



The data consortium consists of Denver Regional Council of Governments members and regional partners with an interest in geospatial data and collaboration. The data consortium newsletter improves communication among local geographic information systems professionals and features updates from all levels of government as they relate to data and geospatial initiatives in our region. This newsletter is published quarterly.

Planimetric data for outdoor event planning

Article submitted by Jim Castagneri, volunteer coordinator at the Rocky Mountain Collegiate Cycling Conference.



Outdoor sporting and entertainment events are a staple of summertime at county fairs, farmers markets and urban festivals. Foot races, bike races, parades and music festivals all make use of public space to bring people together for social events. Public outdoor events are part of our culture. But what makes an outdoor event successful? They certainly have their roots of success tied to the culture and history of an area. But another key element plays an important role in the safe and successful execution of public events: site planning.

Challenges to hosting regular outdoor events can be addressed in the physical environment by building permanent facilities such as parks, fairgrounds, stadiums and band shells. When outdoor events are planned in areas not normally designed for them, many complex problems must be addressed. In today's geospatial-enabled world,

planimetric data can provide part of the solution.

When city and regional planners think about planimetric data, they imagine mapping things like utility corridors, roadways, curb lines or sidewalk locations. They might also map the locations of parks, open space or storm sewer covers. Local governments use this information for a variety of purposes from urban planning to utility work planning. So how can this fundamental type of geographic information systems data be useful for outdoor event planning? What are the needs and benefits of planimetric data for event planning?

To answer the questions, let's explore the needs of event planners once local permits and schedules are set. Event planners generally have three areas of concern when executing large outdoor events;

1. event infrastructure placement (temporary stages, toilets, first aid, etc.)
2. crowd and resource management
3. emergency management

All three concerns must come into play in the three-dimensional space in which the event will take place. For example, how much equipment and staging space is available for the event? What is the best placement for food vendors? Are there areas that are off-limits to the public? What are the major pedestrian thoroughfares? What roads must be blocked off? Where is the nearest parking?

Not unlike larger-scale mapping applications, outdoor event planners must consider a variety of information to make relevant site layout decisions. Placement of special-event barricades, tents, emergency equipment, sound stages and other temporary structures requires planning for ease of access, emergency evacuations and crowd control, and other considerations. In the past, a paper plan might have been created using an outline of the event area. The layout of tents and other structures would be approximated with symbols or hand-drawn objects. That site plan would then be copied to share with others.

Public domain planimetric data such as that maintained by the Denver Regional Council of Governments has facilitated event planning in the GIS realm. The data can help answer a variety of questions like: How wide is a street at a major intersection? How many hectares is a grassy area identified for a concert? How far must concertgoers walk from the nearest parking lot? For crowd control and safety concerns, planimetric data can help planners identify key locations for police presence and medical personnel. Locations for portable toilets, food tents, beer garden permits, racecourse barricades, soundstages, supply trucks, utility and power line routing can all be planned more efficiently in a GIS environment. Elements can be arranged in digital space to allow for a review of equipment spacing, support access and crowd movement.

Additionally, the ability to publish the map data online allows multiple parties to review plans for adherence to local codes and resource allocation. For example, a local police department can review barricade, spectator and festival locations to determine resource and officer placement on the ground. Audio-visual equipment can be located and cabling distances measured, while mixing boards, generators and other equipment are located away from crowds in a semi-secure environment.

First responders can plan for temporary first-aid service locations and ambulance and

firetruck ingress and egress routes. Police and public security personnel can plan for security checkpoints, pedestrian flow and egress.

In my own experience it is clear: Planimetric data provides an invaluable resource for efficient site planning of public outdoor events.



Planimetric data for downtown Pueblo, Colorado. Source: Microsoft, Jim Castagneri

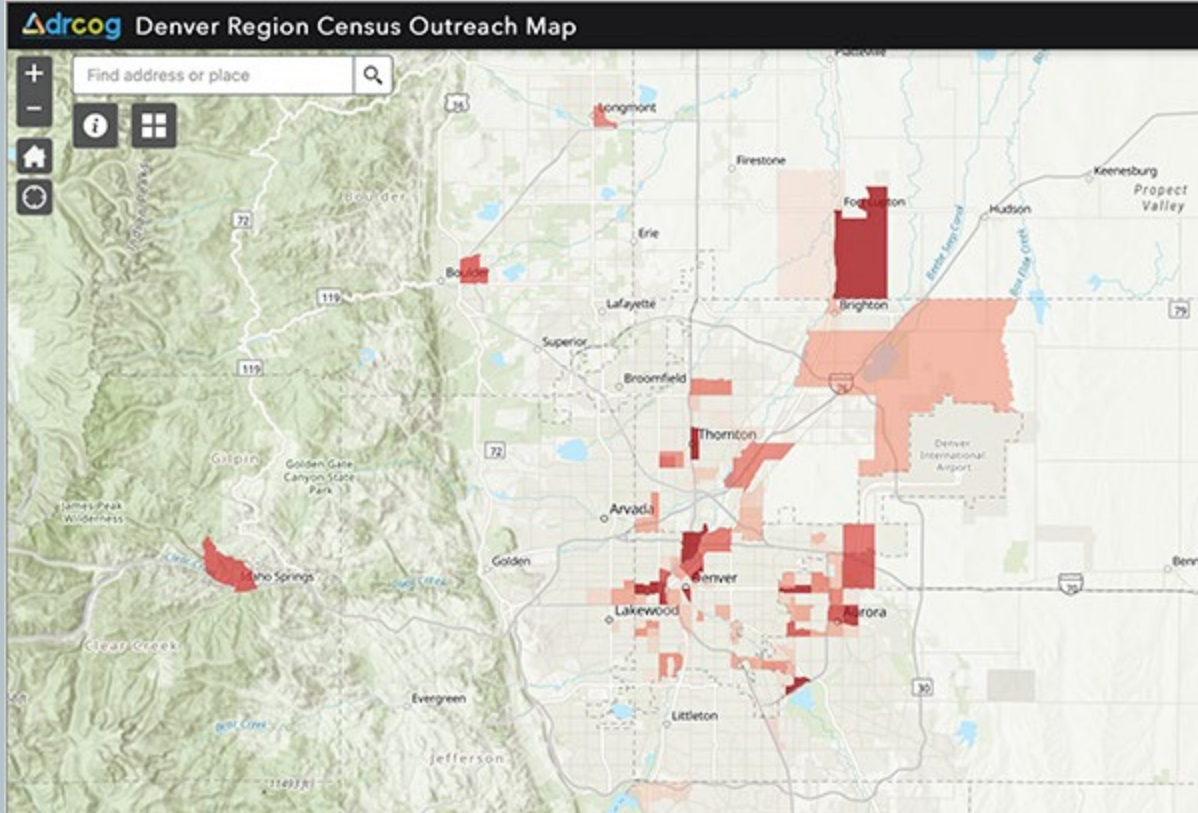
Targeted census outreach for hard-to-count communities

Article submitted by Lisa Houde, communications specialist at DRCOG. Lisa can be reached at 303-480-5658 or lhoude@drcog.org.

Take the census: Responding to the census has never been easier with options to respond [by mail, phone or online](#). Residents can now respond to the census through the summer due to operational changes in response to COVID-19. To avoid in-person interactions with census takers in the future, respond to the census now.

DRCOG census outreach: DRCOG received a grant through the Department of Local Affairs to conduct census outreach to ensure an accurate count of older adults in the region. Outreach efforts included convening a regional workgroup of organizations also working to reach older adults and promote the census; advertising through many different mediums including print, TV, digital and radio; and working with DRCOG's Area Agency on Aging staff and contractors to spread the word about the census to its clients. June was the final month of the grant, and DRCOG staff have focused on outreach to

communities with lower response rates and higher percentages of older adults. In order to target the outreach, DRCOG staff created a map that can be used to identify communities that are typically more difficult to reach and those that have lower response rates. [Explore the map to learn more.](#)



DRCOG's Vision Zero plan

Article submitted by Beth Doliboa, transportation planner at DRCOG. Beth can be reached at 303-480-5647 or bdoliboa@drcog.org.

Traffic-related deaths and severe injuries are a critical and preventable public health epidemic and a social equity issue in the Denver region. In 2018, 242 people were killed and 1,866 people were seriously injured on the region's roadways. That's 2,108 people in just one year. To respond to the issue, the Denver Regional Council of Governments Board of Directors adopted [Taking Action on Regional Vision Zero](#).

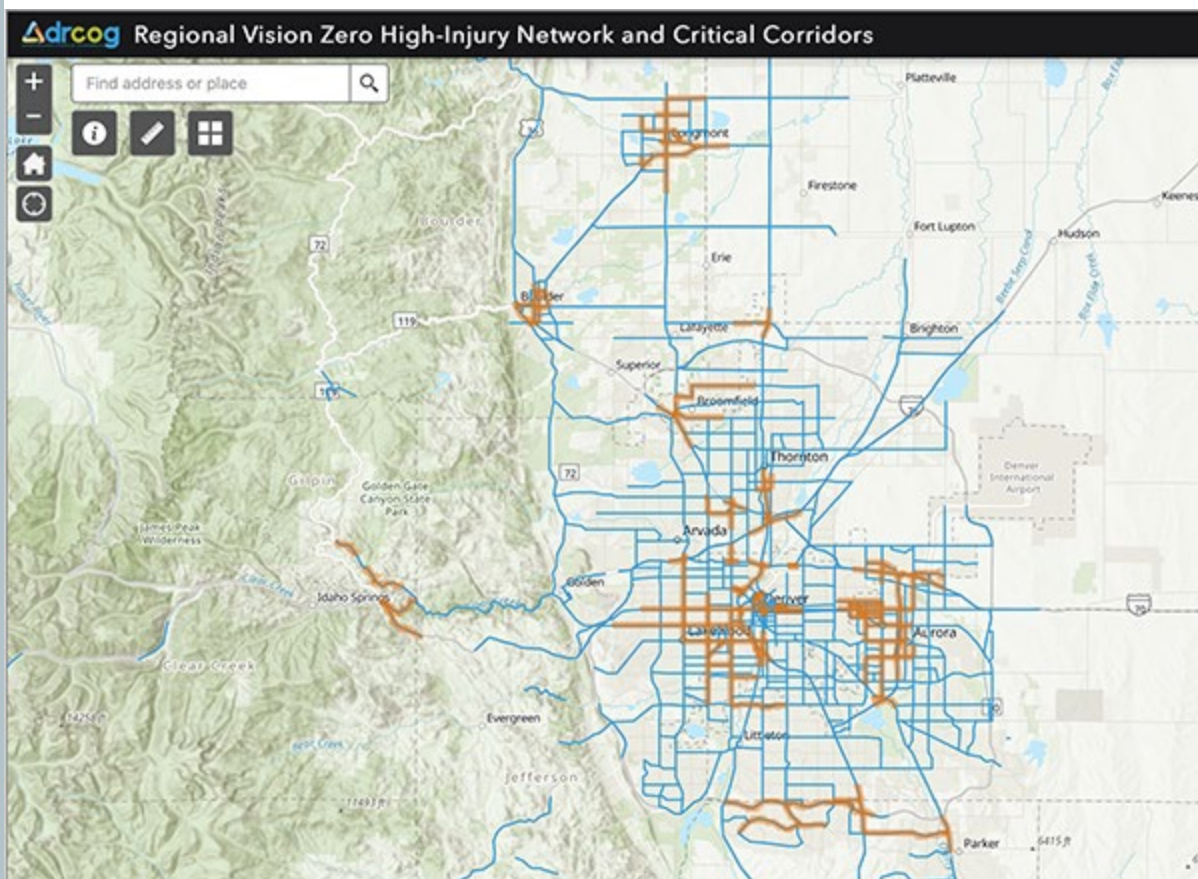
Vision Zero is a safety approach with the core principle that it can never be ethically acceptable that people are killed or seriously injured when moving within the road transportation system. It is fundamentally different from the traditional traffic safety approach in American communities in six ways by:

1. reframing traffic deaths as preventable
2. integrating human error to the approach
3. focusing on preventing fatal and severe crashes
4. establishing safe systems prioritizing human life when designing a road network
5. applying data-driven decision-making
6. establishing road safety as a social equity issue

Taking Action on Regional Vision Zero includes a toolkit for local governments to use to plan their own implementation of Vision Zero principles in their communities. The plan also sets out action initiatives, an implementation timeline and measures that will help track regional progress toward safety improvements. The plan was guided by robust public engagement over the last year, including a crowdsourced map of safety issues around the region.

Regional Vision Zero prioritizes data in decision-making. Crash data from 2013 through 2017 was used to analyze the locations of fatal and serious-injury crashes in the region to gain an understanding of the causes of the crashes and identify priority locations for safety improvements in the Denver region. The Regional High-Injury Network was developed by identifying the road segments with the highest killed and serious-injury crash density. To further identify areas of concern, DRCOG's geographic information systems team developed critical corridors along the Regional High-Injury Network by identify the top 50% of killed and serious-injury crash density corridors by each county within the DRCOG boundary.

To provide DRCOG's local jurisdictions easy access to Regional High-Injury Network and critical corridors, DRCOG's GIS team created an [interactive map](#) that includes additional layers, such as vulnerable populations.



DRCOG data acquisition updates

Article submitted by Ashley Summers, geographic information systems professional, project management professional, information systems manager at DRCOG. Ashley can be reached at 303-480-6746 or asummers@drcog.org.

Denver regional aerial photography project 2020

DRCOG is collecting 6,000 square miles of high-resolution imagery in 2020 on behalf of 48 partners. The spring flights in the metro area and eastern plains are complete. The summer flights in the mountains have just begun.

If you are not a project partner and would like to be, reach out to me at asummers@drcog.org. Read more about our [imagery projects](#) on our [website](#).

Historical imagery is available for download via the [Governor's Office of Information Technology FTP site](#).

Regional lidar project 2020

DRCOG received a [grant from the U.S. Geological Survey](#) in December 2019 to collect quality level 2 lidar in 5,000 square miles of the region and derive contours in most of the metro area. Flights to collect the data are almost halfway finished. Many thanks to the 32 local and state partners that committed funding to the project!

For more information, visit our [website](#).

Do you have an interesting use case for lidar data? Tell us about it by emailing me at asummers@drcog.org.

Planimetric and land use land cover project 2020

As noted above, plans are in motion for collecting a substantial amount of foundational data in 2020. DRCOG wants to make sure it leverages that investment by preparing to create derivatives that would benefit our GIS community in the region. With updated imagery and lidar, project partners can delineate, quantify, and measure many aspects of our built and natural environments. [See some examples](#).

Discussions are happening now to shape those data products and determine potential partnerships for funding. If you're interested in knowing more, please reach out to me at asummers@drcog.org. Also, be aware of our tentative schedule:

- fall 2020 – letters of intent due from participating partners
- winter 2021 – new imagery is delivered
- spring 2021 – new lidar is delivered; derivative projects begin

Things you might have missed

- The next [Data Consortium meeting](#) is on July 30.
- Check out DRCOG's latest data brief on [COVID-19's effect on workers](#).
- The OpenStreetMap Colorado community continues to add DRCOG's regional building footprints to OpenStreetMap. [Read an article about it in Popular Science](#). View all [OpenStreetMap Colorado Meetups](#).

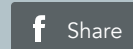
- Sign up to attend the GIS Colorado summer meeting on Aug. 15. View all [GISCO Events](#).

Engage with us

- This quarterly newsletter reaches more than 300 people, has a higher-than-average open rate, and is written by professionals like you. It's the perfect place to show off your projects, highlight your great work and contribute ideas to the GIS community in the Denver region. Newsletter release dates are the 15th of January, April, July and October (or the next business day afterward). Please contact Ashley Summers at 303-480-6746 or asummers@drcog.org to contribute.
- Did you miss a newsletter or a meeting? [Visit our website](#) for past newsletter issues and Denver Regional Data Consortium meeting materials.



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