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TECHNICAL MEMORANDUM

DATE: April 21, 2023

TO: Jim Harnish and Brent Gibbons | Mintier Harnish

FROM: Jim Damkowitch, Erin Vaca, Zoey Li | DKS Associates

SUBJECT: Lompoc General Plan Update
Evacuation Analysis

Project #22055-000

INTRODUCTION

This memorandum describes the analysis of emergency evacuation vulnerability scenarios conducted as part of the Lompoc General Plan Safety Element update. Three generalized evacuation scenarios were analyzed: wildfire, earthquake, Vandenberg Space Force Base mishap. The source location and directionality of the event is the primary distinguishing factor for a given evacuation assessment. Hence, these scenarios could be generally titled Scenario A, B and C. The methodology and analysis assumptions applied are described along with generalized findings and recommendations.

The purpose of this analysis is to identify specific roadways that under a given evacuation scenario would need to accommodate excess demand. The anticipated degree of traffic over-saturation (as defined by the ratio of traffic volume to roadway capacity) is estimated and resulting degree that these over-burdened roadways would hinder evacuation efficiency surmised. Recognizing the evacuation events can occur suddenly without much warning time or gradually over time that allows for adequate warning and evacuation management, evacuation efficiency was analyzed under two temporal assumptions: 1) All-At-Once evacuation (spanning 3 hours); and, 2) Metered Evacuation where designated zones of the city are evacuated sequentially (spanning 3 hours for each city zone for a total of a 12-hour evacuation). Potential strategies for creating and/or maintaining adequate roadway capacity to facilitate an efficient evacuation under either of these temporal scenarios are described.

Note that this analysis should not be construed as an evacuation plan. The intent of the analysis and findings are limited to identifying critical roadway capacity needs that can inform evacuation planning by the City of Lompoc. All evacuation scenarios are hypothetical and simplified for analysis purposes. The specific characteristics of an actual evacuation event affecting the City of Lompoc could be significantly different than those applied for this analysis.

EVACUATION ANALYSIS PARAMETERS

EVACUATION AREA

The at-risk area assumed to be affected by the various evacuation event scenarios is shown in **Figure 1.** The hatched areas in the map depict the SBCAG model Transportation Analysis Zones (TAZs). The selected TAZs represent the basic unit of analysis geography for this study and reflect the areas of City of Lompoc and Vandenberg Village.

TIMING OF EVACUATION

The analysis assumes that an evacuation event would occur during non-work hours. This includes weekday morning or evening hours or during a weekend (Saturday or Sunday). Hence, all evacuation related vehicle trips are assumed to be home-based trips (residents leaving their home versus place of work). The analysis assumes that all homes located in the areas shown in **Figure 1** would need to be evacuated during an event. This simplifying assumption was required for modeling purposes.

LOMPOC AREA HAZARDS

Hypothetical evacuation scenarios were developed and informed by the following two documents:

- City of Lompoc Multi-jurisdictional Local Hazard Mitigation Plan (2016)
- Santa Barbara County Multi-Modal Transportation Network Resiliency Assessment (SBCAG, 2019)

According to the City's Local Hazard Mitigation Plan, wildfire and flooding are high probability events for the city (see **Figure 2**). Both are considered to result in medium impact type events. **Figure 3** and **Figure 4** indicate that areas just north and south of the city have a very high wildfire threat with high severity potential. Wildfires that have threatened the City of Lompoc since 2000 include the Harris Fire (2000) that burned approximately 8,684 acres, the Sudden Fire (2002) that burned approximately 7,500 acres, and the Miguelito Fire (2015) that burned approximately 632 acres. The location of these wildfires are shown in **Figure 5**.

Earthquakes are given a medium probability events but are considered a high impact event. **Figure 6** and **Figure 7** show existing fault lines that run east-west just south of the city epicenter locations of historical earthquakes that affected the Lompoc area. Landslides have also been common along US 1 from Gaviota Pass to Lompoc.

The primary climate change hazards addressed in SBCAG's Multi-Modal Transportation Network Resiliency Assessment include sea level rise (in the form of nuisance flooding, storm surge flooding) and inland hazards such as increased wildfire occurrences, landslides, and fluvial flooding. The City of Lompoc lies approximately 33 miles west of the Bradbury Dam and the city sits along the Santa Ynez River. If the dam were to fail, the City of Lompoc could sustain substantial flooding via the Santa Ynez River. It has been established that the Bradbury Dam has been mapped for inundation. Fluvial flooding hazards have periodically threatened CA 246 at several places along the Santa Ynez

River including segments adjacent to the Robinson Bridge on the Santa Ynez River in Lompoc. In the major floods of 1969, the Robinson Bridge was closed by river water overtopping the bridge. West of Lompoc, SR 246 turns into West Ocean Ave, which faces storm surge hazards in the Santa Ynez River delta.

Based on discussions with the City of Lompoc (March 20, 2023), another hazard event of concern that is not considered in either the City's Local Hazard Mitigation Plan or SBCAG's Multi-Modal Transportation Network Resiliency Assessment is an event associated with Vandenberg Space Force Base. This could be a transport spill of hazardous materials or a rocket launch mishap.

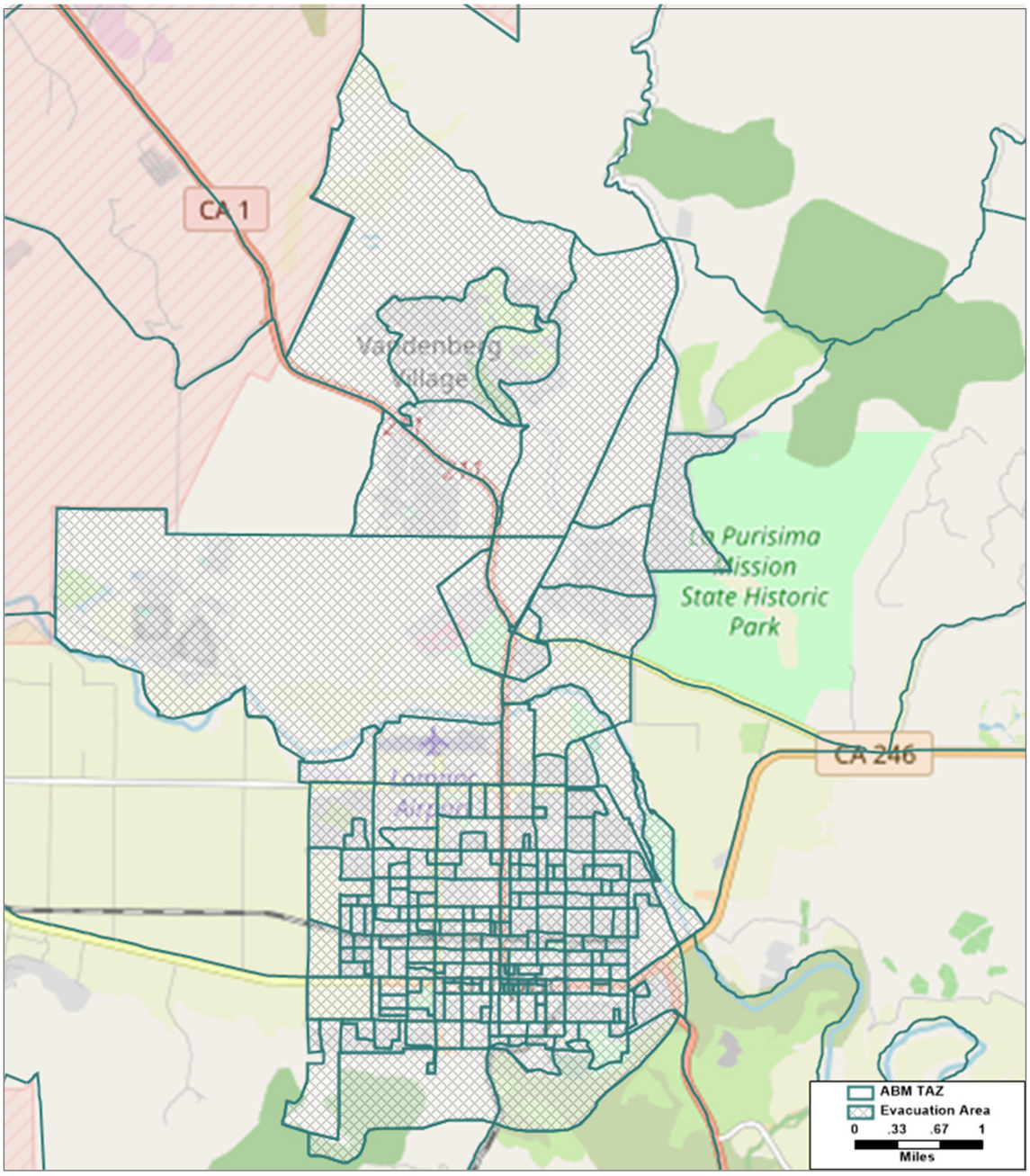

FIGURE 1: STUDY AREA AND EVACUATION AREA

Rank	High Impact	Medium Impact	Low Impact
High Probability		• Flooding • Wildfire • Drought and Water Shortage	
Medium Probability	• Earthquake		
Low Probability	• Dam Failure		

FIGURE 2: LOMPOC AREA HAZARD SCREENING AND RISK
Source: City of Lompoc Local Hazard Mitigation Plan

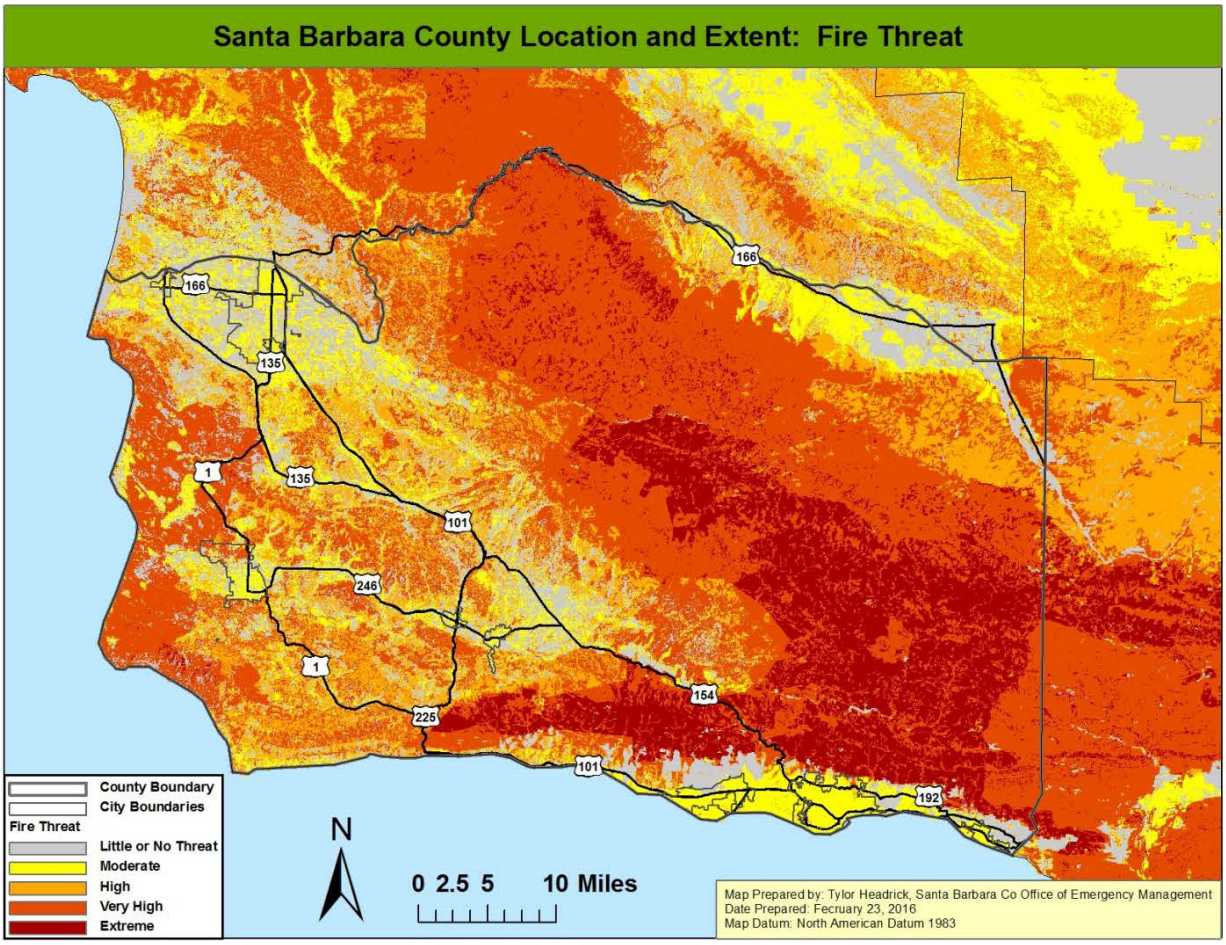

FIGURE 3: LOMPOC AREA FIRE THREAT
Source: City of Lompoc Local Hazard Mitigation Plan

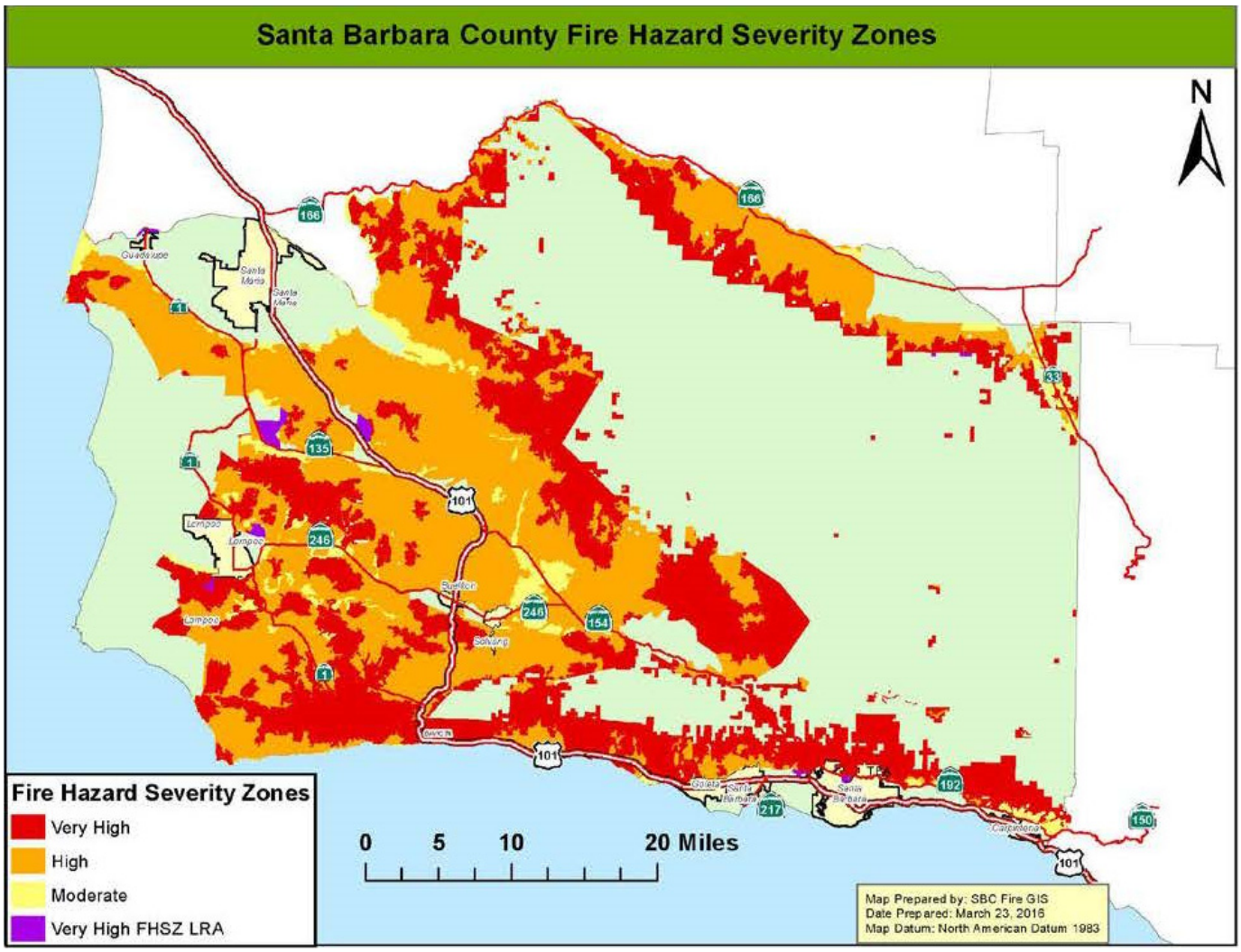

FIGURE 4: LOMPOC AREA WILDFIRE HAZARD SEVERITY ZONES
Source: City of Lompoc Local Hazard Mitigation Plan

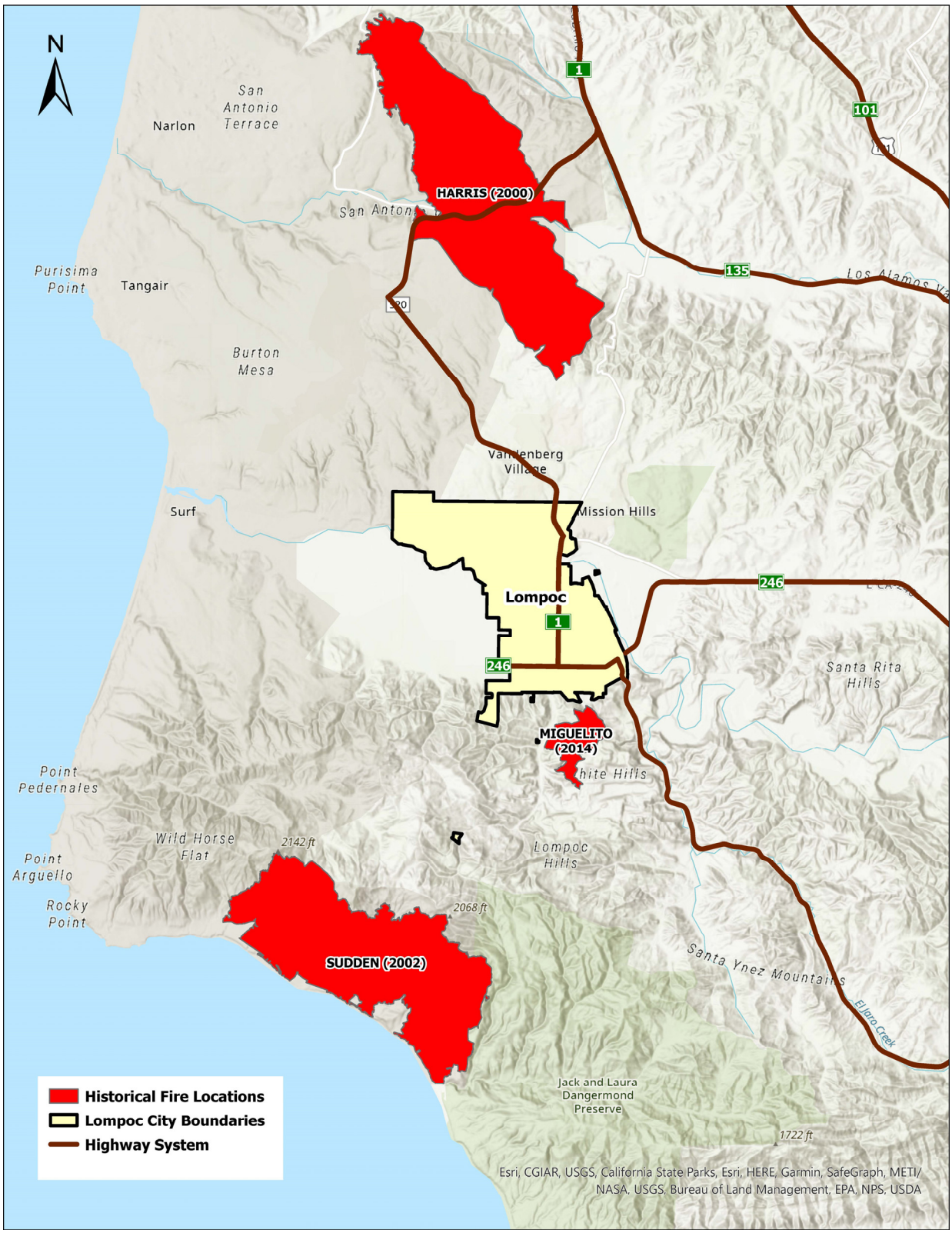

FIGURE 5: LOMPOC AREA HISTORICAL WILDFIRE HISTORY
Source: City of Lompoc Local Hazard Mitigation Plan

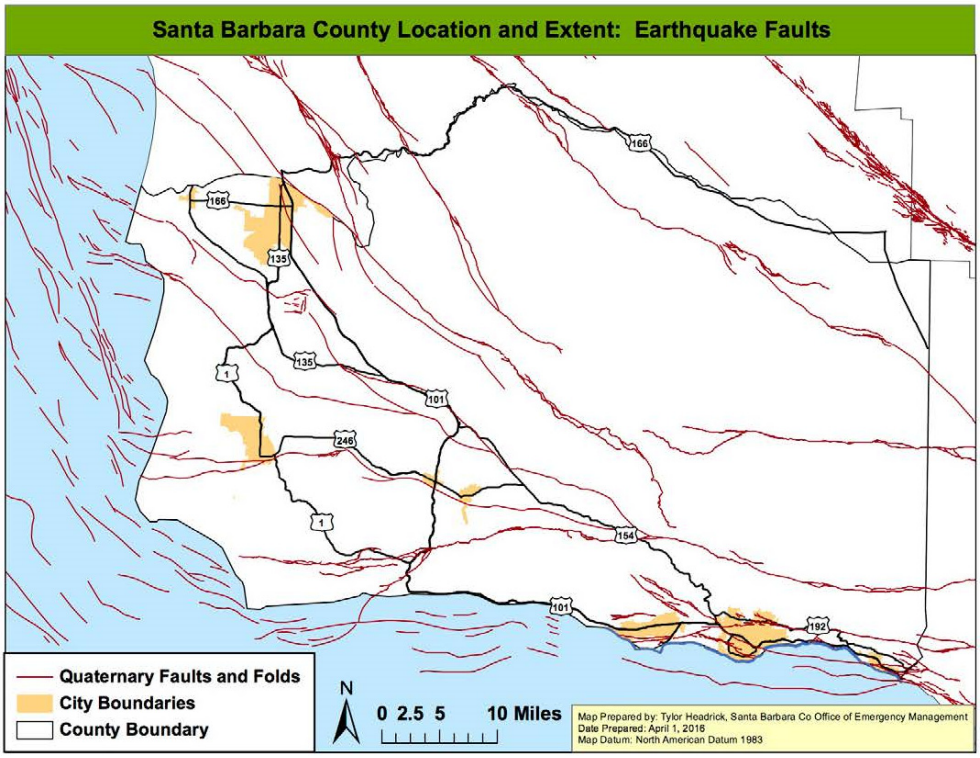

FIGURE 6: LOMPOC AREA EARTHQUAKE FAULT LOCATIONS
Source: City of Lompoc Local Hazard Mitigation Plan

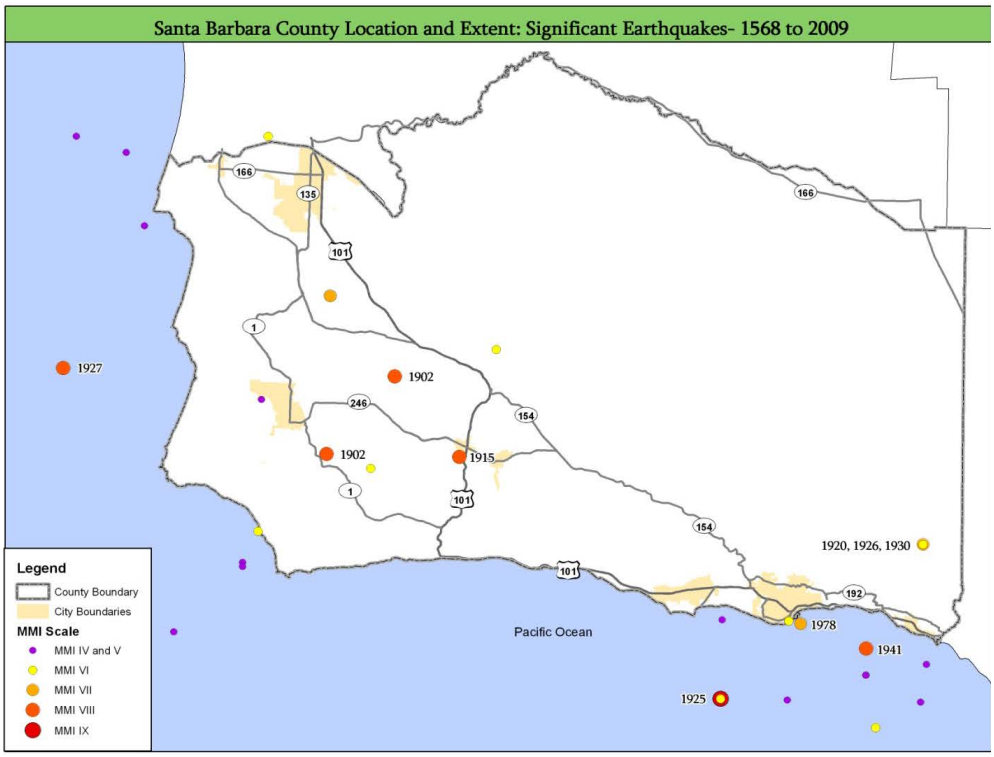

FIGURE 7: LOMPOC AREA EARTHQUAKE FAULT LOCATIONS
Source: City of Lompoc Local Hazard Mitigation Plan

EVACUATION SCENARIOS

Based on risk assessments and historical information, three hypothetical evacuation scenarios were developed for analysis. **Table 1** summarizes the key characteristics of each scenario. Key characteristics include: Origin of Event (denotes the point of origin); Evacuation Direction (denotes the direction of the evacuation event – moving away from the origin of the event); and, Roadway Closures (lists those roadways that due to the Origin Event and Direction are assumed to be rendered inoperable during the evacuation).

As stated previously, the evacuation efficiency of each of the scenarios listed in **Table 1** was analyzed under two temporal assumptions:

1) All-At-Once evacuation (spanning 3 hours); and,

2) Metered evacuation where designated zones of the city are evacuated sequentially (spanning 3 hours for each city zone for a total of a 12-hour evacuation).

TABLE 1: SCENARIO SUMMARY
LOMPOC EVACUATION ANALYSIS

SCENARIOS	EVACUATION DIRECTION AND DESTINATION	ROADWAY CLOSURES ASSUMED RESULTING FROM THE EVENT
WILDFIRE **ORIGIN OF EVENT: NORTHEAST OF LOMPOC AREA**	South to Santa Barbara	SR 1 (North of Lompoc) SR 246 West Ocean Ave Santa Lucia Canyon Rd Harris Grade Rd Rancho Lompoc Farm Rd
VANDENBERG SPACE FORCE BASE MISHAP **ORIGIN OF EVENT: WEST OF LOMPOC AREA**	South to Santa Barbara	SR 1 (North of Lompoc), West Ocean Ave Santa Lucia Canyon Rd San Miguelito Rd Harris Grade Rd Rancho Lompoc Farm Rd
EARTHQUAKE **ORIGIN OF EVENT: SOUTH OF LOMPOC AREA**	North to Santa Maria	SR1 (South of Lompoc), SR 246

Source: DKS Associates.

Each evacuation scenario was modeled using the most recent regional travel demand model maintained by the Santa Barbara Council of Governments (SBCAG). This is the same model used to develop SBCAG's 2021 Regional Transportation Plan & Sustainable Community's Strategy (Connected 2050). The model was modified and applied to simulate evacuation circulation characteristics namely trip generation (i.e., how many vehicle trips made during an evacuation), trip distribution (i.e., origin-destinations of an evacuation) and route selection (trip assignment on the available roadway network during an evacuation). Model modifications are described in detail in the following section.

MODELING ANALYSIS

The SBCAG travel demand model is a trip-based model covering Santa Barbara County as the main model study area with the surrounding counties (San Luis Obispo and Ventura) included as "external" zones. The SBCAG model application includes the conventional steps of trip generation, distribution, mode choice, and traffic assignment. Travel demand generated by the model for the basic Year 2050 scenario was used as the starting point for analyzing potential evacuation traffic flows. The steps applied in the analysis for each scenario are summarized in the following sections.

EDIT PRODUCTION-ATTRACTION MATRICES (ALL SCENARIOS)

As described previously, only home-based trip purposes were retained to represent evacuation travel demand. The Production-Attraction (PA) format person trip tables output from the model's mode choice step were edited to remove all non-home based, home-based school, visitor, and internal-external travel produced or attracted to the evacuation area shown in **Figure 1**. **Table 2** summarizes the results of these calculations.

TABLE 2: LOMPOC EVACUATION AREA PRODUCTIONS AND ATTRACTIONS
DRIVE ALONE + SHARED RIDE

P-A MATRIX	ORIGINAL PRODUCTIONS	ORIGINAL ATTRACTIONS	EDITED PRODUCTIONS	EDITED ATTRACTIONS
HBSCH_MC_OFFPEAK.MTX	8,397	4,491	0	0
HBSCH_MC_PEAK.MTX	8,914	6,425	0	0
NHBO_MC_OFFPEAK.MTX	30,214	29,684	0	0
NHBO_MC_PEAK.MTX	9,210	9,119	0	0
NHBW_MC_OFFPEAK.MTX	20,343	9,521	0	0
NHBW_MC_PEAK.MTX	6,091	2,625	0	0
VISITOR_MC_OFFPEAK.MTX	4,656	3,556	0	0
VISITOR_MC_PEAK.MTX	1,517	1,067	0	0
IX_MC_OFFPEAK.MTX	1,846	3,463	0	0
IX_MC_PEAK.MTX	706	1,230	0	0

Source: DKS Associates.

PREPARE DAILY OD VEHICLE TRIP TABLE FOR ASSIGNMENT (ALL SCENARIOS)

The model's PA to Origin-Destination (OD) step was run to produce time-of-day OD vehicle trip tables. The daily OD matrix file was reduced by 70 percent to represent the estimated demand for travel that would occur during a three-hour evacuation period. Hence, evacuation travel demand was estimated to be approximately 30 percent of daily home-based vehicle trips, which equates to approximately two trips per household. **Table 3** compares the original daily OD trip table to and from the evacuation area with the modified and reduced version calculated for the evacuation analyses.

The External-External or through trip matrices were set to zero to remove any through trips that might ordinarily be routed over evacuation area roadways. Also note that commercial vehicle trips are generated separately and included in the separate time-of-day matrices but not the daily OD vehicle trip table.

TABLE 3: EVACUATION AREA VEHICLE TRIP ORIGINS AND DESTINATIONS

	ORIGINAL ORIGINS [a]	ORIGINAL DESTINATIONS [a]	MODIFIED ORIGINS [b]	MODIFIED DESTINATIONS [b]	REDUCED ORIGINS [c]	REDUCED DESTINATIONS [c]
DRIVE ALONE	76,512	76,425	22,954	3,930	76,512	76,425
SHARED RIDE	25,595	25,583	7,679	7,675	25,595	25,583
TOTAL	102,107	102,007	30,632	11,605	102,107	102,007

[a] Original SBCAG 2050 scenario.

[b] Trip table including only home-based trips produced in the evacuation area.

[c] Trip table from previous step reduced by 70 percent.

Source: DKS Associates.

CUSTOMIZE DAILY OD VEHICLE TRIP TABLE BY SCENARIO

The modified daily OD trip table resulting from the previous step was then further customized for each scenario. Trips originating in the evacuation area were edited to redirect them to a destination zone defined by the evacuation scenario, as noted in **Table 1**. Three versions of the modified daily OD vehicle trip table (one per scenario) were carried forward to the traffic assignment step.

CUSTOMIZE NETWORK FILE AND TRAFFIC ASSIGNMENT (SCENARIO SPECIFIC)

Given that each evacuation event lasts three hours, the customized evacuation demand matrices created in the preceding steps were assigned using parameters consistent with the AM peak period assignment in the SBCAG model. The "*.net" file built by the SBCAG model application for the AM period was modified by disabling selected roadway links for each scenario and then updating the network before assignment. Link variables used in the assignment included AM congested travel time and a three-hour capacity. The resulting assigned volumes were then used to calculate and visualize the volume to capacity (VC) ratios for each link to highlight network constraints.

WILDFIRE SCENARIO (ALL AT ONCE)

The first scenario analyzes a wildfire occurring to the northeast of Lompoc, necessitating an evacuation to locations south, such as the City of Santa Barbara. Under this scenario, SR 1 (north of Lompoc), SR 246 east of Lompoc, as well as portions of West Ocean Avenue, Santa Lucia Canyon Road, Harris Grade Road, and Rancho Lompoc Farm Road north of the city are assumed closed to traffic as indicated in **Figure 8**.

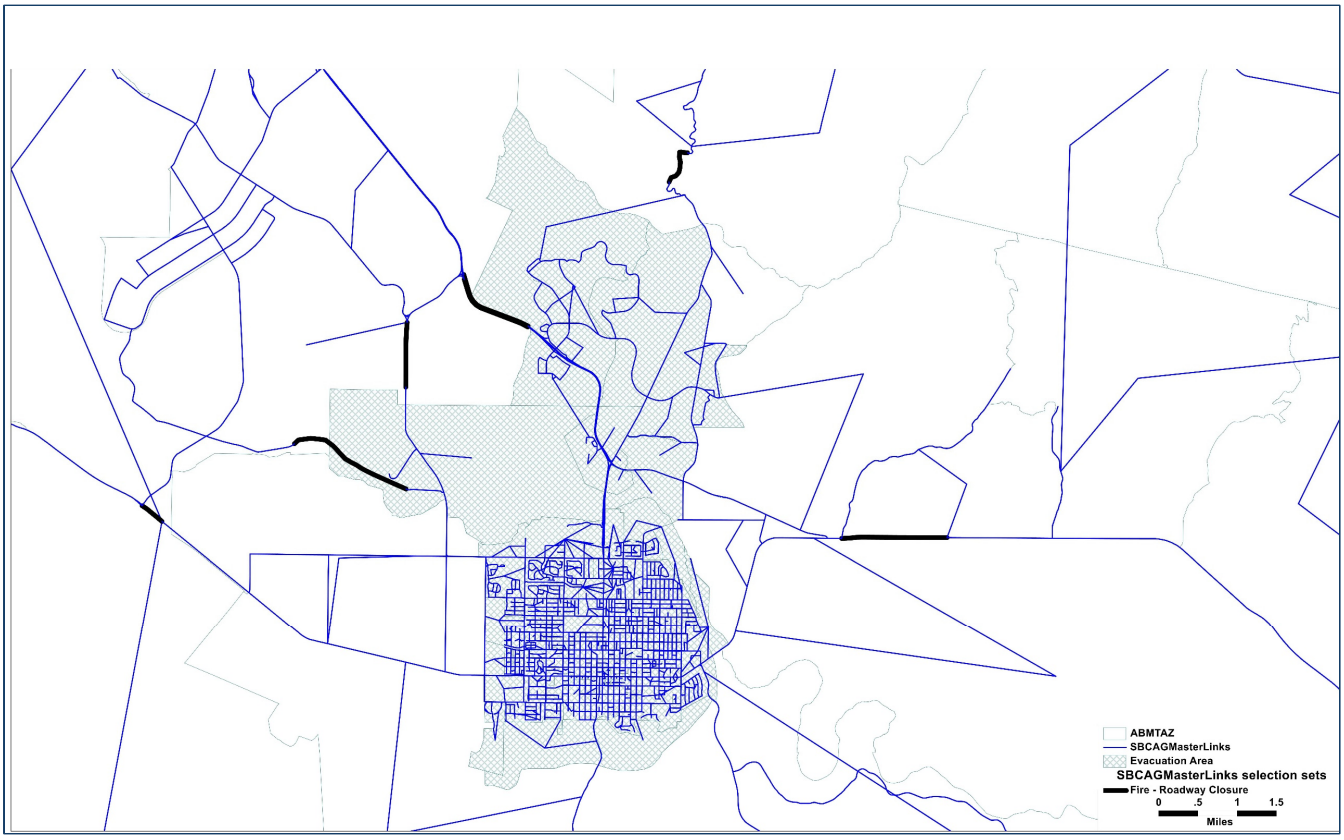

FIGURE 8: WILDFIRE SCENARIO: ORIGIN NORTH AND NORTHEAST; DIRECTIONALITY SOUTH

Figure 9 shows the regional distribution of vehicle trips during a sudden 3-hour wildfire evacuation event in the Lompoc area. The evacuation direction is south as key gateway roadways to the north and east (SR 246) of Lompoc are assumed inoperable. All regional trips that are destined for the Lompoc area are removed. Regional trips that do not have an origin or destination in the Lompoc area are assigned as normal. As shown, SR 1, SR 246, and Santa Rosa Road are the most impacted roadways. **Figure 10** and **Figure 11** present the resulting roadway volume/capacity ratios at the regional and local scale respectively. As shown, during a sudden evacuation event up to 2 (Santa Rosa Road) to 4+ (SR 1 and SR 246) times the amount of out-bound traffic relative to available roadway capacity would occur. These conditions would result in significant queuing and delays significantly increasing the amount of time needed for vehicles to evacuate. Use-of-shoulder would have minimal benefit. Reverse contra-flow (i.e., opening both directions of roadway for a single out-bound direction) on SR 1 and SR 246 would be an effective evacuation management strategy to safely evacuate the area – assuming emergency vehicles do not require entry from the south.

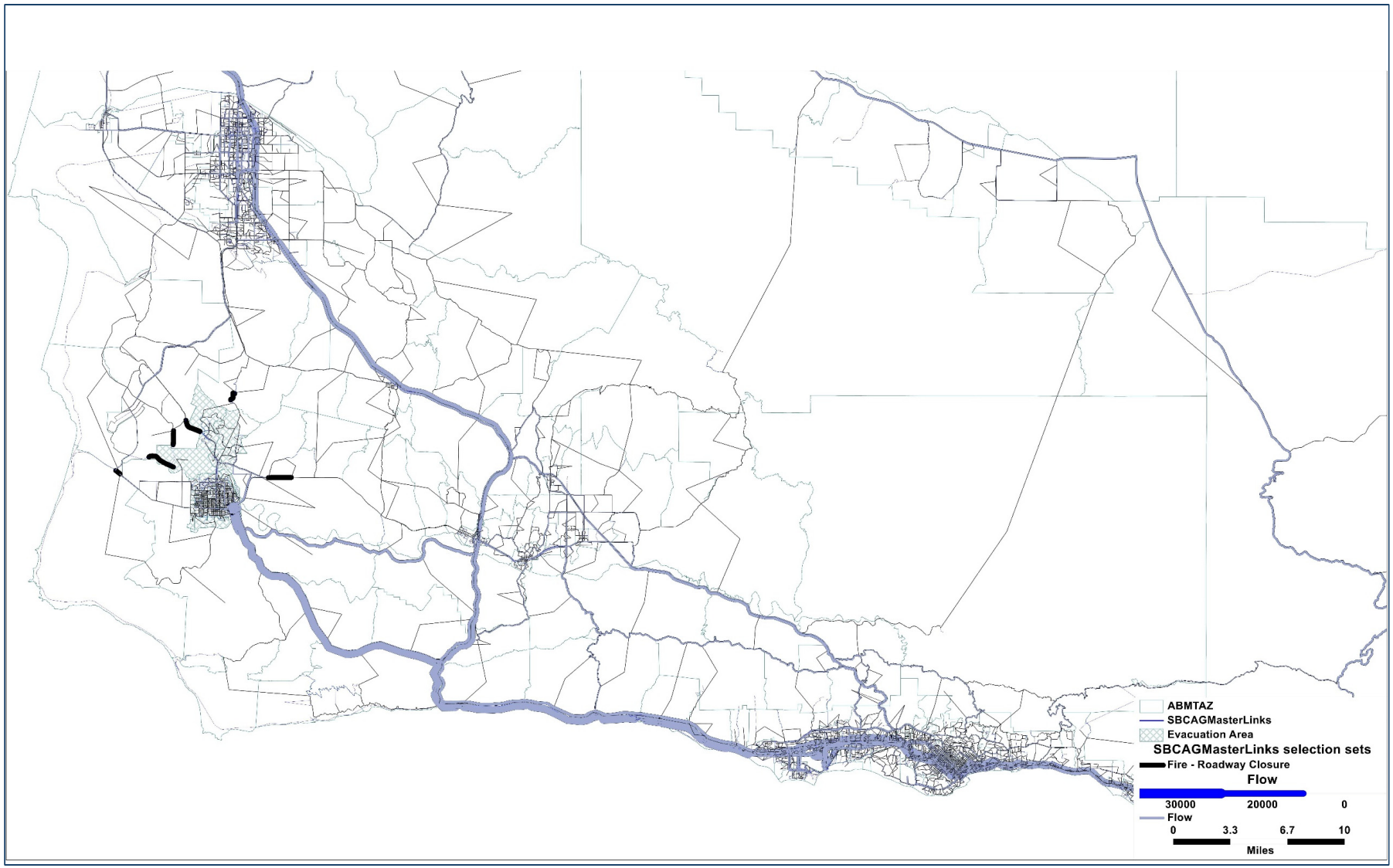

FIGURE 9: WILDFIRE SCENARIO: REGIONAL EVACUATION FLOWS; DIRECTIONALITY SOUTH

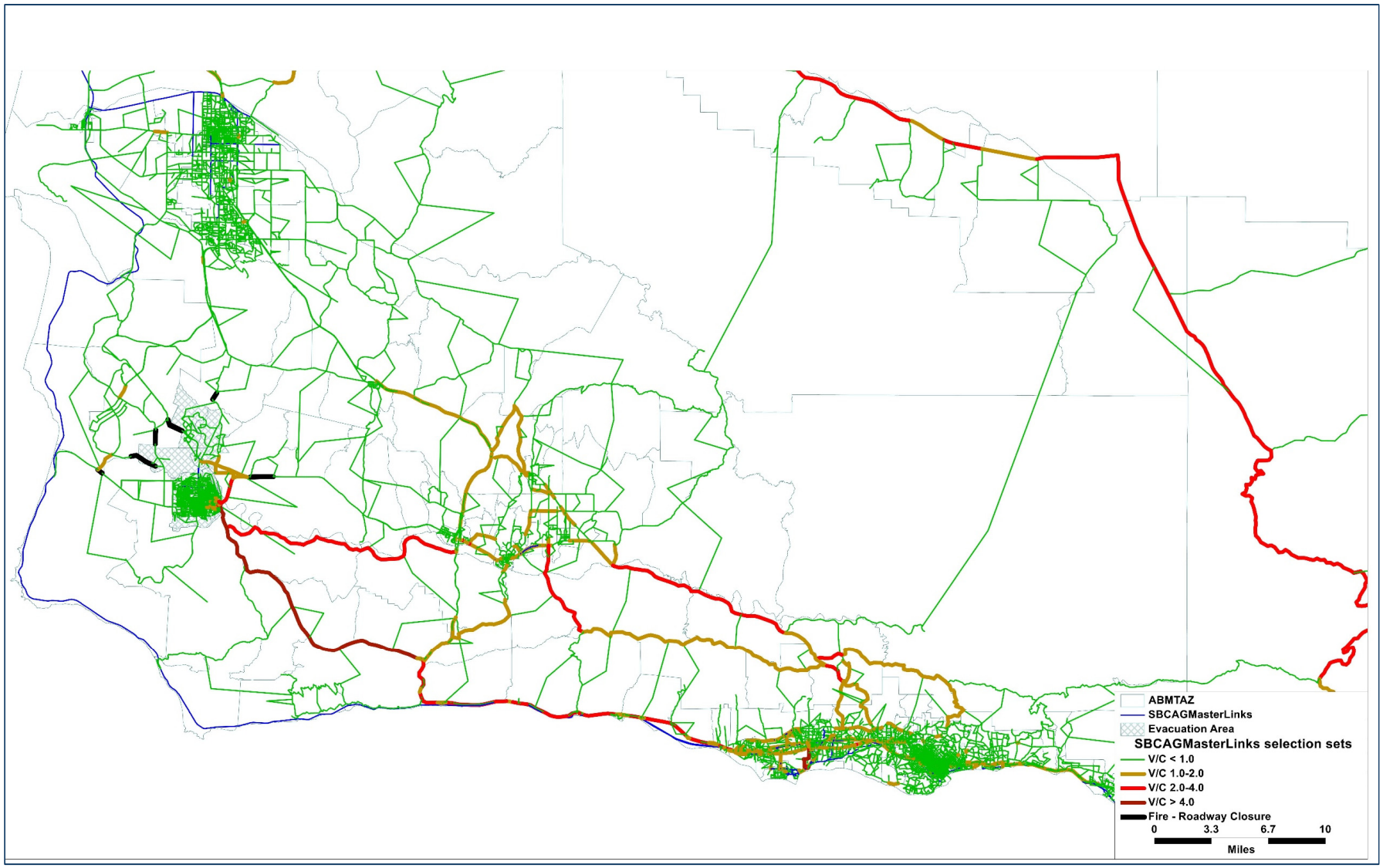

FIGURE 10: WILDFIRE SCENARIO: REGIONAL SCALE VOLUME/CAPACITY RESULTS

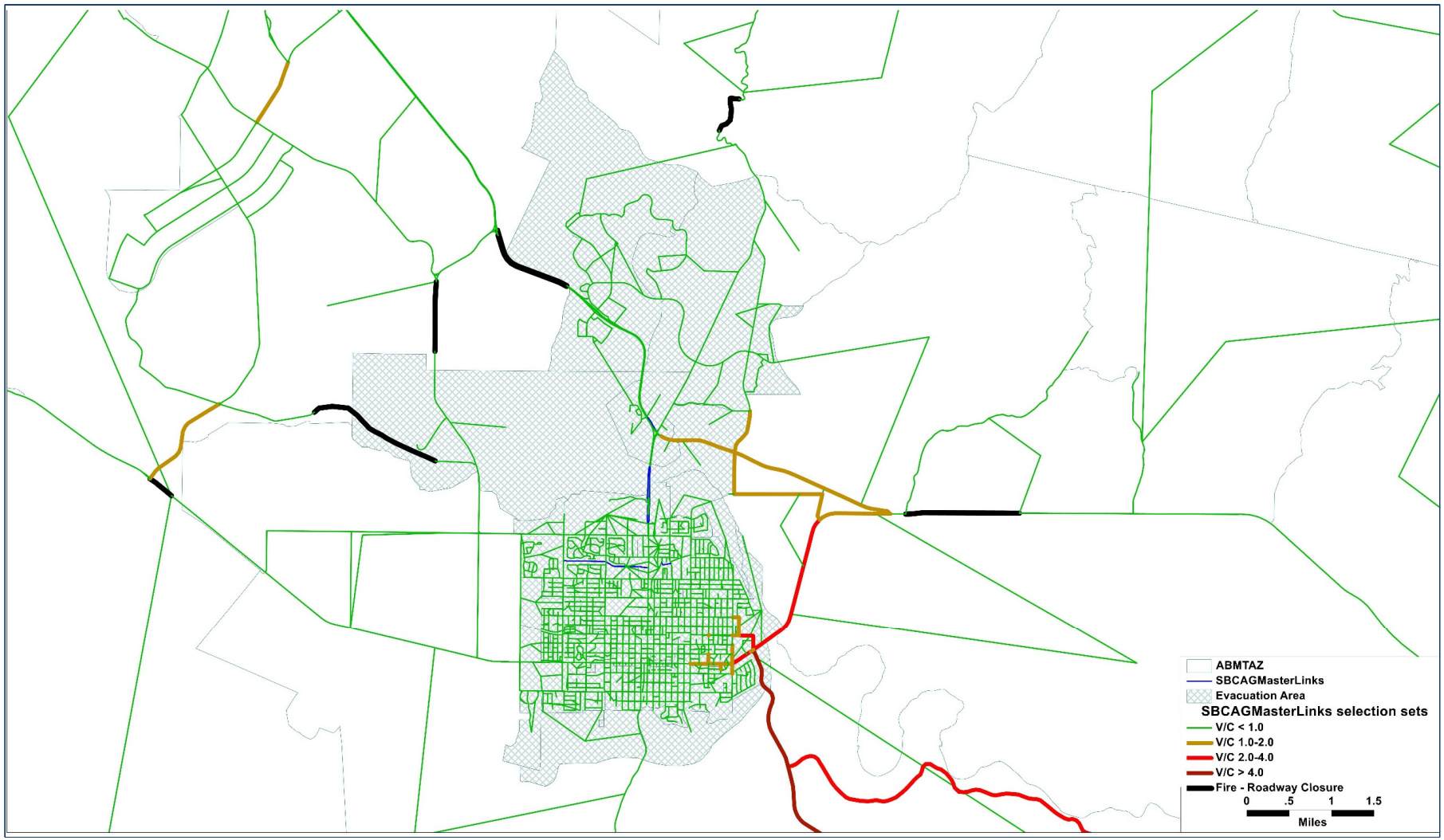

FIGURE 11: WILDFIRE SCENARIO: LOCAL SCALE VOLUME/CAPACITY RESULTS

VANDENBERG EMERGENCY SCENARIO

This scenario assumes that a Vandenberg Space Force Base mishap, such as a ground transport spill or an unintended missile launch. Under this scenario, all homes in the evacuation area would be evacuated to locations south, towards the City of Santa Barbara. SR 1 (north of the city), West Ocean Avenue, Santa Lucia Canyon Road, San Miguelito Road, Harris Grade Road, and Rancho Lompoc Farm Road would be closed to traffic as depicted in **Figure 12**.

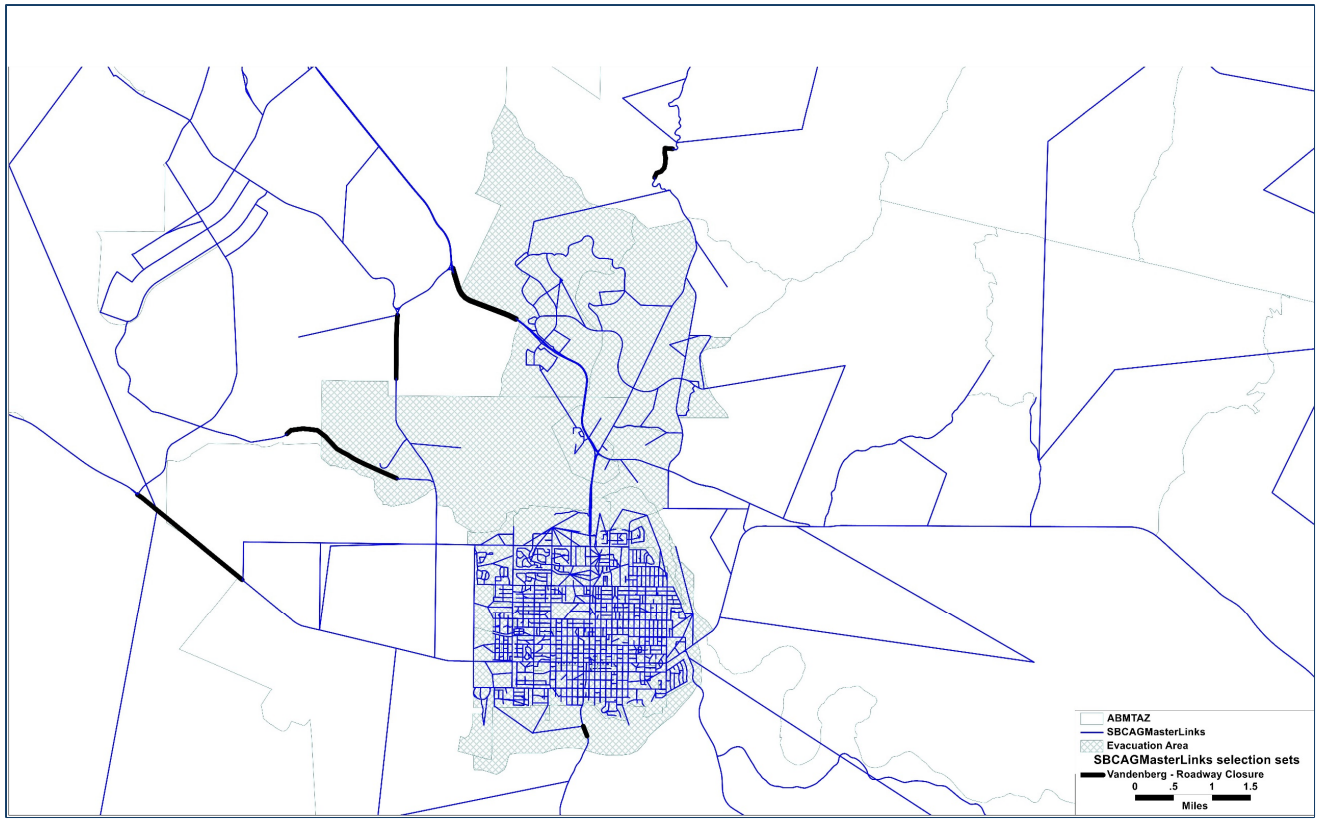

FIGURE 12: VANDENBERG SCENARIO: ORIGIN NORTH; DIRECTIONALITY SOUTH AND EAST

Figure 13 shows the regional distribution of vehicle trips during a sudden 3-hour wildfire evacuation event in the Lompoc area. The evacuation direction is directly east and south as key gateway roadways to the north are assumed inoperable. As shown, SR 246, SR 1 and Santa Rosa Road are the most impacted roadways. **Figure 14** and **Figure 15** present the resulting roadway volume/capacity ratios at the regional and local scale respectively. As shown, during a sudden evacuation event up to 2 (Santa Rosa Road) to 4+ (SR 1 and SR 246) times the amount of out-bound directional traffic would occur than what could be adequately accommodated by available roadway capacity. These conditions would result in significant queuing and delays that would significantly increase the amount of time needed for vehicles to leave the area (i.e., double). Use-of-shoulder would provide minimal benefit. Reverse contra-flow (i.e., opening both directions of roadway for a single out-bound direction) on SR 1 and SR 246 would be an effective evacuation management strategy to safely evacuate the area – assuming emergency vehicles do not require entry from the south.

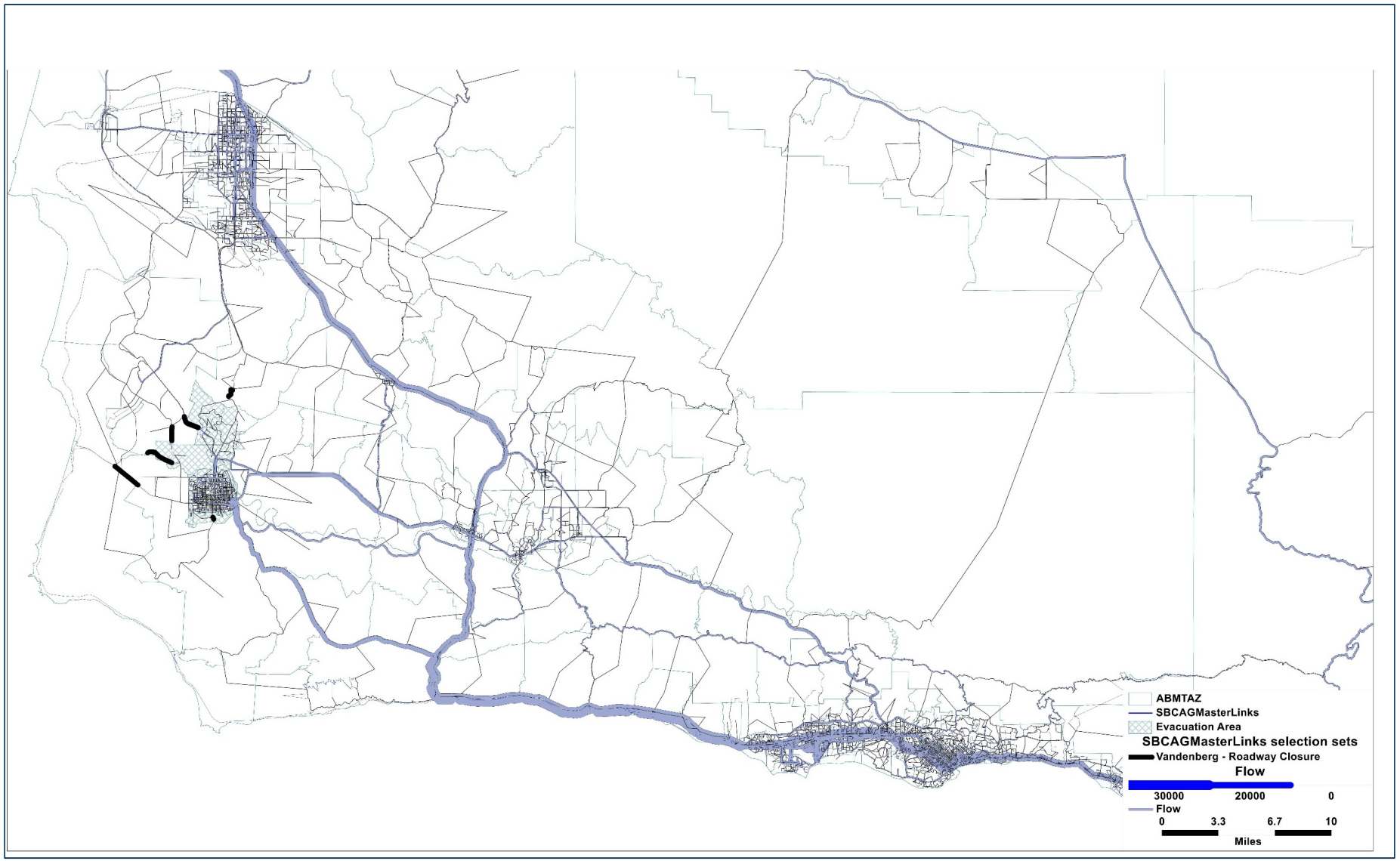

FIGURE 13: VANDENBERG SCENARIO REGIONAL EVACUATION FLOWS; DIRECTIONALITY SOUTH AND EAST

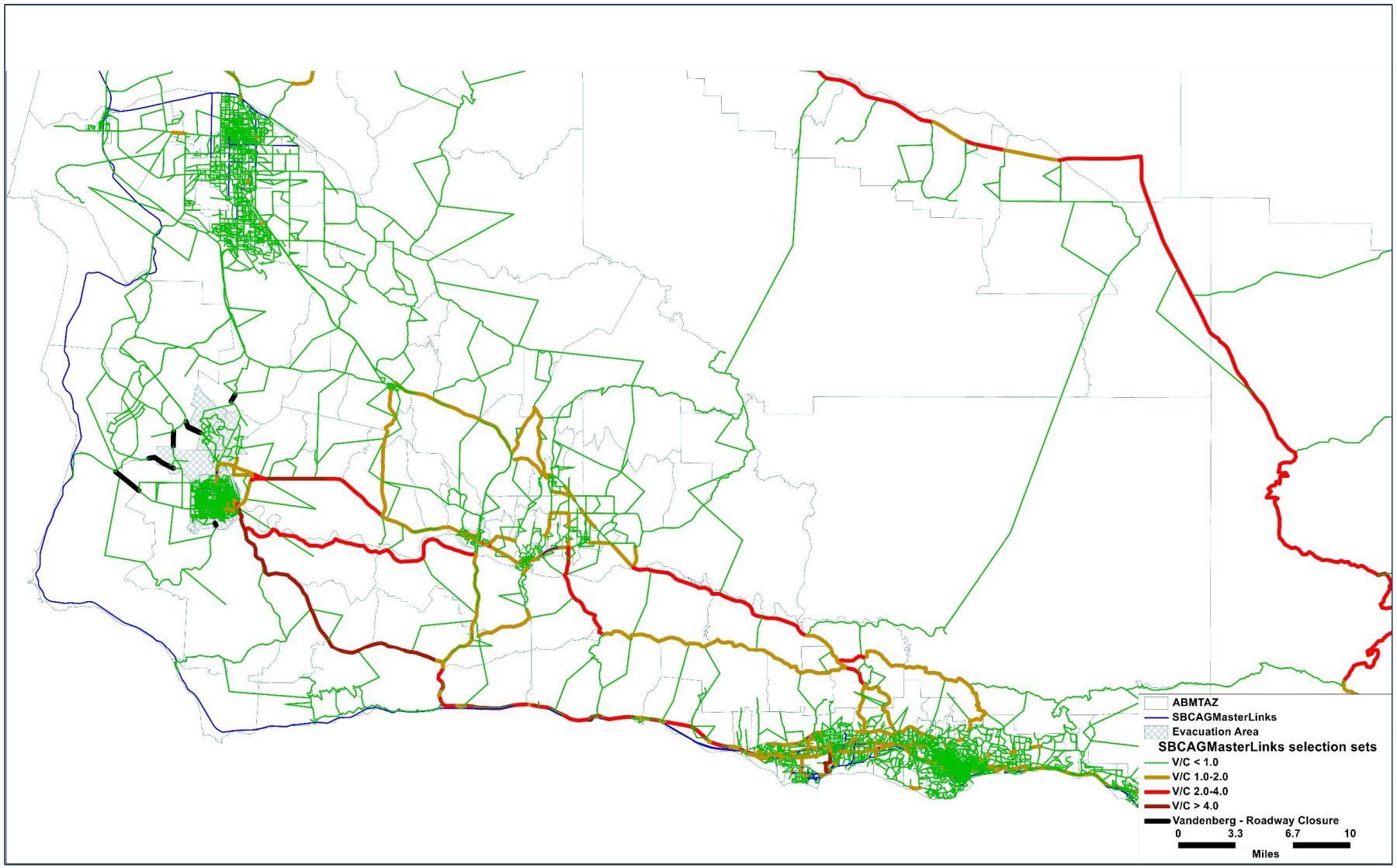

FIGURE 14: VANDENBERG SCENARIO: REGIONAL SCALE VOLUME/CAPACITY RESULTS

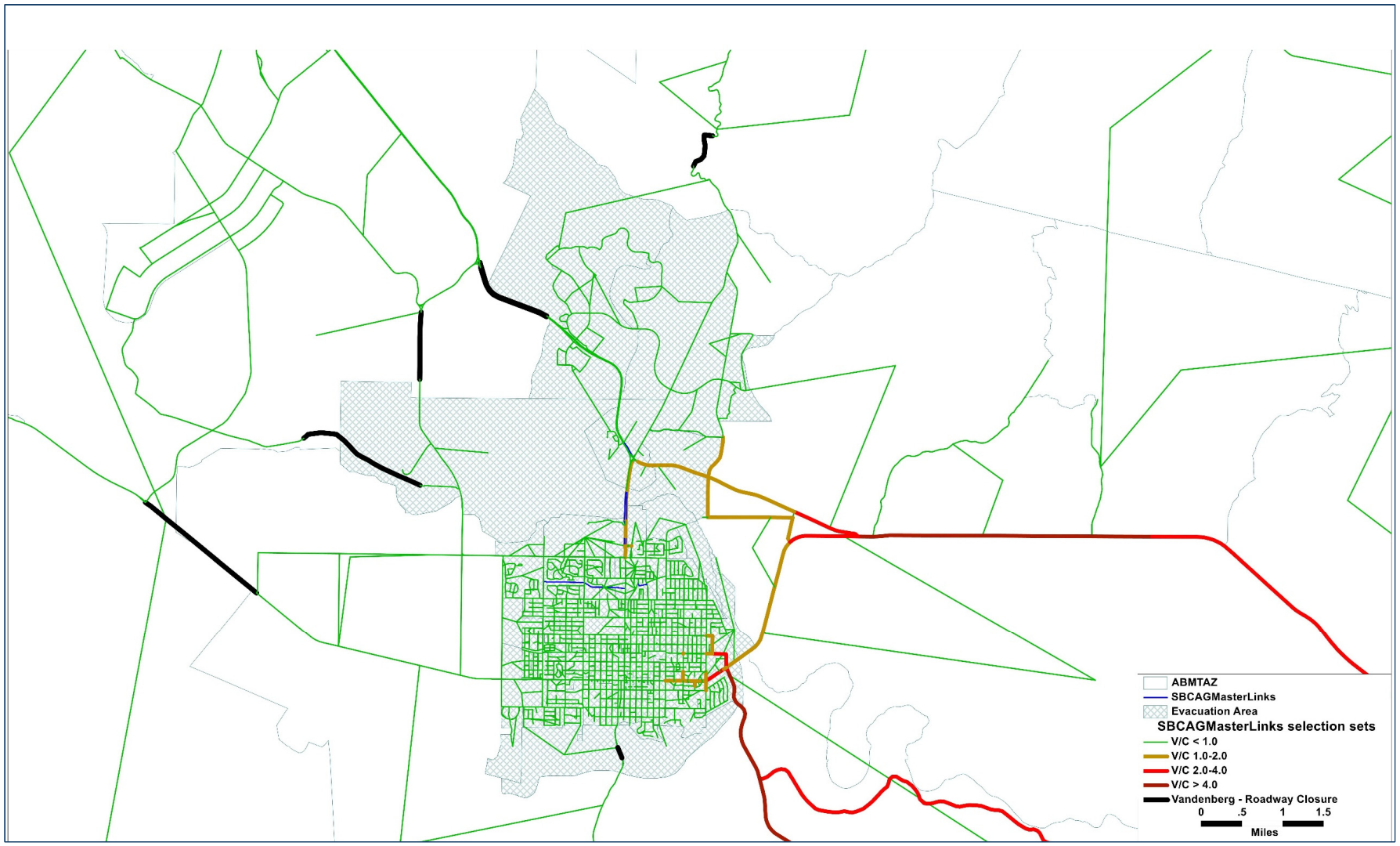

FIGURE 15: VANDENBERG SCENARIO: LOCAL SCALE VOLUME/CAPACITY RESULTS

EARTHQUAKE SCENARIO

This scenario assumes an earthquake on a fault running south of Lompoc. Under this scenario, SR 1 south of Lompoc and SR 246 east of Lompoc are assumed closed to traffic as depicted in **Figure 16** necessitating a widespread evacuation to points north towards the City of Santa Maria.

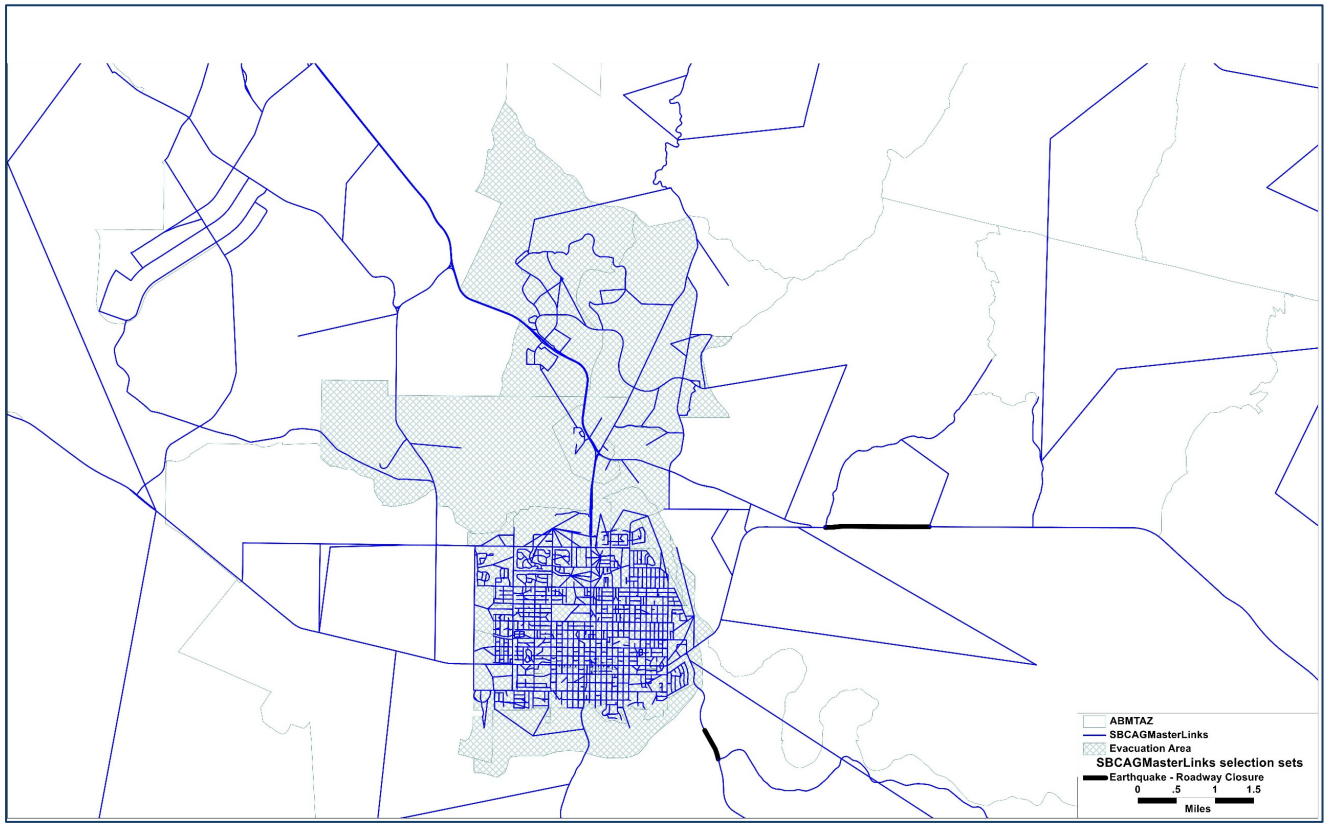

FIGURE 16: EARTHQUAKE SCENARIO: ORIGIN SOUTH; DIRECTIONALITY NORTH AND WEST

Figure 17 shows the regional distribution of vehicle trips during a sudden 3-hour earthquake evacuation event in the Lompoc area. The evacuation direction is directly north and west as key gateway roadways to the south (SR-1) and east (SR 246) are assumed inoperable. As shown, greater route choices are available to disperse traffic. **Figure 18** and **Figure 19** show roadway volume/capacity ratios at the regional and local scale respectively. The most critical bottleneck is SR 1 from Central Avenue to Purisima Road. Depending on location, from up to 2 to 4+ times the amount of out-bound directional traffic would occur than what could be adequately accommodated. Significant queuing and delays would occur. Use-of-shoulder and the center median on SR 1 would provide greater capacity for out-going vehicles except at the Santa Ynez River bridge where it is constrained to four lanes. Reverse contra-flow (i.e., opening both directions of roadway for the out-bound direction (retaining one in-coming lane) on SR 1 would be an effective management strategy for maximizing roadway capacity for evacuation. Other impacted facilities are Harris Grade Road north of Rucker Road and SR 1 between Santa Lucia Canyon Road and California Boulevard. These bottlenecks occur significantly north of the city. As such they would not pose a safety risk unless fires ignited as a result of an earthquake and moved in a northernly direction from the city.

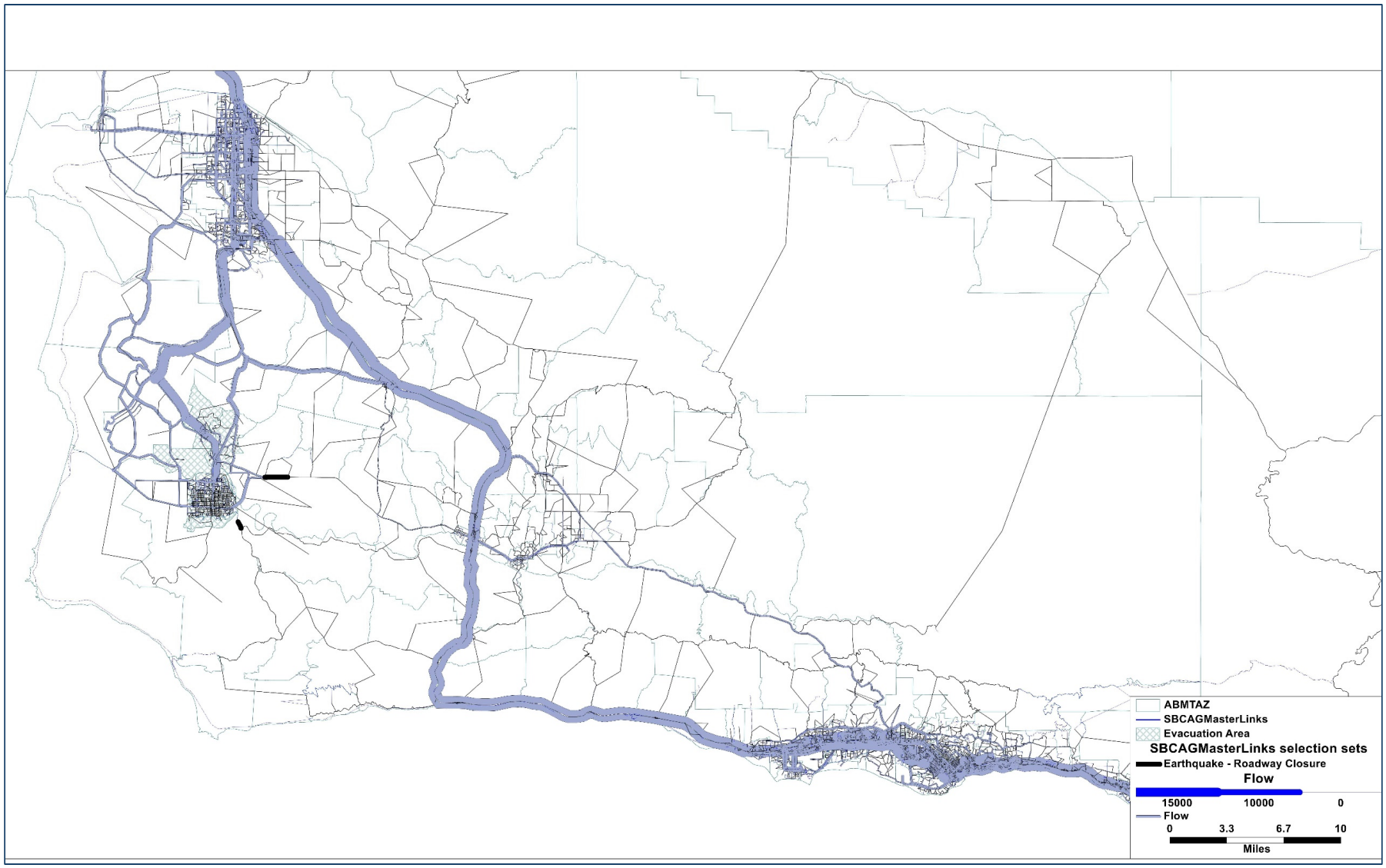

FIGURE 17: EARTHQUAKE SCENARIO REGIONAL EVACUATION FLOWS; DIRECTIONALITY NORTH AND WEST

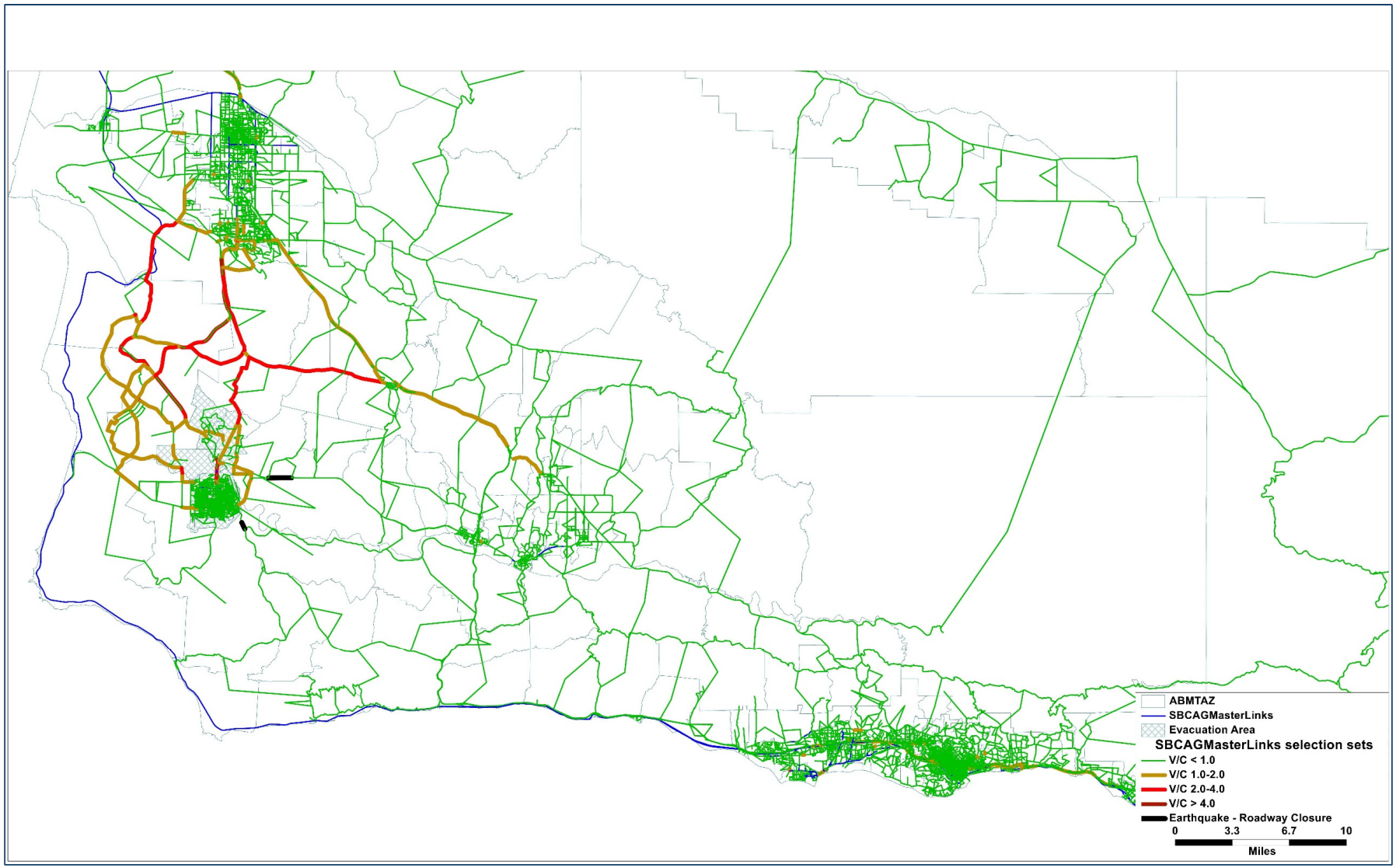

FIGURE 18: EARTHQUAKE SCENARIO: REGIONAL SCALE VOLUME/CAPACITY RESULTS

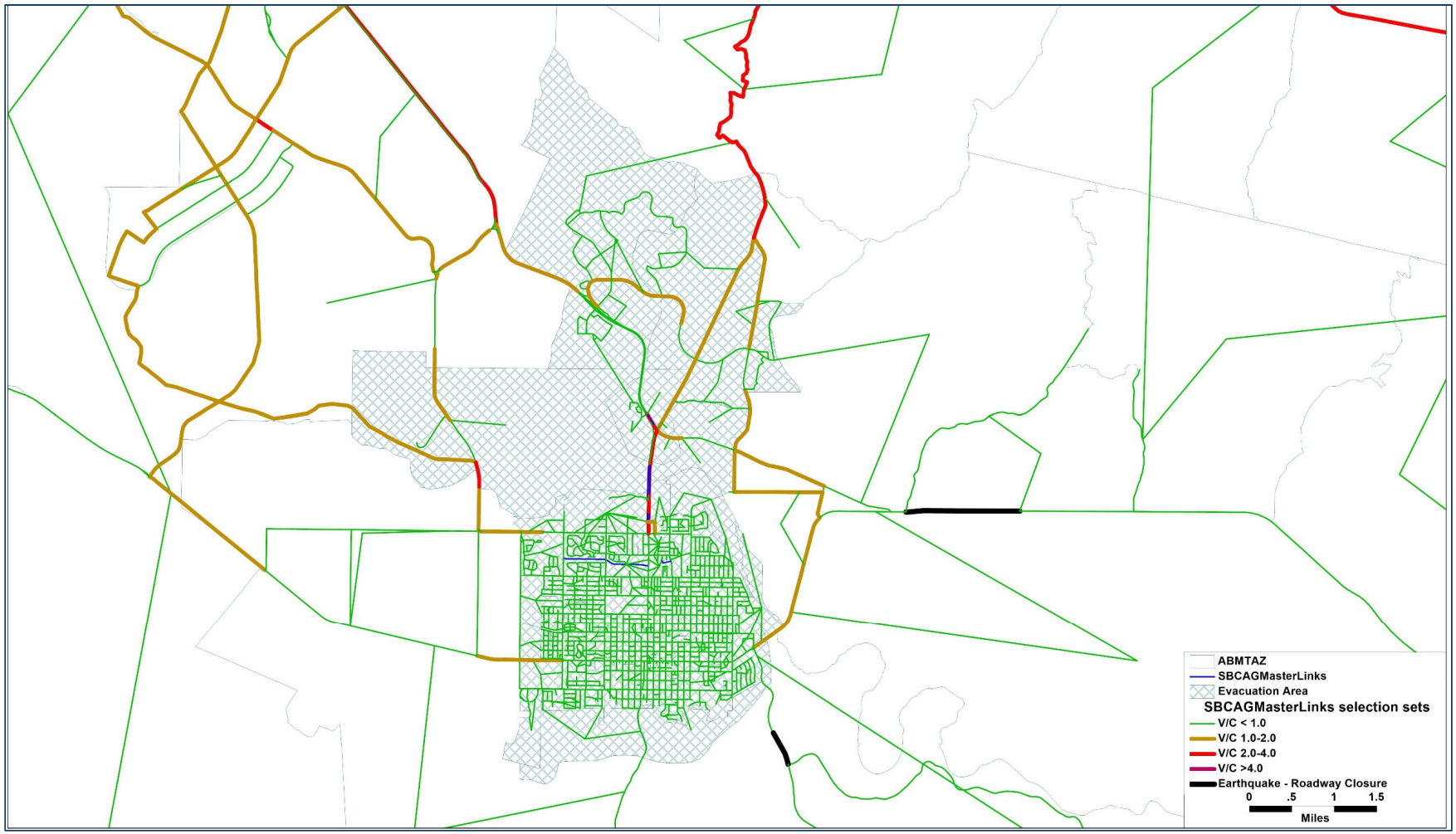

FIGURE 19: EARTHQUAKE SCENARIO: LOCAL SCALE VOLUME/CAPACITY RESULTS

METERED EVACUATION

Recognizing the evacuation events can occur gradually over time that allows for adequate warning and evacuation management, a Metered Evacuation (ME) was analyzed. This analysis assumes that evacuation zones are designated and delineated for the Lompoc area. Sequentially evacuating by zones during an emergency (from highest-risk zones first to lowest-risk zone last) can help ensure that the evacuation process is well-organized and efficient, with each zone having designated routes and destinations. This would have the effect of metering traffic during an evacuation to reduce the potential of exceeding available roadway capacity on the roads leading out of the city. Additionally, by dividing the city into zones, emergency responders can more easily identify which areas are most vulnerable and prioritize their efforts accordingly.

This analysis assumes a sequential evacuation spanning 3 hours for each city zone for a total of a 12-hour evacuation process. For analysis purposes, the city was arbitrarily delineated into four subareas based on population - such that each subarea has approximately the same amount of household population. Given that each zone has approximately the same amount of population, the circulation characteristics and congestion levels of a given single zone can be assumed to hold true for the other three. Hence, only one zone (i.e., one model run) was required for each evacuation scenario. Based on the point of origin and directionality of the hazard of a given evacuation scenario, the most at-risk zone was selected for modeling. **Table 2** lists the four zones, the zone population (current condition), and the selected evacuation scenario for each subarea. **Figure 20** shows the divisions of the four subareas within the evacuation area.

TABLE 4: SUBAREAS SETUP WITHIIN THE LOMPOC EVACUATION AREA

	POPULATION[a]	PERCENT	SCENARIOS
AREA 1	15,710	29%	Wildfire
AREA 2	12,061	22%	Vandenberg
AREA 3	13,948	26%	Earthquake
AREA 4	12,822	24%	Wildfire
TOTAL	54,541	100%	

Source: DKS Associates.

Figure 21 - Figure 24 show the volume/capacity ratios at the local scale for Area 1, Area 2, Area 3, and Area 4 respectively. Results indicate that sequentially metering an evacuation significantly improves the ability for the roadway network to accommodate out-bound directional traffic with the exception of the wildfire event which based on the roadway closure assumptions significantly impacts SR 1. Reverse contra-flow (i.e., opening both directions of roadway for a single out-bound direction) on SR 1 would be an effective evacuation management strategy to safely evacuate the area – assuming emergency vehicles do not require entry from the south.

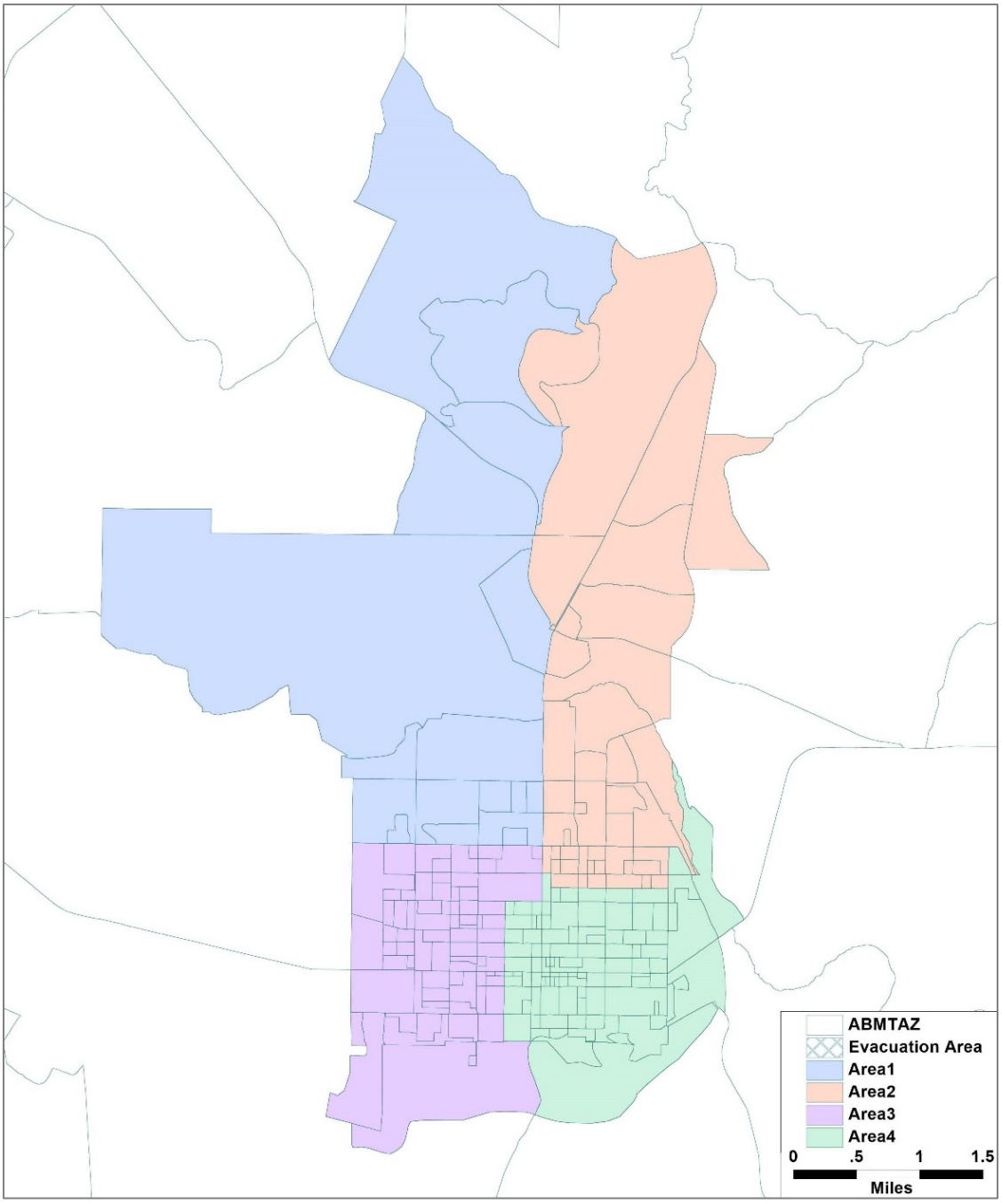

FIGURE 20: SUBAREAS WITHIN THE LOMPOC EVACUATION AREA

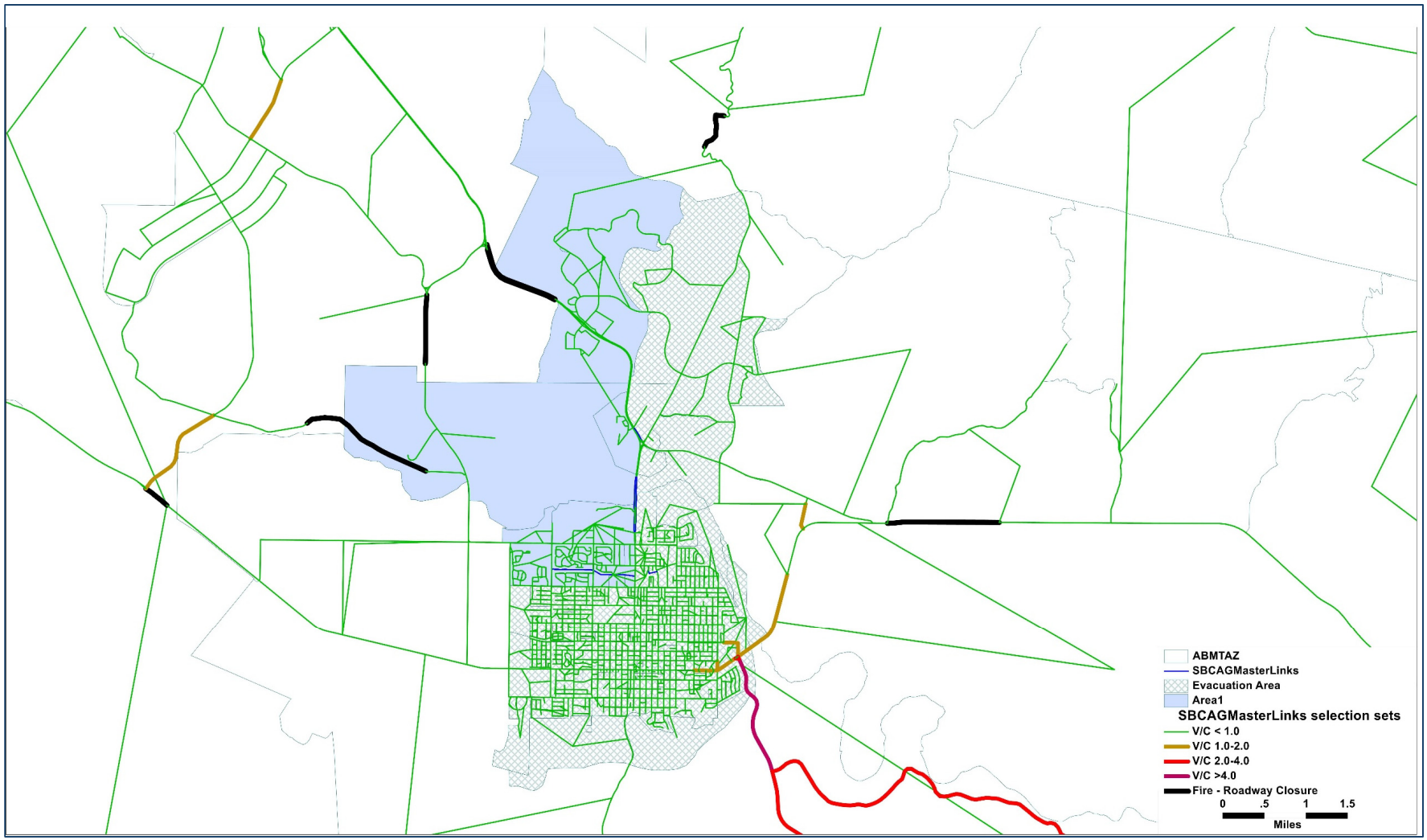

FIGURE 21: AREA/ZONE 1 WILDFIRE SCENARIO: LOCAL SCALE VOLUME/CAPACITY RESULTS

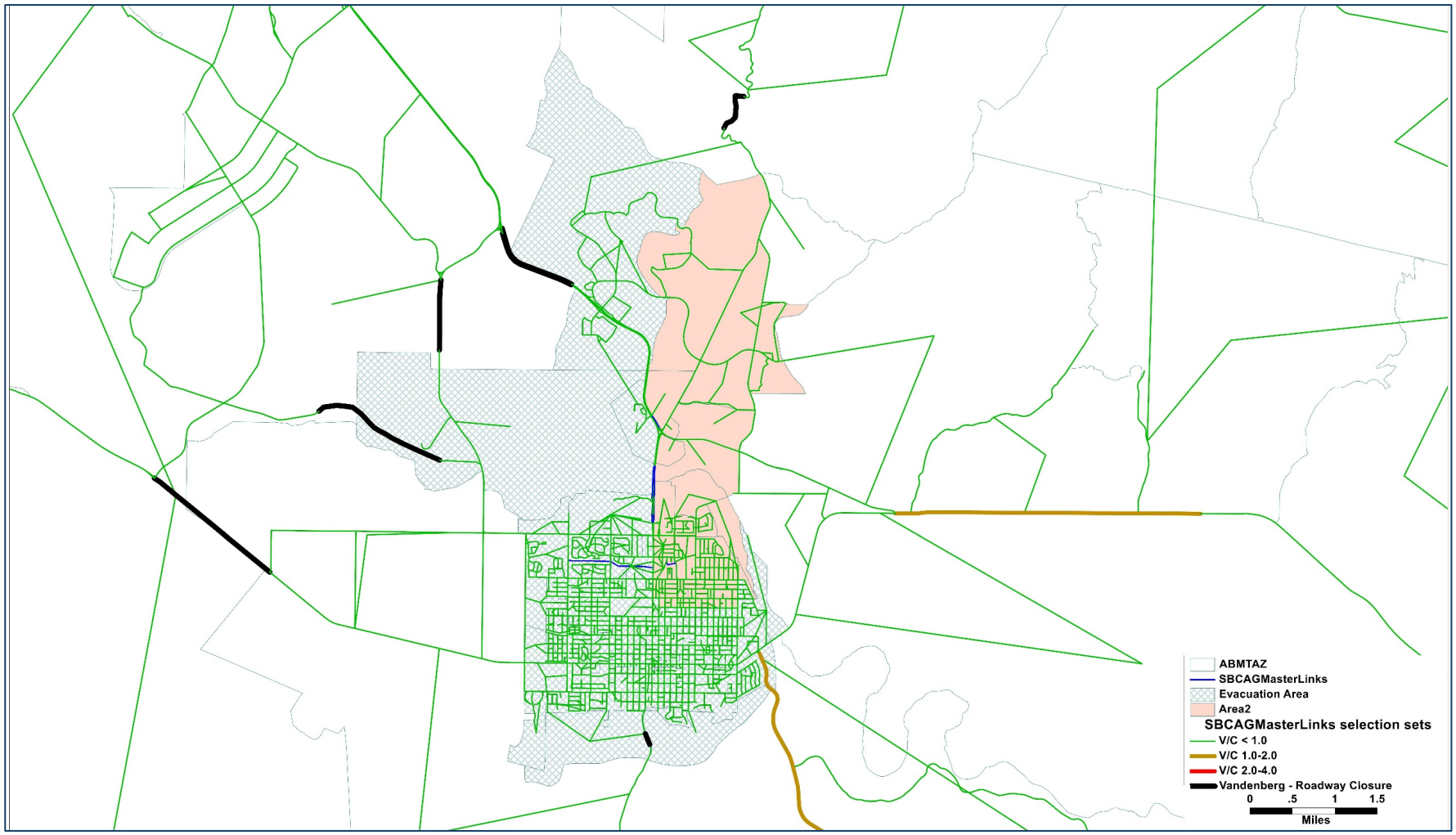

FIGURE 22: AREA/ZONE 2 VANDENBERG SCENARIO: LOCAL SCALE VOLUME/CAPACITY RESULTS

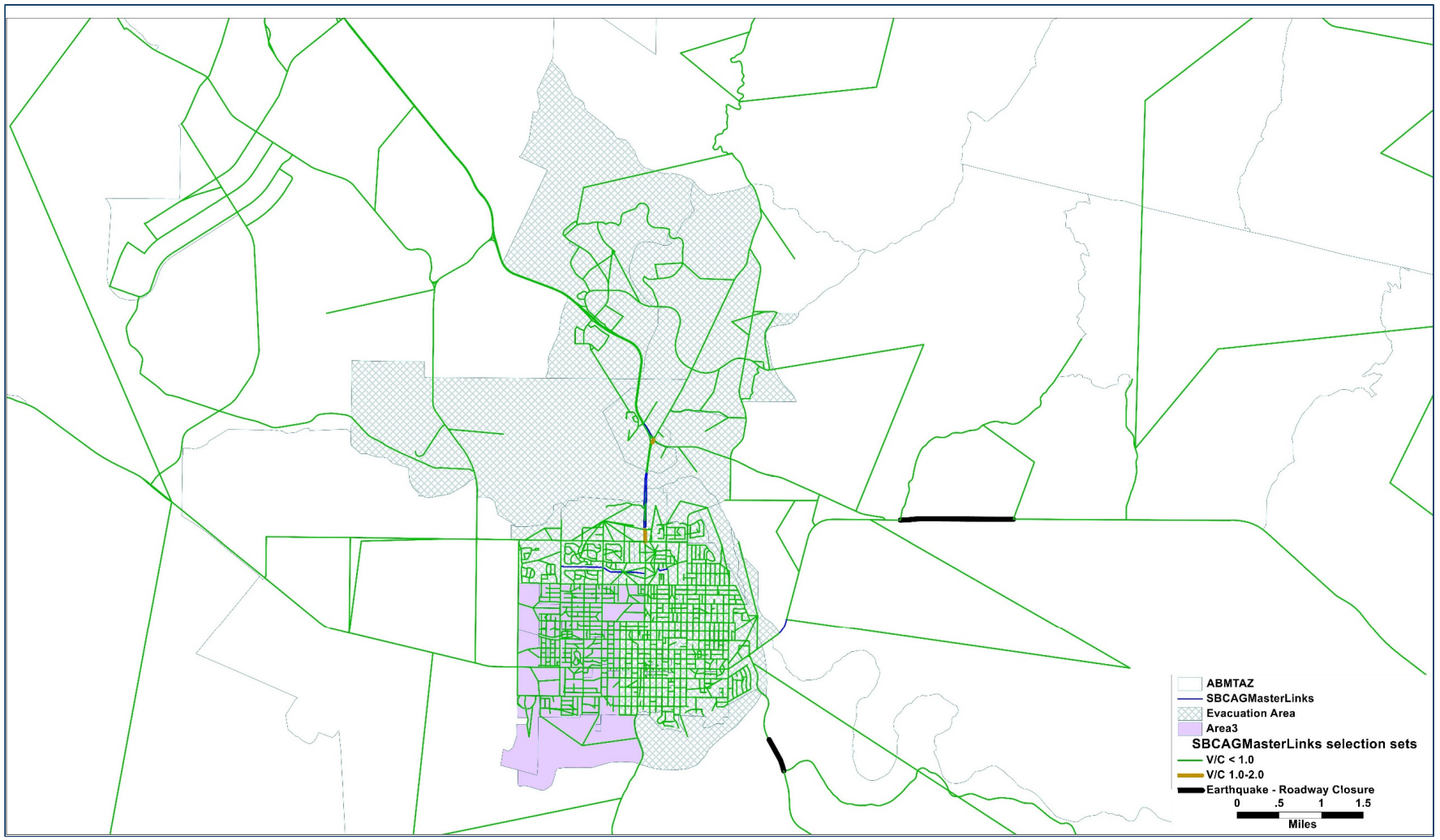

FIGURE 22: AREA/ZONE 3 EARTHQUAKE SCENARIO: LOCAL SCALE VOLUME/CAPACITY RESULTS

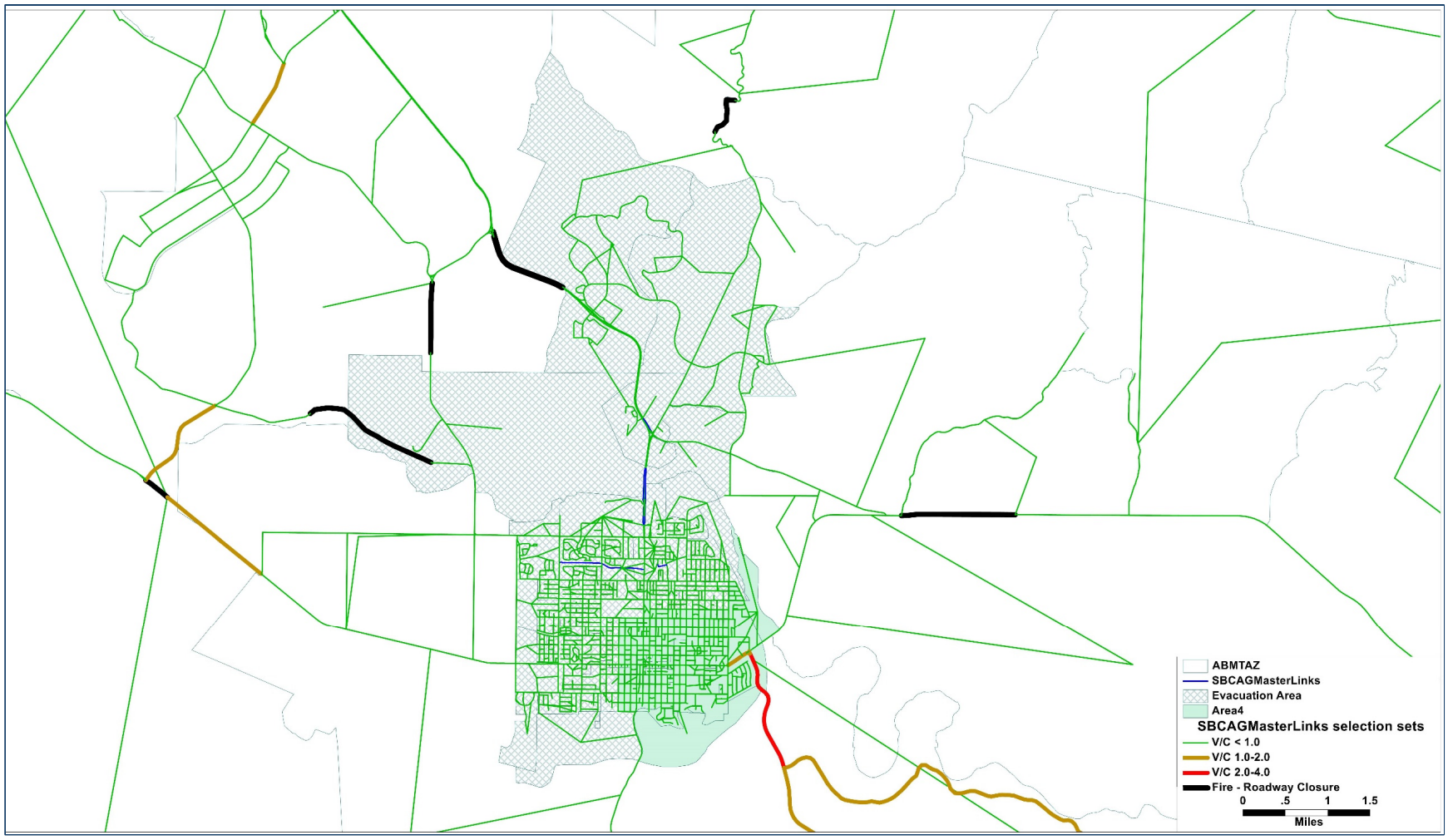

FIGURE 23: AREA/ZONE 4 WILDFIRE SCENARIO: LOCAL SCALE VOLUME/CAPACITY RESULTS

FINDINGS

Three evacuation events resulting from plausible hazards including: wildfire; Vandenberg mishap; and, earthquake were analyzed under immediate (3-hour) and sequential (12-hour) evacuation durations. Under each scenarios several key roadways were assumed to be rendered inoperable and not available for use during an evacuation. The evacuation scenarios are summarized in **Table 5**.

TABLE 5: SCENARIO RESULTS SUMMARY
LOMPOC EVACUATION ANALYSIS

SCENARIOS	ROADWAY CLOSURES ASSUMED RESULTING FROM THE EVENT	CRITICAL INFRASTRUCTURE CONSTRAINTS WITHIN THE LOMPOC AREA
WILDFIRE **ORIGIN OF EVENT: NORTHEAST OF LOMPOC AREA**	SR 1 (North of Lompoc) SR 246 West Ocean Ave Santa Lucia Canyon Rd Harris Grade Rd Rancho Lompoc Farm Rd	All At Once Evacuation SR 1 (south of city – SB direction); SR 246 (La Purisima to SR 1 – SB direction); Santa Rosa Road – WB direction. Sequential Evacuation SR 1 (south of city – SB direction); Santa Rosa Road – WB direction.
VANDENBERG SPACE FORCE BASE MISHAP **ORIGIN OF EVENT: WEST OF LOMPOC AREA**	SR 1 (North of Lompoc), West Ocean Ave Santa Lucia Canyon Rd San Miguelito Rd Harris Grade Rd Rancho Lompoc Farm Rd	All At Once Evacuation SR 1 (south of city – SB direction); SR 246 (La Purisima to SR 1 – SB direction); Santa Rosa Road – WB direction. Sequential Evacuation No Capacity Issues
EARTHQUAKE **ORIGIN OF EVENT: SOUTH OF LOMPOC AREA**	SR1 (South of Lompoc), SR 246	All At Once Evacuation SR 1 (Central Avenue to Purisima Road) – NB direction; Harris Grade Road north of Rucker Road) – NB direction; SR 1 (Santa Lucia Canyon Road to California Boulevard) – NB direction; Others further north[1] Sequential Evacuation No Capacity Issues

Source: DKS Associates.

1. *North of Lompoc Area segments of SR 135 (SR 1 to Santa Maria City Limit), San Antonio Road (SR 1 to SR 135) and Black Road (SR 1 south juncture to SR 1 north juncture)*

Use-of-shoulder and reverse contra-flow for SR 1 operations just north of the city and reverse contra-flow for SR 1 operations south of the city is a recommended evacuation strategy. Similarly, reverse contra-flow for Santa Rosa Road, Harris Grade Road, and SR 246 is also recommended. Designating evacuation zones within the city to allow for a metered evacuation process is recommended.