DWI
Resource Center, Inc.

Data Visualization–Based Inference of Time-Based Drunk Driver–Preferred Driving Routes

Our mapping project arose because of :

- Public misperceptions of where drunk driving problem exists. (Not in my neighborhood).
- The inefficiency of textual information to engage public and inform law enforcement. (Too much information – not enough time).
- Lack of visual indication of relative drunk-driving behavior over time and space in current maps. (% of all drivers that are intoxicated – over time and space).

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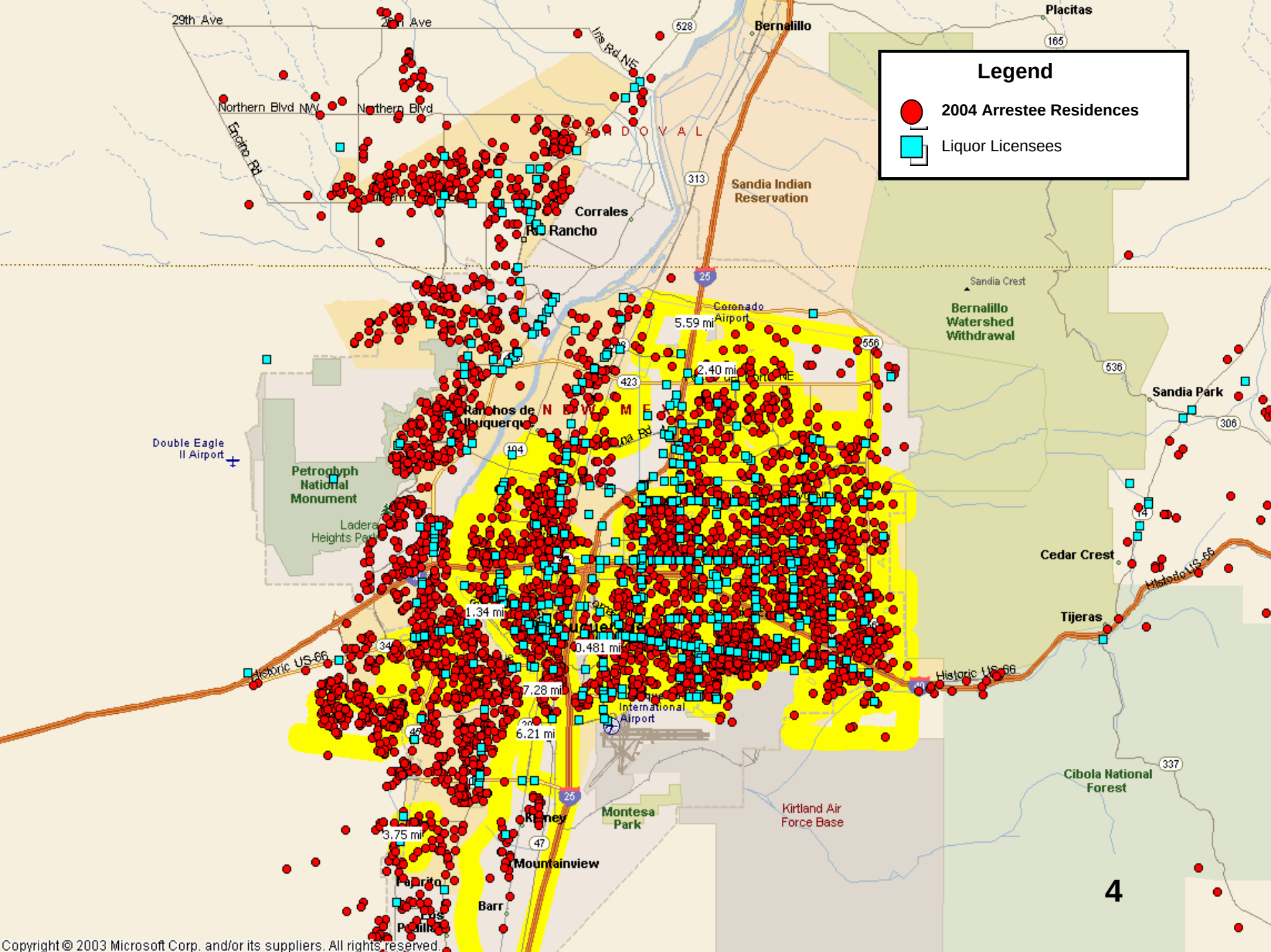
First Attempts at mapping:

A reaction to surveys showing the public's acknowledgement of the problem – but not at their neighborhood level.



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Next Step

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- Map bars
- Map residences
- Map the most dangerous roads

Our great city!

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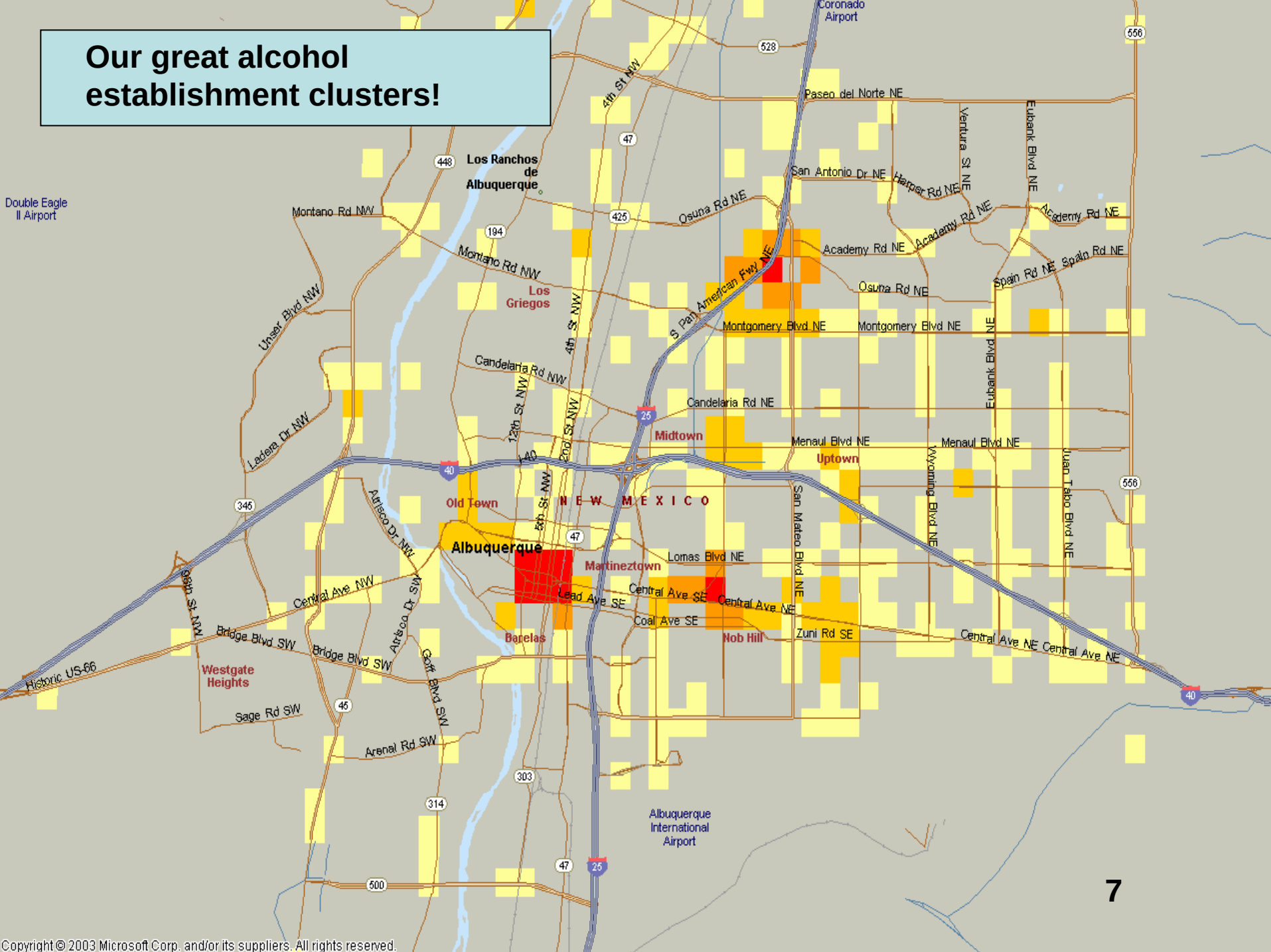
Our great alcohol establishment clusters!



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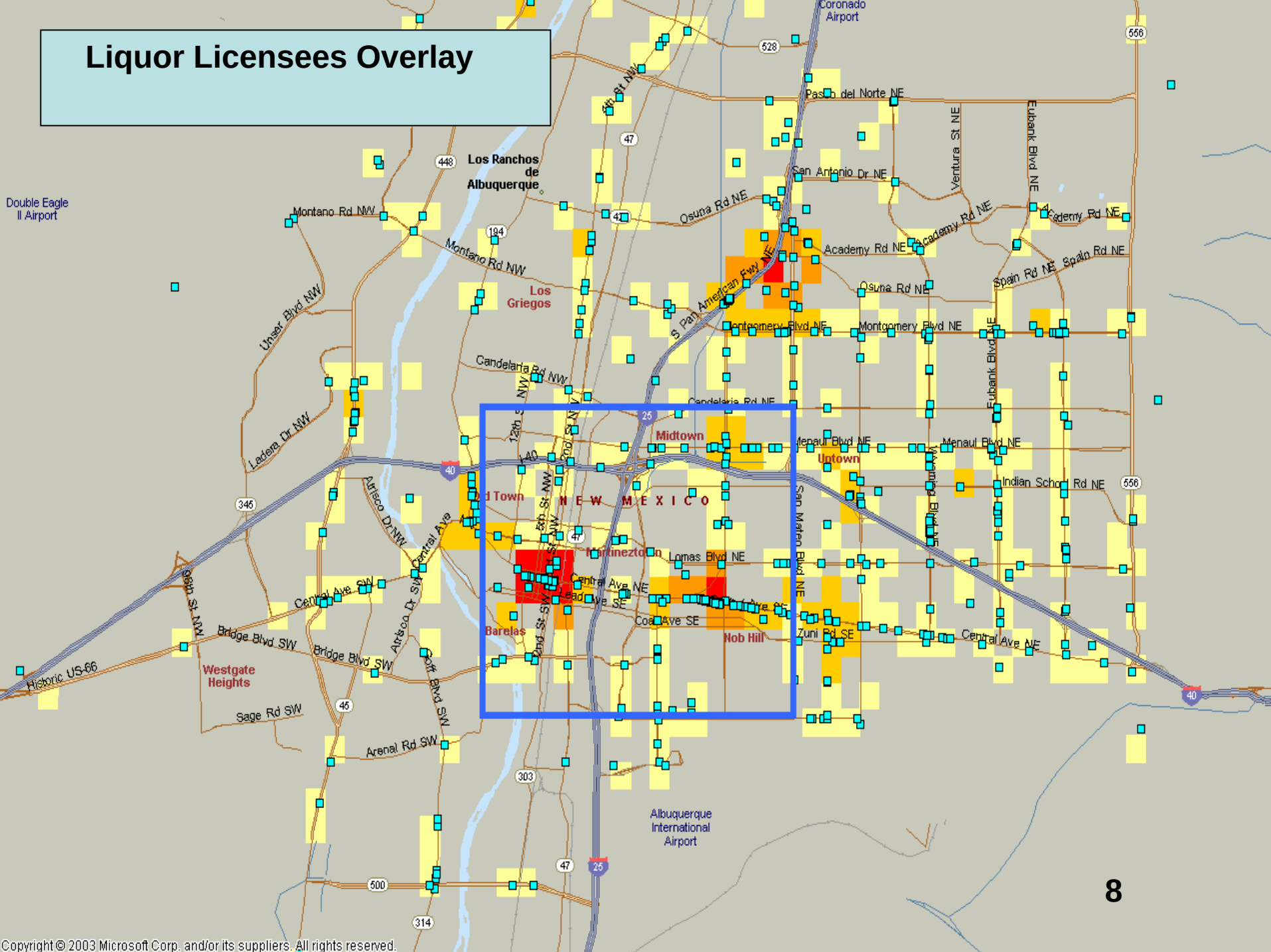
Liquor Licensees Overlay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Los Ranchos de Albuquerque
Double Eagle II Airport
Los Griegos
Midtown
Uptown
Downtown
NEW MEXICO
Martinez Town
Barelas
Nob Hill
Westgate Heights
Albuquerque International Airport
Montano Rd NW
Osuna Rd NE
San Antonio Dr NE
Academy Rd NE
Spain Rd NE
Montgomery Blvd NE
Candelaria Rd NW
Lomas Blvd NE
Central Ave NE
Central Ave SW
Bridge Blvd SW
Indian School Rd NE
Menaul Blvd NE
Pasco del Norte NE
Unser Blvd NW
Ladera Dr NW
Arenal Rd SW
Sage Rd SW
Historic US-66
Coors Blvd SW
Eubank Blvd NE
Ventura St NE
Wyoming Blvd NE
San Mateo Blvd NE
Zuni Rd SE
Lead Ave SE
Coal Ave SE
Arbisco Dr NW
Arbisco Dr SW
Central Ave
Unser Blvd
Coors Blvd
Eubank Blvd
Wyoming Blvd
San Mateo Blvd
Pan American Fwy NE
Montgomery Blvd
Spain Rd
Academy Rd
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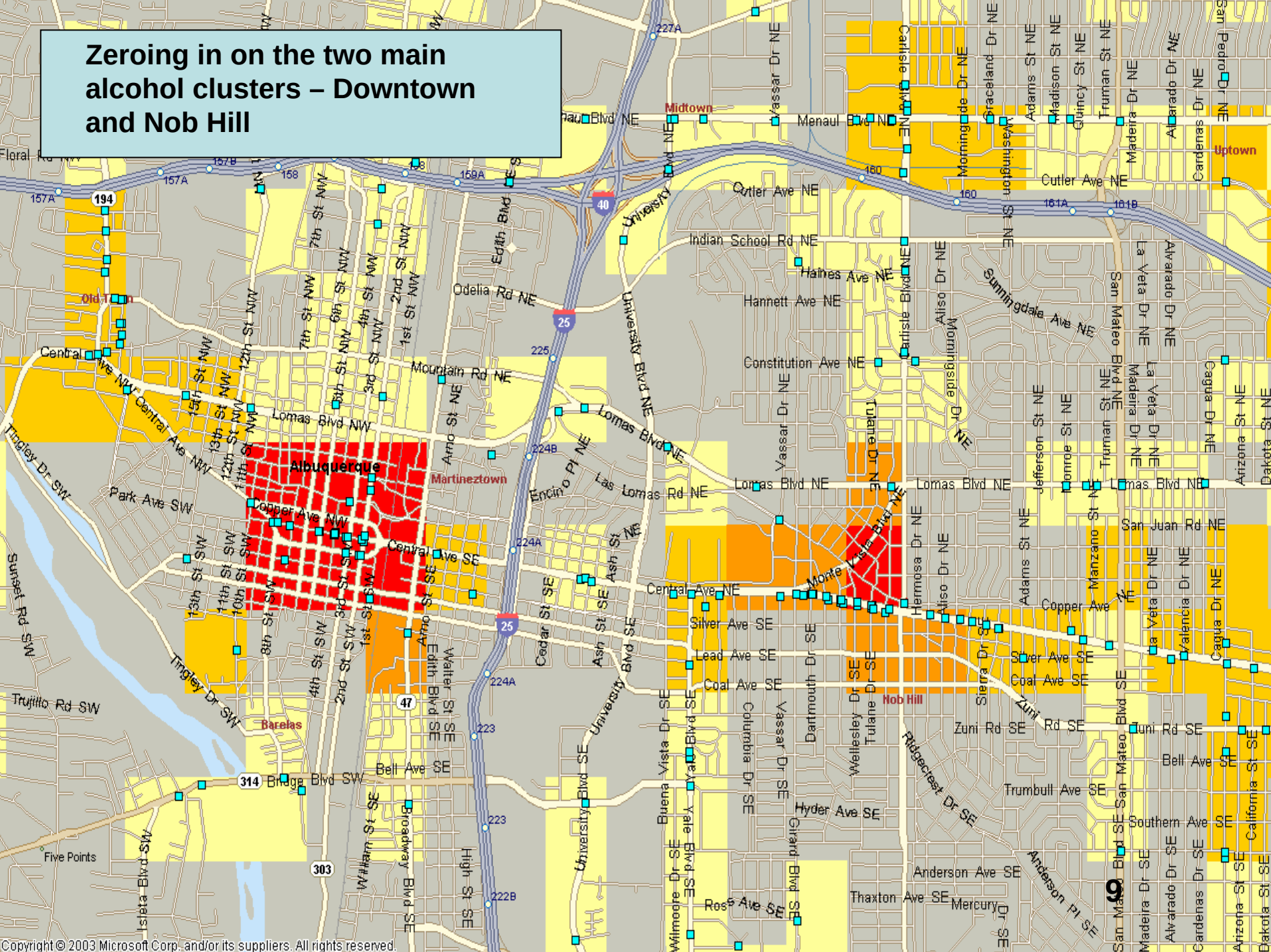
Zeroing in on the two main alcohol clusters – Downtown and Nob Hill
Albuquerque
Martineztown
Old Town
Barelas
Five Points
Nob Hill
Uptown
Midtown
Central Ave NW
Central Ave SE
Central Ave NE
Lomas Blvd NW
Lomas Blvd NE
Mountain Rd NE
Odelia Rd NE
Indian School Rd NE
Cutler Ave NE
Menaul Blvd NE
Bridge Blvd SW
Bell Ave SE
Silver Ave SE
Lead Ave SE
Coal Ave SE
Zuni Rd SE
Hyder Ave SE
Trumbull Ave SE
Southern Ave SE
Anderson Ave SE
Thaxton Ave SE
Ross Ave SE
Mercury Dr SE
Park Ave SW
Copper Ave NW
Tingley Dr SW
Trujillo Rd SW
Sunset Rd SW
Las Lomas Rd NE
Monte Vista Blvd NE
Copper Ave NE
San Juan Rd NE
Haines Ave NE
Hannett Ave NE
Constitution Ave NE
Summingdale Ave NE
Encino Pl NE
Edith Blvd NE
University Blvd NE
University Blvd SE
Arno St NE
Cedar St SE
Ash St SE
Broadway Blvd SE
High St SE
Wellesley Dr SE
Tulane Dr SE
Dartmouth Dr SE
Columbia Dr SE
Yale Blvd SE
Buena Vista Dr SE
Ridgecrest Dr SE
Wilmoore Dr SE
Isleta Blvd SW
Carlisle Blvd NE
Vassar Dr NE
Morningside Dr NE
Aliso Dr NE
Hermosa Dr NE
Jefferson St NE
Monroe St NE
Truman St NE
Madeira Dr NE
La Vista Dr NE
Alvarado Dr NE
Cardenas Dr NE
Valencia Dr NE
Caguia Dr NE
Arizona St NE
Dakota St NE
San Mateo Blvd NE
San Mateo Blvd SE
Madeira Dr SE
Alvarado Dr SE
Cardenas Dr SE
Arizona St SE
Dakota St SE
California St SE
Anderson Pl SE
Graceland Dr NE
Adams St NE
Madison St NE
Quincy St NE
Truman St NE
Madeira Dr NE
Alvarado Dr NE
Cardenas Dr NE
Pardo Dr NE
Floral Rd NW
Old Town
Central Ave NW
Tingley Dr SW
Park Ave SW
Sunset Rd SW
Trujillo Rd SW
Five Points
Isleta Blvd SW
Bridge Blvd SW
Bell Ave SE
Broadway Blvd SE
Edith Blvd SE
Arno St SE
Cedar St SE
Ash St SE
University Blvd SE
Buena Vista Dr SE
Columbia Dr SE
Yale Blvd SE
Wellesley Dr SE
Tulane Dr SE
Dartmouth Dr SE
Ridgecrest Dr SE
Wilmoore Dr SE
Ross Ave SE
Mercury Dr SE
Anderson Pl SE
Thaxton Ave SE
Anderson Ave SE
Hyder Ave SE
Trumbull Ave SE
Southern Ave SE
Bell Ave SE
Zuni Rd SE
Coal Ave SE
Silver Ave SE
Lead Ave SE
Central Ave SE
Central Ave NE
Copper Ave NE
Monte Vista Blvd NE
Las Lomas Rd NE
Lomas Blvd NE
Lomas Blvd NW
Mountain Rd NE
Odelia Rd NE
Indian School Rd NE
Haines Ave NE
Hannett Ave NE
Constitution Ave NE
Summingdale Ave NE
Cutler Ave NE
Menaul Blvd NE
Encino Pl NE
Edith Blvd NE
University Blvd NE
Arno St NE
Cedar St SE
Ash St SE
Broadway Blvd SE
High St SE
Wellesley Dr SE
Tulane Dr SE
Dartmouth Dr SE
Columbia Dr SE
Yale Blvd SE
Buena Vista

Coding the streets:
Streets were grouped by name and the % of crashes caused by drunk drivers was determined.
Red - Top third worst streets by ratio
Blue – Middle third streets by ratio
Green – Bottom third streets by ratio
10
Albuquerque
Old Town
Tiguex Park
Albuquerque Country Club
Albuquerque Biological Park
Barelas
Five Points
Santa Barbara Martineztown Park
Martineztown
Midtown
Uptown
University of New Mexico Athletic
Phoenix Ave NW
Indian School Rd NW
Menaul Blvd NW
Floral Rd NW
Central Ave NW
Lomas Blvd NW
Tingley Dr SW
Laguna Blvd SW
Sunset Rd SW
Trujillo Rd SW
Gerrard Ave SW
Haines Ave NW
Odelia Rd NE
Mountain Rd NE
Copper Ave NW
Roma Ave NE
Central Ave SE
Lomas Blvd NE
Menaul Blvd NE
Cutler Ave NE
Indian School Rd NE
Haines Ave NE
Hannett Ave NE
Constitution Ave NE
Central Ave NE
Silver Ave SE
Lead Ave SE
Coal Ave SE
Zuni Rd SE
Claremont Ave NE
Phoenix Ave NE
Sunningdale Ave NE
San Juan Rd NE
Marquette Ave NE
Grand Ave NE
Copper Ave NE
Crest Ave SE
Dakota St SE
California St SE
Arizona St NE
Alvarado Dr NE
Tingley Dr SW
Lomas Blvd SE
Lomas Blvd NE
Sunset Dr NE
Vassar Dr NE
Stanford Dr NE
Tulane Dr NE
Yale Blvd NE
Yale Blvd SE
University Blvd NE
University Blvd SE
Carlisle Blvd NE
Wyoming Blvd NE
Washington St NE
Adams St NE
Madison St NE
Quincy St NE
Truman St NE
Madeira Dr NE
Graceland Dr NE
Aliso Dr NE
Rita Dr NE
La Veta Dr NE
Laguna Dr NE
Monte Vista Blvd NE
Hermosa Dr NE
Jefferson St NE
Monroe St NE
Valencia Dr NE
Cedar St SE
Oak St SE
Ash St SE
Walter St SE
Edith Blvd SE
Broadway Blvd SE
Commercial St SE
William St SE
High St SE
Dartmouth Dr SE
Buena Vista Dr SE
Wilmoore Dr SE
Cinnamon Dr SE
Vassar Dr SE
Wesley Dr SE
1st St NW
2nd St NW
3rd St NW
4th St NW
5th St NW
6th St NW
7th St NW
8th St NW
10th St NW
12th St NW
14th St NW
15th St NW
1st St SW
2nd St SW
3rd St SW
4th St SW
8th St SW
10th St SW
12th St SW
14th St SW
1st St SE
2nd St SE
Sunset Dr NW
Sunset Dr NE
Rio Grande Blvd NW
Rio Grande Blvd SE
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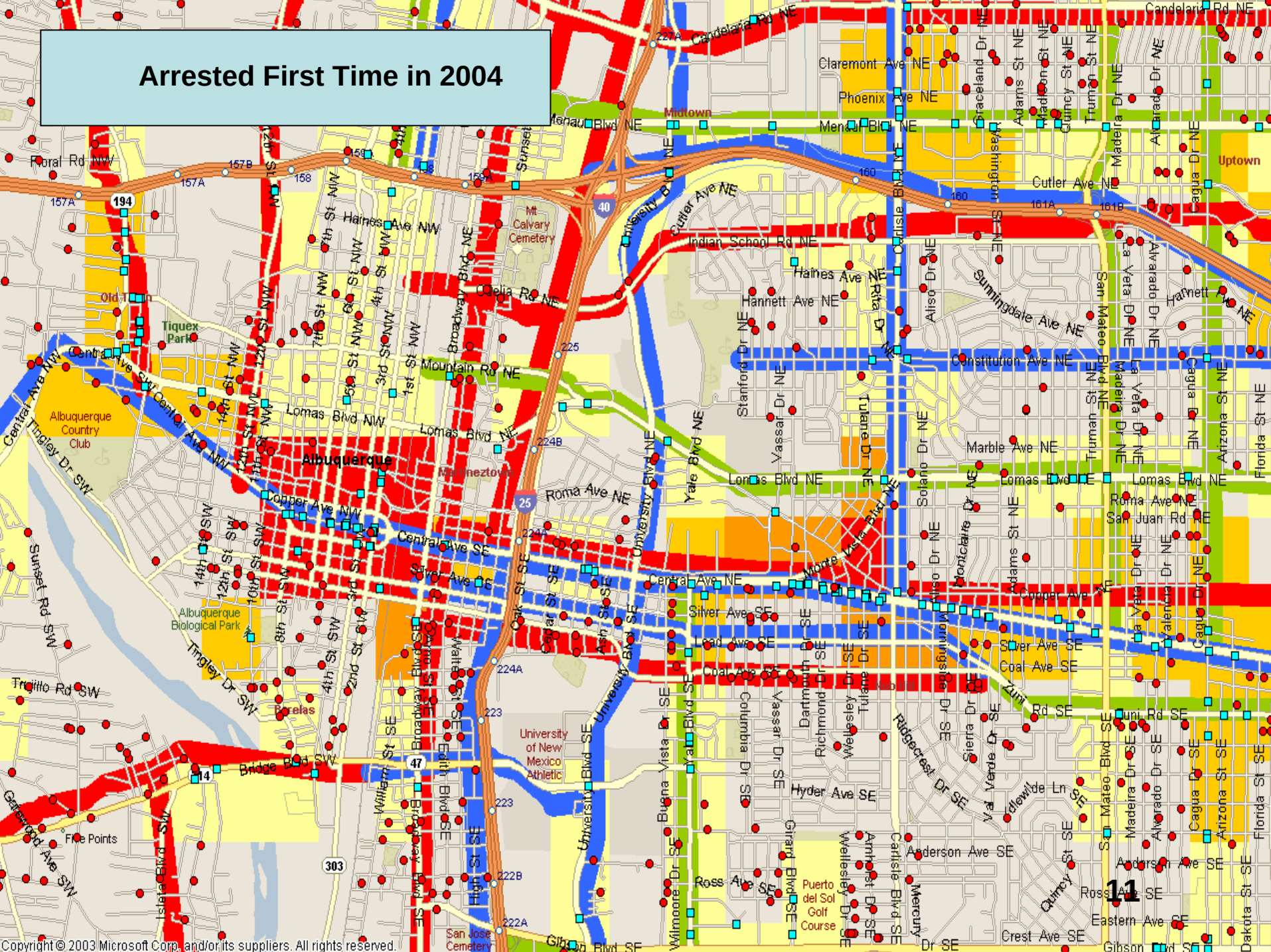
Arrested First Time in 2004


Albuquerque
Midtown
Uptown
Old Town
Tiguex Park
Albuquerque Country Club
Albuquerque Biological Park
Mt Calvary Cemetery
University of New Mexico Athletic
Puerto del Sol Golf Course
San Jose Cemetery
Five Points
Los Barelas
Martineztown
Central Ave NW
Central Ave SW
Central Ave SE
Central Ave NE
Lomas Blvd NW
Lomas Blvd NE
Lomas Blvd SW
Lomas Blvd SE
Haines Ave NW
Haines Ave NE
Mountain Rd NE
Roma Ave NE
Roma Ave NW
Copper Ave NW
Copper Ave NE
Silver Ave SE
Coal Ave SE
Tingley Dr SW
Trujillo Rd SW
Sunset Rd SW
Bridge Blvd SW
Bridge Blvd SE
Broadway Blvd SE
University Blvd SE
University Blvd NE
Yale Blvd NE
Carlisle Blvd NE
Carlisle Blvd SE
Cutler Ave NE
Indian School Rd NE
Claremont Ave NE
Phoenix Ave NE
Menaul Blvd NE
Candelaria Rd NE
Hannett Ave NE
Constitution Ave NE
Marble Ave NE
Zuni Rd SE
Hyder Ave SE
Anderson Ave SE
Ross Ave SE
Eastern Ave SE
Crest Ave SE
Gibson Blvd SE
Dakota St SE
Florida St SE
Arizona St SE
Quincy St SE
Mercury Dr SE
Wellesley Dr SE
Ridgecrest Dr SE
Morningside Dr SE
Dartmouth Dr SE
Richmond Dr SE
Columbia Dr SE
Vassar Dr SE
Girard Blvd SE
Wilmoore Dr SE
Buena Vista Dr SE
Sierra Dr SE
Verde Dr SE
Glenwilde Ln SE
Amherst Dr SE
Stanford Dr NE
Vassar Dr NE
Tulane Dr NE
Solano Dr NE
Montclaire Dr NE
Monte Vista Blvd NE
Rita Dr NE
Aliso Dr NE
Summingdale Ave NE
San Mateo Blvd NE
Madeira Dr NE
Alvarado Dr NE
La Vista Dr NE
Valencia Dr NE
Cagua Dr NE
San Juan Rd NE
Adams St NE
Truman St NE
Quincy St NE
Madison St NE
Washington St NE
Graceland Dr NE
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Roma Ave NE
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Menaul Blvd NE
Phoenix Ave NE
Claremont Ave NE
Candelaria Rd NE
Loral Rd NW
Trujillo Rd SW
Tingley Dr SW
Sunset Rd SW
Bridge Blvd SW
Five Points
Gun Club Rd SW
Isleta Blvd SW
Eastern Ave SE
Ross Ave SE
Anderson Ave SE
Hyder Ave SE
Zuni Rd SE
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Candelaria Rd NE
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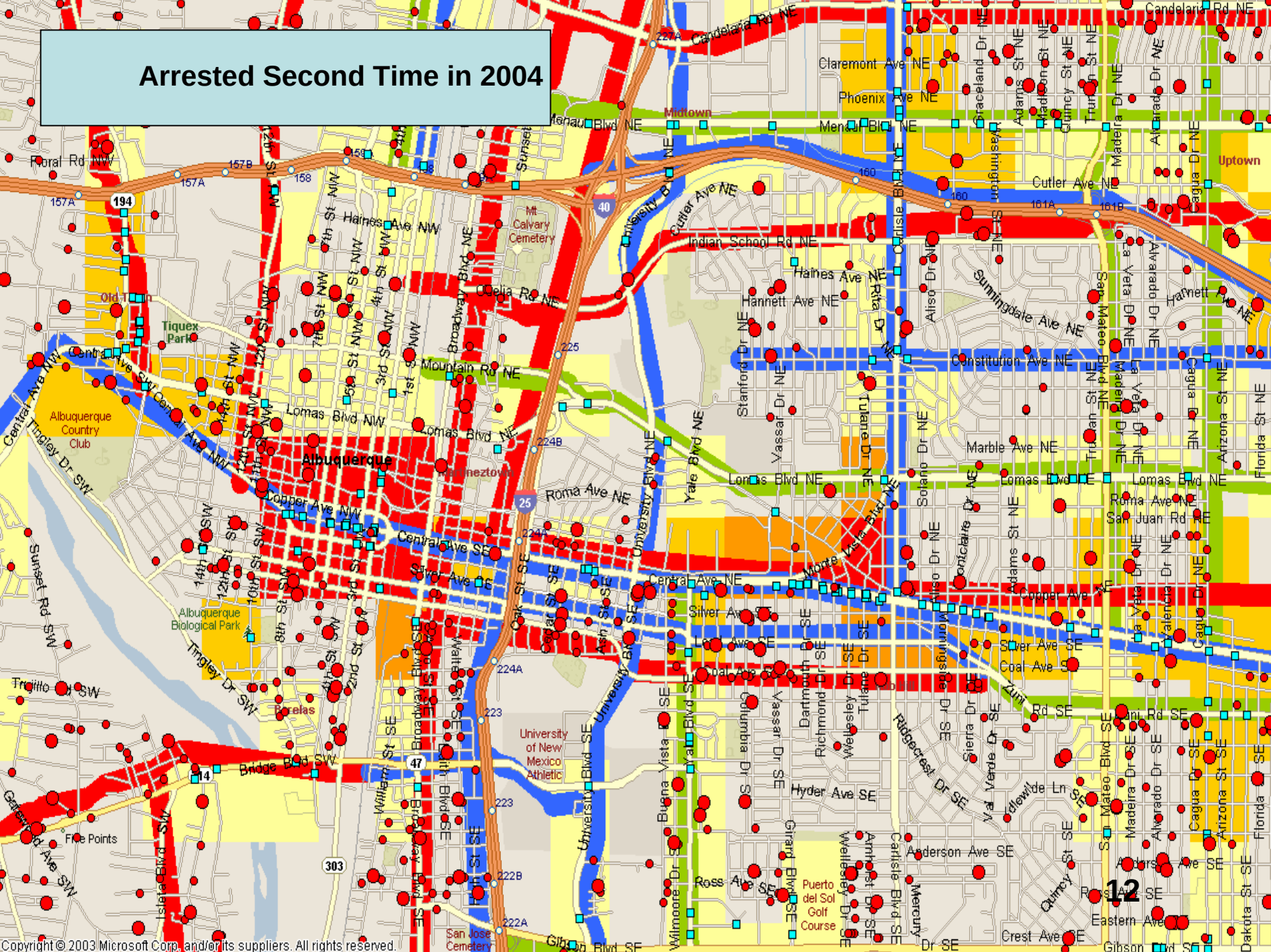
Carlisle Blvd NE
Carlisle Blvd

Arrested Second Time in 2004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Anderson Ave SE
Ross Ave SE
Crest Ave SE
Eastern Ave SE
Gibson Blvd SE
Mt Calvary Cemetery
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Quincy St SE
Wellesley Dr SE
Richmond Dr SE
Dartmouth Dr SE
Girard Blvd SE
Wilmoore Dr SE
Buena Vista Dr SE
Ridgecrest Dr SE
Zuni Rd SE
Mercury Dr SE
Amherst Dr SE
Sierra Dr SE
Verde Dr SE
Glenwilde Ln SE
Cagua Dr SE
Valencia Dr SE
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Rio Bravo Blvd SW
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Gonzales Rd SW
Old Coors Dr SW
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Rio Grande Blvd SW
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Yale Blvd SE
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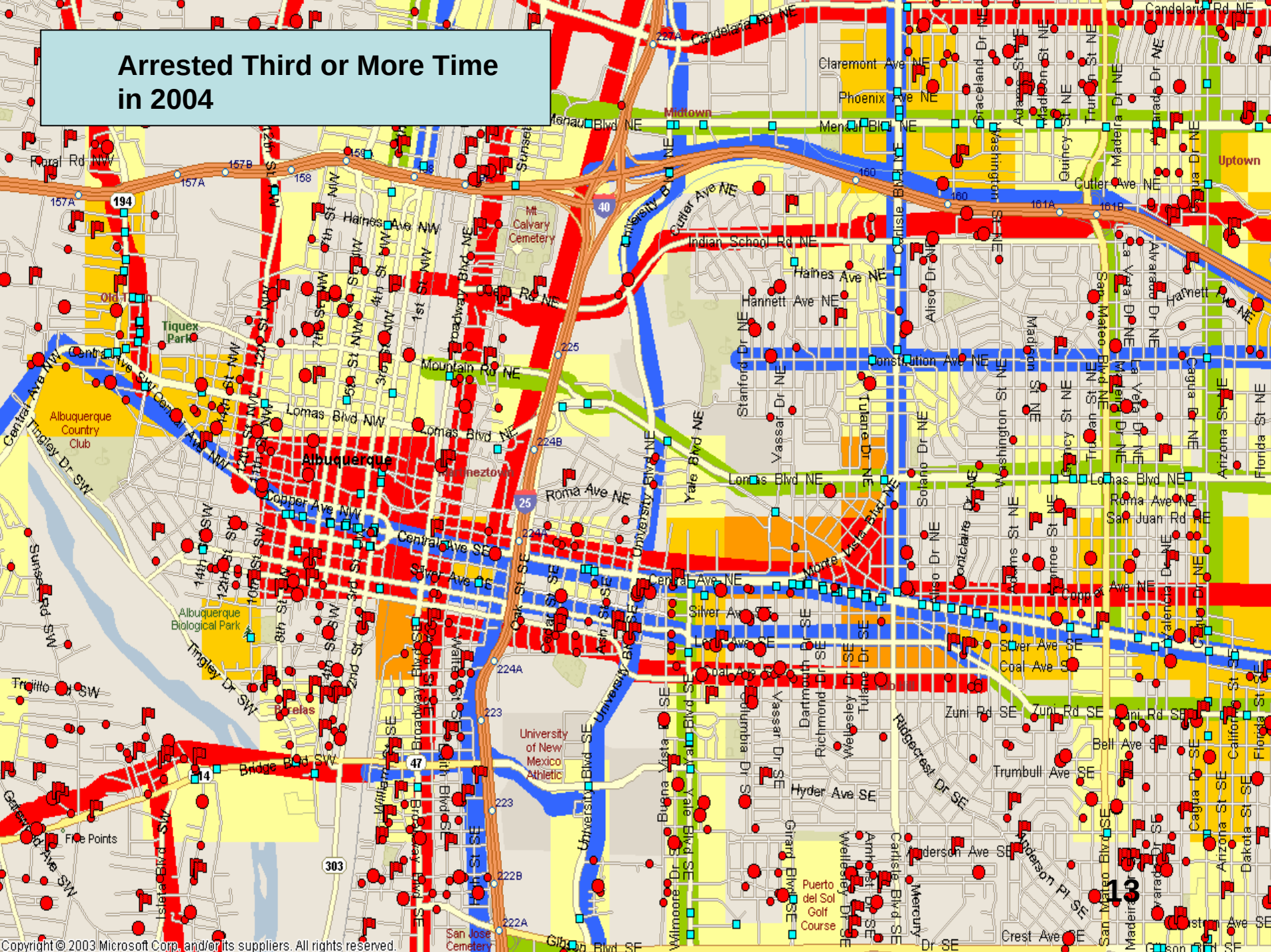
Columbia

Arrested Third or More Time in 2004


Midtown
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Old Town
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Mt Calvary Cemetery
San Jose Cemetery
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Haines Ave NE
Hannett Ave NE
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Lomas Blvd NE
Roma Ave NE
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Silver Ave SE
Coal Ave SE
Zuni Rd SE
Trumbull Ave SE
Hyder Ave SE
Anderson Ave SE
Crest Ave SE
Bridge Blvd SW
Tingley Dr SW
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Central Ave NW
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Copper Ave NW
Haines Ave NW
Cutler Ave NE
Candelaria Rd NE
Rural Rd NW
Sunset Rd SW
Trujillo Rd SW
Gibson Blvd SE
Ridgecrest Dr SE
Yale Blvd NE
University Blvd NE
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Carlisle Blvd NE
Carlisle Blvd SE
Broadway Blvd NE
Broadway Blvd SE
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Aliso Dr NE
Madeira Dr NE
Arvada Dr NE
Quincy St NE
Washington St NE
Adams St NE
Truman St NE
Arizona St NE
Florida St NE
Dakota St SE
Oak St SE
Cedar St SE
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Lead Ave SW
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Roma Ave NW
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Trujillo Rd SW
Five Points
Bridge Blvd SW
Gibson Blvd SW
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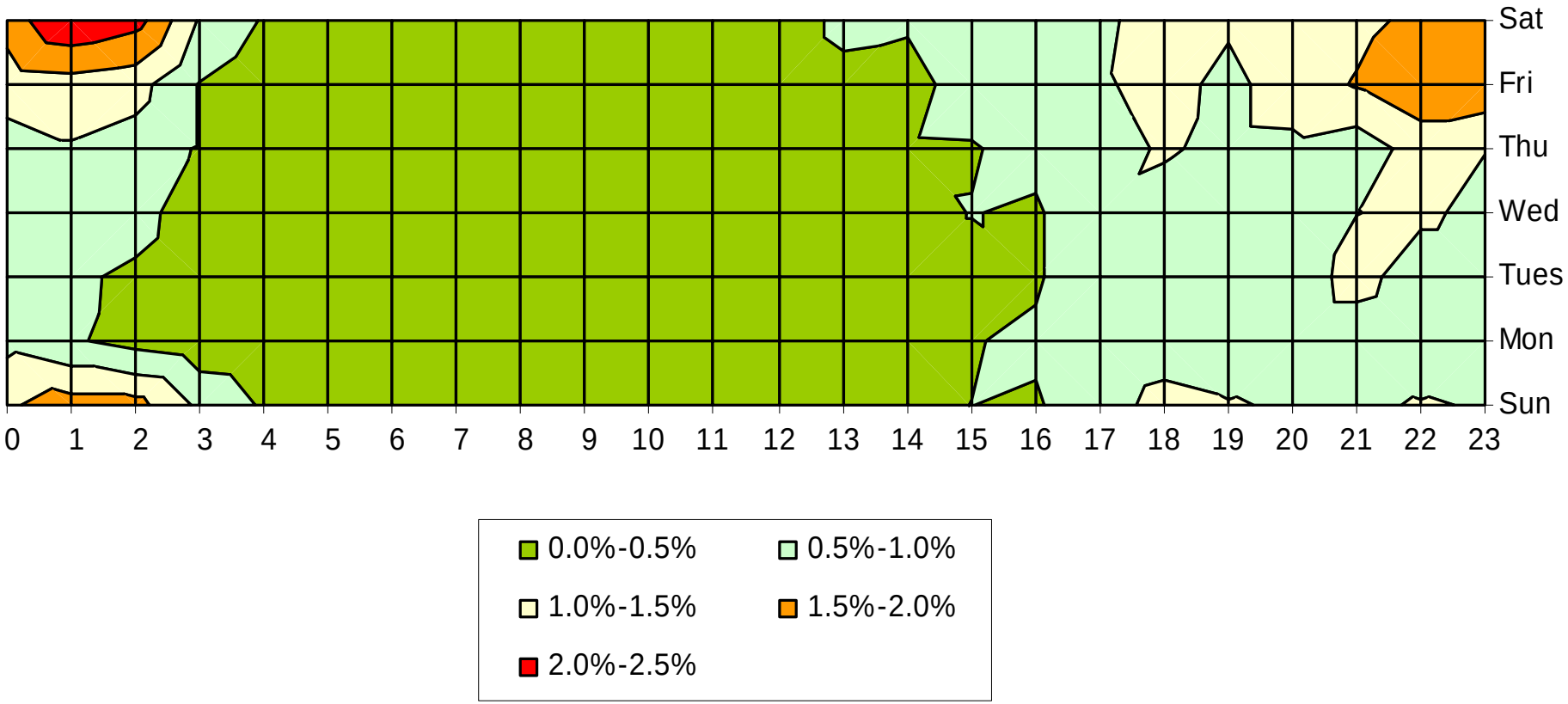
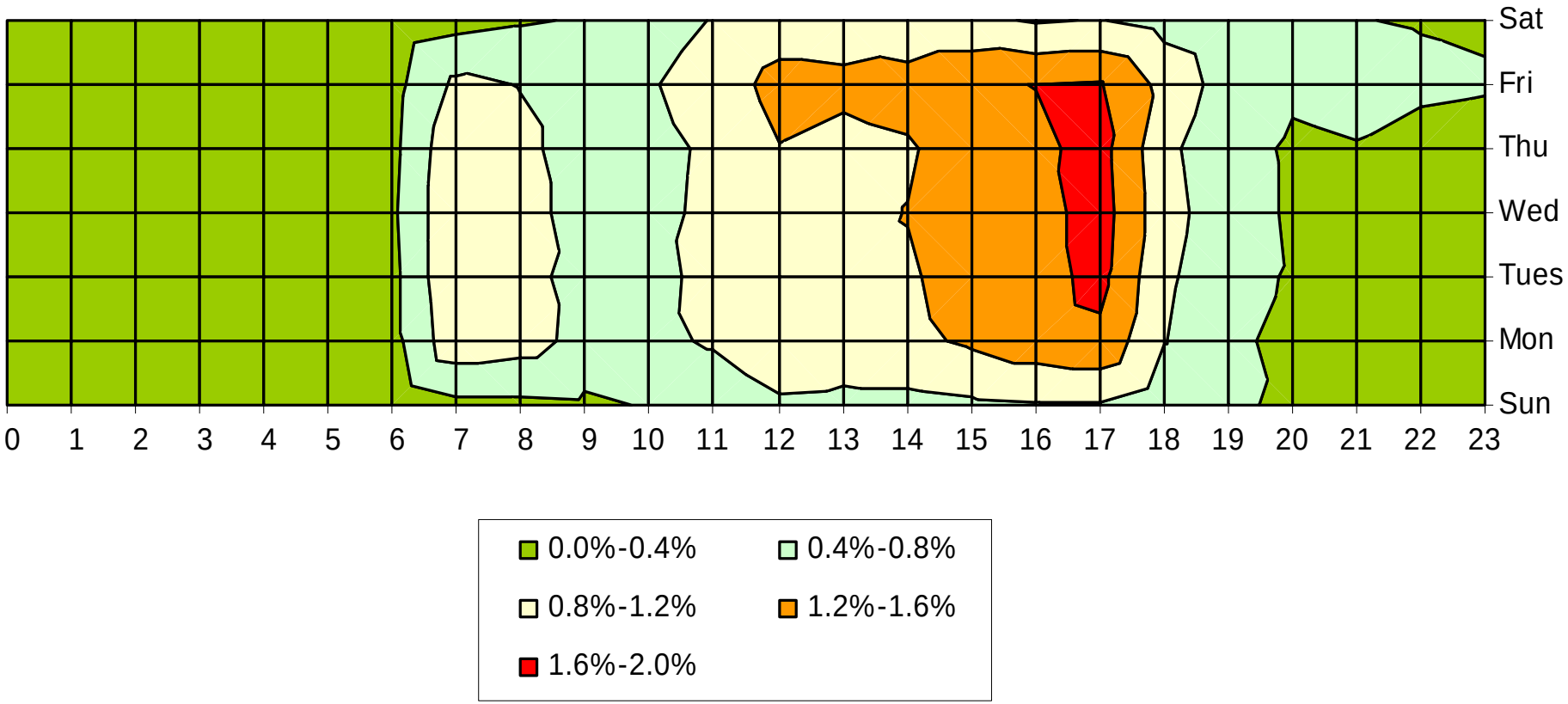
Yale

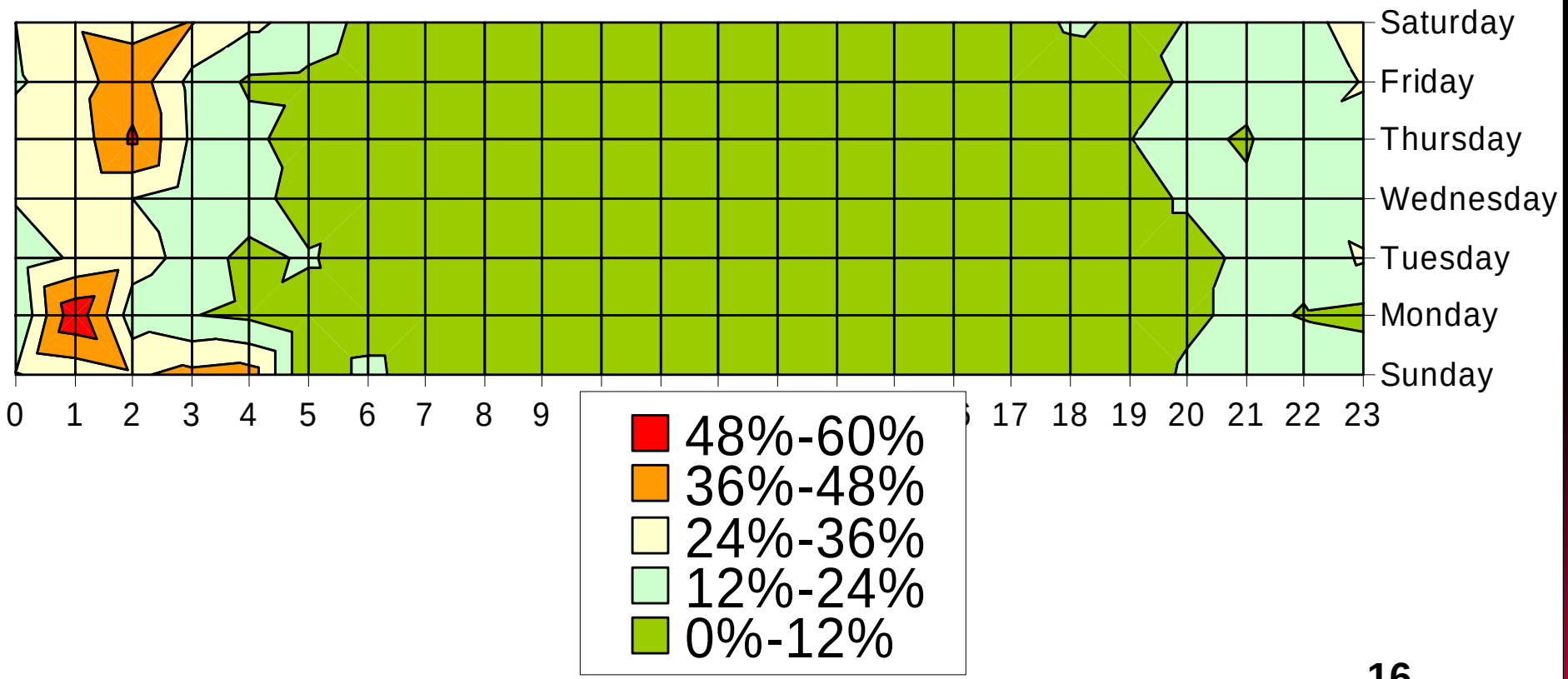
Bernco Alcohol Involved Crashes - By day and by hour (98-04 data)



Bernco Non-Alcohol Involved Crashes - By day and by hour (98-04 data)



Alcohol Involved Crashes as % of Total by Hour and Day



DWI Charts & Graphs by NM County

County:
Bernalillo

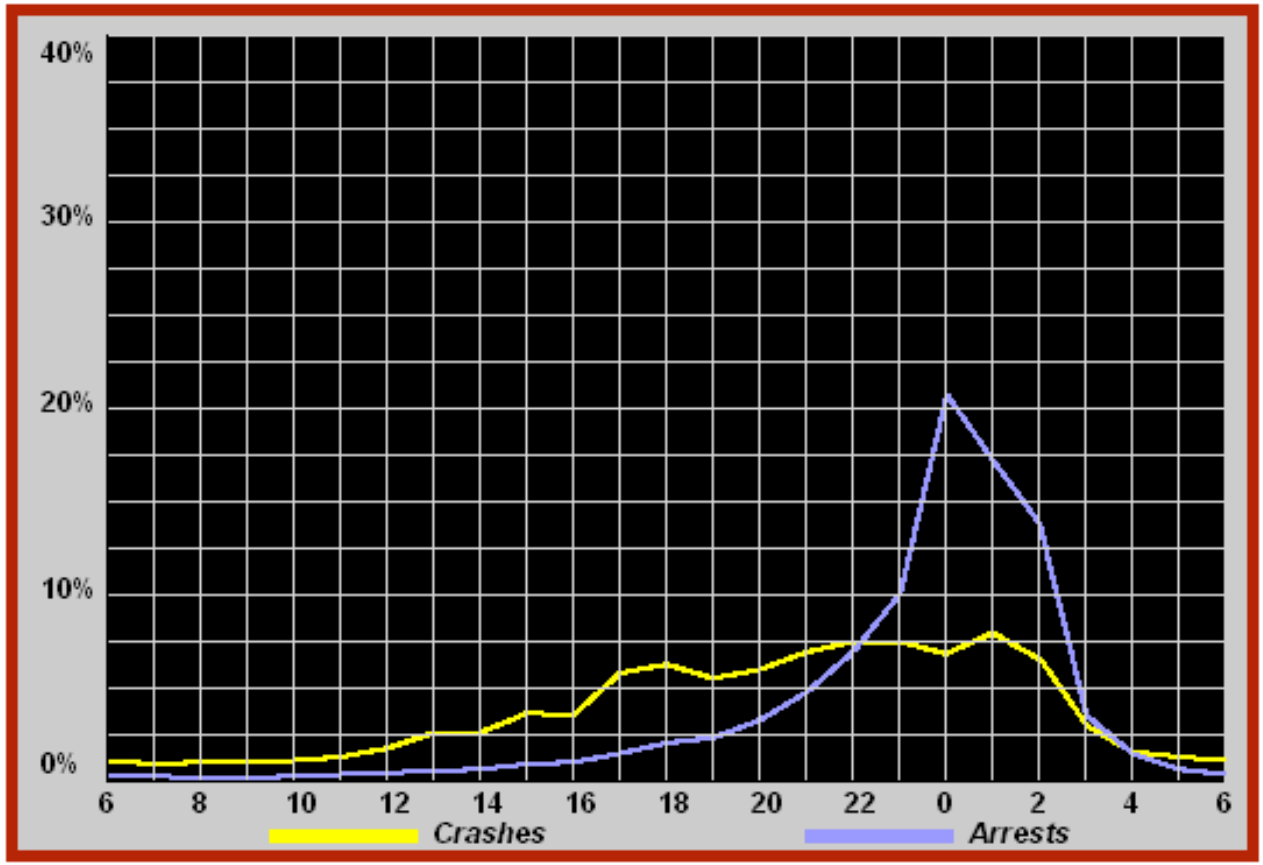
Parameter:
by Hour

Show Me

Parameters' Definitions:

- **Hour**: percentage of alcohol-related crashes and DWI arrests by hour, 1998-2002
- **Month**: percentage of alcohol-related crashes and DWI arrests by month, 1998-2002
- **Weeknight**: percentage of alcohol-related crashes and DWI arrests by weeknight, 1998-2002
- **Driver Age**: percentage of alcohol-related crashes and DWI arrests by driver's age, 1998-2002
- **Year**: percentage of alcohol-related crashes and DWI arrests by year, 1991-2002
- **Proxy by Year**: "Proxy by Year"

Bernalillo County % Alc-Rel Crashes & DWI Arrests by Hour, 1998-2002



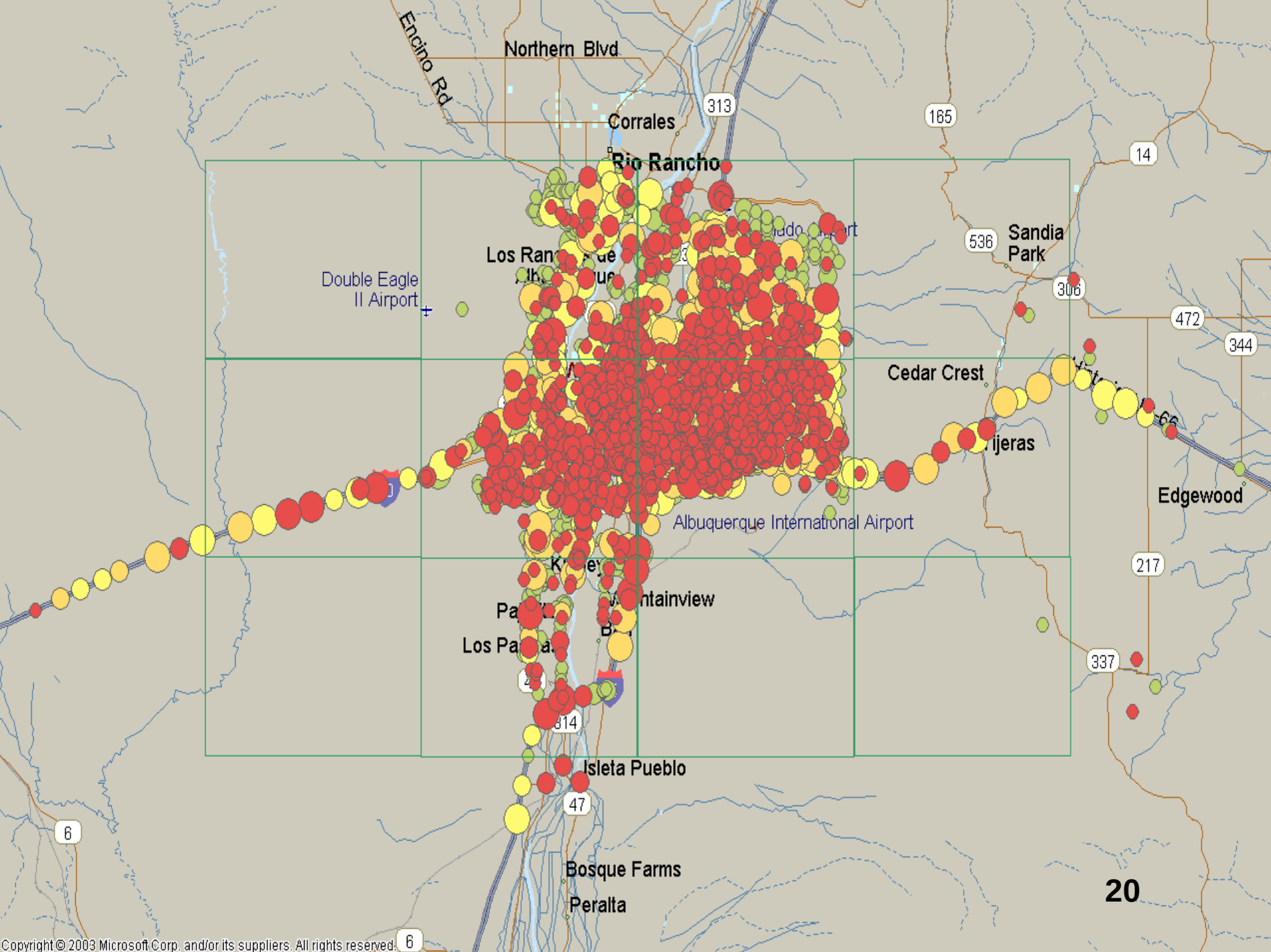
Where the yellow line is above the blue one, enforcement appears insufficient. Where the blue line is above the yellow one, enforcement appears to be proportionately overemphasized.

Reactions & Feedback

- Public – Positive, Didn’t realize there were so many drunk drivers or alcohol establishments in the neighborhood.
- Law Enforcement – Positive and excited about the tool for planning.

Changes Made

- Change crash color-coding to a more logical schema red, orange, yellow, green.
- Do not color-code streets.
- Color- and Frequency-code crash sites.
- For law enforcement, leave out specific drunk driving residences.
- Simplify, simplify, simplify – do not clutter.
- Don’t waste real estate.
- Automate wherever possible.
- Map all crashes during peak drunk driving hours.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Northern Blvd
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Corrales
Rio Rancho
165
14
536
Sandia Park
306
472
344
Double Eagle II Airport
Cedar Crest
Edgewood
Albuquerque International Airport
217
337
Isleta Pueblo
47
6
Bosque Farms
Peralta
20
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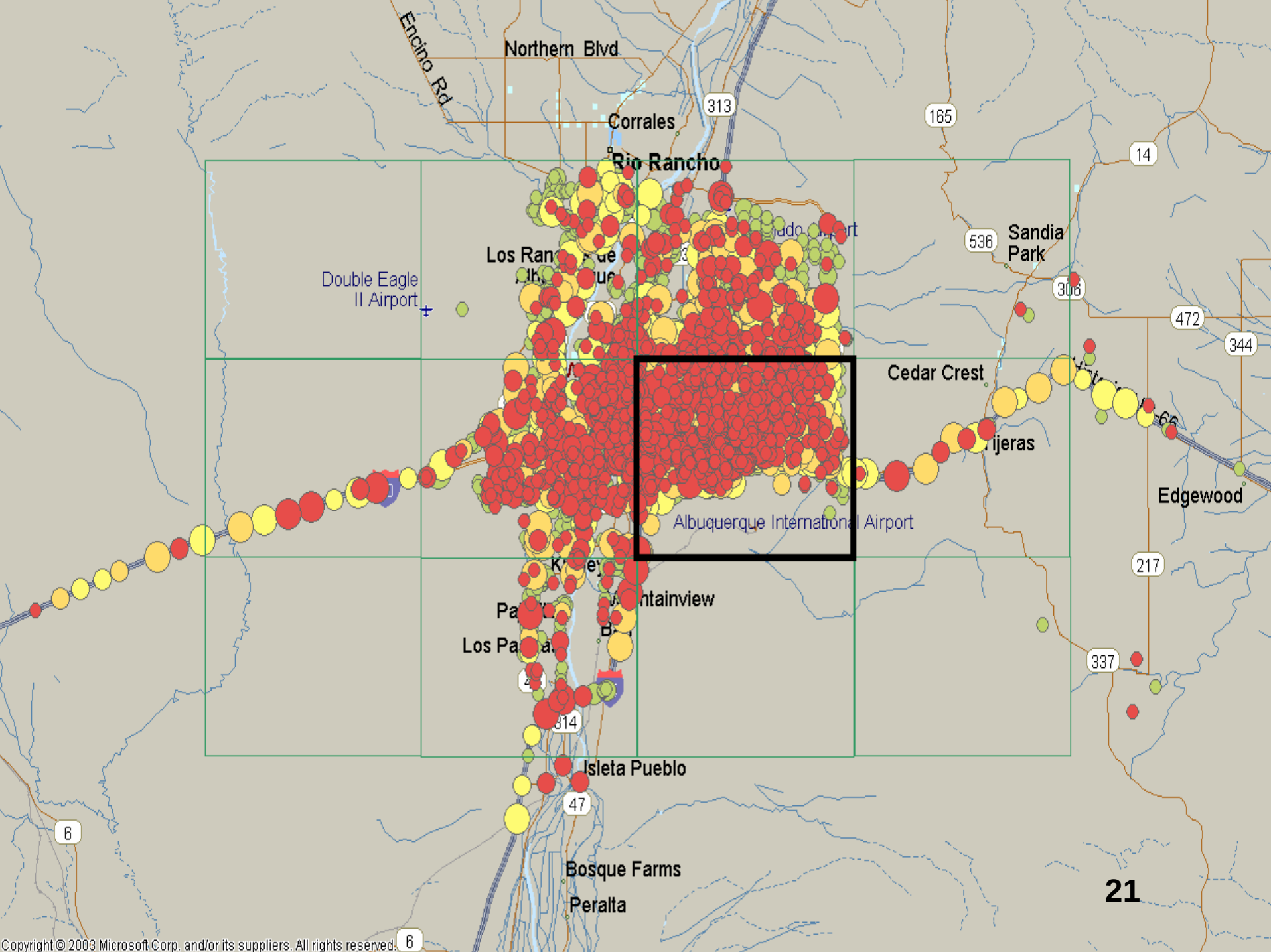

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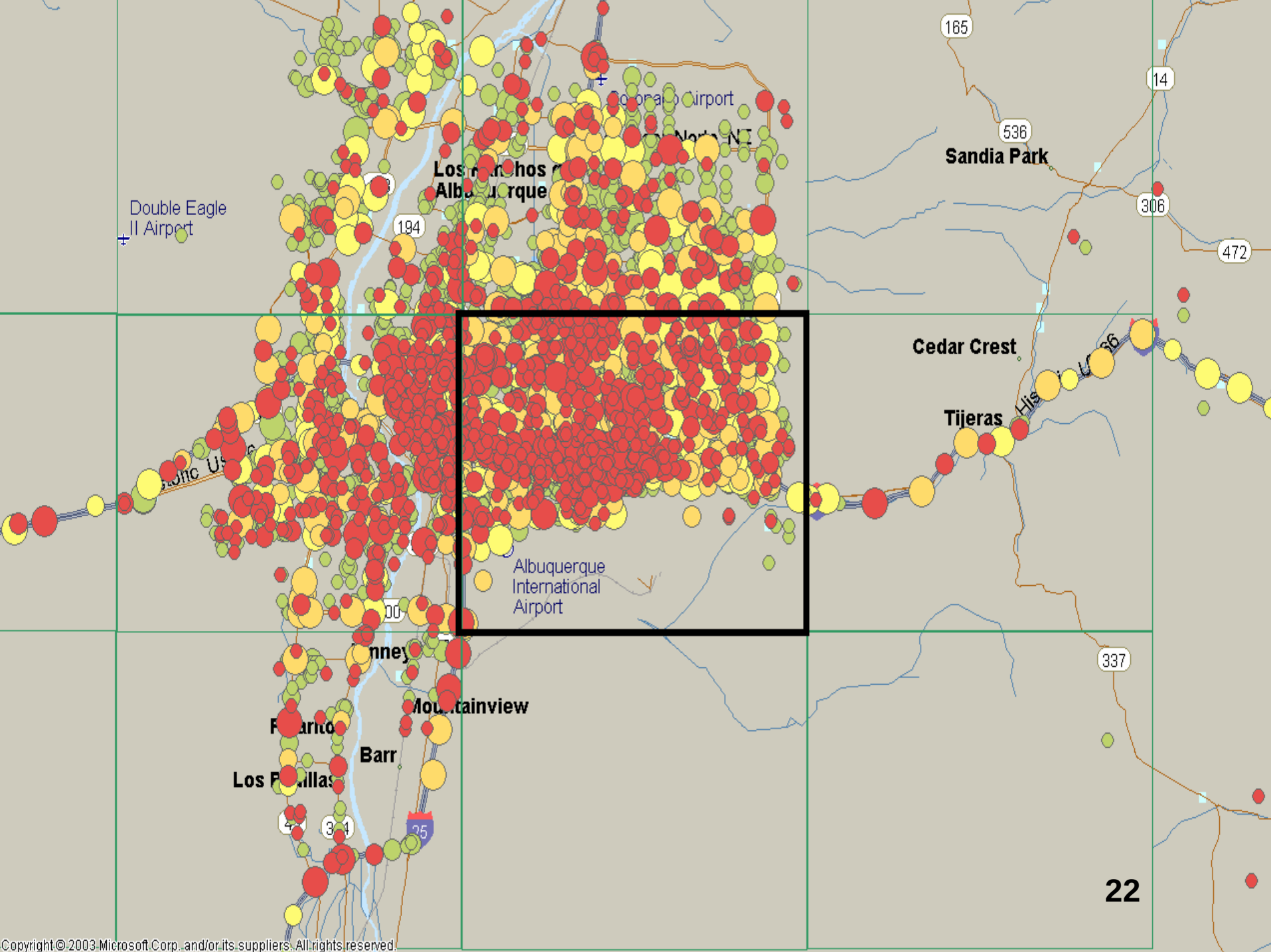

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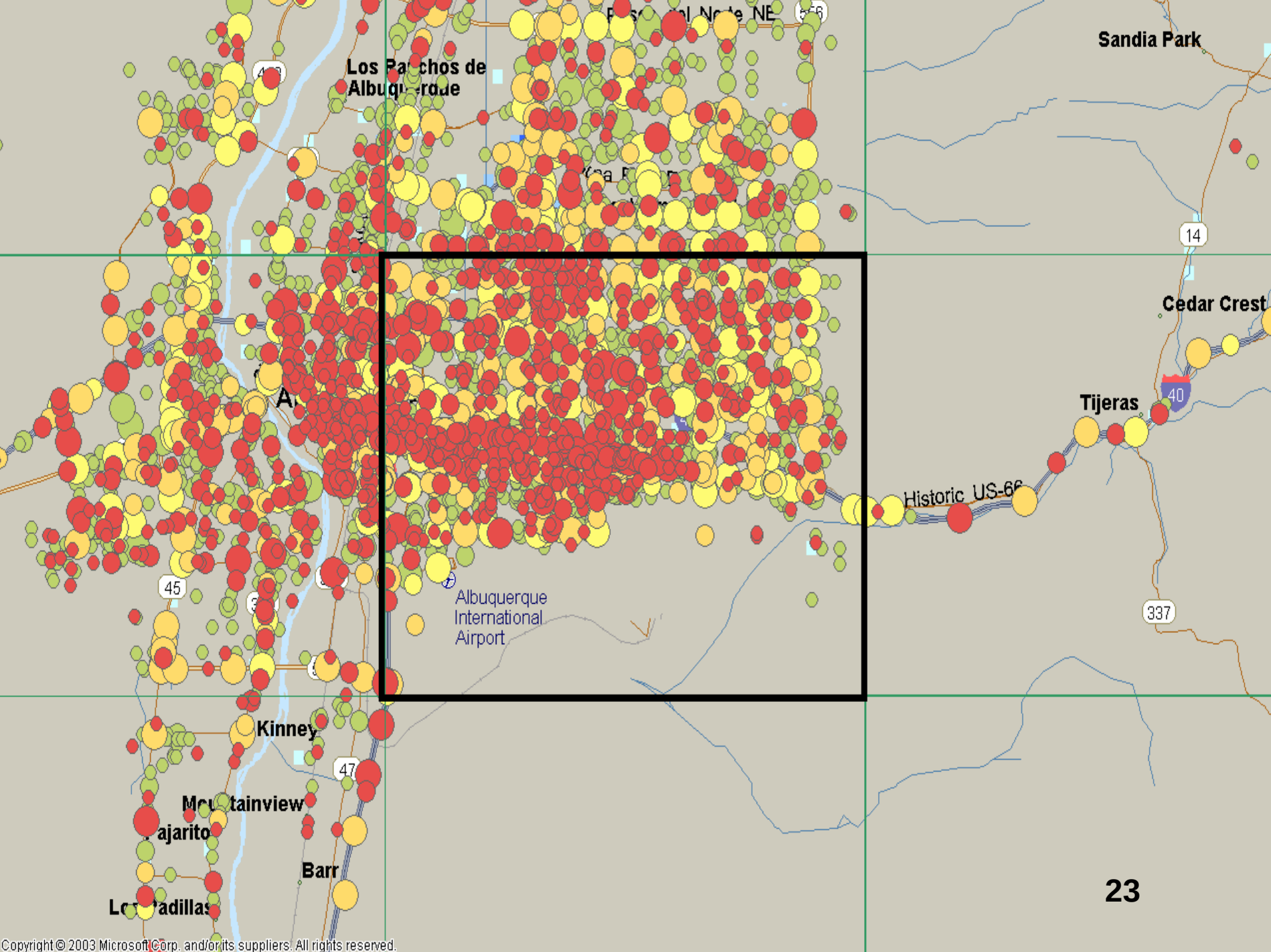

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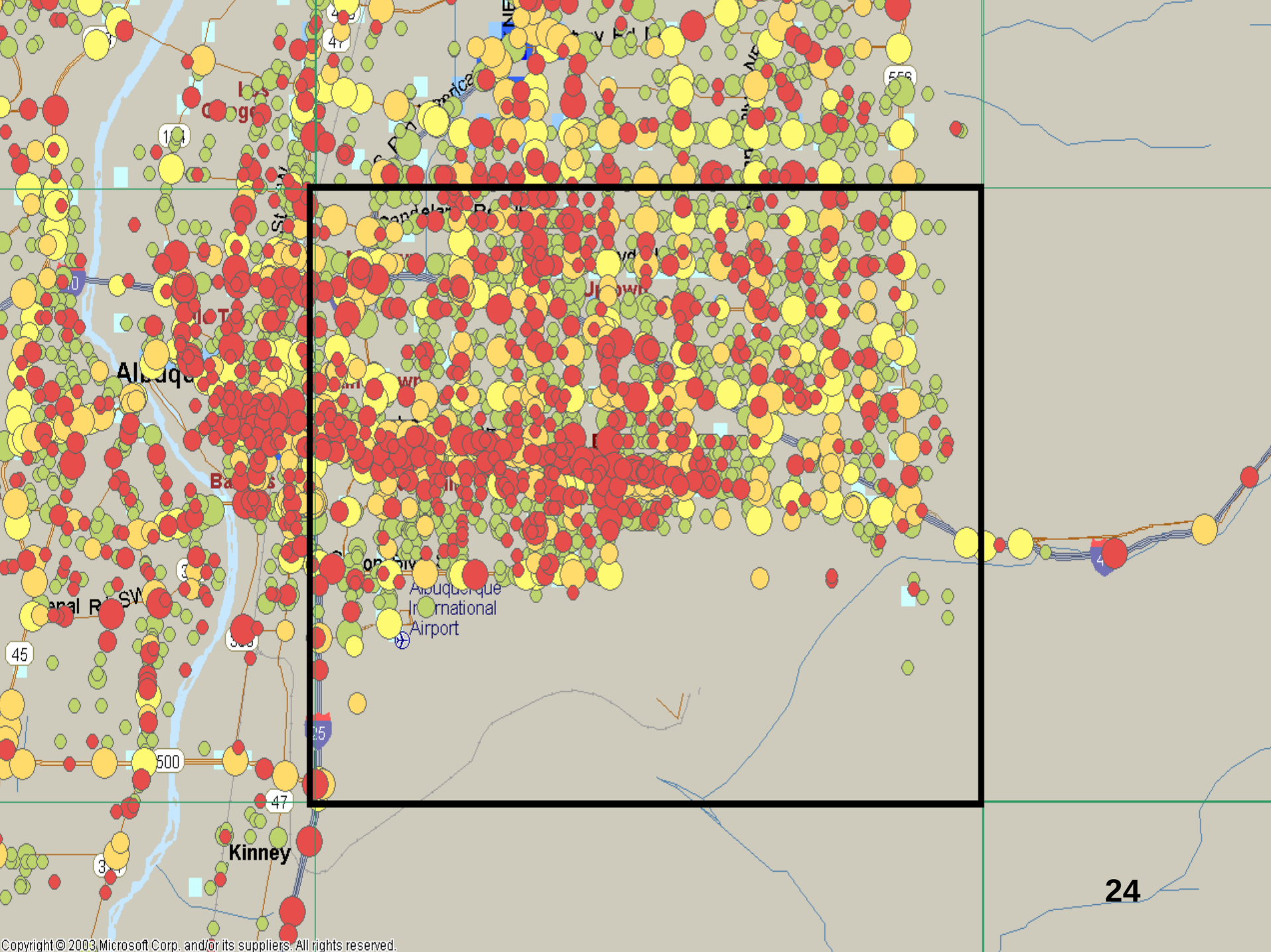

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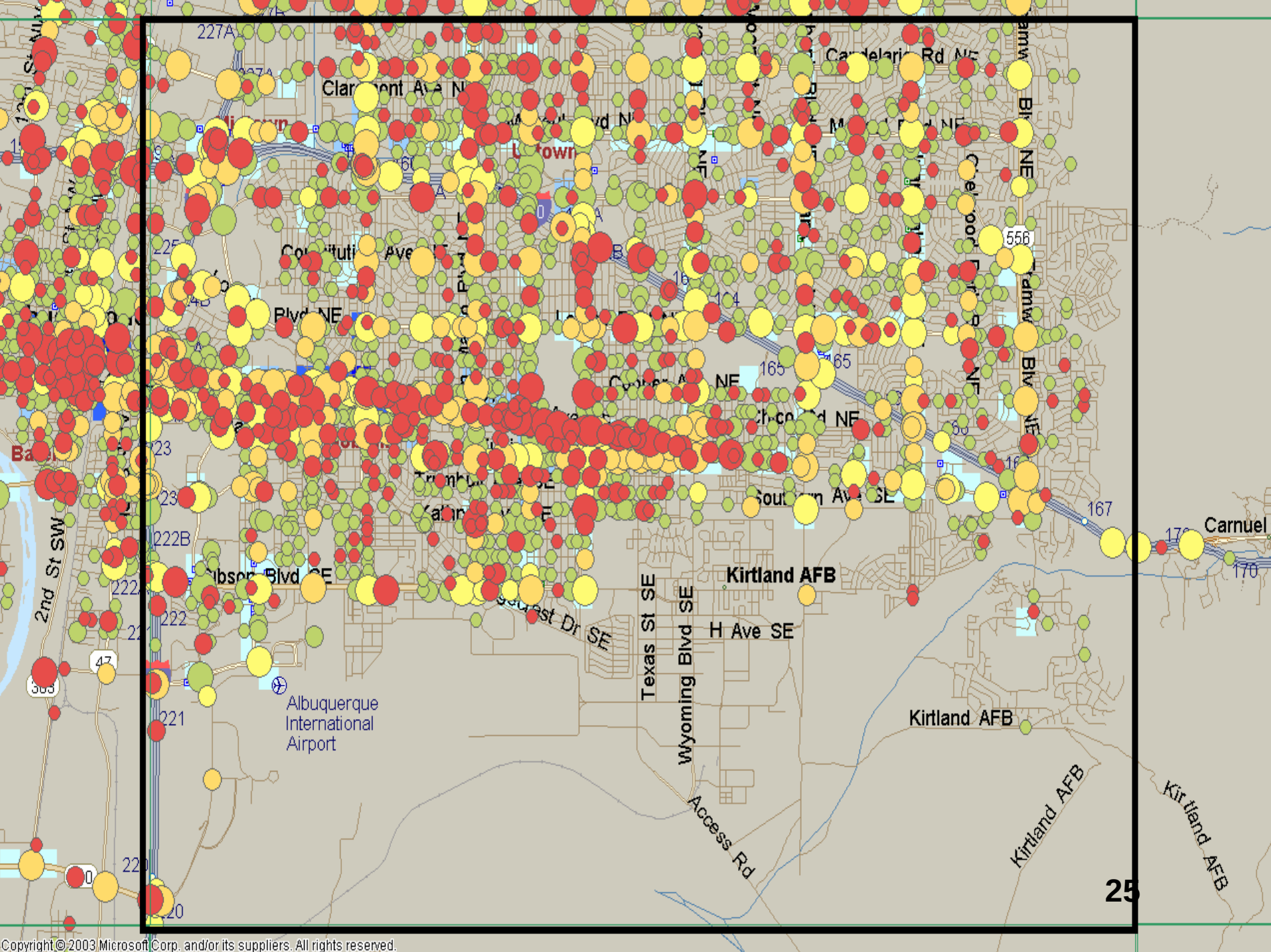

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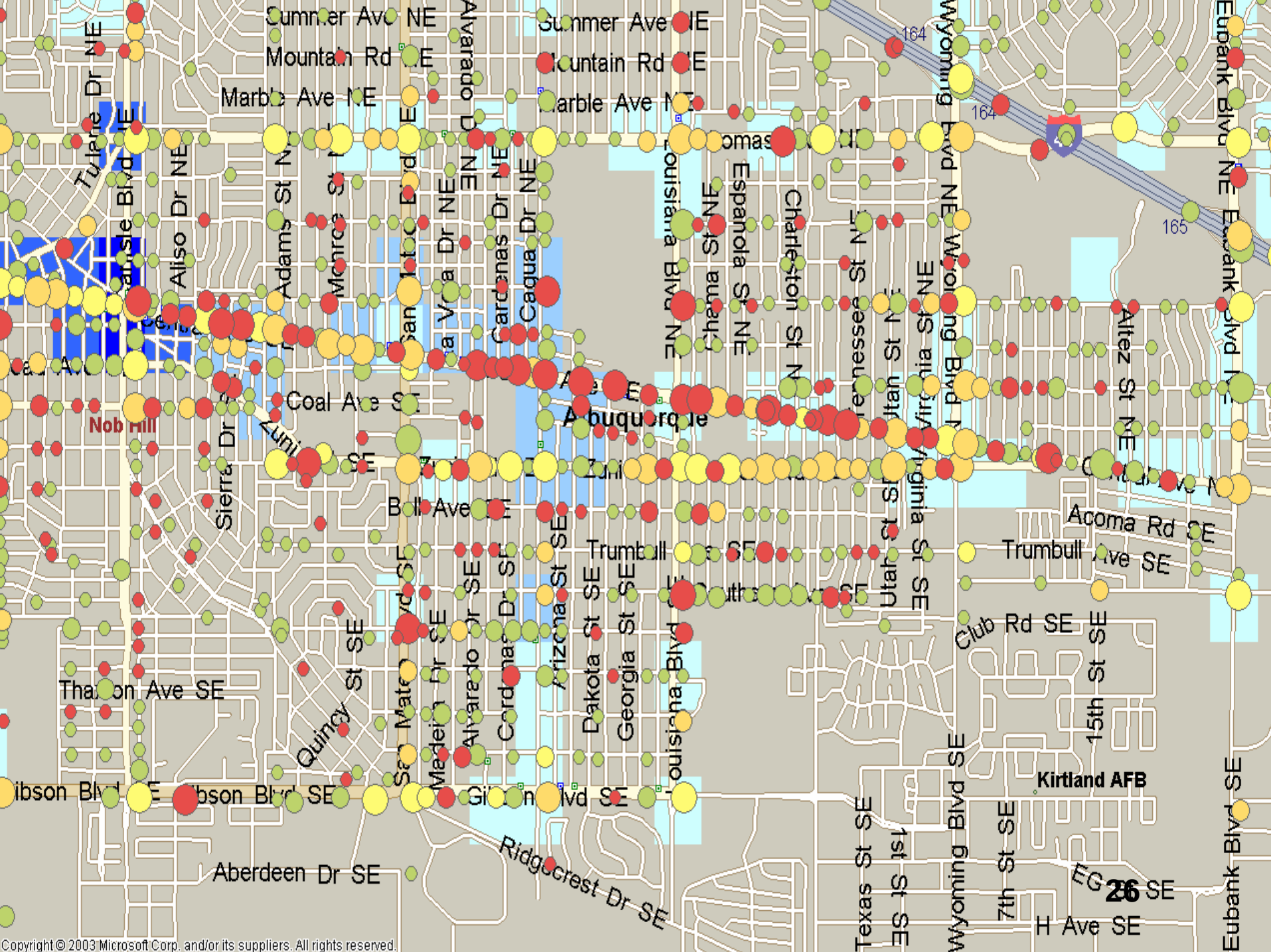

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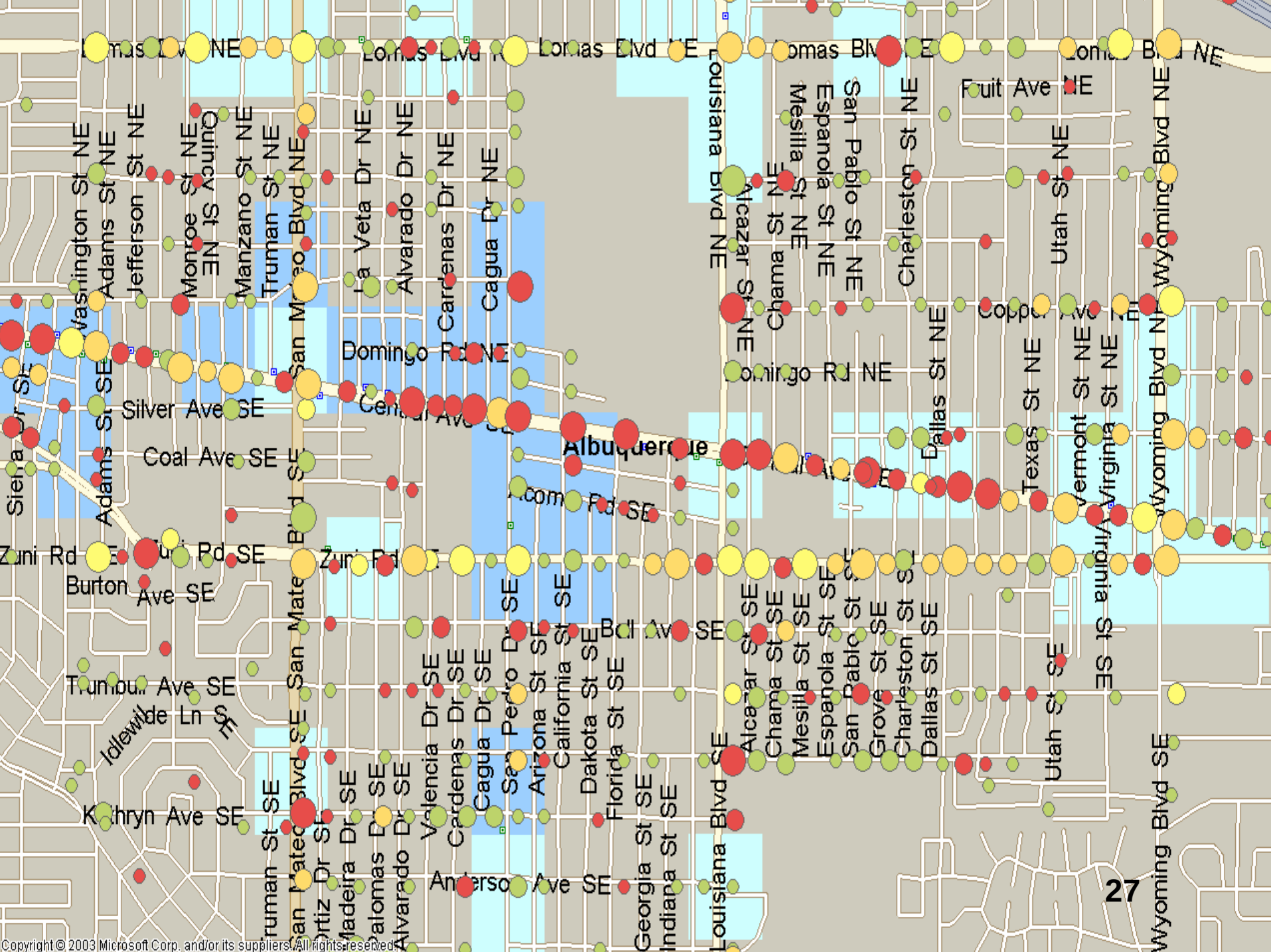
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Alvarado Dr NE
Cardenas Dr NE
Cagua Dr NE
Louisiana Blvd NE
Alcazar St NE
Chama St NE
Mesilla St NE
Espanola St NE
San Pablo St NE
Charleston St NE
Utah St NE
Wyoming Blvd NE
Copper Ave NE
Domingo Rd NE
Silver Ave SE
Central Ave SE
Albuquerque
Coal Ave SE
Sierra Dr SE
Adams St SE
Dallas St NE
Texas St NE
Vermont St NE
Virginia St NE
Zuni Rd SE
Burton Ave SE
San Mateo Blvd SE
Bell Ave SE
Trumbull Ave SE
Idlewild Ln SE
Kathryn Ave SE
Truman St SE
San Mateo Blvd SE
Ortiz Dr SE
Madeira Dr SE
Palomas Dr SE
Alvarado Dr SE
Valencia Dr SE
Cardenas Dr SE
Cagua Dr SE
San Pedro Dr SE
Arizona St SE
California St SE
Dakota St SE
Florida St SE
Georgia St SE
Indiana St SE
Louisiana Blvd SE
Alcazar St SE
Chama St SE
Mesilla St SE
Espanola St SE
San Pablo St SE
Grove St SE
Charleston St SE
Dallas St SE
Utah St SE
Virginia St SE
Wyoming Blvd SE
Anderson Ave SE
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Crash Site Information Map

This map depicts crash site information at specific intersections during specific times of day. The information depicted is based on crash information from the CTS database of the Division of Government Research at UNM. Crashes from 1998 to 2005, during the hours of 7p.m. to 5 a.m., Sun-Saturday were used. Four levels of coloring are used to describe increasing prevalence of alcohol related crashes among total crashes at specific intersections. Green circles represent crash sites where less than 7.5% of accidents were alcohol-involved. Yellow circles represent crash sites where between 7.5% and 16.4% of crashes were alcohol involved, orange circles represent crash sites where between 16.5% and 26.5% of crashes were alcohol involved and finally red circles represent, crash sites where 26.5% to 100% of accidents were alcohol involved. Please note that 5.31% of all accidents occurring during 1998-2005 were alcohol involved in Bernalillo County and 17.6% of all accidents in the same period between the hours of 7 p.m. to 5 a.m. were alcohol involved. The subset of accidents used on this map are 77% of total accidents occurring between 7 p.m. and before 5 a.m. The remaining 23% were not mapped because of either poor location data or low accident frequency. In addition, three sizes for the circles depicting crash sites are used. The smallest circle represents 1 accident over the period mentioned above, the medium circle equates to 2-8 accidents, and the largest circle represents from 9 to 228 accidents over this period.

	0-7.4% Alcohol Involved	7.5-16.4% Alcohol Involved	16.5-26.4% Alcohol Involved	26.5-100% Alcohol Involved
1 Wreck				
2-8 Wrecks				
9-228 Wrecks				

Liquor Establishments

The blocks below are centered at liquor licensee locations and represent concentrations of alcohol establishments in a surrounding square mile area.

1-10 liquor licensees

11-20 liquor licensees

21-30 liquor licensees

31-40 liquor licensees

Non-Alcohol Involved Accidents

Time of Day	Sun	Mon	Tue	Wed	Thu	Fri	Sat	All Week
12 am - 1 am	0.26%	0.19%	0.15%	0.18%	0.19%	0.20%	0.31%	1.47%
1 am - 2 am	0.20%	0.08%	0.09%	0.09%	0.09%	0.11%	0.20%	0.86%
2 am - 3 am	0.19%	0.06%	0.06%	0.08%	0.09%	0.10%	0.22%	0.79%
3 am - 4 am	0.12%	0.05%	0.04%	0.06%	0.06%	0.05%	0.11%	0.48%
4 am - 5 am	0.09%	0.05%	0.06%	0.06%	0.06%	0.06%	0.07%	0.44%
5 am - 6 am	0.08%	0.07%	0.09%	0.10%	0.10%	0.09%	0.08%	0.61%
6 am - 7 am	0.09%	0.29%	0.32%	0.31%	0.32%	0.28%	0.14%	1.74%
7 am - 8 am	0.17%	1.07%	1.18%	1.19%	1.09%	0.98%	0.26%	5.94%
8 am - 9 am	0.22%	0.94%	0.93%	0.98%	0.91%	0.84%	0.38%	5.19%
9 am - 10 am	0.28%	0.65%	0.71%	0.63%	0.62%	0.64%	0.48%	4.01%
10 am - 11 am	0.39%	0.70%	0.71%	0.69%	0.66%	0.77%	0.65%	4.57%
11 am - 12 pm	0.43%	0.86%	0.93%	0.84%	0.86%	0.99%	0.85%	5.75%
12 pm - 1 pm	0.64%	1.10%	1.10%	1.09%	1.17%	1.38%	1.05%	7.53%
1 pm - 2 pm	0.65%	1.03%	1.09%	1.06%	1.04%	1.30%	1.05%	7.22%
2 pm - 3 pm	0.61%	1.13%	1.15%	1.19%	1.11%	1.39%	0.96%	7.53%
3 pm - 4 pm	0.65%	1.27%	1.37%	1.34%	1.36%	1.64%	0.91%	8.55%
4 pm - 5 pm	0.67%	1.39%	1.49%	1.45%	1.43%	1.76%	0.81%	9.01%
5 pm - 6 pm	0.64%	1.51%	1.70%	1.78%	1.69%	1.76%	0.85%	9.94%
6 pm - 7 pm	0.51%	0.79%	0.90%	0.94%	0.89%	1.10%	0.68%	5.81%
7 pm - 8 pm	0.43%	0.48%	0.53%	0.55%	0.50%	0.64%	0.51%	3.65%
8 pm - 9 pm	0.36%	0.31%	0.36%	0.35%	0.34%	0.44%	0.47%	2.63%
9 pm - 10 pm	0.30%	0.29%	0.33%	0.34%	0.36%	0.49%	0.43%	2.54%
10 pm - 11 pm	0.24%	0.21%	0.23%	0.25%	0.26%	0.47%	0.39%	2.04%
11 pm - 12 am	0.19%	0.16%	0.17%	0.20%	0.19%	0.43%	0.35%	1.70%
All Hours	8.39%	14.69%	15.69%	15.74%	15.39%	17.91%	12.20%	100.00%

There were 148,712 accidents in Bernalillo county in the period 1998-2005 that were classified as non – alcohol involved. As can be seen, from the table on the left, these accidents can be best understood as regular work hour related traffic incidents. The red hourly periods represent that 1/3 of the week that has the highest fraction of total accidents – 66%, the green hourly periods are that third with the lowest fraction of total accidents – 7%. The yellow middle third of the week accounts for 27% of total non alcohol involved accidents. The boxed numbers represent the highest accident rates for the morning and afternoon rush hour periods.

Alcohol Involved Accidents

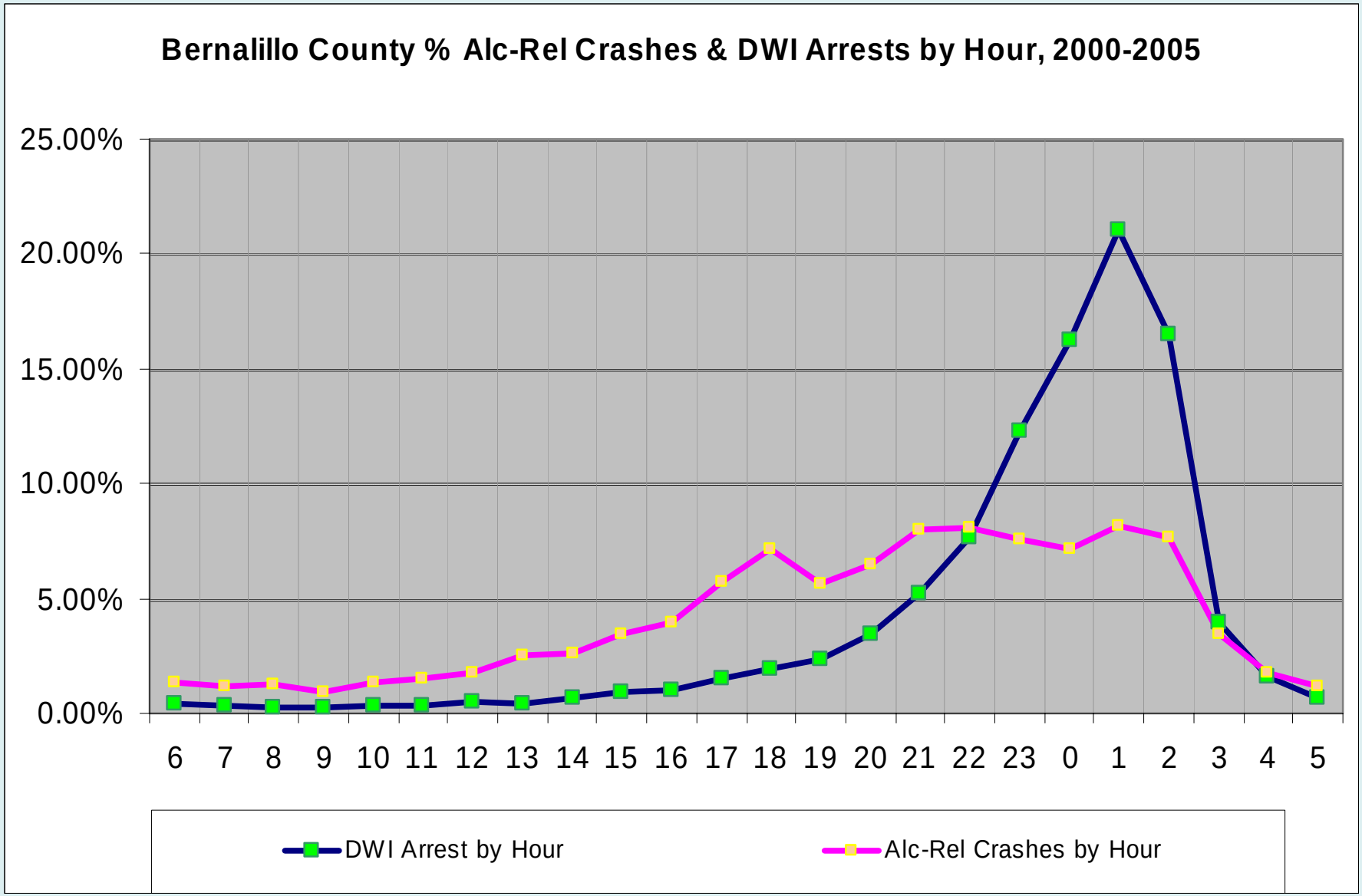
Time of Day	Sun	Mon	Tue	Wed	Thu	Fri	Sat	All Week
12 am - 1 am	1.41%	0.86%	0.61%	0.74%	0.85%	1.02%	1.81%	7.31%
1 am - 2 am	2.05%	0.52%	0.62%	0.77%	0.91%	1.10%	2.41%	8.38%
2 am - 3 am	1.93%	0.25%	0.41%	0.65%	0.88%	1.04%	2.22%	7.37%
3 am - 4 am	0.97%	0.11%	0.18%	0.29%	0.38%	0.41%	0.99%	3.33%
4 am - 5 am	0.46%	0.11%	0.05%	0.20%	0.17%	0.22%	0.54%	1.74%
5 am - 6 am	0.34%	0.08%	0.08%	0.12%	0.08%	0.12%	0.49%	1.32%
6 am - 7 am	0.24%	0.11%	0.12%	0.12%	0.19%	0.14%	0.29%	1.21%
7 am - 8 am	0.20%	0.12%	0.08%	0.22%	0.16%	0.12%	0.18%	1.08%
8 am - 9 am	0.20%	0.20%	0.11%	0.19%	0.20%	0.11%	0.16%	1.17%
9 am - 10 am	0.12%	0.08%	0.10%	0.18%	0.14%	0.17%	0.19%	0.98%
10 am - 11 am	0.10%	0.22%	0.12%	0.20%	0.22%	0.16%	0.26%	1.27%
11 am - 12 pm	0.17%	0.22%	0.22%	0.17%	0.16%	0.22%	0.35%	1.49%
12 pm - 1 pm	0.16%	0.30%	0.28%	0.29%	0.29%	0.22%	0.29%	1.81%
13 pm - 2 pm	0.22%	0.34%	0.36%	0.30%	0.38%	0.35%	0.64%	2.58%
14 pm - 3 pm	0.35%	0.38%	0.35%	0.24%	0.49%	0.31%	0.54%	2.66%
15 pm - 4 pm	0.54%	0.43%	0.35%	0.52%	0.43%	0.74%	0.67%	3.68%
16 pm - 5 pm	0.43%	0.60%	0.44%	0.48%	0.58%	0.67%	0.77%	3.97%
17 pm - 6 pm	0.77%	0.76%	0.91%	0.85%	0.76%	0.90%	0.98%	5.92%
18 pm - 7 pm	1.11%	0.74%	0.82%	0.77%	0.86%	1.33%	1.27%	6.90%
19 pm - 8 pm	1.04%	0.66%	0.56%	0.67%	0.67%	1.19%	1.03%	5.83%
20 pm - 9 pm	0.96%	0.66%	0.73%	0.77%	0.89%	1.17%	1.32%	6.50%
21 pm - 10 pm	0.97%	0.71%	1.13%	0.99%	0.73%	1.52%	1.51%	7.56%
22 pm - 11 pm	1.09%	0.61%	0.78%	1.01%	1.10%	1.94%	1.75%	8.28%
23 pm - 12 am	0.92%	0.70%	0.68%	0.80%	0.85%	1.82%	1.87%	7.65%
All Hours	16.75%	9.76%	10.08%	11.53%	12.37%	16.99%	22.52%	100.00%

There were 8,342 accidents in Bernalillo county in the period 1998-2005 that were classified as alcohol involved. As can be seen, from the table on the left, these accidents can be best understood as occurring (although not exclusively) during late evening-early morning, weekend time periods. The red hourly periods represent that 1/3 of the week that has the highest fraction of total accidents – 65%, the green hourly periods are that third with the lowest fraction of total accidents – 9%. The yellow middle third of the week accounts for 26% of total alcohol involved accidents. The boxed numbers represent the 10 highest accident %'s for a typical week.

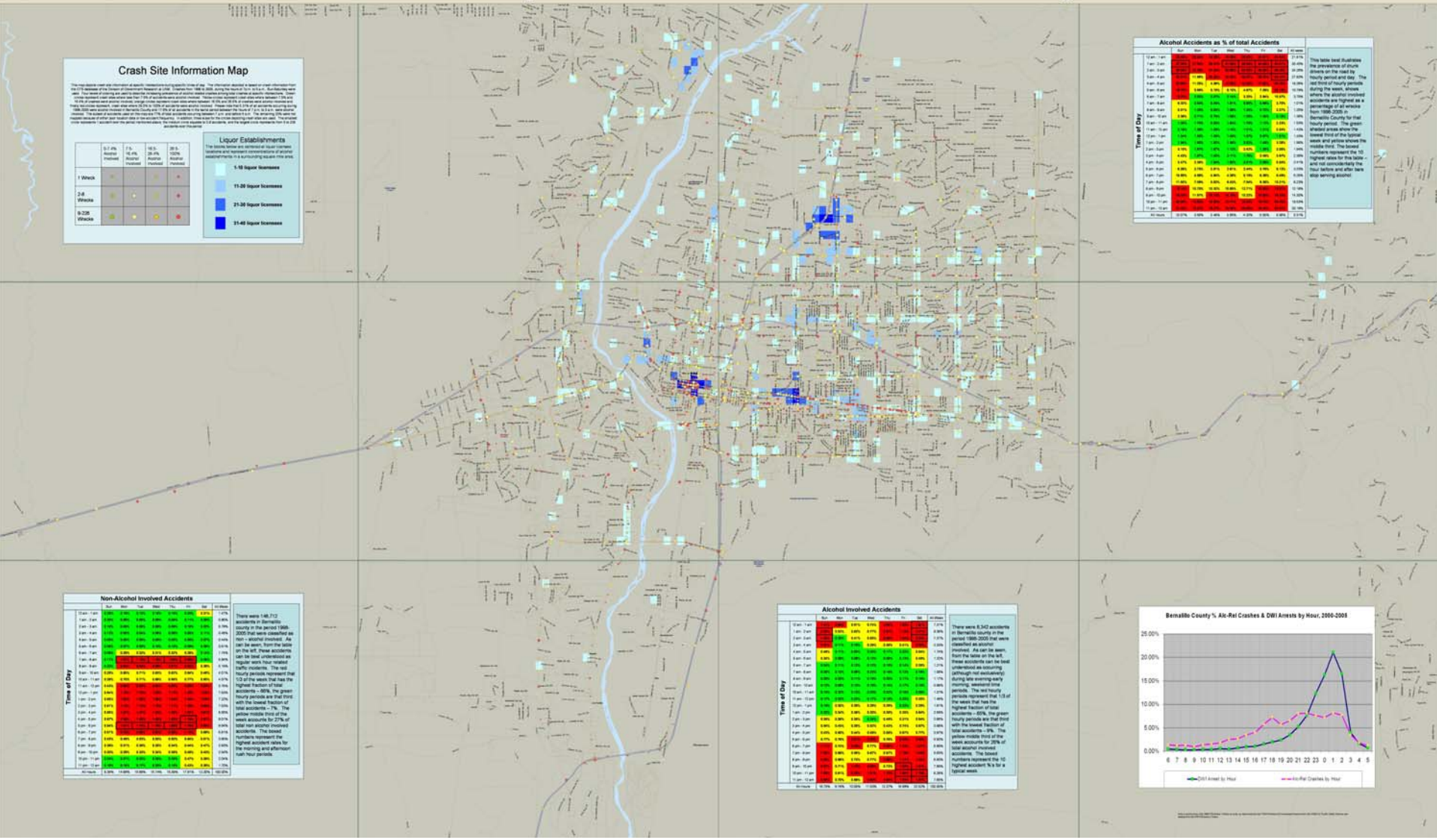
Alcohol Accidents as % of total Accidents

Time of Day	Sun	Mon	Tue	Wed	Thu	Fri	Sat	All week
12 am - 1 am	23.60%	20.34%	18.28%	19.08%	20.00%	22.61%	24.84%	21.81%
1 am - 2 am	37.09%	27.04%	28.42%	31.68%	36.36%	34.98%	40.61%	35.45%
2 am - 3 am	36.59%	20.39%	27.64%	30.68%	34.93%	36.55%	36.56%	34.26%
3 am - 4 am	30.57%	11.69%	20.00%	22.43%	28.07%	29.57%	33.74%	27.83%
4 am - 5 am	22.89%	11.25%	4.08%	17.00%	14.00%	17.82%	30.20%	18.26%
5 am - 6 am	18.79%	5.98%	5.19%	6.10%	4.67%	7.09%	25.15%	10.79%
6 am - 7 am	13.07%	2.02%	2.07%	2.14%	3.25%	2.84%	10.57%	3.75%
7 am - 8 am	6.32%	0.63%	0.40%	1.01%	0.80%	0.68%	3.70%	1.01%
8 am - 9 am	5.01%	1.20%	0.65%	1.09%	1.24%	0.72%	2.27%	1.25%
9 am - 10 am	2.36%	0.71%	0.75%	1.58%	1.28%	1.45%	2.18%	1.36%
10 am - 11 am	1.35%	1.70%	0.93%	1.64%	1.79%	1.12%	2.23%	1.53%
11 am - 12 pm	2.16%	1.39%	1.29%	1.10%	1.01%	1.21%	2.24%	1.43%
12 pm - 1 pm	1.34%	1.50%	1.39%	1.46%	1.37%	0.87%	1.51%	1.33%
1 pm - 2 pm	1.84%	1.80%	1.82%	1.56%	2.02%	1.48%	3.28%	1.96%
2 pm - 3 pm	3.10%	1.87%	1.67%	1.12%	2.42%	1.25%	3.05%	1.94%
3 pm - 4 pm	4.43%	1.87%	1.40%	2.11%	1.75%	2.48%	3.97%	2.36%
4 pm - 5 pm	3.47%	2.36%	1.64%	1.82%	2.21%	2.09%	5.04%	2.41%
5 pm - 6 pm	6.28%	2.73%	2.91%	2.61%	2.44%	2.78%	6.12%	3.23%
6 pm - 7 pm	10.95%	4.98%	4.84%	4.38%	5.16%	6.38%	9.49%	6.25%
7 pm - 8 pm	11.92%	7.09%	5.62%	6.43%	7.04%	9.38%	10.21%	8.23%
8 pm - 9 pm	13.14%	10.70%	10.32%	10.85%	12.71%	12.95%	13.61%	12.18%
9 pm - 10 pm	15.40%	11.97%	16.10%	14.19%	10.22%	14.80%	16.34%	14.30%
10 pm - 11 pm	20.59%	13.90%	15.89%	18.71%	19.33%	18.73%	20.25%	18.53%
11 pm - 12 am	21.33%	19.27%	18.27%	18.36%	20.06%	19.34%	22.91%	20.19%
All Hours	10.07%	3.59%	3.48%	3.95%	4.32%	5.05%	9.38%	5.31%

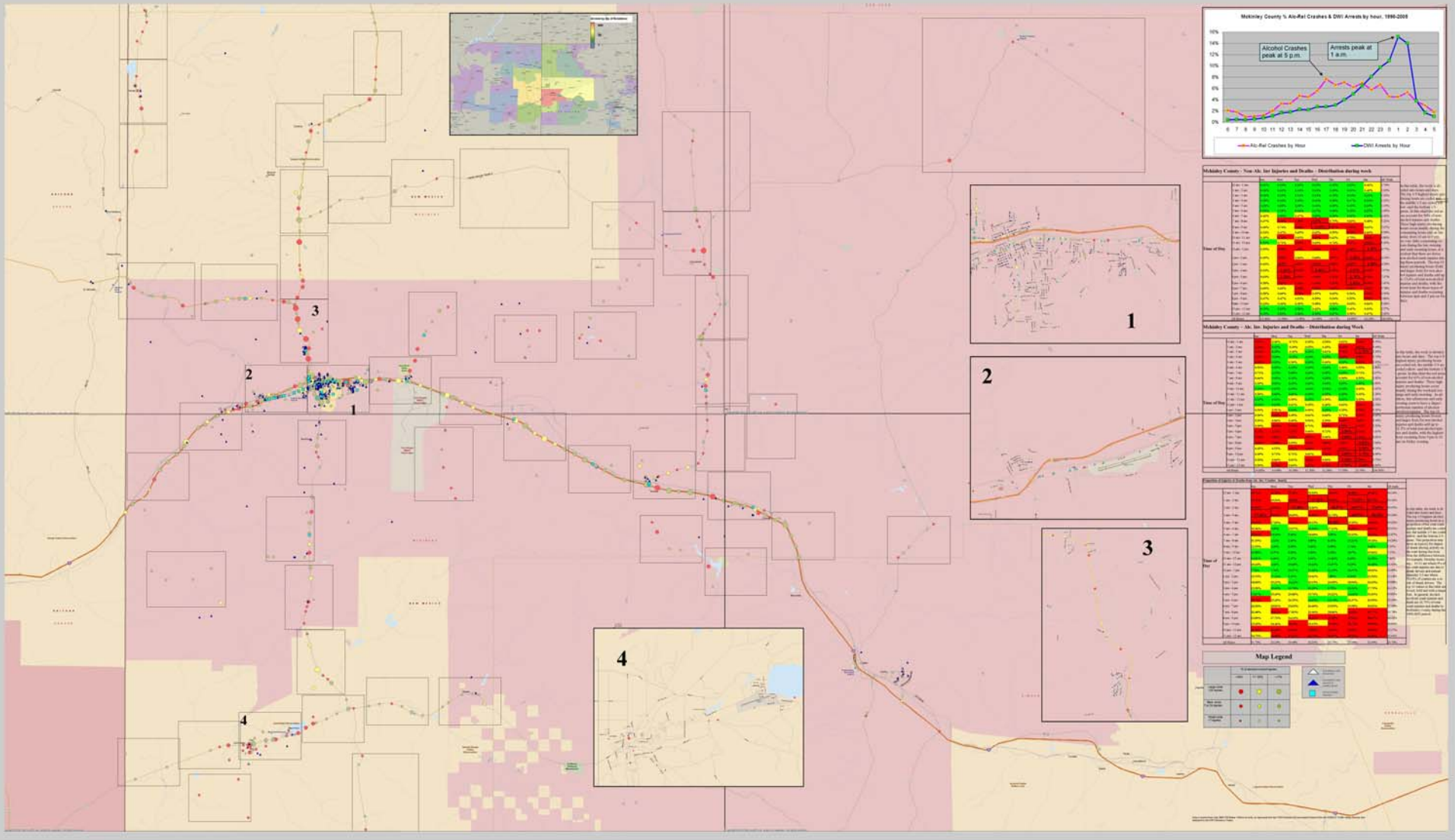
This table best illustrates the prevalence of drunk drivers on the road by hourly period and day. The red third of hourly periods during the week, shows where the alcohol involved accidents are highest as a percentage of all wrecks from 1998-2005 in Bernalillo County for that hourly period. The green shaded areas show the lowest third of the typical week and yellow shows the middle third. The boxed numbers represent the 10 highest rates for this table – and not coincidentally the hour before and after bars stop serving alcohol.


Bernalillo County % Alc-Rel Crashes & DWI Arrests by Hour, 2000-2005
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0 1 2 3 4 5
DWI Arrest by Hour
Alc-Rel Crashes by Hour

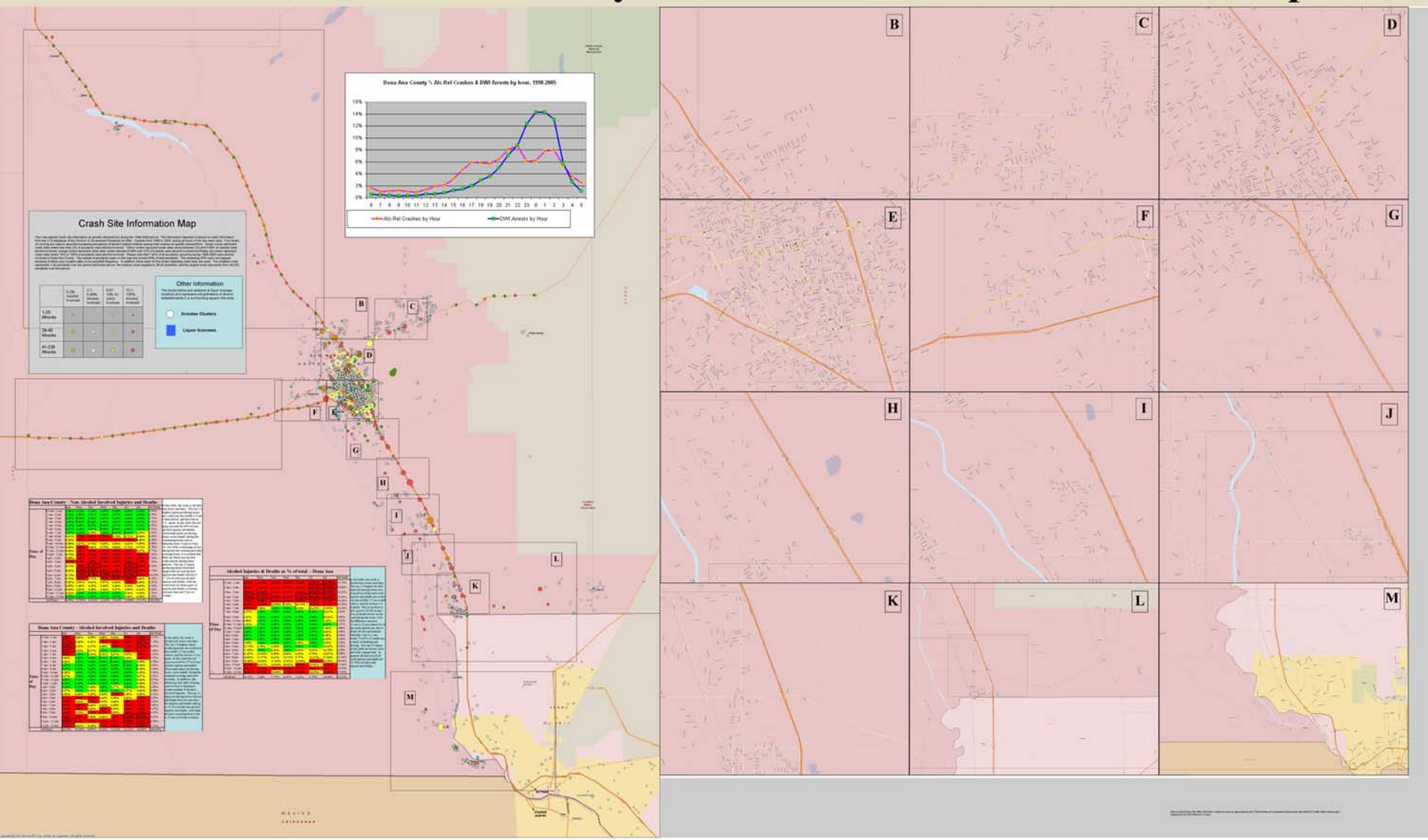
1998-2005 Bernalillo County Alcohol-Involved Crash Map and Related Data



1998-2005 Mckinley County Alcohol-Involved Crash Map and Related Data



1998-2005 Dona Ana County Alcohol-Involved Crash & Data Map



Our Technology

DWI
Resource Center, Inc.

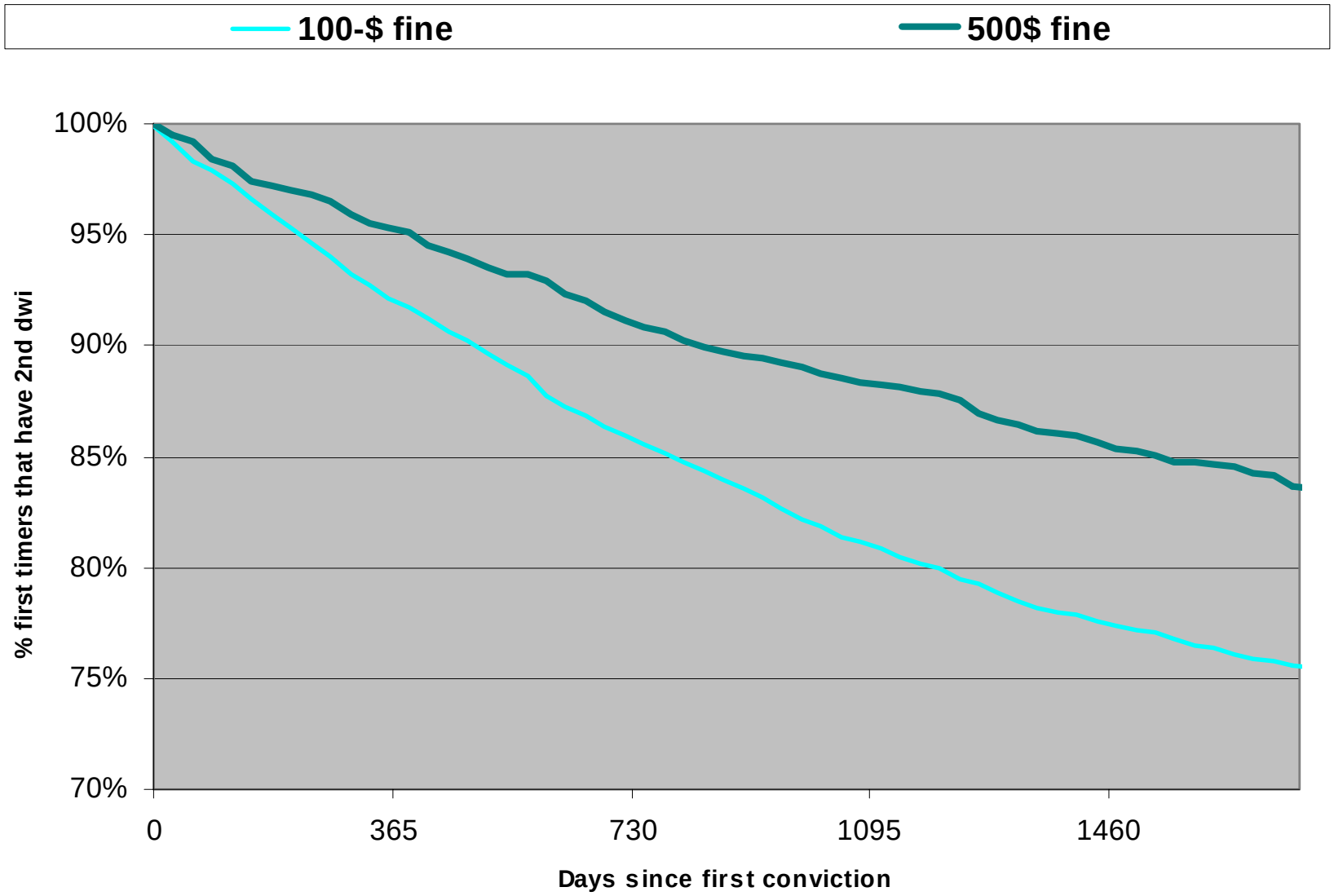
- Volunteers
- Bill Gate's bag of tricks
  - Visual Basic Apps for retrieving Lats & Longs from Yahoo, Google, MapPoint into Excel.
  - Excel for data manipulation and crash site grouping.
  - Access – data repository.
  - MapPoint – map design.
  - PowerPoint – Intermediate map manipulation.
  - Microsoft Publisher – final map output.

That’s it.

DWI
Resource Center, Inc.

We feel our data visualization techniques, although quite simple and straight forward, have allowed us to make a map that is useful both to the lay person in terms of Risk Avoidance and to Law Enforcement in terms of Risk Mitigation and Management.

Just for Fun – Survivability Curves



Questions?

Thomas Beretich

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505-881-1084