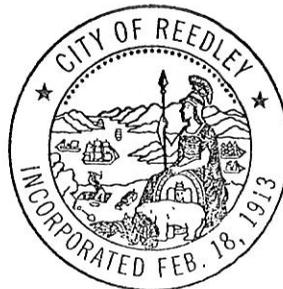
ABSTAIN: None.

ABSENT: None.

  
Mary L. Fast, Mayor

ATTEST:

  
Kay L. Pierce, City Clerk



## 2011 Radar Speed Zone Engineering and Traffic Survey

The 2011 Radar Speed Zone Engineering and Traffic Survey (E&TS) replaces the previous E&TS completed in 2006. The California Vehicle Code (CVC) requires that all jurisdictions that enforce speed limit regulations with radar speed measuring devices perform studies to justify the posted limits. The code mandates jurisdictions who desire to enforce speed limits that the posted limits correspond to the 85<sup>th</sup> percentile range of measured (surveyed) speeds, unless there are present conditions that warrant restricting speeds lower than the 85<sup>th</sup> percentile. The short method of speed zoning is the engineering analysis used in this report and is based on the premise that a reasonable speed limit is one that conforms to the behavior of the majority of the motorist, and that by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. The application of designated vehicle speed limits on public streets is regulated by the CVC and the California Manual of Uniform Traffic Control Devices (CAMUTCD). Speed zoning help contribute to the orderly movement of traffic by increasing driver awareness of a reasonable speed. The goal of speed zones is to prevent motorist from operating at a wide range of speeds along a roadway segment that could create vehicle conflicts. Speed zoning allows motorists to travel at or near the same speeds. The Study found that all of the existing posted limits proposed for radar enforcement were consistent with both the recently measured speeds and the present speed restricting conditions as outlined within the report. The 2011 E&TS results conclude that no speed zone adjustments are necessary to the surveyed roadway segments and therefore the existing posted limits shall remain in full force.

The E&TS must be conducted every 5 years and per subdivision (c) of CVC 40802 may be extended to seven years if certain criteria are met and up to a maximum of ten years if a registered engineer evaluates the sections of roadways and determines that no significant changes in roadway or traffic conditions have occurred, including but not limited to, changes in adjoining property or land use, roadway width or traffic volumes.

The Reedley Police Department conducted speed surveys between February and March 2011 on 63 posted roadway segments within the City. The speeds of vehicles were measured using manual Radar Speed Surveys. The manual Radar Speed Surveys were conducted by staff at specified locations listed below and illustrated in Figure 1. In all instances a minimum of 50 vehicles were surveyed as required by the CAMUTCD. This data was considered along with other factors, including collision records, roadway characteristics, adjacent land uses, side street traffic, on-street parking, sight distances and pedestrian traffic along the roadway without sidewalks. Typically, roadway speed limits are established based upon a combination of these factors along with the measured "critical vehicle speed" usually referred to as the 85<sup>th</sup> percentile. The measured speed results from the survey are attached in the appendix.

A summary of the selected locations for the Speed Zone Survey are as follows:

<u>ID</u>	<u>Route</u>	<u>Location</u>	<u>Direction</u>	<u>Vehicles Counted</u>	<u>Average Speed</u>	<u>85th Percentile</u>	<u>Posted Speed Limit</u>
1	Manning Avenue	at "I" Street	EB	50	22	26	35
2	Manning Avenue	at "I" Street	WB	50	24	28	35
3	Manning Avenue	at King River Road	EB	50	49	56	50
4	Manning Avenue	at King River Road	WB	50	38	52	50
5	Manning Avenue	at Frankwood Avenue	EB	50	32	36	35
6	Manning Avenue	at Frankwood Avenue	WB	50	31	36	35
7	Manning Avenue	at Kady	EB	50	32	36	35
8	Manning Avenue	at Kady	WB	50	28	32	35
9	Eleventh Street	at Sunset Avenue	WB	50	27	30	30

<u>ID</u>	<u>Route</u>	<u>Location</u>	<u>Direction</u>	<u>Vehicles Counted</u>	<u>Average Speed</u>	<u>85th Percentile</u>	<u>Posted Speed Limit</u>
11	Eleventh Street	at "K" Street	EB	50	27	32	30
12	Eleventh Street	at "K" Street	WB	50	28	34	30
13	"I" Street	at Reed Avenue	NB	50	35	38	30
14	"I" Street	at Reed Avenue	SB	50	30	34	30
15	"I" Street	at 14th Street	NB	50	30	34	30
16	"I" Street	at 14th Street	SB	50	32	36	30
17	Reed Avenue	at Parlier Avenue	NB	50	36	42	35
18	Reed Avenue	at Parlier Avenue	SB	50	36	44	35
19	Reed Avenue	at North Avenue	NB	50	24	28	30
20	South Avenue	at Frankwood Avenue	EB	50	42	46	40
21	South Avenue ( * )	at Frankwood Avenue	WB	50	40	46	40
22	Manning Avenue	at Buttonwillow Avenue	EB	50	40	44	40
23	Manning Avenue( * )	at Buttonwillow Avenue	WB	50	30	34	40
24	Buttonwillow Avenue	at Parlier Avenue	SB	50	41	46	45
25	Buttonwillow Avenue	at Parlier Avenue	NB	50	43	52	45
26	Buttonwillow Avenue	at El Dorado	NB	50	39	42	40
27	Buttonwillow Avenue	at El Dorado	SB	50	38	42	40
28	Buttonwillow Avenue	at Evening Glow	NB	50	36	42	40
29	Buttonwillow Avenue	at Evening Glow	SB	50	39	44	40
30	Buttonwillow Avenue	at Olsen Avenue	NB	50	40	44	40
31	Buttonwillow Avenue	at Olsen Avenue	SB	50	43	50	40
32	Reed Avenue ( * )	at Flora Avenue	NB	50	32	38	30
33	Reed Avenue ( * )	at Flora Avenue	SB	50	30	34	30
34	Olson Avenue	at Blossom Avenue	EB	50	35	38	25
35	Olson Avenue	at Blossom Avenue	WB	50	34	40	25
36	Springfield Avenue	at Haney	EB	50	26	30	25
37	Springfield Avenue	at Haney	WB	50	26	30	25
38	North Avenue	at "F" Street	WB	50	27	30	25
39	North Avenue	at "F" Street	EB	50	28	32	25
40	Frankwood Avenue	at Curtis Avenue	SB	50	34	38	35
41	Frankwood Avenue	at Curtis Avenue	NB	50	35	40	35
42	Frankwood Avenue	at Parlier Avenue	SB	50	29	34	35
43	Frankwood Avenue	at Parlier Avenue	NB	50	30	34	35
44	Parlier Avenue	at Pecan	EB	50	34	38	35
45	Parlier Avenue ( * )	at Pecan	WB	50	33	38	35
46	Parlier Avenue	at Hope Street	EB	50	30	34	30
47	Parlier Avenue	at Hope Street	WB	50	31	36	30
48	Dinuba Avenue	at Carolyn Lane	EB	50	38	42	40
49	Dinuba Avenue	at Carolyn Lane	WB	50	38	42	40
50	Dinuba Avenue	at Hope Avenue	EB	50	25	28	30
51	Dinuba Avenue	at Hope Avenue	WB	50	29	34	30

<u>ID</u>	<u>Route</u>	<u>Location</u>	<u>Direction</u>	<u>Vehicles Counted</u>	<u>Average Speed</u>	<u>85th Percentile</u>	<u>Posted Speed Limit</u>
52	Dinuba Avenue	at Tobu Avenue	WB	50	44	48	40
53	Dinuba Avenue	at Tobu Avenue	EB	50	47	54	45
54	East Avenue	at Lincoln Avenue	SB	50	28	34	35
55	East Avenue	at Lincoln Avenue	NB	50	28	32	35
56	Reed Avenue	at South Avenue	NB	50	47	54	45
57	Columbia Avenue	at Ponderosa Avenue	SB	50	23	26	30
58	Reed Avenue	at Herbert	SB	50	37	44	35
59	Reed Avenue	at Dinuba Avenue	NB	50	32	38	35
60	Frankwood Avenue	at Herbert	NB	50	41	50	40
61	Frankwood Avenue	at Herbert	SB	50	40	46	40
62	Manning Avenue	at Kings River Bridge	WB	50	46	52	50
63	Manning Avenue	at Kings River Bridge	EB	50	46	52	40

Note: ( \* ) This street segment is not within City Limits

For the purpose of this evaluation the measured 85<sup>th</sup> percentile speed has been rounded to the nearest 5 MPH integer to determine the new recommended speed limits from those presently posted. In some cases, a lower or higher speed limit than the measured 85<sup>th</sup> percentile may be warranted to mitigate present conditions in order to provide for a safer roadway segment. In such cases, it is necessary to provide an engineering report or engineering recommendation to justify posted speed limits other than those measured. The following are the evaluation results for each of measured posted segments with conclusions and recommendations.

The first category of recommendations are those speed zones where the current posted speed limit and the 85<sup>th</sup> percentile speed are consistent. These zones, therefore, are recommended to remain status quo. They are as follows:

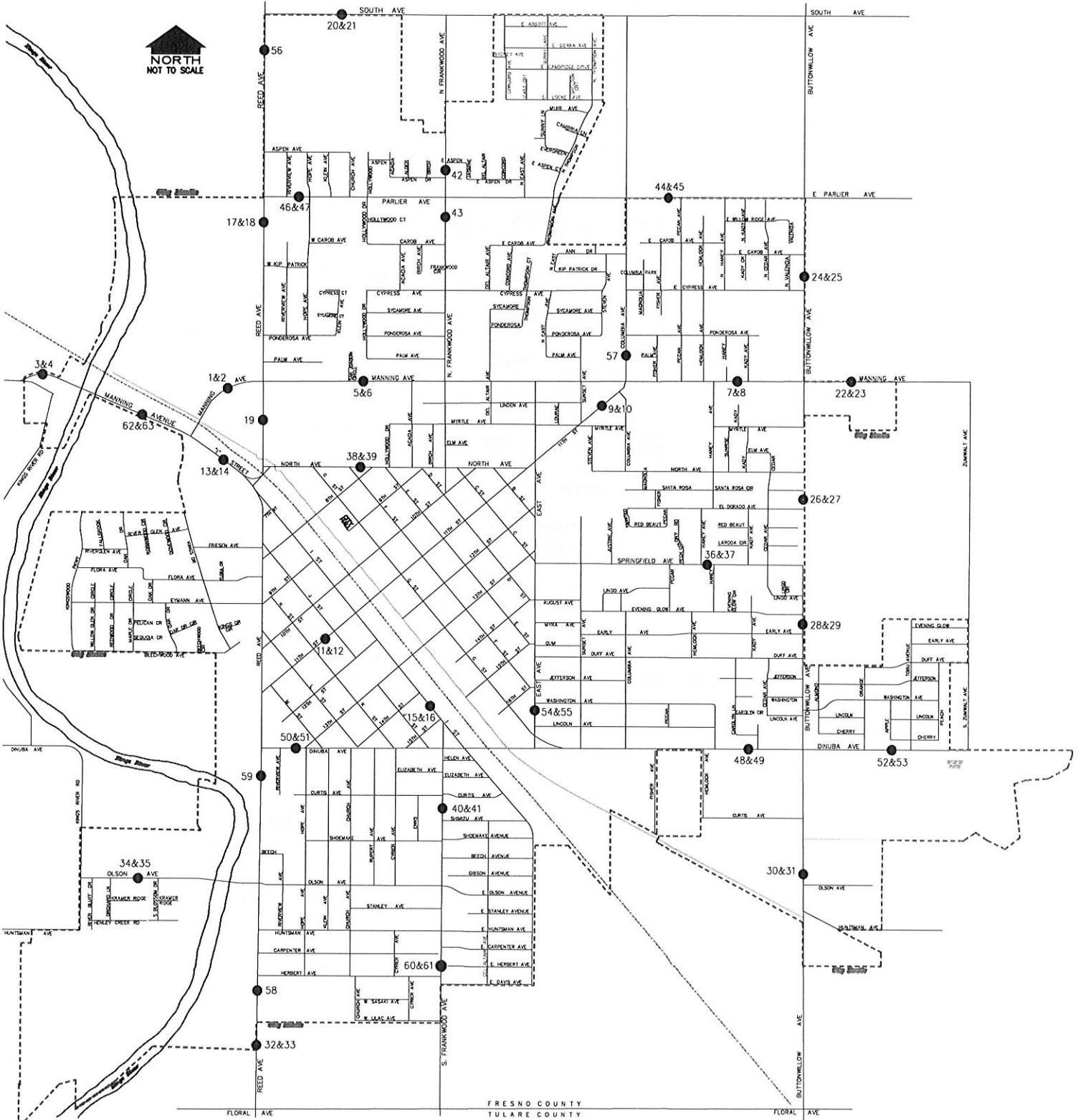
<u>ID</u>	<u>Route Segment:</u>	<u>Speed Limit MPH</u>
57	Columbia Avenue from Parlier Avenue to Manning Avenue	30
48-49	Dinuba Avenue from Sunset Avenue to Buttonwillow Avenue	40
50-51	Dinuba Avenue from Reed Avenue to Sunset Avenue	30
54-55	East Avenue from Manning Avenue to Dinuba Avenue	35
9-10	Eleventh Street from East Avenue to Manning Avenue	30
11-12	Eleventh Street from Reed Avenue to "I" Street	30
42-43	Frankwood Avenue from Manning Avenue to the north City Limit Line	35
5-6	Manning Avenue from Reed Avenue to East Avenue	35
1-2	Manning Avenue from "I" Street to Reed Avenue	35
7-8	Manning Avenue from East Avenue to Buttonwillow Avenue	35
62	Manning Avenue from "I" Street to Kings River Bridge (W/B)	50
19	Reed Avenue from Manning Avenue to Dinuba Avenue	30

The following zones are recommended to remain at the current posted speed limits although the 85<sup>th</sup> percentile rule would require an increase or reduction of the posted zone of 5 mph or more at any one segment than the recommended zone limits. In order to provide for a safer roadway, the following roadway segments were applied the 85<sup>th</sup> percentile 5 mph reduction and in some instances greater and compliance with CVC Sections 627 and 22358.5.

<u>ID</u>	<u>Route Segment:</u>	Speed Limit <u>MPH</u>
26-27		40
28-29	Buttonwillow Avenue from Manning Avenue to the south City Limit Line	40
30-31	<i>Engineering recommends that the lower speed limit be used within this residential and commercial zone area. It is anticipated that future development within this area will add to the congestion of this roadway thereby making the lower speed desirable.</i>	
24-25	Buttonwillow Avenue from Parlier Avenue to Manning Avenue	45
	<i>Engineering recommends that the lower speed limit be used within this residential and commercial zone area. It is anticipated that future development within this area will add to the congestion of this roadway thereby making the lower speed desirable.</i>	
20-21	South Avenue (E/B) from Reed Avenue to the east City Limit Line	40
	<i>Engineering recommends that the lower speed limit be used within this industrial zone area. This roadway segment is a narrow 20-foot wide roadway (10-foot travel lane each direction) with no shoulders. Industrial facilities are located on both sides of this road segment with off-site parking at the west end of this roadway segment restricting sight distance.</i>	
	<i>This segment of roadway is a shared jurisdiction with Fresno County. The west-bound travel lane is within Fresno County and the east-bound travel lane is within the City Limits. It is recommended that the existing posted speed limit remain and that City staff work with County to maintain the current speed limit within this roadway segment.</i>	
22-23	Manning Avenue (E/B) from Buttonwillow Avenue to the east City Limit Line	40
	<i>Engineering recommends that the lower speed limit be used within this commercial zone area. This roadway segment has multiple driveways with parallel parking along the south side of the east-bound travel lane and a merging east-bound second lane restricting sight distance. This roadway segment is a planned Class II Bikeway and bicyclist safety is concern.</i>	
	<i>This segment of roadway is a shared jurisdiction with Fresno County. The west-bound travel lane is within Fresno County and the east-bound travel lane is within the City Limits. It is recommended that existing posted speed limit remain with minor modifications as shown in EXHIBIT A and that City staff work with County to maintain the current speed limit within this roadway segment.</i>	

<u>ID</u>	<u>Route Segment:</u>	<u>Speed Limit MPH</u>
52-53	Dinuba Avenue from Buttonwillow to the east City Limit Line  <i>Engineering recommends that the lower speed limit be used within this zone area. This segment of roadway is a planned Class III Bikeway with missing sidewalk along the south side which leads to and fronts the City's Sports Park. Bicyclist and pedestrian safety is a concern, thereby making the lower speed desirable. It is recommended that the existing speed limit remain within this roadway segment with minor modifications as shown in EXHIBIT B1 - B2.</i>	45
40-41	Frankwood Avenue from "I" Street to Shoemake Avenue  <i>Engineering recommends that the lower speed limit be used, this street segment is primarily within a residential zone area with 13 or more dwelling units fronting the roadway segment w/in a 1/4 mile. There are vehicles that back into the roadway from residential driveways. This segment of roadway is on a designated School Route and a planned Class II Bikeway w/ bicyclist and pedestrian safety a concern, thereby making the lower speed desirable.</i>	35
60-61	Frankwood Avenue from Shoemake Avenue to Herbert Avenue  <i>Engineering recommends that the lower speed limit be used within this residential zone area. This roadway segment is a planned Class II Bikeway w/ bicyclist safety a concern. It is anticipated that future development within this area will add to the congestion of this roadway thereby making the lower speed desirable.</i>	40
13-14	"I" Street from Manning Avenue to Reed Avenue  <i>Engineering recommends that the lower speed limit be used within this commercial area with a mid-block left-turn lane. This roadway segment leads to the City's Downtown retail zone, thereby making the lower speed desirable.</i>	35
15-16	"I" Street from Reed Avenue to Dinuba Avenue  <i>Engineering recommends that the lower speed limit be used within this commercial area which also leads to the City's Downtown retail zone. There are over 13 business structures within a 1/4 mile in this roadway segment. In addition, a number of midblock left and right turn movements into businesses fronting this roadway segment, thereby making the lower speed desirable.</i>	30
62-63	Manning Avenue from "I" Street to Kings River Bridge  <i>Engineering recommends that the lower speed limit be used within this zone area. Traffic control signal is located at the intersection of Manning Avenue and "I" Street and it is anticipated that future development in this area will add to the congestion of this roadway. This roadway segment is a Class III Bikeway with bicyclist safety a concern, thereby making the lower speed desirable.</i>	40

<u>ID</u>	<u>Route Segment:</u>	Speed Limit <u>MPH</u>
3-4	Manning Avenue from the west City Limit Line to the Kings River Bridge	50
	<i>Engineering recommends that the lower speed limit be used within this zone area. Sight distance is a concern for east and west bound traffic due to horizontal/vertical roadway geometry and traffic entering onto Manning Avenue within this roadway segment. No sidewalks within this segment of roadway. This segment of roadway is a Regional Bikeway with bicyclist and pedestrian safety a concern. New development within this area add to the congestion of this roadway, thereby making the lower speed desirable. It is recommended that the existing speed limit remain within this roadway segment with minor modifications as shown in EXHIBIT C1 - C2.</i>	
38-39	North Avenue from Reed Avenue to East Avenue	25
	<i>Engineering recommends that the lower speed limit be used within this street segment primarily within a residential and school zone area. There are vehicles that back into the roadway from residential driveways. This segment of roadway is on a designated School Route and a Class II Bikeway w/ bicyclist and pedestrian safety a concern, thereby making the lower speed desirable.</i>	
34-35	Olson Avenue from Kings River Road to Reed Avenue	35
	<i>Engineering recommends that the lower speed limit be used within this zone area due to the proximity of the recreational areas along the Kings River and vehicle turn movements on this roadway segment. Horizontal and vertical sight distance along east and west bound lanes of Olson Avenue at the bridge are a concern on this segment. This roadway segment has a high pedestrian count on the north side with no curb separation between west bound vehicle traffic. This roadway segment is a Regional Bikeway with bicyclist and pedestrian safety a concern, thereby making the lower speed desirable.</i>	
44-45	Parlier Avenue from Frankwood Avenue to Buttonwillow Avenue	35
	<i>Engineering recommends that the lower speed limit be used within this Residential Zone area. Sight distance is a concern along this roadway segment. This segment of roadway is on a designated School Route which lacks sidewalk along the County islands. This roadway is a planned Class II Bikeway with bicyclist and pedestrian safety concerns, thereby making the lower speed desirable.</i>	
46-47	Parlier Avenue from Reed Avenue to Frankwood Avenue	30
	<i>Engineering recommends that the lower speed limit be used within this residential zone area. Sight distance is a concern within this roadway segment. There are vehicles that back into the roadway from residential driveways. This segment of roadway is on a designated School Route and a planned Class II Bikeway with bicyclist and pedestrian safety concerns, thereby making the lower speed desirable.</i>	



PREPARED BY:  
 CITY OF REEDLEY  
 ENGINEERING DIVISION  
 1733 9TH STREET  
 REEDLEY, CA 93654

**FIGURE I**  
**CITY OF REEDLEY**  
**2011 RADAR SPEED ZONE**  
**ENGINEERING and TRAFFIC SURVEY**

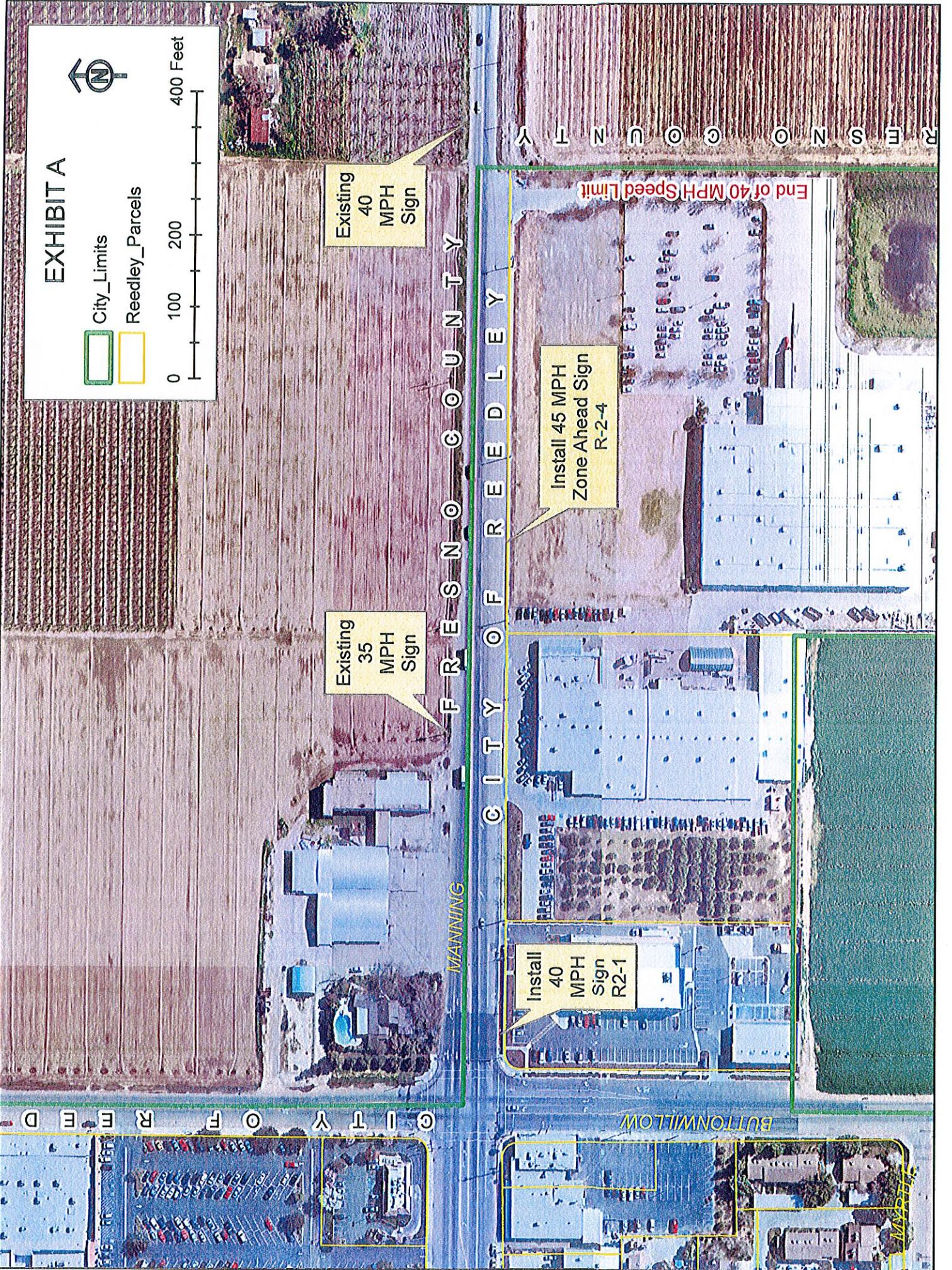
**LEGEND**  
 ● SPEED SURVEY LOCATIONS

# EXHIBIT A

City Limits

Reedley Parcels

0 100 200 400 Feet



Existing 35 MPH Sign

Existing 40 MPH Sign

Install 40 MPH Sign R2-1

Install 45 MPH Zone Ahead Sign R-2-4

End of 40 MPH Speed Limit

MANNING

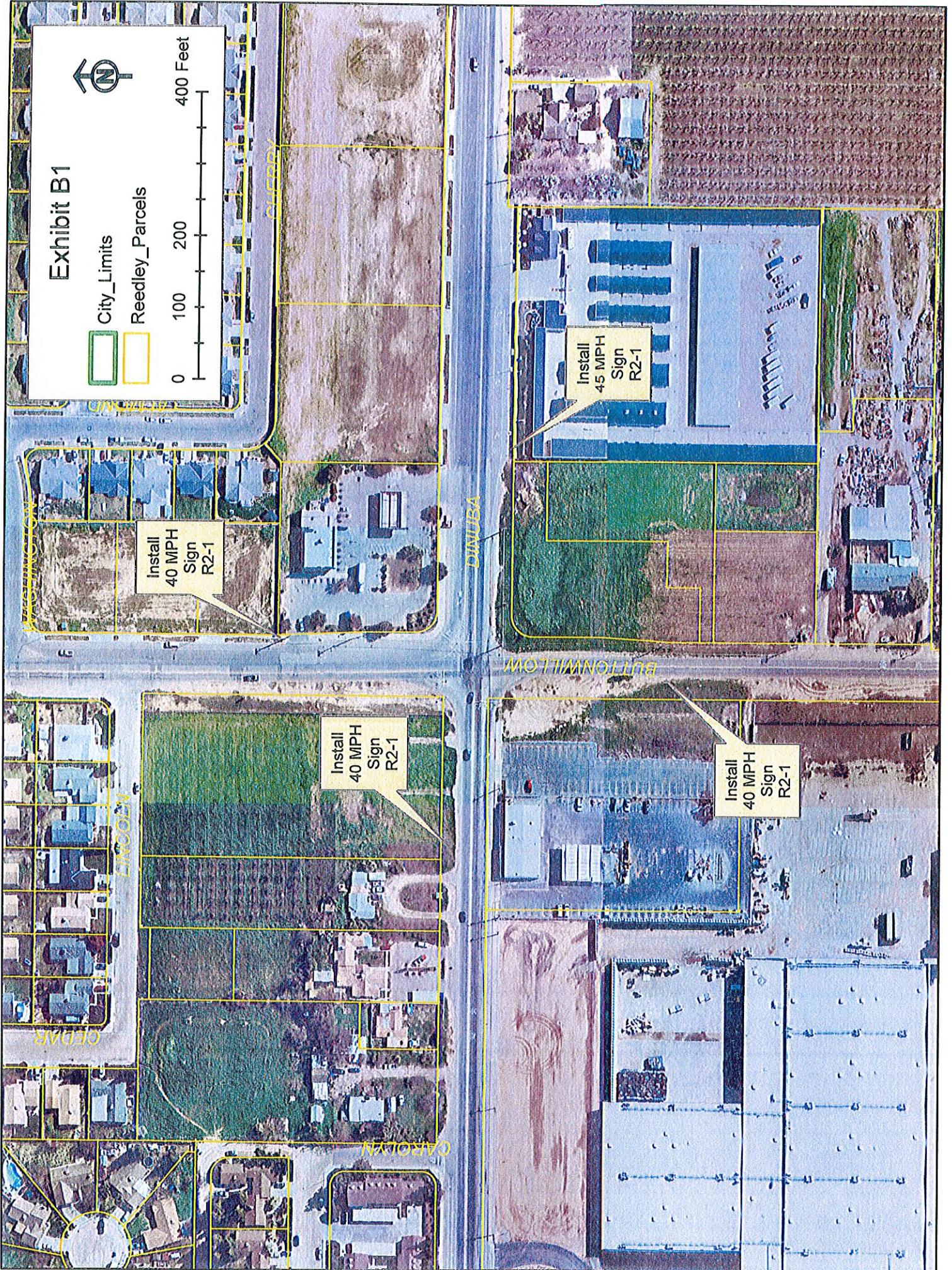
CITY OF REEDLEY

CITY OF REEDLEY

BUTTONWILLOW

RESNO COUNTY

MADISON



# Exhibit B1



City\_Limits

Reedley\_Parcels

0 100 200 400 Feet

Install  
40 MPH  
Sign  
R2-1

Install  
40 MPH  
Sign  
R2-1

Install  
45 MPH  
Sign  
R2-1

Install  
40 MPH  
Sign  
R2-1

# Exhibit B2



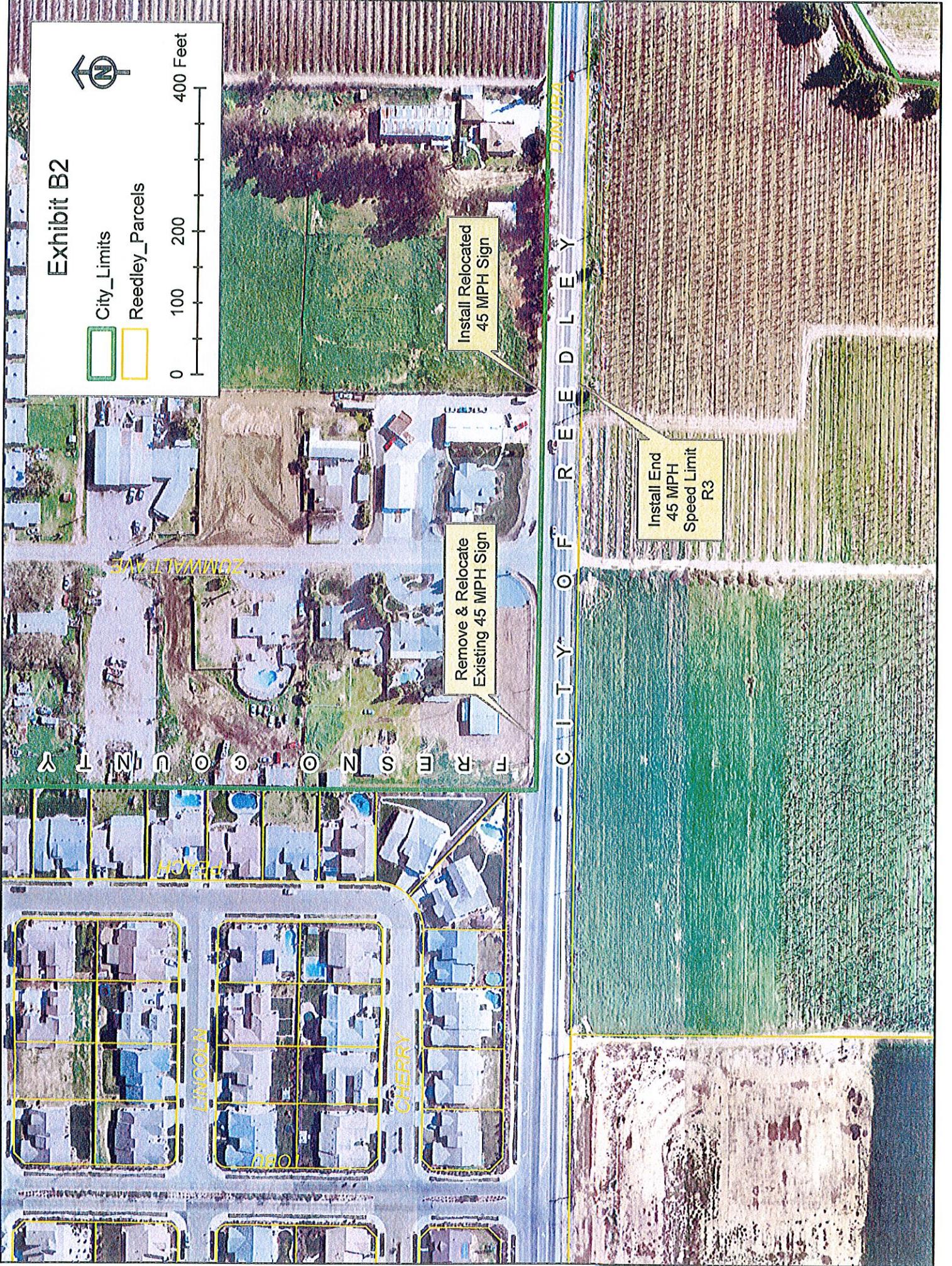
City\_Limits



Reedley\_Parcels



0 100 200 400 Feet



Remove & Relocate Existing 45 MPH Sign

Install Relocated 45 MPH Sign

Install End 45 MPH Speed Limit R3

# Exhibit C1



City\_Limits

Reedley\_Parcels

0 100 200 400 Feet

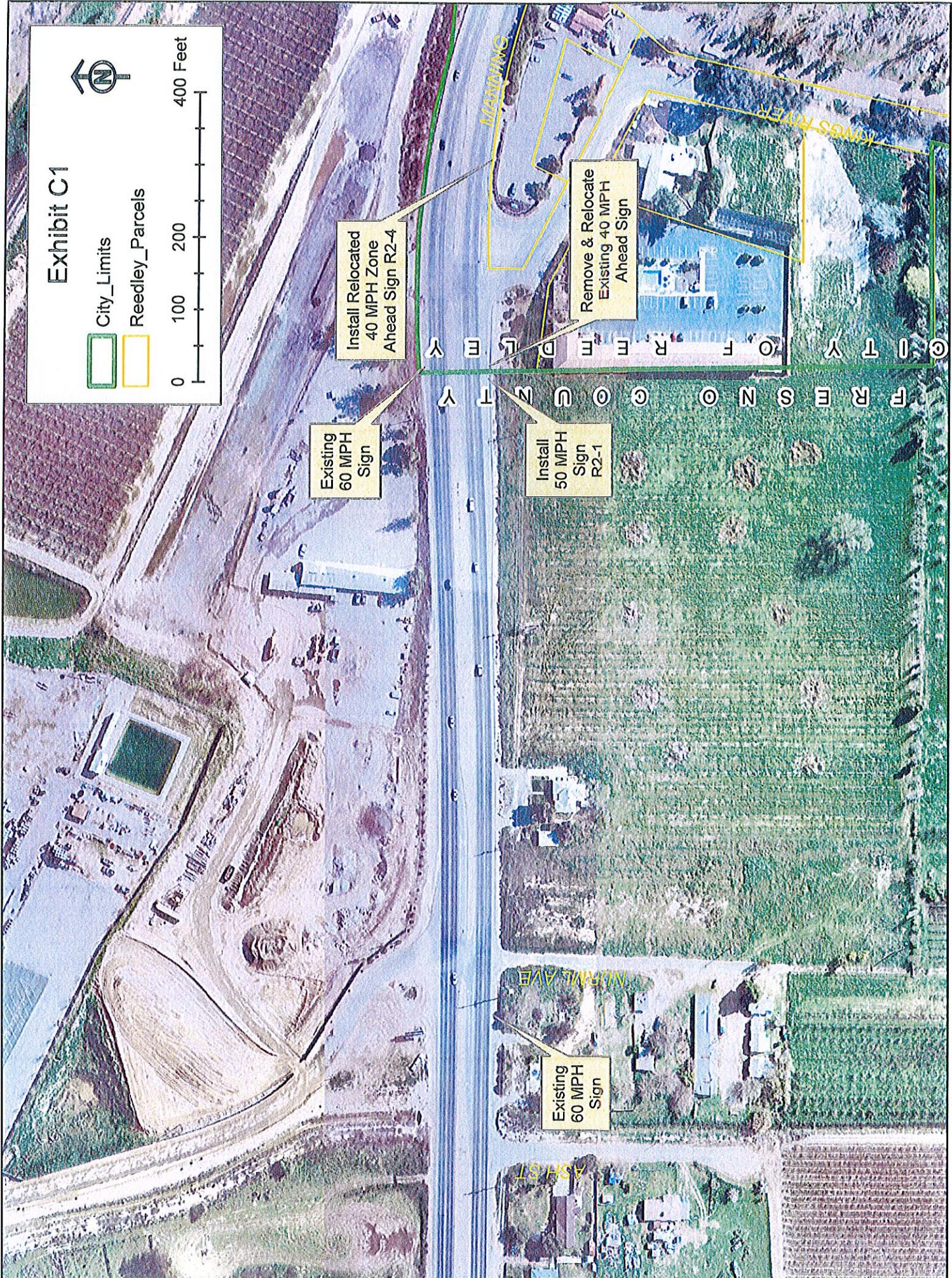
Existing  
60 MPH  
Sign

Install Relocated  
40 MPH Zone  
Ahead Sign R2-4

Install  
50 MPH  
Sign  
R2-1

Existing  
60 MPH  
Sign

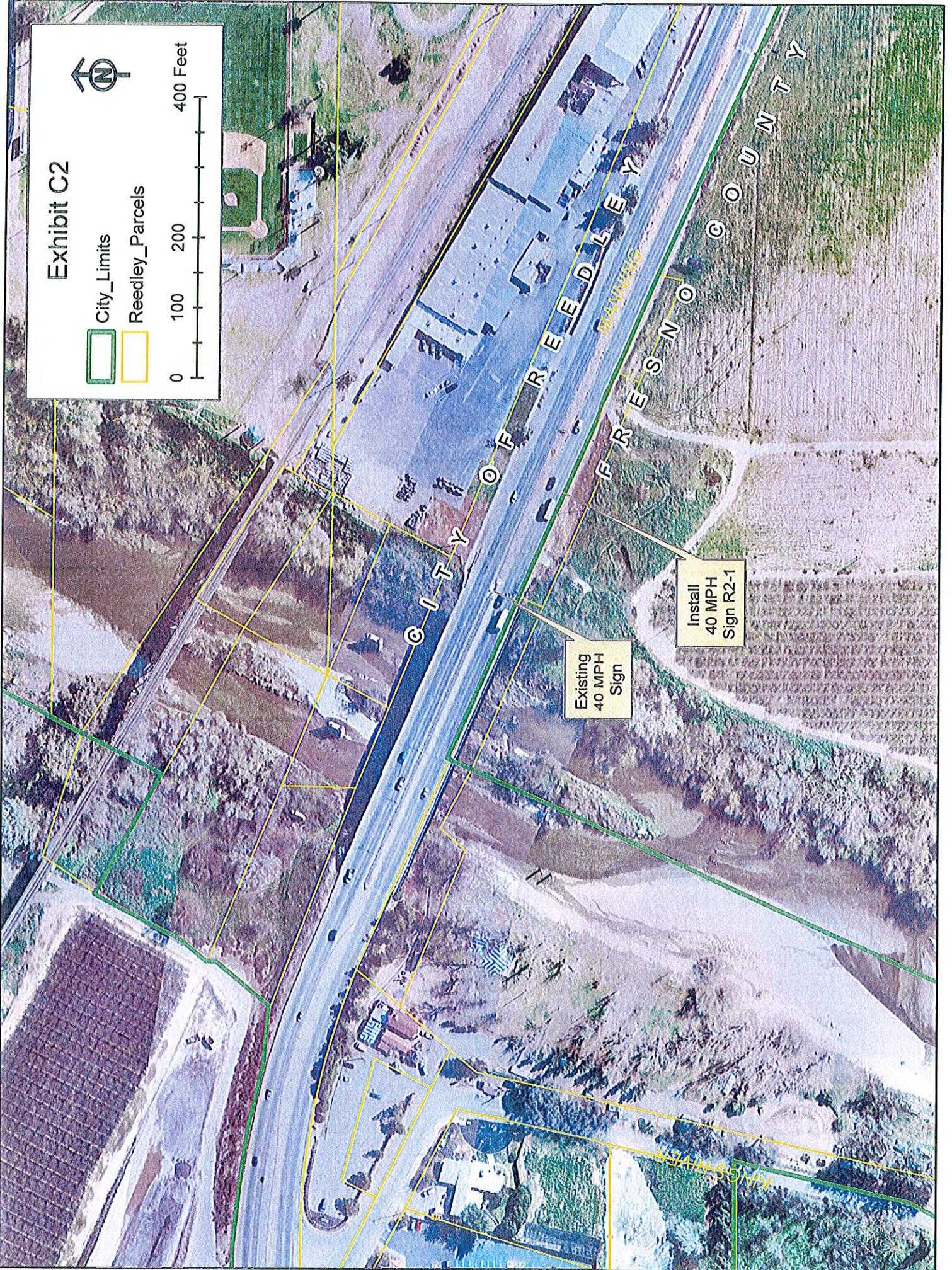
Remove & Relocate  
Existing 40 MPH  
Ahead Sign



# Exhibit C2



- City\_Limits
- Reedley\_Parcel



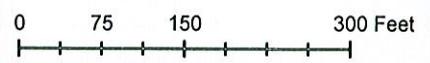
Existing  
40 MPH  
Sign

Install  
40 MPH  
Sign R2-1

CITY OF REEDLEY  
FRESNO COUNTY  
MAINWAY

Exhibit D1

- City\_Limits
- Reedley\_Parcels



Existing  
55 MPH  
Sign

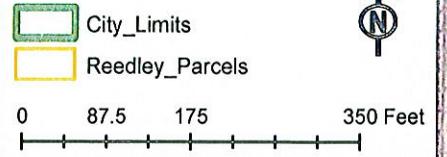
Existing  
45 MPH  
Sign (County)

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SOUTH



Exhibit D2



Existing Speed Checked By Radar Sign

Existing 45 MPH Sign

Existing 35 MPH Sign Remove & Replace w/ 35 MPH Zone Ahead Sign R2-4

Existing 35 MPH Sign

Crosswalk

