Josef Korbel School
of International Studies
UNIVERSITY OF DENVER

REPORT

Denver's Central-70 Redevelopment and Local Hire: A Billion Dollar Project on Toxic Grounds?

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Abbreviations and Acronyms

ASARCO	American Smelting and Refining Company
ACS	American Community Survey
CCESL Grand Challenges	Center for Community Engagement to advance Scholarship and Learning - Grand Challenges
CCD	Community College of Denver
CDOT	Colorado Department of Transport
Central-70 or C-70	The Central-70 Project; this is the official name for the expansion of Central-70 highway
CDPHE	Colorado Department of Public Health and Environment
CREA Results	CREA stands for Community, Research, Education + Awareness. CREA Results is a grassroots organization that strives to harness the assets of the immigrant community through community-based participatory research to advance health equity and economic security and “build trust among community members and local service agencies” (see crearesults.org)
CU	University of Colorado
DDPHE	Denver Department of Public Health and Environment

DRCOG	Denver Regional Council of Governments
DU	University of Denver
EIS	Environmental Impact Statement
EJSCREEN	Environmental Justice Screening and Mapping Tool. It is EPA's environmental justice mapping and screening tool that provides EPA with a nationally consistent dataset and approach for combining environmental and socioeconomic indicators.
EPA (US EPA)	United States Environmental Protection Agency
EPIC	Colorado Jobs with Justice Equity and Possibilities in Construction
FHWA	Federal Highway Administration
GES	Globeville Elyria Swansea
HVAC	Heating, Ventilation, and Air Conditioning
HIA	Health Impact Assessment
HUC12	A hierarchical hydrologic unit code, 12-digit
I-25	Interstate 25
I-225	Interstate 225
I-270	Interstate 270
I-70	Interstate 70

I-76	Interstate 76
IRISE	Interdisciplinary Research Institute for the Study of (In)Equality
JwJ	Jobs with Justice
KMP	Kiewit Meridiam Partners
O_3	Ozone (O_3) is a highly reactive gas composed of three oxygen atoms. It is both a natural and a man-made product that occurs in the Earth's upper atmosphere (the stratosphere) and lower atmosphere (the troposphere)
PM2.5	Particulate matter 2.5, is a type of air pollution that consists of fine particles that are 2.5 micrometers or less in diameter
PM10	Particulate matter 10 is a mixture of solid particles and liquid droplets in the air that are 10 microns or less in diameter
REDCap	REDCap is a secure web application for building and managing online surveys and databases.
ROD	Record of Decisions
RTD	Regional Transportation District
TRI	Toxic Release Inventory
TSDF	Treatment, Storage and Disposal Facilities
USDOT	United States Department of Transportation
WORKNOW	Coalition of organizations dedicated to training, placing, and advancing workers in the construction industry

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Key Findings and Recommendations

Key Findings

The local hire target was met early and exceeded. Partnerships enabled stakeholders to learn from their mistakes, improve implementation, recruitment, incentives, and buy-in. However, official reports did not fully account for other (including dissenting) experiences and narratives from impacted communities, leaders, and advocates.

Recommendation 1

Genuine community consultation and buy-in takes time and must start prior to project inception (not when already a done deal), involve all aspects of the community, and avoid aggravating existing fractures or pitting segments of communities against one another (see Earle and Simonelli, 2000). Otherwise, mistrust can hamper project recruitment and completion, industry goals to develop an inclusive and well-prepared workforce, local development goals, and city-industry-community relations.

Recommendation 2

Regularly assess existing health and environmental indicators and community impact in ways that can systematically enable pre and post project evaluations to parse out the specific impacts of particular projects over the short, medium, and longer-term. Involve and train community members in participatory-action research techniques to assess problems in their community and provide avenues to share their results and take action.[i] CREA results is an excellent partner for this, as well as the GES Coalition that is focused on community ownership of projects and decision-making processes. Funding the comprehensive community health assessment is a good start; it will be critical for the community to have the resources and a platform to make their results actionable and sustainable.

Recommendation 3

Take an asset versus deficit-based approach to communities to understand what they already have, need, and desire versus offering them what they may not. Invest in initiatives run by and for the community, like the GES Coalition; specifically its community land trust Tierra Colectiva (established in 2017). Address local desires for affordable and accessible housing and dignified jobs. Seriously engage with past and ongoing environmental and health disparities and hazardous exposures.

[i]For example, see Beebe 2001 and Sangaramoorthy and Kroeger 2020 for participatory rapid assessment methods.

Executive Summary

In 2018, Colorado Jobs with Justice (JwJ) approached Dr. Rebecca Galemba at the University of Denver to help evaluate its new Equity and Possibilities in Construction (EPIC) program. Launched in 2017, EPIC aims to advance the training, placement, and mobility pathways of women, nonbinary, and people of color in the construction industry through union building and construction trades and apprenticeship programs in Colorado. Given that the re-design and expansion of Colorado's Central-70 highway was about to get underway, and contained within the project stipulations for a 'local hire' arrangement, the research team saw this as an opportunity to evaluate the implications of the project for women and people of color in construction trades. The local hire included a commitment that 20% of labor hours should be filled by workers from the targeted development area, largely corresponding to minority communities.

According to the Colorado Department of Transportation (CDOT), the local hire target was achieved early and exceeded. Although CDOT's final evaluation mentions important lessons that led to improvements over the course of the project including achieving buy-in, subcontractor outreach, reducing administrative burdens, and addressing implementation timelines, the Central-70 Final Report released in August 2023 largely describes the project as a success. It concludes that the:

> *"Workforce Development Program is an example of how partnership can foster hiring and retention practices that support the construction industry as a whole…while it also provides benefits to un- and under-employed local residents" (CDOT, 2023: 18).*

However, many of our interviewees told different stories. Although some of the difficulties noted by CDOT and WORKNOW staff, unions, and community advocates may reflect an initial learning curve and difficulties in 2018, later interviews continued to highlight the need to go beyond official narratives that tended to center administrative efficiencies, implementation timelines, buy-in, competition, and incentives.

Instead, they reveal important considerations regarding existing power dynamics and asymmetries among stakeholders and the need to address a legacy of development as dispossession in communities often targeted for redevelopment initiatives.

The report is based on initial survey interviews with 32 firms in the construction trades in Colorado[1] conducted by Dr. Muyeba and student assistants, data and reports from CDOT, and 30 in-depth qualitative interviews (including one repeat) with a range of stakeholders positioned in relation to the project and the construction industry. Interviewees included union leaders, apprenticeship staff and organizers, workers, local advocates and community organizers, CDOT and other city personnel, academics, community members, and non-profit stakeholders from 2019-2022.[2] Interviews were conducted by Dr. Galemba and students under her supervision in her Qualitative Methods course or hired as research assistants, as well as by trained community researchers through CREA Results. CREA is a grassroots organization that strives to harness the assets of the immigrant community through community-based participatory research to advance health equity and economic security and "to build trust among community members and local service agencies" (see crearesults.org). CREA's community roots and trust were critical to both recruitment and interviews. Dr. Galemba and CREA facilitators co-trained the community and student interviewers.[3]

After interviews, we had planned to survey workers (with a survey designed by Dr. Muyeba) on the Central-70 expansion, but unfortunately this phase of the study never came to fruition as a result of the pandemic. By the time COVID conditions and vaccination rates had improved, the main construction was largely completed and staff turnover in CDOT, Kiewit Meridiam Partners LLC (the lead contractor), and within Jobs with Justice made it difficult to reach rosters of workers. Thus, this report cannot assess whether the project truly led to opportunities and advancement for women, nonbinary, and people of color. Still, our interviews and other subsequent reports point to important challenges and lessons that provide a cautionary addendum to official accounts.

[1] This covered 32 contractors and subcontractors on the I-70 Redevelopment Project and questions regarding unionization rates, number of women and minorities on the Board of Directors, the gender of the CEO, Executive Director or President, number of women and minorities on staff and among workers, gender distribution of foremen, apprenticeship programs and how many women and minorities are in those programs. A full list of contractors and subcontractors was obtained through Colorado Jobs with Justice. Data was collected via telephone interviews and email. Data analysis involved descriptive statistics and thematic analysis of responses to open-ended questions.

[2] Interviews were paused during the pandemic, with the majority of interviews happening prior.

[3] The project, as well as CREA's participation as co-interviewers, was approved by the University of Denver IRB under Protocol 1321935 with an initial approval date of November 26, 2018. We thank former DU student Ariadma Segura for assistance with organizing interviewer trainings and administrative coordination.

Many community members and long-time advocates were wary of the project's promises of jobs and increased connectivity. Instead, they worried about displacement, aggravated environmental and health risks, and community disruption and fragmentation. Given a long history of similar experiences in impacted neighborhoods, some saw it "as the latest in a string of North Denver projects that will ultimately not serve its residents" (Minor, 2018). To some stakeholders we interviewed, the focus on job opportunities and development masked how the project might otherwise intensify environmental justice concerns and exposures. As more large national infrastructure projects consider incorporating local hire or similar targeting mechanisms into their agreements, we hope this report provides important considerations for true community consultation in defining what community members need and want in terms of development and work opportunities while effectively addressing their concerns. We recommend that future projects involve impacted communities in all stages of the project to foster inclusive development that ameliorates, rather than exacerbates, existing forms of structural disadvantage and disempowerment.

The strucutre of the report is as follows: First, the report describes the Central-70 project and its local hire components. We draw on our interviews to describe challenges that unions, apprenticeship programs, contractors, and CDOT encountered while recruiting the targeted population to the project. We contrast CDOT reports about fulfilling their goals with interviews with people close to the targeted communities who held different opinions. The second section of the report discusses how the local hire arrangement, as part of the Central-70 redevelopment, must be understood within a history of the impacted neighborhoods of Globeville and Elyria-Swansea (GES), including earlier highway development projects, systemic exclusion and marginalization, and environmental justice concerns. This section provides data on health, pollution, gentrification, and other social, economic, and demographic indicators in GES to provide context into why promises of jobs were often viewed with skepticism and reticence. Although we cannot make causal statements or correlations, these indicators are concerning for the potential of the Central-70 reconstruction to intensify, rather than address, existing inequalities. For example, new data released in a 2024 health report reveals little traction on existing health disparities in GES. The last section offers considerations about how the project revealed diverging ideas of what is considered development and who benefits, which helps explain how different stakeholders can simultaneously claim success and failure, creating frustration on all sides. We include recommendations for the future of such large infrastructure projects that claim to offer a win-win-win for the construction industry, city development, and workers and their communities.

I. The Central-70 Renewal Project:

1.1.Project Background

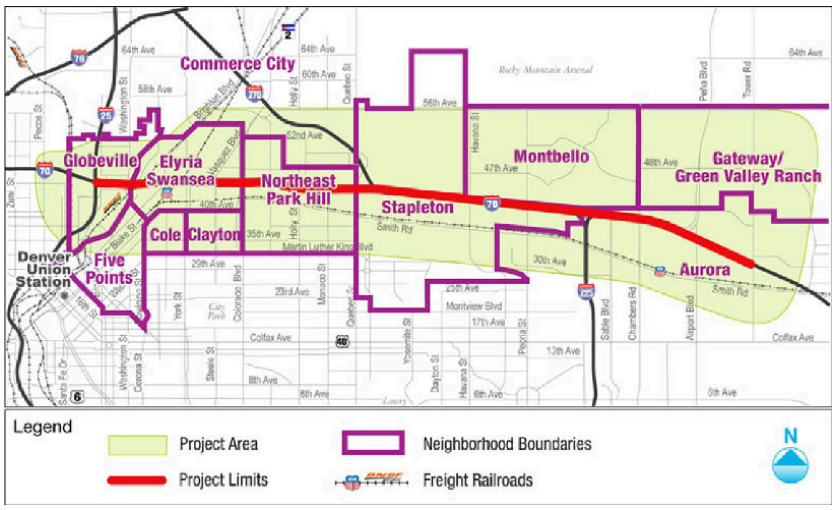
The Central-70 expansion project was one of nine “local hire” pilots nationwide authorized by the U.S. Department of Transportation (USDOT) under the Obama administration. In this arrangement, the transportation agencies committed to employing a certain portion of the workforce from particular geographic zones (CDOT, 2023). The Central-70 project was grandfathered in to proceed despite policy changes prohibiting such targets under the Trump administration. Yet, such projects with local hire commitments gained renewed traction in President Biden’s Bipartisan Infrastructure Law (2023), paving the way for similar initiatives nationwide. CDOT noted that this pilot would represent the “first time in CDOT history that such a goal [local hiring] would be applied on a project,” claiming that the benefits for Colorado’s workforce and its development would be “significant and long lasting" (CDOT, 2017-b). The local hiring goal was set at 760,000 hours (about 20% of approximated craft hours) (CDOT, 2023: 8). In effect, CDOT tracked both total hours and the percentage of hours; the former being easier to track and the latter which “holds the developer accountable” (CDOT, 2023: 14).

CDOT carefully laid its preparation work. It commissioned an in-depth study, carried out by the Community College of Denver’s Workforce Initiatives, to assess and design the local hire and the target. This led to a slightly wider map of 15 neighborhoods surrounding the project (to account for high impact, economic need/opportunity, and displacement from gentrification), but one that largely aligns with high minority and immigrant communities. The goal was for 20% of the workforce to be from one of the targeted zip codes surrounding the project without displacing the current workforce, but at least 10% met by new hires. The lead contractor, Kiewit, was required to meet, and report on, these goals. In addition to setting targets, CDOT also received funding from the Federal Highway Administration (FWHA). The funding was intended to support workforce development and training. This included providing job opportunities to workers from impacted communities, as well as skills for career development and job mobility.

The local hire process required, and built on, community meet-and-greets, multiple listening sessions, and multi-stakeholder collaboration to make it responsive, meet its goals, and be valuable to both contractors and the community.

The proposal for the Central-70 renewal project emanated from the study of the I-70 East Corridor Environmental Impact Statement (EIS) project developed jointly by CDOT and Denver's Regional Transportation District (RTD). Initially, the concern that led to the environmental impact study was "increased transportation demand, limited transportation capacity, safety concerns, and transportation infrastructure deficiencies" (CDOT, n.d.-a:1). The goal of the EIS project was to enhance transportation along the I-70 corridor from I-25 to Tower Road and to investigate potential rapid transit options from downtown Denver to Denver International Airport. There are several neighborhoods affected during the development phase of the I-70 East project, which are shown in figure 1.

Figure 1: Neighborhoods making up the I-70 East project area



Source: (CDOT, n.d.-a:3) The name of neighborhood referred to as "Stapleton" on the map was changed to Central Park.

The CDOT Central-70 redevelopment project covers the area between the I-25 and Chambers Road, a 10 mile stretch of the I-70 East that carries upwards of 200,000 vehicles per day, hosts 200 businesses, and provides the regional connection to Denver International Airport (CDOT, 2018). It is an area recognized as an economic mainstay of Denver and Colorado in general.

The renewal was initially proposed by CDOT in 2014. The plan included demolishing the aging overhead viaduct (between Brighton and Colorado boulevards) and constructing a semi-covered highway trench through the Elyria-Swansea neighborhood and placing a 4-acre park over this part of the highway (see Figure 3). According to CDOT, connectivity in Elyria-Swansea would increase, as the construction of the park reverses the disconnecting impact of the old viaduct. Other renewal plans involved adding two extra lanes for a 10 miles stretch, between Brighton Boulevard and Chambers Road (Gurara, 2023 and CDOT, n.d.-b), adding new express lanes and replacing aging infrastructure intended to reduce congestion, improve safety, and accommodate the growing demands from the rapid growth of the Denver Metro area. Figure 2 shows the plan of the project.

Figure 2: Completed Central 70 Project- Aerial view of new 4-acre park built over Interstate 70

Source: Cutting (2023)

Figure 3: I-70 Project-Map

Source: CDOT (n.d.-b)

Initially, there were other suggestions to relocate the highway along the current I-270 and I-76 routes. However, these suggestions were dismissed for the reasons of extra distance, expense, and travel time. By January 2017, the Federal Highway Administration (FHWA) issued a Record of Decision (ROD) endorsing CDOT's preferred choice, which was also supported by the City and County of Denver (Goetz and Boschmann, 2018). Despite an organized effort by community members (e.g., Ditch-the-Ditch) to oppose the project, and who strongly favored relocation of the highway along I-270 and I-76, CDOT's proposed plan was implemented (Gurara, 2023).

Before such a large federal project could be undertaken, CDOT had to complete a lengthy environmental study, investigating historical, economic, and environmental impacts. While the impacted zip codes are wider, the north Denver communities of Globeville and Elyria-Swansea (GES) are some of the most impacted, with the proposed expansion running right through them. Eighty-seven percent of residents in GES identify as Hispanic and the community is home to historical working class and immigrant communities who have long borne adverse environmental and health costs from Denver's development (see Section II). Understanding the potential sensitivity of the project in impacted neighborhoods – especially in GES – CDOT conducted five more years of community outreach, gathered input in more than 300 pre-construction public meetings, and made roughly 150 commitments to the community over the lifespan of the project (CDOT, 2023).

CDOT selected Kiewit Meridiam Partners (KMP or Kiewit) to design, build, finance, operate, and maintain the project in August 2017 and the construction began in the summer of 2018 (CDOT, 2019-a). According to CDOT, the total cost of the project

was $1.2 billion. This was financed by multiple sources including the Bridge Enterprise ($850 million), Senate Bill 09-228 ($180 million), the Denver Regional Council of Governments (DRCOG) ($50 million) and the City of Denver ($37 million). By July 2023, the renewal of the I-70, or the Central 70-project, was completed (CDOT, n.d.-b). Kiewit's contract with CDOT provided for 200,000 hours of On-the-Job training in the skilled craft– an "official US Department of Transportation program targeted to move women, people of color and disadvantaged populations into journey-level positions" (CDOT, 2021). The potential creation of 4,000 positions in a neighborhood with high-employment was seen as a potential benefit for both impacted communities and Colorado workforce development in general (CDOT, 2023).

Despite vocal community resistance (see Section 1.2), because the project was proceeding, some advocates at least applauded the selection of Kiewit as the lead contractor due to its reputation as a union company. Kiewit saw the importance of building an inclusive workforce and publicly positioned itself as a "local contractor…in Denver and in the community for over 70 years" (CDOT, 2023: 13).[4] Kiewit is a signatory to the local unions of Carpenters, Operators, and Laborers (CDOT, 2023), which can provide opportunities for unions and apprenticeships to have a more significant role and voice in the project. Union jobs also provide more assurance that women and people of color are paid equally according to the individual's level. Yet it is important to keep in mind that many community members continued to oppose the project and their degree of representation and ownership over the project and its impacts was limited. However, local organizing did result in some key community benefits, impact mitigations, and investments.

CDOT made several pre-construction and post-construction commitments, including mitigating the impacts of construction noise and dust. Some of the pre-construction commitments focused on reducing the impact of the renewal of the I-70 on Swansea Elementary School, providing new windows, doors, HVAC systems, and classrooms, as well as building a new playground; these improvements were completed by the summer of 2017 and fall of 2018. Other pre-construction initiatives involved equipping homes between Colorado and Brighton boulevards with air conditioning units, attic insulation, interior storm windows, and weatherization, which was completed in the spring of 2019. Post-construction commitments by CDOT included a $2 million grant awarded to the GES Affordable Housing Collaborative in July 2018, allocating $100,000 to improve access to fresh food, and ongoing monitoring for PM10 (dust) levels (CDOT, 2019-a).

CDOT was well aware that "government investments that create jobs and federal

[4] The report is citing Cathi Buckley, Kiewit's chief financial officer.

investments that prepare people for jobs are not always aligned" (CDOT, 2023: 5), which motivated them to cultivate partnerships to craft and implement the local hiring plan to provide local residents with "access [to] training [and] high-quality jobs with connected career pathways" (Ibid.). To support the local hiring goal, CDOT partnered with Community College of Denver's (CCD) Center for Workforce Initiatives to establish a neighborhood training center (known as WORKNOW) in July 2017, offering training and support programs for the local workforce (CDOT, 2019-a). This was made possible through the Ladders of Opportunity grant from the Federal Highway Administration (FHWA) to support recruitment, training, retaining, as well as placement of a diverse workforce (CDOT, n.d.-c and Cutting, 2023).

1.2.Resistance and Legal Settlement

Community groups like the GES Coalition were active in organizing opposition to the project's high costs to marginalized communities in terms of environmental and displacement impacts. In contrast to Denver Mayor Hancock's promises and depictions of the communities as a "region of opportunity," residents and community groups were wary of where benefits and drawbacks would unequally accrue, pointing to a long history of displacement for the sake of development in their neighborhoods (Fine, 2017). Such a massive federal project lines up with what stakeholders call environmental justice communities, meaning they risk displacing and impacting communities of color that suffer disproportionate displacement and ill environmental and health effects.

The GES coalition's organizing, outreach, and survey of 500 community members documented strong resistance to displacement. In the survey, 80% expressed the desire to stay as the report also demonstrated a high vulnerability to displacement. Low incomes and educational levels, lack of affordable housing, pressures of gentrification and rising rents, and the fact that many renters lack leases contribute to intensified risks of displacement. Redevelopment initiatives like the C-70 expansion threatened community stability in terms of displacement and rising indirect costs from gentrification. For construction alone, 56 homes were demolished. Despite the millions promised for investment in GES as part of the mitigation project, GES residents were skeptical. Past efforts rarely took local considerations into account and often prioritized investments in manufacturing and commercial enterprises around the highway. Such efforts aggravated pollution and undermined other community assets (GES Coalition, 2017:6).

Following the decision to redevelop and expand the I-70, Earthjustice (representing the Sierra Club, the Colorado Latino Forum, the Chaffee Park Neighborhood Association, and the Elyria-Swansea Neighborhood Association) filed a lawsuit against CDOT for violating Title VI of the Civil Rights Act of 1964. This case was later settled, with terms that aimed to provide benefits to the GES neighborhood, including a community health study, air monitoring, landscaping, and community outreach. These commitments supplement those already made by CDOT during the development of the Central-70 Project (CDOT, 2018). The terms of the settlement, as per Earthjustice's summary document, are listed in Appendix A. Although opponents did not achieve their main goal of halting the project, funding for a comprehensive community health assessment was considered to be a major achievement since it recognized existing foundations of lack of trust. Specifically, it promised to pay for a study done by the community (not to be done by CDOT)– and acknowledged that they were "contributing to existing problems in the neighborhood."[5]

The next section details the challenges of implementing the local hire recruitment and training components at the outset of the project.

1.3 Local Hire: Successes & Challenges

Figure 4: C-70 project local hire neighborhoods

Source: CDOT (2019-b).

[5] Interview with attorney at a non-profit, August 2019, Denver, CO.

The local hire zone comprised 13 zip codes (see Figure 4 above). For working hours to count for the target, one of three criteria had to be met. The household head was a current resident of the bracketed geographic area for at least 60 straight calendar days, or prior resident of a targeted area for at least 180 consecutive days as long as this period "ended no more than one year prior to the agreement date," or a displaced resident from one of the geographic areas according to a "right of relocation" (CDOT, 2023: 10).

For CDOT, local hire was conceived as a way of providing opportunities to the community and building Denver's local workforce (in contrast to subcontractors and labor brokers who may bring in workers from out of state for short-term work). It could be a win-win. As one expert involved in the research and design of the local hire implementation put it, it is "about mitigating some of the impact, but it's also about creating economic opportunities."[6] An employee of CDOT who was instrumental in the development of the local-hire agreement told interviewers:

> *"We're keeping our money in the communities right? And…it helps the local neighborhood now we have extra money and you can fix up your house…you can do your car repairs. That impacts very closely the people around you as well as yourself and we keep that money in the community and it's not workers that are here and then gone. And that's kind of another issue….we have a huge problem with contractors who bring workers from out of state and then don't pay them, mistreat them, they put them twelve in a motel room, you know we're working on some initiatives over there. It cuts down that kind of exploitation when you have a local workforce and when they're required to use that local workforce,right?"[7]*

Yet at the same time, it was also clear that local hire aimed to compensate for, or mitigate displacement. Another CDOT employee continued:

[6] Interview with union organizer, February 2019, Denver, CO.
[7] Interview with CDOT employee, August 2019, Denver, CO.

"If you're hiring people and paying them, they're going to be less upset. And I do think it mitigates displacement. So, people have a good paying job, they're going to be able to afford what they need. And it's you know, you have development going up in a neighborhood."[8]

Still, some in impacted communities were more circumspect about the kinds and quality of jobs that would be provided. Our interviews with union leaders, workers, organizers, and apprenticeship program staff revealed additional challenges in recruiting, retaining, and advancing women, nonbinary, and people of color in the construction industry including:

- Not meeting the skills or qualifications needed
- Stigma around construction as "dirty work"
- Concerns of "industry culture": issues of harassment and lack of accountability Lack of affordable and reliable childcare.
- Lack of paid parental leave Inflexible/long hours
- Transportation
- Lack of predictable vacation/sick days
- Lack of understanding of the career pathways
- Language:only 2/16 apprenticeship programs offer bilingual English/Spanish training.
- Industry terminology in English is also technical/specific and hard to translate.
- Apprenticeship program requirements: GED/high school, math requirements, driver's license. Some requirements vary by trade; for example the Laborers Union teaches construction math in their training program, but their program is the shortest (2 years) and easiest to enter; then it can provide a bridge to career opportunities in specialized trades.
- Lack of work authorization: federal projects now all require E-verify.
- Institutional racism produces disproportionate incarceration rates for people of color. This can make it difficult to fulfill apprenticeship program requirements; for example, getting a commercial driver's license

[8] Interview with community organizer, October 2019, Denver, CO.

- Perceptions that construction is not a friendly industry for women and people of color.
- Lack of trust
- According to one union organizer,"People don't see construction as a career pathway. Especially [the] youth...they don't see themselves in the same job or [with] the same employer [over time]" so they are hesitant to commit to a union. [9]
- Lack of trust in the construction industry due to high rates of labor abuses like wage theft (Galemba, 2023) and worker misclassification enabled by multiple levels of subcontracting.

Due to funding and multi-stakeholder involvement, recruitment was amped up around the Central-70 project including radio, school visits, and job fairs. However, recruitment traditionally mostly relies on word-of-mouth, which stakeholders argued was “not enough.” This can risk perpetuating the largely white and male composition of the construction workforce and trade unions, reproducing the idea among many women and people of color that they will experience stigma, harassment, or that there are very few people who look like them. Colorado’s construction industry is 52.4% White, 44% Hispanic, and women account for a little less than 10%, which is below the national average of 11% (Brennan, 2022; McLeary and Moore, 2024.). The International Union of Operating Engineers is 10% female in Colorado, but our interviews highlighted that many women still perceive it as a male-dominated industry. Their international union is working on making explicit efforts to recruit more women.

Advocates also mentioned that companies that have high retention of women and people of color are often in states with stronger protective policies. For example, according to one labor representative, the Vikings Stadium Construction in Minneapolis had “good accountability structures when it came to harassment and discrimination”[10], in contrast to Colorado. Colorado employs many Latinos in construction, but advocates cautioned that this could overstate the situation. While this claim may apply to the industry as a whole, it is not necessarily the case in different crafts, where membership and training would result in higher wages, benefits, and more opportunities for upward mobility.

WORKNOW intended to address some of these barriers and challenges. With funds from the Piton Foundation/Gary Community Investments [11] and in partnership with CDOT as a founding partner, WORKNOW formed out of community and stakeholder meetings to provide “wrap around services” to ensure workers were supported to succeed in their jobs and improve retention. This included providing boots, bus passes, and

[9] Interview with union organizer, February 2019, Denver, CO.

[10] Ibid.

[11] Gary Community Investments ended up investing $2 million into the workforce development program to alleviate employment barriers, such as affordability of personal protective equipment, transportation, and childcare (Cutting, 2023).

assistance with finding other resources that could interfere with the ability to continue working; for example, paying one's electric bill. They also worked with CDOT to bring in training and help individuals pay for training they needed; for example for a commercial driver's license. The Neighborhood Training Center offered a type of boot-camp to help individuals prepare for careers in construction even when they had no prior experience, hosted job fairs and high school career fairs, and helped connect program graduates with contractors and information on the Central-70 project (Proctor, 2017). Kiewit also partnered with unions and other community and industry partners for referrals to apprenticeship and training programs, offered cultural awareness and language classes for supervisory staff and workers, and worked to support worker retention through mentorship of new workers from established craftsmen (CDOT, 2023: 9).

One CDOT employee explained that despite initial opposition, the tone began to shift among some residents when the Neighborhood Training Center WORKNOW opened, which increased trust:

> *"I think people began to see we were working in earnest and that was sort of the advantage of bringing WORKNOW on since they don't have a dog in this fight.. They just want it to succeed and the project is happening regardless." [12]*

Specific benefits to WORKNOW included:

- Apprenticeship training and credentials can lead to higher wages and jobs, job-readiness, and wrap around supports through WORKNOW
- Work available through the Central-70 project
- Changing ideas towards CDOT as more supportive
- City of Denver now also looking at local hiring
- Provisions for displaced persons to also qualify as local hire

[12] Interview with CDOT employee, September 2019, Denver, CO.

However, there were also concerns, questions, and potential drawbacks, including:

- Unions encountered difficulties recruiting and retaining women and people of color
- Weak overall union density in the construction trades in Colorado
- How to ensure workers were not just brought in for Central-70. For example, labor representatives and staff were working to ensure that people were prepared for careers so that work on Central-70 could lead to a job on National Western. WORKNOW was created for Central-70, but was expanding for other projects.
- How to ensure contractors were accountable. Lack of clarity if there were sufficient punitive measures if local or apprenticeship program targets were not met.
- While Kiewit, the lead contractor, was a signatory with some unions, there was uncertainty among some labor stakeholders regarding how other contractors and subcontractors were selected. Some were union signatories and others were not. [13]

As per the last quarterly report on the Central-70 Workforce Development Program, which was submitted to the FHWA in January 2021, the total number of WORKNOW participants between 2017 and 2020 was 1,845. During the third quarter of 2020, female participants were 31%, non-white participants amounted to 58%, and people with a high school degree or less were around 51% (CDOT, 2021). Details can be found in Appendix B 5.2.

Labor advocates and apprenticeship staff saw local hire not as a goal in itself, but as a pathway to bring more people into the construction industry and to advance careers beyond a job on one specific project. Stakeholders wanted to ensure that local hire succeeded in the hopes that it could be implemented in future large-scale infrastructure projects in the state.

Jobs delivered through local hire arrangements can be promising if they provide adequate protections and safeguards, benefits, and a pathway to higher wages and careers, but not if, as in the past, they reproduce the reliance on communities of color to provide a source of temporary cheap labor for the benefit of capital.

[13] We reached out to 32 contractors and subcontractors for informational interviews. 18 of them responded, 11 refused to participate, and 3 said that they would get back to us and did not despite follow-up efforts.

Stakeholders received mixed feedback from the community including:

1. *"It [local hire] provides workers with the opportunity for a living wage, career pathways, which could keep some displacement at bay…[but] not all of it."[14]*
2. *"Does the community see value in this project? Or, are we making the decision for them? They're upset about it understandably…But at the same time, they want the work. But they know how much of a raw deal it is. So we try to show them the positives, such as better money and benefits."- labor organizer [15]*
3. *Mistrust in CDOT that they were setting targets and goals that were empty promises. Perceptions that CDOT's promises were part of an attempt to buy off the community.*
4. *Serious environmental impact concerns.*

Other concerns involved balancing local hire goals with union rules and operations. For example, unions operate from their benches and do not take into account what zip code someone is from. As one CDOT employee explained, "unions are interested in local hire…[but] they operate by their list." However, the economic conditions at the time were conducive to making local hire beneficial to unions, as well as contractors. Specifically, Colorado's massive skilled labor shortage after the Great Recession and weak union density meant that unions and contractors had an interest in bringing more workers into the industry. However, as the CDOT employee continued, "had it not been a union job, if it had been an economy where the [union] benches were full, it could have been a different outcome for local hire." [16]

Due to large demand for construction work and a skilled labor shortage, most unions saw work on the Central-70 project, as well as its long-term maintenance needs, as beneficial because it would provide large quantities of jobs. However, because of the large amount of work required for the Central-70 project, some unions mentioned they were asked to lower basic qualification standards and requirements. Doing so risked undermining their standards, as well as their goals of building prepared employees beyond the project. For example, one union required reliable transportation; despite

[14] Interview with union organizer, February 2019, Denver, CO.
[15] Ibid.
[16] Interview with CDOT employee, September 2019, Denver, CO.

the barriers this may pose for some individuals, they see it as necessary for workers to pursue careers and get jobs on subsequent projects. They want to set members up for successful careers beyond one project. A community advocate collaborating with WORKNOW stated, “We’re not seeking to [just] get people jobs [but] to show them [that] construction is a legitimate career”[17]

However, some were unaware of these programs of remained wary. unaware of these programs or remained wary. One community member who works for a non-profit to help disseminate information to the community
(including about jobs) commented after the interviewer explained WORKNOW, “So I wasn't even aware, you know, and I feel like this happens a lot that there's just so much information that we don't know what is a fact and what is not.” She mentioned insufficient bilingual resources, as well as fear and hesitancy among job-seekers in the community whether they met the required skills or other requirements; “It's just feeling insecure…not feeling sure if they qualify or not. [Or] what the processes [are]...this whole process is not easy.” [18]

Many impediments boiled down to a fundamental lack of trust. One labor representative explained in terms of working with the community to enhance trust, “I have trusted people in these communities, but I am not a trusted person in those communities.”[19] Lack of trust (Booth, 2018) made it difficult for the project to proceed. Although lawsuits plagued the project, a federal judge declined an injunction to stop the work.

1.4 Local Hire: Mission Accomplished?

According to CDOT, it met its local hire target as of February 1, 2021. “Only two and a half years into construction already 600 workers (had) contributed 760,000 hours to the Project” and by June 2022 local hire hours stood at over one million (CDOT, 2021; CDOT, 2023). However, some advocates debated whether these hours would be in promised craft occupations, or if the zip codes might also be capturing architects and other specialists in Rino. Yet the Central-70 project final report (CDOT, 2023: 13) documents 789,836 craft hours as of June 2022 and Kiewit was awarded $250,000 for accomplishing the target. The zip code targeting GES (80216) accounted for 66 of 515 craft workers enrolled to the project as of December 2020, and as of this date 169 WORKNOW members were working on the project and 69 had been employed by Central-70 subcontractors for other projects (CDOT, 2020).

[17] Interview with community advocate, February 2020, Denver, CO.
[18] Interview with community advocate, February 2019, Denver, CO.
[19] Interview with labor organizer, February 2019, Denver, CO.

However, even if the local hire target was met and even surpassed, it is important to consider who benefits. As many stakeholders noted, the project came with a lot of baggage. Even though many in the impacted communities never wanted the project, some did want the job opportunities once it was underway.

Local hire initiatives have the potential to provide good jobs that lead to careers and economic mobility for residents long left behind. Union personnel and CDOT staff alike noted the potential benefits of a project of this size was the sheer amount of jobs and integration with apprenticeship and training courses, which can provide skills and connections for workers to develop careers and pursue jobs beyond I-70. As the GES report mentions, however, such investment must also target the low-incomes and unequal living standards in GES, where 52% earn $25,000 a year or less. Given that many residents work in manufacturing, skilled labor, or food service and janitorial work, increasing training and union density would help support access to higher wages, benefits, and more stable work (GES Coalition, 2017:16). Being largely a “union job” with collaboration with apprenticeship programs can promote better working conditions and ensure workers are being trained with on-the-job training hours to achieve higher qualifications and wages.

The GES report documented significant interest among residents in job training. Given the strong union presence in the project, there was the opportunity to enter apprenticeship programs, gain on-the-job training hours, and come out with construction careers beyond the Central-70 project. Even in apprenticeship programs before graduation, workers can often access benefits that they can also apply to their families; when they graduate their wages increase and they receive a “ticket” as a journey worker. As one staff member of the Laborers’ Union put their goals, “we provide a pipeline...a path to the middle class through our apprenticeship.”[20]

However, others had doubts. When we interviewed Candi CdeBaca, a former city council member with a long family lineage in GES about the feasibility of the local hiring quota, she questioned the official narrative:

> *“We were pretty well aware of it during the process because it was used as a like... what do they call it, lipstick on a pig?”[21]*

[20] Interview with union staff, May 2019, Denver, CO.
[21] Interview with Candi CdeBaca, March 2022, Denver, CO. (agreed to be quoted)

Her reference to how local hire could deflect from larger problems echoed a union organizer, who mentioned that most people who were historically part of construction families were priced out of the area because of gentrification. He told us:

> *"There used to be high density construction families there [in the neighborhood] – can they still get priority? These are people who moved out 2-3 years, even 6 months ago. I was part of that neighborhood, and I was driven out by high prices and my friends too. This all makes me think, does a local hire work? Is it feasible to have goals to meet local hire, if there's a lack of actual construction workers in the area?"[22]*

Despite concerns, the local hire is largely depicted as successful in official spaces. Stakeholders responded to criticism that the local hire might not be benefitting those it intended. For example, one government employee mentioned how they learned from early challenges; "By including local hire onto the design goal, what we noticed initially is that Kiewit was meeting the local component of that with middle-class, upper-class people who live in Stapleton"[23] where only 2.37% of families live in poverty compared to much higher rates in GES.[24] However, others remained critical. Candi CdeBaca questioned the official discourse of success, noting that "A better question is retention." According to CdeBaca, many people in GES were not familiar with the arrangement, they were already employed elsewhere, or they were not interested in "you know jumping to another construction job…or they never expected it to be upheld anyways…"[25] She knew of a few people who had gone through the training and were given boots, but then never worked on the project.

She shared the experience of a community member who had worked on the project, who she had feared was hired in order to check a box:

[22] Interview with union organizer/staff, May 2019, Denver, CO.
[23] Interview with government employee, February 2019, Denver, CO.
[24] Information from final brief written by Dana Parke for Qualitative Methods course, March 2019.
[25] Interview with Candi CdeBaca, March 2022, Denver, CO.

"He had got the job before he told me. And then when he came to me to tell me about it he was kind of embarrassed about it, but he was like they hired me at a good level, like I'm in a leadership position, like I'm in a truck all day, I'm not exposed to it. And so he was like, I can be your eyes and ears on the project. I can let you know what the neighborhood wants. And I was like great, that works for me. And so he started being the one who was giving me a heads up on people who were complaining about their house shaking, or like things that were going on. And so he was kind of like my mole on the inside. And eventually, when he left, he was like you were right, everything you said was right, and like we kind of just left it at that."[26]

The local hire initiative did not necessarily translate into retention and advancement in the industry, nor did it quite address what jobs impacted communities desired. The realities of building construction careers are more complex. Rather than being directly hired onto projects, workers are usually first hired through various unions, such as the International Brotherhood of Electrical Workers or the Welders' Union, and then sent on to apprenticeship programs to train for those specific skill sets. These do not always translate into careers in construction given the long and arduous pipeline in training and certification, where actual hiring does not necessarily lead to full-fledged careers. CdeBaca further explained:

"They've kind of really just accepted this work force program and are investing in it and they think it is successful and from most accounts of anyone that's participated in it they're kind of just like this is not effective. Because there is a component of it that's disconnected from I-70. There is a training component of it, a construction jobs training component, and people's biggest complaint was that they can go through the training but it doesn't actually pipeline them into jobs. And so they're like taking off from work, or like giving their time for the training but not actually getting access to the jobs, especially like the higher paying ones. So it's kind of just like this bigger failure than I-70 and a refusal to acknowledge it because that would require them to confront their own failures."[27]

[26] Ibid.
[27] Ibid.

Moreover, apprenticeship programs are known to have extensive wait lists because of the excess of people applying to them, even if they are paid gigs. One of our interlocutors who is a part of the Colorado Unions said that sometimes unions have almost a 300-person waitlist and applicants could go up to two years without hearing back about their apprenticeship applications.[28] This process doesn't necessarily guarantee that people hired onto apprenticeship programs get tied to specific projects of their choice. Therefore, claims that local community members will have ownership over the Central-70 expansion project are limited if many of the local hires are quite new to the construction business as a whole and have to be trained before they are hired onto the project.

The challenges of construction careers are manifold, especially for immigrants and people of color living in the GES area— including language barriers, required qualifications, and the paperwork required to be hired in job fairs. Our participants also questioned whether local residents needed more opportunities in the construction industry at a time when unemployment was already low, especially given that many families within the area already worked in construction or were gainfully employed in other fields. Many in the impacted neighborhoods felt spoken for regarding what they wanted, needed, or should want, rather than adequately consulted and included. As CdeBaca explained:

> *"It was kind of like this thing that we were told we wanted... and at the time the unemployment rate was like 2% and it was even lower for Latinos because of all the development and construction jobs. So it was kind of like, this isn't really a bargaining chip that we want right now, that we need, like why is it being told to us that we need this."[29]*

She further explained that many in the community felt that they didn't need construction jobs; "we've already got that market cornered. That was what we do already."

[28] Interview with union member, February 2020, Denver, CO.
[29] Interview with Candi CdeBaca, March 2022, Denver, CO.

Given community organizing against the project, some felt that the proposition of local hire pit parts of the communities against one another because "some people are trying to put food on their table and some people are trying to protect a community."[30] There was additional division within Denver City Council between those fighting the project itself and those fighting for mitigation measures. CdeBaca noted:

> *"There was a lot of division over it because these projects often get sold to us under the guise of creating jobs. They tell us, no, it's good for you because it'll create jobs…That's a tried and true tactic…."*

Some who knew less about the local hire initiative, but had experience with the impacted neighborhoods, were also skeptical about how much money or how many jobs would actually flow into communities, or at least high paying jobs. One non-profit advocate surmised that large contractors were:

> *"Pretty used to hiring their own. You know, they keep up such a high level of construction activity that they have teams going full-on all the time. So, my guess is that all the skilled high paying jobs are already spoken for unless there are people in the neighborhood who make it through a union apprentice program or somewhere on those lines that become eligible. So, we'll have to see."[31]*

Despite CDOT's hundreds of public consultations and extensive community outreach, many felt that the plans were a fait accompli. There was not an option to say no, address community concerns, or genuinely consider suggested alternatives. Prevailing power dynamics orchestrated what consultation looked like, giving the community relatively little decision-making. A non-profit advocate explained:

[30] Interview with Candi CdeBaca, February 2020, Denver, CO.
[31] Interview with non-profit advocate/academic, August 2019, Denver, CO.

"There needs to be a process where you're making sure all voices are heard in the community…And it's like this project always decides to leave somebody out because either they think they know better or they forgot about somebody. So, you know it's engaging the community and saying let the community decide who gets to be at the table and let them be part of the decision-making process"[32]

He noted that much of the actual community consultation occurred after the fact, as he added, "to cover their butt kind of thing…I question the legitimacy when you're coming in after the fact." This advocate contrasted official narratives about extensive community outreach with what targeted neighborhoods had long experienced:

"You know, they talk about all the hundreds of hours of community outreach they've done and what not. ..What they would do going down into those neighborhoods starting around 2006 was to say 'Hi, we're here and we're gonna double the size of the freeway and poison your air. Are you okay with that?'" He clarified, "That is not exactly what they said of course! But that was pretty much it."[33]

Others feared that dangling the promise of jobs was a distraction from the project's potential immediate and longer-term detrimental impacts on displacement, gentrification, pollution, and health. One community member did not see a local hire arrangement as an effective mitigation, but instead noted that "it will make it [the project] easier to accept."[34] A non-profit advocate further explained:

[32] Interview with non-profit advocate, July, 2019, Denver, CO.
[33] Ibid.
[34] Interview with community member, October 2019, Denver, CO.

“I just think the health impacts that come from projects like this; the health impacts that are already created in this community; the pushing of people out of their homes, you’re disrupting people’s entire lives [emphasized]. I mean that’s great if you’re gonna give some community members some jobs, that is but a like permanent fix?”[35]

Having a “billion dollar project in your backyard,” as one CDOT employee described it, reminded many community members of, and threatened to exacerbate, generational forms of dispossession, displacement, environmental injustice, harm, and illness inflicted on their neighborhoods. Although residents wanted jobs, working on this project, especially in a Superfund area, made many wary of disturbing soil they feared could still be contaminated.[36] This constituted a kind of "slow poisoning" (Nixon, 2011) through what Fabricant (2022) describes in Baltimore as “toxic entanglements” between developers and large firms, city leaders, and investors that compromise working class communities of color in the name of development. Rather than development, some felt that the project positioned targeted communities as pawns in a project over which they had little say, but that planners nevertheless claimed would eventually benefit them. This bred distrust from the get-go regardless of the number of community consultations, mitigation measures, investments, and settlements. To many in the community, the legal settlement was not successful because it did not achieve their main goal of stopping the project. Instead, the project proceeded as cases were pending, and community demands to consider an alternative proposal were not heeded (Brasch, 2023).

The next section provides a brief overview of the history, demographics, health, and environment of GES and the legacy of the initial highway construction through the neighborhood to contextualize why many in the impacted communities perceived the project as a continuation of degradation, displacement, and disposability rather than an opportunity for development.

[35] Interview with non-profit advocate, July 2019, Denver, CO.
[36] Interview with Candi CdeBaca, February 2020, Denver, CO.

II. History of Exclusion and Displacement

2.1 Brief history of Globeville, Elyria and Swansea (GES)

Globeville, Elyria, and Swansea started as smelting towns, and later they were annexed and incorporated into Denver. In what is now Globeville, Argo Smelter was founded in 1878 as the first smelting establishment in the village. Years later, in 1885, Holden Smelting was founded. Globeville used to be called Holdenville after Holden Smelting company. In 1889, Holden Smelting Company changed its name to Globe Smelter and Refining Company and the town started to be referred to as "Globeville" instead of Holdenville. The official incorporation of the town was not until two years later, in 1891. Almost a decade later, it was incorporated into Denver in 1903 (Denver Public Library, n.d. and Gurara, 2023). As a smelting town, Globeville attracted immigrant workers from different parts of Europe due to the availability of employment opportunities. At that time, European immigrant workers who came in search of employment included Volga-Deutsch, Polish, Slovenians, Croatians, Serbs, Russians, Slovaks, Czechs, and Carpatho-Russians (Doeppers, 1967). A non-profit advocate explained the history:

> *"The workers…for the most part were very low-skilled, low-wage, immigrant minority…mostly from Europe. They couldn't afford housing in Denver and there wasn't good public transportation. So, what they did was build a little shanty town community around the smelters where they worked so they could just walk to work…Swansea is the name of a cold port in Wales because some of the immigrants came from places like that. And so, that's how those communities got established, and eventually as the city grew it incorporated them and…they became neighborhoods of the city."[37]*

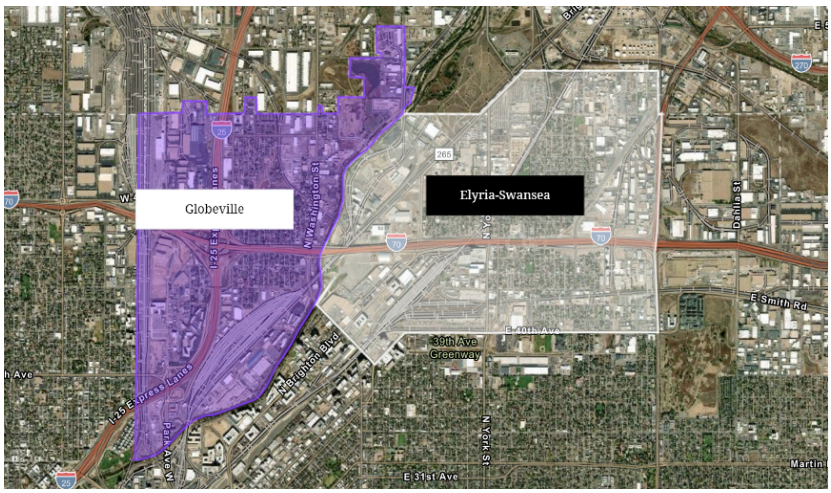
Initially, Elyria and Swansea were established as two separate settlements, located on the west and east side of Columbine Street, respectively.

[37] Interview with non-profit advocate, August 2019, Denver, CO.

Elyria was founded in 1881 under the Denver Land Improvement Company and then, the village was incorporated as a town in 1890 and later annexed into Denver in 1902. On the other hand, Swansea was established a decade before Elyria in 1870, after the Kansas Pacific and Union Pacific Railroads were constructed. Swansea was annexed by Denver in two phases, the first phase of incorporation happened in 1883 and the second in 1902 (Denver Public Library, n.d. and Gurara, 2023).

The GES neighborhoods have been part of Denver since their incorporation and have remained a mix of residential urban areas and industrial zones exposed to the traffic from I-25 and 70. The following figure shows the current map of GES.

Figure 5: Map of Current GES

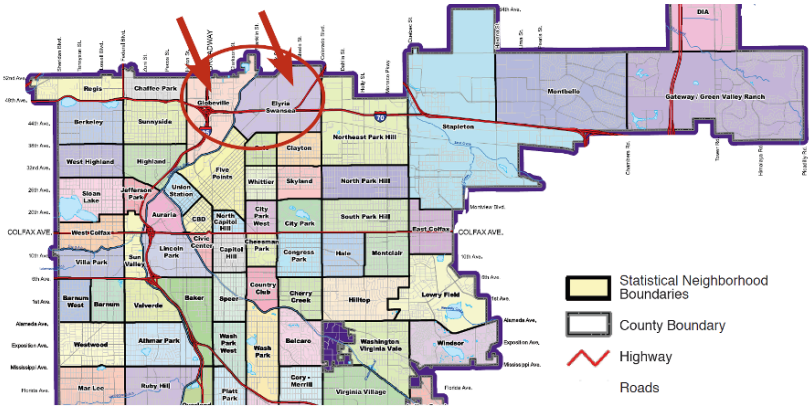


Source: North Denver Cornerstone Collaborative (n.d.)

2.2 Legacy of Resistance to Highway Expansion through GES

Since the establishment of Denver, the construction of roads, highways, and railroads has been central to the city's growth. This role is attributed to Denver's geography, particularly the difficult terrain and the geographical isolation of the city (Gurara, 2023). Some notable highways in Denver include the I-25, I-70, I-225, and Route 36. Particularly, the I-25 and 70 became key arterial routes, facilitating north-south and east-west connectivity within the city (Goetz and Boschmann, 2018).

Figure 6: Map of Denver Neighborhoods and Highways



Source: Denver Department of Environmental Health (2014:9)

According to Litvak (2007), it was not until 1957 that Denver residents started opposing a major highway construction when state highway officials proposed building an east-west freeway (that is, part of the I-70) near the northern limits of Denver, affecting E. 46th Avenue and W. 48th Avenue. Especially the Berkeley Park residents— who were predominantly "native-white", "lower middle class", and holding "professional or managerial jobs"— organized to adamantly oppose this highway as it cut through their neighborhood. The North Denver Civic Association was at the forefront of this opposition. The association's leader was Robert Keating, who was a Berkeley resident, attorney, and city council president representing this section of Denver. The residents wanted the highway to route outside of the Denver city limits, north of 52nd Avenue, instead of routing it along 48th Avenue (Litvak, 2007).

However, Berkely residents' organized opposition to the construction of the I-70 did not come to fruition. Local officials were convinced that keeping the route along E. 46th and W. 48th avenues was the most economically beneficial and effective choice (Litvak, 2007). On the other hand, Litvak (2007) notes that compared to Berkeley residents, the working-class neighborhoods of Globeville, Swansea, and Elyria—located east of Berkeley and also affected by I-70 (see Figure 6 for a map of the neighborhoods)— had less success altering freeway plans.

The completion of Interstate 70 in Globeville in 1964, following the completion of Interstate 25 (also known as the Denver Valley Highway) in 1958, had a profound impact on the neighborhood. The construction process, beginning in the mid-1950s, was demoralizing. Specifically, it led to the replacement of 31 well-maintained homes with an elevated highway wall. The construction of the I-70 highway in the mid-1950s, as well as the establishment of a public housing project north of 51st Avenue, also contributed to the out-migration of previous residents and altered the demographic composition of the neighborhood (Doeppers, 1967). In the 1960s, Mexican Americans became the second largest group in Globeville. From 12 Mexican American households in 1950, there were 123 by 1965 (Ibid.).

The presence of Interstates 25 and 70 dissect Globeville into four different pieces. These two major interstate highways have significantly influenced Globeville's socio-economic landscape. Globeville is an urban pocket that is surrounded by industrial zones that mark its periphery while maintaining residential characteristics, and remains accessible to north-south traffic flow via the I-70 (CDOT, n.d.-a).

On the other hand, the environmental landscape of the Elyria-Swansea neighborhood—already shaped by extensive industrial and commercial presence— was significantly transformed by the construction of I-70 in the 1960s. The highway, which cut directly through both neighborhoods, was met with strong resistance from local residents and business owners. They particularly opposed the construction of the large viaduct, deeming it a visually unappealing structure that would adversely impact property values. The decision to construct this stretch of I-70 was a pivotal one, chosen over the alternative of converting East 48th Avenue into a six-lane, at-grade freeway akin to West 6th Avenue. This alternative route would have required the demolition of multiple homes to make way for a substantial interchange, representing a significant intrusion into the residential fabric (Denver metro-data, n.d. and CDOT, 2017-b). A non-profit advocate explained the decision:

"The initial plan was to have the interstate be Highway 6 and so they were just gonna take the Highway 6 route and their plan was to run their freeway into Denver on Highway 6, down 6th Avenue…and as you might imagine the people who lived in those little mansions…along the 6th Avenue didn't think that was a very good idea…When it looked like they weren't able to build the Highway 6, they started looking into the north and they looked to the neighborhood that has the least political influence and the poorest and so that's how they decided to run it….There is a saying in the transportation industry that in highway planning…the route always follows the geographic path of the political least resistance."[38]

Consequently, the construction of I-70 was a decision that altered the physical environment and imposed lasting social and economic effects on Elyria-Swansea.

Highway construction in Denver, as well as in other cities, has a history of "gutting low-income communities and reinforcing racial segregation" while disproportionately exposing working class communities of color to pollution and its associated hazards (see Brasch, 2023). The legacy of these struggles and community neglect persists today. This history contextualizes why many impacted community members distrusted promises that this time would be different. Candi CdeBaca, for example, noted that her involvement started before she was born. In fact, her grandparents had been part of this earlier fight against I-70. She reflected, "I inherited the fight against the expansion."[39]

2.3 Structured Vulnerability in GES

The demographic profile of GES reveals a structurally vulnerable population. We use this term to describe how specific policy decisions, economic and investment priorities, environmental neglect, and differential exposure to hazards have made particular populations vulnerable. The impacts can also compound one another and accumulate over generations. Compared to the rest of Denver and many census tracts across the country, GES residents and households are more likely to be younger, have lower incomes and levels of education, more likely to rent than own homes, and live in food deserts. They are also more exposed to gentrification, pollution, and other toxic hazards.

[38] Interview with non-profit advocate, August 2019, Denver, CO.
[39] Interview with Candi CdeBaca, March 2022, Denver, CO.

Adverse socio-structural determinants of health, which Paul Farmer (2005: 19) famously termed the “social determinants of the distribution of assaults on human dignity,” have led to higher rates of poor health outcomes and exposure to disease, acute and chronic conditions, and illnesses such as cancer, heart disease, and asthma.

Demographics

First, GES’s demographic profile is relatively young, with a high percentage of the population under 18 and a lower population of people over the age of 64. The Globeville and Elyria-Swansea neighborhoods are historically working-class neighborhoods with significant minority populations. Only 21.59% of the nation’s census tracts have more minority residents than Globeville while just 10.51% of the nation’s census tracts have more minority residents than Elyria-Swansea (EJScreen 2.2).

Compared to Denver, GES has higher percentages of Hispanic or Latino and foreign-born residents. GES’s Hispanic or Latino population is around 50% for Globeville, and 75% and 90% for Elyria-Swansea’s tracts 01 and 02, respectively. Moreover, 18% of Globeville's population and 31% of Elyria-Swansea's are foreign-born (DHS, 2022). Data from the U.S. Census (2022-b) shows that a significant number of the foreign-born population is from Mexico.

Income and Education

GES households predominantly earn less than Denver’s; most of the households in GES earn less than $50,000 per year while the 2019 to 2023 average income for Denver was $61,202 (US Census Bureau, 2025). .[40] Educational attainment data (for ages 25 years and up) shows that for GES residents, having a high school degree is dominant compared to Denver as whole, where a bachelor's degree is more common for this age group (U.S. Census 2022-b).

Gentrification and Housing

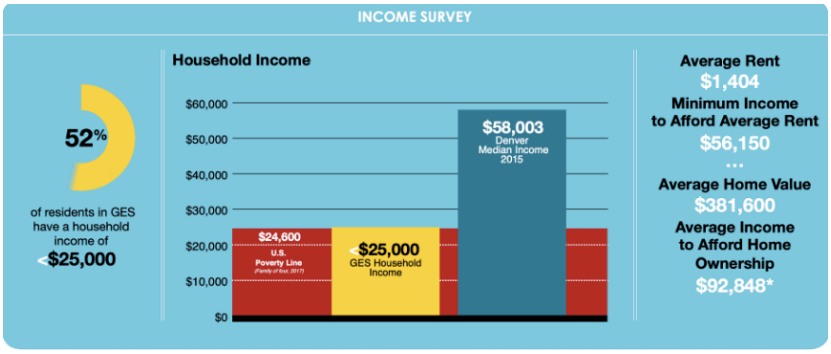
GES is also disproportionately impacted by gentrification, which has displaced long-time lower-income residents, especially minorities, from neighborhoods like northern and eastern Denver and Globeville. According to a study by the University of Colorado Boulder, Denver is the second most gentrified city in the U.S. after San Francisco-Oakland (Courtney, 2021). Twenty-seven percent of Denver's neighborhoods are gentrifying (Richardson, Mitchell, and Edlebi 2020). According to a survey by the GES Coalition (2017), the GES neighborhoods face displacement threats from major public and private investments like the I-70 expansion, National Western Center redevelopment, and new transit lines.

[40] That is, if we compare these households against Denver and the metro area, we find that there are more households making less than $50,000/year in GES than Denver or the metro area (U.S. Census 2022).

A survey of 500 GES residents found that most wish to remain, but struggle with unaffordable rents and home prices, lack of leases and renters' rights, and development pressures on homeowners. Survey results show 51% of GES renters lack leases entirely and 61% earn under $25,000 annually. GES renters tend to be relatively larger families, with 50% having 3+ adults and 64% having 2+ children. Given Denver's shortage of affordable housing units and low incomes below 30% of the area median income, few new affordable units meet resident needs (GES Coalition, 2017).

Without leases or rights, vulnerable families risk eviction, forced relocation, and potential homelessness. Long-term, low-income, often unemployed homeowners aged 50+ have lived in GES for decades. The survey found 80% of residents had only a high school education or less. With 52% of residents earning under $25,000/year and 76% under $35,000/year, many face difficult trade-offs between rent, food, and healthcare. At 37%, GES had an unemployment rate ten times that of the city of Denver at the time of the survey (GES Coalition, 2017:4)

Figure 7: GES Income Survey



Source: GES Coalition (2017:6)

GES residents are also more likely to rent than own their homes; only 47% of Globeville's properties are owner-occupied while this figure is 40% and 48% for the two of Elyria-Swansea's census tracts. For reference, although rates are in a similar range for the city of Denver (49% owner-occupied), this figure is much higher (64%) for the larger Denver-Aurora-Lakewood metro area (U.S. Census, 2022-b).

Tierra Colectiva, GES's community land trust began in 2017 and has attempted to address displacement and community dislocation via accessible and affordable housing run by and for the community. CDOT gave $2 million (as noted above) to the GES

Coalition for housing, in addition to funds from the Colorado Health Foundation. The collective has been discussing with CDOT the possibility of "reclaiming lots left over from the I-70 Central project" and other unused land owned by the city to build new housing (Heinz, 2023). According to local advocates like Nola Miguel, the Director of the GES Coalition, a land trust is important not only to pave the way for affordable home ownership, but also for much-needed early childhood facilities and grocery stores, which can be difficult to find sufficient space for (cited in Heinz, 2023).

Food Insecurity

Households in GES are also more likely to reside in food deserts,[41] which poses implications for health and overall well-being. The USDA Food Access Research Atlas classifies both census tracts in GES as low-income and low-access, defined in urban areas as being more than one mile from a supermarket or large grocery store. This classification contributes to Denver's designation as a USDA StrikeForce County, characterized by census tracts where poverty rates exceed 20% (USDA, 2017). Data from the Economic Research Service of United States Department of Agriculture (USDA, 2021) indicate that in Globeville, there are 514 residents who live more than one mile away from the nearest supermarket. Elyria-Swansea shows a much higher number, with 4,930 residents living more than a one-mile radius from their nearest supermarket.

Another aspect of food deserts is that there are low-income households without vehicles. In these neighborhoods, the total count of low-income population per census tract is 2,201 in Globeville and 3,422 Elyria-Swansea. Moreover, a total of 306 housing units in Globeville and 530 housing units in Elyria-Swansea receive Supplemental Nutrition Assistance Program (SNAP) benefits. When we look at the proportion of housing units in GES that receive SNAP benefits and are located more than one mile from a supermarket, we find that 3.64% of units in Globeville that are reliant on SNAP benefits are situated at a considerable distance from a supermarket. In Elyria and Swansea, the percentage is significantly higher at 22.61%. In terms of vehicle ownership, 142 housing units in Globeville (out of 1,040) and 99 units in Elyria-Swansea (out of 1,695) do not own a vehicle (USDA, 2021).

[41] The United States Department of Agriculture (USDA) broadly defines food deserts as regions where there is restricted availability of diverse, healthy, and affordable food (USDA, 2021). These places usually have a large proportion of low-income households and lack access to supermarkets within 1 mile (for urban areas) and 10 miles (for rural areas). Breger-Bush (2021:697) describes food deserts as "places where food retailing is often limited to fast food outlets, gas stations, convenience stores, and liquor stores, with residents forced to purchase unhealthy and often overpriced, processed foods."

According to the Health Impact Assessment (HIA) conducted in 2014 by the Denver Department of Environmental Health (DDEH, 2014), the absence of a full-service grocery store in GES is a significant service deficiency for a population exceeding 10,000. Furthermore, the community had 14 convenience or corner stores, including three 7-Elevens. These stores typically lacked fresh produce, whole grains, and basic staples, and instead predominantly stocked processed foods rich in sugar, salt, and fat (DDEH, 2014). Within the community, 12 stores, including 4 gas station convenience stores, accepted SNAP benefits. Additionally, the GrowHaus was notable for offering locally grown produce and regional farmers' products. As of 2013, USDA data indicated the absence of farmers' markets within GES. However, Denver Human Services on East 38th Avenue and Steele Street operated a seasonal farm stand weekly, providing SNAP users with double bucks.

A more recent community health study, published in 2024, reports that the nearest grocery store, Natural Grocers, is located in Five Points (Kenyon, et al. 2024). However, this is not affordable for many GES residents as it is an expensive store. The report also notes that in 2021, GES was one of the neighborhoods with the lowest access to grocery stores; "only 10.5% of residents in Globeville and 0% in Elyria-Swansea live within a 10-minute walk of a full grocery store, compared to a city-wide population-weighted average of 42.1%" (ibid:32). The health report notes that the East Denver Food Sovereignty Initiative has begun development of a co-op model grocery store located in the Elyria neighborhood following multiple years of planning in order to address the low access to grocery stores.

Environmental Hazards and Pollution

The existence of multiple sources of pollution, including mixed industrial use, landfill, and traffic pollution, make the communities of GES (which collectively form a significant portion of the 80216 zip code) the most polluted residential neighborhoods in the United States (Horvath, 2023). The potential impacts of the Central-70 expansion thus compound historical layers of slow onset and acute exposure to toxicity through existing highway emissions and pollution, a foundation of industrial pollution, and the designation of a Superfund site. The latter specifically concerned residents who worried about working on construction projects that required digging in potentially contaminated soil.

Even in the 1870s, the soil was becoming more contaminated from the smelting plants. According to a non-profit advocate:

"In the 1990s the ASARCO refinery was still in operation here and so they had had some soil testing done and they found the soil to be very toxic. And so, they brought a suit… damages action against ASARCO. And the case started going through discovery and evidence of this massive contamination of the neighborhood soil became evident and it shamed the EPA…basically into coming out and doing its own soil testing and saying whoow this place is in deep and we better do something about this you know…So finally, when a Superfund site was declared and the EPA came out, all they did was just scrape off the topsoil and replace it with fresh soil.[42]

The 80216 ZIP code encompassing Globeville, Elyria, and Swansea exhibits particularly high levels of environmental risk (DeCristopher, 2018, referencing the Environmental Data Index by ATTOM Data Solutions). The assessment was based on four critical criteria: air quality, the presence of Superfund sites, brownfield sites, and the number of active polluters. Remarkably, this area ranked at the top in three of these categories, with the sole exception being overall air quality (Ibid.).

The 2014 Health Impact Assessment (HIA) report further underscores the environmental challenges faced by the Globeville and Elyria-Swansea communities. The Environmental Protection Agency (EPA) has identified these neighborhoods as suffering from significant environmental justice issues. The issues are not limited to the presence of two major interstate highways, but are compounded by the historical contamination from the ASARCO site and the Vasquez Boulevard/I-70 Superfund site,[43] a region spanning four square miles and affected by past smelting operations. This was a result of the operation of the major Omaha-Grant, Argo, and Globe Smelting plants, in operation since the 1870s. These plants processed different metals, including gold, silver, copper, lead, and zinc. During their active years, these plants left behind heavy metals in the local soil and caused groundwater contamination at the locations where the smelters were situated (CDPHE, n.d. and DDEH, 2014).

Although remediation efforts at these historic smelting sites are approaching completion, their legacy of impacts on health and environment extend beyond these immediate areas. The initiatives related to the Superfund and I-70, while significant, are part of a broader context of environmental and health concerns in GES. The non-profit advocate continued:

[42] Interview with non-profit advocate, August 2019, Denver, CO.
[43] EPA's Superfund program is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills, and natural disasters.

"They declared the area to be sufficiently remediated and everyone thought that was the end of the story. But you know unless everyone messes with the soil, the soil will probably be okay, but now they're messing with the soil, big time! ASARCO declared bankruptcy toward the end of that litigation so the city became a proud owner of a contaminated Superfund site. And market forces finally got to the point where they start saying, well maybe we can actually begin developing this land…on the cheap. So instead of the city having to pay to clean the site up, what they would tell..people who became interested in buying was you buy the property, you assume the liability for the cleanup…Now Denver's real-estate has gotten so valuable, realtors [mixed and residential]…bought up all the real-estate, bought it really cheap and now they are turning around and selling it for a lot money!"[44]

In this sense, the contamination of the community was converted into an investment opportunity, akin to what experts like Naomi Klein (2007) call disaster capitalism, whereby natural and man-made disasters are leveraged to serve capitalist interests and usher in otherwise unpopular policies that benefit these interests.

Industrial Toxic Foundations

Around 70% of the land in each neighborhood is occupied by industrial and commercial entities, which are significant contributors to pollution in the area. While the air pollution from plants in the Globeville, Elyria, and Swansea neighborhoods is not markedly higher than other areas of Denver, it contributes to overall diminished air quality (DDEH, 2014).

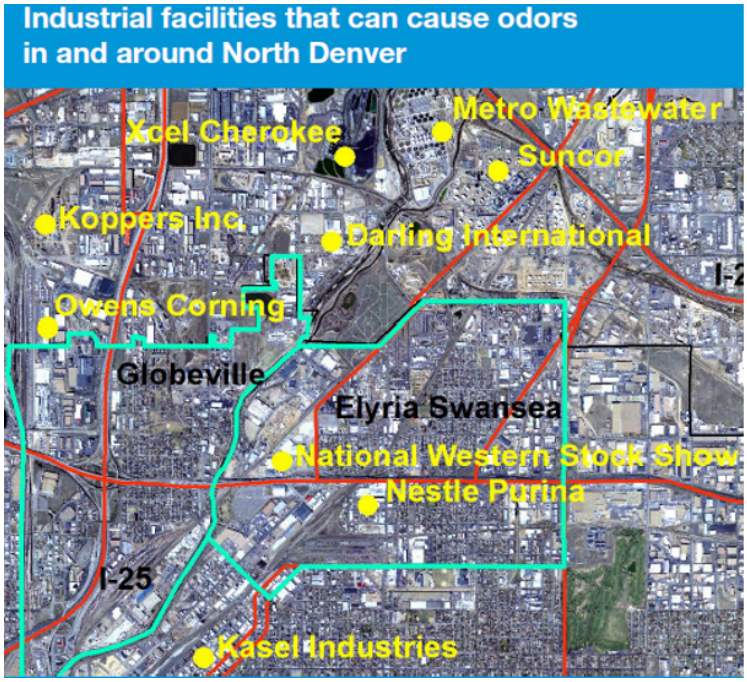
One hundred percent of Globeville and Elyria-Swansea's census tracts fall within a one-mile radius of a site listed in the EPA's Toxic Release Inventory (TRI), which indicates considerable exposure to various environmental pollutants that can adversely impact the health and well-being of residents (EJ Screen 2.2). Globeville and Elyria-Swansea also rank exceptionally high (0.9972 for Globeville and 0.9979 for Elyria-Swansea) in terms of proximity to various environmental risk sites—including National Priority List sites, Release Inventory sites, Treatment, Storage, and Disposal (TSD) sites, Risk Management Plan sites, coal mines, and lead mines. This paints a concerning picture of environmental exposure. These ranks,

[44] Interview with non-profit advocate, August 2019, Denver, CO.

nearing the maximum of 1, suggest that nearly all other areas in the U.S. are at a lower risk compared to these neighborhoods in terms of proximity to such hazardous sites.

Furthermore, these industrial use related operations are primarily associated with the generation of unpleasant odors, which not only cause health issues like headaches and eye or throat irritation, but also deter residents from engaging in outdoor physical activities. Industries such as Owens Corning, Koppers Industries, Darling International, Nestle Purina Pet Care, Kasel Industries, National Western Stock Show, Suncor Refinery,[45] Metro Wastewater, and Xcel Energy Cherokee Generating Station have been identified as sources of these odors (DDEH, 2014). Figure 8 shows the location of some of these industrial facilities currently generating odors.

Figure 8: Industrial facilities in and near GES

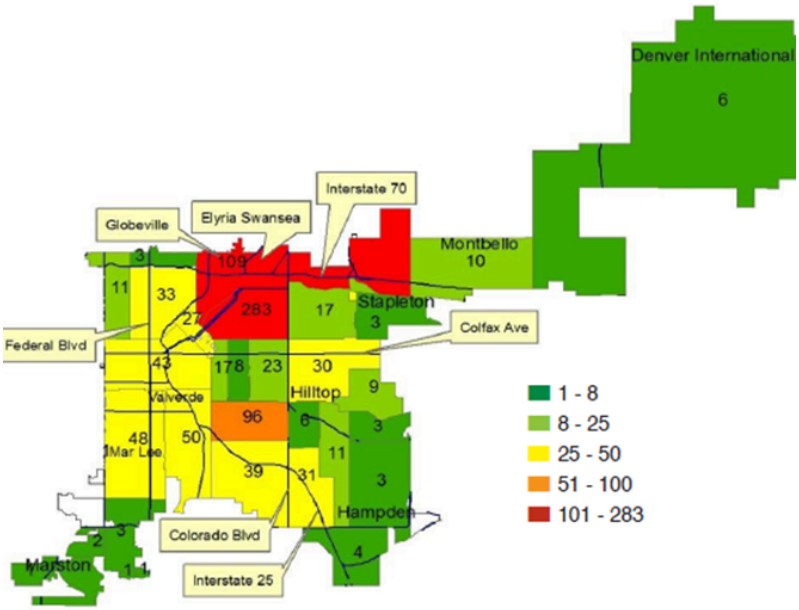


Source: (DDEH, 2014:24).

[45] According to DeChristopher (2018), "Suncor Energy Refinery had two major malfunctions in 2017 that caused residents within a two-mile radius to have to shelter in place. The refinery continues to spew out a plethora of toxic gasses, including hydrogen cyanide– which was once used to kill death row inmates in state penitentiaries– into the Globeville, Elyria, and Swansea neighborhoods, and is even looking to expand its operations."

Because these industries are located in close proximity to residential pockets, the highest number of complaints frequently comes from these neighborhoods compared to other parts of Denver. The 2014 Health Impact Assessment (HIA) report notes that over the past 10 years [that is, before 2014], more than one-third of the total 983 odor complaints in Denver "came from the Globeville and Elyria Swansea area" (DDEH, 2014:24). An accompanying Figure, 9, illustrates the distribution of odor complaints in Denver from 2004-2013.

Figure 9: Odor complaints received in Denver, by zip code, 2004–2013



Source: (DDEH, 2014:24)

An additional matter that complicates the health burden in GES is lead exposure, owing to a large percentage of homes built prior to 1980. A substantial portion of the residential structures in these neighborhoods were constructed before modern regulations limiting lead use, thereby increasing the risk of lead exposure with particularly acute risks for young children.[46]

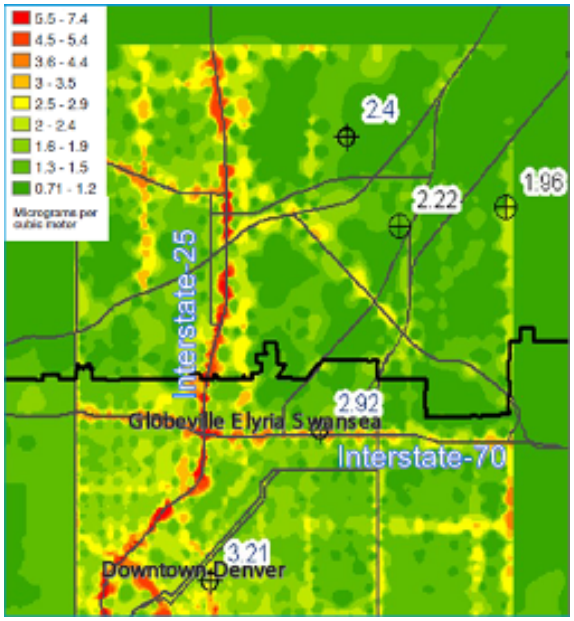
[46] Denver Water launched the Lead Reduction Program in 2020 to replace lead service lines across neighborhoods, with an estimated completion by 2035. As of June 2022, 12,381 lead service lines had been replaced. The program also includes increasing the water's pH to reduce lead levels, creating a lead service line inventory, and providing filters. These efforts have reduced lead levels by 60%, keeping them well below EPA's action level.

Road Pollution

Globeville and Elyria-Swansea stand out at the national level and compared to the majority of neighboring areas for having a larger portion of their land area situated near both railroads and high-volume highways. As indicated in the EJScreen (version 2.2) data, the proportion of the GES census tract's area within a 1-mile buffer of high-volume road or highway as well as railroad is 100%.

This stands out at the local and national levels; the percentile rank for proximity to a railroad is 0.7891 for both Globeville and Elyria-Swansea, signifying that these neighborhoods have a greater proportion of their total land area located within this 1-mile buffer zone than approximately 78.91% of the other neighborhoods in the national dataset. Similarly, they exceed roughly 76.66% of other neighborhoods concerning land area within a 1-mile radius of high-volume highways. These factors impact quality of life, walkability, traffic, emissions, and air and noise pollution.

Figure 10: Modeling of vehicle emissions near major roadways in Downtown and North Denver



Source: (DDEH, 2014:20)

According to the 2014 HIA report, car emissions from the busy I-70 and I-25 highways contribute to local pollution levels. In 2014, these highways managed traffic volumes of around 150,000 and 250,000 vehicles daily, respectively (DDEH, 2014). Advancing to the current period, data from CDOT shows that I-25 now sees a daily traffic of 175,000 vehicles and 4,300 bus passengers (CDOT, n.d.-d), whereas I-70 handles about 200,000 vehicles per day (CDOT, n.d.-e). The illustration above depicts vehicular emissions surrounding these interstate highways.

The EJScreen 2.2 data reports that the three-year average number of days per year when ozone (O_3) levels exceed a regulatory standard is 79% and 71% higher in Globeville and Elyria-Swansea, respectively, than other neighborhoods in the dataset. This suggests that O_3 levels during these days are high, indicating significant pollution in these neighborhoods. On the other hand, the percentile rank of annual mean days above PM2.5 regulatory standard—of a three-year average-is low. However, the percentile rank of ambient concentrations of diesel (PM/m3) in these neighborhoods is quite high. Only 0.5% and 2% of the nation's tracts experience more severe ambient concentrations of diesel than Globeville and Elyria-Swansea, respectively.

Similarly, the percentile rank data, comprising a domain of O_3, PM2.5, air toxicity cancer risk, and diesel particulate matter, presents a comprehensive picture of the environmental quality of Globeville and Elyria-Swansea. With Globeville registering a percentile rank of 0.8741 and Elyria-Swansea at 0.8607, both are positioned very high in terms of environmental risk compared to other areas. GES thus experiences a significant level of exposure to pollutants that are known to be harmful, which poses potential long-term health impacts (EJScreen 2.2).

Additionally, neighborhood schools are located near or right next to these highways. Swansea Elementary School is a prime example. Established in 1957, just before the construction of I-70, Swansea Elementary sits directly beside the highway This proximity to intense traffic exposes students to high levels of pollution. The infrastructural design of Globeville, Elyria, and Swansea reveals additional shortcomings that impact quality of life, including poor walkability and lack of convenient access to recreational parks.

Watershed pollution raises additional concerns. Looking at the hierarchical classification system used for organizing and delineating watersheds in the United States, especially the HUC12, reveals that watersheds in these neighborhoods are highly polluted. Only around 9% of the nation's neighborhood tracts have a higher degree of intersection with such watersheds than GES. The 2024 health study noted that throughout the GES Community Health study, residents expressed concerns about the safety of their drinking water, fearing contamination (Kenyon et al., 2024)

Denver Water's supply comes from surface water sources like rain and snow. While contamination risks from various sources exist, such as agricultural runoff or petroleum products, Denver Water conducts extensive daily, weekly, and monthly testing to ensure the water leaving treatment facilities meets safety standards. According to Denver Water's annual reports, the treated water is safe for consumption. However, contamination can occur after it leaves the plant, with lead being the primary concern in GES.

The GES neighborhoods are a prime example of environmental justice communities. With an exceptionally high environmental burden module percentile rank of 0.9975 for both Globeville and Elyria-Swansea, they experience extraordinary burdens compared to other census tracts in the nation (EJScreen 2.2).

Health Implications

The 2014 Health Impact Assessment (HIA) report notes that the residents of Globeville and Elyria Swansea have long faced a disproportionate share of health issues (DDEH, 2014). This imbalance in health outcomes is due to several compounding factors, such as industrial operations, highway constructions, and various aspects of the local infrastructure, all of which have negatively impacted health. A recent 2024 health study on GES finds that the status of health in GES has not improved.

Instead, GES residents are faring worse than the average Denver resident on various health indicators including higher incidences of gestational diabetes during pregnancy and congenital abnormalities, overall rate of death, rate of adult asthma hospitalizations, percentage of adult obesity, overweight, and type II diabetes, and disability (Kenyon et al., 2024).

According to the 2014 Health Impact Assessment (HIA) report, death from cardiovascular disease in GES (District 9) is one of the highest, when compared with other Denver districts. DDEH (2014) also notes a higher incidence of diabetes in GES (District 9) compared to other parts of Denver. Ten years later, the 2024 GES health study (Kenyon et al., 2024: 14) suggests that mortality from cardiovascular disease may still be higher in GES than in Denver, but that more "research would be required to confirm this." Nevertheless, the report indicates an "alarming prevalence of cardiovascular disease risk factors in GES" including high environmental exposure to "air pollution, noise, high temperature, light pollution, and the build environment" (Ibid., 14-15). Similarly, the 2024 report continues to document higher diabetes prevalence and hospitalizations in GES than Denver average.

Asthma is another chronic health concern in GES. According to DDEH (2014), children and youth from Globeville and Elyria-Swansea seek treatment in emergency rooms for asthma-related issues at a higher frequency than their peers across Denver. There is a notable geographic variation, with areas around the I-70 corridor and the intersection of I-70 and I-25 exhibiting higher than average rates of these events. These higher than average rates persist in the 2024 health study, which also documents a higher prevalence of respiratory diseases.

In terms of mental health, the 2014 Health Impact Assessment (HIA) indicated that there were some conditions related to environmental quality, connectivity and mobility, access to goods and services, and community safety in GES that contributed to a sense of losing control over one's daily environment, stress, and poor mental health (DDEH, 2014). Although the 2024 GES health study (Kenyon et al., 2024:17) did not find any evidence to suggest that there was more depression, anxiety, or suicide in GES, GES residents did experience more frequent mental distress than the average in Denver.[47]

Low rates of insurance coverage in GES exacerbate health inequities. In 2021, 12.4% of Denver adults were uninsured compared to 28.3% and 33.6% in Globeville and Elyria-Swansea, respectively (Kenyon et al., 2024: 9).

[47] The GES health study (Kenyon et al., 2024: 17) defined "Frequent Mental Distress" as "experiencing more than 14 mentally unhealthy days within the past 30 days in which mental health was 'not good.'"

III. ‘Local Implications’: Development for Whom?

3.1 Legacy of Mistrust

Given the historical legacy of exclusion, displacement, and toxic exposure, it makes sense why many residents and community groups in GES opposed the highway expansion and hesitated to entertain its employment prospects. Some also questioned the project’s very premise of development. Below, we indicate key findings around a theme of mistrust, which influenced perceptions of insufficient consultation, lack of accountability, and the unequal allocation of benefits and burdens. Uneven dynamics of power led many to feel that local concerns were minimized even when they were technically heard. Sometimes these concerns were framed for the community as short-term costs or sacrifices that would be overcome by future promises of wider benefits. However, these concerns must be taken seriously in order to address community harm, create beneficial partnerships for future projects, foster sustainable community development, and improve city-community relations.

First, it is important to address the discrepancy between the project’s protagonists, who framed the local hire initiative as a success, and many impacted community members, non-profits, and advocates who were critical and disillusioned. Not only did CDOT and partner stakeholders largely perceive local hire (and the project itself) to be a success; many also hoped it could offer potentially wider benefits to remedy historical exclusion by providing improved connectivity and access to infrastructure. A member from WORKNOW staff noted:

"And I also think long term, when I think about it in the sense of right now, it has caused a great deal of disruption and loss to community members...And I really hope that it's better for them in the end and that it does genuinely connect the communities, as stated to be one of the goals for the construction of taking the highway, the highway below grade, and creating this part that could bridge the two."[48]

Despite short-term challenges, project stakeholders envisioned long-term community benefits. They cited plans for infrastructural development in association with the project, such as better sidewalks, parks, and recreation centers.[49] Although they acknowledged temporary disruptions, these were oriented towards an envisioned long-term greater good. Immediate incentives and mitigation measures, one of which was the local hire agreement, attempted to smooth any adjustments.

From the start, however, community members and local advocates with strong ties to impacted communities did not buy into this argument. One organizer summed up the sentiment that "the community is being redeveloped [but] it's not being redeveloped for them."[50] The project proceeded on a bedrock of distrust. One non-profit advocate explained, "The people in the neighborhoods do not trust anybody, any kind of government agency…They feel like they've been betrayed over and over again."[51] Instead, many in the impacted neighborhoods and their allies saw the project, alongside the incentives and mitigation plans, as a continuation of displacement and a recycling of a 'construction-as-development' discourse they had been sold for generations. As noted by one resident in a community discussion around the project, the Central-70 is not "the first project to arrive."[52]

The GES neighborhoods have long hosted, and are planned to be the future sites of, multiple mega-construction projects. For example, the original Central-70 construction in 1968 and construction and plans related to the National Western Center.

[48] Interview with WORKNOW staff, February 2020, Denver, CO.
[49] Interview with Community organizer, October 2019, Denver, CO.
[50] Ibid.
[51] Interview with non-profit advocate, August 2019, Denver, CO.
[52] Notes from community GES meeting, February 2020, Denver, CO.

Residents have witnessed different ebbs and flows related to each project through their lifetimes including displacement, increased transportation and economic activity, disconnection from neighbors, relatives, and friends, pricing variations, and environmental impacts. Therefore, any impacts from the Central-70 redevelopment will be experienced along a continuum of change proceeding since the 1960s. In addition to the health and environmental implications, to many long-term residents, the most glaring impact of different construction projects has been the out-migration of families – either through direct displacement for construction or because staying became increasingly untenable as a result of excess noise and pollution, home and rental price increases, and/or neighborhood degradation.

3.2 Politics of Consultation

Although CDOT consulted communities through expansive community outreach efforts and meetings, as noted above, people felt that they did not have the option to say no. Many, in fact, knew very little about the process. One community member described, “Without even knowing anything about the community, one day [they] just come and bring the tractors and start crossing the streets, tearing down houses to make space for I-70.”[53] He was also unfamiliar with the local hire arrangement. When interviewers asked what voice the community had in the process, he responded, “Zero, zero…And they [city and CDOT] were completely oblivious. They acted like there were no people living there at all.”[54]

A community organizer [55] noted how planners often chose to consult non-profits instead of really understanding and listening to the community. To her, this would entail, “Going in and seeing it…really listening to what their needs are and what they want…Listening to the community makes a huge difference.” Although she was positive about arranging forums, she cautioned, “I just think it’s bad when you’re just asking people and then do what you want."[56] She highlighted a gap between hearing the community versus actual listening and actions:

“I think everything that the community is saying is being heard. What they're doing about it is…you know…I don't think they're prioritizing what the community would want prioritized..I do think that the stakeholders have heard loud and clear the concerns of the community.”

[53] Interview with community member/advocate, October 2019, Denver CO.
[54] Ibid.
[55] Interview with community organizer, October 2019, Denver CO.
[56] Ibid.

Many community members and advocates saw little being done towards the long-term uplifting of the community; to truly "have the voice of the community at the table."[57]

3.3. Physical and Social Displacement

To many impacted community members, the city's consultation process resembled earlier projects for which they were not consulted at all. For example, when the city announces construction projects, they often acquire private homes and land from people living in those neighborhoods for construction through a process of eminent domain. Even if there is compensation involved, this might not sufficiently account for all the costs that people face in the process of displacement. Candi CdeBaca spoke to us about a close friend from the GES area whose property went through this process of eminent domain — not once but twice:

> *"He lived in a house that was, right on the National Western property–on 46th and Baldwin court. His family was (originally) moved from their other house to create the Brighton on-ramp when we were kids. And so they moved into the grandma's house and this house was taken from them through eminent domain for National Western."[58]*

This family experienced multiple displacements because of consecutive construction activities over the years, which generated overlapping challenges. Apart from the inconvenience and difficulties of leaving their home, the family considered the compensation unfair. She continued:

> *"We used our same lawyers to fight his eminent domain fight. We fought because one, we didn't want to lose the house, and two, the amount that they were offering was extremely low. It was a Victorian house that you could have placed anywhere else, three miles from the downtown and received over $1 million, but they didn't get that."[59]*

[57] Ibid.
[58] Interview with Candi CdeBaca, February 2020, Denver, CO.
[59] Ibid.

After they received the settlement, the house was declared a historic property and could not be demolished. However, because it was not declared a historic property until after they had already moved, they were unable to use this information to demand higher compensation on account of its historic value. Now, her friend pays a mortgage on a new property he moved to upon his second displacement.

When families resisted selling, advocates mentioned how city stakeholders made staying on certain parcels more difficult. One non-profit advocate involved in the lawsuit against the project explained a standard government practice of deliberately blading neighborhoods to drive down property prices. By blading, he meant that CDOT would buy property, "Put a huge hurricane fence around it and abandon it. Gardens will turn into weeds and there will be rats. They were deliberately blading the neighborhood to drive down property prices so that people will move away."[60] People would have no choice but to leave. This practice artificially and deliberately lowers housing prices to be conducive to redevelopment, which is a classic example of accumulation by dispossession. The term "racial capitalism," which goes further than environmental racism, identifies the patterned ways that capitalism, in alliance with the state's legal tools and power, relies on the devaluation of non-white bodies, land, and labor to create the differential value that capital requires to expand, extract, and accumulate (see Pulido, 2017). Candi CdeBaca thus saw colonization in lieu of development:

> *"No other more perfect example of modern colonization….You can play by all the rules… pay off your house,…pay your taxes and the government can still come in and take your house if you're Black, Brown, or poor, and give you nothing for it and then sell it to a private developer."[61]*

Such chronic displacement destabilizes communities and alters their social foundations. One CDOT staff member noted that even if the City of Denver and CDOT claim that they are displacing only 30 households from a neighborhood like Elyria, this is a significant percentage of the area given that the neighborhood only has 300 houses in the first place. [62]

[60] Interview with non-profit advocate, August 2019, Denver, CO.
[61] Interview with Candi CdeBaca, February 2020, Denver, CO.
[62] Interview with CDOT employee, August 2019, Denver, CO.

Displacement also has larger social impacts than merely moving people out of their houses. The same interviewee added, “You're taking the kids out of the schools, you're taking people out of the community.”[63] Dynamics of displacement can generate deep instability when people heavily rely on each other to navigate everyday life; as Candi CdeBaca explained, it is “a community that clings on each other.”[64]

In addition to outright dispossession for the project, its impacts on the neighborhood led to more indirect displacements. Neighborhoods change rapidly as construction investment into different kinds of businesses, industries, retail, and housing raises housing prices and the cost of living for existing residents. In the process, residents may be priced out of their neighborhoods, especially given high rental dependence in GES. Many of our interviewees spoke about how residents in the area had been forced to move away because of rising costs in the past, even before the Central-70 redevelopment. One non-profit advocate engaged in community organizing work told us that she had lived in Swansea for twenty years. Yet she recently decided to buy a house outside of Denver because of gentrification and the lack of affordable housing nearby, which made it more difficult to get to work and organize with the community.[65]

3.4 Who Benefits & Who is Accountable?

Many intended benefits also barely ended up reaching the community. For example, one GES resident who is also part of a community advocacy group, GreenLatinos, spoke with us about the stormwater drain master plan that was developed as part of the highway expansion. Although the city claimed that it would provide more facilities to the community, the trenches did nothing to protect the neighborhood from massive flooding in 2016, so much so that he had to personally lift his car out of water on the road. The stormwater drains were predominantly built to protect both the highway during the redevelopment and the city’s infrastructural investments along the highway. Residents, in contrast, were required to pay double the stormwater permit fee as tax. The funds were then pumped back into the redevelopment project.[66] Community members and advocates saw the unequal benefits and costs allocated along familiar pathways.

Similarly, despite improvements promised for Swansea Elementary School, it was like putting a muffler on a toxic pipe. A non-profit advocate explained, referencing the construction occurring outside the school:

[63] Ibid.
[64] Interview with Candi CdeBaca, February 2020, Denver, CO.
[65] Interview with non-profit advocate/community member, October 2019, Denver, CO.
[66] Interview with non-profit advocate, March 2020, Denver, CO.

"The way CDOT dealt with that was that they said okay we'll spend 2 million dollars in your school. And we will give you all your doors and windows and HVAC system so that you can make it more soundproof so that your students are not suffering…So then the principal came around and said okay I guess that works. The reason the neighborhood was not amused was because they said- well that's all very well when you are indoors, but are you gonna give our children self-breathing apparatuses when they go out to play?"[67]

A recent article published by CPR detailed similar problems plaguing the "park," also known as the "cap" built over the highway to mitigate highway noise and pollution (Brasch, 2023).The story documents how community members not only doubted its ability to contain pollution, but worried it might even attract more kids to play and risk aggravating their toxic exposure in a community already plagued with exceptionally high asthma rates (Ibid.).Putting a park on top of a highway cutting through a community evokes what former District 9 councilwoman and long-term community advocate, Candi CdeBaca, called "putting lipstick on a pig" (see above). Although it remains unclear if the highway project has aggravated air pollution and whether the cap is helping, such caps have become a popular approach Denver is considering across the city. Experts note that caps can help when there are no other options, but warn that Denver's "didn't meet those criteria [because] the city had an option to remove the highway altogether but nixed the idea due to concerns over costs and logistics" and selected a "design without ventilation to help minimize the risk of exposure to dangerous air quality" (Brasch, 2023).

Compounding sources of exposure, lack of data, and historical neglect make it difficult to establish a baseline to know for certain the specific health impacts of the highway expansion. It was impossible to disentangle, as Candi CdeBaca put it, "It is hard to describe, because how could you describe water to fish?"[68] However, historical experience showed why community members worried about cumulative adverse impacts and lack of accountability. She explained that many witnessed what she called the "original round of local hire" when community members worked construction on Superfund sites and "paid the price with their lives." She elaborated, "They were paid to dig their graves and there was no legal recourse for them because when you hire locally in an environment like this, if somebody gets cancer down the road, there's no way to prove that their exposure was on the job versus because they lived in the community."[69]

[67] Interview with non-profit advocate August 2019, Denver, CO.
[68] Interview with Candi CdeBaca, March 2022, Denver, CO.
[69] Interview with Candi CdeBaca, February 2020, Denver, CO.

Many were also skeptical whether the EPA and the state were monitoring effectively, which raised concerns regarding the new construction. A non-profit advocate shared:

> *"What the EPA and the state are telling the neighborhoods is we're keeping an eye on these folks, you know they have to do soil samples every now and then, tell us if they find any contamination, and we tell them how clean they have to make it. But, no one trusts they're actually doing that and so the neighbors are worried with the excavation for the Globeville Landing Outfall…they did that as an emergency clean up action. The only emergency was that the city had accepted 50 million from CDOT to build a structure and if they didn't start to work from the structure, they'd have to start paying the fine. So, they started doing the excavation work in the neighborhoods and the neighbors are still worried they're gonna be hauling 50 thousand truckloads of contaminated soil out of that site to build the I-70."[70]*

He specified who he believed to be the project's intended beneficiaries and the implications for lack of trust:

> *"The chief beneficiary of all that work is gonna be the freeway, it's gonna do nextnothing to protect those neighborhoods from flooding. So, the people who livethere have less than no reason to trust anything!"[71]*

Contrary to the lists of incentives, mitigation measures, and claims of opportunities, he did not see many benefits for the community. He argued, "I think they've been even further degrading the environmental quality down there and creating even more stress on the well-being of the people."[72] Another community member agreed, stating that there were no benefits to the community; only "very minimal concessions" from the lawsuits. He continued, "The only community that would benefit with the extension of I-70 will be all the white people that come to ski."[73]

Although many advocates shared these concerns, some did note the positive benefits of associated infrastructural improvements. Moreover, one community organizer

[70] Interview with non-profit advocate, August 2019, Denver, CO.
[71] Ibid.
[72] Ibid.
[73] Interview with community member/advocate, October 2019, Denver, CO.

witnessed indirect, unexpected impacts on community empowerment as leadership and community voice developed through raising community consciousness and organizing against the project. The process of resistance contributed to:

> *"Creating leaders in the community…and room for people like different organizations who are really powerful to come up…The real value could be really helping people understand the power of their voice and getting them engaged in channels where they could make a difference…Having them believe their voice matters."[74]*

[74] Interview with community organizer, October 2019, Denver, CO.

IV. Conclusions & Recommendations

The local hire met its targets ahead of schedule and even surpassed them. The project's protagonists largely herald the initiative as a success and model for future complex collaboration on large-scale infrastructure projects through public-private partnerships. However, contrasting narratives from impacted communities and advocates provide cautionary lessons for future projects. Rather than a target of opportunity, one non-profit advocate likened the GES neighborhood to a "great laboratory…they're doing this great experiment on,"[75] reinforcing the ways many residents of GES have historically felt neglected or even sacrificed for city development and industry goals. Rather than being partners in the development process, to many residents, planners' approach seemed to repeat old patterns that have paternalistically treated impacted communities as objects, targets, or lesser-than-subjects incapable of being informed of, and making, their own decisions. It is not that communities don't want development or even a local hire initiative; but rather not on terms defined by others at the expense of their land, livelihoods, health, communities, environment, and autonomy (e.g,. see Kirsch, 2007).

The Central-70 project provides lessons on engaging with communities on neighborhood development initiatives and large scale infrastructure projects. Community resistance was key to Denver Mayor Hancock's administration's frustrations with building the National Western Center arena and marketplace. His plans to fund the last portion– an arena– failed in 2021, which also included funds that would have filtered into the community (Beaty June 20, 2024). However, the GES coalition argued that efforts failed to "meaningfully include the community" (GES Coalition, 2024; Beaty June 20, 2024). Nola Miguel, director of the GES Coalition, (quoted in Beaty March 3, 2024) noted the importance of not just engaging with the community, but ensuring it has full decision-making and ownership over its development in ways that build true partnership and community power. She advocated for putting projects directly into the hands of the Coalition:

[75] Interview with non-profit advocate, August 2019, Denver, CO.

"We want it to go into the land trust. It has a community governance, it has a community membership. That's why we created it. It's community directed… We don't want just community engagement of some sort. We want a true, equal partnership, where the equity is actually equitable, where the land is owned. So then we have that control, so that throughout the whole process there's community checks of not only how it's happening and what's happening throughout the process, but then the outcomes." (quoted in Beaty March 3, 2024).

This provides important lessons for Denver Mayor Johnston's engagement with the community. The GES coalition has presented its own plans for the last undeveloped parcel (Beaty March 3, 2024) known as the "triangle," and the mayor has committed to this area being "governed by some sort of community ownership" (Beaty June 20, 2024). Local proposals include a "People's Plaza" and recreation spaces, and "commercial revitalization centered around people who actually live in this neighborhood" (Beaty March 3, 2024).

Given strong community opposition to the Central-70 expansion and excessive researcher and outsider presence in GES, our goal as researchers was to focus on the local hire and not wade into complex community dynamics where we did not belong. We were aware that many GES residents and community groups no longer wanted to talk to researchers given historical and more recent experiences with extractive research. Large scale infrastructure projects pitched as development are not the only projects that impacted communities have perceived as extractive. Communities have had similar experience with well-intentioned non-profits, city programs, and academic researchers who take information from the community in order to "help," but do little to amplify and uplift the community's power to make the changes they desire. Despite all the researchers that attempted to document community resistance to the highway project, it proceeded anyway with little benefit to the community. Most never even saw the data or results.

However, the more we tried to focus in on the local hire, the more people with trust within the GES neighborhoods brought the project back to the toxic foundations: health, environment, inequality, and fundamental power imbalances and vested interests. Although our methods fell short of a community-based participatory approach, by learning from and with CREA, we reached community and other alternative voices we hope to center, which are often silenced in official reports of city development initiatives.

Still, it is important to stress that even interviewees who were critical of the project favored the concept of local hire initiatives for future projects. We recommend such arrangements be considered and developed, but advise planners to authentically engage with communities in all of their facets (and before projects happen), rather than only consulting select representatives or gathering feedback for decisions that have already been made. This means taking local concerns and desires seriously, addressing past and ongoing harms, and placing more initiatives under community control and ownership rather than assuming planners know best.

One community member and advocate advised policymakers looking to implement future local hire initiatives, “They need to understand clearly and totally the situation of a particular community, and the stresses and suffering that is being put on that community.”[76] An organizer specified the need to change the “mindset of what community engagement means…not just going out and getting the numbers or paying people and incentivizing them to get them to a program.”[77] Community members must not only be consulted, but brought in as idea-generators, decision-makers, investors, owners, implementers, and evaluators of projects. Communities need to be present, as well as have a genuine voice, at the table. In turn, public officials, developers, planners, and industry leaders need to show that they are also accountable to the community.[78] Otherwise initial targets may be met, but longer-term goals and future collaborations frustrated.

[76] Interview with community member/advocate, October 2019, Denver, CO.
[77] Interview with community organizer, October 2019, Denver, CO.
[78] Ibid.

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Appendices

Appendix A: Terms of the I-70 settlement

I. Community Health Study (CHS)

A. Scope:

1. The CHS's is to "provide best estimates, as scientifically warranted" about the causes of adverse health outcomes in Globeville, Elyria, and Swansea (GES).
2. Will assess "potential causes of the disparate health outcomes in the Globeville, Elyria, and Swansea [GES] neighborhoods, including but not limited to those disparate health outcomes identified in the 2014 [City of Denver] Assessment."
3. To identify the causes of GES's disparate health outcomes, will collect data on:
a. Air, water, soil and noise pollution, including pollution from vehicles on I-70;
b. Socioeconomic factors;
c. Barriers to mobility; and
d. The availability of healthy foods, such as fresh vegetables.
4. Will not look specifically at the I-70 Project's impacts, but will consider "effects of pollutants, noise and vehicle and rail traffic" in general, including I-70 traffic.
5. Will not make recommendations about how to improve health, but will provide data to help inform future policy discussions.

B. Structure and Execution:

1. The CHS will be overseen by a Steering Committee made up of:

a. 1 representative from the City of Denver;

b. 1 from CDPHE (Colo. Dep't of Public Health & Environment);

c. 1 chosen by the Plaintiffs in the lawsuit (Colorado Latino Forum, Elyria & Swansea Neighborhood Association, Chaffee Park Neighborhood Association, and Sierra Club); and

d. These 3 members will choose a fourth member by unanimous vote.

2. The Steering Committee will be responsible for:

a. Choosing an Expert: the person or organization who will actually conduct the research and draft the CHS.

b. Develop guidelines for budgeting and conducting the CHS.

3. The Steering Committee must make all decisions unanimously.

4. There are multiple phases of the CHS, each approved by the Steering Committee:

a. Phase 1: The Expert will develop a refined plan for what data will be collected, and how it will be collected.

b. Phase 2: The Expert will develop a schedule for the remainder of the CHS.

c. The CHS will be completed within 4 years of appointing the Expert.

5. The Steering Committee will provide regular updates and opportunities for meaningfully community engagement. Its meetings will be open to the public, and the public will be able to comment on proposed actions, including the CHS's scope, protocols, and final report.

6. Four times a year, the Steering Committee will disclose to the public its communications about the CHS, and provide access to written materials.

7. All data, methodologies and final reports will be posted online.

a. Some documents could be withheld under the Colorado Open Records Act.

The withheld documents would likely be limited to:

i. attorney-client privileged documents conveying communications between the City Attorney's office and Denver's representative (or the Attorney General's office and the CDPHE representative);

ii. personal or medical information about residents that is withheld for privacy reasons; or

iii. proprietary information about a polluting facility's operations that is considered confidential business information (i.e., the schematics for the smokestack design at the Suncor Refinery or the Cherokee power plant).

C. Funding:
1. CDOT will provide $550,000.00 for the CHS, to cover the costs of the Expert.
a. Even though CDOT is providing this funding, the CHS will not be attributed to CDOT or the Federal Highway Administration.
2. CDOT will contribute an additional $25,000.00 to pay the fourth Steering Committee member (who is chosen by the other three members).
3. Plaintiffs can use funds from other sources, if needed, to pay the fourth Steering Committee member.

II. Air Monitoring
A. Kiewit will operate four new air pollution monitors that measure PM10 – which is mostly larger dust particles stirred up by construction. It will operate the monitors throughout the duration of the I-70 construction, in addition to the monitor that is already installed at Swansea Elementary. The four new monitors will be located at:
1. 46th and Vine
2. 45th and Josephine
3. Southeast of I-70 at Quebec
4. North of the I-225/I-70 interchange
B. The monitors will be 10-12 feet above ground, as required by EPA federal regulations.
C. Kiewit will automatically alert CDOT and CDPHE by text and email when a monitor records a one-hour average PM10 concentration of 135 µg/m3.

1. EPA's health standard for when PM10 exposure becomes unhealthy is 150 µg/m3, meaning that Kiewit must take action before PM10 reaches unhealthy levels.
2. If PM10 concentrations reach 135 µg/m3, Kiewit must take action (likely controlling dust) until concentrations go down. Kiewit must notify CDOT of all actions taken to reduce PM10 levels.
3. Kiewit must provide CDOT with monthly air quality reports and any steps taken to mitigate pollution.
D. Kiewit will post PM10 concentrations online every hour.

III. Landscaping Along the Highway
A. Kiewit will work with Denver to provide tree plantings and long-term maintenance in right of ways along 46th Avenue between York Street and Steele Street.
B. Kiewit will provide vine or other plantings on community-facing sides of permanent noise walls in Swansea, except where community art is already planned.

IV. Trees throughout GES

A. CDOT will provide $25,000 for tree plantings throughout GES.

B. Plaintiffs will choose a non-profit or governmental agency to plant the trees by 3/30/19.

V. Communications: Kiewit must:

A. Provide a public web page, with content in English and Spanish, describing all major construction activities and traffic impacts, that will be updated weekly.

B. Send email blasts, text alerts, and social media updates weekly or more frequently to alert the public to changes or additions to the planned activities.

C. Provide notifications of major project developments and heavy construction work at least 7 days in advance, in both Spanish and English.

D. Publish articles and notices in local media.

E. On request, make presentations to community groups in English or Spanish.

F. Distribute a monthly English & Spanish newsletter, by email, posted online and at community centers, and hand delivered to about 2,500 residents of Elyria and Swansea.

G. Post fact sheets on the website on specific issues in both Spanish and English, and provide door-to-door outreach by bilingual personnel to inform specific residents of focused activities affecting their block.

H. Maintain a telephone hotline for community feedback and complaints. Assistance will be available for people with limited or no English proficiency.

1. The voicemail greeting for this phone line will be recorded in English and Spanish. It will provide an updated message each week explaining exactly where construction is happening and how long it will take.

2. The hotline will have a voicemail for callers to leave messages.

3. Kiewit must check messages throughout the day. On weekdays, it must return calls the same day. On weekends, it must returned calls within 24 hours. Kiewit may have up to 2 days to return calls in high volume situations.

4. Kiewit and CDOT must respond to e-mails and texts in the same day, or within 2 working days in high-volume situations.

5. Kiewit must log and report all inquiries and complaints to CDOT.

I. Kiewit will install a web camera on top of the Purina building to provide images of construction on the lowered section of the highway through Swansea.

J. Kiewit will publish a quarterly communications report throughout construction. This report will be published in English. Kiewit must also provide it in Spanish, upon request.

This report will include:
1. A summary of primary construction work during the preceding quarter;
2. A summary of communications received from the public;
3. A detailed summary of any mitigation actions taken;
4. A list of any times that PM10 reached or exceeded 135 µg/m3 during the preceding quarter, and a description of what actions were taken in response.

Source: Earthjustice. (n.d.)

Appendix B: Tracking Outcomes for Central-70 Project

Tracking Outcomes

Training programs were officially launched in Q3 2017, and annual goals are being tracked accordingly.

Objectives	Key Metrics	2017 Total	2018 Total	2019 Total	*Q1 2020*	*Q2 2020*	*Q3 2020*	Cumulative
Overall	Number of WORKNOW* Participants	172	541	728	155	135	114	1845
	Number of WORKNOW* Participants Utilizing Supportive Services§	66	390	352	90	85	72	599
	Number of WorkNow: Central 70† Participants Utilizing Supportive Services §	60	157	134	16	13	14	394
Targeted Outreach and Recruitment	Number of Individuals Attending WorkNow: Central 70† Construction Outreach Sessions	106	529	205	20	41	85	986
	Number of Individuals Attending WORKNOW* Construction Outreach Sessions	106	529	205	20	41	85	986
	Number of WORKNOW* Construction Outreach Sessions (inc. virtual)	7	60	58	6	4	8	143
Training and Job Readiness	Number of Individuals Enrolled in WorkNow: Central 70† training programs	78	125	185	42	45	50	525
	Number of Individuals Completing WorkNow: Central 70† training programs (60 Annual Goal)	71	117	172	39	44	47	490
	Percent of Individuals Completing WorkNow: Central 70† training programs (Annual Only)	91%	94%	93%				
	Number of WorkNow: Central 70† Training/Certificate Courses Offered	8	11	24	2	3	4	45
	Number of Individuals Enrolled in WORKNOW* training programs	114	326	334	54	83	99	1010
	Number of Individuals Completing WORKNOW* training programs	110	287	299	49	77	91	913
	Percent of Individuals Completing WORKNOW* training programs (Annual Only)	89%	88%	90%				
Placement and Retention	Number of WORKNOW* Placements in Construction Industry Jobs, not Central 70 (40 Annual Goal)	124	208	254	60	42	40	728
	Number of WORKNOW* Placements in Construction Industry OJT trainee/apprenticeships	19	42	41	10	4	6	122
	Average WORKNOW* Participant Starting Wage	$15.62			$19.01	$20.34	$19.05	
	Number of WORKNOW* Placements in Jobs on Central 70	N/A	14	44	5	6	5	74
	Number of WORKNOW* Placements in Central 70 OJT trainee/apprenticeships on Central 70	N/A	3		1	2	2	26
	Average Starting Wage for WORKNOW* Individuals Placed on Central 70	N/A						
	Percentage of WORKNOW* Individuals Retained after 90 days (75% Annual Goal)	N/A			81%	79%	85%	
Demographic Breakdown of WORKNOW: Participants	Gender: Percentage of Female Participants				14%	23%	31%	
	Veteran: Percentage of Participants who are Vets				8%	3%	4%	
	Race: Percentage of Non-White Participants				62%	69%	58%	
	Education: Percentage of Participants with HS/GED or less				50%	48%	51%	

* WORKNOW Participants are **all** individuals accessing training and/or supportive service resources through the WORKNOW construction workforce collaborative, which focuses on helping individuals find and keep good jobs in construction, including but not limited to the Central 70 Project.

† Reference to "WORKNOW: Central 70" means WORKNOW activities funded fully or in part by this federal grant, inclusive of individuals working on Central 70. The Central 70 Project is both a funder and key beneficiary of WORKNOW. WORKNOW participants who have not received services funded by the Central 70 project will still be recruited to work on Central 70, funds from multiple partners is being leveraged to increase overall impact.

§ WORKNOW supportive services include transportation support, PPE, and other wrap-around services, such as childcare resources, needed for individuals to access training and/or job opportunities. WORKNOW: Central 70 funding is used only for those supportive services approved by FHWA.

Green = Goal is met or on-track.
Yellow = Goal is not on-track to be met

Source: CDOT (2021:6).