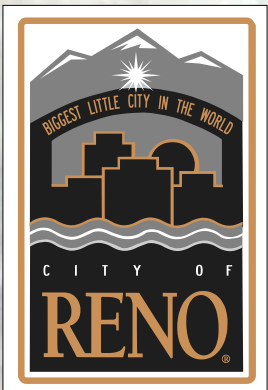


City of Reno

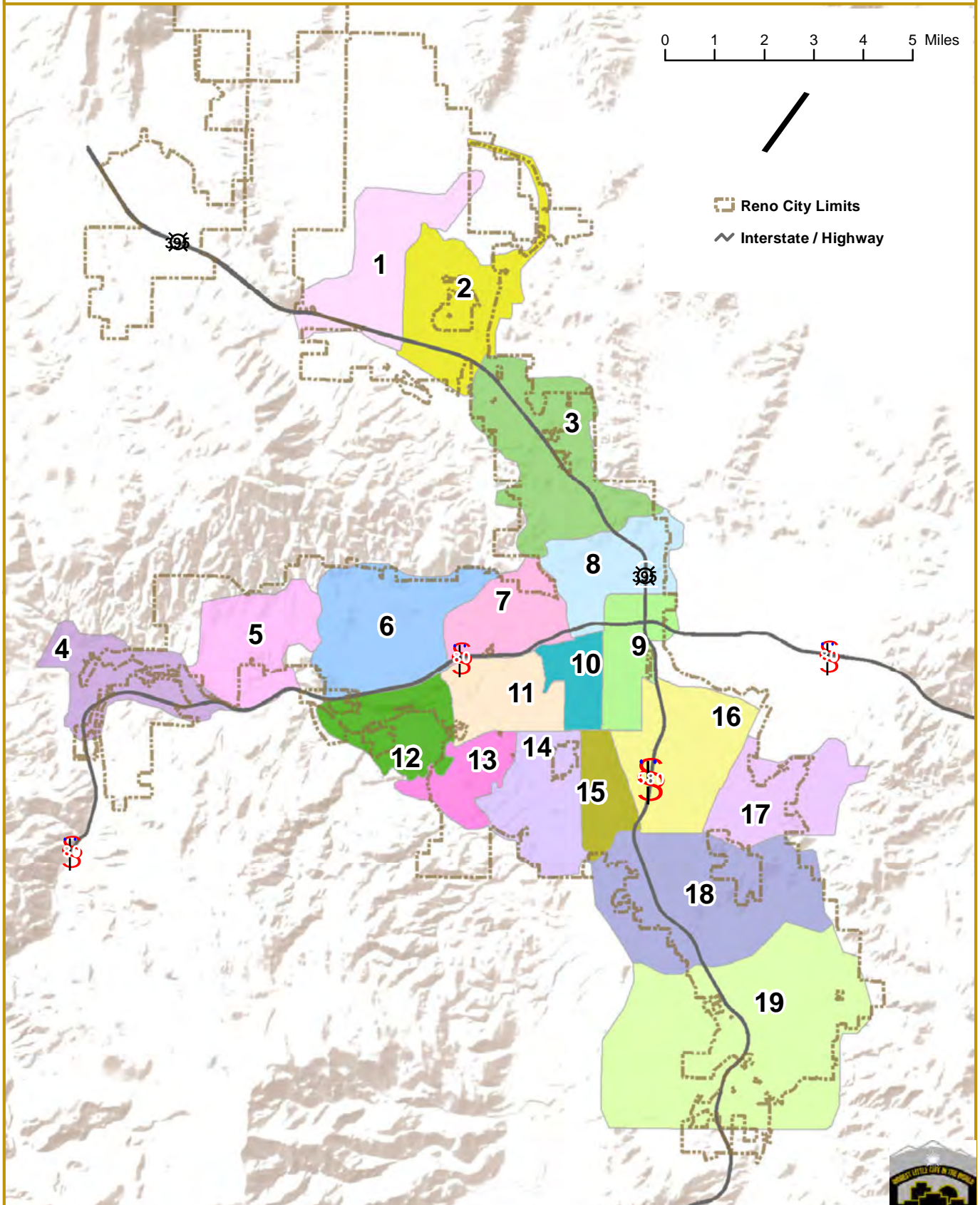
Snow and Ice Control Routes



REVISED NOV. 2018

City of Reno

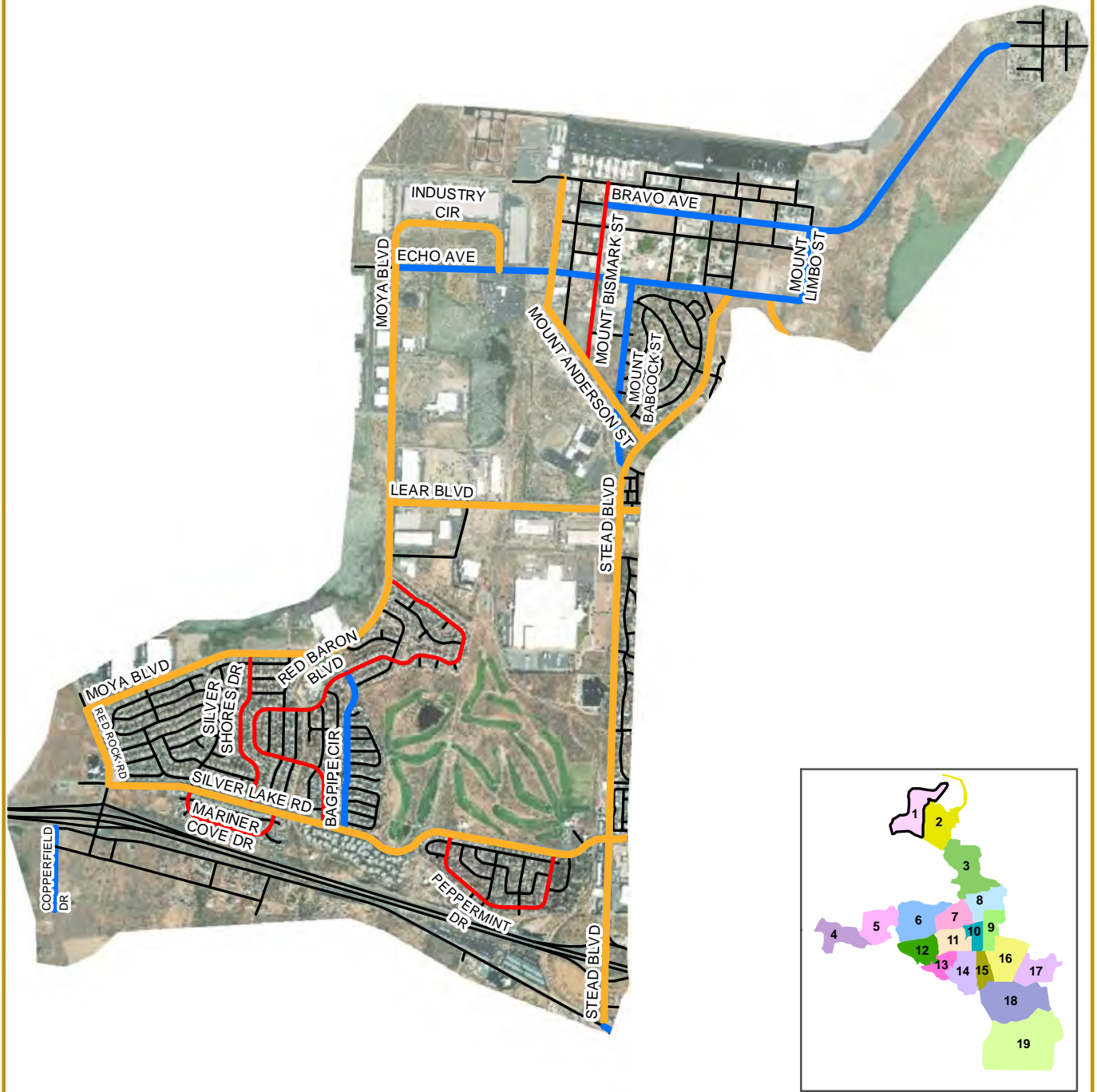
Snow and Ice Control Routes



Winter 2018-2019.
Map created November 2018,
City of Reno GIS.

(775) 334-INFO (4636) | Reno.Gov | @CityofReno

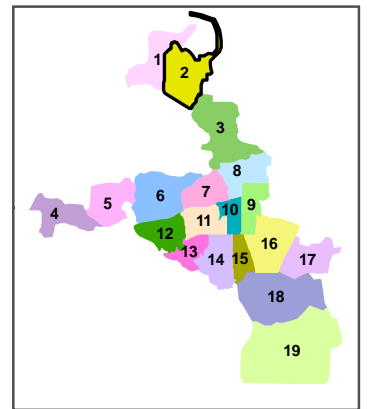




- 🔴 Priority 1 Multiple Lanes = Orange
- 🔵 Priority 1 Single Lanes = Blue
- 🔴 Priority 2 Bus Routes = Red
- ⚫ Priority 3 = Black

All Priority 1 streets get brine when conditions permit.

0 0.5 1 Miles

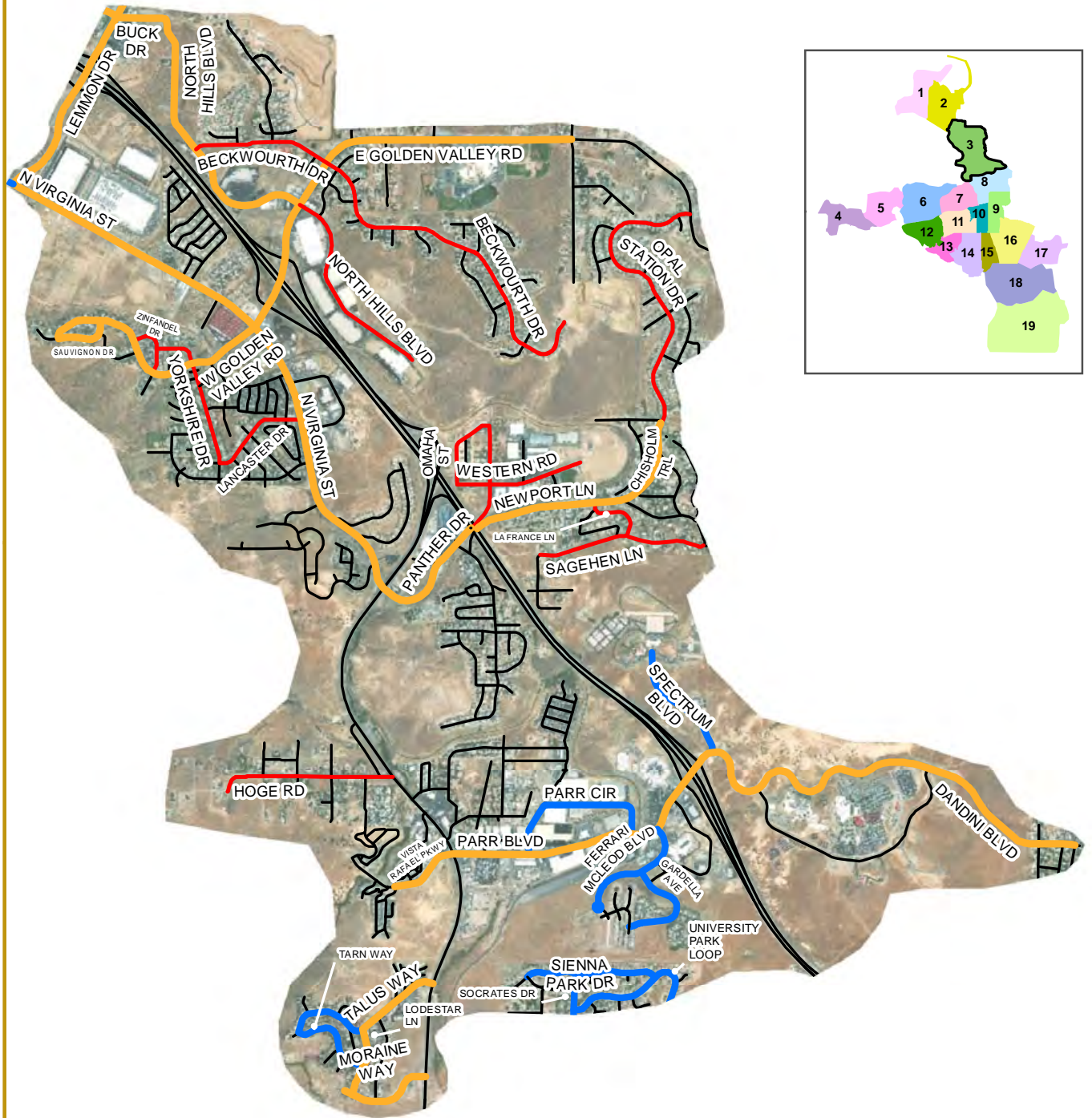


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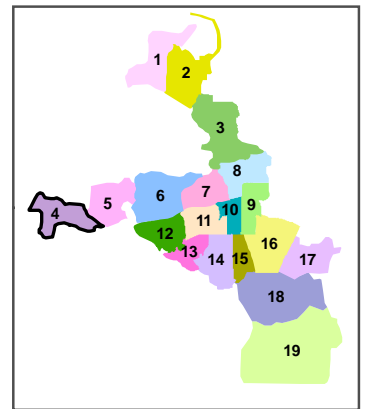
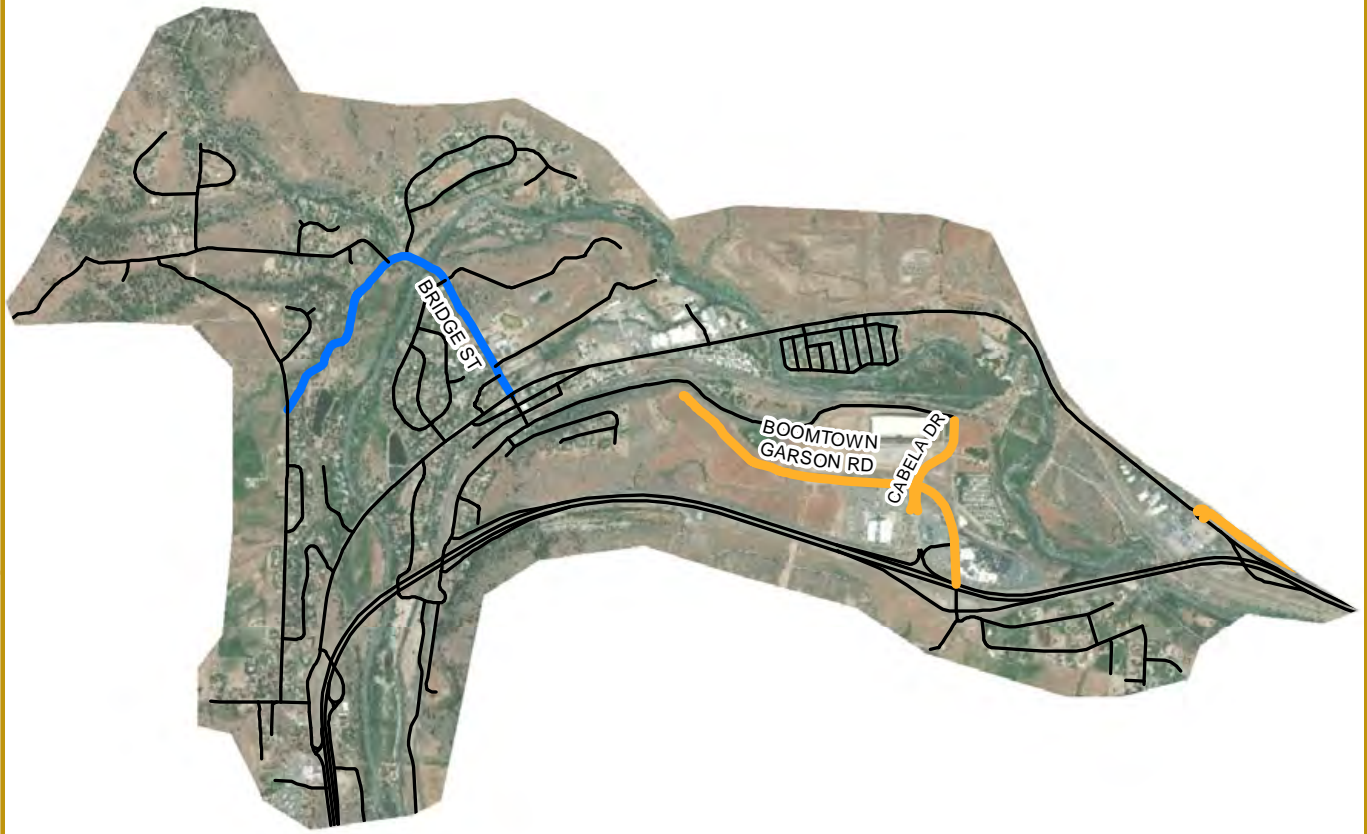
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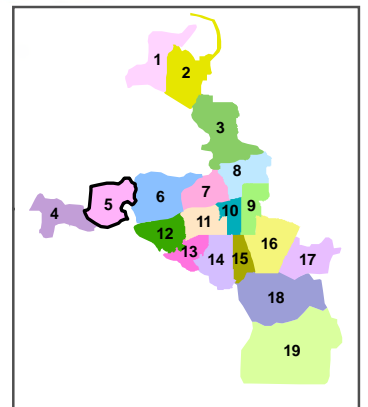
0 0.5 1 Miles





KEY TO UNLABELLED STREETS

- | | |
|-------------------------|--------------------------|
| 1 = Evergreen Ridge Way | 7 = Cabin Creek Trl |
| 2 = Trailcreek Way | 8 = Meridian Ranch Dr |
| 3 = Hidden Park Dr | 9 = Orchard Park Trl |
| 4 = Bay Meadows Dr | 10 = Copper Mountain Cir |
| 5 = Ashland Bluff Way | 11 = Chalkstone Way |
| 6 = Mt Pleasant Dr | |



🔴 Priority 1 Multiple Lanes = Orange

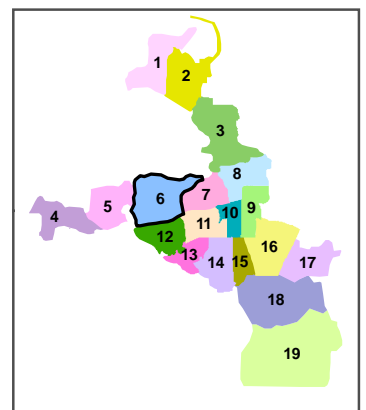
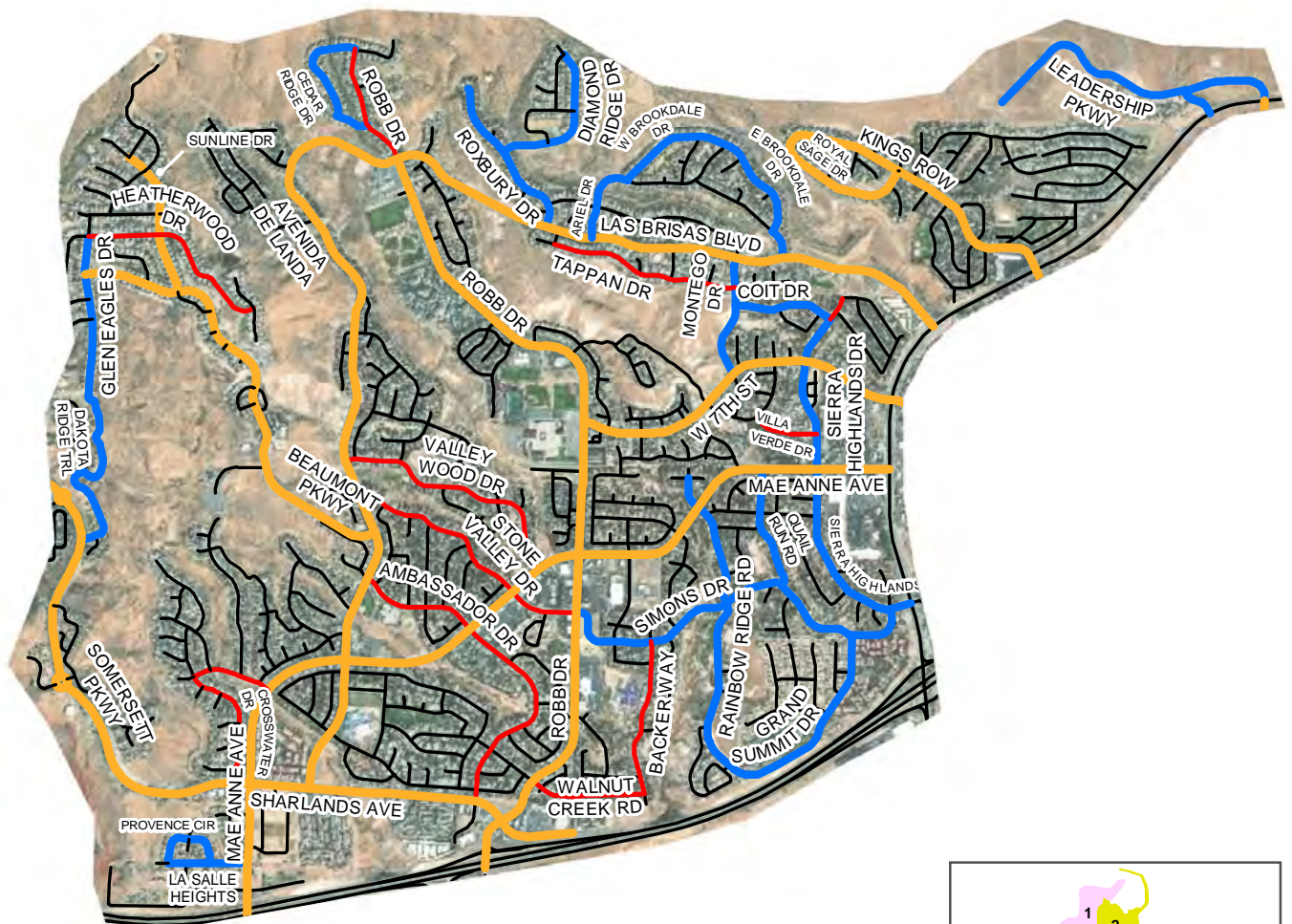
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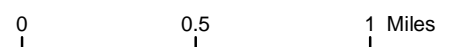
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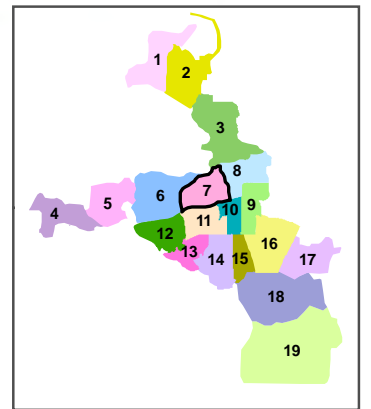
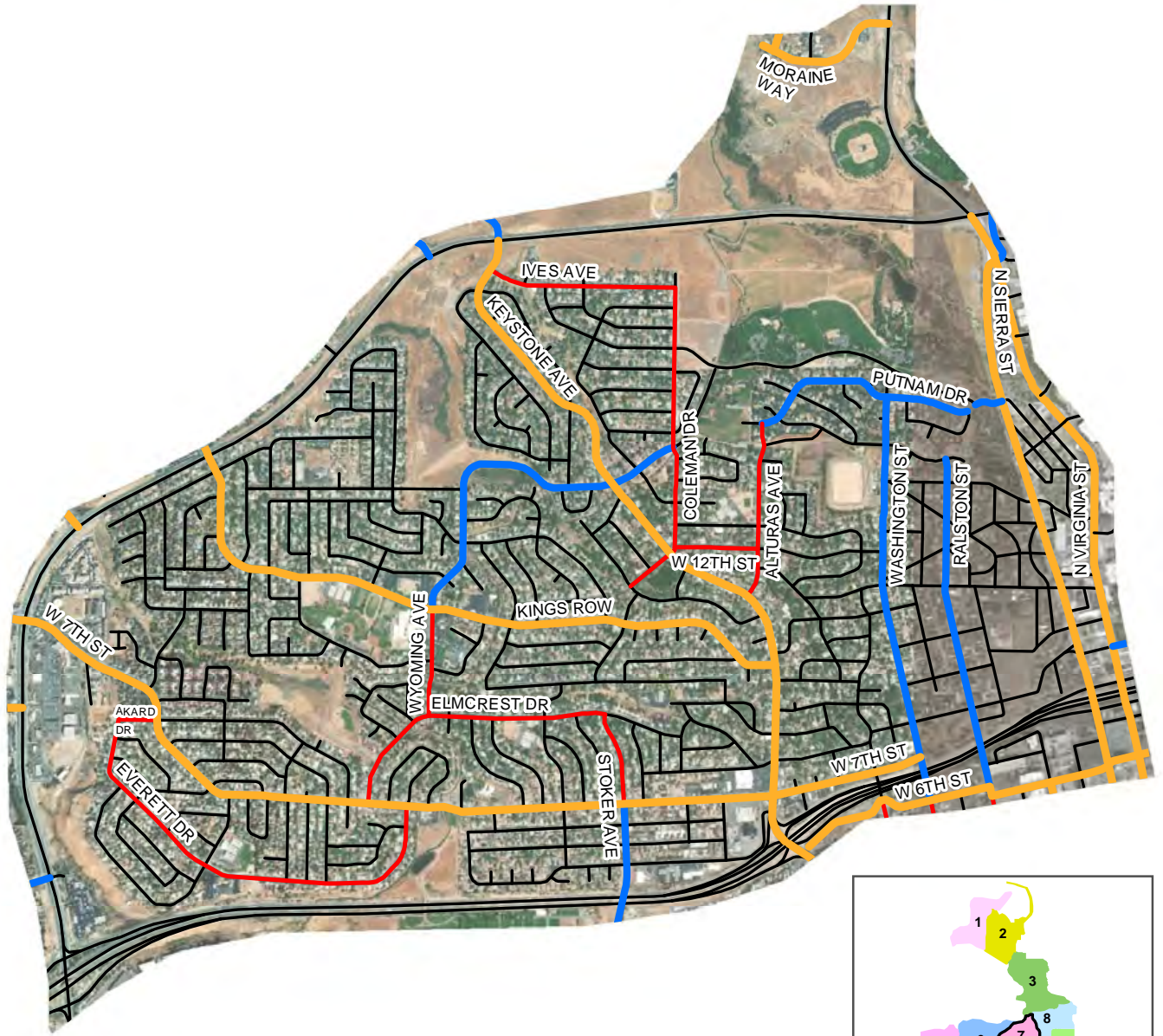
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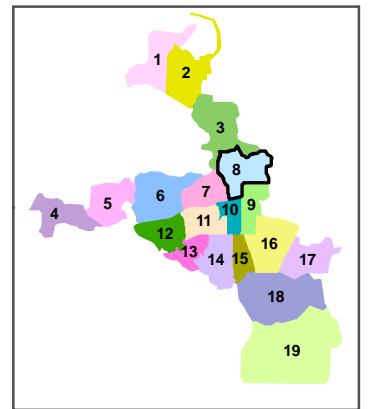
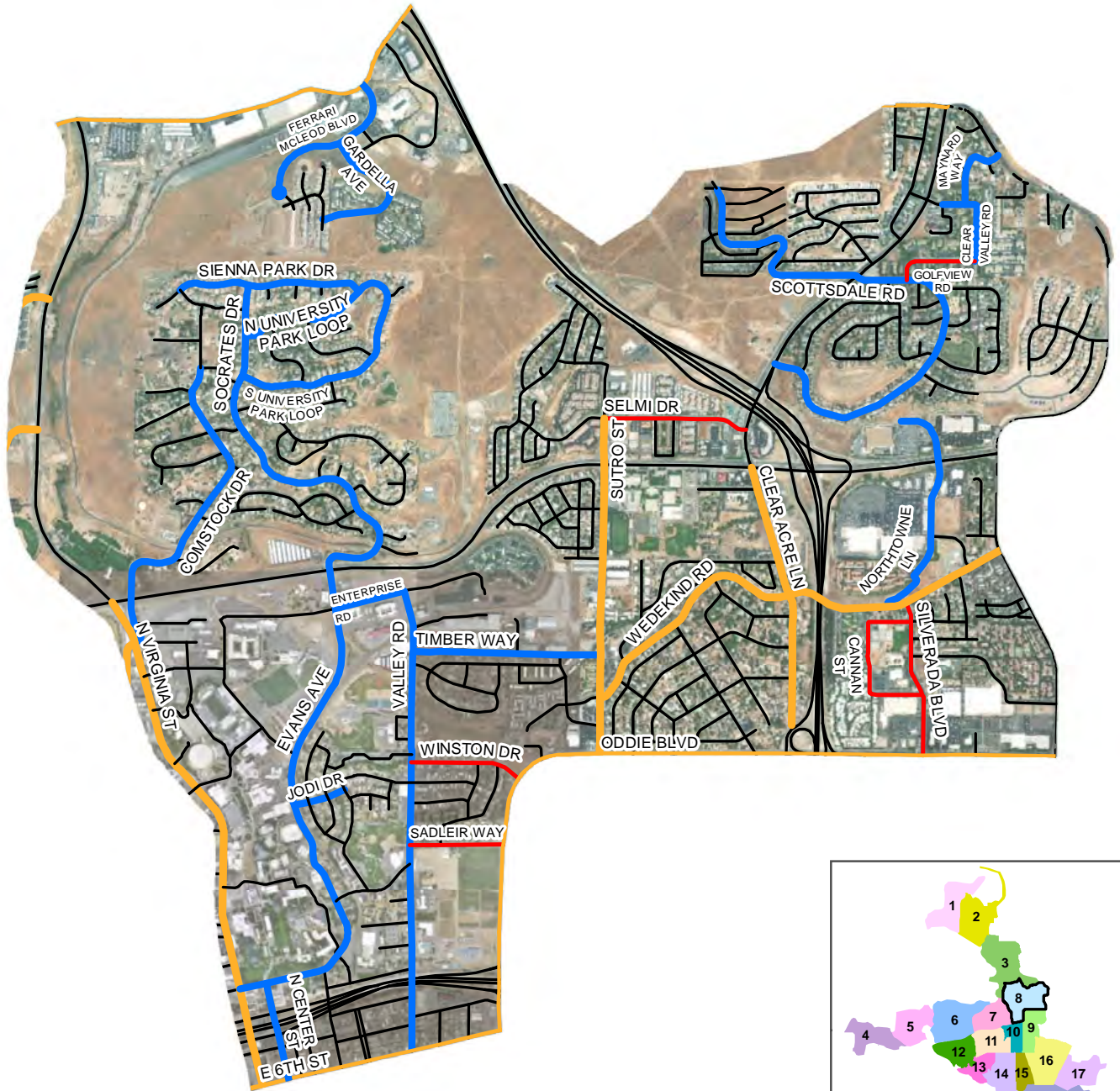
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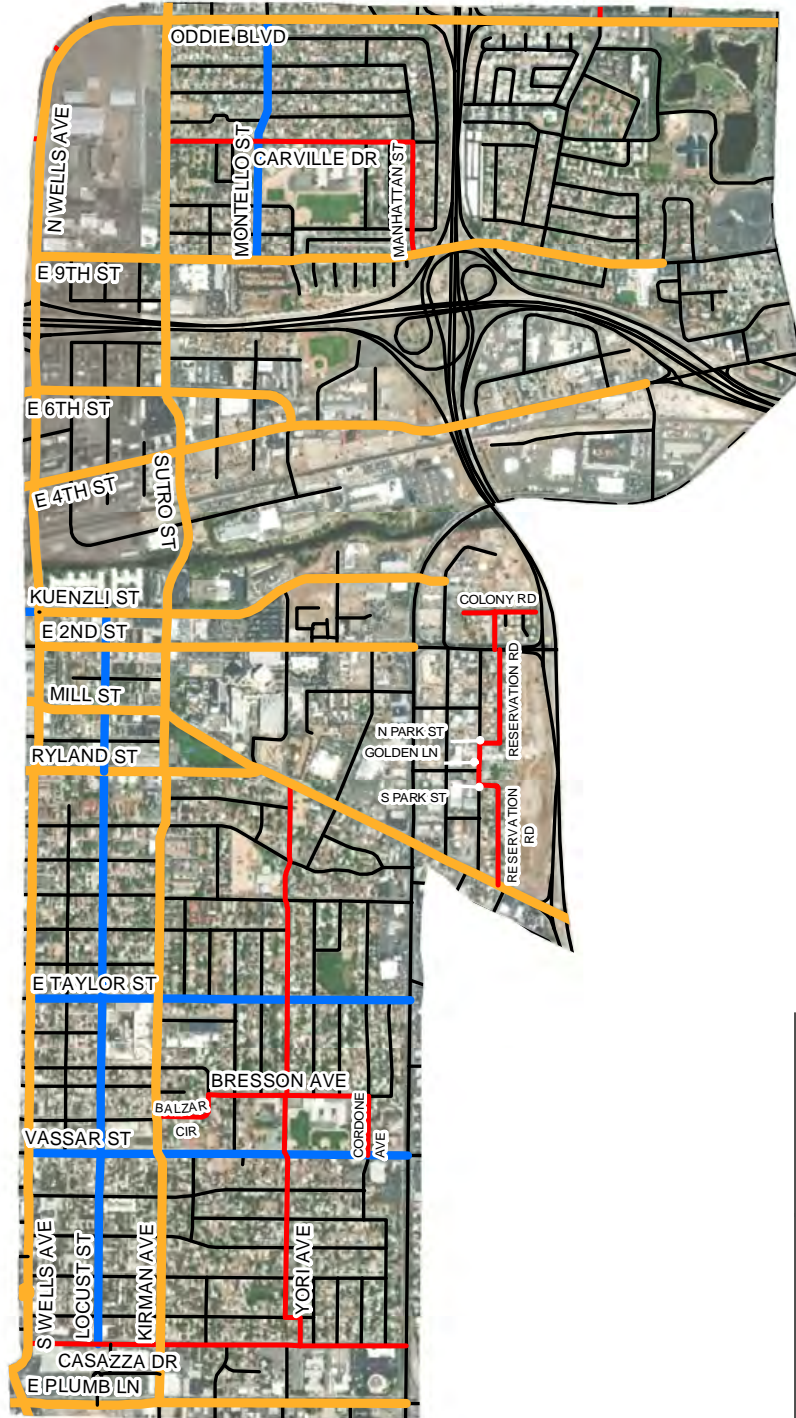
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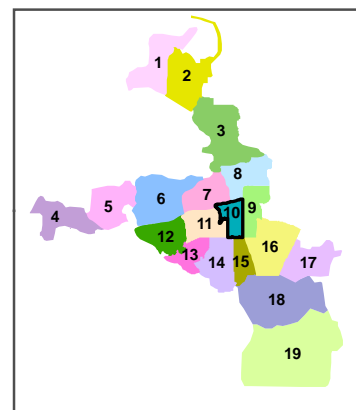
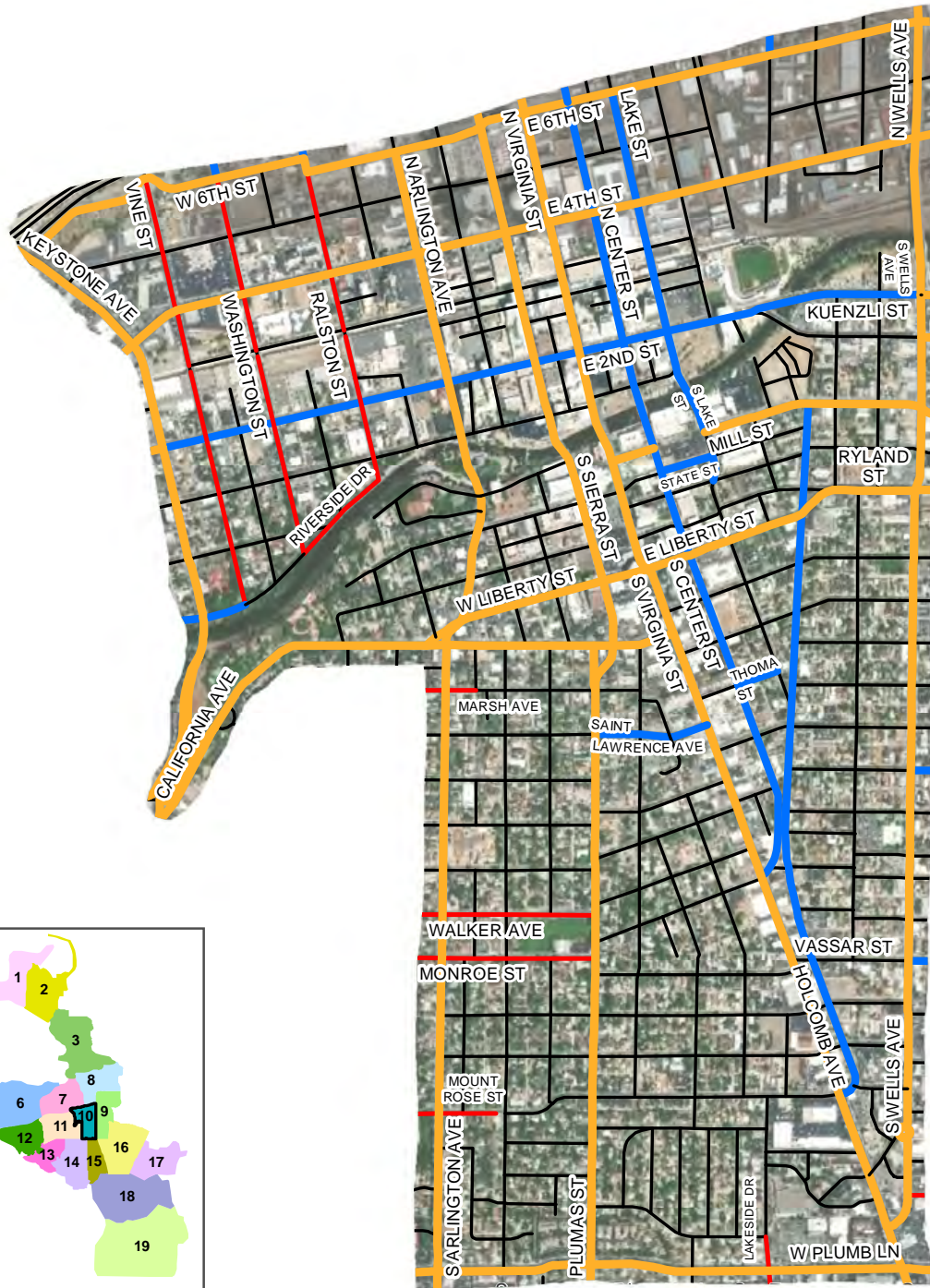
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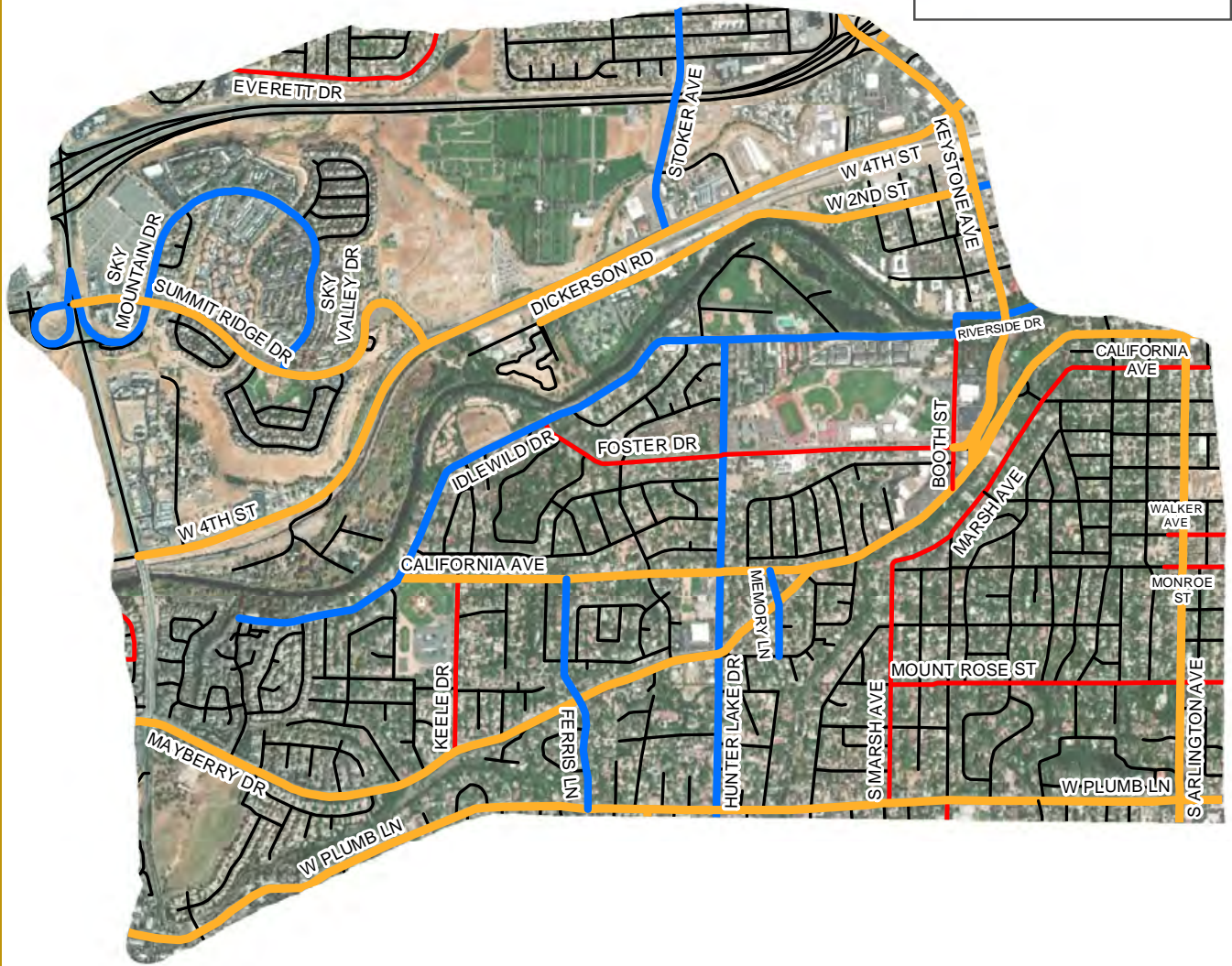
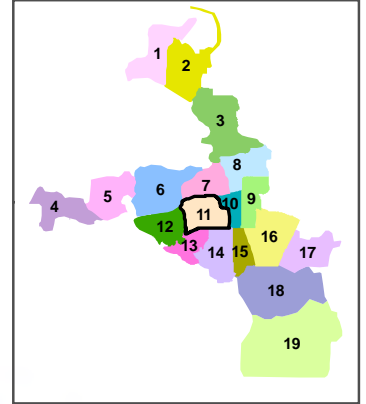
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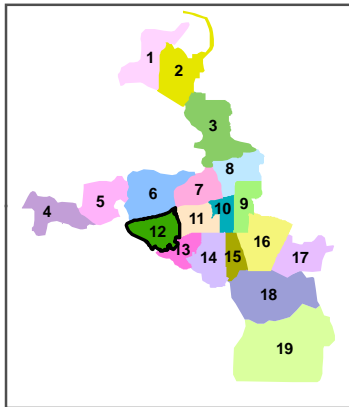
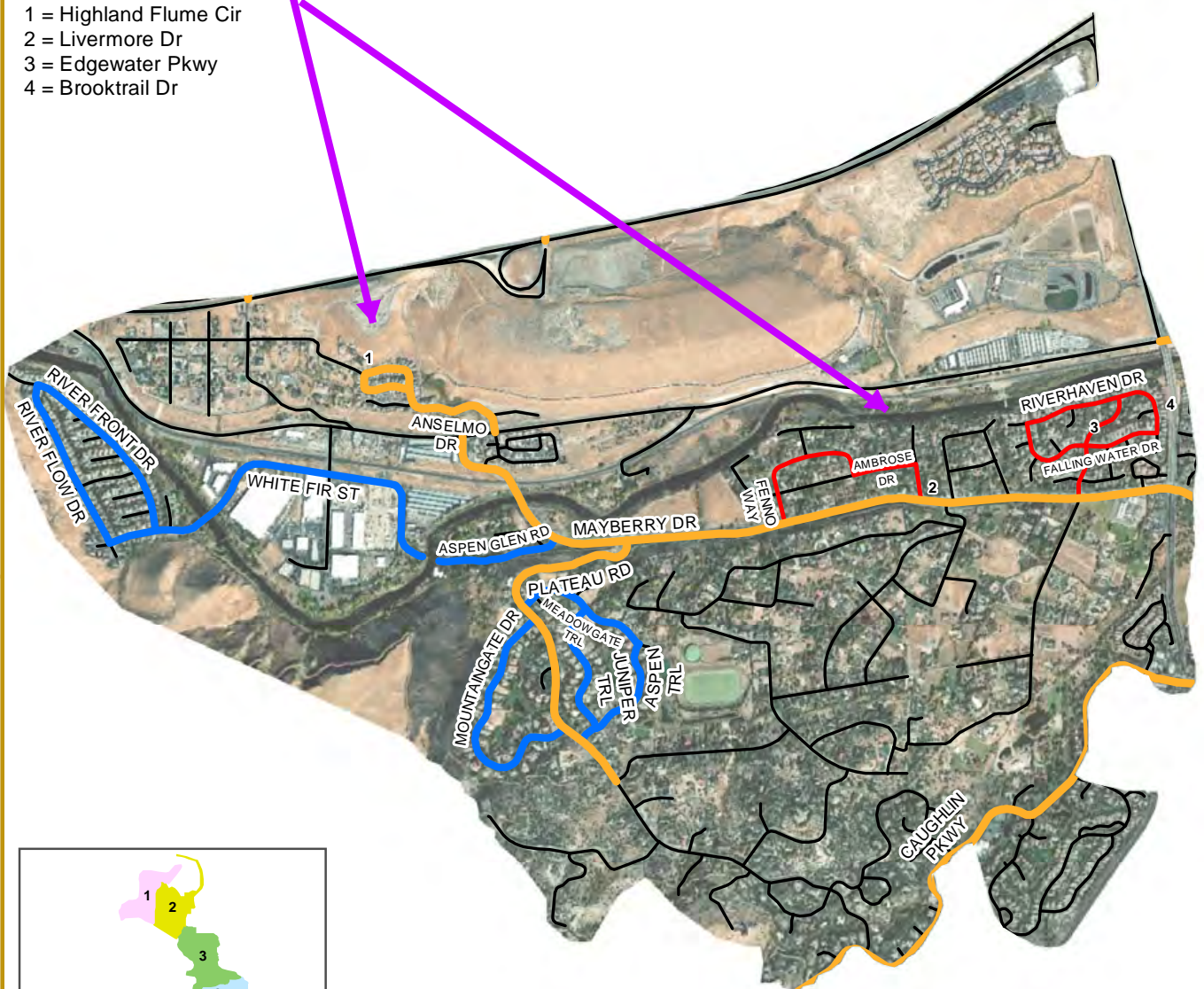
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0 0.5 1 Miles

KEY TO UNLABELLED STREETS

- 1 = Highland Flume Cir
- 2 = Livermore Dr
- 3 = Edgewater Pkwy
- 4 = Brooktrail Dr



🔴 Priority 1 Multiple Lanes = Orange

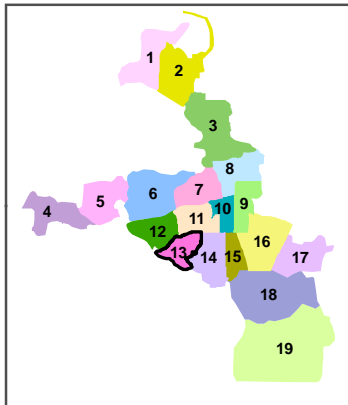
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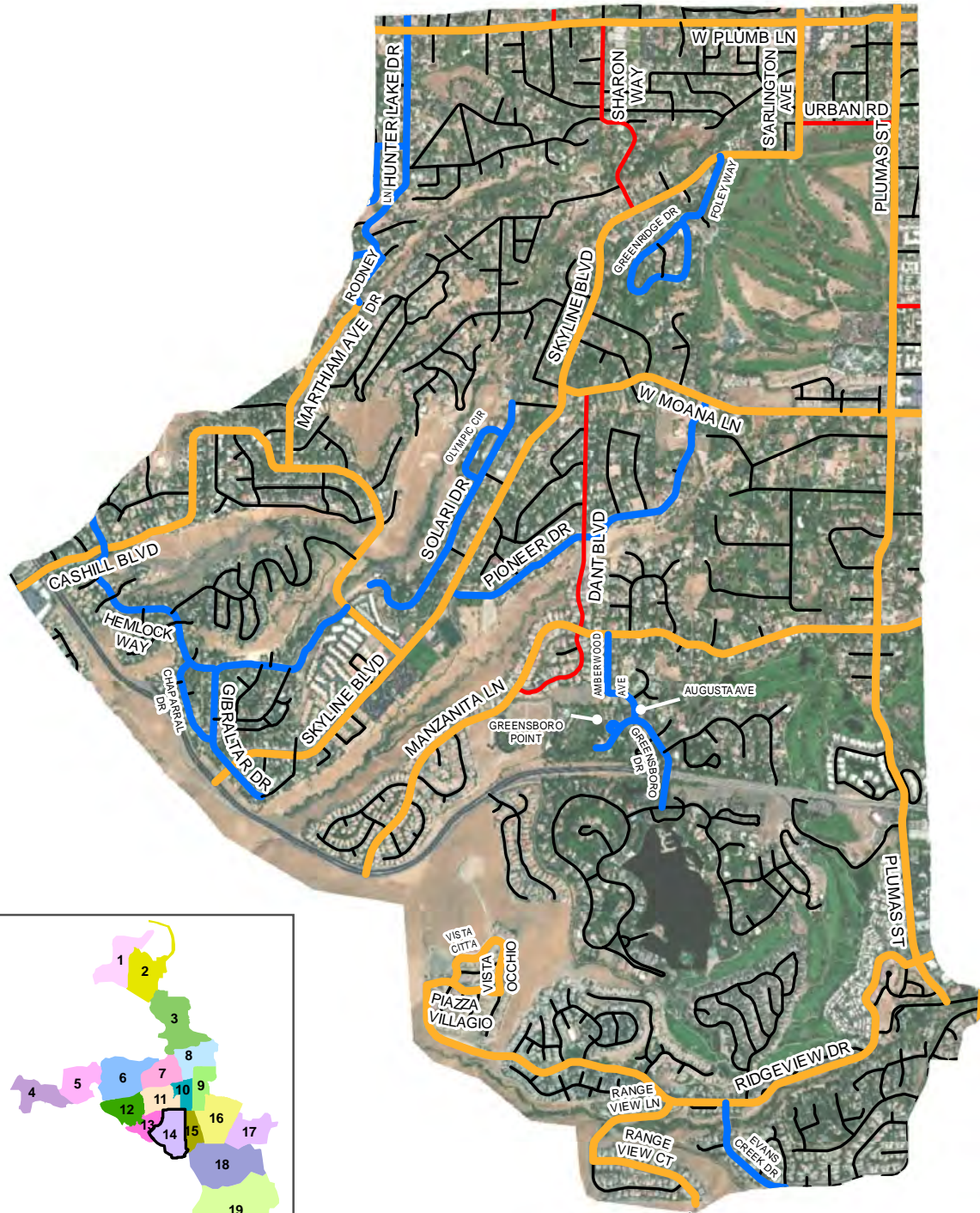
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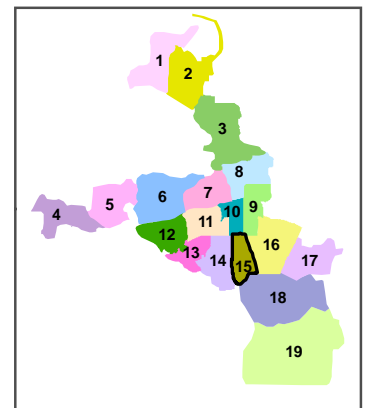
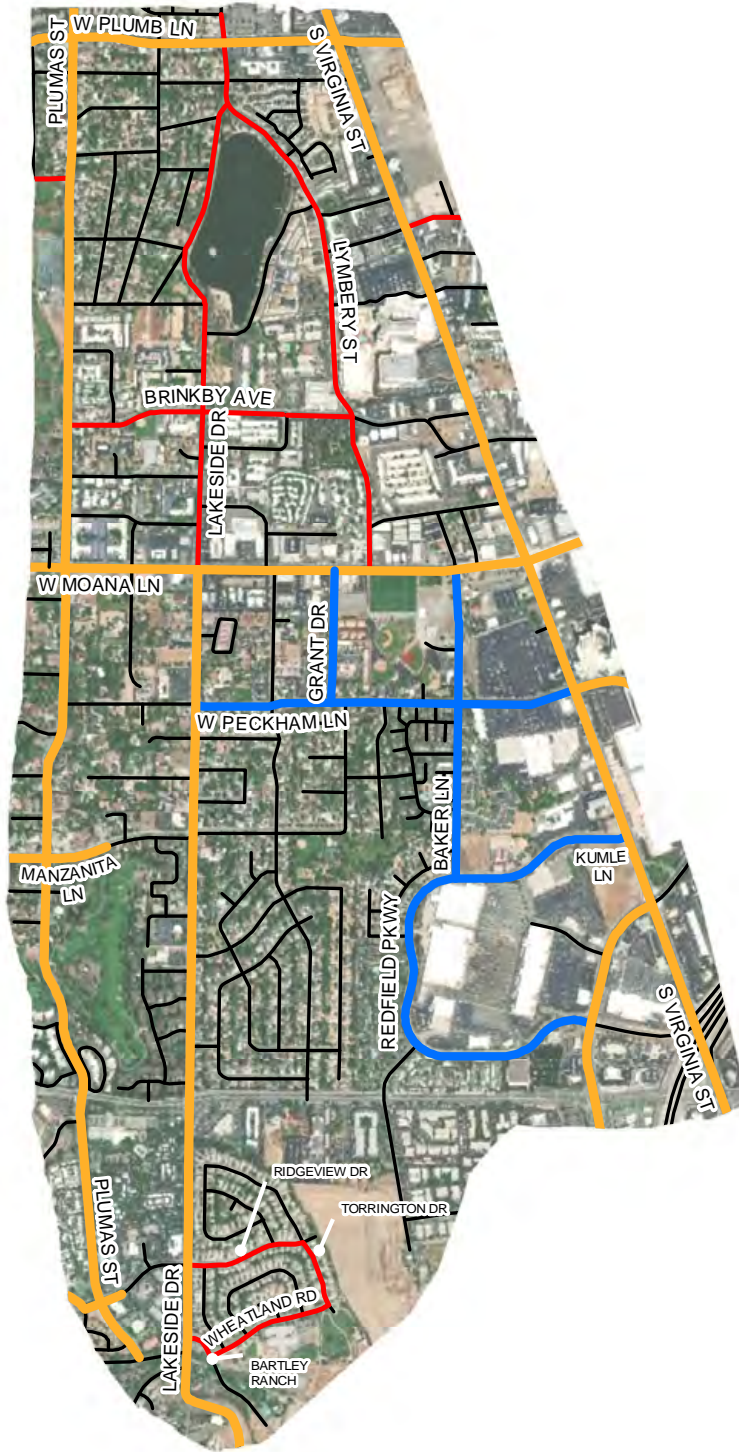
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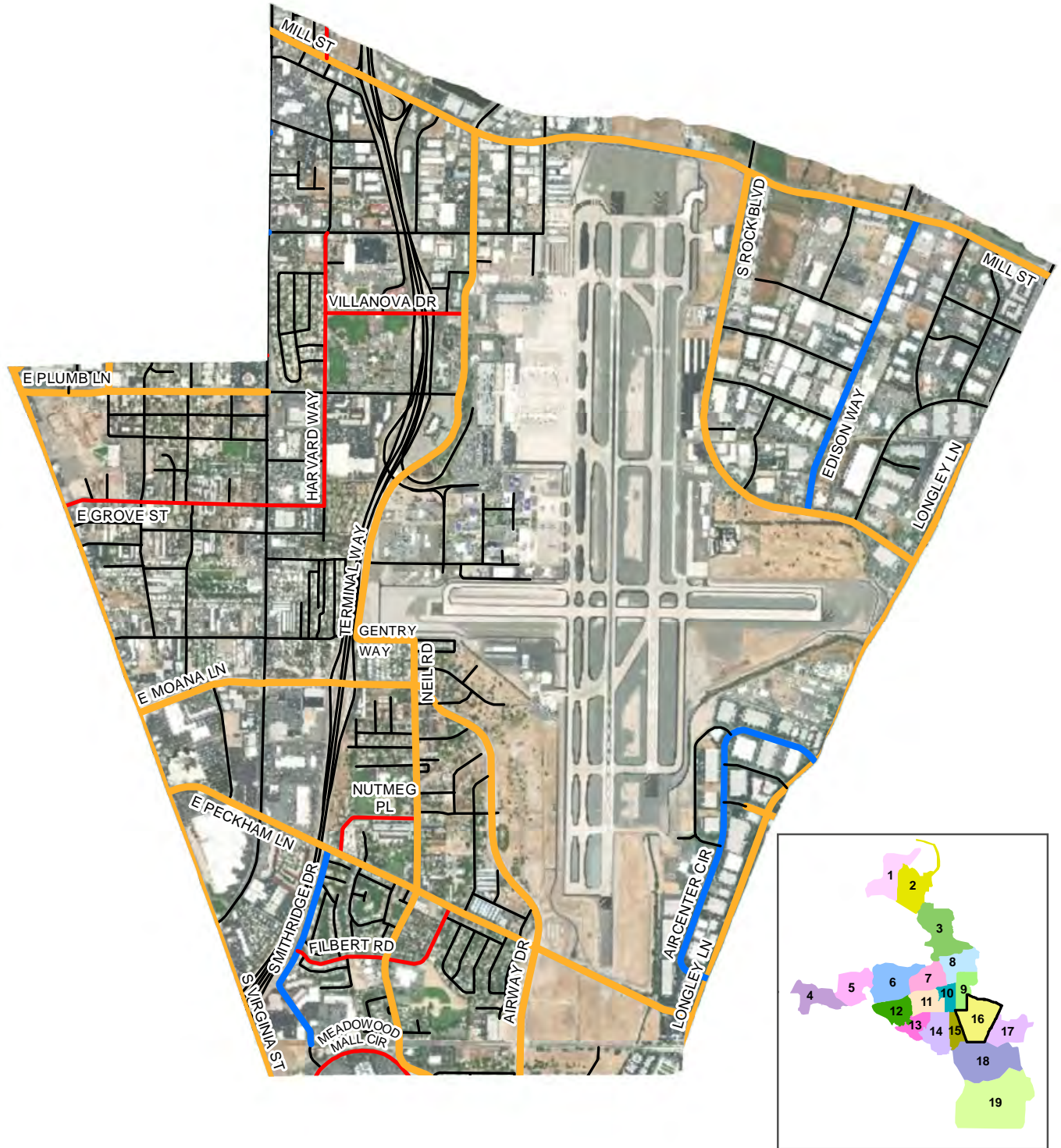
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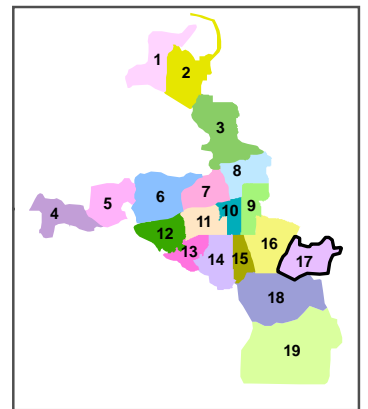
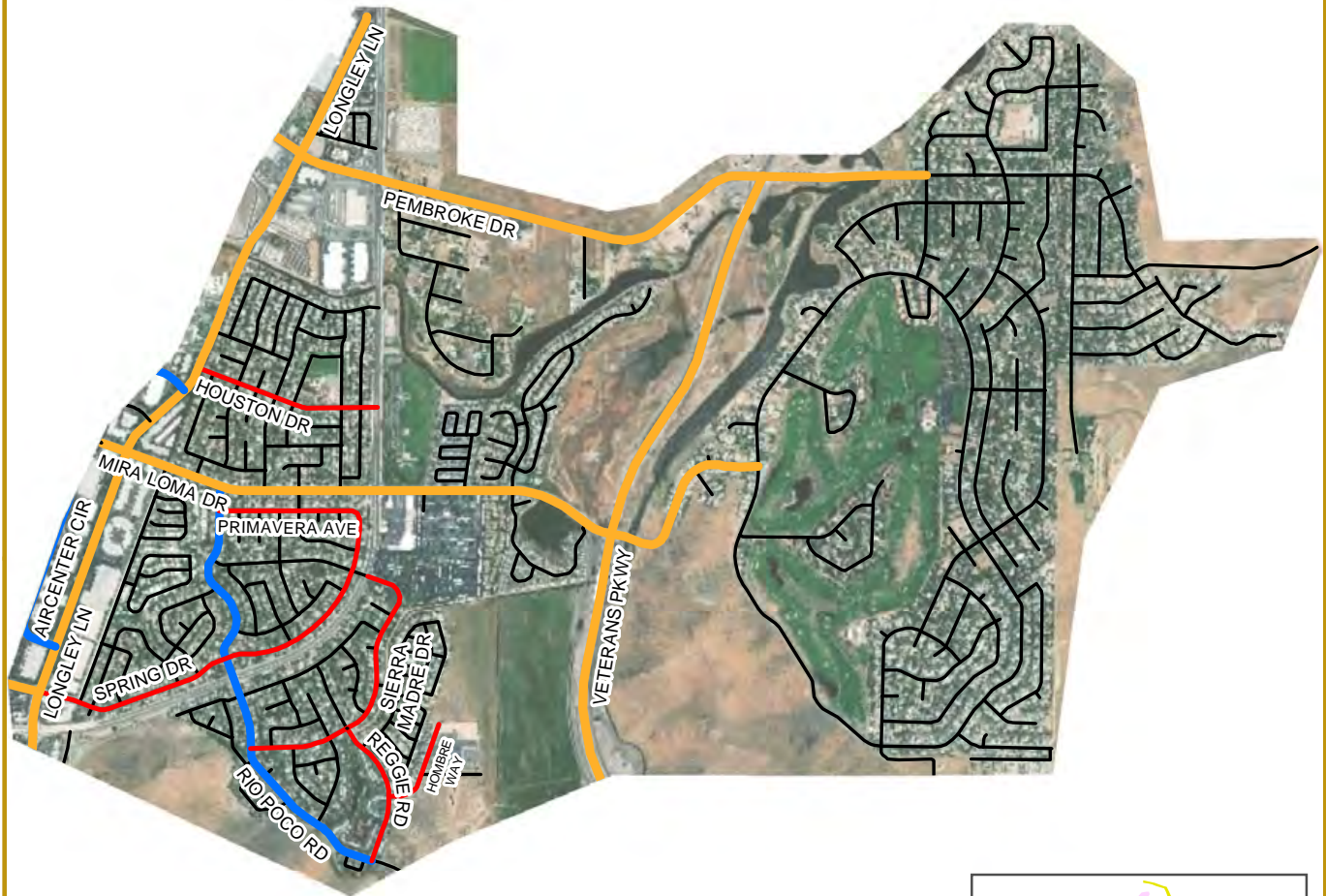
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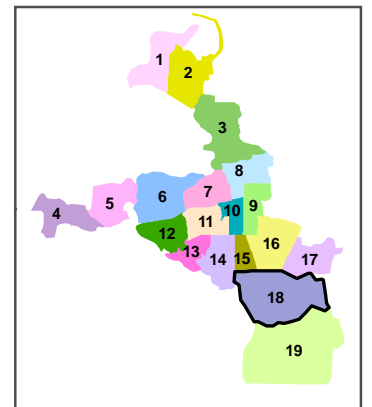
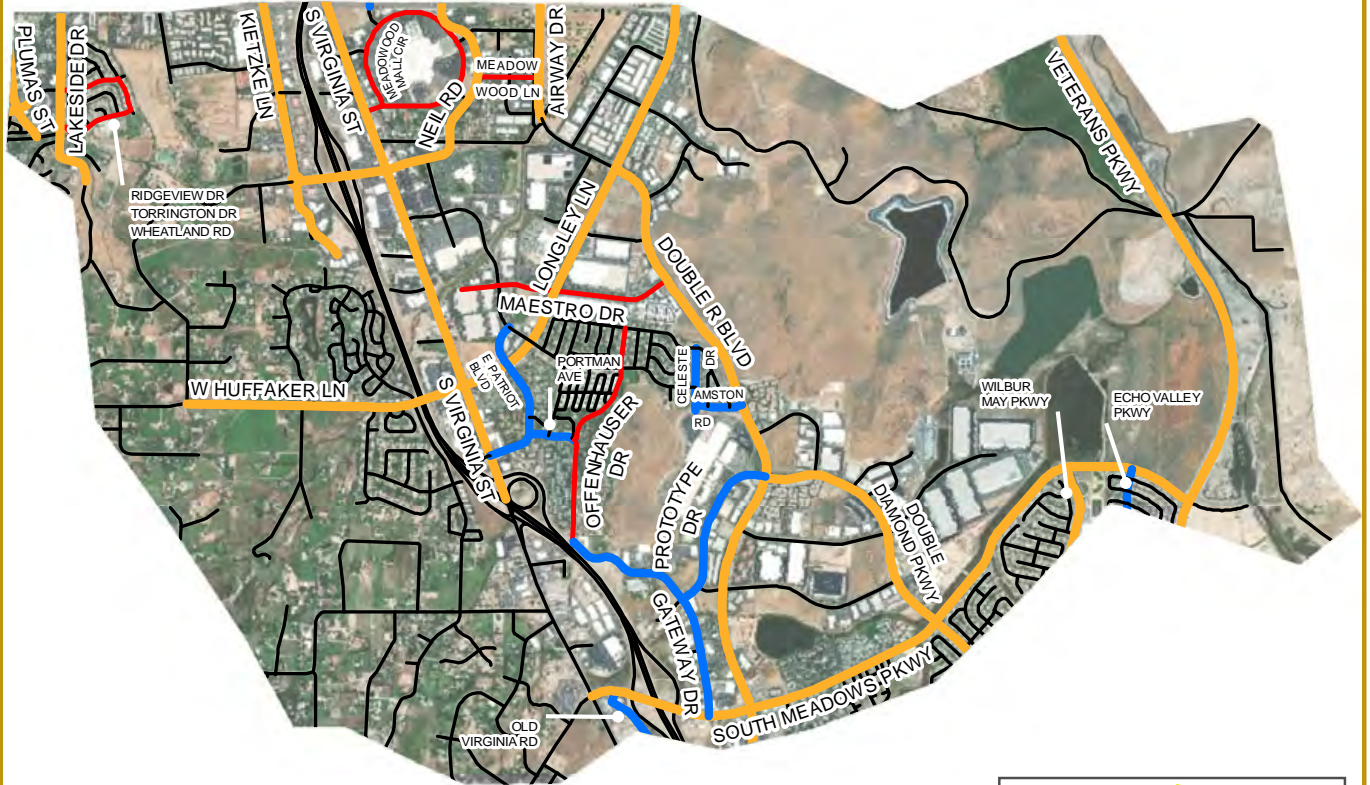
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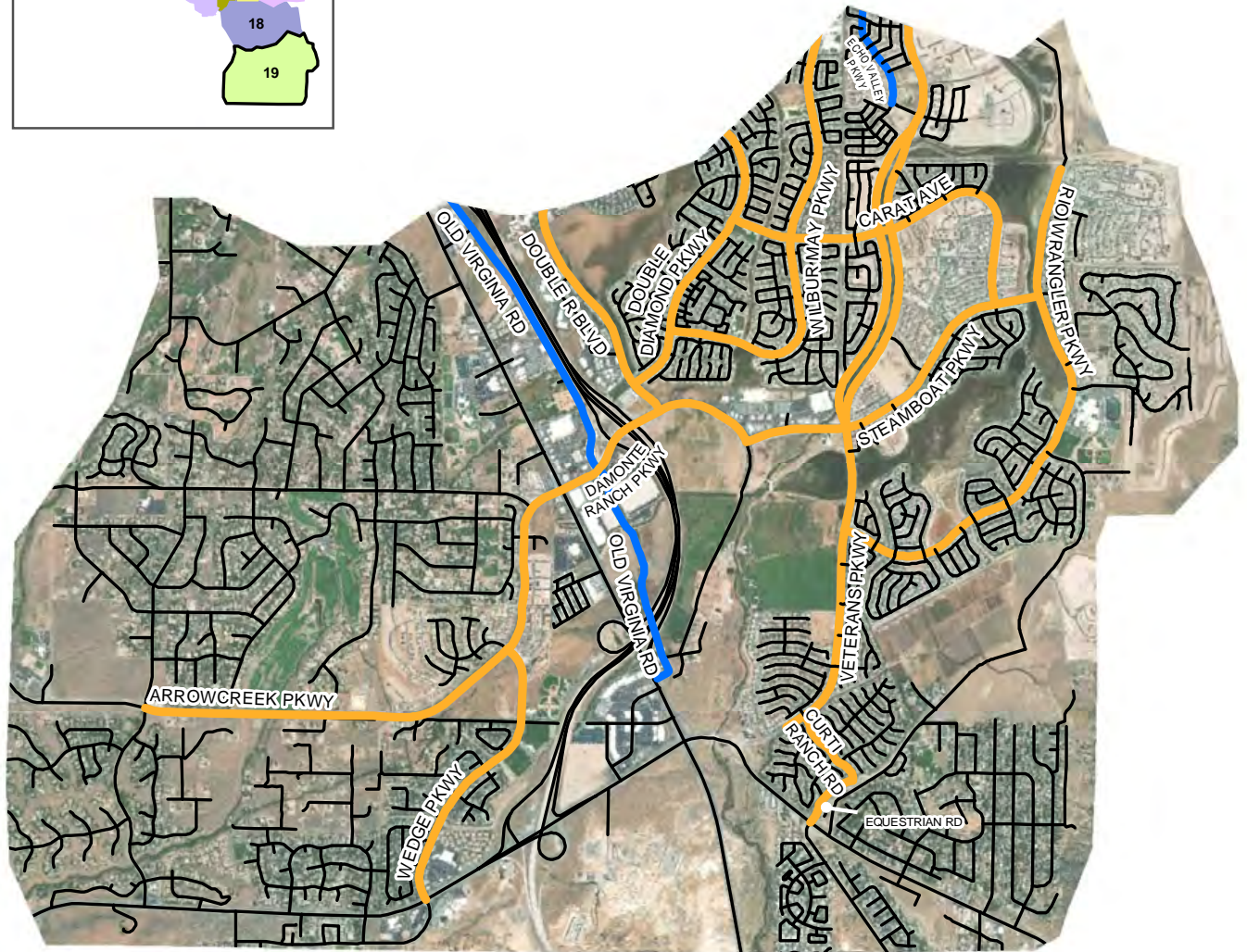
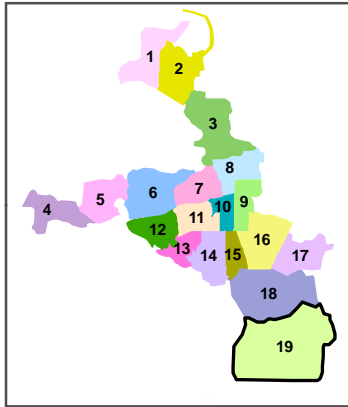
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0 0.5 1 Miles



Table of Snow Plow Priority 1 and 2 Streets by Route

ROUTE #	PRIORITY 1 MULTIPLE LANES	PRIORITY 1 SINGLE LANE	PRIORITY 2 BUS ROUTES
1	INDUSTRY CIR LEAR BLVD MOUNT ANDERSON ST MOYA BLVD RED ROCK RD SILVER LAKE RD STEAD BLVD	BAGPIPE CIR BRAVO AVE COPPERFIELD DR ECHO AVE MOUNT BABCOCK ST MOUNT LIMBO ST	MARINER COVE DR MOUNT BISMARK ST PEPPERMINT DR RED BARON BLVD SILVER SHORES DR
2	LEAR BLVD LEMMON DR MILITARY RD SILVER LAKE RD SKY VISTA PKWY VISTA KNOLL PKWY	LEMMON DR N VIRGINIA ST SILVER SKY PKWY	AUTUMN LEAF WAY CANYON MEADOWS DR KERNITE ST
3	BUCK DR CHISHOLM TRL DANDINI BLVD E GOLDEN VALLEY RD LODESTAR LN MORAINES WAY N VIRGINIA ST NEWPORT LN NORTH HILLS BLVD PANTHER DR PARR BLVD SAUVIGNON DR TALUS WAY VISTA RAFAEL PKWY W GOLDEN VALLEY RD	FERRARI MCLEOD BLVD GARDELLA AVE PARR CIR SPECTRUM BLVD TALUS WAY TARN WAY	BECKWOURTH DR HOGE RD LA FRANCE LN LANCASTER DR NORTH HILLS BLVD OMAHA ST OPAL STATION DR PANTHER DR SAGEHEN LN WESTERN RD YORKSHIRE DR ZINFANDEL DR
4	BOOMTOWN GARSON RD CABELA DR	BRIDGE ST	N/A
5	DEL WEBB PKWY E DEL WEBB PKWY W EVENING ROCK TRL FOREST WILLOW TRL SOMERSETT PKWY SOMERSETT RIDGE PKWY	PEAVINE CREEK RD	ASHLAND BLUFF WAY AUTUMN VALLEY WAY BAY MEADOWS DR CABIN CREEK TRL CHALKSTONE WAY COPPER MOUNTAIN CIR EVERGREEN RIDGE WAY HIDDEN PARK DR MERIDIAN RANCH DR MOUNT PLEASANT DR ORCHARD PARK TRL TRAILCREEK WAY

ROUTE #	PRIORITY 1 MULTIPLE LANES	PRIORITY 1 SINGLE LANE	PRIORITY 2 BUS ROUTES
6	AVENIDA DE LANDA BEAUMONT PKWY KINGS ROW LAS BRISAS BLVD MAE ANNE AVE ROBB DR ROYAL SAGE DR SHARLANDS AVE SOMERSETT PKWY SUNLINE DR W 7TH ST	ARIEL DR CEDAR RIDGE DR COIT DR DAKOTA RIDGE TRL DIAMOND RIDGE DR E BROOKDALE DR FAIRLANDS DR GLEN EAGLES DR GRAND SUMMIT DR LA SALLE HEIGHTS LEADERSHIP PKWY MAHOGANY RIDGE DR MONTEGO DR PEAVINE HILLS AVE PROVENCE CIR QUAIL RUN RD RAINBOW RIDGE RD ROXBURY DR SIERRA HIGHLANDS DR SIMONS DR TWIN CREEKS DR VICTORY LN W BROOKDALE DR	AMBASSADOR DR BACKER WAY CROSSWATER DR HEATHERWOOD DR ISHI POINT DR ROBB DR SIERRA HIGHLANDS DR STONE VALLEY DR TAPPAN DR VALLEY WOOD DR VILLA VERDE DR WALNUT CREEK RD
7	KEYSTONE AVE KINGS ROW N SIERRA ST W 7TH ST	PUTNAM DR RALSTON ST STOKER AVE WASHINGTON ST WYOMING AVE	PUTNAM DR RALSTON ST STOKER AVE WASHINGTON ST WYOMING AVE
8	CLEAR ACRE LN N VIRGINIA ST SUTRO ST WEDEKIND RD	CLEAR VALLEY RD COMSTOCK DR CRYSTAL LN E 9TH ST ENTERPRISE RD EPLEY RD EVANS AVE JODI DR MAYNARD WAY N CENTER ST N UNIVERSITY PARK LOOP NORTHTOWNE LN S UNIVERSITY PARK LOOP SCOTTSDALE RD SIENNA PARK DR SOCRATES DR TIMBER WAY VALLEY RD	CANNAN ST FANTASTIC DR GOLFVIEW RD SADLEIR WAY SELMI DR SILVERADA BLVD WINSTON DR

ROUTE #	PRIORITY 1 MULTIPLE LANES	PRIORITY 1 SINGLE LANE	PRIORITY 2 BUS ROUTES
9	E 2ND ST E 4TH ST E 6TH ST E 9TH ST E PLUMB LN KIRMAN AVE KUENZLI ST MILL ST N WELLS AVE ODDIE BLVD RYLAND ST S WELLS AVE SUTRO ST	E TAYLOR ST LOCUST ST MONTELLO ST VASSAR ST	BALZAR CIR BRESSON AVE CARVILLE DR CASAZZA DR COLONY RD COLORADO RIVER BLVD CORDONE AVE GOLDEN LN MANHATTAN ST N PARK ST RESERVATION RD S PARK ST YORI AVE
10	CALIFORNIA AVE E 4TH ST E 6TH ST E LIBERTY ST MILL ST N ARLINGTON AVE N SIERRA ST N VIRGINIA ST PLUMAS ST RALSTON ST RYLAND ST S ARLINGTON AVE S SIERRA ST S VIRGINIA ST W 4TH ST W 6TH ST W LIBERTY ST W PLUMB LN	E 2ND ST HOLCOMB AVE KUENZLI ST LAKE ST N CENTER ST RIVERSIDE DR S CENTER ST S LAKE ST SAINT LAWRENCE AVE SINCLAIR ST STATE ST THOMA ST VASSAR ST W 2ND ST	MONROE ST RALSTON ST RIVERSIDE DR VINE ST WALKER AVE WASHINGTON ST
11	CALIFORNIA AVE DICKERSON RD KEYSTONE AVE MAYBERRY DR SUMMIT RIDGE DR W 2ND ST W 4TH ST W PLUMB LN	BOOTH ST FERRIS LN HUNTER LAKE DR IDLEWILD DR MEMORY LN RIVERSIDE DR SKY MOUNTAIN DR SKY VALLEY DR STOKER AVE SUMMIT RIDGE DR	BOOTH ST FOSTER DR KEELE DR MARSH AVE MOUNT ROSE ST S MARSH AVE

ROUTE #	PRIORITY 1 MULTIPLE LANES	PRIORITY 1 SINGLE LANE	PRIORITY 2 BUS ROUTES
12	ANSELMO DR HIGHLAND FLUME CIR MAYBERRY DR PLATEAU RD	ASPEN GLEN RD ASPEN TRL JUNIPER TRL MEADOWGATE TRL MOUNTAINGATE DR RIVER FLOW DR RIVER FRONT DR WHITE FIR ST	AMBROSE DR BROOKTRAIL DR EDGEWATER PKWY FALLING WATER DR FENNO WAY LIVERMORE DR RIVERHAVEN DR
13	AQUILA AVE BRIGHTON WAY CAUGHLIN PKWY CAUGHLIN PKWY GREENSBURG CIR SAGITTARIUS DR SOUTHAMPTON DR	ARMSTRONG LN ASH FORK DR BRIDGEWATER DR GREENSBURG CIR MARKRIDGE DR MERIDIAN LN SOUTHAMPTON DR SUSILEEN DR YUMA LN	VILLAGE GREEN PKWY
14	CASHILL BLVD MANZANITA LN MARTHAM AVE PIAZZA VILLAGIO RANGE VIEW CT RANGE VIEW LN RIDGEVIEW DR S ARLINGTON AVE SKYLINE BLVD VISTA CITT'A VISTA OCCHIO W MOANA LN	AMBERWOOD AVE AUGUSTA AVE CHAPARRAL DR EVANS CREEK DR FOLEY WAY GIBRALTAR DR GREENRIDGE DR GREENSBORO DR GREENSBORO POINT HEMLOCK WAY HUNTER LAKE DR OLYMPIC CIR PIONEER DR RODNEY DR SOLARI DR	DANT BLVD SHARON WAY URBAN RD
15	KIETZKE LN LAKESIDE DR PLUMAS ST S VIRGINIA ST W MOANA LN	BAKER LN GRANT DR KUMLE LN REDFIELD PKWY W PECKHAM LN	BARTLEY RANCH RD BRINKBY AVE LAKESIDE DR LYMBERY ST RIDGEVIEW DR TORRINGTON DR WHEATLAND RD

ROUTE #	PRIORITY 1 MULTIPLE LANES	PRIORITY 1 SINGLE LANE	PRIORITY 2 BUS ROUTES
16	AIRWAY DR E MOANA LN E PECKHAM LN GENTRY WAY MILL ST NEIL RD S ROCK BLVD TERMINAL WAY	AIRCENTER CIR EDISON WAY SMITHRIDGE DR	E GROVE ST FILBERT RD HARVARD WAY NUTMEG PL VILLANOVA DR
17	LONGLEY LN MIRA LOMA DR PEMBROKE DR S ROCK BLVD VETERANS PKWY	RIO POCO RD	HOMBRE WAY HOUSTON DR PRIMAVERA AVE REGGIE RD SIERRA MADRE DR SPRING DR
18	AIRWAY DR DOUBLE DIAMOND PKWY DOUBLE R BLVD KIETZKE LN LONGLEY LN NEIL RD S VIRGINIA ST SOUTH MEADOWS PKWY VETERANS PKWY W HUFFAKER LN	AMSTON RD CELESTE DR E PATRIOT BLVD GATEWAY DR PORTMAN AVE PROTOTYPE DR	MAESTRO DR MEADOW WOOD LN MEADOWOOD MALL CIR OFFENHAUSER DR
19	ARROWCREEK PKWY CARAT AVE CURTI RANCH RD DAMONTE RANCH PKWY DOUBLE DIAMOND PKWY DOUBLE R BLVD EQUESTRIAN RD RIO WRANGLER PKWY STEAMBOAT PKWY VETERANS PKWY WEDGE PKWY WILBUR MAY PKWY	ECHO VALLEY PKWY OLD VIRGINIA RD	N/A

City of Reno

Public Works Snow and Ice Control Plan

2018/2019

Winter Snow and Ice Control Plan

2018 - 2019

Purpose

The purpose of this plan is to establish procedures for the City of Reno Public Works Department staff to efficiently conduct snow and ice control operations and as an information source for citizens of this community. This plan has been developed to ensure that all work is completed in a well-planned, safe, efficient and environmentally sound manner with the available resources.

The goal of this planning effort is to ensure the City of Reno's residents will have safe and accessible priority streets throughout the snow and ice season. In addition, the Truckee Meadows is considered a non-attainment area for air quality. This annual plan complies with Washoe County Health Department air quality mandates.

The City of Reno Public Works Department staff strives to maintain safe winter driving conditions for the motoring public. Each winter storm has its own character with variable conditions such as wind, extreme temperatures, timing, duration of storm, rate of accumulation, and moisture content. This plan must remain flexible and take into consideration these variables.

Background

The City of Reno receives an average of 13 storms annually and average snow accumulations totaling 23.5 inches. The City's annual snow removal budget and size of its snow removal equipment fleet are based on average snowfall figures as well as the expected number of street miles to be plowed and sanded during any given winter storm event. The snow and ice control program is not designed or intended to remove all accumulations of snow and ice from all streets (arterial, collector, and residential) within the City.

The City of Reno street system has been divided into 19 prioritized snow and ice control routes totaling approximately 2,361 lane miles. Priority is given to arterial and collector streets along with school zones, hospitals, emergency facilities, bus routes, dangerous intersections, hills and curves. Secondary streets are given a low priority and generally receive a lower level of service or no service due to the limited availability of resources.

During a winter storm event where periods of heavy snowfall persist, the City may utilize the assistance of private contractors through the Associated General Contractors Auxiliary (AGC) for snow accumulations greater than 8 inches based on current and forecasted conditions for the region.

Planning and Scheduling of Resources

During winter months from November through March of each year, the Street Maintenance and Operations Manager and Streets Crew Supervisors continuously monitor weather forecasts for approaching winter storms. Based on projected and current winter storm modeling and additional weather resource forecast information, staffing and equipment needs are determined and scheduled accordingly. Crews are scheduled to work alternating twelve-hour shifts during large winter storm events to provide 24/7 operational support for snow and ice control operations. During active winter storm snow and ice control operations, the Maintenance and Operations Division Manager and Street Maintenance and Operations Manager will monitor winter snow and ice removal activities, making operational adjustments and may request additional support as required to meet the needs of the City.

Major Storm Events

During major storm events, staff are scheduled to work alternating twelve-hour shifts. Each crew will consist of a Crew Supervisor and the required number of employees for that shift. Shift one (1) will be from 6:00 a.m. to 6:00 p.m. - Shift two (2) will be from 6:00 p.m. to 6:00 a.m. This rotation will continue until the required winter snow and ice control operations are completed.

When additional resources are required for snow accumulations of eight (8) inches or greater, the Street Maintenance and Operations Manager may request the assistance of private contractors through the Associated General Contractors (AGC) Auxiliary. Contractor resources will be directed to clear snow from priority one (1) streets and priority two (2) streets and other areas within the City that received greater amounts of accumulations (prior to clearing snow from residential streets) Streets will generally be cleared to one lane in and one lane out of each populated area.

Available Vehicles and Staff

For the fiscal year 2018-2019 Public Works Maintenance and Operations will have a total of eighteen (19) trucks mounted with plows and sanders, one (1) wheel loader mounted with a push plow. This includes seventeen (18) ten wheel dump trucks, five (5) of which are all wheel drive, along with the front-end loader which will be assigned to the higher elevations and outlying routes. One (1) bobtail dump truck with sander will be assigned to the lower elevation routes. Street maintenance section has a total staff of fifty (50) snow plow operators that will be divided into two (2) crews. Sewer maintenance staff will provide additional support as needed. Additionally, a Fleet Mechanics are scheduled to support winter snow and ice control operations as required.

De-icing Material/Salt and Sand - Satellite Stations

The roadway abrasives currently being utilized to aid in traction and De-icing during the plowing stage of winter storm events is primarily a mixture of salt and sand (one part salt and five parts

sand). Maintenance and Operations currently utilizes a main storage area and three (3) satellite stations for the storage of de-icing materials. The main storage area is the City of Reno Corporation Yard located off of Commercial Row. Satellite station locations are, Northgate Golf Course, located off Avenida de Landa on Beaumont Parkway in northwest Reno, Moana Station, located on Moana Lane and Baker in southwest Reno and Stead Sewer Plant located off Military Road. Front-end loaders will be located at each of the satellite locations for the loading of de-icing materials.

Anti-Icing/ Salt Brine Application

Public Works Maintenance and Operations utilizes a Salt Brine anti-icing application process to assist in control of icing on targeted roads, priority one (1) streets, bridges and some inclines. Advantage is gained using salt brine as a prevention method by reducing operational cost of snow removal operations, reduction of salt, abrasives and retrieval of abrasives.

Applying salt brine is an effective pre-treatment of roadways before inclement weather arrives. Salt brine will adhere to the road surface and can be applied several days prior a predicted winter storm event. For anti-icing to be most effective the importance of timing for placement is essential. Applying salt brine to the roadway surface prior to a precipitation event will assist in keeping the snow and ice from bonding to the surface of the roadway, making it easier for removal and a more cost effective snow removal operation.

Salt in its granular form works by creating a brine solution by absorbing moisture from the snow before its effectiveness is realized. Salt brine reduces the reaction time because it's already in liquid form, and is more evenly distributed. Salt brine can also have some residual effect of providing ongoing anti-icing value by remaining on the pavement for several days.

Sanding and Plowing Procedures

Individual operators will apply de-icing materials in assigned routes as needed based on the current conditions in each respective route.

Operators are instructed to plow only when the accumulated snow depth reaches approximately four (4) or more inches. All plowing will be from the inside lane to the curbside/shoulder.

All streets will be plowed and/or sanded in the priority order as identified in each of the 19 routes contained within this plan. Operators will complete all streets in said priority order unless otherwise directed.

Upon completion of the priority one (1) streets, operators will plow the priority two (2) streets. When all priority two (2) streets are cleared with one lane in and one lane out, the operators will return and clear the remainder of the priority two (2) streets.

Snow and ice control operations will continue until the storm event has ended and all first and second priority streets have been plowed.

Post Storm Material Recovery Operation

Current Washoe County Health Department air quality regulations require the City to remove all residual salt/sand abrasives from its roadways within four (4) days after a storm event.

To comply with this mandate, Maintenance and Operations schedules street sweepers to remove all residual salt/sand abrasives as expeditiously and safely as weather and road conditions permit. This activity is considered part of the snow and ice control operations.

Post Storm Procedures

At the completion of the storm event, operators will wash, grease and perform regular maintenance on all snow and ice control equipment. Operators will immediately notify their Supervisor and coordinate with Fleet Management for repairs and maintenance issues.

