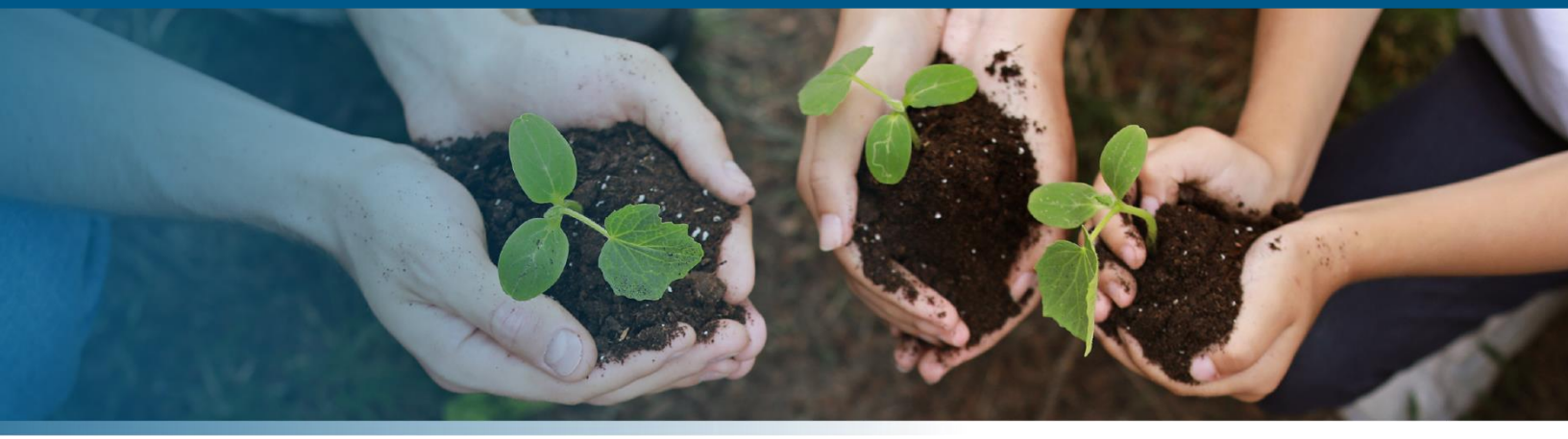
Measures for Advancing Health and Equity

CHAPTER 5



Introduction

California may be the world's fifth-largest economy, but there is a vast disparity in health, economic, and wellbeing outcomes across our state. We may have gleaming towns in the golden hills, but we also have communities in the shadows of refineries and oilfields, in agricultural valleys and arid deserts, facing high housing costs and low wages, drinking contaminated groundwater, and breathing air that is of some of the worst quality in the United States.

All this is not by chance. Such discrepancies are driven by land use planning decisions, which have in turn led to inequities in the social determinants of health—the characteristics of built environments, social networks, and economic opportunities that lead neighboring census tracts and communities to have vastly different life expectancies and health outcomes. Yet location only tells part of the story: Race and racism have had a profound influence on where people in the United States live, how they live, and how their communities are shaped and built.

The history of land use planning in California is inextricably rooted in exclusion and structural racism—starting with the centuries-long forced displacement of Native Californians and dispossession of Native lands. The first zoning ordinances were passed in the late nineteenth century in Modesto and San Francisco to restrict where Chinese residents

could live and where laundries owned by Chinese residents could operate (Chou 2014; Fan 2015). The 1913 and 1920 Alien Land Laws of California banned Asian immigrants, especially those from Japan, as well as their U.S.-born children, from owning agricultural land in California. During the New Deal, federal agencies designated immigrant communities and communities of color, particularly Black communities, as hazardous for investment—redlined on a map—while predominantly white neighborhoods were greenlined. Armed with these maps, federal housing agencies refused to insure mortgages in redlined communities, while lenders denied mortgages to Black residents, leading to systemic, compounding divestment from communities of color. At the same time, racial zoning, racial covenants, and terror campaigns restricted housing choice and prohibited people of color from buying homes in desirable suburban communities. Redevelopment and freeway construction further targeted communities of color, whose mere presence was used as evidence of blight and lower property values. These neighborhoods were either placed next to, or targeted with, sources of pollution such that even today, people of color breathe dirtier air than their white counterparts (Lloyd 2021).

The consequences of redlining and other deliberately racist housing practices can still be felt today. Formerly redlined neighborhoods continue to be ravaged by predatory lending and housing insecurity, and 87 percent of San Francisco's formerly redlined neighborhoods remain low-income (Hernandez 2009). Home values and household incomes are nearly twice as high in predominantly white neighborhoods than in communities of color (Menendian, Gailes, and Gambhir 2021). Redlining has denied homeownership to generations of people of color—excluding them from one of the primary means of wealth accumulation in the U.S.—and denied lines of credit to businesses, barring communities of color from equitably sharing in the decades of twentieth-century prosperity. The cascading consequences are far-reaching, affecting every facet of life from the distribution of environmental pollution burdens and public goods and services to school and education funding and opportunity access.

This persistent and pervasive racism and discrimination is not only economically inequitable, but actively erodes the health and longevity of communities of color. The stress alone of experiencing lifelong racism and discrimination leads to worsened physical and mental health outcomes (Bichell 2017). Furthermore, communities of color and low-income, marginalized, and immigrant communities have been excluded from the many social determinants critical to supporting healthy, thriving, prosperous lives. To reverse the harms of decades of divestment, communities must have the power and capacity to access these resources.

Our planning systems have created and entrenched these unfair outcomes—and so it is not only necessary but also appropriate for our planning systems to provide restitution. This situation, built over hundreds of years and embedded in the laws, finance, economy, transportation, public health, education, governing processes, and buildings of California, can only be addressed in the same manner it was created: one decision at a time. Equity and health cannot be considered separately from land use planning and zoning, and land use decisions are never undertaken in a neutral vacuum but must co-exist in conversation with the aggressions of the past. Each budget, each project, each approval, each building,

each job, each school, each tree, each road, each ordinance, each loan, each salary, must be designed and realized in a manner that is more inclusive, fair, and equitable.

Purpose

This chapter seeks to provide a non-exhaustive list of measures, examples, and resources to aid proponents, lead agencies, and communities to make the planning, approval, construction, and operation of projects more inclusive and the outcomes of these projects more equitable.

These measures seek to promote health equity, defined in state code as "efforts to ensure that all people have full and equal access to opportunities that enable them to lead healthy lives" (Health and Safety Code 131019.5).

These measures are also intended to support progress toward racial equity, or "when race can no longer be used to predict life outcomes and outcomes for all groups are improved" (GARE 2015). More specifically, achieving health and racial equity requires ensuring that all communities have full access to safe and affordable homes, education, good jobs, walkable neighborhoods, clean air and water, green spaces, healthy food, and mobility choices—as well as freedom from discrimination, and the capacity and empowerment to participate in and influence civic processes.

Finally, these measures are intended to support inclusion of and solidarity with marginalized, underrepresented, and vulnerable communities, including people of all race and ethnic groups; low-income people; people who are incarcerated and those who have been incarcerated; people who are unhoused; people who are undocumented; people with disabilities; people with mental health conditions; children; youth and young adults; seniors; immigrants and refugees; people who are limited-English proficient; women; gender-expansive people; and lesbian, gay, bisexual, transgender, queer/questioning, intersex, asexual, and other gender identities (LGBTQIA+) communities.

Statewide Goals and Policies

Through the various levers of government, the State of California seeks to elevate the centrality of health, equity, and environmental justice as a goal and priority. With the continued evolution of California Environmental Quality Act (CEQA) caselaw, health and equity are becoming recognized parts of the environmental review process. The courts have long held that "[P]ublic participation is an 'essential part of the CEQA process'" (Laurel Heights II (1993) 6 Cal.4th 1112 at 1123), and as such, it should be meaningful. Beyond outreach, the potential impacts of land use decisions that must be considered have increased to include "urban decay impacts" (Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184) and impacts on human health (Sierra Club v. County of Fresno (Friant Ranch, L.P.) (2018) 6 Cal.5th 502).

Beyond CEQA contexts, the legislature is recognizing the failures of current systems to address inequity. In 2012, Senate Bill (SB) 535 (de Léon) acknowledged the disproportionate burden of environmental pollution on California's disadvantaged

communities, and accordingly required them to be prioritized for emissions reduction projects funded by cap-and-trade proceeds. This led to the State of California's development of CalEnviroScreen, a tool that identifies disadvantaged communities, currently defined as census tracts ranking in the top 25 percentile for environmental burdens and socioeconomic conditions; census tracts without scores but having the highest 5 percent of cumulative pollution burden scores in CalEnviroScreen 4.0; disadvantaged census tracts from the 2017 designation of disadvantaged communities; and land under control of federally recognized Tribes. In 2016, the legislature expanded funding prioritization to include low-income communities with the passage of Assembly Bill (AB) 1550 (Gomez).

Also, in 2016, SB 1000 (Leyva) required local jurisdictions to identify communities that are disproportionately burdened by environmental justice issues within their boundaries and address environmental justice in their general plans. This includes developing goals and policies to reduce pollution exposure, reduce unique or compounded health risks, promote safe and sanitary homes, and prioritize the needs of disadvantaged communities, among other focus areas. In addition, the Community Air Protection Program and other initiatives authorized by AB 617 (Garcia) aim to develop community-driven planning to reduce air pollution locally. Starting in 2018, air districts began working with community-led steering committees to implement air monitoring and emissions reduction projects in communities experiencing some of California's most severe air pollution impacts.

Looking forward, it is anticipated that the state will continue to prioritize environmental justice and health and racial equity in its environmental and climate programs. Project proponents and jurisdictions are encouraged to take the lead and embrace placing the healthy and equitable treatment of their residents front and center.

Using this Chapter

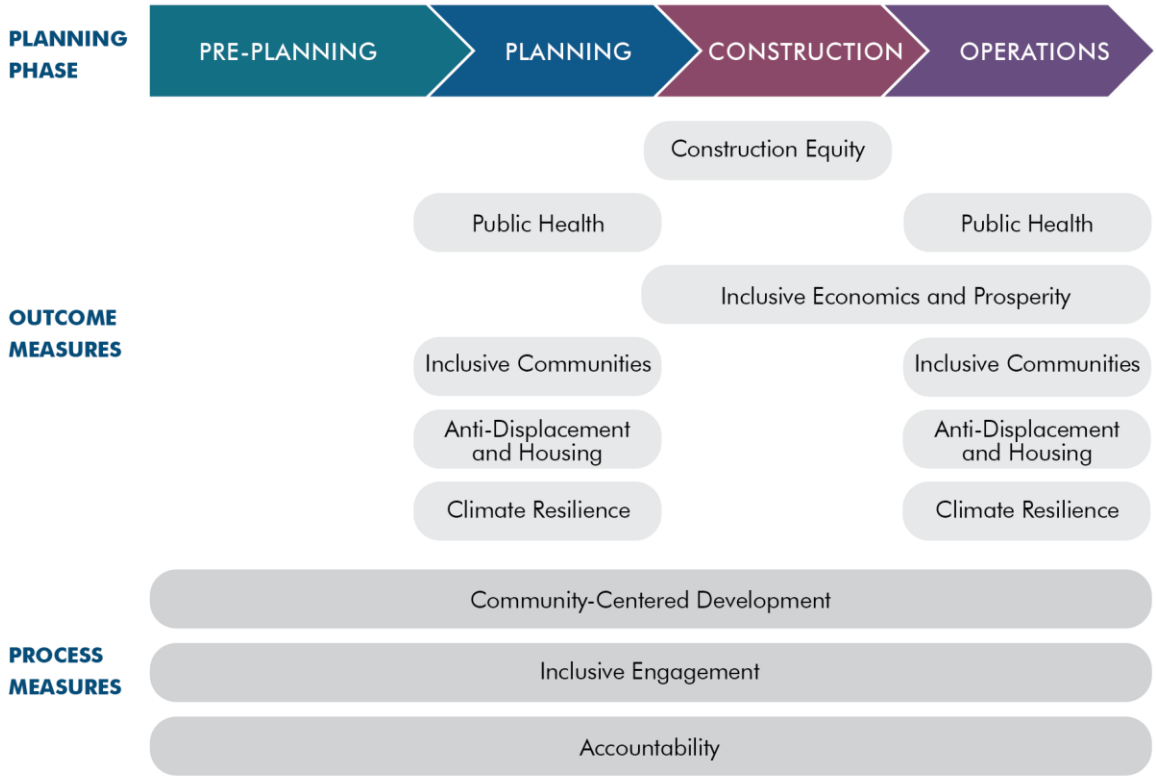
This chapter is divided into two parts: *process measures* focus on facilitating greater community participation and decision-making in the process of land use planning, and *outcome measures* focus on enhancing the project features and operational practices that advance equity-supportive outcomes.

Process measures are further grouped into three categories. We recommend starting with the community-centered development category for strategies to help the project align with community priorities and needs, ideally through a collaborative process working side by side with community-based organizations (CBOs). The inclusive engagement category is crucial to all phases of project development to ensure that outreach is inclusive, accessible, culturally competent and respects community experience and capacity. Finally, the accountability section is intended to provide community members with methods to hold project proponents accountable for their commitments.

The outcome measures comprise six categories, each pertaining to a desired outcome area. Construction equity measures focus on reducing the air quality, traffic, noise, and other impacts of construction for the surrounding community. Public health and air quality measures aim to improve the health outcomes of project residents as well as nearby neighborhoods. The inclusive economics and prosperity measures aim to ensure that the economic benefits of new development are shared equitably, particularly for underserved and marginalized communities. The inclusive communities category seeks to ensure that projects are designed to be inclusive, accessible, and supportive for all people. The anti-displacement and housing measures aim to increase affordable housing and protect residents from displacement. Finally, the climate resilience category complements the larger set of climate adaptation measures in Chapter 4, *Assessing Climate Exposures and Measures to Reduce Vulnerabilities*, with three additional strategies to enhance resilience in vulnerable communities.

Critically, equity as a process remains essential to the outcome measures: all community members should be able to participate meaningfully in the development and decision-making around desired project outcomes and features. Thus, users should refer to the process section for guidance around community priorities, inclusive engagement, and accountability. Providing open, inclusive engagement throughout project development, for example, can support community members to give feedback at any phase. Figure 5-1 demonstrates how process measures should be considered throughout planning and illustrates how outcome measures can be integrated into specific planning phases.

Figure 5-1. Equity Measures by Planning Phase



Measures involving outreach or engagement can be done voluntarily by the proponent or imposed as a requirement by the local jurisdiction as part of the outreach process. Measures involving design features, construction practices, or operational practices should be incorporated as a condition of approval, mitigation measure, or part of a developer agreement. In general, the project proponent will be responsible for undertaking most measures, with a select few implemented by lead agencies, local jurisdictions, or community groups and coalitions.

The nine measure categories are illustrated in Figure 5-2. Users may click on an individual measure to navigate directly to the description of that measure. Each measure description includes applicability guidelines, implementation considerations, a discussion of how the measure impacts various equity outcomes, case study examples, and resources. Each of the process measures also pose a key question to guide users in their thinking and to help determine if they are implementing the measure both in letter and spirit.

Figure 5-2. Navigation Tree for Equity Measures

Process Measures

COMMUNITY-CENTERED DEVELOPMENT

- CCD-1. Consult Pre-existing Community Knowledge/Priorities
- CCD-2. Conduct a Stakeholder Analysis and Develop a Community-Centered Outreach Plan
- CCD-3. Conduct a Community Needs Assessment
- CCD-4. Conduct Community Asset Mapping
- CCD-5. Establish a Community Benefits Agreement

INCLUSIVE ENGAGEMENT

- IE-1. Prioritize Outreach to Communities of Color and Underserved Groups
- IE-2. Establish or Join a Community Project Steering Committee
- IE-3. Elevate Voices of Underrepresented Groups in Project Direction and Outreach
- IE-4. Inclusive Community Meetings
- IE-5. Provide Education on Essential Topics Related to Project
- IE-6. Conduct an Equity Assessment with Community Project Steering Committee

ACCOUNTABILITY

- A-1. Use Participatory Budgeting
- A-2. Establish Incentive and Penalty Provisions for Community Priorities
- A-3. Evaluate Project Performance with Community Project Steering Committee/Community Based-Organizations
- A-4. Establish Clear Points of Contact
- A-5. Public Disclosure of Project Commitments

Outcome Measures

CONSTRUCTION EQUITY

- CE-1. Create a Construction Plan with Community Input
- CE-2. Ensure Active Modes Access During Construction
- CE-3. Post a Clear, Visible Enforcement and Complaint Sign
- CE-4. Portable Indoor Air Filtration for Nearby Residents During Construction
- CE-5. Air Quality Monitoring and Response Plan
- CE-6. Provide Funds to Businesses Impacted by Construction Activities

PUBLIC HEALTH AND AIR QUALITY

- PH-1. Establish Vegetative Barriers to Reduce Pollution Exposure
- PH-2. Increase Urban Tree Canopy and Green Spaces
- PH-3. Highly Rated Air Filtration
- PH-4. Create Healthful, Sustainable Indoor Spaces
- PH-5. Provide Equitable Food Access and Food Justice

INCLUSIVE ECONOMICS & PROSPERITY

- IEP-1. Local Labor and Apprenticeships (Construction)
- IEP-2. Local Labor and Apprenticeships (Operations)
- IEP-3. Contract with Diverse Suppliers
- IEP-4. Use of Locally/Regionally Manufactured Products and Materials
- IEP-5. Higher Wage and Working Condition Standards

INCLUSIVE COMMUNITIES

- IC-1. Invests in Local Arts and Culture to Affirm Community Identity
- IC-2. Adopt Design Standards
- IC-3. Promotes Accessibility
- IC-4. Enhanced Open and Green Spaces
- IC-5. Designated Space for Community-Based Organizations, Disadvantaged Businesses, and Community Assets
- IC-6. Create Non-Standard Commercial or Retail Spaces
- IC-7. Equal Access to Building Amenities
- IC-8. Enhanced Access to Community Resources

ANTI-DISPLACEMENT AND HOUSING

- AH-1. Support Community Land Trusts
- AH-2. Promote Affordable Housing in Transit-Rich Areas
- AH-3. Protection for Existing Tenants of Redevelopment Projects
- AH-4. Incorporates Permanent Supportive Housing
- AH-5. Make Housing Units Permanently Affordable
- AH-6. Support the Formation of Collective Ownership Models. Limited-Equity Housing Cooperatives or Mutual Housing Associations
- AH-7. No Net Loss of Affordable Housing Units/One-For-One Affordable Housing Policies

CLIMATE RESILIENCE

- CR-1. Adapt and Re-use Vacant Lots for Green Infrastructure
- CR-2. Support the Development and Operations of Community Resilience Centers
- CR-3. Passive Survivability

The measures presented in this chapter provide broad guidelines and best practices and should be tailored to the needs and characteristics of individual communities. Project proponents should respect community experts, build upon existing work done in the community, and provide compensation to CBOs in return for their knowledge, networks, and labor.

Development of this chapter relied greatly upon the City University of New York's *Equitable Development Guidelines,* and the guidance and feedback from TAC members.

While the challenge of dismantling structural racism cannot be tackled by one project alone, it is hoped that these measures help to provide support and momentum toward building more equitable communities.

Process Measures

While California provides various ways for the public to engage and participate in the land use development process, these channels and the systems by which local government operates are often exclusionary of under-resourced, historically marginalized, and underrepresented communities. As a result, their perspectives are frequently overlooked from decision-making, risking furthering structural inequities and the concentrations of locally unwanted uses, gentrification, displacement, and the erosion of community.

This section provides strategies and best practices to help re-imagine the role of community members in land use development. The aim is to transition to a community-centered process in which the community determines their needs and priorities and is empowered to work closely with lead agencies and project proponents to achieve these goals. These measures encourage the meaningful involvement and participation of CBOs and other community stakeholders from the outset of the development process, continuing through project completion to ensure accountability. The outcome will be a project that prioritizes community desires and needs, uplifts the perspectives of underserved and marginalized residents, and helps to support healthier, more equitable communities.

While many of these measures emphasize involving the community in the design, mitigation, and approval process, users of this guide are encouraged to *build community capacity* and *acknowledge structural inequities*. Wealthier communities have greater capacity and access to act on their interests, while historically marginalized communities lack similar resources, a reality overlooked by one-size-fits-all outreach processes. Indeed, vulnerable communities must often labor *more* on their own behalf to advocate for the rights and amenities that are provided to wealthier communities as a matter of course. Regardless, all communities should have the opportunity for meaningful engagement and participation that respects their time and circumstances. An equitable engagement process asks the project proponent or lead agency to provide additional resources, assistance, and opportunities in some communities, so *all* residents can participate meaningfully.

Engagement is not counted in hours spent in meetings, but how the project changes and reacts in dialogue with the needs and priorities of the community. For engagement to be

meaningful, the community must be able to effect change and shape outcomes and processes, not merely provide feedback to be filed away.

Although this process may be more labor-intensive at the outset, in the long term it can lead to a project that is supported by the community both in the development phase and in its operational lifetime. Equity is not a barrier in project development, nor a box to be checked, but rather an opportunity and a continuous practice to build a more inclusive, prosperous community. The process measures that follow focus on centering around community needs, inclusive engagement, and accountability.

Community-Centered Development (CCD)

This section focuses on measures designed to promote community-driven planning and highlight community priorities, with the aim of ensuring that issue and priority identification starts from the community. True equity arises from a community-centered, collaborative approach to identify and understand community concerns and priorities and create solutions together. Measures here represent crucial first steps foundational to achieving these goals and should be incorporated prior to the initial planning phase of project development.

Photo Credit: City of West Hollywood / Jon Viscott, February 2020

These measures recommend consulting existing priority identification efforts before developing new efforts. It is important for project proponents to be mindful of community engagement fatigue, as some underserved and underrepresented communities have been part of numerous neighborhood studies and community engagement projects – without ever seeing resulting change. To avoid placing excess burden on communities, proponents should first consult existing studies and plans and align the project proposal with their recommendations and identified goals. However, only consulting prior studies and plans is not sufficient to understanding community concerns; in every process the community must have the opportunity to express their concerns directly to those responsible for planning.

Thus, other measures in this section offer practices when pre-existing knowledge may be sparse or not accepted by existing community members. These measures call for project proponents to thoroughly research community priorities and consult with local CBOs' knowledge and expertise. Finally, the last measure calls for project proponents to formalize identified community priorities into a community benefits agreement.

CCD-1. Consult Pre-Existing Community Knowledge/Priorities

As a first step, before embarking on more extensive community outreach, the project should consult existing neighborhood and community plans or studies, such as community needs assessments, community asset mapping, and neighborhood plans. By recognizing and understanding the work that has already been done, project proponents have a greater opportunity to address community concerns and needs that have already been identified. Proponents also demonstrate respect for the existing wisdom and lived experiences of the community. Additionally, consulting existing knowledge helps avoid engagement fatigue for already-burdened communities. If existing knowledge is outdated, not accessible, or not aligned with community priorities, conduct a community needs assessment to identify specific community needs.

Key Question: Is the project in alignment with existing plans accepted by the community?

Applicability

Applicable to all projects. Projects in greenfields or smaller jurisdictions may need to rely on general, regional, or state planning efforts.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning

Dimensions of Equity

Because a given community's priorities can range widely, this measure has the potential to impact all dimensions of equity, depending on project context.

Implementation Considerations

Project proponents should prioritize community-led and community-generated plans and documents. Examples of these can range from a local school class project on proposals for a nearby vacant lot, a business improvement district visioning their main corridor, a community health needs assessment, or a full economic development and housing plan drafted by a CBO.

Government plans originate at different levels of government: California has 58 counties, 482 cities, and 3,300 special districts, including air, water, transit, and park districts. Additionally, councils of governments, joint powers authorities, metropolitan planning organizations and regional transportation planning agencies will often have controlling plans with various levels of community outreach and acceptance. These plans may be in conflict, offering differing perspectives on the locations of future bus corridors, bike lanes, housing densities, or development intensities. Areas of disagreement should be explored

with the community to better understand priorities. In addition, plan priorities should be ground-truthed with community members.

When consulting these plans, be mindful of who led their development, whose perspectives are included, and whose are missing. Some communities, including those historically marginalized, may be underrepresented in existing documents and resources. Evaluate the methodologies of these documents to determine their degree of representativeness. For example, a specific plan may have held two to three public meetings, while a community-led effort may have attended multiple events and meetings held by hard-to-reach communities. If the perspectives of vulnerable populations are absent or excluded, conduct additional outreach to ensure their insights are incorporated into the project.

As the project progresses into later phases, the proponent should hold open communications with community members to evaluate the project's continued alignment with identified community priorities.

Example

Focused around a 5-square-mile area encompassing Chinatown, southwest Fresno, and parts of downtown Fresno, the Transform Fresno project is comprised of 22 projects that tackle affordable housing, energy efficiency upgrades, solar panel installation, tree planting, bike lanes and trails, urban gardening and farming, parks, and clean transportation. In its community engagement plan, Transform Fresno examined its local community's history with community engagement and other project plans. Specifically, Transform Fresno highlighted the *City of Fresno General Plan*, *Southwest Fresno Specific Plan*, *Downtown Neighborhoods Community Plan*, and *Fulton Corridor Specific Plan*. Additionally, local CBOs involved with these plans were recognized in the community engagement plan. This information was used to leverage existing relationships within the community and help guide the community engagement plan (Raimi + Associates 2019).

Related Measures

- CCD-3. Conduct a Community Needs Assessment
- CCD-4. Conduct a Community Asset Mapping

CCD-2. Conduct a Stakeholder Analysis and Develop a Community-Centered Outreach Plan

Based on the evaluation of existing plans, the project proponent may identify engagement gaps and accordingly must conduct a stakeholder analysis to fully understand the project's potential impact on residents and ensure that no stakeholders have been left out. A stakeholder analysis strives to identify stakeholders, recognize the degree of influence of different groups, and prioritize those who have been historically overlooked and excluded when it comes to land use planning and local development. A stakeholder analysis can uncover why community members are interested in a project and potential obstacles to a project's success according to community knowledge. A project proponent may also wish

to conduct the stakeholder analysis prior to conducting a community needs assessment or asset mapping to ensure that it engages fully with residents traditionally left out of planning decisions.

It is advised that project proponents contract with CBOs on a stakeholder analysis to recognize the value of local knowledge and expertise, and work with a partner that community members trust and recognize. In addition, working with multiple CBOs may offer the most complete analysis, as different organizations serve different demographics.

Once stakeholders have been identified, the project proponent should undertake tailored outreach efforts to underrepresented groups to uplift their voices and invite them to participate in the development process. Project proponents should invite and compensate CBOs and community leaders to develop a community outreach plan together. This approach increases the inclusivity of outreach efforts by leveraging existing CBO networks. An inclusive outreach effort can increase the representation and participation of underrepresented community members in decision-making spaces, which is critical to achieving a more community-focused development process. Furthermore, tapping into community knowledge can elevate important outreach considerations otherwise overlooked. The project proponent should be mindful of outreach fatigue and consider best strategies to facilitate community participation and reduce barriers; see the *Inclusive Engagement* section for outreach strategies.

A community-focused outreach plan includes the following key components.

- Scheduled public involvement timeframes:
  - Outreach events, meetings, and other methods of community engagement.
- Identified stakeholders (from stakeholder analysis plan), underrepresented communities, and other audiences to include.
- Defined goals, outcomes, and performance metrics.
- Identified opportunities for public involvement that are accessible and convenient.
- Timeframe for reporting project progress and data on agreed-upon equity and project performance metrics.

Key Questions: Who is affected by the project? Which groups are not represented in the project development process? What outreach activities can help to support and encourage underrepresented communities to participate?

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Project/Site or Neighborhood/City
- Timing: Planning

Dimensions of Equity

By increasing stakeholder representation and prioritizing vulnerable stakeholders and their concerns, a project can help improve the translation between community concerns and project development. An outreach strategy developed in collaboration with CBOs and community leaders can enhance community member representation, capture feedback, and elevate residents' voices. These critical elements help promote *racial equity* in outreach efforts and enhance community *self-determination* during project development.

Implementation Considerations

- Many stakeholders have few advocates and may be easily left out of community decision-making processes. Thus, it is highly important to work with trusted CBOs that serve underrepresented and marginalized communities.
- Compensate CBOs for their time and expertise, just as one would with consultants.
- There are a variety of approaches to conducting a stakeholder analysis, and CBOs may have their own preferred methodology.
- The outreach strategy must incorporate a variety of different formats to reach a diverse range of residents. Specify roles and responsibilities for each member involved with the outreach strategy. Schedule engagement activities throughout the project's development and implementation to ensure adequate public involvement when resolving issues that might arise during any point in project development.
- Community outreach does not end with the planning phase and is essential across all stages of the project. Consider revisiting the outreach plan at regular intervals to ensure that community input is consulted throughout the project development process.

Example

The Transform Fresno initiative outlined goals to include the full spectrum of stakeholders to be informed, engaged, and take project development-related leadership and guidance roles. Transform Fresno emphasized community-led transformation and listened to residents to identify key barriers to participation for hard-to-reach communities. Community members were given the opportunity to provide suggestions on how to overcome such barriers and to facilitate broad community participation.

In collaboration with community members, Transform Fresno identified several underrepresented target groups: the Latinx, Black, and Asian populations; young children; older people; people with low educational attainment; people living in poverty; people with limited English proficiency; and workers commuting to the project area. Next, Transform Fresno identified barriers to participation associated with each group, such as limited mobility, concerns over deportation, and historical lack of trust in government.

Engagement activities and strategies to mitigate these barriers were highlighted including hosting/attending an arts and culture event, translation services, door-to-door canvassing, and providing introductory education on issues. Finally, to ensure full opportunity for engagement, Transform Fresno identified additional community partners with established ties to underrepresented groups such as Fresno Barrios Unidos, Tenants Together, senior centers, and local businesses.

In creating its outreach strategy, Transform Fresno actively leveraged CBO relationships while creating space for the inclusion of new community partners. The initiative recognized numerous local civic organizations and advocacy groups such as Fresno Building Healthy Communities, West Fresno Family Resource Center, and Centro la Familia. The City of Fresno used this strong civic infrastructure to guide its proposal for the Transformative Climate Communities Implementation Grant and to create a Community Engagement Collaborative. Anyone who lived, worked, or owned property in the project area was encouraged to participate. Community partners were tapped to engage community members in ways to help connect projects to people.

For its outreach strategy, Transform Fresno clearly identified roles of each party involved and paired them with outreach methods and tangible deliverables. For instance, the outreach strategy calls for the Direct Outreach Community Partner to print materials for distribution, maintain a volunteer interest database, maintain an online community engagement calendar, and administer surveys (Raimi + Associates 2019).

Related Measures

- CCD-3. Conduct a Community Needs Assessment
- CCD-4. Conduct a Community Asset Mapping

CCD-3. Conduct a Community Needs Assessment

Photo Credit: City of West Hollywood / Jon Viscott, December 2017

If existing knowledge on community priorities is outdated, lacks detail, or does not represent the perspectives of marginalized groups, the project proponent should contract with CBOs or other partners to conduct a community needs assessment. A needs assessment asks community members what they see as the most important needs for their group or community. Community needs can vary endlessly, from providing childcare to improving local infrastructure; therefore, needs assessments uncover the key priorities for a local community. Furthermore, needs assessments help engage stakeholders before project development begins.

Ideally, the needs assessment should be led by a CBO, other community group, property business improvement district, or local jurisdiction. The format of a community needs assessment can take a variety of shapes including surveys, conversations, workshops, charettes, crowdsourced mapping, and focus groups. While the needs assessment is likely to be far broader than the scope of individual projects, the needs surfaced and opportunities identified can help to inform and address project design, as well as the conditions of approval from the lead agency.

Additionally, it is crucial to analyze the benefits and burdens changes and investments have on vulnerable populations. Here, a project proponent analyzes a community needs assessment to explore how a project addresses a community's communicated priorities, who and what is impacted by project development, and how to mitigate negative effects and align a project more closely with community priorities.

Key Question: How can the project be designed to help address community needs and priorities?

Applicability

Community and neighborhood planning efforts, as well as very large development projects in areas where this work has not been done.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning

Dimensions of Equity

Successful community needs assessments allow communities to communicate their individual priorities and then see development projects address them. This process helps promote a community's capacity for *self-determination* and can enhance *racial equity*.

Implementation Considerations

- Timing: Allow enough time to collect responses early during the project planning process.
- A local agency, CBO, or other local group should lead the needs assessment, but the project proponent should provide funding or compensation to support the effort.
- A good needs assessment must represent the perspectives and voices of all community members, including those of historically marginalized communities, communities of color, hard-to-reach groups, immigrants, undocumented residents, seniors, and youth. Consider who may be overlooked by online surveys or other outreach methodologies, as well as languages, internet literacy, typical work schedules, outreach fatigue, and other potential barriers to participation. Best practices include meeting community

members where they are, attending meetings of existing neighborhood organizations, and conducting pop-ups at existing community events, gatherings, and festivals.

- Compensate community members for their time, expertise, and local knowledge. Compensation can also help to support broad and more diverse participation.
- Demonstrate clearly to the local community how the feedback provided is being used to inform the project design.
- Make the community needs assessment publicly available.

Example

The San Diego County Community Action Partnership's 2016 community needs assessment demonstrates key components of a comprehensive community needs assessment: detailed community demographic data, robust community engagement, and actionable next steps rooted in community input. In gathering demographic information, the Community Action Partnership (a public agency within San Diego County's Health and Human Services Agency) examined age, gender, race/ethnicity, primary language spoken, residents in labor force and their occupations, and poverty thresholds. Other additional demographic information projects should consider include families with young children, members of the LGBTQIA+ community, and undocumented residents.

Community Action Partnership contracted with Community Health Improvement Partners, a local non-profit, to seek community input on priorities for services. Six local CBOs also participated as subcontractors to help enhance outreach to low-income communities. This demonstrates the good practice of partnering directly with CBOs and paying them for their time, services, community knowledge, relationships, and expertise. Community forums (with live polling features) were held in communities with high concentrations of poverty to amplify their concerns. Surveys (paper and digital) were used to identify and rank community priorities countywide. Outreach materials and content were translated and interpreted as needed into Spanish, Arabic, and Vietnamese.

The results of the needs assessment informed the *2018–2019 County of San Diego Community Action Plan*, which helps to direct the use of Community Service Block Grants as well as other funding, including applying for additional funds to enhance services for low-income communities. (San Diego County Health and Human Services Agency 2017).

Related Measures

- CCD-1. Consult Pre-existing Community Knowledge/Priorities
- CCD-4. Conduct Community Asset Mapping

CCD-4. Conduct Community Asset Mapping

Community asset mapping identifies the people, places, institutions, and services in a community that aim to improve residents' quality of life. Examples of community assets include local gardens, schools, CBOs, hospitals, and parks. They can also include cultural assets such as arts groups, public art, and places of traditional, heritage, or historical value. The format of a community asset map can vary from an actual map that locates

physical assets to a database that organizes a neighborhood's social, economic, and institutional assets. Creating a community asset map not only builds local capacity and knowledge base but also reveals gaps and areas where a project proponent might be able to enhance levels of service or meet missing needs through their project.

Key Question: What are the existing assets, resources, and strengths in this community, and what gaps and opportunities remain to be filled?

Applicability

Community and neighborhood planning efforts, as well as projects costing $250 million or more in areas where this work has not been done.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning

Dimensions of Equity

Identifying and collating community assets helps build a community's *social resilience* by revealing neighborhood resources. Furthermore, publicly available community asset mappings can help promote *community ownership*. They can also help to identify valued assets and resources to be protected from climate change and other hazards.

Implementation Considerations

- Gather feedback from a large sample of residents to capture as many assets as community members can identify. A large sample is also important as people will have different perspectives on what they view as contributing positively to their community.
- Consider the frequency at which assets are identified by community members.
- Make the community asset map publicly available so this knowledge can be dispersed across the community and used by future projects.

Example

California early childhood services and advocacy organization First 5 LA initiated the Best Start effort to develop community-based solutions to ensure neighborhoods are safe, healthy, and happy places for children. As part of its community assessment report, the organization conducted asset mapping to engage community members in identifying existing resources and to help clarify focus areas for new efforts.

During the community asset mapping sessions, residents and service providers engaged in facilitated conversations about the resources, supports, strengths, and concerns in their

community. Participants used color-coded stickers to identify resources on large, printed maps, and were also encouraged to include additional information from their perspectives. All maps were then compiled into a single community asset map that identified fresh food outlets, hospitals, clinics, public schools, places of learning, children's play areas and public transportation. The community also identified unsafe places, sources of pride, and opportunities for change. Key findings from the East LA Best Start Community Asset Map revealed that the area has numerous public hospitals, clinics, and parks, but the community also identified areas for improvement for these assets.

Resources

- Alabama Youth Justice Alliance and the Southern Poverty Law Center: *Unlocking Your Community's Hidden Strengths*.
- *Participatory Asset Mapping—A Community Research Lab Toolkit*.

Related Measures

- CCD-1. Consult Pre-existing Community Knowledge/Priorities

CCD-5. Establish a Community Benefits Agreement

Community benefits agreements (CBAs) are project-specific, legally enforceable contracts between project proponents and the community that explicitly describe the benefits a project agrees to fund or implement in the community. CBAs help ensure residents, particularly those in low-income areas, receive the economic and other benefits from development projects. These contracts help amplify community priorities and outline direct, specific actions for a project proponent to contribute improvements to the local community. CBAs can be particularly important in areas where a new project may increase the risk of gentrification. Sometimes, but not always, community members may support the project in exchange for a CBA, while other projects clearly note that participation in the CBA does not imply community support.

Key Question: What steps can the project take to mitigate potential negative effects on the nearby community, and how can it ensure its benefits flow equitably to underrepresented or marginalized community members?

Negotiating CBAs

Importantly, CBAs are negotiated before a development project goes to the jurisdiction for approval. Typically, a CBA is then integrated into the development agreement signed by the project proponent and the jurisdiction—allowing the CBA to be enforced by local officials and community groups.

CBAs are typically negotiated between a project proponent (i.e., a developer) and a coalition representing a range of community members. It is essential that community groups are authentically representative of the local community to establish the legitimacy of the CBA. CBA negotiations should be transparent and open to as many community groups as possible. All proceedings and agreements should be made publicly available. Following these strategies can help ensure that the project proponent is not intentionally selecting groups with which to negotiate.

When drafting benefits and commitments for a CBA, be sure to address the following questions (Gross, LeRoy, and Janis-Aparicio 2005):

- What is the time frame for the commitment to be fulfilled?
- How will performance be measured?
- Who will monitor performance?
- How and when will information on performance be made available?
- What will happen if the commitment is not fulfilled?

Enforcement

Establishing strong enforcement mechanisms in a Community Benefits Agreement is an essential step for accountability. Effective enforcement measures must lead to real consequences, should a project proponent fail to meet expectations. While each CBA may differ in its enforcement approach depending on project context and location, examples of effective enforcement measures include the following (Santacroce and Weber 2007):

- *Rescission*: Canceling a contract or incentive agreement if terms are not met; Terminates the incentive agreement in the event of non-performance.
  - Important consideration: Note that if rescission is the only remedy in the CBA, the project can breach the agreement mid-term and leave the public with little value.
- *Clawback*: Recovery of all or part of costs if specified goals are not met.
- *Recalibration*: Adjustment of terms to reflect changing conditions; allows agreement to be flexible and not completely terminated if certain aspects change.
- *Liquidated Damages/Monetary Damages*: Additional charges for non-performance; may be proportional to the project proponent's failure.
- *Revocation* of land transfers or land sales.
- *Injunctive Relief:* Court order requiring an entity to do or to refrain from doing a specified act; allows parties to turn to courts to enforce CBA deliverables.
- *Debarment and suspension:* Prohibits the non-compliant company from receiving incentives in the future and/or conducting business with the public agency in the event of a breach; typically in state statute.

Applicability

This measure is recommended for projects costing at least $250 million, particularly those proposed in census tracts where median household income is below the California

Department of Housing and Community Development's 80 percent of area median household income definitions; considered as disadvantaged according to CalEnviroScreen; ranked in the lowest 25th percentile of the Healthy Places Index; designated as a federal opportunity zone; or another metric of income and advantage as determined by the local jurisdiction.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning

Dimensions of Equity

The benefits derived from CBAs can vary across different projects and communities. CBAs have been used to promote workforce development, affordable housing, and green space for underserved communities. Due to their roots in the needs of individual communities, CBAs serve as potent tools to promote *community ownership* and *self-determination*.

Implementation Considerations

Successful CBAs in the long-term require a large, diverse, and organized coalition of groups with strong ties to communities to ensure communities' interests are well-represented. The coalition must stay involved and hold project proponents accountable beyond implementation.

It is essential that CBAs have transparent timeframes for deliverables and include a set of enforcement mechanisms to ensure accountability. A strong CBA has a transparent, inclusive, and accessible process throughout its creation.

Clearly define expectations, roles, and responsibilities for each party included in a CBA. Only assign provisions to organizations that are experienced in the subject matter and have the capacity to meet responsibilities.

Private agreements between community coalitions and a private project developer are free from legal constraints that typically apply to government conditions on development projects. To become enforceable by local officials, CBAs can be incorporated into a development agreement signed between the proponent and local government.

The CBA should establish project progress monitoring systems and clear processes of how to address negative impacts produced by project development.

Other best practices include the following (Gross, LeRoy, and Janis-Aparicio 2005).

- CBA clearly states when a provision kicks in.
- CBA identifies parties and the specific obligations of each.
- CBA outlines a clear timeframe for commitment fulfillment.
- Strong monitoring, oversight, and reporting processes are key elements to of robust enforcement mechanisms.
  - Establish affirmative reporting requirements.

  - Ensure monitoring body has the authority and capacity to investigate complaints of noncompliance through strategies such as records inspection.
  - Required reports should be published at least once per year with a specified due date and be made publicly available.
- Make enforcement mechanisms applicable to third parties and successors of each party to ensure long-term accountability.
  - Contract chains: To ensure obligations transfer to subsequent parties, set up systems that provide enforcement throughout project development and operational phases.
    - » Each business is informed of and agrees to the applicable substantive requirements.
    - » Each business agrees that it will include these requirements in other contracts it enters.
    - » Each business agrees that the community groups, the local government, or affected individuals can enforce the requirements.
- Incorporate the CBA into a development agreement to authorize local government monitoring or enforcement.
- In the event of a CBA breach, specify which other clauses will remain in effect after the contract violation.
- Set up a remedy system to provide opportunities for mediation in the event of a breach.

Examples

2001 Los Angeles Staples CBA

The Figueroa Corridor Coalition for Economic Justice—a broad coalition of over 30 community-based groups, including Strategic Actions for a Just Economy (SAJE), Los Angeles Alliance for a New Economy, and Coalition L.A, as well as hundreds of individuals—successfully negotiated a strong CBA with the $4.2 billion mixed-use Los Angeles Sports and Entertainment District development. The benefits include the following (Partnership for Working Families 2015a):

- Funding to assess community park & recreation needs, and $1 million for park and recreational facilities to meet those needs.
- 70 percent of jobs created in the project will pay the City of Los Angeles's living wage, and consultation with the coalition on selection of tenants.
- Job training and a local hiring program for low-income individuals and those displaced by the project.
- Affordable housing increased to 20 percent of new housing, and a commitment of seed money for other affordable housing projects.
- Standards for responsible contracting and leasing decisions.

A coalition member (SAJE) is responsible for monitoring and tracking compliance. Outcomes have been successful: the developer has met most benefits and exceeded some, such as continuing the local hiring policy beyond the first 5 years. Because the CBA

was approved by the City and entered into the development agreement, it is enforceable by both the City of Los Angeles and community groups.

Building on its successes and movement-building, the Figueroa Corridor Coalition has since evolved into United Neighbors in Defense Against Displacement (UNIDAD) and negotiated many other CBAs to ensure that development is equitable and inclusive, and that local communities will directly benefit (Pastor et al. 2015).

Kingsbridge Armory/National Ice Center CBA, New York

In April 2013, the Knightsbridge Armory Redevelopment Alliance (KARA), a coalition of 25 different local community groups, entered a CBA regarding the redevelopment of the Kingsbridge Armory into a National Ice Center in the Northwest Bronx. The developer, KNIC Partners, agreed to the following outlined in the CBA:

- Contributions to the community:
  - $8 million toward building approximately 52,000 square feet of community space used in any way to which KARA agrees.
  - $1 million per year for in-kind access to ice center facilities, including discounted rates for school children who receive free school lunch.
  - 1 percent of annual gross ice-rink rental revenue up to $25 million, plus 2 percent of any revenue above $25 million for community issues.
- Local hiring, training, and prevailing wages:
  - At least 51 percent of jobs designated for Bronx residents.
  - At least 25 percent of construction employees must be residents who were formerly incarcerated or are currently unemployed or underemployed.
  - Living wages indexed to inflation.
- Local procurement: Majority of all needed goods and services for the development and operation of the ice center would be sourced from local businesses and minority- and women-owned businesses in the Bronx.
- Environmental practices:
  - Developers pledged to attain a Leadership in Energy & Environmental Design (LEED) certification of silver or higher for the project.
  - Developers pledged to incentivize public transportation use, mitigate pollution, and ensure healthy indoor air quality.
  - Developers pledged to provide green space for 20 percent of the whole project site.
  - Developers pledged to provide $10,000 per year to train residents in skills required for work with alternative-energy-generation systems.
- New school construction: If the developer decides to develop an adjoining property, the developer agreed to apply for approval to develop a surrounding area for a school.
- Community involvement: Established a Community Advisory Council as a legal oversight body.

Crucial to the support of this CBA is the high degree of community representation provided by the 25 different local community organizations that helped draft the agreement (De Barbieri 2017; Partnership for Working Families 2015b).

Oakland Army Base: West Gateway Operations Jobs Policy

In 2012, as part of the Oakland Army Base Project, a comprehensive set of jobs policies were developed and agreed upon by project developers, City of Oakland staff, City Councilmembers, and a broad community coalition, Revive Oakland!. These jobs policies were included as terms of the Lease Disposition and Development Agreement made between Oakland and the project developers (Partnership for Working Families 2015c).

To help enforce its resident and disadvantaged worker hiring measures, the Oakland Army Base West Gateway Operations Job Policy outlines clear consequences for the failure of an employer to meet associated requirements. If a large employer fails to comply with the hiring requirements, the employer will pay the City liquidated damages in the amount of $5,000 per job short of the set hiring targets. The Operations Job Policy also details how these damages are to be spent by the City: to support training, referral, monitoring, or technical assistance to advance resident and disadvantaged worker hiring policies (City of Oakland 2012).

Resources

The Partnership for Working Families' *Community Benefits Agreements—A Framework for Success* provides an online step-by-step guide to building a community benefits agreement.

Related Measures

- CCD-3. Conduct a Community Needs Assessment

Inclusive Engagement (IE)

As the previous section touched on the topic of making use of existing community knowledge and priorities, this section seeks to build upon such findings and ensure local communities are heard, represented, and given opportunities to make decisions. Throughout the planning, construction, and operations phases, project proponents should seek to incorporate opportunities for community-led decision making as thoroughly as possible. These steps not only help legitimize the project with community members but can also yield valuable information crucial to a project's long-term success.

Photo Credit: Port of San Francisco, September 2017

Figure 5-3 presents the spectrum of public engagement, which provides a framework for evaluating the degree of community participation, leadership, and empowerment in a public engagement process. Figure 5-3 was adapted from Equity Matters (2015). The spectrum of public engagement was developed originally by the International Association of Public Participation (IAP2) and has since been refined and adapted by advocacy groups, such as the Facilitating Power & Movement Strategy Center.

Figure 5-3. IAP2 Spectrum of Public Engagement

	INFORM	CONSULT	DIALOGUE	COLLABORATE	DIRECT
DESCRIPTION	Project proponent or local jurisdiction initiates outreach and uses a variety of channels to inform community on project development.	Project proponent or local jurisdiction gathers information from the community to inform projects; obtains community feedback on analysis, alternatives, and /or decisions.	Project proponent or jurisdiction engages community to shape priorities and plans; directly works with community throughout process to understand and consider community issues and concerns.	Community and project proponent or jurisdiction share in decision-making authority to co-create solutions together. Partner with community in each aspect of planning, including initial development of alternatives and preferred solution.	Community takes leading role in decision-making and determining strategy with participation and technical assistance from project proponent or lead agency. The community or public has final decision-making.
EXAMPLE	Proponent-led presentations, factsheets, and flyers.	Proponent-led interviews, public meetings, surveys, and focus groups.	Proponent- or agency-led interactive workshops and forums.	Ongoing interactions between community and project proponent in a proponent-led format. Establishing a community advisory/steering committee. Consensus-building efforts, participatory decision-making.	Ongoing interactions between community and project proponent in a community-led format, with support from project or lead agency. Participatory budgeting. Decision-making powers delegated to community advisory/steering committee.

Many interactions between government agencies or project proponents and the community or the public remain at the *informed* or *consulted* level. These interactions can be more one-sided and passive, with community testimony unable to affect real change in project design or policy, and there is often a lack of follow-up with the community to share how their input has been used. Consequently, communities may feel wearied by a constant stream of requests for input with few tangible improvements.

This section offers strategies to help move community engagement from *informed* to *collaborate* or *direct,* and to ensure that community members from diverse backgrounds have ample opportunity to communicate their priorities and concerns and participate in planning and decision-making activities. Government agencies and proponents should actively listen, learn, acknowledge past shortcomings, and make space for community perspectives in plans and documents. Increasing direct participation from community members can help to build equity, community ownership, and local capacity, providing

communities with greater determination over how their environments are designed, built, and developed.

IE-1. Prioritize Outreach to Communities of Color and Underserved Groups

Photo Credit: Capital Region Climate Readiness Collaborative, April 2018

This measure looks at specific strategies to incorporate when attempting to reach underserved groups. Make direct, targeted efforts to reach communities of color and underresourced groups to increase their opportunities for participation/engagement. Consult with community leaders and a variety of CBOs with relationships in the community to determine effective outreach approaches.

Engagement strategies should be diverse and include multiple modes of communication, such as online posts, social media content, posters and flyers, and advertisements in multiple languages across different radio stations, television stations, and newsletters and magazines that are popular amongst target groups. Engagement strategies can also include attending meetings and events hosted by CBOs, other local organizations, and neighborhood associations. Pop-up events across different neighborhoods can also be effective in reaching underrepresented groups.

When engaging with the public, proponents should be mindful of differing levels of subject matter expertise. Proponents should be prepared to provide community members education and background materials on subject matter to facilitate greater understanding and confidence. Proponents should also be prepared to direct community members to resources for additional support. These strategies are far from all-inclusive, and project proponents and community members are encouraged to incorporate strategies based on what works best for their specific communities.

Key Question: How can the project proponent make sure that low-income, underserved, and marginalized communities and communities of color are not excluded from the project development processes?

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning, construction, operations

Dimensions of Equity

Explicit efforts to reach communities of color and frontline groups not typically represented in decision-making structures is an important step in the process of inclusive outreach. Inclusive outreach can lead to a greater *racial justice and equity, community ownership,* and *self-determination* by reducing inequities in representation and decision-making authority.

Implementation Considerations

- Partner with community leaders and/or a CBO. Leverage their networks and relationships to reach groups.
- Outreach is not a one-off, check-the-box exercise, but should be conducted across all phases of project development to increase community input, feedback, and participation.
- Go *to* the community, instead of expecting them to attend another meeting whose importance may not be clear: Ask to get on the agenda of existing community and other local meetings and go to community events.
- Create a welcoming atmosphere and honor the community's history and lived experiences.
- Genuinely listen to community concerns. Be aware that community members may raise a range of issues with the project proponent or local agency; participating staff should be prepared to listen to and acknowledge all concerns and bring information back to the appropriate departments or agencies.
- Develop a long outreach timeframe to reach as many communities as possible.
- Make use of multiple channels and modes of communication to disperse information and updates to a broad audience.
- Employ multilingual content to be more inclusive, for example working with local Spanish (or other language) community newspapers, radio stations, or newsletters.
- Technological platforms are powerful tools to reach broad audiences. However, they should not be the sole outreach method as different groups have different levels of

access to technology. Make use of traditional media sources such as television and radio, as well as flyers and posters at popular community locations (e.g., community center, library, local grocery). Physical outreach events at public spaces (when safe) are also highly encouraged.

- Provide incentives for feedback and engagement that would be of value to residents. Provide compensation for CBO and community partner assistance.
- Be conscious and respectful of cultures and norms.

Examples

Somali Health Board, King County

King County, Washington, has developed a model of community health boards to help improve health in immigrant communities, who may face language, cultural, and other barriers in accessing health care and health information. Based on input from Somali leaders on improving outreach to their communities, in 2011 the King County Department of Public Health helped to create a community advisory board consisting of Somali health professionals and community leaders. Unlike outside government agencies, the Somali Health Board can effectively outreach to Somali immigrant communities in King County, providing health information and education with a cultural lens and from a position of trust (Ali 2018). It also advocates on behalf of the community, develops partnerships with local health services and systems, and grows community leaders. The model has led to the development of other community-led health boards, including those serving the African-American, Eritrean, Ethiopian, Vietnamese, Cambodian, Arab/Iraqi, and Pacific Islander communities (Public Health – Seattle & King County 2019). The health boards operate independently as non-profits but have liaisons with the county public health department.

San Francisco Municipal Transportation Agency Bayview Community-Based Transportation Plan

The Bayview Community-Based Transportation Plan (Bayview CBTP) is a project developed for the Bayview-Hunters Point community in the southeast corner of San Francisco. Decades of disinvestment and institutional racism has left community members of San Francisco's once prosperous and largest Black neighborhood at risk of displacement. The Bayview CBTP is a community-driven planning effort focused on improving the physical mobility and needs for existing residents and businesses. The plan synthesized local knowledge of the community with San Francisco Municipal Transportation Agency technical expertise to create a plan with a list of projects that emphasize walking, public transit, and improving access for underserved groups such as seniors, young people, residents of color, residents with disabilities, and residents of public housing.

The Bayview CBTP partnered with five CBOs to help identify and engage hard-to-reach groups and elevate the needs of vulnerable residents. CBOs were full collaborators on the public outreach plan, co-designed three stages of public engagement events, co-hosted engagement events in the community, reviewed all outreach materials for cultural

competency, clarity, and accuracy, reviewed all Bayview CBTP recommendations for the project, and facilitated a participatory budgeting process.

During the initial community engagement planning steps, residents directed efforts with assistance from the Bayview CBPT team to create an equity index map to help ensure the project would provide the greatest benefit to Bayview-Hunters Point's most vulnerable residents. This equity index map depicted community assets as well as the distribution of vulnerable groups within the community to help prioritize projects. Community members were then asked to develop a scoring system to determine how much the equity index should influence project selection. Importantly, the equity index scoring was also balanced against direct resident input, ensuring that voices left out during the initial equity index creation would still be represented.

The Bayview CBTP team sponsored several pop-up events and met residents at a variety of spaces, including the Bayview-Hunters Point Black Cuisine Festival, the Shekinah Christian Fellowship service, the Lunar New Year and Black History Month Celebration, and the Youth Transportation Summit. Workshops were also launched in collaboration with CBOs to engage Spanish and Chinese languages speakers. All worksheets and display boards were translated into Spanish and Chinese and made publicly available online. (San Francisco Municipal Transportation Agency 2020)

Resources

The California Air Resources Board's California Climate Investments program has developed a summary of best practices for community engagement: *Best Practices for Community Engagement and Building Successful Projects: A Summary from the 2018 Community Leadership Summit*.

Related Measures

- IE-3. Elevate Voices of Underrepresented Groups in Project Direction and Outreach

IE-2. Establish or Join a Community Project Steering Committee

Community project steering committees help shift decision-making power back to the communities where the project is being developed. This power shift facilitates greater community engagement and enhances equity in decision-making. The extent to which a community steering planning committee is invested with decision-making authority can be captured by the spectrum of community engagement, with greater ownership and authority in the process associated with the higher ends of the spectrum (dialogue, collaborate, and direct); see the *Inclusive Engagement* section introduction for more information.

To establish a community steering committee, project proponents should rely upon its stakeholder analysis and outreach strategy (see CCD-2. Conduct a Stakeholder Analysis and Develop a Community-Centered Outreach Plan) and ensure that steering committee members are representative and inclusive of the project area.

Oversight authorities and responsibilities should be granted to a community committee during all phases of a project's development. The community project steering committee *must be able to request information and review a project's performance to satisfy this measure*. Additional actions that a community project steering committee may take include the following:

- Directing and approving community outreach and engagement plans.
- Reviewing and approving construction plans, including any construction activity outside of normal working hours.
- Reviewing and approving proposed road detours and closures, including impacts on transit and active transportation.
- Reviewing and approving agreed-upon project benefits, local hiring provisions, and other project commitments.
- Reviewing project performance.

At the project outset, the project proponent and community steering committee should clearly define the full scope and bounds of the committee's decision-making authority. This establishes transparency and clear expectations and can help avoid the project committee devoting time to decisions and items it cannot influence.

It is also important to keep in mind that steering committees may not be the right structure for every community. Some communities may feel more comfortable with a less formalized organizational structure to discuss, engage with, and direct project progress. Other options could include informal working groups, weekly coffee meetings, or other informal meeting settings. Project proponents could also consider engaging with the community through community coalitions, anchor institutions, neighborhood associations, and collaboratives. The key is to understand what format would be the most comfortable and inclusive for the residents of each community.

Key Question: How can community members provide input and direction to the project development process?

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning, construction, operations

Dimensions of Equity

Establishing or joining with a community project steering committee allows for greater community engagement and relationship building and can yield valuable insights from

community members. Shifting decision-making power to the community is an important step to enhancing a community's degree of *self-determination* during project development.

Implementation Considerations

- Understand that statistics, indicators, and data do not tell the whole story, and that a community's lived experiences should also be part of the picture. Incorporating community members into decision-making structures is an essential step to gain these insights. Ground truth statistics and data with meaningful community engagement.
- Ensure robust and equitable outreach strategies to reach all stakeholders, especially those in marginalized and underresourced groups, and incorporate them into the community project steering committee.
- Participation in community project steering committee should not be restricted to individuals who are eligible to vote in elections—ensure that all residents are able to participate, regardless of status. Recruit participation from undocumented people, people with experiences with the criminal justice system, refugees, permanent residents, and youth.
- Compensate community steering committee members fairly.
- Follow guidance to promote accessibility when it comes to creating and running community project steering committees.
- Respect and understand a community's history in collaborating with developers and local government.
- Clearly define the scope of the committee's decision-making authority and influence.
- Establish local, issue-based implementation working groups.
- Establish conflict resolution processes to ensure a clear system to address issues. A professional facilitator can also help provide support for meetings.
- Establish a clear system for decision-making and voting in the committee (e.g., majority or two-thirds vote?), as well as other governance policies as needed.
- Establish scheduled reporting to community project steering committee on agreed-upon subject areas.
- Ensure Community Project Steering Committee is *provided with educational materials* and given adequate time to make decisions. See IE-5. Educate Community Members on Essential Topics Related to Project.

Examples

Community Steering Committee

As part of Transform Fresno's initial community engagement plan—a robust process required by the Transformative Climate Communities grant that calls for a high degree of community engagement and stakeholder involvement at all phases—the project created a 165-member community steering committee. Meetings were open to the public, and residents were encouraged to participate and become a voting member. Each member of the committee either worked, lived, or owned property in the Transform Fresno project

area. The committee created and voted on the final list of projects in the Transformative Climate Communities grant—demonstrating a high degree of authority in pursuit of community-centered development. This body eventually evolved into the Outreach and Oversight Committee.

Outreach and Oversight Committee

As the Transform Fresno initiative progressed, the project formed an outreach and oversight committee to serve as an advisory body and as a resource for community collaboration and feedback. The outreach and oversight committee is charged with providing overall guidance on implementation and material changes to the projects developed under the Transform Fresno initiative. Importantly, this body provides feedback and guidance on major budget and programmatic changes. Members must have served as voting members on the original community steering committee, either work, live, or own property in the Transform Fresno Project Area, and must not have been part of a project partner organization. (Transform Fresno 2021)

Related Measures

- CCD-2. Conduct a Stakeholder Analysis and Develop a Community-Centered Outreach Plan
- IE-3. Elevate Voices of Underrepresented Groups in Project Direction and Outreach

IE-3. Elevate Voices of Underrepresented Groups in Project Direction and Outreach

Upon identifying stakeholders and researching community needs, ensure that the community project steering committee is representative of the communities the project impacts. Amplify voices of frontline workers, people of color, women, gender-expansive people, LGBTQIA+, people with disabilities, people living in poverty, and underresourced communities by empowering them with decision-making authority and incorporating their representation in a community project steering committee (or another format). Leverage community knowledge and available data to identify vulnerable and underrepresented groups in the project impact area and elevate their priorities. Act on communicated needs and concerns, and report back to the community on how their input have informed the project.

Key Question: How can project proponents help to uplift the voices of underserved, underrepresented, and marginalized community members in decision-making and project development processes?

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning, construction, operations

Dimensions of Equity

The perspectives of underrepresented communities are often left unheard by government and land-use developers. Elevating their perspectives and acting on their concerns is an essential component of *racial justice and equity* work.

Implementation Considerations

- Robust and inclusive outreach efforts are necessary to reach, incorporate, and uplift marginalized communities.
- Research and respect the historical experiences different groups have had with local government and developers. Talk to residents and leaders to learn about community experiences during the 2008 recession or COVID-19, or with wildfires, policing, deportation, and other community traumas. Understand the history and consequences of redlining and racial covenants, if applicable.
- Avoid tokenism and do not expect *individuals* to speak on behalf of an entire group. Recognize that individuals have different perspectives.
- Use appropriate committee structure, especially for people engaged over longer periods of time. These can vary from informal to very formal. Examples include steering committees, regular outreach meetings, social media groups, and coffee klatches.

Example

Recognizing that racism is a public health crisis, King County, Washington, committed to addressing the needs of Black, brown, Indigenous, and people of color in its 2020–2021 budget and policy agenda. As part of its larger priorities, the proposed budget includes $1.6 million for a cross-functional community engagement team and a $1 million reserve for "intentional and meaningful community engagement to co-create anti-racist, pro-equity solutions *with* community" (King County 2020). It also includes $1 million to build an ongoing translation program to ensure that information is available in the six most-spoken languages in the county. To help develop policy and investments, King County also provided $200,000 to 24 organizations serving underrepresented and marginalized communities. The organizations will help to engage their communities to provide input and direction that will guide the county's priorities and anti-racist agenda.

Related Measures

- CCD-2. Conduct a Stakeholder Analysis and Develop a Community-Centered Outreach Plan
- IE-1. Prioritize Outreach to Communities of Color and Underserved Groups
- IE-2. Establish or Join a Community Project Steering Committee

- IE-4. Inclusive Community Meetings

IE-4. Inclusive Community Meetings

Community engagement should be inclusive to all people, regardless of their abilities and needs, and capture diverse values and perspectives. To increase the accessibility of community meetings, the following strategies should be considered.

- *Hold community meetings in familiar spaces*: Meet community members where they are by following a format that is appropriate for the local community and use existing community meeting spaces if possible. Here, it is important to use physical spaces and technological platforms with which community members are already familiar. Look for opportunities to become familiar with the community by attending community events and building long-term relationships with residents.
- *Make community meetings accessible via walking and public transit*: Limiting the time and resources needed to travel to community meetings can enhance participation and increase accessibility.
- *Hold community meetings during times convenient for working members of the community*: Consult with community members to find times that work best for them; weekends and evening are typically most suitable. Respect attendees' time and keep meetings productive and succinct.

Photo Credit: Port of San Francisco, March 2019

- *Provide refreshments:* Meeting times may conflict with community members' opportunities to get food. Provide refreshments to help offset these inconveniences.
- *Provide childcare:* Meeting times may be inaccessible for families, parents, and caregivers. Provide childcare to enhance engagement with these stakeholders.
- *Outreach and meeting materials are accessible:* Meeting materials should be in community members' primary language. Provide translation or interpretation services and conduct outreach in multiple languages to engage a larger group of stakeholders. Use accessible, non-technical language and provide explanations where appropriate. Ensure all materials and information are readily accessible for people with disabilities.
- *Provide monetary stipends/compensation:* Monetary compensation for attendees encourages community members' participation and can help offset costs of attending community meetings.

These recommended strategies are not definitive, and the project proponent is encouraged to create additional strategies in collaboration with community members to ensure accessible meetings suited for their local community.

Key Question: How can the project proponent ensure that all community members, regardless of their capabilities, needs, income, or other characteristics, are able to attend and fully participate in meetings?

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning, construction, operations

Dimensions of Equity

Ensuring accessibility for community meetings enhances the project proponent's ability to reach stakeholders who are traditionally left out of land-use development and decision-making structures. This measure can help promote opportunities for *social resilience, self-determination,* and *equity* for these groups.

Implementation Considerations

- Build relationships with community members and respect community history: It is important to understand the local community's culture, values, political structures, demographic trends, history, and past engagement with the local governments and project proponents.
- Work with local leaders and skilled facilitators with established relationships with community to help organize community meetings.
- To avoid engagement fatigue, provide additional resources as identified by community members to support capacity and participation.

Example

The Neighborhood Mobility Plan for the communities of Thermal and Oasis is designed to meet the needs of residents by increasing active mobility options and enhancing transportation networks in the Eastern Coachella Valley. The plan seeks to promote accessibility, connectivity, and resilience by following a community-driven model of development working in partnership with agencies and other stakeholders. The plan includes several projects, including establishing a long-term network of bicycle and pedestrian infrastructure that connects residents to key resources. Over 70 miles of multimodal pathways—more than ten times the existing amount of pedestrian and bicycle infrastructure—is proposed.

Among other strategies, Riverside County held three community workshops to help formulate the community-based plan. In these workshops, residents identified barriers to walking, bicycling, and transit and offered suggested solutions such as design and

operational changes and the development of public transit route and mode options. In addition, the County conducted a diverse set of engagement activities to increase participation opportunities, including stakeholder meetings, pop-up on-street demonstrations, and mobile research beacon deployments. At these events, residents learned about traffic devices and improvement options, and identified priority areas to site enhanced pedestrian, public transit, and bicycle infrastructure. Times and locations were chosen to maximize accessibility and community turn-out. For instance, mobile research beacon deployments occurred at a local market in Oasis on a Friday and at a church in Thermal on a Sunday. All workshops were conducted in Spanish, the primary language of residents, with English translations. Additionally, food and childcare were provided (Riverside County Department of Transportation 2018).

Related Measures

- IE-1. Prioritize Outreach to Communities of Color and Underserved Groups
- IE-3. Elevate Voices of Underrepresented Groups in Project Direction and Outreach

IE-5. Provide Education on Essential Topics Related to Project

This measure encourages project proponents to provide technical assistance and information on key issues related to the project. Aspects of a project may require a high degree of specialized or technical knowledge. Project proponents should work with CBOs and community members to identify specific topic areas for additional or supporting information. Project proponents should work with a local jurisdiction, agency, or specialized community non-profit to provide assistance and educational materials. For example, if residents have identified improving pedestrian safety and reducing traffic impacts as a priority, a local pedestrian and bicycle advocacy organization may provide education on available street design and traffic control options. Simple, non-technical language should be used to broaden reach.

Key Question: How can local jurisdictions and lead agencies help to build community capacity so that all members are equipped with the knowledge and expertise to make meaningful decisions about the project?

Applicability

This measure is recommended for projects costing $50 million or more.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning, construction, operations

Dimensions of Equity

Providing educational materials to community members not only enhances their capacity for *self-determination* as it relates to making informed decisions, but also increases a community's social *resilience* and builds local capacity by investing in social capital.

Implementation Considerations

- Provide materials in community's primary language. Proponents are also encouraged to offer multilingual materials and translation and interpretation services.
- Avoid use of jargon or technical language wherever possible.
- Depending on the project, long-term educational services may be beneficial. Providing industry-specific information can ensure a community is well-informed about a certain practice or sector in the long run.

Examples

Sacramento Boards & Commission Leadership Institute

The Sacramento Boards & Commission Leadership Institute provides training and education to local community advocates from low-income communities and communities of color to help them successfully navigate the processes of local government and policymaking. The training equips community advocates with technical expertise as well as the language and cultural norms needed to participate in local boards and commissions. Topics covered include structural racism, land use and affordable housing, health equity, transportation justice, and more.

Santa Cruz Housing Conversation Kit

As a part of the City of Santa Cruz's 2017 housing community engagement efforts, the City launched a Housing Conversation Kit program, providing outreach kits to residents interested in engagement activities. The program distributed kits at its kickoff event as well as other community locations, including Toddler Time at the downtown public library, bookmobile stops in two affordable housing communities, the downtown farmers' market, a police department town hall meeting, and City Hall to YOU locations (pop-up events at different neighborhoods where citizens and city leaders and staff have the opportunity to discuss neighborhood-specific issues). Each kit included several cards with a provocative statement about housing to discuss, along with supporting information to provide a quick yet comprehensive overview of housing issues. More than 1,000 kits were distributed in both English and Spanish (City of Santa Cruz 2017).

IE-6. Conduct an Equity Assessment with Community Project Steering Committee

An equity assessment explores how a project addresses and performs across a variety of equity-related indicators. This type of assessment analyzes how a project impacts racial and ethnic groups, how it may enhance or exacerbate equity, and where positive outcomes are likely to be realized during project implementation or other phases.

Race Forward (2009) provides the following guide to conducting an equity assessment:

1. Identify stakeholders: Specify which racial/ethnic groups may be most affected by and concerned with this project.
2. Engage stakeholders: Identify and incorporate anyone missing from the engagement process. Ensure stakeholders from different racial/ethnic groups have meaningful opportunities for input and decision-making.
3. Identify and document racial inequities: Research how different racial/ethnic groups are advantaged and disadvantaged by the project. Gather qualitative and quantitative data to document such inequities.
4. Examine the causes: Critically study causes of inequities and any related trends. Explore how the project impacts or addresses such inequities.
5. Clarify the purpose: Re-examine the project goal and investigate how it might reduce or deepen disparities.
6. Consider adverse impacts: Comprehensively explore negative effects and unintended consequences related to the project. Consider approaches to prevent or minimize adverse effects.
7. Advance equitable impacts: Explore ways in which positive effects or trends can be enhanced through the project.
8. Examine alternatives or improvements: Research and recommend other strategies that might reduce racial disparities in a more meaningful manner.
9. Ensure viability and sustainability: Establish ongoing data collection systems and pursue accountability during all phases of project development.
10. Identify success indicators: Detail how success will be operationalized and measured. Specify indicators that are to be evaluated.

Working with a CBO and community members is essential to develop a legitimate and comprehensive equity assessment. Equity assessments may differ in their scope and processes depending on the project and community but developing a host of community-supported equity metrics for long-term monitoring is a necessary element.

Key Question: How will the project impact equity and related metrics in the local community? How could it improve?

Applicability

This measure is recommended for projects costing $50 million or more.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning, construction, operations

Dimensions of Equity

Effective equity assessments can help a project proponent understand where racial disparities exist and how to prevent negative impacts and/or enhance *racial justice and equity*.

Implementation Considerations

- Promote community decision-making by allowing community members and CBOs to lead when conducting an equity assessment. They often have community-rooted knowledge that a project proponent might miss.
- Provide payment and other resources for community-based organizers and community members to do this work, much as a project proponent would hire a consultant; do not expect them to provide labor for free.
- Grant adequate time and resources to conduct an equity assessment early in the planning phase and dedicate resources for continuous monitoring of equity indicators throughout a project's development.

Example

As part of creating Oakland's 2030 Equitable Climate Action Plan (ECAP), the City of Oakland's 2030 ECAP Equity Facilitator Team—Oakland Climate Action Coalition, Environmental/Justice Solutions, and Blue Star Integrated Studio (the equity facilitator)—were charged with setting up an equitable community engagement process and ensuring that the final plan is equitable in its ability to help reduce disparities in Oakland. The equity facilitator reviewed draft 2030 ECAP language and developed the *Racial Equity Impact Assessment and Implementation Guide* (REIA). In the REIA, Oakland-specific data was collected to provide city staff with a framework to maximize equitable outcomes. The REIA outlines clear approaches to identifying frontline communities, avoid policy blind spots, mitigate or reverse equity gaps that limit access to resources, and monitor and evaluate equity outcomes for reporting back to frontline communities. Key recommendations issued include the following (Tobias et al. 2020):

- Create tailor-made approaches to identify frontline communities.
  - Collect and analyze existing quantitative and qualitative data to illuminate systemic root causes for disparities in climate vulnerabilities and outcomes.
  - Measure baseline conditions for frontline communities over time, noting any gaps and aspirational data needs.
  - Ground-truth assertions with frontline communities and acknowledge blind spots.
- Use Geographic Information Systems mapping to enhance data visualization and accessibility. Make use of community-based data reporting, such as data generated by frontline community members.
- Maximize equitable outcomes.
  - Invite and empower frontline communities to co-design ECAP equity implementing policies and programs.

  - Adopt recommendations from the REIA's Best Practices for Frontline Community Engagement over the 10-year implementation plan.
- Dedicate resources for monitoring and evaluation.
  - Track outcomes, relevant project locations, and where project benefits accumulate, along with demographics of beneficiaries.
  - Track benefits that reach the 25 most-burdened census tracts in Oakland as compared to the City as a whole.
- Streamline and increase communication between City departments implementing the ECAP.

Related Measures

- CCD-2. Conduct a Stakeholder Analysis and Develop a Community-Centered Outreach Plan
- A-3. Evaluate Project Performance with Community Project Steering Committee/Community Based-Organizations

Accountability (A)

Photo Credit: Port of San Francisco, July 2019

Previous process sections outlined strategies to ensure community goals and perspectives are addressed in project development. This section focuses on delivering and implementing community priorities and providing enforcement and accountability strategies for community members. Transparency is foundational in this pursuit and should be followed throughout all phases of project development. Additional measures in this section call for project proponents to create accessible avenues for community members to register their concerns. Measures also focus on empowering community members to evaluate project performance and oversee the enforcement of provisions. Ensuring community members have direct roles in overseeing project development is critical to building project legitimacy and community ownership.

Making use of open feedback loops is a helpful overarching strategy to incorporate community insight into any stage of project development and increase accountability. Open feedback loop processes can be used to build trust with community members and enhance community decision-making in project development. The description of an open feedback loop follows (Jackson et al. 2018).

1. Initial community conversation: Identify community and neighborhood priorities.
2. Co-design data collection: Determine how community members prefer to have their input collected. There are a range of options here, such as surveys and websites

where people can submit input. Co-design both the medium for data collection and the data focus areas.

3. Collect data: Collect community feedback.
4. Second community conversation: Meet with and assist community members to reach consensus on appropriate course-correcting actions in response to feedback collection.
5. Implement: Take course-correcting actions as recommended by consensus in the previous step. Keep community notified of changes and project progress. Track and document changes and results.

The feedback loop can be continued.

6. Co-design second data collection: Co-design a second round of data collection with community members. Data should assess how community members view course-correcting actions.
7. Second data collection: Ensure feedback from community members results in a representative capture of community priorities.
8. Third community conversation: Discuss with community members to determine if action was appropriate and if additional changes need to be made. Follow a similar feedback loop pattern.

Following equitable stakeholder identification and community engagement practices is essential to gather representative feedback from community members. Be sure to show community members how their feedback is influencing project development to build trust. Measures in this section provide additional strategies to ensure accountability in project development.

A-1. Use Participatory Budgeting

Participatory budgeting is a democratic process that allows community members to lead funding allocation for projects by giving them voting powers when deciding how to spend part of a budget. Participatory budgeting is typically used for public investments, and the process begins during the outset of plan and program development. By participating in the budgeting process at every stage, residents can shape project proposals in a way that brings project development closer in alignment with the lived experiences of the local community. According to the Participatory Budgeting Project, a standard participatory budgeting process empowers community members to generate ideas, vote on proposals, and fund winners by following these steps.

1. Design the process: A steering committee that represents the community creates the rules for partnership and engagement plan.
2. Brainstorm ideas: Residents share and discuss ideas for projects.
3. Develop proposals: Volunteer "budget delegates" develop the ideas into feasible proposals with technical assistance from experts.
4. Vote: Residents vote on the proposals that most serve the community's needs.
5. Fund winning projects: The government or institution funds and implements winning ideas.

While the participatory budgeting process outlined above is commonly applied to public budgets, participatory budgeting can be applied to any budget. Overall, participatory budgeting democratizes decision-making power, enhances civic engagement, and tailors projects to community priorities.

Key Question: What would communities identify as top priorities for funding?

Applicability

Public agency-led plans and programs, grant-funded plans and programs.

Scale and Timing

- Scale: Neighborhood/City
- Timing: All

Dimensions of Equity

As a procedural equity tool, participatory budgeting opens opportunities for communities to lead investment in a variety of sectors, enhancing *community ownership* and *self-determination*. Community-led projects can achieve a range of outcomes from strengthening economic resilience to enhancing access to parks, green spaces, and community gardens. See the *Examples* section for case studies on participatory budgeting's impacts on equity.

Implementation Considerations

- Robust community engagement is essential to ensure that underrepresented communities have proper representation in a steering committee and have their voices amplified in decision-making settings.
- Participation should not be restricted to individuals who are eligible to vote in elections—ensure that all residents are able to participate, regardless of status. Recruit participation from undocumented people, people with experiences with the criminal justice system, refugees, permanent residents, and youth.
- Incorporating participatory budgeting during the earliest stages of project planning is essential to capture community priorities and foster collaboration.
- Ongoing participatory budgeting processes provide greater opportunities for community direction and collaboration.
- Private-sector proponents can make sure that their projects are aligned with community priorities identified by existing jurisdictional-scale participatory budgeting processes.
- Technical assistance should be provided to steering committee and community members; see IE-5. Educate Community Members on Essential Topics Related to Project.

- While participatory budgeting can work with any amount of money, larger allocations of funds will increase the likelihood for motivated participation and long-lasting project impact. The Participatory Budgeting Project recommends starting with at least $1 million per 100,000 residents for large municipalities, or $13 to $22 per resident. Many jurisdictions use between 1 to 15 percent of their annual budget. Smaller allocations can be just as worthwhile: in San Jose's Overfelt High School, the participatory budgeting process allocates $50,000 for 2,800 students.

Examples

Oakland

In 2017, Oakland launched its first participatory budgeting cycle that gave residents of City Council Districts 1 and 2 decision-making authority over how federal Community Development Block Grant funds should be spent over the next 2 years. A range of project proposals secured funding, such as programs to provide meals and health services to people who are unhoused and programs to improve infrastructure safety.

Vallejo

In 2012, the first city-wide participatory budgeting process in the U.S. was established in Vallejo. Vallejo stakeholders are tasked with developing project proposals and voting on projects that are sent to City Council for consideration as part of the annual City budget (City of Vallejo 2018). The participatory budgeting steering committee funds a range of projects such as educational programs and community garden improvement programs.

Resources

- The Participatory Budgeting Project provides resources and guides to how participatory budgeting can address issues such as affordable housing, transportation, climate resilience, and equity and inclusion.
- *Organizing Engagement* provides a guide to participatory budgeting.

Related Measures

- CCD-3. Conduct a Community Needs Assessment
- CCD-5. Establish a Community Benefits Agreement

A-2. Establish Incentive and Penalty Provisions for Community Priorities

Clear terms for enforcement are essential when pursuing accountability, and the use of penalties and positive incentives can help ensure project proponents deliver on commitments. These provisions apply to public projects where there is a contract between government and a developer or construction company. One example of a penalty is a clawback provision, or a recapture provision, which requires a project proponent to deliver on an agreed-upon goal, and, if they fail to do so, they must repay a certain amount of public funds. On the other hand, incentives provide additional funds (bonus) to

a project proponent that meets or exceeds an agreed-upon goal. Agreed-upon goals can cover a wide range of outcomes such as the number of union jobs created, long-term capital investment, years in residence requirements, duration of construction, diverse contracting requirements, or other provisions. Incorporating these provisions into contract agreements helps ensure a project upholds obligations and provides taxpayers some protections for public funding.

Key Question: If the project proponent cannot deliver the agreed upon benefits, what redress will be available? Are the benefits being sought reflective of community priorities?

Applicability

Projects receiving public funds.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning

Dimensions of Equity

Penalty and incentive provisions require a project proponent to deliver on an agreed-upon benefit, increasing accountability. Tailoring provisions to the local community's desired benefits and priorities leave this measure with the potential to impact *any/all* dimensions of equity depending on the context.

Implementation Considerations

- Define key terms, metrics, and expectations.
- Clearly establish project proponent's scope of work and define penalties and incentives for agreed-upon metrics and goals.
- Agree to a timeline for achieving agreed-upon metrics and goals.
- Incorporate into the project agreement or contract to ensure it is legally enforceable.

Examples

City of Chicago and Ford Motors

In 2000 Chicago, Illinois, and Ford Motors negotiated a $115 million incentive deal for a new Ford plant, under which Ford would develop an industrial park and the city would develop a 900-acre inter-model freight transfer center. The deal included clawback provisions that required Ford to create at least 500 full-time jobs by the end of 2006 and to maintain these jobs through 2011. Failure to meet these goals would require Ford to pay back a percentage of the financing proportionate to the percentage of jobs that were

not created, and it must also repay the city for infrastructure and road improvements (Santacroce and Weber 2007).

UNIDAD and G.H. Palmer Associates

In December 2010, G. H. Palmer Associates unveiled plans to build a multi-million dollar residential and retail complex on a 9-acre site in South Central Los Angeles. The project proposal included the Lorenzo, a large private luxury housing and retail complex on the site of a hospital. Already struggling with health and environmental disparities, most local residents would not be able to afford the Lorenzo and were concerned over the replacement of a medical site with luxury housing. As a result, the UNIDAD coalition launched its Lorenzo campaign. With strong organizing from activists, community leaders, and community members, in early 2011 UNIDAD and Palmer Associates negotiated a ground-breaking fully private $9.5 million community benefits agreement. UNIDAD won several provisions, including a 7,500-square-foot community health clinic that would operate rent-free for its first 20 years, a $2.1 million contribution to the clinic, and affordable housing contributions, among others (Pastor 2015).

To help guarantee that the local community can realize the benefits won through the CBA, UNIDAD installed essential enforcement mechanisms, including $140,000 to fund CBA compliance monitoring. For instance, the CBA stipulates that if Palmer fails to meet its local hiring or at-risk hiring goals, the company would pay liquidated damages to the Community Benefits Fund at the value of $168 for each work-day by which performance fell short (Partnership for Working Families 2011). There are also similar protections for living wage provisions. UNIDAD also incorporated a crucial severability clause to bolster the entire CBA. This clause allows the remainder of the agreement to remain in full force and effect, should a court find any other term, provision, or condition of the agreement to be invalid, void, or unenforceable.

Strong legal capacity and an effective legal strategy were critical success factors for UNIDAD against a developer that had previously successfully sued the City of Los Angeles over affordable housing requirements. UNIDAD also benefited from its coalition members' seasoned history and experience organizing in South Central Los Angeles.

Related Measures

- CCD-5. Establish a Community Benefits Agreement

A-3. Evaluate Project Performance with Community Project Steering Committee/Community Based-Organizations

The project proponent should develop reports in collaboration with the community project steering community or CBO to evaluate progress at every stage of project development, centering around agreed-upon focus areas and data metrics. Essential data for a comprehensive evaluation includes indicators on demographic and geographic characteristics as well as personal experiences from communities in the project impact area.

Quantitative data and qualitative data rooted in community insight should be used to create metrics for project evaluation.

Potential Evaluation Metrics—Specific Metrics will Depend on Project Type

- Cost-benefits assessment: Compare societal benefits against anticipated costs, including not only financial costs and benefits but also costs and benefits for the environment, air quality, and public health, for example.
- Project performance:
  - Affordable housing units created.
  - Percent of contracts with local vendors and businesses from marginalized and low-income communities and communities of color.
  - Sustainability metrics and performance (e.g., support for transportation justice and air quality improvements).
  - Other agreed-upon targets, such as financial contributions to community groups (as agreed upon in a CBA for instance).
- Management:
  - Percentage of employees in management-level positions who come from local underrepresented racial and ethnic populations.
  - Percentage of employees in management-level positions who identify as women or gender-expansive people.
  - Percentage of employees in management-level positions who identify as LGBTQIA+.
- Staffing:
  - Percentage of employees in staffing positions who come from local underrepresented racial and ethnic populations.
  - Percentage of employees in staffing positions who identify as women or gender-expansive people.
  - Percentage of employees in staffing positions who identify as LGBTQIA+.
  - Percentage of employees making at minimum a living wage with benefits such as healthcare, paid time-off, and sick leave.
- Equity Assessment:
  - Analyze the distribution of positive and negative impacts associated with the project across different groups.

Potential Data Sources

- Quantitative Data:
  - Environmental and air quality data
  - Environmental justice screening tools
  - Social vulnerability screening tools
  - Census economic and social data
  - Jobs data
- Qualitative Data Collection Strategies:
  - Workshops
  - Surveys

  - Interviews
- Other:
  - Community-based participatory research methods
  - Community-level data collection

Ideally, project evaluation reports should be conducted by a third-party evaluator, working in conjunction with the community project steering committee. The topics covered in each report will vary depending on agreed-upon data metrics; however, each report should cover at minimum successful activities, takeaways, and areas for improvement.

Key Question: How has the project proponent delivered on its commitments and metrics? Where is the project exceeding targets, and where is the project falling short and in need of remedies?

Applicability

Recommended for projects with a budget of at least $250 million.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: All

Dimensions of Equity

Evaluating project performance with a community project steering committee centers the local community in determining the overall performance of a development project. This practice also helps to ensure accountability and compliance by identifying where projects fall short of their equity targets and allows project proponents to identify and act on community concerns. Furthermore, coupling project performance with accountability measures builds the local community's degree of *self-determination*.

Implementation Considerations

- Schedule reports to ensure transparency and accountability in project's operational plan.
- Ensure access to agreed-upon data metrics across a project's development.
- Coordinate project evaluation performance with accountability measures.
- Make results of project performance assessment publicly available.
- Conduct hypothetical scenarios and prepare for "what if" scenarios to enhance project adaptation.

Example

To ensure community oversight of the implementation and operations of the Kingsbridge National Ice Center, a community advisory council was created in the Kingsbridge CBA. This body is a working group of 11 community representatives with broad monitoring and decision-making authorities. For instance, the advisory council may request the project proponent to make capital improvements from funding allocated through an $8 million initial contribution fund (Partnership for Working Families 2015b).

The community advisory committee is also charged with monitoring and reviewing the developer's local hiring and training initiatives at least annually. The CBA requires that on a quarterly basis each employer notifies the community advisory council of the following.

- The number of targeted job applicants hired (those who are underemployed, unemployed, recipients of public assistance, previously incarcerated individuals, people with disabilities, veterans, young people, seniors, and members of minority groups).
- The number of independent contractors, full-time employees, and total employees employed during the prior quarter.

Employers must retain these records for at least 7 years and grant the community advisory council the authority to request and review these documents. If an employer fails to meet requirements outlined in the CBA, the council may direct an employer to take corrective action; the CBA includes a hiring corrective action plan. If an employer fails to complete the corrective action plan, the CBA grants the advisory council and each organization of the coalition the authority to seek an additional remedy available at court or in equity, including specific performance. In terms of the CBA's local procurement plan, the community advisory council also has the authority to appoint an independent monitoring agency to assess progress toward meeting targets.

Related Measures

- CCD-5. Establish a Community Benefits Agreement
- IE-6. Conduct an Equity Assessment with Community Project Steering Committee
- A-2. Establish Incentive and Penalty Provisions for Community Priorities

A-4. Establish Clear Points of Contact

A core tenet of transparency is creating reachable avenues for the public to contact project proponents. This measure calls for project proponents to establish clear, accessible hotlines, websites, social media, email, and physical locations/mailing addresses to expand contact options for the public to register complaints and ask questions. Furthermore, during early stages of project development, clear points of contact can broaden and deepen the reach of the project's community engagement strategy. Post clear information detailing channels for communication and ensure that public inquiries are responded to promptly.

Key Question: How can community members quickly and easily contact project proponents to share concerns and provide feedback?

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: All

Dimensions of Equity

Clear contact information can help address issues related to *public health, air pollution, walkability & bike-ability,* and boost the *social resilience* of the local community during different phases of project development.

Implementation Considerations

- Contact information and services may need to be provided in multiple languages based on demographics in the local community.
- Consider partnering with CBOs to help communicate contact information across the community.
- Follow up with community members who register complaints to evaluate how the project is addressing the concerns.

Example

Non-available.

Related Measures

- A-5. Public Disclosure of Project Commitments
- CE-3. Post a Clear, Visible Enforcement and Complaint Sign

A-5. Public Disclosure of Project Commitments

The project proponent will make publicly available all commitments to improve equity, diversity, health, climate change and resilience, and other benefits. This would apply for both projects with and without a community benefits agreement. Commitments should be included in a project proponent's agreement, other agreements, or other applicable documents, as well as maintained on a website. It should also include clear goals, performance metrics, timelines, contact information, and responsible parties. Project information, plans, potential impacts and benefits, and other information should also be included to help provide education and information. Translations should be available in the languages most widely spoken in the community.

Key Question: How can the public learn about project commitments and targets to help track and provide public monitoring on progress?

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: All

Dimensions of Equity

Public disclosure of a project's commitments, in simple and clear language, is important for accountability and transparency. Enhanced, widespread community knowledge and awareness of a project's commitments can help to support public monitoring, progress tracking, and oversight to ensure that commitments are met. This can lead to greater *community ownership and self-determination,* as well as greater equity and community empowerment.

Implementation Considerations

The project proponent should coordinate with the community steering committee to ensure that residents know where to find project commitments. An easily accessible location may be the website of the community benefits coalition or CBO. This should also be accompanied by updates on project progress toward metrics, as well as points of contact and channels of communication to address questions and concerns. In addition, relevant conditions of approval should also be included on the website to streamline information accessibility and transparency.

Example

Non-available.

Related Measures

- A-3. Evaluate Project Performance with Community Project Steering Committee/Community Based-Organizations
- A-4. Establish Clear Points of Contact

Outcome Measures

A new land use project can alter the existing community, for better or for worse. Wealthier, well-resourced communities have the power and capacity to influence the processes of local governments, planning commissions, and public hearings and are

often able to alter or reject proposed projects based on their preferences. Due to historic and structural inequities, low-income, underresourced, and marginalized communities often lack access to these same opportunities or have their concerns ignored and overlooked. The outcome is that underresourced communities must expend more time and effort to access education, jobs, convenient mobility choices, safe homes, affordable and fresh groceries, and much more.

While structural inequities and racism should be addressed at the policy and plan level, it is possible and desirable for each individual project to strive to maximize its positive outcomes and benefits for the surrounding community. This is more so if a project is proposed for a community that experiences disproportionate air pollution, or lacks tree canopy, parks, high-quality housing, and other amenities that are critical social determinants of health. While the previous section focused on strategies to expand community participation and decision-making in the process of project development, this section recommends strategies for projects to improve their outcomes for the community. These outcomes range from the temporary – construction emissions – to long-lasting impacts, such as the provision of healthy neighborhoods, economic opportunities, inclusive community resources, green spaces, affordable housing, and protection against climate impacts. By incorporating these measures, projects can help to address chronic under-investment and help to build up healthy, livable communities throughout California.

Construction Equity (CE)

Photo Credit: Richard Masoner, February 2011

While construction is generally a temporary state, its impacts on communities can be consequential and long-lasting. The construction sector as a whole is responsible for negative impacts on community experiences with noise, access, air quality, and quality of life, especially in growing neighborhoods. Statewide, off-road vehicles—such as bulldozers, backhoes, and graders—are responsible for nearly a quarter of particulate matter (PM) emissions and a fifth of nitrous oxides (NOx) emissions from mobile diesel sources (CARB 2007). Construction also generates carbon monoxide, sulfur dioxide, fugitive dust, reactive organic gases, volatile organic compounds, and GHGs from disparate sources and activities such as on-road haul trucks, off-road heavy-duty equipment, soil disturbance, grading, asphalt paving, and the application of architectural coatings. As a result, mitigation and conditions of approval can be difficult to enforce, with multiple contractors and trades working across different construction phases. Equipment breakdowns and shortages, as well as unplanned delays, can lead to dirtier engines or dustier construction sites than originally anticipated in construction plans.

This section is intended to offer communities and lead agencies a non-exhaustive list of considerations for lessening the disruption and impacts of the construction period on communities, as well as empower communities to ensure laws are fairly enforced.

Key Indicators: While all communities can benefit from these measures, communities with sensitive populations and socioeconomic challenges would especially benefit. Relevant CalEnviroScreen indicators include: Asthma, Cardiovascular Disease, Low Birth Weight Infants, Poverty, Linguistic Isolation, Housing Burden, and Educational Attainment. Relevant Healthy Places Index indicators include: Above Poverty, Housing Habitability, Asthma Emergency Room Admissions, Coronary Heart Disease, Chronic Obstructive Pulmonary Disease, Heart Attack Emergency Room Admissions, Children, and Elderly.

Cross-Cutting Guidance

Construction sites are dynamic places, and it can be difficult for instructions and information to be disseminated to all relevant persons, or for a plan to foresee and appropriately address all issues. We recommend incorporating the following into any measures chosen.

- **Regular community check-ins**: Establishing a standard, open channel of communications is essential to allow the community to give the project proponent real-time feedback on the construction plan as it is implemented across different construction phases. The project proponent may also use the channel to communicate any changes. The feedback process should allow for additional enforcement as well as amendments to the construction plan, such as if nuisance issues become a problem. The community should be viewed as an ally in ensuring the project proceeds with minimal disruption to both the construction schedule and the community.
- **Construction equity requirements included in bid specifications and contracts**: Specific requirements, such as guaranteed bike lane access or speed limits for haul trucks, should be included in bid specifications and contracts. Contracts should also include financial penalties for non-compliance if contractors fail to adhere to policies that support public health and community priorities during construction.

CE-1. Create a Construction Plan with Community Input

This measure creates a construction plan that is responsive to community input, reflecting community concerns and priorities. The plan should include construction hours, duration, access closures, detours, noise, dust, parking, deliveries, lighting, emissions, truck routes,

and other potential impacts and nuisances that may affect the community. The plan should also include agencies responsible for enforcing the plan and a point of contact in case aspects of the plan fail to be implemented or are ineffective. As noted by Jose Richard Aviles, "The construction phase tends to be the longest, most painful part of a project for the community—what would it look like for planners to build an engagement strategy for that phase?" (Aviles 2020).

Applicability

Projects involving construction.

Scale and Timing

- Scale: Project/Site
- Timing: Planning

Communities or Issues Addressed

Construction plans are often driven by what is most expedient for the project, and not necessarily what is best for the community. Plans also tend to be drafted in isolation of other nearby projects. In addition, communities may not be familiar with available enforcement options to reduce construction activity impacts. A construction plan developed jointly with the community can help to address community perspectives and concerns before any work takes place. While project proponents should research and identify any sensitive sites (such as schools, senior residences, or playgrounds) in advance, community participation can provide additional ground truthing and refinement of local needs, and express preferences in accommodating the construction process (for example, a shorter, more intensive construction process or a longer, less intensive one).

Dimensions of Equity

Community members are knowledgeable about their neighborhood and can help direct traffic and impacts away from sensitive areas, improving *public health* and minimizing disruptions to daily life. Increasing community participation in construction planning supports greater *self-determination*.

Implementation Considerations

Construction plan discussions with the community need to present meaningful choices that reflect community priorities. Jurisdiction staff and the project proponent should be thoughtful about these issues, and, especially for detours, hours, and duration, present a range of options for discussion. If only one plan is presented and community input would not change the plan, this measure cannot be utilized.

Construction plans should include the following: set construction hours, duration, access closures, detours, allowable noise, dust, parking, deliveries, lighting, emissions, truck routes, and other potential impacts and nuisances. Heavy-duty routes can be

planned to avoid residential neighborhoods and sensitive land uses such as daycares, schools, and senior residences. It should also include penalties for violations.

It is strongly recommended that these outcome measures be combined with the *Process Measures* in this chapter, especially the *Inclusive Engagement* measures, so that the construction plan may be effectively discussed with the community. This is especially important for larger projects, multi-year projects, and/or projects that impact the public right-of-way (i.e., sidewalks, bicycle lanes, and streets).

In areas with nearby populations, the plan should pay particular attention to PM emissions, such as from dust and diesel exhaust. Most air districts provide guidance related to dust control and reducing diesel particulate matter.

Example

LA Metro's Purple Line extension required street closures and night work. Regular meetings with the community resulted in changes to the project practices, such as sound training, sound blankets, and moving loud work to the daytime. The construction schedule also changed during the COVID-19 pandemic, when it was deemed preferable to close Wilshire Boulevard continuously during the lockdown for a shorter duration instead of intermittent closures over a longer period.

Resources

- *Planning Healthy Places*: The Bay Area Air Quality Management District (BAAQMD) provides best management practices to reduce emissions as well as exposure for construction (pages 25–26) in this guidebook for addressing local sources of air pollutants in community planning.
- The Sacramento Metropolitan Air Quality Management District provides best management practices for various construction phases.
  - Basic Construction Emission Control Practices (Best Management Practices)
  - Enhanced Onsite Exhaust Controls
  - Enhanced Fugitive PM Dust Control Practices

CE-2. Ensure Active Modes Access During Construction

The project will maintain pedestrian, cycling, and transit access along street frontage during construction. Any pedestrian detours will not require crossing the street. Bus stop relocations should be no more than two blocks away, with clear signage and a map at the original stop directing passengers.

Applicability

Projects with construction that infringe upon the public right-of-way.

Scale and Timing

- Scale: Project/Site

- Timing: Construction

Communities or Issues Addressed

Construction projects often temporarily close sidewalks and bike lanes, forcing vulnerable users into dangerous situations in the vehicle lanes or creating burdensome detours. Closures are often not coordinated with other projects, leading to dangerous or incomplete active transportation networks. This measure seeks to maintain safety and convenience for active transportation users for the duration of construction.

Dimensions of Equity

Ensuring safe, sustainable modes maintains *active transportation/walkability and bike-ability.* Communities with low vehicle ownership rates and limited mobility options are often put into dangerous situations due to construction sites, leading to possible traffic injury or inconvenient, ill-marked detours. Maintaining transit stops also ensures *transportation access*.

Implementation Considerations

The project should ensure construction deliveries do not create safety conflicts with pedestrian and cycling paths of travel. A solid barrier should be used if the pedestrian or cycling path is in-street. Construction workers often use on-street parking, which can cause conflicts with transit stops and local business. If the project is replacing a vacant lot, look for desire paths, which indicate existing routes used by the community; these travel patterns should be taken into consideration when designing both the construction access plan as well as circulation patterns after the project is operational.

Example

For a construction project on Broadway, the City of Oakland required the placement of protective barriers for both sidewalks and bike lanes rerouted into the street (Rudick 2020). Unlike in many construction projects, the contractors provided K-rail to the left of the bike lane, providing cyclists a physical barrier from vehicle traffic. Additional dividers for the rerouted walking path protected pedestrians from both bicycles and construction equipment, providing greater safety for users.

The City and County of San Francisco provides clear guidance on sidewalk closures, transit station access, and bike lane access during construction. Contractors are required to provide, at minimum, a 4-foot wide clear path of travel on any sidewalk at all times, and any projects that cannot do so requires a special permit (San Francisco Municipal Transportation Agency 2012). If pedestrians must be routed into the parking lanes, a barrier must be used. San Francisco also requires that construction projects not block or impede any transit operations or movements into transit stops. Contractors may submit a request for a temporary bus stop relocation, and they must provide signs and may be required to install temporary benches.

CE-3. Post a Clear, Visible Enforcement and Complaint Sign

The project will have conspicuous signs at the fence line listing hotline numbers for potential nuisance complaints and agency responsible for enforcement. The sign should be in clear, plain language (example: Dust problems? – Call Air District at xxx, Construction before 6am or after 8pm? – Call City at xxx, etc.).

Applicability

Projects with construction.

Scale and Timing

- Scale: Project/Site
- Timing: Construction

Communities or Issues Addressed

Enforcement of nuisance issues—which includes excessive dust, noise, light, pollution, or other inconvenience or annoyance impacting other people—tend to be complaint-based. Ensuring that all communities have knowledge of expected parameters of construction and access to reporting resources is necessary to minimize disruption and harm during the construction process.

Dimensions of Equity

Providing clear contact information and a means of solving a problem related to construction can increase *transparency* and *accountability* and increase community members' positive interactions with and trust in local government.

Implementation Considerations

Provide translations in communities where other languages are widely spoken, which may be reflected in CalEnviroScreen's Linguistic Isolation indicator and the American Community Survey and should be reviewed with community members during construction plan development, as many languages are not represented in surveys. Larger projects, or projects on multiple street frontages, will need multiple signs. Include multiple methods of contact for each enforcing agency, such as phone, email, social media, or website.

Example

The City of Los Angeles provides a list of good neighbor construction practices, containing requirements regarding street access, street closures, noise, debris and cleanliness, and allowed construction hours. The City also provides the agency responsible for enforcement for each requirement (Los Angeles Department of Building and Safety 2015).

CE-4. Portable Indoor Air Filtration for Nearby Residents During Construction

The project proponent will provide indoor air filtration for the duration of the construction project to potentially impacted residents and businesses. The project may either upgrade or equip heating, ventilation, and air conditioning (HVAC) systems to use MERV-13 or higher air filters capable of at least 0.5 air exchanges per hour, or provide California-certified portable air-cleaning devices. Residential users should be provided with at least one air-cleaning device per occupied bedroom, with sufficient air flow to complete at least two air exchanges per hour. Residents will be trained on their use, optimal placement, and are encouraged to move the air-cleaning device(s) to where they will be breathing. High-efficiency, appropriately sized portable air-cleaning devices can remove 30 to 60 percent of air particles, and in some cases up to 90 percent (CARB 2017).

Applicability

- Projects using diesel on-road trucks with a gross vehicle weight rating over 14,000 pounds using an exemption from the California Air Resources Board's (CARB) Truck and Bus regulation (such as Low-Use Exemption or a Governor's Emergency Order).
- Projects in locations with harmful soils.
- Projects where construction activity is likely to cause dust to impact adjacent or nearby occupied land uses.
- Projects involving demolition or extensive site preparation.

Scale and Timing

- Scale: Project/Site
- Timing: Construction

Communities or Issues Addressed

Even with carefully selected measures, construction activity can still impact nearby residents due to the amount of equipment involved, especially for large projects or in areas where residents are downwind of construction. Construction emissions can also have a greater impact on low-income residents, who are more likely to live in older homes or apartments, with more air leakages that leave them exposed to outdoor air quality. Renters, who may be more likely to be low income, also have less control over their building conditions or access to the HVAC system. This measure acts as an additional line of protection, filtering dust, diesel exhaust, and other PM generated by the project. Consider using this measure in areas with particularly harmful soils, such as areas with naturally occurring asbestos, lead contamination, or Valley Fever spores.

Dimensions of Equity

Providing indoor air filtration to impacted residents improves *public health* and can also mitigate indoor *air quality* impacts.

Implementation Considerations

This measure requires windows to be closed to be effective, so may be less effective in locations with mild climates or for buildings without HVAC systems. Resident training is key for success; all training and educational materials should be available in multiple languages based on community input and available data. Replacement filters need to be provided in sufficient quantities to last through the construction phase. The project proponent should also consider providing assistance throughout the construction phase with maintenance and filter replacements. Air filters may increase utility bills for residents, so a stipend may be appropriate.

This measure is not a replacement for emission and nuisance-control practices and should complement local and state regulations, mitigation measures, and conditions of approval.

Example

For construction projects built under the UC Davis Sacramento Campus 2020 Long Range Development Plan update, the prime construction contractor will implement air pollution exposure reduction measures for nearby residents in areas where projected cancer risks exceed 10 per million. UC Davis will provide financial assistance for residents to purchase up to two MERV-15 air filters per year or a portable home air cleaner if the home lacks a compatible HVAC system. (UC Davis 2020.)

Resources

- U.S. Environmental Protection Agency's (U.S. EPA's) *Guide to Air Cleaners in the Home 2nd Edition*
- CARB's List of CARB-Certified Air Cleaning Devices
- *Planning Healthy Places*: This resource from BAAQMD provides guidance on air filtration use to reduce exposure for sensitive receptors.

CE-5. Air Quality Monitoring and Response Plan

The project proponent will commit to fence-line monitoring of air pollution during the construction phase and will take corrective action to modify or limit construction activities if pollutant levels exceed the ambient air quality standards. Community input is critical to determine preferred response and redress actions in advance, so that when air quality standards are exceeded, the project proponent can immediately implement corrective actions. Potential redress actions include eliminating idling of diesel-powered equipment; suspension of excavation, grading, and demolition activities when wind speeds or the daily air quality index (AQI) exceeds a certain threshold; limiting simultaneous occurrence of multiple construction phases; lowering speed limits; adding more freeboard in haul trucks; and increasing watering of exposed surfaces, such as unpaved access roads or graded areas, ideally with recycled or reclaimed water.

Applicability

- Locations with harmful soils near other occupied land uses.
- Construction includes demolition, simultaneous occurrence of two or more construction phases, extensive site preparation, or extensive material transport.

Scale and Timing

- Scale: Project/Site
- Timing: Construction

Communities or Issues Addressed

This measure may be particularly applicable in communities already disproportionately burdened by air pollution, as based on their indicators in CalEnviroScreen or the Healthy Places Index. Some projects, such as landfill remediation, necessitate disturbing soils that may put nearby receptors at risk.

Dimensions of Equity

Continued air monitoring at a construction site, particularly if the data is available in real-time to the public, can increase *transparency* and *accountability* for land use development projects, while also supporting *public health*.

Implementation Considerations

An air quality monitoring plan should consider target emissions for monitoring as well as meteorological data. The plan should ideally also include a publicly accessible platform to share real-time as well as historical air quality data and connect to other local air quality monitoring efforts. If real-time data will not be available, the plan should work with the community to determine preferred reporting intervals and delivery formats. Multiple monitors may be required for appropriate coverage. Monitoring should begin before construction activities start to understand baseline air pollutant levels. Once construction begins, monitoring should be active both during and outside of core construction hours to establish a control for comparison. The plan should also set action levels at which construction activities are altered or limited. Community input (see *Inclusive Engagement*) and consultation with the local air district are necessary to make these determinations.

Example

City of Folsom Clean Closure Work Plan: Corporation Yard Landfill

The City of Folsom conducted a clean closure (removal of waste to another location) of a 4-acre landfill in their corporation yard. The environmental document required that an air monitoring specialist, independent of the contractor, would implement a monitoring program for methane, total VOCs, hydrogen sulfide, dust, metals, asbestos, and meteorological parameters during construction. The plan included actions that the contractor would take if air quality levels degraded below appropriate levels.

BNSF Sangamon Right-of-Way Air Monitoring Plan

BNSF (a railroad) conducted removal activities along South Sangamon Street in the City of Chicago, Illinois. An Air Quality Monitoring Plan was created to monitor for fugitive dust from project activities. The plan committed to real-time air monitoring and the implementation of additional fugitive dust mitigation measures if PM2.5 concentrations exceeded set action levels.

Resources

- CARB's Community Air Protection program includes resources on how to develop and implement a community-driven air monitoring program.
- *Planning Healthy Places* and *Warehouse Projects and Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act*: These resources, from BAAQMD and the Office of the Attorney General, respectively, contain construction best practices and example construction ordinances that can be consulted for potential response actions if air quality standards are exceeded.

CE-6. Provide Funds to Businesses Impacted by Construction Activities

The project will provide financial assistance to businesses impacted by construction activities and consequently see a decline in revenue. Financial assistance may be limited to fixed operating expenses, such as payroll, rent or mortgage, utilities, and insurance.

Applicability

Projects where access to businesses are restricted during construction—typically, public transportation projects.

Scale and Timing

- Scale: Project/Site
- Timing: Construction

Communities or Issues Addressed

Small and local businesses typically have less available operating capital than their national counterparts and are typically less able to withstand temporary loss-of-business due to construction impacts. Many small businesses also have limited ability to transition to online sales or to increase marketing as a response strategy to construction disruptions.

Dimensions of Equity

Small and local businesses provide community identity, gathering places, and services. Small businesses also return more money into the local economy. Keeping small businesses afloat during the construction period helps to ensure the new project will benefit from an intact neighborhood and supports local *economic resilience* with the continuity of employment opportunities.

Implementation Considerations

Funds can be provided to businesses based on a percentage of their losses and may be capped at a certain amount. Some small businesses may not have sufficient record-keeping to demonstrate years of sales or income, so strict documentation requirements may exclude some impacted businesses.

Example

The Los Angeles Metro operates a Business Interruption Fund that provides financial assistance to small businesses located in areas impacted by transit construction projects. The financial assistance covers fixed operating expenses such as utilities, rent or mortgage, payroll, insurance, and other documented expenses. Funding is limited to $50,000 or 60 percent of operating expenses, whichever is less. Businesses must have at least 2 years of continuous operating history, be solvent, provide financial records, and be in good standing with all tax and licensing authorities. Information is available in English, Spanish, Korean and Japanese, based on the demographics of the construction location. Six months after grant award, 94 percent of recipient businesses remained open, and 1 year after receiving the grant, 85 percent of businesses remained open.

Public Health and Air Quality (PH)

As established by extensive research and residents' lived experiences, low-income communities and communities of color are disproportionately burdened by air pollution, with lasting health impacts.

Marginalized communities are more likely to be located near highways, railyards, warehouses, ports, oil and gas facilities, and other industrial sources—or rather, these industrial facilities are more likely to be placed in and near communities of color. Over half (57 percent) of facilities covered by California's cap and trade program are in or within a half mile of disadvantaged communities, including 15 out of 20 refineries, 5 out of 9 cement plants, and 65 percent of other combustion sources – including facilities that produce a range of toxic chemicals (OEHHA 2017). Across the U.S., Black communities are exposed to 1.5 times more particulate matter 2.5 (PM2.5) than the population average, and communities of color 1.3 times more (Mikati et al. 2018). Communities of color with higher levels of racial isolation also experience higher levels of ozone and PM2.5 (Bravo et al 2016), as well as exposure to airborne toxics and its associated cancer risks (Morello-Frosch and Jesdale 2006). The severity of discrimination appears even at the particle level: Black, Latinx, Asian, and low-income populations were up to 150 percent more exposed to toxic components of PM2.5,

including aluminum, sulfates, vanadium, nickel, nitrates, and zinc, than white populations—even in areas that meet federal air quality standards (Bell and Ebisu 2012).

Toxic air outside the home translates into toxic air inside the home. Low-income residents and residents of color are more likely to live in homes with elevated indoor levels of NOx, PM2.5, and compounds such as benzene, chlorinated chemicals, and lead as result of aging and dilapidated housing conditions, air leakages, inadequate or non-existent ventilation systems, smaller living spaces, and other challenges (Adamkiewicz 2011). Moreover, poor housing conditions and the lack of ventilation/HVAC systems can translate into exposure to hazardous levels of wildfire smoke – an increasingly urgent issue as California endures catastrophic wildfires year after year. Wildfire smoke can be up to 10 times more harmful to human health than ambient PM2.5, leading to significant increases in hospital admissions (Aguilera 2021). Low-income and outdoor workers, such as in the agricultural and construction industries, especially undocumented people, are particularly at risk of wildfire smoke and are often overlooked by local, state, and federal disaster response and relief programs.

A lifetime of breathing polluted air, coupled with systemic disparities in healthcare, transportation, housing, education, access barriers, green spaces, and resource availability, has consequences. Long-term exposure to PM2.5 is far deadlier – up to three times more – for Black, Asian, Latinx, and low-income populations than the general population (Di 2017). Race matters more than wealth: Even at higher income levels, Black people had higher risks of deaths from PM2.5 than the general population or lower-income white people, suggesting that systematic racism in the siting of polluting sources is at play (Di 2017). Extreme heat and the climate crisis will only make matters worse, as mortalities associated with PM2.5 increases with warmer temperatures (Kioumourtzoglou et al. 2016). Extreme heat itself is an environmental justice issue: low-income communities and communities of color are more likely to lack tree canopy, parks, and green spaces, and are more likely to experience urban heat island (UHI) effects and extreme heat. Heat, in turn, is linked to heat strokes and potential fatalities, cardiac arrests, and other health impacts.

These tragic disparities have magnified and exacerbated the impact of COVID-19 on marginalized and underserved communities. A nationwide study found that for every 1 microgram per cubic meter increase in long-term PM2.5 exposure, COVID-19 fatality rates increase by 11 percent (Wu 2020). Black, Latinx, and Native persons are hospitalized at three to four times the rate of white persons and have fatality rates about 2 to 2.5 times greater (CDC 2021). Decades of segregation and structural racism have resulted in poverty, pollution exposure, underserved neighborhoods, and a lack of access to healthy food, healthcare, and green spaces—all of which have left communities of color at far greater risk to COVID-19 and other health and environmental disasters (Pirtle 2020).

Recent research finds that inequities in PM2.5 exposure are increasing—not decreasing—in the U.S. *despite* the progress made in stricter vehicle emission standards, air pollution regulations, and cleaner electricity production. From 2000 to 2016, predominantly white populations saw improvements in air quality, compared to no improvements in

predominantly Black communities (Jbaily 2020). While California's cap-and-trade program has helped to reduce the gap in air pollution exposure between disadvantaged communities and the rest of the state, it has not completely eliminated this gap, which has returned to near-2008 levels by 2017 (Hernandez-Cortes and Meng 2020). This suggests that unless equity and environmental justice are intentionally centered in policies and programs, frontline communities will not see the co-benefits of cleaner air and improved public health because of GHG reduction programs. As such, it is critical that new development in California attempts to implement measures to improve public health and air quality outcomes for vulnerable and underserved communities.

Key Indicators: These measures are relevant to communities that experience elevated air quality impacts, AB 617 communities, and communities with greater socioeconomic vulnerabilities. Relevant CalEnviroScreen indicators include PM2.5, Diesel PM, Ozone, Asthma, Cardiovascular Disease, Low-Birth Weight, Poverty, and Unemployment. Relevant Healthy Places Index indicators include Above Poverty Level, Clean Air–Diesel PM, Clean Air–Ozone, Clean Air–PM2.5, Asthma, Asthma–Emergency Room Admissions, Coronary Heart Disease, Chronic Obstructive Pulmonary Disease, Heart Attack Emergency Room Admissions, Active Transportation, Obesity, Children, Elderly, Outdoor Workers, and Race/Ethnicity.

Cross-Cutting Guidance

Most measures in this section focus on urban greening, which begins a multi-generational commitment of maintenance and care. Often if a tree becomes a problem or gets in the way, it is removed. As such, it is critical that the right planting goes in the right location with the right support and protection. It is recommended the user incorporate the following into PH-1 and 2.

- **Input from the community**: Community preference and concerns must be addressed for the plantings to be used and loved. Sight lines, access, security, lighting, allergens, odors, droppings, shade, and community character should be discussed.
- **Input from jurisdiction and agency partners**: To forestall potential conflicts, utilities, Caltrans, and local departments (e.g., transportation, fire, parks, planning, and urban forestry) should have access to and input on landscaping and greening plans. The landscape plan must also be cross-checked with signage and billboards, as trees will likely be felled if they encroach upon the view shed. Appropriate space must be given to prevent sidewalk and pavement buckling, as well as allowing the plantings to mature to their full potential.

- **Maintenance and redress**: There must be clear ownership of the maintenance responsibility, understanding of maintenance expectations, and appropriate redress if the vegetation fails. This can include replanting, adding high-albedo coating to unshaded pavements, providing portable air filtration devices, or other measures.

It should also be noted that measures addressing public health are not limited to this section. There are substantive public health benefits from many GHG mitigation measures in Chapter 3, chiefly via air pollution reduction, such as through building electrification, building decarbonization, renewable energy generation, and reductions in vehicle emissions. Critically, however, the health benefits associated with increased physical activity as a result of active transportation overshadow the health benefits associated with improved air quality from reduced or cleaner vehicle emissions (Maizlish et al. 2017). Physical inactivity is one of the leading factors in cardiovascular diseases, such as heart disease, diabetes, and cancer. Increasing active transportation to just 20 minutes per day could save over 8,000 lives annually, improve health, and reduce years of life lost and disability (Maizlish 2016). What's more, historically underserved and marginalized communities are often disproportionately burdened by chronic disease as a result of structural inequities and often lack access to sidewalks, bike lanes, transit service, and parks. Thus, measures that facilitate Californians to walk, bike, and ride transit as part of their daily routine should be prioritized to improve public health and reduce health disparities. To see measures that support active transportation, please turn to Chapter 4.

PH-1. Establish Vegetative Barriers to Reduce Pollution Exposure

If designed, planted, and maintained correctly, a thick barrier of trees, bushes, hedges, and/or shrubbery can decrease air pollution and protect public health. Vegetative barriers achieve this by intercepting PM, as well as taking up ozone, NOx, and other air pollutants through their leaves. Well-designed roadside vegetation barriers can reduce downwind particulate matter by as much as 50 percent, black carbon by 27 percent, and NOx by 20 percent (Deshmukh 2018). To maximize effectiveness, vegetative barriers can be combined with a solid wall barrier (Tong 2015); however, use of impenetrable walls should be considered carefully to avoid creating barriers that discourage walking or biking to destinations in or near a neighborhood.

Applicability

Projects within 1,000 feet of the following:

- Major roads such as highways, freeways, or arterials.
- Major stationary sources as defined by the local air district.
- Railyards and railways.
- Locations with high volume of diesel trucks, or other sources of pollution.

Scale and Timing

- Neighborhood/City and Project/Site
- Construction and operations

Communities or Issues Addressed

This measure is particularly applicable for AB 617 communities and other communities disproportionately burdened by poor air quality. Because it takes time for vehicle fleets to become cleaner, vegetative barriers can reduce air pollution for projects that are located near busy roads and freeways. They can also help to block pollution from new land uses that will be a source of emissions and provide protection for projects that serve sensitive users (e.g., daycares or senior residences).

Dimensions of Equity

In addition to improving *air quality*, vegetative barriers can help to reduce noise and beautify the environment. In addition, they can help to reduce the UHI effect through evapotranspiration and shading, contributing to *climate resilience*. If native species are selected, they can also support local biodiversity and habitat. Finally, vegetative barriers can help to reduce stormwater and improve groundwater infiltration.

Implementation Considerations

It is critical to properly design and plant vegetative barriers to effectively block and uptake air pollution. Vegetative barriers should be tall, thick, and have sufficient density of leaves to block air flow (Baldauf 2017). U.S. EPA has developed minimum recommendations for constructing roadside vegetation barriers to improve near-road air quality, including ensuring a minimum thickness of 10 meters (33 feet); for examples of vegetative roadside barriers meeting these minimum recommendations, please see illustrations on pages 13-16 in the Sacramento Metropolitan Air Quality Management District's *Landscaping Guidance for Improving Air Quality Near Roadways*.

Vegetative barriers should not seasonally shed leaves or have other gaps – vegetative barriers that are porous or have large gaps can result in unchanged or higher levels of air pollution downstream. Studies suggest that plants with small leaves, complex leaf shapes, and/or rough leaf surfaces are the most effective at air pollution reduction (Barwise and Kumar 2020). In addition, regular maintenance, pruning, and care is important to keep the vegetative barrier alive, and these costs should be factored in during the design phase. If possible, drought-tolerant or native species should be selected.

While there are ranked lists of species most effective at air pollutant removal (Yang 2015), the project proponent should consult with the regional urban forester, local tree foundations, master gardeners, CBOs, neighborhood associations, and other groups to select plant varieties preferred by residents and suitable to the local climate. Species selection should not include tree species that emit high amounts of reactive organic gases or allergenic pollen to avoid additional, substantial burdens for nearby residents, especially those with asthma or other respiratory conditions.

Vegetative barriers adjacent to freeways can consider the inclusion of a solid wall barrier or sound wall, but a wall along arterial and collector roads may create barriers to walking and biking around the community, reducing network connectivity.

Inclusive community engagement is a critical part of this measure: community participation can determine preferences and priorities around preferred species, barrier design, and barrier placement. Consult the *Community-Centered Development* and *Inclusive Engagement* sections for measures on understanding local priorities and community outreach.

Example

Approved in 2014, McKinley Village is a 328-unit residential development in the City of Sacramento, closely bounded by an interstate highway to the north and the Union Pacific Railroad tracks to the south. Project residents are located within 500 feet of the highway—CARB's recommended minimum distance for siting new sensitive receptors—which averages 159,000 vehicles per day (City of Sacramento 2014). To reduce air quality impacts, the project includes a 30-foot-wide barrier consisting of a sound wall with landscaping adjacent to the freeway and an 8-foot-wide landscape buffer adjacent to the railroad tracks (City of Sacramento 2013). The vegetation for both barriers includes a mix of evergreen, deciduous (which are *not* recommended for vegetative barriers), and coniferous trees such as pines and redwoods. When initially planted, the vegetative barrier was incomplete due to temporary signage advertising the sale of homes.

Resources

- CARB: *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways*
- Sacramento Metropolitan Air Quality Management District: *Landscaping Guidance for Improving Air Quality Near Roadways*
- U.S. EPA: *Recommendations for Constructing Roadside Vegetation Barriers to Improve Near-Road Air Quality*

PH-2. Increase Urban Tree Canopy and Green Spaces

The project will go above and beyond local requirements and standards and plant additional trees along streets and public spaces in underserved and low-income communities, which disproportionately lack tree canopy, parks, and green spaces in comparison to wealthier, whiter neighborhoods. To achieve equity in tree canopy, additional tree planting should be focused on neighborhoods with the fewest trees. Trees are estimated to remove over 1 million tons of air pollution in California in 2010, with associated health benefits of $446 million dollars in terms of avoided health costs (Nowak 2014). Yet with the disparity in urban tree canopy between communities, these benefits fail to accrue to low-income residents and people of color, who disproportionately experience the impacts from respiratory conditions, hospital admissions and emergency room visits, lost workdays, and fatalities. By increasing tree canopy and park spaces in underserved communities, the project can contribute to reductions in air pollution and extreme heat, while creating a more inviting environment for walking and biking, improving all dimensions of public health.

Numerous studies have documented the association between income, race, and tree canopy coverage, which in turn leads to inequities in air pollution and extreme heat

exposure. Formerly redlined communities have nearly 50 percent less tree canopy than formerly greenlined communities (Locke et al. 2021). Across the U.S., 94 percent of formerly redlined communities are hotter than their non-redlined neighbors, by as much as 12.6 degrees Fahrenheit (°F) in some cases (Hoffman et al. 2020). An analysis of heat disparities in urban California found a 4.7°F difference between the poorest 10 percent of neighborhoods and the wealthiest 10 percent, with the greatest difference of 6 to 7 °F in Los Angeles, the Inland Empire, Palm Springs, and Latinx communities (Dialesandro 2021). The disparity in tree canopy and green spaces leads to higher fatalities during heat waves, exacerbated cardiovascular conditions, higher energy bills, poorer air quality, lower home values, and other impacts.

Applicability

Applicable to all projects.

Scale and Timing

- Neighborhood/City and Project/Site
- Trees can be established during the construction or operations phase but should be determined in the planning stage in conjunction with the community.
- The environmental review phase should include opportunities to mitigate noise/air quality impacts through the installation of trees.

Communities or Issues Addressed

This measure should be prioritized for neighborhoods that lack tree canopy, or projects that are located near busy roads, freeways, industrial land uses, and other sources of pollution. Projects located in communities with a high percentage of impervious or paved surfaces should also consider increasing tree canopy, green spaces, greenways, and other green infrastructure.

Dimensions of Equity

Trees improve *air quality* by removing PM, NOx, ozone, and sulfur dioxides, with the greatest health and environmental benefits from PM reduction. By reducing air pollutant concentrations in outside air, trees in turn also reduce indoor air pollution, with trees planted outside the home linked with a 50 percent or more reduction in indoor PM (Maher 2013). Similarly, urban trees, as well as cooler air temperatures, have also been linked with improved academic performance in schools – a benefit that could extend to future *economic resilience* (Kuo et al. 2018; Park 2018). Indeed, trees can cool cities by up to 10°F, with the greatest cooling occurring when canopy cover exceeds 40 percent (Ziter 2019). This cooling effect means that homes in neighborhoods with high tree canopy levels can save on air-conditioning bills during the summer—by up to 30 percent in Sacramento as one example (Akbari 1997).

In addition, urban trees and parks can help to create a more comfortable environment for walking, biking, and exercise, improving people's overall *health* and encouraging *active transportation.* Urban greening can also help provide pleasant public spaces for

community residents to meet and socialize. Public spaces and strong neighborhood connections have been linked with greater *social resilience* and decreased fatalities during the 1995 Chicago heat wave as documented by Eric Klinenberg in *Heat Wave: A Social Autopsy of Disaster in Chicago*. By listening to community members on desired spaces for greening, tree planting can support *community ownership* of their neighborhood and built environment. Finally, trees, parks, and green infrastructure can help to enhance overall *climate resilience,* through contributing to groundwater recharge, stormwater absorption, and biodiversity support.

Implementation Considerations

Community input and preferences should be centered in any tree planting efforts. Because an increase in tree canopy is associated with small increases in property value (Donovan 2021), gentrification is a concern, and CBOs and residents should have full input and decision-making authority on tree selection, siting, and maintenance. The project should work with neighborhood associations, CBOs, and other stakeholders throughout the process. Local tree foundations and forestry organizations can provide advice about species selection, but generally a diversity of species will be more resilient against pests, invasive species, and climate change. Heat- and drought-tolerant trees are more likely to be adaptable to future climate conditions and ensure long-term survivability. If urban cooling is a goal, growth rate and canopy size should be considered. Finally, allergen and biogenic volatile organic compound production are additional factors to consider.

Example

On June 17, 2021, the City of San Francisco broke ground on the India Basin Shoreline Park. The project will create a park that directly serves the priorities of San Francisco's historically overlooked and underserved southeast communities by remediating an abandoned industrial site, which will then be combined with two existing open space areas. Upon completion, the 10-acre waterfront park will offer the 35,000 nearby residents a restored shoreline, accessible, expanded park space, gardens, natural habitats, walkways, a public plaza for local events and markets, and an ecological education area. The park is led by a collaborative partnership with the Bayview Hunters Point community, the A. Philip Randolph Institute, the Trust for Public Land, and the San Francisco Parks Alliance (City and County of San Francisco Office of the Mayor 2021).

Resources

- Tree Equity Score: Based on the existing tree canopy cover, population, income, unemployment, race, age, and temperature, this tool identifies the amount of tree canopy cover needed for urbanized census tracts to reach tree equity.
- Vibrant Cities Lab: A wealth of resources, research, toolkits, and case studies related to urban forestry and all its accompanying benefits.

Related Measures

- Inclusive Engagement (IE) measures

PH-3. Highly Rated Air Filtration

This measure requires a project proponent to install MERV-13 or higher-rated air filtration systems, and for vulnerable populations such as schools and nursing homes, MERV-14 or higher air filters. Highly rated air filters clean the air that enters the building, reducing resident exposure to air pollution and wildfire smoke. Independent of efforts to reduce air pollution sources, filters can help protect people from the air pollution that already exists, removing 50 to 99 percent of particles (CARB 2017). In addition, they can reduce air pollution generated indoors (e.g., from cooking, candles, consumer products, or smoking) as well as allergens that trigger respiratory ailments.

This measure requires the project be constructed with an HVAC system that accepts MERV-13/14 or higher filters, and has a permanent label affixed to the HVAC system that indicates a MERV-13/14 or higher filter must be used as a condition of approval for the project.

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Project/Site
- Timing: Project construction, but filters must be changed regularly during operations

Communities or Issues Addressed

Low-income and underserved communities are often disproportionately impacted by particulate pollution and toxic air contaminants. Indoor air filtration can reduce impacts from these pollutants. In addition, seasonal issues, such as wildfire smoke, wood-burning appliance use, dust storms or certain airborne allergens, can be reduced inside, giving respite to breathers. This is especially important in communities without regular access to health care providers, and for projects located near major sources of pollution such as highways, trucking routes, railyards and railroads, or industrial sources.

Dimensions of Equity

While a combination of regulations and lower-emissions technology (e.g., renewable energy or electric vehicles) is gradually lowering air pollution levels throughout California, air filtration represents an immediate improvement to indoor *air quality* and can address allergen issues as well. This is especially important in communities burdened with high levels of air pollutants. With wildfires increasing across California, air filtration is also a *climate resilience* solution, and may become necessary in areas where air pollution has not historically been an issue. While all properties can benefit from cleaner indoor air, projects in places with high traffic and high PM can especially benefit from this measure.

Implementation Considerations

Filters work best when windows are closed, so this measure will be less effective in mild climates where windows are kept open most of the year, or in places without air conditioning. Education is necessary to ensure effective use.

While filters typically need replacing at least once each year, major wildfire events or location in high-use areas, such as near major roads, may necessitate more frequent replacement.

Because the filters are only effective when the HVAC fan is engaged, energy bills may be higher than normal. Seek to use the most efficient and durable systems. Operating the HVAC system on fan-only mode, instead of with air-conditioning, will have lower energy costs.

Example

Non-applicable.

Resources

- U.S. EPA: *Guide to Air Cleaners in the Home 2nd Edition*
- CARB: List of CARB-Certified Air Cleaning Devices

Related Measures

- CE-4. Portable Indoor Air Filtration for Nearby Residents During Construction

PH-4. Create Healthful, Sustainable Indoor Spaces

People spend nearly 90 percent of their time indoors, making indoor air quality and chemical exposure critical to human health. Yet indoor air quality can be two to five times worse than outdoor air quality (U.S. EPA n.d.). Building materials and interior furnishings are the main source of indoor air pollutants and other toxics. Paints, flooring, composite and manufactured wood, fire retardants, insulation, adhesives, binders, sealants, and other materials can off-gas and release a wide range of chemicals hazardous to human health. These include volatile organic compounds (VOCs) – including formaldehydes – benzene, xylene, styrene, per- and poly-fluorinated chemicals (PFCs, such as polyfluoroalkyl substances), and fibers. The U.S. EPA estimates that VOC levels can be as much as ten times higher indoors than they are outside (U.S. EPA n.d.).

In addition to reducing chemical exposure, ventilation is also a key component of indoor air quality. As building energy efficiency improves, the tightness of the envelope seal also improves, potentially creating stagnant air inside, which can result in higher indoor humidity and concentrations of carbon dioxide, VOCs, and other chemicals.

This measure calls for the project to:

- Use certified non-toxic, low-toxic, and/or low-emissions building materials, wherever feasible, including in paints, sealants, finishes, adhesive products, carpets, insulation, flooring, flooring materials, wood products, furniture, and more.
- Include operable windows and provide training and guidance on the proper operation and maintenance of ventilation systems to optimize indoor air quality. Ensure good ventilation when paints, sealants, adhesives, and similar products are being applied.
- Projects with an operational component should use low- or non-toxic cleaners and other chemicals, which can benefit the health of building staff and occupants.

Some material certification systems undertake a lifecycle analysis of the environmental footprint of building materials and products. Thus, building materials should ideally be sustainable, natural, or made of recycled or renewable materials, which are also likely to have less impact on people and the environment during the manufacturing process. If possible, materials and products should be sourced locally.

Applicability

All

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning, construction, and/or operations

Communities or Issues Addressed

Using non- or low-toxic or low-emissions building materials can improve public health for both building occupants as well as construction workers. People with respiratory conditions or existing health conditions, seniors, and children are particularly vulnerable.

VOCs are linked with a range of short- and long-term health effects, ranging from irritation of the eyes, nose, and throat; to nausea, headaches, and loss of coordination; to long-term damage to the liver, kidneys, and central nervous system. As a carcinogen, formaldehyde is a particular VOC of concern and can be found in a range of composite wood products. Other indoor air contaminants, such as toluenes and xylenes, which are emitted from laminated lumber products, have high levels of toxicity to the liver, blood, and nervous systems (Khoshnava et al. 2020). In addition, PFCs are commonly used in building materials such as carpets and furniture to repel stains, water, and corrosion, but they are linked to health impacts such as high cholesterol, testicular and kidney cancer, reduced vaccine effectiveness, and thyroid disease (Fletcher et al. n.d.).

Used in pipes, flooring, and other building materials, polyvinyl chloride (PVC) generates high levels of dioxins and vinyl chloride throughout its production and disposal cycle and is a critical environmental justice issue: Most of the United States' PVC manufacturing plants – including the world's largest – are located in low-income Black communities in Texas and Louisiana, including Louisiana's Cancer Alley, a stretch between Baton Rouge and New

Orleans home to 150 refineries, plastic plants, and chemical facilities (CHEJ n.d., UN 2021). Dioxins are highly toxic and are linked with cancers and harms to the reproductive and immune systems, while vinyl chloride is a known carcinogen (WHO 2016).

Using low- or non-toxic materials is beneficial for all projects but especially so for residential projects, healthcare facilities, and schools. Notably, for businesses and commercial projects, studies have found improved productivity, decision-making skills, and a 26 percent improvement in cognitive function for workers in green-certified buildings with low levels of VOCs, low levels of carbon dioxide, and low- or non-toxic building materials (MacNaughton 2017). Workers and occupants of these green buildings also report fewer symptoms of sick building syndrome and better sleep.

Dimensions of Equity

The use of low- or non-toxic building materials can improve *public health* for people across the lifecycle of the building. By displacing toxic materials, it can reduce chemical exposure during the material manufacturing, building construction, and operational phase for workers, nearby residents, and building occupants. If the building materials are sourced locally or recycled locally at their end of life, it can also help to support local *economic resilience*.

Implementation Considerations

There are various third-party certifications for low- or non-toxic building materials, with some certifications extending to cover lifecycle analysis, material sustainability, end-of-life producer responsibility, sourcing, and more. Note that each material or product type may have its own specific chemicals of concern, and there is not one single certification system, rule, or solution. Thus, ensuring a completely low-toxic building throughout all its components can be challenging and costly. The project should work with community members and stakeholders to understand priorities, goals, and toxins of highest concern. Examples of intrinsically low-VOC materials include glass, concrete, stone, ceramic, adobe, tile, plated or anodized metal, clay brick, and unfinished or untreated solid wood. Some low- or non-toxic materials may be more expensive than others, and understanding community priorities will be important to determining trade-offs and alternatives.

Note that many California air districts have VOC limits for paints, adhesives, sealants, and other architectural coatings. Projects are advised to check with their local air district for the most up-to-date limits.

Example

Kaiser Permanente has adopted a safer products policy prohibiting a wide range of toxins and carcinogens from its building materials as well as medical products. Specifically, Kaiser has prohibited the use of PVCs in flooring, carpet and carpet backing, handrails, signage, and more; the use of per- and poly-fluorinated chemicals in building materials, finishes, furniture, and fabrics; and upholstered furniture with chemical flame retardants. This is not only good for health but also lower cost overall: the use of PVC-free flooring

not only reduces staff, patient, and visitor chemical exposure but also lowers the total cost of ownership, including cost and time for maintenance (Health Care Without Harm 2019). In addition, Kaiser's commitment across its facilities also helps to expand the market and product availability for low- and non-toxic building materials.

Resources

Certification systems

Below is a non-exhaustive list of established certification systems and programs for sustainable building materials. As interest in healthful indoor environments grows, the number of available environmentally friendly, non-toxic building materials is also likely to increase, while their cost is likely to decrease.

- Declare: The Living Future Institute's Declare program provides a clear label for building materials and products, detailing their place of final assembly, component ingredients (including toxics), VOCs, responsible sourcing certification for forestry products, and end-of-life options. The program includes construction materials, furnishings, paints, finishes, and more.
- WELL Building Standard: WELL certifies buildings based on how their design features and operational protocols support human health and well-being. WELL focuses on 10 areas, including air quality, materials, and thermal comfort, and is performance-based, with certification based on onsite testing.
- Build it Green: This pioneering California nonprofit organization focuses on environmentally friendly buildings that support occupant health. They offer a green product rating and also rate single- and multifamily homes for their environmental, health, and energy efficiency components.
- Greenguard: This independent, third-party organization certifies low-emitting building materials, paints, and products, with all results in a searchable database.
- GreenSeal: GreenSeal certifies products based on rigorous lifecycle analysis. Their directory includes paints, sealants, finishes, and adhesives, as well as a wide range of commercial/industrial cleaners and detergents.
- CARB Airborne Toxic Control Measures Phase II and Toxic Substances Control Act Title VI: To reduce exposure to formaldehyde in furniture, flooring, and cabinets, choose products that are certified CARB Airborne Toxic Control Measures Phase II compliant or Toxic Substances Control Act Title VI compliant.

Other resources

- Healthy Buildings For Health: This resource hub from the Harvard T.H. Chan School of Public Health translates research and studies on healthy buildings to actionable recommendations for all. The hub contains guides for healthy homes, schools, workplaces, and materials, as well as for COVID-19, climate change, and more.
- CARB Formaldehyde Factsheet: Overview of formaldehyde and strategies to reduce formaldehyde exposure.

Related Measures

- IEP-4. Use of Locally/Regionally Manufactured Products and Materials

PH-5. Provide Equitable Food Access and Food Justice

California is the United States' largest producer of fruit and vegetables, but more than 4.7 million adults and 2 million children suffer food insecurity, experiencing inconsistent or limited access to sufficient or nutritious foods (California Food Policy Advocates 2019). The situation is worsening: the percentage of households reporting food insecurity increased by 22 percent during the first 3 months of the COVID-19 pandemic (UCLA 2021). Even when food is available, it may not be healthful. Counties with a higher percentage of people of color often have fewer healthful food options and more unhealthful options (Union of Concerned Scientists 2016). As a result, residents must often travel further and spend more time and money to access fresh produce. Thus, expanding access to healthful food is integral to public health and food justice, especially for low-income, historically underresourced communities.

While food access is a multifaceted issue, land use plays a key role in shaping access and availability. This measure calls for project proponents to incorporate strategies or solutions to support equitable food access as part of their project. Strategies include increasing opportunities for residents to grow their own food, adding or retaining locations to purchase food, and facilitating access to existing food sources.

For instance, projects can incorporate space and improvements for urban agriculture or community gardens, including through the transformation of vacant lots into urban farms. Also rising in popularity, vertical farming grows produce in stacked layers by controlling light, temperature, water, and sometimes carbon dioxide – thus, optimizing plant growth while taking up little space. Adopting local policies to support the growing of food crops in front yards and other practices can increase food access.

Projects can also expand the number of refrigeration units at existing or new convenience or neighborhood markets to facilitate the provision of fresh, healthful foods. Space, equipment, or funding for farmers markets, farm stands, mobile food banks, or local CBOs dedicated to food justice are also eligible. Larger efforts, such as the recruitment and construction of grocery stores, are also welcome.

Increasing access to existing food sources can also further food justice. Examples include expanding eligibility or hours to existing food programs (e.g., school nutrition programs) or facilitating travel (e.g., via microtransit or carshare) to existing retail locations.

Applicability

All

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning

Communities or Issues Addressed

Expanding healthful foods access can reduce food insecurity and the incidence of chronic health conditions, such as high blood pressure, high cholesterol, heart disease, type 2 diabetes, cancer, and obesity. Many low-income and underserved communities are disproportionately burdened by these diseases as a result of structural inequities and redlining that have left neighborhoods with limited access to healthful foods but a far higher density of fast-food outlets and convenience stores (Union of Concerned Scientists 2016). Children are particularly vulnerable to food insecurity and poor nutrition, as it can affect development and mental health. Poor nutrition has even been linked with COVD-19 outcomes, as a plant-based diet is associated with a lower risk of COVID-19 infections and less serious symptoms if infected – with the beneficial effects particularly significant for residents in areas of high socioeconomic deprivation (Hampton 2021).

Dimensions of Equity

Providing access to nutritious food supports *public health*. In addition, enhanced access to affordable food and agriculture facilitates greater *economic and social resilience*. Community-based urban agriculture can support *community development* by creating an opportunity to network, organize, and strengthen social capital, civic involvement, and community empowerment (Meenar and Hoover 2012).

Implementation Considerations

The project should involve community members, CBOs, and other stakeholders in the planning and decision-making process to uplift community expertise and to avoid inequality, displacement, or gentrification. Consulting with community members is also essential in order to identify food options that are needed and desired, including culturally appropriate foods. Consider collaborating with a CBO to identify these needs and provide resources to community members. Such resources may include community-led cooking or canning workshops, gardening events, seed and crop swaps, and recipe bulletins.

When considering spaces to grow produce, especially in underresourced communities, specific health risks such as soil, water, and air pollution should be analyzed and mitigated first. For instance, vegetables grown in soil with high lead concentrations will uptake lead, which poses negative health effects, particularly for children (Horst et al. 2017). Appropriate training, garden planning, and infrastructure can help mitigate some of the environmental pollution risk.

Examples

The City of Santa Clara approved a farm-to-table, mixed-income development that will combine affordable housing with a 1.5-acre regenerative farm in a dense, urban environment. In addition to 36 townhomes, the housing will include 165 units for low-income seniors and veterans and 160 market-rate units with 10 percent reserved for moderate-income households. The farm will produce up to 20,000 pounds of hyper-local fruits, vegetables, herbs, and nuts per year, which will be available to purchase at steep

discounts for residents. Landscaping outside the farm will also include food plants and habitat for native birds and insects. The project will also provide publicly accessible open space and recreational opportunities (Peters 2021).

The City of Richmond worked with the Richmond Food Policy Council to support agricultural initiatives by simplifying the process for submitting paperwork, lowering permitting fees, eliminating certain zoning requirements, and promoting community gardens as spaces for social and education activities (Barhoum 2016). The Contra Costa County Food Bank hosts a mobile food pantry, which provided food to one in eight people in Contra Costa and Solano Counties in 2015 (Barhoum 2016). Similarly, the Regional Environmental Council in Worcester, MA, provides fresh produce through their mobile farmers markets rotating through different residential, medical, cultural, or religious centers, while providing standing farmers markets at parks from Monday to Saturday.

The community of Southeast Bakersfield lost its only supermarket in 1995. Using $100,000 of public funds, the City of Bakersfield conducted demolition and site prep work on a burned-down motel located at California and Union Avenues (both of which host bus lines) in 2000 and started recruiting supermarkets. FoodMaxx opened for business on the site in 2006 (Wenner 2016).

Resources

- USDA Food Access Research Atlas and Food Environment Atlas: These atlases help to map food access indicators and data, and food environment indicators (store proximity, food prices, food and nutrition access), respectively, at the census tract level. They can help to determine if the proposed project is in a neighborhood facing food access or food insecurity challenges.
- The California Health and Human Services Open Data Portal offers California-specific data sets on food affordability, fruit and vegetable consumption, food assistance program participation, and the retail food environment.
- Food policy councils are made up of local food system stakeholders and provide suggestions on how to improve the food system. The Food Policy Network Directory lists local food policy councils throughout California.

Related Measures

- IC-5. Designated Space for Community-Based Organizations, Disadvantaged Businesses, and Community Assets
- IC-8. Enhanced Access to Community Resources

Inclusive Economics and Prosperity (IEP)

On August 28, 1963, more than 200,000 people gathered for the Washington March for Jobs and Freedom to call for a sweeping civil rights bill that would, among other goals, desegregate schools, eliminate discrimination in all employment, and provide training and placement for unemployed workers. Recognizing the centrality of economic empowerment to achieving racial justice, demonstrators marched in response to the segregation and structural racism that left Black workers facing low wages, poor mobility, unequal pay, and widespread discrimination. And yet, while much progress has been made, the dream of freedom and economic empowerment has not yet been fully realized. Systemic racism, as expressed by unfair housing, education, public safety, labor and healthcare policies, has continue to produce unjust outcomes in life expectancy, wage disparity, employment, and other indicators of prosperity. Historic disenfranchisement and exclusion from higher-paying jobs and homeownership, for example, has left communities of color unable to accumulate and pass on wealth between generations that can help to support a higher degree, a test prep course, or the ability to take on an unpaid internship. The mean and median wealth of Black families in the U.S. was only 15 percent that of white families in 2019—or $24,100 compared to $188,200 (Bhutta 2020). The wage gap between Black and white workers continues to increase year on year, and between 2000 and 2018, wage growth for white and Latinx workers was about four times faster than for Black workers (Gould 2019). Black workers with university and advanced degrees experienced significantly slower wage growth than white or Latinx workers at the same education levels.

Although these issues are challenging and complex, the development of land use projects can help to gradually address these issues through the adoption of inclusive contracting and hiring practices that prioritize residents from historically marginalized and underserved communities. By providing internships, apprenticeships, and other opportunities, project proponents can help open doors and potentially change lives.

Key Indicators: Relevant CalEnviroScreen indicators include Poverty, Education, and Unemployment. Relevant Healthy Places Index indicators include all Economic and Education indicators, Homeownership, and Hardship Index.

Cross-Cutting Guidance

Many contracting and hiring processes, especially in the public sector, are resource-intensive for potential applicants and favor large enterprises or well-resourced individuals. If the measures below are simply appended to existing processes, root causes of exclusion are not addressed and can lead to tokenism or the proponent asking for the measures to be removed as infeasible. We recommend incorporating the following into any measures chosen.

- **Evaluate existing contracting, recruiting, and hiring practices**: The organization should evaluate their vendor lists and applicant pools from recent recruitments to identify additional outreach or modification of application requirements needed to increase local and diverse applicants. Consider partnering with CBOs or non-profits to provide technical assistance or increase the diversity of the applicant pool.
- **Plan for inclusion at the beginning**: Local small businesses need small, specific contracts. If the organization cannot bid contracts individually, the application process for the general contractor needs to include detailed, community-driven plans to meet local and diversity hiring targets, and appropriate redress if they fall short.
- **Create an inclusive workplace**: Worker productivity, growth, and retention occur when people can bring their authentic selves to the workplace. Pay equity, training, gender-neutral parental leave, employee resource groups, mentoring, and culturally inclusive dress codes, holidays, and organizational culture all can help people feel more welcome, supported, and included within an organization.

IEP-1. Local Labor and Apprenticeships (Construction)

To encourage economic development for the local community, the project will commit to hiring locally and provide apprenticeship and training opportunities for residents during the construction phase of the project. Local hiring can help to channel some of the economic value of development directly to the community in which it is building, helping to partially counter the potential effects of gentrification and neighborhood change. An apprenticeship program can help workers from low-income, vulnerable, marginalized, underresourced, or underrepresented backgrounds to gain work experience in the construction industry, and eventually accreditation and certification.

Applicability

All projects with construction.

Scale and Timing

- Neighborhood/City and Project/Site
- Construction

Communities or Issues Addressed

Communities that are economically disadvantaged or low-income, based on median annual household income, CalEnviroScreen socioeconomic indicators, or Healthy Places Index economic indicators.

Dimensions of Equity

This measure can support local *economic development* and *job training* by providing opportunities to residents as well as members from underrepresented, marginalized, and vulnerable communities, and communities that face barriers in accessing jobs.

Implementation Considerations

This may be most feasible for larger projects above a certain price threshold (e.g., $2.5 million). The project can set targets for both overall local hiring as well as specifically for apprenticeships for workers from the local community, economically disadvantaged communities, communities of color, individuals who are unhoused, formerly incarcerated, or from underrepresented backgrounds, LGBTQIA+ people, and women. The project should establish quarterly or annual reporting to document progress toward these targets.

Example

In 2012, Los Angeles Metro adopted a construction career policy and a project labor agreement for federally funded, and some locally funded, projects with a construction value greater than $2.5 million. For federally funded projects, the project labor agreement set targets of 40 percent participation (based on work hours) for construction workers from economically disadvantaged areas, 10 percent participation for disadvantaged workers, and 20 percent participation for apprentices. For locally funded projects, the targets are 40 percent participation from local targeted workers and community area residents, 10 percent participation from Los Angeles County residents, and 20 percent participation from apprentices, with 50 percent of all apprentice hours coming from local targeted workers. Los Angeles Metro provides project labor agreements, contractor resources and forms, reports, and other helpful documents.

Related Measures

- IEP-2. Local Labor and Apprenticeships (Operations)
- IEP-3. Contract with Diverse Suppliers

IEP-2. Local Labor and Apprenticeships (Operations)

To encourage economic development for the local community, the project will commit to hiring locally and provide internship and training opportunities for residents or residents from marginalized and underresourced communities during the operations phase of the project. Ideally, partnering with local education providers can offer additional training and accreditation for workers. Local hiring can help to channel some of the economic value of development directly to the community, helping to partially counter the potential effects of

gentrification and neighborhood change. An internship program can help workers from low-income or marginalized, underrepresented, and underresourced backgrounds to gain work experience and eventually accreditation and certification.

Applicability

All projects with employees.

Scale and Timing

- Neighborhood/City and Project/Site
- Operations

Communities or Issues Addressed

Communities that are economically disadvantaged or low-income, based on median annual household income, CalEnviroScreen socio-economic indicators, or Healthy Places Index economic indicators.

Dimensions of Equity

This measure can support local *economic development* and *job training* by providing opportunities to residents. It can also help to increase opportunities and training for individuals who face barriers in accessing employment, as well as members from underresourced and marginalized communities. Local employment also reduces the need for transportation expenditures, which, when combined with housing, make up half of the average U.S. household budget; thus, this measure can help to reduce cost burdens for households (U.S. DOT 2015).

Implementation Considerations

This may be most feasible with large projects or institutions, such as healthcare providers. However, smaller projects can partner with existing programs or educational institutions to provide internship opportunities. The goal of these programs is to develop local employee talent for the project while creating opportunity and building capacity for residents.

Examples

Eighty percent of jobs at hospitals require 2-years of training or less. East Bakersfield High School (a public Title I school) created a Health Careers Academy with local hospitals, governments, healthcare providers, and veterinarians to provide hands-on experience and training as well as college-prep courses to provide youth early engagement in the healthcare field.

Cristo Rey, a private high school network serving mostly low-income students of color, includes a corporate work-study program as part of its curriculum. Local employers can bring on students to intern 1 day per week in return for sponsoring half their tuition. Through 4 years of high school, the student learns about different careers, develops job skills, contacts, work experience, and builds professionalism.

Many larger projects also include local hiring and training provisions, such as the $4.2 billion Los Angeles Sports and Entertainment District development (the Staples Center).

Related Measures

- IEP-1. Local Labor and Apprenticeships (Construction)

IEP-3. Contract with Diverse Suppliers

The project proponent will contract with diverse supplier(s): disadvantaged business enterprises (DBE); women-owned business enterprise (WBE); minority-owned business enterprise (MBE); disabled veteran-owned business enterprise; and/or LGBTQIA+-owned business enterprise.

This measure calls for proponents to contract with diverse suppliers, as defined above, for at least 15 percent of contracting dollars. Diverse suppliers are essential components of the health and sustainability of the economy. They employ people, provide wages, and contribute to social and community development. Project development offers important opportunities for equitable contracting practices by engaging with diverse suppliers.

Applicability

All projects with contracting needs.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timeframe: All

Dimensions of Equity

Utilizing inclusive contracting practices by partnering with diverse suppliers is an important strategy to direct funds to historically marginalized communities. Contracting with diverse suppliers provides important opportunities for *jobs/training* and *economic resilience* for women, people of color, disabled veterans, and/or LGBTQIA+ people.

Business ownership is a potent tool to help vulnerable communities accumulate assets and wealth. However, challenges for diverse suppliers arise on multiple fronts. Minority- and women-owned business enterprises typically have lower rates of utilization and face systemic barriers in contract procurement. The net worth for families of color is typically only a fraction of the net worth of white families—limiting access to financial institutions and causing their businesses to often rely on family and friends for initial growth capital. Discrimination in lending practices restricts initial access to capital and other financial resources for diverse suppliers. Gaps in capital between minority-owned businesses and their white counterparts are heavily influenced by disparities in credit scores (Fairlie 2020). Low levels of access to bank loans, credit services, and other financial resources affect minority-owned businesses in the long-run as well. Studies have found that businesses started by Black founders do not converge with their white-owned counterparts as they

age. Additionally, minority business owners typically have fewer relationships with prime contractors, making it less likely they will be asked to become a sub-contractor.

Project proponents can help advance *racial justice* and equity by addressing systemic barriers and discrimination in lending, contracting, and business ownership. Promoting contracts with diverse suppliers provides these businesses with opportunities for capacity development and business growth. Not only do inclusive contracting programs help enhance individual diverse suppliers, but they work toward closing wealth and resource gaps impeding the well-being of children, families, and communities—contributing to greater *social resilience*. Studies have shown that regional economies that invest in their diversity are economically better off. Thus, active engagement with diverse suppliers is essential for sustainable economic prosperity.

Implementation Considerations

- The low number of certified diverse suppliers can be a barrier for this measure. Additionally, a complex network of certification programs contributes to a significant burden for diverse suppliers to receive third-party verification. Due to this reason, while third-party verification is recommended, it is not required to satisfy this measure.
- Establish data-reporting systems to share the following:
  - Race and gender data and hours worked for all employees under contractor(s) and subcontractor(s). These requirements help identify specific instances of discrimination in hours allocation.
  - Breakdown of dollar amounts the proponent spends on diverse suppliers.
  - Contract allocation (Edelman et al. 2017):
    - » Percentage and absolute number of contracts awarded to all diverse suppliers.
    - » Percentage and absolute number of businesses in each diverse supplier category (DBE, WBE, MBE, etc.) that have contracts with the proponent.
    - » Number of diverse suppliers that win a contract with the proponent for the first time. This data reveals insights on the proponent's outreach performance for smaller diverse suppliers.
- Targeted outreach and technical assistance (Edelman et al. 2017):
  - Invest in staff dedicated to outreach and technical assistance objectives.
  - Provide support and guidance to diverse suppliers for business registration, certification, bidding, and contracting processes.
  - Conduct contract and business development workshops—particularly in low-income communities and/or communities of color.
  - Partner with non-profit organizations and CBOs to increase access to responsible capital and legal services for diverse suppliers.
  - Advertise contracting opportunities in spaces familiar with diverse suppliers. Circulate advertisements in small business media, and publications of minority and women's business organizations.
  - Meet with diverse suppliers prior to bid or proposal deadlines to explain scope of work.
  - Provide feedback to diverse suppliers who did not win a bid.

  - Provide skills and information training to diverse suppliers. Due to high barriers to entry, disadvantaged businesses may have limited capacity in certain fields including high-cost construction requirements, materials, technologies, and skills.
- Use online contract monitoring tools to track contract progress and goals.
- Make use of best-value contracts. They are negotiated contracts between a contractor and owner and include a range of considerations such as expertise, financing, quality, and past performance.
- Pay sub-contractors promptly—they are often the last ones paid and least able to afford the wait.
- Ensure payment through contract compliance.
- Unbundle large projects to make them accessible to smaller DBEs with different levels of capacity.
- Structure bid pools based on contractor size. This allows small contractors to compete rather than with large contractors.
- Use an accessible online sub-contracting system.
- Identify portions of work during the planning phase that could be substituted for diverse suppliers.
- Build a diverse supplier contact list to share with other proponents. (Fairchild et al. 2018)

Examples

Kingsbridge Armory, New York

Contracting with minority- and women-owned business enterprises is an explicit provision in the Kingsbridge Armory CBA. Specifically, the CBA calls for each employer of the development project to award 25 percent of the funds spent on employees performing construction of the project to MBEs and WBEs located in the Bronx. Each employer is also required to include this provision in any contract or agreement with any third party that will operate its business at or provide services to the Kingsbridge Armory project (Partnership for Working Families 2015b).

Los Angeles International Airport, California

In 2004, a coalition of CBOs and labor unions entered a CBA as part of the Los Angeles International Airport's (LAX) $11 billion modernization plan. The agreement is between the LAX Coalition of Economic, Environmental, and Educational Justice and Los Angeles Worlds Airports (LAWA). The original agreement includes a MBE, WBE, and small business utilization and retention program to increase participation in the planning, construction, operation, and maintenance of LAX. To pursue these goals, LAWA agreed to conduct targeted outreach to small businesses, MBE, and WBE within the project impact area. These businesses were also included in pre-bid conferences and "meet the general contractor" events. LAWA also agreed to unbundle construction projects into smaller bid sizes to help ensure fair competition. Additionally, LAWA agreed to help with access to bonding, insurance, procurement and other types of capacity-related assistance where

necessary. Importantly, the CBA also called for LAWA to coordinate with the City of Los Angeles Mayor's Office and other relevant business and finance organizations to assist in identifying or developing a low-interest working capital revolving loan program (Partnership for Working Families 2004).

Resources

Third-Party Certification Sources and Clearinghouse

- Caltrans California Unified Certification Program Disadvantaged Business Enterprise Certification
- Women, minority, LGBTQIA+, and disabled veteran-owned businesses:
  - CPUC GO 156 CPUC Supplier Diversity Program Clearinghouse
  - Southern California Minority Supplier Developer Council/National Minority Supplier Development Council Certification
  - Western Regional Minority Supplier Development Council/National Minority Supplier Development Council
  - US Small Business Administration: Service-Disabled Veteran-Owned Small Business Program
  - US Small Business Administration: Women-Owned Small Business/Economically Disadvantaged Women-Owned Small Business Program
  - CA Department of General Services: Disabled Veteran Business Enterprise Certification Program
  - US Small Business Administration: 8(a) Business Development Program

Related Measures

- CCD-5. Establish a Community Benefits Agreement

IEP-4. Use of Locally/Regionally Manufactured Products and Materials

Buying locally manufactured products and materials in both the construction (e.g., forestry products) and operations (e.g., food) provides employment opportunities for community members as well as supporting California tax revenues. Local procurement also reduces emissions for transportation, especially for bulk materials such as construction aggregate. Different parts of California also have different capacity for manufacturing and producing products and materials, so the guidelines below should be tailored to local conditions. In general, the preference is to first source materials from within the commute shed of the project location (offering local employment opportunities), followed by within the region or adjacent counties, followed by sourced within California.

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Project/Site
- Timing: Project construction

Communities or Issues Addressed

Tradable sectors of the economy (where output can be sold to other states and nations) bring income into an area, and typically support non-tradable sectors of the economy (such as retail, healthcare, and service) through the multiplier effect. Money spent with local businesses on locally made goods is more likely to flow to other sectors of the local economy (e.g., upstream through product supply chain or horizontally through employees), than money spent at national-level chains and retailers. In addition, local businesses support local jobs and pay local taxes, which in turn support municipal and state services. Keeping project dollars local by purchasing from local providers strengthens economies and can reduce transportation emissions.

Dimensions of Equity

Investment in local tradable industries improves *economic resilience* and creates additional opportunities for residents. The use of local forestry products made of biomass from forest restoration projects can help to increase *climate resilience* by reducing the risk of catastrophic wildfires, thus also reducing GHG emissions.

Implementation Considerations

Beyond aggregate, paving, and forestry products, consider other products the project would use, such as machinery, fabricated metals (bike racks and hardware), plumbing, interior furnishings, ceramics, electrical vehicle support equipment, etc. Product sourcing should also consider sustainability and recyclability and support the circular economy whenever possible. Paving products, for example, can contain recycled materials. Wood products can use biomass removed from forest thinning and management practices, sustaining local jobs as well as helping to increase resilience. Currently, California imports 100 percent of its engineered wood from out of state, but the use of locally produced cross-laminated timber products, for example, can simultaneously support local industry in rural California, develop beneficial uses for biomass removed from forest restoration and thinning, and reduce GHG emissions by offsetting the use of steel and concrete as construction materials (LHC 2018).

The project can also go a step further to ensure that its products and materials are not only locally sourced but are free of toxic chemicals and components that may affect the health of construction workers and building occupants (see Measure PH-4, *Create Healthful, Sustainable Indoor Spaces*). Additionally, project proponents can also look for materials that are locally recycled or salvaged.

Example

The City of Pasadena has a First Buy Local Initiative that offers informal bid procedures for purchases under $25,000 and formal competitive procedures for purchases exceeding that threshold. Both the informal and formal procedures have a 5 percent bonus in evaluation score for local businesses and a 5 percent bonus for small businesses. Supporting strategies include outreach, engagement, and working groups to reach local businesses (City of Pasadena 2010).

Related Measures

- PH-4. Create Healthful, Sustainable Indoor Spaces

Resources

- Made in California Program: A directory of over 2,000 small- and medium-sized companies that make their products in California, with the ability to filter by county, region, or category.
- CA Made Program: The Governor's Office of Business and Economic Development's made in California certification and label.

IEP-5. Higher Wage and Working Condition Standards

The project will go above and beyond standard requirements on wages and working conditions. Since 1979, worker productivity has grown 3.5 times faster than worker pay, while cost of living – especially housing – has escalated dramatically, driving income inequality (Economic Policy Institute 2021). In addition, there are notable pay gaps in gender and race, with Asian and white people making more than Black and Latinx people and men making more than women (Patten 2016). The rise of independent contractors (the "gig" economy), labor deregulation, and increasing costs of benefits have further led to the deterioration of working conditions (Livni 2019). While projects may promise job creation as a core benefit, communities may be rightfully concerned that employment opportunities generated by project construction and operation may not pay wages commensurate with the local cost of living or provide safe working conditions and meaningful employment opportunities.

For this measure, the project would ensure minimum wage and/or labor standards. During construction, project labor agreements and prevailing wage and skilled and trained workforce requirements are typical mechanisms to ensure fair wages and working conditions. Living-wage standards, skilled worker or training requirements, or union labor agreements can help achieve these goals for operational projects. These requirements can also be adopted jurisdiction-wide for specific workers or industries, such as prevailing wage requirements for publicly funded construction projects, or New York City's delivery worker bills that required restroom access, mileage limits, and other working condition improvements for app-based delivery workers.

Finally, the project will include accountability measures to implement existing labor standards that may be overlooked or difficult to enforce. For example, to protect outdoor

workers from wildfire smoke, California Code of Regulations, Title 8, Section 5141.1 requires employers to provide enclosed workspaces, relocate work sites, change work schedules or work intensity, and/or provide respirators such as N95 face masks when the AQI for PM2.5 exceeds 151. Projects would need to create policies and procedures in advance, such as designating staff to monitor daily AQI, stockpiling sufficient respirators, and instructing staff and supervisors on appropriate work intensity. These additional accountability measures should be focused on likely hazards, such as extreme heat, or regulations that are commonly violated in the industry or community.

Applicability

All

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Construction and operations

Communities or Issues Addressed

Projects may increase demand for low-wage service workers, workers in industries with limited regulations, or other laborers that operate with inherent power differentials that can lead to exploitation (e.g., undocumented workers or workers whose immigration status is dependent on the employer). Ensuring fair wages and safe working conditions empowers these employees and communities. Workers also benefit from lower allostatic load and increased residential and transportation choice (McEwen and Gianaros 2011).

For example, half of the families in California's construction sector are on state safety net programs, considerably higher than the state average of one-third for all working families (Jacobs and Huang 2021). A skilled and trained workforce provision, which requires a percentage of workers to graduate from apprenticeship programs, can improve safety and wages (Office of Disability Employment Policy 2021).

Dimensions of Equity

By implementing wage and working conditions standards that go beyond requirements, proponents can directly support *economic resilience* and *social resilience* for workers. This measure also has the potential to benefit the resilience of the broader community when coupled with local hiring and contracting provisions. With deep wage disparities across race and gender, prevailing wage standards can help advance *equity*. Enhanced labor standards can also help combat labor exploitation and provide safer environments, critical for *climate resilience*.

Implementation Considerations

Accountability measures are necessary to ensure the project is consistent with promises, and measures need to be carefully crafted to survive challenge. Community benefit

agreements, project labor agreements, and developer agreements may be more defensible than mitigation measures or conditions of approval.

Examples

The Los Angeles Sports and Entertainment District Community Benefits Agreement (Staples Center) set a goal that 70 percent of the jobs created by the project would pay the City's living wage.

The Oakland Army Base project included employer hiring agreements that required living wage compensation and a focus on hiring disadvantaged workers.

Related Measures

- CCD-5. Establish a Community Benefits Agreement
- IEP-1. Local Labor and Apprenticeships (Construction)
- IEP-2. Local Labor and Apprenticeships (Operations)

Inclusive Communities (IC)

Photo Credit: Franco Folini, November 2003

Many communities in California have been intentionally designed to exclude people, often by race, income, or disability (Othering & Belonging Institute 2018). This reality created the need for people, especially marginalized communities, to create supportive social networks within the built environment to fulfill needs such as childcare, education, employment, and identity (Payne et al. 2009). As projects are built in new and established communities, care must be taken to ensure that all Californians can be included in the housing and jobs that the project brings. An inclusive community is one in which all residents can live, work, play, and meet their daily needs, and which shares, uplifts, and affirms the stories and identities of its marginalized and historically excluded communities.

Key Indicators: Many communities would benefit from these measures. That said, relevant indicators in CalEnviroScreen include: Education, Linguistic Isolation, Poverty, and Unemployment. Relevant Healthy Places Indicators include: Above Poverty, Employed, Median Household Income, Auto Access, Park Access, Retail Density, Supermarket Access, Tree Canopy, Disabled, Cognitively Disabled, Physically Disabled, Children, Elderly, Hardship Index, California Qualified Opportunity Zones, and Race/Ethnicity.

Cross-Cutting Guidance

Standard development processes are rooted in exclusionary practices. Designing inclusive communities requires intentionality and collaboration, ideally prior to the formal entitlement process. It is recommended the user consider the following:

- **Early community engagement:** Community members are experts on their neighborhood and can help identify which suite of measures and implementation pieces have the most benefit for the community. Refer to the *Community-Centered Development* section for measures on community needs assessments and asset mapping to help identify needs and gaps, and the *Inclusive Engagement* section for engagement recommendations.
- **Continued engagement during operations**: As communities evolve, and as climate and economic disruptions may occur, community needs change. Demographic, socio-economic, and environmental changes may require the project to flexibly address what it means to create an inclusive community. Relationship building between community members and the project, as well as regular community engagement events, can help anticipate some of these changes.

IC-1. Invests in Local Arts and Culture to Affirm Community Identity

During development, a community's identity can often be erased and threatened with gentrification. Support for and investment in local arts and culture help to preserve a sense of community in the wake of neighborhood change. Art can help contribute to advancing human dignity, inspiring and mobilizing social change, healing and mental health, expressing a community's identity, history, and vision for itself and its place in the world, building community capacity, and improving its public spaces and infrastructure (Cleveland 2011). Additionally, access to representative arts and cultural spaces may be a community need identified through community needs assessments or other community-based outreach. Collaborating with CBOs and local groups is imperative to ensure proper and appropriate investment.

The project proponent, working with local community groups, will invest at least 1 percent of the total project cost in local arts and culture projects, programs, or other initiatives. This could manifest as murals, heritage walks, arts education, artist-in-residence and artist-in-training programs, cultural district designation, youth-led arts, arts programs for people who are incarcerated, a performing arts pavilion in an onsite plaza, sponsorship of local artists and groups, or other priorities identified by community members.

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Project/Site or Neighborhood/City
- Timing: Planning, construction, or operations

Communities or Issues Addressed

"During challenging and turbulent times, artists have been on the forefront of expressing our community's demand for change… It is imperative that we amplify their voices by supporting their work as they memorialize and mark this moment," noted the Saint Paul and Minnesota Foundation (SPMF 2020). The arts can narrate the unique people, culture, history, and issues of a community to both the members of the community and the wider world.

Art is a core part of a community's articulation of its past, present, and future, and it is crucial to provide greater space and support to artists from low-income and marginalized communities and communities of color, which have often been overlooked in arts funding programs. Arts organizations serving communities of color generally have far smaller budgets and greater financially instability than their counterparts in white communities (PolicyLink 2017). Through this measure, a project proponent can thoughtfully support artists from underresourced backgrounds, while contributing to community development and creative placemaking.

Dimensions of Equity

By uplifting artists from marginalized and underrepresented communities, inclusive art projects can help to enhance community *self-determination* and support community ownership over art, art-making, and public spaces. Providing support and spaces for Black, Indigenous, and People of Color (BIPOC) artists can help to further *racial equity*. Art commemorating civil rights leaders, community figures, and traditional cultural practices can help a community tell its story, benefiting *social resilience*. Community-centered art training and education can also help to increase individual wellbeing, civic participation, and engagement with community initiatives (Bennett 2014). Finally, arts projects can also help to contribute to creative placemaking and *enhance economic development* by drawing visitors.

Implementation Considerations

While art can benefit an individual project, the intent of this measure is to ensure the wider community benefits as well. This can take the form of not only supporting individual public works of arts (e.g., a sculpture, mural, a performance, or festival) but also supporting local artists, sponsoring art programs, and providing training and arts education for underserved, vulnerable, and marginalized communities. "Successful creative placemaking projects are not measured by how many new arts centers, galleries, or cultural districts are built. Rather, their success is measured in the ways artists, formal and informal arts spaces, and creative interventions have contributed toward community outcomes," writes ArtPlace, a collaboration between foundations and federal agencies to support and fund art as placemaking and community development (Axel-Lute 2017).

Community spaces should be respected, and artists should come from and be representative of the community. Community arts groups, coalitions, and CBOs should take the lead in identifying artists, programs, and initiatives to support, as well as implementation and program design. Artists and art groups from underresourced and

marginalized communities should be prioritized, especially Black, indigenous, people of color, youth, and seniors. Local artists should be involved.

Examples

The City of Berkeley's Public Art on Private Development Program requires either an onsite, publicly accessible artwork valued at 1.75 percent of construction costs, an in-lieu fee at 0.8 percent of costs, or a combination thereof.

Public projects in San Francisco are required to contribute 2 percent of projects costs for art through the San Francisco Arts Commission. As part of its multibillion rebuild of its sewer system, the San Francisco Public Utilities Commission is working to channel art funds to neighborhoods directly impacted by the rebuild. This includes a focus on Bayview-Hunters Point, San Francisco's historic Black community and home to the city's largest wastewater treatment plant (PolicyLink 2017).

Resources

- The **Americans for the Arts** provides example ordinances that set aside percentages to fund arts projects.
- **ArtPlace** provides toolkits, resources, research studies, and more to help community planners, local governments, and artists to support art in community development. ArtPlace has developed an interactive tool that provides research and case studies on how arts and culture can support equitable community development, focusing on 13 benefits, such as ensuring cultural continuity, healing trauma, and building power.
- The **Federal Reserve Bank of San Francisco's** November 2019 issue of *Community Development Innovation Review* focuses on the role of arts and culture, with articles examining how the arts can impact community wellbeing, transforming vacant space, social resilience, community empowerment, economic development and more.

IC-2. Adopt Design Standards

The use of an inclusive design standard or certification system can encourage sustainable, equitable development, while also providing inspiration and examples to other project proponents. Today there exists a range of comprehensive international and national design standards and frameworks that help to guide and promote sustainable design throughout the project planning, construction, and operations lifecycle, but not all of them address equity.

Below are some of the key features of each of the design standards that can be incorporated to increase equity.

- The Living Future Challenge is the most comprehensive of all global design standards, aiming to be "socially just, culturally rich, and ecologically restorative" (International Living Future Institute 2021). Their standards can be implemented at the product, building, or community scale, and are based on performance and operations, not just certification at completion of construction.

  - The Living Building Challenge includes elements focusing on indoor air quality; equitable and public access to non-building infrastructure and roads such as gardens, paths, and benches; equitable treatment; just business practices; accessibility; and urban agriculture.
  - The Living Community Challenge encompasses these same elements, as well as broader features that can build equity in an entire community: local food programs, community hubs, shared public spaces, community resilience and disaster planning, and more. They also provide a framework for affordable housing and biophilic design.
- Enterprise Green Communities (EGC) is a design standard specifically for new or rehabilitated affordable housing projects. The goal is to develop affordable housing that is healthy, sustainable, safe, resilient, and comfortable. Standards focus on a healthy indoor living environment, zero energy, active mobility, emergency management and resilience, and universal design. There are also recommendations for affordable housing development in rural, suburban, and tribal communities. Unlike many other design standards, EGC covers the cost of certification, making it more accessible for affordable housing developers.
- Active Design Guidelines: Developed by the Center for Active Design in 2010, the Active Design Guidelines aim to support public health through developing streets, buildings, and public spaces that encourage walking, biking, recreation, and active living. The guidelines can help improve pedestrian and bicycling infrastructure and amenities (e.g., lighting and crosswalks) in communities where they have historically been neglected. They can also to help to increase access to neighborhood destinations while simultaneously addressing physical activity and public health. There are additional supplements for affordable housing, safety, and schools.
- LEED: The U.S. Green Building Council's LEED rating system has introduced Social Equity Pilot Credits, which are designed to address equity throughout the lifecycle of the building process, from construction to operations. The credit includes community engagement, evaluating existing needs and disparities, workforce development, supply chain sustainability, accessibility, and more.
- Universal Design: Universal design is the principle that the built environment can be accessed and used by all people regardless of age, ability, disability, or size, meeting the needs of all without the use of individual modifications and adaptations. Universal design is inclusive by nature and aims to be equitable, flexible, and intuitive and require low physical effort. This supports equity by expanding accessibility to all users.

Applicability

All projects with construction.

Scale and Timing

- Neighborhood/City and Project/Site
- Timeframe: Planning, construction, and operations

Communities or Issues Addressed

Due to the comprehensive nature of these design standards, they are beneficial to all communities and issues.

Dimensions of Equity

Because this measure encompasses a range of design standards, some of which are holistic and systematic in approach, it can help to address almost all dimensions of equity, depending on the specific standards implemented.

Implementation Considerations

The process of pursuing certification may be costly for some projects, but individual elements can be pursued or combined across systems to increase equity, resilience, and sustainability. The project should consider local goals and priorities, as well as community input, needs assessments, and plans, in selecting which design standard, or combination of standards, would be most appropriate. Of all the design standards, ECG specifically focuses on affordable housing and may be the most accessible for all projects.

Examples

Working with an interdisciplinary team of planners, health experts, community groups, and agencies, Sacramento County developed and adopted its own iteration of the Active Design Guidelines, Design 4 Active Sacramento. This has been codified into an array of zoning and housing codes, ensuring that active design for health is centered in Sacramento County regulations.

Seattle's International Chinatown District is exploring multiple ways to adopt Living Community Challenge principles, include a community-led de-paving effort, community gardens, public gathering spaces, a greenway, and stormwater mitigation. Numerous other case studies and examples, including many in California, can be found on the Living Future website.

IC-3. Promotes Accessibility

The project will increase ADA access beyond code requirements and design for people with autism as well as other neurological or sensory processing conditions. Open spaces and amenities are available to all; the project will incorporate Universal Design to create environments that are accessible to anyone. Universal Design explicitly calls for constructing environments that are designed with everyone in mind, regardless of their age, size, or ability.

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Project/Site or Neighborhood/City
- Timing: Construction

Communities or Issues Addressed

People with physical or neurological conditions or limitations may have difficulties navigating and using traditionally designed projects. Designing for accessibility supports all users, making a more open, inclusive built environment. Features that benefit neurodivergent populations also reduce stress and confusion for neurotypical users, while features aiding those with mobility devices also help those with carts or strollers. These features also enhance independence. For example, Universal Design facilitates aging in place, allowing seniors to defer or delay leaving their homes and communities for institutionalized care.

Dimensions of Equity

Designing for accessibility in all spaces creates a more welcoming environment for all, supporting greater inclusion and independence for individuals of all abilities. Accessible transportation can improve *mobility choice* and transportation justice, while accessible housing design can help improve *public health*, mental wellbeing and confidence, and enhance *economic* and *social resilience.*

Implementation Considerations

The project proponent should consider not only how the target market would use the project, but how anyone could use the project. For example, a subdivision of two-story single-family homes should include an option for a bedroom and bathroom on the ground floor to accommodate occupant injury, residents who cannot navigate stairs, or seniors. Grab bars in bathrooms and wide doorways and hallways facilitate aging and mobility devices. A nearby quiet garden with water feature can create a place to recover from overstimulation.

Resources

- The **Center for Excellence in Universal Design** provides an excellent primer on universal design.
- A City for Marc provides a toolkit and resources for urban design that is inclusive of people with autism and other neurosensory conditions.
- The American Association of Retired Persons' Center for Aging in Place provides a checklist for developing senior-friendly communities supportive of aging-in-place.

IC-4. Enhanced Open and Green Spaces

Low-income communities often lack equitable access to parks and green spaces. By supporting park and open space development in underserved communities, the project proponent can help increase space for residents to exercise and socialize, increasing

social resilience and reducing the UHI effect. Especially as COVID-19 has highlighted the need for outdoor spaces in which to safely exercise and socialize, the disparities in park access between wealthy and low-income communities have become particularly stark.

Under this measure, proponents of residential projects will contribute their Quimby requirements and other park impact fees, plus an additional 25 percent or more in acreage-equivalents, to a Quimby plan area in the bottom quartile of a jurisdiction based on aggregated CalEnviroScreen score, or on the project if in a disadvantaged community. These additional funds may be given to the local jurisdiction or local open space CBOs. Commercial and industrial projects would make a similar additional contribution based on equivalent dwelling units.

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Project/Site
- Timing: Construction

Communities or Issues Addressed

This measure can help communities that currently lack park access or have low tree canopy or a high percentage of impervious spaces. Low-income or underresourced communities should be prioritized. Relevant indicators include Park Access, Tree Canopy, Impervious Surface Cover, and Urban Heat Island Index as part of the Healthy Places Index.

Dimensions of Equity

Parks, greenbelts, and green spaces are linked with not only improved *air quality* and lower temperatures in the park itself, but also in their greater surrounding areas, supporting *climate resilience* (CARB 2017). In addition, parks and other public spaces help to support greater *social resilience.* Increasing access to public green spaces will also help to encourage *active transportation, mobility,* and *public health*.

Implementation Considerations

Commercial developments that are not able to develop public spaces or open spaces on site may be able to consider an offsite alternative, ideally within the same community. The development of parks in low-income and marginalized communities may lead to rising housing costs, and eventually gentrification and displacement. To address this potentiality, project proponents should work closely with CBOs and community members to understand community priorities and needs, as well as to plan, site, design, and develop the park. Project proponents, local jurisdictions, housing advocates, and community groups should also work together to determine appropriate anti-displacement strategies, such as local hiring measures in the *Inclusive Economics and Prosperity* section or housing measures in the *Anti-Displacement and Housing* section.

Example

The 1985 San Francisco Downtown Plan required that publicly accessible open spaces be provided for all construction projects, at the rate of one square foot of open space per 50 square foot of building space. As a result, as of 2009, 27 open spaces have been developed, including urban gardens, walkways, and public plazas (SFPD 2011). In addition, commercial developments were required to contribute $2 per square foot of building space to a dedicated park fund that would be used to acquire and develop parks downtown. As of 2009, nearly $11 million has been collected and used to develop parks on existing public parcels. As a result, most of downtown is now within a quarter mile of a neighborhood-serving open space.

Resources

- Greening without Gentrification: This policy brief analyzes 26 parks-related anti displacement strategies targeted for different audiences, finding that early implementation and community engagement are key.

Related Measures

- PH-2: Increase Urban Tree Canopy and Green Spaces

IC-5. Designated Space for Community-Based Organizations, Disadvantaged Businesses, and Community Assets

Designating space in a development project for a CBO, a community asset, or a disadvantaged business can contribute to local economic development, social wellbeing and resilience, education, health, capacity building, and other benefits. A CBO or local non-profit can provide services, resources, events, and activities for residents. Community assets should help to address existing needs and disparities in the community and provide needed services. Examples include community centers, health clinics, elderly care sites, grocery stores providing healthy, affordable foods, local businesses, and childcare facilities. Disadvantaged businesses can include businesses owned by women, people of color, veterans, LGBTQIA+ people, and other underrepresented groups, as well as small, locally owned businesses. In addition, or as an alternative approach, the project proponent could also consider offering discounted rent or mortgage, in-kind donations, or other support. By designating space for these organizations, the project can help to expand local opportunities and enhance the overall economic and social wellbeing of its surrounding community, which would in turn enhance its long-term prospects.

Applicability

Commercial or mixed-use developments in urban, rural, and suburban communities.

Scale and Timing

- Scale: Project/Site
- Timing: Operations

Communities or Issues Addressed

This measure can help to support local businesses and community needs in low-income and underresourced communities.

Dimensions of Equity

Locally owned businesses recirculate a greater share (50–80 percent) of their revenue to the local economy as compared to chain businesses (14–30 percent), because of greater spending with local labor, contractors, supply chains, and locally made goods (ILSR 2016). Other studies show that sales at local businesses generate more than twice the amount of local economic activity and 2.6 times more jobs, than sales at chain businesses (ISLR 2016). Thus, supporting local businesses will help keep money in the local economy, supporting *local jobs,* tax revenue, and *economic resilience.*

Implementation Considerations

Community input is crucial to the success of this measure; the project should consult existing community plans, needs assessments, asset mapping, and other available community documents to identify unmet needs and priorities. If existing research is insufficient, the project should partner with a CBO or conduct listening sessions to understand local desires. By designating space to support community needs, the project can help gain local support and drive additional traffic and visits to project sites, increasing overall economic benefits.

Example

La Fenix, a new housing development by BRIDGE Housing and Mission Housing Development Corporation in the Mission District of San Francisco, provides 100 percent affordable housing in combination with dedicated spaces for CBOs and community assets. On the first floor, neighborhood-serving spaces include a childcare center operated by Mission Neighborhood Centers, art studios, an art gallery from Acción Latina, and a bicycle repair workshop (City and County of San Francisco 2021). These services are open to not only onsite residents but also the surrounding neighborhood.

Related Measures

- CCD-3. Conduct a Community Needs Assessment

IC-6: Create Non-Standard Commercial or Retail Spaces

National-level chain businesses typically require larger building footprints and standard retail environments, high ceilings, and storage. These retail spaces typically have greater difficulty accommodating locally owned and small businesses. As retail and dining trends evolve in the twenty-first century away from big-box stores and chains, commercial developments can incorporate more non-standard retail spaces within their projects to respond to emerging business types (e.g., pop-up and to-go only food vendors, start-ups). By being smaller and thus more affordable to rent and operate, non-standard retail

spaces can reduce operating costs and better accommodate the needs of small and independent businesses, first-time business owners, and businesses owned by members of low-income, underserved, and underresourced communities. This can help to spur new business creation, especially by those who may lack initial capital, as well as social benefit businesses. In turn, this can help to support local economic development, social wellbeing and resilience, capacity-building, and other benefits.

Applicability

Commercial or retail projects.

Scale and Timing

- Scale: Project/Site
- Timing: Operations

Communities or Issues Addressed

Commercial or mixed-use properties, especially those in underserved communities.

Dimensions of Equity

Non-standard retail spaces can encourage new small businesses and help drive *economic development,* entrepreneurship, and creativity. Smaller spaces with lower rents reduce barriers of entry for people with less capital or lower credit. As non-standard retail spaces are more likely to be occupied by independent locally owned businesses, they are likely to return more economic value to the community. Locally owned businesses recirculate a greater share (50–80 percent) of their revenue to the local economy as compared to chain businesses (14–30 percent), because of greater spending with local labor, contractors, and locally made goods (ILSR 2016). Other studies show that sales at local businesses generate more than twice the amount of local economic activity, and 2.6 times more jobs, than at chain businesses (ISLR 2016). Thus, supporting local businesses will help to ensure that money stays in the local economy, supporting *local jobs*, tax revenue, and economic resilience.

Implementation Considerations

Offering a range of retail spaces can help commercial and mixed-use developments diversify the retail environment, support new business development, and attract a wider range of uses and customers. Buildings with low ceilings and alley-fronting spaces will usually be avoided by national retailers, preventing local businesses from being outbid. Small, street-facing retail spaces can help increase foot traffic and create more walkable, engaging neighborhoods. The project proponent should work with local business improvement districts and community coalitions to conduct outreach to potential tenants from underresourced and marginalized communities.

Example

As malls have closed around in the U.S., several of them are being redeveloped to accommodate smaller retailers, while downtown revitalization efforts around the U.S. have also highlighted the popularity of smaller street-facing shops in dense, walkable communities. The popularity of markets, converted shipping containers, and food halls such as Los Angeles's Grand Central Market and San Francisco's Ferry Building also point to the success of establishments focused on non-standard retail and their ability to develop and support new businesses, including from underrepresented business owners. In San Francisco, La Cocina opened the first woman-led food hall that will provide retail spaces for women- and immigrant-owned restaurants, offer economic opportunities and jobs, and serve as a model for anti-gentrification and conscious development in the Tenderloin, one of San Francisco's most disadvantaged neighborhoods.

Related Measures

- IC-8. Enhanced Access to Community Resources

IC-7. Equal Access to Building Amenities

Mixed-income multi-family developments should provide equal access to all building entrances, amenities, lobbies, and other shared facilities for affordable housing units. Affordable housing units should also be built to the same energy efficiency and other design standards as the baseline market-rate units.

Applicability

Mixed-income residential projects with common areas.

Scale and Timing

- Scale: Project/Site
- Timing: Operations

Communities or Issues Addressed

Affordable housing units are sometimes excluded from amenities in multi-family housing complexes, such as use of the clubhouse, community room, pool, or other shared amenities. This leads to segregation under which affordable housing residents are treated as second-class citizens, and families must explain to children why they cannot enjoy the same the pool or playroom as other residents.

Dimensions of Equity

Equal access to building facilities can help build *social resilience* and integration in the community. This can also support greater physical and mental *health* for residents.

Implementation Considerations

Shared, equitable access should include all amenities that are available to market-rate units at no additional cost but can exclude priced amenities such as parking. Affordable housing units should be provided the same keys to all secured amenities (e.g., bike rooms, laundry, gyms) as market-rate units. Take into account the needs of large families, those living with disabilities, and children when designing facilities and building access.

Example

Designed by Dutch architectural firm OMA, the Avery in San Francisco combines world-class architecture and a LEED gold rating with mixed-income housing. Of the 548 housing units, 149 are permanently affordable and will be designated for families earning up to 50 percent of area median income, which would be $64,050 or less for a family of four (City and County of San Francisco Office of the Mayor 2020). Shared building amenities include a fitness center, pool, roof garden, outdoor terrace, business and technology lounge, media room, and resident community garden. The Avery also includes public art, including works by local artists.

IC-8. Enhanced Access to Community Resources

The project will enhance and expand access of marginalized and underserved communities to resources such as additional green spaces, food, recreation areas, healthcare facilities, childcare facilities, elder care facilities, schools, broadband internet, and financial services. This measure promotes the diversification of accessible economic and social activities. The project can also expand transportation access to existing resources, such as by improving access to transit stations, sidewalk and bike lane improvements, or other improvements to the active transportation infrastructure. The project should directly address the identified needs of the community and help to support the creation of a healthier, more equitable, and more resilient environment for the people who live and work in the project area.

Applicability

Applicable to all projects.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning, operations

Communities or Issues Addressed

As a result of redlining and other historic policies, low-income communities and communities of color have been neglected by investment and development, and as a result lack ready access to facilities such as grocery stores, health, recreation, and other services that support healthful living. For example, predominantly white communities in Los Angeles have 3.2 times and 1.7 times more supermarkets than predominantly Black

and Latinx communities, respectively (NYLSRJP 2012). At the same time, low-income communities often have higher than average shares of fast-food restaurants and convenience stores supplying only processed foods. As a result, residents often face fewer choices, pay more, and travel further for fresh produce, groceries, and other services. Rural communities, as well, lack access to many of the same facilities, in addition to high-quality broadband internet, which often puts rural residents at a disadvantage for remote work, school, healthcare, and social connections.

Dimensions of Equity

Depending on the specific needs in each community, this measure can address a range of equity dimensions, including *public health, education, climate resilience*, *air quality, social resilience, jobs,* and more. By directly addressing community needs, this measure can also improve a community's *self-determination* and *equity*.

Implementation Considerations

The project proponent should build on community engagement and outreach efforts to understand community needs, priorities, and challenges. Partnering with a local CBO can help to identify existing community needs without conducting a separate needs assessment. Other resources, such as adopted community plans, a community health needs assessment, Healthy Places Index, or CalEnviroScreen can help to inform the process. The project proponent should then work with residents and local organizations to develop strategies to address the identified needs through the provision of space, infrastructure, transportation access, programming, or other solutions. Consider creating a new social or economic use, such as one that is not available within a half-mile, to enhance the local community's access to diverse activities.

Example

In its request for proposal for a 700,000-square-foot mixed-use development in East Harlem, the New York City Economic Development Corporation requested that 50,000 square feet be set aside for local businesses and 30,000 square feet for community facilities (ISLR 2016).

Related Measures

- IC-5: Designated Space for Community-Based Organizations, Disadvantaged Businesses, and Community Assets

Anti-Displacement and Housing (AH)

Photo Credit: Mark Hogan, May 2012

Housing, equity, and climate resilience are deeply linked – especially in California. As a result of skyrocketing rents, 79 percent of extremely low-income households and over half of very low-income households in California pay more than half their income for housing, compared to 7 percent of moderate-income households (California Housing Partnership 2020a). According to the Bay Area Equity Atlas, renters who are Black, Latinx, Native American, and/or women are more likely to be rent-burdened (Bay Area Equity Atlas 2021). Black residents are less likely to own their home, and for those that do, they are more likely to have their home be systematically undervalued during appraisals—by as much as $164,000 in the San Francisco Bay Area—when compared to similar homes with similar neighborhood amenities and school districts, which in turn undermines wealth and equity building for families (Levin 2020). With home ownership being one of the primary means of generational wealth accumulation and transfer among middle-class Americans, decades of segregation and redlining have exacerbated intergenerational poverty for Black communities and other communities of color. For the U.S., homeownership rates for Black residents are about 30 points lower than those of non-Hispanic whites, and for Latinx residents, about 25 point lower (U.S. Census 2021).

High housing costs and the lack of affordable housing have other widespread impacts, contributing to the number of unhoused residents in California, higher poverty rates, and greater vulnerability to sudden shocks and emergencies. Unaffordable housing also pushes residents into aging, potentially unsanitary homes that may be more exposed to temperature extremes. Housing costs may force residents to live at great distances from their work and school, resulting in long commutes that reduce time available for family life and exercise, deteriorating physical and mental health. Thus, expanding affordable and workforce housing near job centers can also help to decrease GHG emissions, not only in cities but also in mountain towns and rural communities, where second homes and short-term rentals have exacerbated housing shortages for local residents.

The measures in this section provide recommendations to increase affordable housing in California, protect tenants, and develop additional forms of community-owned housing or supportive housing. There are many strategies and actions to support affordable housing and anti-displacement at all levels of actions, from state- and regional-level policy change to direct advocacy and assistance for tenants; the measures here are by no means comprehensive and focus on actions that may be implemented at the project level, or by the project working together with the local jurisdiction.

Key Indicators: Relevant indicators in CalEnviroScreen include Housing Burden, Poverty, and Unemployment. Relevant indicators in Healthy Places Index include Above Poverty, Employed, Homeownership, Housing Habitability, Low-Income Homeowner Severe Housing Cost Burden, and Low-Income Renter Severe Housing Cost Burden.

Cross-Cutting Guidance

While California continues to pass laws that streamline the development of affordable housing, at the time of writing rising rents, land values, and construction costs have made safe, affordable housing even more challenging. The following are recommendations to support and enhance all measures in this section.

- **Early community engagement**: Early community engagement, including with CBOs and housing advocates, is essential to these measures. Projects including affordable housing may find challenges during entitlement, and early, collaborative engagement with the community can result in a better project. Community engagement also helps to identify important housing considerations for people with children, people living with a disability or medical condition, people coming from an underserved background, and large or multigenerational families.
- **Creative financing:** Standard project financing may require a rate-of-return that may be incompatible with these measures. Patient capital, tax credits, use of non-standard parcels, grants, or other finance vehicles may be appropriate.

AH-1. Support Community Land Trusts

Under this measure, the project proponent would either set aside land or provide a donation to a local, existing community land trust (CLT), a non-profit organization that owns land in trust for the community. The size of the land or donation should depend on project size and community characteristics and be determined in consultation with the local CLT and residents living in the project area.

First developed by civil rights activists, CLTs provide a shared model of land and home ownership that takes land off the market rollercoaster of appreciation and speculation. While some CLTs have other goals, most focus on the provision of housing through affordable rentals or long-term leases as an alternative to traditional home sales. Unlike housing funded by low-income house tax credits, CLT housing will not revert to market rate after 30 years and will remain permanently affordable. Under the CLT lease model, homeowners will only earn a portion of any appreciation in property value when they leave, and the rest goes back to the CLT, helping to preserve long-term affordability (Community-Wealth.org n.d.). A true multi-benefit solution, CLT-stewarded homes are often built more sustainably and are maintained in better condition than typical low-cost

rental housing, helping residents to live in a healthier environment, build wealth, and support climate resilience and racial justice.

Applicability

All projects in jurisdictions with a local community land trust. While CLTs are most common in cities, they can also be found in suburban and rural communities in California, such as the Bolinas Land Trust and Humboldt Land Trust. CLTs can also steward community-owned farms and green spaces for conservation.

Scale and Timing

- Scale: Project/Site or Neighborhood/City
- Timing: Planning

Communities or Issues Addressed

CLTs can be particularly effective for neighborhoods at risk of displacement or gentrification by placing control of land and housing directly with the community. CLTs may also be an effective solution for rural communities where tourism is changing the market dynamics of real estate. It is recommended that projects consult with CBOs, residents, housing advocacy organizations, and the lead agency to understand if they are in a community at risk from gentrification. Regional or local studies may help to identify vulnerable communities. The Urban Displacement Project provides detailed maps for the San Francisco Bay Area (including Sacramento), Los Angeles, and San Diego on neighborhoods at risk of displacement and gentrification. A nation-wide effort from the University of Minnesota similarly maps displacement and the concentration of low-income residents in economically declining neighborhoods.

Dimensions of Equity

Community land trusts can directly alleviate the high *housing burden* for low-income residents and communities of color, reducing housing costs and the risk of becoming unhoused, providing fair lending practices, and enabling occupants to build up wealth and home equity. These improvements can slowly reverse decades of racial inequity in home ownership, and lead to greater economic stability and resilience. In turn, *economic resilience* often confers greater ability for *disaster response and recovery* at both the household and neighborhood level. The cascading impacts of climate disasters, high housing costs, and systemic racism not only place communities of color directly in the path of the disaster—as with Hurricane Katrina—but they are also less likely to receive assistance from the Federal Emergency Management Agency post-disaster (National Advisory Council 2020). By increasing economic stability—starting with housing—CLTs can play a valuable role in climate resilience. With hundreds of thousands of Californians displaced by wildfires in recent years—and likely more to come—increasing community-owned, permanently affordable housing is critical to aid recovery efforts.

In addition, market-supplied housing units available to low-income renters are often in unsanitary and unsafe conditions, leaving residents exposed to air pollution, extreme

heat, mold, and other climate and health hazards. In contrast, CLT homes generally are better maintained and often have energy efficiency and weatherization improvements, helping residents with utility savings and reducing GHG emissions. CLTs also contribute to *climate and social resilience* of the community through stewardship of parks, urban gardens, and other green spaces; many CLT homes incorporate renewable energy, green infrastructure, active transportation, and other sustainable elements.

Finally, CLTs help to build community power and support *community ownership*, *self-determination*, and participation by providing residents a say in land use planning and decision-making in the neighborhood.

Implementation Considerations

This measure is particularly applicable for housing or commercial developments that may contribute to rising rents and housing prices in the project area. As such, engagement with and input from organizations and stakeholders that are representative of the project area are especially important. Project proponents are recommended to consult with the CLT and community stakeholders on the ideal location, size, and other characteristics of the land to be donated. In areas without an established community land trust, project proponents could consider contributing to seed funding or start-up funding that could be held by the lead agency to support nascent efforts.

Examples

In its home renovations, the Community Land Trust Association of West Marin makes energy efficiency and weatherization improvements and installs induction cooktops, hybrid water heaters, grey water recycling, and other sustainability features. It also built California's first new passivhaus, which are highly efficient and uses minimal energy, instead relying on passive heating and cooling from the environment. The Beverly/Vermont Community Land Trust in Los Angeles exercises land stewardship to create permanently affordable, sustainable, and low-impact housing in pedestrian-centered neighborhoods, including the Los Angeles Eco Village.

Resources

- The California Community Land Trust Network is a group of over 25 community land trusts across California, helping to support new and existing CLTs.
- The Grounded Solutions Network provides a resource library containing toolkits, case studies, reports, and decision guides to support CLTs and other inclusive housing policies.

Related Measures

- AH-6. Support the Formation of Collective Ownership Models: Limited-Equity Housing Cooperatives or Mutual Housing Associations

AH-2. Promote Affordable Housing in Transit-Rich Areas

Increasing affordable housing in transit-areas can help support wealth-building, mobility, and economic resilience for low-income residents, while also reducing GHG emissions and improving air quality. As a result of high housing prices in California, many low-income households live far from work or school, commuting hours from the outskirts of urban areas and job centers. Yet the trade-off is that transportation expenses—the cost of car ownership, maintenance, and operations—may erode or negate any savings on housing costs. Households in auto-dependent neighborhoods spend 25 percent of household income on transportation costs, but in neighborhoods with a variety of mobility options, including transit, transportation drops to 9 percent of budgets (HUD 2014). Affordable housing near transit, thus, can help save residents money as well as time. Data from the California Household Travel Survey shows that low-income households drive 25 to 30 percent less when living within a half mile of transit, and 50 percent less when living within a quarter mile of frequent transit, in comparison to households at the same income level living far from transit (Transform and California Housing Partnership Corporation 2014). This reduction in vehicle miles traveled can translate into savings in gas, vehicle ownership, and maintenance costs—which range from $6,000-$12,000 per year (HUD 2014).

In selecting sites and locations, multi-family affordable housing projects should opt for locations within a half-mile of existing transit stations and implement transit-supportive measures such as limiting onsite parking supply, building safe and comfortable bike lane and sidewalk connections to transit, and providing subsidized transit passes for residents. Cities and counties that own land within a half mile of transit stations should prioritize these locations for affordable housing development.

Applicability

Urban communities with a robust, frequent transit network.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Planning

Communities or Issues Addressed

This measure would help to support low-income residents, particularly those who are unable to drive, whether for reasons of income, ability, or age. Nationally, only about 18 percent of people earning less than $35,000 per year own a car (HUD 2014).

Dimensions of Equity

By reducing both housing and transportation costs for low-income households, affordable housing near transit can help to build *economic resilience*. In addition, transit can free up *mobility choices* and destination access for residents, especially for families with multiple working adults, school-age children, and only one vehicle. Decreased auto usage can

also reduce GHG emissions, improve *air quality,* and support walking and *active transportation,* supporting *physical health* for residents.

Implementation Considerations

Strategies to help incentivize affordable housing include increasing density allowances, eliminating or reducing parking requirements for transit-oriented development (saving on costs while enabling increases in building footprint), and establishing a transit-oriented development fund. Because transit is typically viewed as a neighborhood amenity, proximity to transit typically increases market rates by up to 20 percent for residential properties and 23 to 120 percent for commercial properties (National Center for Sustainable Transportation 2017). Thus, it may be possible for proponents to subsidize affordable housing units with market-rate housing and commercial leases.

Potential funding programs to support affordable housing near transit include the Strategic Growth Council's Affordable Housing and Sustainable Communities Program, the California Department of Housing and Community Development's Transit-Oriented Development Housing Program and Infill Infrastructure Grant, and regional funding sources such as the Bay Area Transit-Oriented Affordable Housing Fund.

Example

Recognizing that transportation costs are a significant burden for low-income families, San Jose-based First Community Housing chooses to not only site its affordable, sustainable housing developments near transit stations, but also to provide free, annual Valley Transportation Authority (VTA) Eco Passes to all residents at its 14 properties in Santa Clara County (FCH 2014). The passes provide unlimited trips on bus and light rail services operated by VTA. Surveys and studies show a high utilization rate for the Eco Pass, ranging between 40 and 90 percent across the housing developments. Not surprisingly, housing sites closest to light rail stations had the highest utilization rates. Between 29 and 76 percent of residents also reported choosing public transportation over driving for specific trips. Many residents commented on the helpfulness of the Eco Pass, noting that their families relied primarily or solely on transit for their mobility needs. Benefits for residents include more affordable commutes, a greater likelihood of walking (and thus increased fitness), and financial savings on vehicle operations and maintenance costs. Public benefits include reduced GHG emissions, air pollution, and traffic.

In addition, the studies also conducted parking counts, finding that 17 to 63 percent of parking spaces were always free at the housing sites. This, in turn, helped to convince the City of San Jose to reduce its parking requirements for senior housing from 1 per unit to 0.67—a significant savings for developers, as parking construction costs between $15,000 to $50,000 per space in Silicon Valley. What is more, First Community Housing is analyzing the potential of converting some of the excess parking spaces into low-impact designs, featuring pervious pavers, bioswales, and raingardens. These solutions—the direct outcome of supporting transit access by low-income residents—thus can also

benefit climate resilience by reducing paved surface areas and the UHI effect, filtering stormwater, and supporting native habitat.

Resources

Transform's GreenTrip Connect tool allows residential multifamily developments in California to estimate how affordable housing can help to reduce vehicle miles traveled and GHG emissions. While it does not specifically focus on projects located near transit stations, users can set the project location near transit and determine the effects of increasing affordable housing units, reducing parking spaces, and providing subsidized transit passes and rideshare program membership, in comparison to the city or county average. GreenTrip Connect will also estimate residential savings in terms of transportation costs and developer savings for avoided parking spaces.

AH-3. Protection for Existing Tenants of Redevelopment Projects

Redevelopment or rehabilitation of existing housing developments can be more sustainable than new construction, while also helping to provide more energy efficient, healthier, and improved housing conditions for residents. When existing affordable or low-income housing developments are redeveloped, the project should aim to help protect existing tenants and avoid displacement. The scarcity of affordable housing makes it challenging for residents to find alternative, equivalent housing near their workplace, family, or school. Residents in affordable housing units may also have fewer resources to enable them to relocate to another region or city, and relocation generally disrupts existing social networks and communities.

To avoid displacement, the project proponent can adopt the following best practices.

- Right to return: Existing residents should have the right to return to the affordable housing site after redevelopment and/or the first right of refusal.
- Relocation assistance: Existing residents should be offered fair compensation or relocation assistance and funding if they must vacate their homes temporarily during construction, or permanently. Relocation assistance programs should aim to ensure existing residents are equipped with the necessary resources, support, and information throughout the moving process.
- Temporary housing: The project proponent should endeavor to provide temporary housing near the original site at similar costs and quality.

Applicability

Projects involving the removal or demolition of existing housing units.

Scale and Timing

- Scale: Project/Site
- Timing: Planning, operations

Communities or Issues Addressed

Existing tenant protections can be particularly effective for affordable housing developments in neighborhoods at risk of displacement or gentrification, as well as rural communities where the market dynamics of real estate are evolving. The project should consult with CBOs, residents, housing advocacy organizations, and the lead agency to understand if they are in a community at risk from gentrification. Regional or local studies may help to identify vulnerable communities. The Urban Displacement Project provides detailed maps for the San Francisco Bay Area (including Sacramento), Los Angeles, and San Diego on neighborhoods at risk of displacement and gentrification. A nation-wide effort from the University of Minnesota similarly maps displacement and the concentration of low-income residents in economically declining neighborhoods.

Dimensions of Equity

Providing protections for existing residents can help to maintain a community's social fabric and network, helping to build and maintain *social resilience*. These protections can also help to buffer residents from high real estate costs and scarcity, reducing the risk of becoming unhoused and reducing housing burdens. Housing stability in turn translates into *economic resilience* and generates greater preparedness for disaster response and recovery at both the household and neighborhood level.

Implementation Considerations

An unplanned relocation from one's residence on another party's timeline is always disruptive and rarely easy. The project proponent should communicate all plans and timelines with residents in the existing development as early as possible, seek resident feedback, and work with residents to address issues and concerns. Households should receive a case manager to assist with the relocation process. If providing temporary housing, the project proponent should also develop clear options as early as possible and present them to residents for feedback. Permanently displaced residents should receive additional assistance and benefits.

Example

The Sacramento Housing and Redevelopment Agency (SHRA) is demolishing and rebuilding the 1940s-era, low-income Dos Rios housing project into a larger mixed-income housing development, renamed Marisol Village. The redevelopment process will fully replace the 218 very-low-income and low-income units and add another 280 affordable workforce and higher-end units. During the demolition and construction process, the proponent will provide relocation assistance for residents to relocate for at least 24 months. A case manager was assigned to each family to assist with relocation to either another SHRA-managed housing project or other alternatives with housing vouchers. If any residents are permanently displaced, they will receive permanent relocation assistance and benefits. While all 218 low-income units will be replaced, only the first 140 units in the initial phase will be offered to former residents. They will retain the same rents, set at a percentage of income. Other project additions will include a bike

trail, community garden, 500 trees, a park, and electric vehicle car share. The project is funded by several federal and state grants, including a Transformative Climate Community grant from the Strategic Growth Council, and will be fully complete in 2024.

AH-4. Incorporates Permanent Supportive Housing

The needs of certain underserved groups are often overlooked when developing housing units. Specifically, people who are currently or formerly unhoused, people living with a mental illness, people who want support with substance use issues, people who are living with chronic medical conditions or disabilities, the elderly, people with young children, people living with large families or multigenerational households, and members of the LGBTQIA+ community can benefit greatly from having onsite services. Permanent supportive housing helps to meet these needs by combining affordable housing with case management and permanent supportive services designed to help people remain permanently housed. For instance, supportive housing projects can allocate space for a community center where residents can engage with health programs, mental health services, job-seeking assistance, educational classes, and childcare services. Services are to be provided permanently, and all tenants may live in their homes and use services if they meet the basic obligations of tenancy. The types of services provided may vary depending on the local community's demonstrated needs and priorities, with the primary goal of keeping tenants housed.

Applicability

Residential projects.

Scale and Timing

- Scale: Project/Site
- Timing: Operations

Communities or Issues Addressed

For everyone, a stable home is foundational. For some of the most vulnerable groups in the state, affordable housing coupled with support services is a necessity. From mental health services to childcare, when it comes to maintaining housing and living in a healthy environment, onsite, multi-disciplinary services help tenants address a variety of challenges. For instance, in Santa Clara County, a study found that 86 percent of unhoused individuals randomly assigned to a permanent supportive housing program remained housed and needed fewer emergency psychiatric services (Kurtzman 2020). Similarly, a comprehensive literature review of permanent supportive housing found significant reductions in use of medical emergency services and mental health crisis services, hospitalizations, substance use, and days incarcerated, as well as increases in quality of life, social network size, and use of outpatient medical services (CSH 2020).

Notably, because of the reductions in use of emergency and crises services, permanent supportive housing is far less costly than traditional spending on services for the

unhoused. In Orange County, individuals in permanent supportive housing had 78 percent fewer ambulance transports and 100 percent fewer arrests in comparison to those who are unhoused. As a result, costs per capita for permanent supportive housing residents were 50 percent lower ($51,587) than for the unhoused ($100,759), with higher benefits for individuals who are more unwell (Snow and Goldberg 2017). As this number totals nearly $300 million in Orange County annually, permanent supportive housing can provide substantial savings for public agencies and non-profit organizations.

Dimensions of Equity

By directly addressing challenges for underserved groups, supportive housing services have the potential to enhance a community's *affordable housing* quality, *public health*, and *social resilience*, boost *employment*, and address key determinants of *poverty*.

Implementation Considerations

- Leverage expertise of local CBOs to help develop supportive housing and/or to become service providers at the project site during operations.
- Ensure that housing and services are affordable, with tenants paying no more than 30 percent of their income toward rent/utilities/services.
- Collaborate with CBOs and community groups to determine specific needs.

Example

Permanent supportive housing has a proven record in helping unhoused residents. In Orange County and Sacramento, Jamboree Housing operates six permanent supportive housing developments, providing homes to over 475 residents who had been unhoused (Jamboree 2021). The housing properties provide units of different sizes, as well as veteran-designated and Mental Health Services Act (MHSA) Housing Program-dedicated units. One of the properties is California's first 100 percent MHSA property. Three of the developments are integrated into standard affordable housing, but all offer onsite services including 24/7 full-service clinical services, vocational training, life skills training, support groups, and community alliances, referrals, and liaisons. In Irvine, one property, Doria, is developed in conjunction with the Irvine Community Land Trust and provides both affordable workforce housing and permanent supportive housing within an upscale master-planned community – exemplifying integrated housing across all income classes. The outcomes include significantly reduced hospitalizations for both physical and mental conditions, reduced incarceration and contacts with the criminal justice system, higher housing retention rates, and improvements in health, financial stability, work skills, and education.

AH-5. Make Housing Units Permanently Affordable

This measure calls for the project proponent to ensure affordable housing units are permanently affordable for low-income residents. Many affordable housing units in California eventually flip to market-rate as affordability restrictions expire. The project proponent should pursue strategies to guarantee affordable housing is maintained.

Permanent affordability can be achieved by engaging with alternative housing models (*community land trusts* and *limited-equity housing cooperatives*) and deed restrictions.

In creating long-term affordable housing units, the project proponent, government agency, or nonprofit subsidizes homeownership for low- and moderate-income homebuyers by investing public and/or private funds to reduce the purchase price of the housing unit. Homebuyers then agree to requirements to preserve the affordability of the unit for future families. These requirements can take the form of resale price restrictions (typically a specified percentage of any increase in value, plus the original cost of the property and any additions they have made), and a requirement to sell to other low- or moderate-income households.

Applicability

Residential projects.

Scale and Timing

- Scale: Project/Site and Neighborhood
- Timing: Planning, operations

Communities or Issues Addressed

The California Housing Partnership (2020b) estimates that even before COVID-19, 1.3 million low-income households in California lacked access to affordable homes. Increasing and preserving affordable housing supply is an utmost priority for the state.

Dimensions of Equity

Enhancing a community's stock of affordable housing has important implications for *economic resilience, social resilience, public health,* and *poverty* levels.

Implementation Considerations

- To preserve affordable housing, project proponents should consider other alternative housing models, especially those that *support collective ownership* and *community land trusts.*
- Partner with local CBO to manage affordable housing programs and consider the following strategies (Stromberg and Stromberg 2013):
  - Provide pre- and post-purchase education for potential homebuyers.
  - Provide financial counseling.
  - Provide other homeownership assistance services.
- Important considerations for deed restrictions.
  - Important considerations when using deed restrictions to limit resale prices:
    - » Specify required length of affordability and affordability level.
    - » Determine how resale price will be calculated.

    - » Specify the entity (typically a public agency) entitled to the difference between the sales price and the restricted resale price if an income-qualified buyer cannot be found.
    - » If there are restrictions for local workers, ensure the program is eligible to all people who work in a certain geographic area, including immigrants.
  - Design deed restriction programs to prevent the conversion of housing units to market rate in the event of foreclosures.
    - » This event occurs when the deed restriction is placed in a subordinate position to the interests of the primary lien holder (issuer of the primary mortgage) which allows a deed restriction to be cancelled under a foreclosure.
    - » Detail protections for buyers if the price of the housing unit declines.
    - » Determine the treatment of capital improvements as well as deferred maintenance at resale.
- Detail provisions for repayment of any secondary financing benefiting a public agency.
- Specify owner-occupancy requirements and/or restrictions on rentals.
- Detail property transfer process.
- Outline involuntary sale or transfer procedures.
- Outline processes for the addition of parties to title by marriage or domestic partnership.
- Detail hazard insurance and property tax requirements.
- Identify provisions for subordination of the agreement, refinancing, and home equity loans.
- Buyer's consent to the option to purchase.
- Detail default events that trigger the Option to Purchase or foreclosure.
- Define the affordability rate of housing units: Detail the income levels targeted (e.g., 80 percent area median income [AMI], 60 percent AMI, 30 percent AMI) and the number of units allocated to each income level. (Marshall, Kautz, and Higgins 2006)

Examples

The Vail, Colorado, Housing Department found that 90 percent of sales from locally owned homes were purchased by a second home/vacation property owner. Vail also found data demonstrating that these second homes and vacation properties are rarely purchased by residents, revealing a housing market trending toward pricing out local wage earners. To address this problem, the Vail Town Council and the Vail Local Housing Authority launched the VailInDEED program in 2017. This program uses taxpayer funds to purchase deed restrictions to protect and preserve existing housing for use by residents. Since its launch, the program has secured approximately 140 new deed restrictions for the Vail community. In total about 270 Vail residents have been assured of the affordability of their homes (Urban Land Institute 2020).

Grappling with a similar challenge of rising housing costs limiting availability for local workers, Placer County is developing a similar program, as 90 percent of homes in

eastern Placer County—by Lake Tahoe—are owned by second homeowners. Due to launch in 2021, the Workforce Housing Preservation Program will pay homeowners to deed restrict their homes so that only local workers can purchase or rent them (County of Placer 2021). Participants must work at least 30 hours a week at a job within 20 miles of the deed-restricted residence; income eligibility is capped at 120 percent of the average median income, or about $103,000 for a family of four. The income and geographic limits are higher in eastern Placer County due to its significantly higher housing costs.

Related Measures

- AH-1. Support Community Land Trusts
- AH-6. Support the Formation of Collective Ownership Models: Limited-Equity Housing Cooperatives or Mutual Housing Associations

AH-6. Support the Formation of Collective Ownership Models: Limited-Equity Housing Cooperatives or Mutual Housing Associations

This measure calls for proponents to build and operate housing units as limited-equity housing cooperatives, mutual housing associations, or resident-controlled units. These collective ownership models serve as effective strategies to center the needs of residents and have the potential to bolster a community's stock of affordable housing.

Limited-Equity Housing Cooperatives

In a limited-equity housing cooperative, residents form a corporation and share ownership of a building. Cooperative members pay dues and work together through democratic decision-making to reach mutual goals. Limited-equity housing cooperatives can offer permanently affordable homeownership opportunities for low- and moderate-income families. Under this system, residents are shareholders of their cooperative, and they purchase a share of stock in the cooperative entitling them to occupy one housing unit, instead of directly buying the housing unit. Restrictions on share resales ensures that affordability is maintained from one resident/shareholder to the next.

Mutual Housing Associations

Mutual housing associations are non-profits that have a board that includes residents, future residents, and representatives of the public and private sectors. They manage their own developments and work toward goals of expanding affordable housing supply, providing public goods by investing in the local neighborhood, and ensuring quality of life for residents. Residents lease housing from the mutual housing association.

Applicability

Residential projects.

Scale and Timing

- Scale: Project/Site or Neighborhood
- Timing: Planning, operations

Communities or Issues Addressed

Increasing the supply of affordable housing with collective ownership structures can help alleviate the declining stock of affordable housing across California. Collective ownership structures help make housing affordable for low-income people by removing property from the speculative real estate market.

Dimensions of Equity

Collective ownership structures help improve the *economic resilience* of residents and democratize residential decision-making power which enhances *community ownership* and *self-determination*.

Implementation Considerations

- Organize ownership structures in collaboration with prospective low- and moderate-income residents. Tailor the ownership structure based on community capacity and priorities. For instance, consider a merger between a community land trust and a limited-equity cooperative for a more robust shared equity model.
- Consider partnering with CBOs or existing community land trusts to manage resident recruitment/community building and to provide housing support services. Limited equity housing cooperatives require strong fiscal and organizational support to succeed. Leverage existing experience from local community organizations to ensure sustained support.
- Resident participation is fundamental for a cooperative's success. Ensure real estate educational resources are provided and residents are supported.
- For limited equity housing cooperatives, develop a workable limited equity formula to determine affordable share purchase and resale prices in the long term.

Examples

Limited Equity Housing Cooperatives

Originally completed in 1985, Dos Pinos is a limited-equity housing cooperative on a 4-acre parcel in the Senda Nueva neighborhood of North Davis. The cooperative has approximately 60 units and is governed by an elected seven-person Board of Directors. To become a voting member of the cooperative, a person purchases a share or membership certificate in the cooperative housing corporation. This share grants the person the exclusive right to occupy one dwelling unit in the cooperative and sign an occupancy agreement. Residents pay a monthly carrying charge that covers the cooperative's general operating costs.

Shares cannot be resold for more than the maximum transfer value (MTV) for that unit. MTV is equivalent to the sum of the following: the value of the share at time of purchase, annual increases in the share's value over the span of a member's residency, and the depreciated value of any permanent improvements (which are approved by the board) made during residency. When a member notifies the Board of their intent to move out, Dos Pinos has the right of first refusal to re-purchase the share. If Dos Pinos does re-purchase, it sells it to the next person on a waiting list.

A study from the Urban Institute found that Dos Pinos has effectively provided affordable homeownership opportunities since its formation. Across 276 sales, the Dos Pinos cooperative's median share price provided homeownership opportunities for households with incomes below the area median. Additionally, during a period when the Sacramento area's housing market underwent substantial appreciation, the cooperative units at Dos Pinos were successful at retaining and in some instances increasing their affordability (Temkin et al. 2010).

Mutual Housing Association

In 1988 Mutual Housing was incorporated as a partnership between neighborhood residents, business representatives, housing advocates, and local government in Sacramento. The locally controlled nonprofit owns and operates 1,071 homes, including communities designed and built by Mutual Housing on vacant infill lots and other communities built from rehabilitated housing stock.

The nonprofit provides residents numerous supportive programs such as a digital literacy program, which provides free Internet access to all residents and offers trainings at onsite computer labs. Mutual Housing also offers various community-specific financial capability programs that provide financial mentoring, group workshops, peer lending circles, and youth financial coaching.

Mutual Housing provides leadership development support to resident leaders to help them identify needs for additional programs to uplift vulnerable individuals and address community-specific gaps. Examples of such activities include community gardening and nutrition, after-school tutoring, English and citizenship classes, disease prevention, and senior exercise classes. Importantly, resident leaders also serve on Mutual Housing's board of directors (Mutual Housing 2021).

Community Land Trust/Limited-Equity Housing Cooperative Hybrid

Established in 1989, the Lopez Community Land Trust uses the ground lease mechanism of CLTs coupled with the limited equity cooperative model of housing to serve the rural island community of Lopez Island, Washington. The hybrid organization is structured as a nonprofit and acquires land and develops housing for residents earning no more than 120 percent of the area median income.

Homes are owned by the limited equity housing cooperative, which leases the underlying land from the CLT. Prospective homeowners purchase shares from the cooperative (granting them the right to occupy homes), sign an occupancy agreement, and become

voting members of the cooperative. Importantly, the housing cooperative holds both the title to the property and the mortgage, with residents making monthly payments to the cooperative to cover their share of the mortgage, property taxes, and other maintenance fees. This set up allows the Lopez Community Land Trust to offer housing to people who may not have the credit history needed to secure a mortgage on their own, as many underserved communities lack access to quality banking and credit infrastructure.

Because the cooperative is directed by residents, there is the inherent risk that members might vote to opt out of affordability restrictions. The CLT protects against this risk by incorporating affordability protections into both the ground lease and the occupancy agreement to help ensure lasting affordability. The CLT also provides supportive services such as first-time homebuyer classes, homeownership counseling, and training in cooperative governance (U.S. HUD OPD&R 2012).

Resources

The California Center for Cooperative Development supports cooperatives across California with start-up, management, and technical assistance, and provides education on how cooperatives can generate economic growth and home ownership in low-income and underserved areas.

AH-7. No Net Loss of Affordable Housing Units/One-For-One Affordable Housing Policies

This measure encourages proponents to preserve affordable housing stock by replacing all affordable units demolished on a one-for-one basis. This strategy is designed to result in a no net loss of affordable housing units for each of the very low-, low-, and moderate-income levels. No net loss/one-for-one replacement strategies ensure that the total number of affordable units within a community does not decline over time and help safeguard against the acquisition and conversion of low-income units into luxury units.

Applicability

Residential projects redeveloping affordable housing.

Scale and Timing

- Scale: Neighborhood/City
- Timing: Planning, construction

Communities or Issues Addressed

The conversion of existing affordable housing units into condominiums and luxury housing presents a clear threat to the already dwindling affordable housing supply.

Dimensions of Equity

As strategies to preserve *affordable housing* supplies, no net loss/one-for-one policies serve as valuable assets to the overall *social resilience* of the local community.

Implementation Considerations

- Build affordable housing replacement units prior to the demolition of existing affordable units.
- Provide strong relocation assistance to help displaced residents find housing.
- Consider Enhanced Infrastructure Financing Districts to help finance the construction/rehabilitation of public and certain types of private infrastructure.
  - Funding from enhanced infrastructure financing districts can help subsidize the development of moderate-, low-, and very low-income housing units.
- Ensure that housing units are *permanently affordable*.

Example

In its redevelopment of the 1940s-era Dos Rios public housing project into mixed-income housing, SHRA has committed to fully replacing the 218 very low-income and low-income units that will be demolished. In addition, it will add 280 affordable workforce and higher-end units. While all 218 low-income units will be replaced, only the first 140 units in the initial phase will be offered to former residents. They will retain the same rents, set at a percentage of income.

Related Measures

- AH-3. Protections for Existing Tenants of Redevelopment Projects

Climate Resilience (CR)

Photo Credit: m., June 2010

Environmental justice communities are at far greater risk to the compounding impacts of climate change than other California communities. As recently experienced during California's catastrophic wildfires, communities of color and low-income communities have been on the frontlines of climate change and extreme weather, living in neighborhoods more likely to flood, living in older homes in high wildfire-risk areas, working jobs that leave them exposed to wildfire smoke—and critically, lacking access to resources, disaster relief, and other assistance needed to bounce back and recover. While it is true storms and wildfires do not differentiate in their destructiveness, wealthier communities are often better protected with infrastructure, live in more resilient homes, and have access to information systems, transportation options, insurance, savings, and other resources that enable them to access information, evacuate quickly (to a hotel or another area), and to recover and rebuild. Marginalized communities, on the other hand, may not receive critical emergency alerts, or may not receive it in a language they know, and may have functional or access needs that slow

down evacuations. Without documentation and insurance, residents may have a difficult time accessing state or federal disaster relief assistance and may not be able to recover losses. For example, after the Thomas fire in Ventura and Santa Barbara counties, local immigrant rights and environmental justice groups provided essential services to communities not served by recovery efforts, which focused on privileged communities. These services included providing access to emergency information in Spanish and Indigenous languages; farmworker labor protections; and a private disaster relief fund for undocumented immigrants ineligible for federal aid.

The greater risks and exposures of environmental justice communities are not just the outcome of present-day decisions, however, but rather have their roots in historic decisions. Homes in formerly redlined neighborhoods are 25 percent more likely to be flooded today. As a result of low-income communities and communities of color being designated as risky for lending in the 1930s, they are now truly at risk of climate hazards. While cities invested in sewers, levees, and other infrastructure in formerly greenlined, predominantly white neighborhoods, systemic racism that drive investment decisions left poorer communities and communities of color exposed. Unfortunately, the floods, wildfires, storms, and other disasters California faces today have the potential to be much more severe and destructive.

Thus, it is critical that new growth and development takes place in a way that enhances resilience in the surrounding community, particularly in neighborhoods that have faced systemic disinvestment and racism in the past. By building in a way that enhances climate resilience and adaptive capacity, new growth has the potential to protect its neighborhood—as well as itself—from future impacts of climate change. A project's resilience is tied to its surrounding community; if a commercial building is surrounded by flooded roads, its employees cannot come to work, and nor can it receive deliveries or welcome customers. Recognizing that the long-term resilience of a business or a project is inherently dependent on its surrounding community can help to encourage project proponents to undertake improvements and investments to build overall responsive capacity to floods, wildfires, poor air quality, drought, extreme precipitation, sea-level rise, and other climate hazards.

It should be noted that most of the climate adaptation and risk reduction measures, of which many address equity and vulnerable communities, are in Chapter 4, *Assessing Climate Exposures and Measures to Reduce Vulnerabilities*. Chapter 4 provides guidance on evaluating climate risks, exposures, and vulnerability, and provides measures to increase resilience. This section provides a more detailed description on three particular risk reduction measures that can be incorporated as part of project design and land use planning at the jurisdictional level.

Key Indicators: Many factors increase both physical and socio-economic vulnerability to climate change impacts. Relevant CalEnviroScreen indicators include: Ozone, PM2.5, Cleanup Sites, Asthma, Cardiovascular Disease, Housing Burden, Linguistic Isolation, Poverty, and Unemployment. Relevant Healthy Places Index indicators include: Above Poverty, Employed, Median Household Income, Automobile Access, Park Access, Tree Canopy, Clean Air – Ozone, Clean Air – PM2.5, Homeownership, Housing Habitability, Asthma, Coronary Heart Disease, Chronic Obstructive Pulmonary Disease, Disabled, Cognitively Disabled, Physically Disabled, Extreme Heat Days, Wildfire Risk, Population in Sea Level Rise Inundation Area, Children, Elderly, English Speaking, Outdoor Workers, Air Conditioning, Impervious Surface Cover, Urban Heat Island Index, and Race/Ethnicity.

Cross-Cutting Guidance

For an issue as big as climate resilience, it is imperative that local jurisdictions take the lead, leveraging their resources and tools to facilitate local action to deal with this global problem. It is recommended that users consider the following actions.

- **Adopt ordinances that facilitate resilience**: Whether requiring enhanced air filtration for publicly owned assembly buildings or adopting an Urban Agricultural Incentive Zone (California Government Code section 51040 et seq.), the jurisdiction should adopt policies that further resilience.
- **Understand community priorities**: Each community is likely to have their own vulnerabilities and exposures to climate impacts, as well as their own strengths and adaptive capacities. Outreach is critical to understand how climate hazards and changing conditions will impact each community, and the highest priority resilience measures.

CR-1. Adapt and Re-Use Vacant Lots for Green Infrastructure

As precipitation extremes are likely to increase because of climate change, stormwater inundation, localized flooding, and even severe flooding will become a greater risk for many communities. Coastal communities may also be at risk of king tides and storm surges that lead to localized flooding. Greening vacant lots and brownfields in cities can help manage stormwater and reduce UHIs, while also providing other community and social benefits based on specific designs and community goals. This measure can be especially beneficial in underserved communities where investment in traditional grey infrastructure is lacking. While grey infrastructure focuses on directing water away from the city, green infrastructure approaches the city as a sponge, with hundreds of points to absorb and hold water (Newman 2019). This can be considered a form of "urban

acupuncture", a concept developed by UC Berkeley architecture professor Nicholas de Monchaux, treating many disparate locations across the urban environment to turn brownfields and vacant lots into public green spaces that can provide additional benefits such as job training, healthy foods, and social wellbeing (Maclay 2016).

Some 17 percent of land in U.S. cities are vacant, with many vacant lots being oddly shaped, small, disjointed, or having less-desirable locations. These lots are challenging to develop for commercial purposes. As such, there is significant potential to repurposing them for regenerative and climate-resilient purposes. Vacant lots can be adapted into urban gardens, bioswales, rain gardens, cisterns, small parks, and other community-serving green spaces.

Project proponents should be encouraged to contribute a small percentage of project costs to redeveloping adjacent or nearby vacant lots into climate-resilient green infrastructure. This can help to benefit the project itself by reducing stormwater run-off, beautifying the neighborhood, reducing the UHI effect, and discouraging crime.

Applicability

Projects located in urban and suburban areas.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Construction

Communities or Issues Addressed

This measure is applicable for communities that experience localized flooding or stormwater surges or have a high amount of paved surfaces and high UHI effect.

Dimensions of Equity

Transforming vacant lots into gardens, parks, and other green infrastructure can support improved *air quality* and reduced UHIs. Improvements can also be planned to incorporate cisterns or detention ponds to capture stormwater, providing *climate resilience* against both drought and flooding. Community gardens can also help to boost food security and encourage *community ownership*, as well as economic opportunity if combined with pop-up markets or food businesses. The use of native plants or pollinator-friendly plants can also support biodiversity and habitat. Turning vacant lots into cared-for spaces can also help to decrease littering and crime, and encourage more civic engagement, recreation, and *social resilience.*

Implementation Considerations

There are numerous ways for vacant lands to be transformed and designed to fit a variety of climate challenges as well as community goals. The project should work closely with community members, stakeholders, and coalitions on site selection and design to ensure alignment with local priorities and goals.

Examples

In de Monchaux's analysis of transforming vacant parcels for climate resilience in the Los Angeles River Basin, a crowdsourcing and community engagement effort identified over 700 candidate sites. The analyzed improvements included drought-resistant landscaping, stormwater retention and filtering, shade trees, and shade gardens. The study estimated that all the proposed improvements together could absorb a million gallons of stormwater and save 13.1 gigawatt-hours of electricity through UHI reductions (Maclay 2016). A single site alone could save 980 kilowatt-hours of electricity a year. In another analysis focusing on the City of San Francisco, de Monchaux estimates that the city could save the millions that it currently spends on sewer work and stormwater management costs by transforming 1,500 vacant and under-used sites.

On the implementation front, Ron Finley, the self-styled "gangsta gardener," and L.A. Green Grounds helped turn dozens of unused and vacant lots in South Central Los Angeles—an area with many fast food outlets but little fresh food—into productive food gardens (Weston 2020). The gardens help to cultivate community ownership and youth engagement, in addition to fresh produce.

Resources

Various tools exist to help calculate and compare benefits across various sites. These include the following.

- Landscape Performance: This compendium of resources from the Landscape Architecture Foundation contains a toolkit, case studies, and resources to help evaluate the benefits of nature-based solutions. The resources can be filtered by benefit (stormwater management, access and equity, habitat, economic development, et cetera) or by feature (food garden, permeable paving, play equipment, et cetera). The toolkit library contains calculators and tools from a range of leading organizations to help quantify the ecological benefits.
- Center for Neighborhood Technology, Green Values Stormwater Management Calculator: This easy-to-use calculator can estimate the stormwater management benefits of a wide range of green infrastructure solutions. It provides both national defaults as well as customizable values for land use types, and calculates volume of stormwater captured, runoff volume, costs, and benefits such as reduced energy use, air pollutant reduction, and increased real estate value.
- Compared to vacant lots, brownfields will require additional remediation; the *U.S. EPA's Climate Smart Brownfields Manual* offers a guide to planning, environmental assessments, and remediation for brownfields, with the ultimate goal of redeveloping to include green infrastructure, community-owned open space, and other climate-resilient uses.

Related Measures

- IC-4. Enhanced Open and Green Spaces
- IC-8. Enhanced Access to Community Resources

CR-2. Support the Development and Operations of Community Resilience Centers

Climate-exacerbated hazards and disasters are likely to compound existing vulnerabilities, challenges, and hazards for both individuals and communities. With increasing extreme weather events, wildfires, and other worsening natural disasters, it becomes critical to develop and establish local resilience centers that can support the needs of the surrounding community—as well as potentially evacuees—at short notice, and for potentially extended periods of time.

Local jurisdictions and project proponents can assist in this effort by anticipating how its structures and land uses can be adapted to serve as resilience centers or provide emergency services. Commercial developments or multi-family residential developments with a public space or community room could consider ensuring that they are equipped with MERV-13 or higher rated air filtration systems, for example, to serve as a clean air center during wildfire smoke events. Larger developments could consider onsite solar PV systems coupled with battery storage to provide emergency power. Multi-family developments should identify residents that have electric-powered medical devices at home or would require interpretation or mobility assistance during emergencies. Disaster preparedness training, supplies, and other capacity-building activities are also important components of developing a community resilience center.

Additionally, local jurisdictions and projects could also partner with established CBOs to develop facilities that can serve as resilience centers or hubs, as part of a community benefits agreement (see *CCD-5. Establish a Community Benefits Agreement*). This could entail retrofitting an existing community center, place of worship or religious center, school, or cultural hub with air filters, cool roofs, building weatherization, and/or back-up power. This approach has the benefit of establishing the resilience center in a space already known and comfortable to the community.

Applicability

Urban, rural, and suburban communities.

Scale and Timing

- Scale: Neighborhood/City and Project/Site
- Timing: Construction, operations

Communities or Issues Addressed

This measure is applicable for all communities, but particularly those that are marginalized and may have fewer resources or less capacity to respond to unexpected disasters or hazards. Existing and projected climate hazards should also be considered using Cal-Adapt.

Dimensions of Equity

By helping to develop and establish community resilience centers, the project proponent can help to support overall *climate resilience* and community well-being during severe weather, extreme heat, wildfire smoke events, and other disasters and hazards. This can in turn help to mitigate and reduce the burdens of *disaster response* and recovery. In addition, community resilience centers can help to support *public health, equity, social resilience,* and *community ownership* and *empowerment*.

Implementation Considerations

Implementation specifics will depend on the location of the project, the surrounding community's existing challenges and needs, and the existing and future climate hazards likely to arise. Generally, partnering with an existing CBO can assist in understanding and identifying existing opportunities and vulnerabilities. A community benefits agreement can also help determine implementation specifics. In addition, creative, non-traditional community outreach and engagement strategies are critical to ensure that community members are aware of and use the resilience centers.

Example

The City of Berkeley's community resilience center program provides emergency supplies, tools, resources, and training to organizations to serve as hubs before, during, and following disasters. The organizations, which include multifamily housing complexes, a community college, and community-based, youth, religious, and cultural organizations, help to provide information and engagement with their audience and membership, and will help to support the community during emergencies.

Related Measures

- CCD-5. Establish a Community Benefits Agreement

CR-3. Passive Survivability

Over 2.7 million Californians were left in the dark when Pacific Gas and Electric Company and other utilities instituted extended blackouts to reduce wildfire risks in October 2019 (Botts 2019). Although entire cities lost power, the most impacted were low-income communities, people living with disabilities, and the elderly (Chabria and Luna 2019). Residents with money and resources are better able to escape to hotels, replace spoiled food, access generators, and maintain communications. For vulnerable communities, losing an entire refrigerator of food or being forced to upgrade cell phone plans to better access data can cause economic disaster. For those who rely on medical equipment, power outages can be life threatening. When the power outages caused schools to shut down, children who rely on school meals were left behind.

As underserved communities lack access to essential resources, face challenges in evacuating, and are often the last to receive emergency assistance, they must be prioritized for climate resilience efforts. One key solution, passive survivability, can help

underserved communities stay safe and resilient at home. Under this architectural concept, buildings are designed to maintain livable conditions in the event of extreme weather or when cut off from utilities. As opposed to active approaches (e.g., onsite generators), passive survivability uses design and building materials to maintain livable conditions *passively,* without additional inputs. This can be particularly critical during extreme heat and heat waves to help residents stay cool without reliance on air-conditioning. On an everyday basis, passive survivability facilitates highly efficient climate control that translates into savings on energy bills.

Importantly, passive survivability principles can be applied to all types of buildings, including multifamily apartment buildings and high rises. Because a core component of passive survivability is increasing building efficiency, it is also complementary to zero net energy (Measure E-16) and renewable surplus (Measure E-17) buildings.

The following design elements are core components of passive survivability.

High-Performance Building Envelope

A highly efficient, well-insulated building envelope is key to passive survivability to minimize temperature gain (or loss) when cooling or heating systems become inoperable. Proponents are encouraged to design buildings to maintain occupant comfort based on reasonably expected historical and projected minimum and maximum temperatures, with particular focus on extremes. Set building design parameters, such as U-factors for window glazings and R-values for insulation, based on predictive climate data when designing the building envelope (DC Department of Energy and Environment 2017).

High-performance windows with low-e coatings, low-conductivity gas fill, and either double or triple glazing with an interior film can optimize the U-factor—a measurement of how well a window insulates—leading to greater energy efficiency (Wilson 2006). Radiant barriers for buildings with high-pitched attic spaces can help reduce radiant heat transfer. Other approaches include installing a cool roof, green roof, or vegetative façade.

To help control air and moisture, consider implementing a continuous air barrier in the building envelope to enhance efficiency and building durability. An air barrier is a system of materials that separates the indoor, conditioned air from outdoor, unconditioned air.

Finally, set an energy use intensity target in alignment with passive survivability principles. Energy use intensity is the building's annual energy consumption per square foot.

Cooling Load Avoidance

Cooling load avoidance strategies utilize geometry and architecture to reduce heat gain in buildings – critical to protecting people from extreme heat if air-conditioning equipment cannot operate. Design strategies to reduce heat gain include using a building orientation (typically north-south) that limits afternoon sun exposure; minimizing east- and west-facing glass; using low solar heat-gain coefficient glass for south, east, and west windows and skylights; shading south, east, and west windows; installing a cool or green roof,

radiant barriers, or radiant barrier roof sheathing in unheated attics; or installing louvered shades on windows and vegetative shading (Wilson 2006).

Ventilation

Mechanical ventilation coupled with natural ventilation ensures efficient ventilation throughout the building. Natural ventilation creates pathways for exhaust air to escape without the use of electric fans. To achieve natural ventilation, consider optimal window placement, building geometry, cupola use, and other methods to allow exhaust air to escape near the peak of the roof (Wilson 2006).

During power outages, mechanical ventilation systems that rely on electricity may become inoperable. Manual controls such as operable windows, pull-down shades, and operable vents should be considered to ensure occupants maintain the ability to control indoor climate conditions (DC Department of Energy and Environment 2017).

Passive Solar Heating

Depending on the project site's climate, passive heating might be desirable during winter months. Passive solar heating strategies include optimizing the siting and orientation of the house and ensuring that there is adequate glazing and high-solar heat-gain coefficient glass for south-facing windows. High-mass materials within the envelope can bolster insulation. Passive ventilation can circulate sun-warmed air throughout the building (Wilson 2006).

Natural Daylighting

A building can be designed to predominantly rely on daylight as opposed to electric lighting. Solar apertures can effectively bring natural light deep into the building interior. Other strategies include light shelves—structures that have reflective upper surfaces that transmit natural light inside a building—and light-colored ceiling and wall finishes. Fiber-optic daylighting systems or tubular skylights can deliver light to locations within a building that do not have full access to windows (DC Department of Energy and Environment 2017).

Water Storage and Heating

In cases of emergency, rainwater catchment systems can provide occupants a critical source of water. Such systems can be used for outdoor irrigation, toilet flushing, washing, and after-filtration drinking and cooking water. Passive solar or PV-powered water heating systems can provide warm water during outages.

Solar Photovoltaic Power and Storage

Solar PV systems coupled with battery storage can provide power during outages, including at night and during times of lower solar availability.

Applicability

Residential projects located in rural, suburban, or urban communities

Scale and Timing

- Scale: Project/Site
- Timing: Planning, construction, operations

Communities or Issues Addressed

As the threat from extreme climate events becomes increasingly prevalent and severe, measures to boost buildings' climate resilience are imperative to structural resilience as well as occupant health and safety. In the United States, low-income people are more likely to live in housing and areas that are vulnerable to climate impacts and face greater challenges in accessing life-saving relief. In the 1995 Chicago heat wave, 739 people died—most of whom were low-income individuals (SAMHSA 2017). Additionally, following disasters, low-income communities face many barriers in receiving aid, leading to disproportionate emotional, economic, and health impacts.

Thus, this measure should be prioritized for low-income communities and those without access to safe and reliable infrastructure services. With an increase in the frequency and severity of extreme heat, precipitation, wildfires, and other climate disasters, power outages and rolling blackouts have become more common. Power outages can be particularly dangerous or even life threatening for people who depend upon medical equipment or electric mobility equipment. For the elderly, children, and other vulnerable people, extended outages also increase the risk of heat illnesses.

Even without power outages, passive survivability can help low-income and underserved communities respond to heat waves and other extreme weather events and help to reduce their utility costs. Communities who may be unwilling to use air-conditioning due to financial challenges or cultural preferences benefit from passive survivability to maintain cooler, livable temperatures.

Dimensions of Equity

Maintaining survivable temperature thresholds can be a significant barrier for underserved and low-income communities. When outages and extreme weather events occur, many cannot afford to turn up the air conditioner (or heater) or relocate to a hotel. Designing buildings to maintain passive survivability enhances *economic resilience, social resilience, climate resilience,* and *public health* for occupants.

Implementation Considerations

When designing passive survivability components, it is essential to account for the project location's climate trends and potential future need. While passive cooling may be more critical in the majority of California, passive solar heating may be needed in some locations. Cal-Adapt, developed by the State of California, can provide localized climate projections for extreme heat, precipitation, wildfire risk, and sea level rise, while local climate vulnerability assessments can provide another detailed analysis. Chapter 4 provides additional guidance and strategies for addressing sea level rise, flooding,

temperature and extreme heat, extreme precipitation, wildfire, drought, decrease in snowpack, and air quality degradation and their cascading effects.

Software tools allow proponents to test a design's efficiency and effectiveness. It is important to simulate 5-day outage worst-case scenarios when examining a building's ability to achieve passive survivability (White 2018). Moreover, depending on the building type, other approaches might be necessary. New construction and retrofits will have different requirements and needs. Maintenance capacity is another factor that can determine the effectiveness of passive survivability strategies, such as solar PV power, vegetative roofs, and vegetative shading. Proponents should consider the project site's design and how it interacts with existing neighborhood features and community needs – for example, the proximity to evacuation routes out of town.

Examples

Multifamily Retrofit, McKeesport Downtown Housing, Pennsylvania

McKeesport Downtown Housing in Pennsylvania is an 84-unit housing complex designed for unhoused people and people at risk of homelessness. Formerly a YMCA, the building added new lighting, air-conditioning, make-up air ventilation systems, an elevator, and cooking facilities as part of its renovations. By using passive house design strategies, the building uses 66 percent less energy than the original even after these additions. The site also serves the community by offering a cold-weather shelter, 60-day emergency housing, bridge housing, and section 8 apartment rentals (Passive House Accelerator 2021).

Multifamily Retrofit, Harry and Jeanette Weinberg Commons, DC

Completed in 2015, the Harry and Jeanette Weinberg Commons is the first multifamily retrofit in the United States to receive a PHIUS+ passive building certification. The project offers 36 two-bedroom units for 60 percent of area median income residents and is a permanent supportive housing complex. The building elements consists of a wall with R-value of R-39, continuous roof insulation, triple-pane windows, energy recovery ventilators, shading, and rooftop solar panels (Fine 2017). The use of passive house principles for this multifamily complex helped increase the affordability for residents by effectively eliminating utility bills and reducing the project's long-term operating costs—allowing more resources for resident support services.

Resources

- Architecture 2030's 2030 Palette offers a database of strategies, tools, and resources for designing zero-carbon, adaptable, and resilient built environments.
- Passive Survivability: How LEED Helps When the Power Goes Out
- Washington, DC Department of Energy and Environment's Climate Ready DC: Resilient Design Guidelines
- Passivhaus Institute's Passipedia, the Passive House Resource: What is a Passive House?
- Passive House Institute United States' PHIUS+ 2018: Getting to Zero
- Passive Survivability: Designing for Tomorrow's Disasters
- Passive House Accelerator

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