



USDOT Region V Regional University Transportation Center Final Report

NEXTRANS Project No. 163UMY2.2

ACCESS-ENABLING ARCHITECTURES: New Hybrid Multi-modal Spatial Prototypes Towards Resource and Social Sustainability

Submitted By

Geoffrey Thün

Associate Dean for Research and Creative Practice, Associate Professor of Architecture
Taubman College of Architecture and Urban Planning
University of Michigan
gthun@umich.edu

and

Susan Zielinski

Managing Director, SMART
Urban Transportation Research Institute
University of Michigan
susanz@umich.edu

Kathy Velikov

Associate Professor of Architecture
Taubman College of Architecture and Urban Planning
University of Michigan
kvelikov@umich.edu



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TECHNICAL SUMMARY

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Title

ACCESS-ENABLING ARCHITECTURES: New Hybrid Multi-modal Spatial Prototypes Towards Resource and Social Sustainability

Introduction

This project is predicated on the hypothesis that, beyond the delivery of mobility by facilitating the operation of various modes of transportation, the public transportation network constitutes a particular spatial asset for cities and municipalities that recommends itself as an apparatus for the delivery of enhanced connectivity and social access. How might we rethink the design and delivery of New Mobility Hub (NMH) facilities (both as new projects when demand arises, but perhaps more importantly as retrofit structures) to prioritize the provision of access as an essential dimension of their goals, configuration, design and operation? This seemingly simple concept is at once straightforward, and on the other hand, a radical proposition within the contemporary context of siloed service planning and delivery. In approaching this question, we work from both top-down and bottom-up perspectives within a complex ‘systems of systems’ approach. New forms of policy regarding the design and implementation of linked transit hubs (or connection points) within a given metropolitan area have the potential to produce massive system-wide impacts within a given transportation network. On the other hand, solutions to questions of access are unlikely to come from a top-down approach alone. Multiple NGO and private partners, multiple programs for the delivery of social services and an evolving ecology of new mobility technologies and options already exist within cities, supported by multiple funding sources and an evolving marketplace, increasingly informed by the sharing economy, transformations in user preferences and behaviors, and the emergence of “Mobility as a

Service” (MaaS) models. The efforts of this project aim to capture and engage these potentials through a design-research method that incorporates a top down, data-driven approach with bottom-up stakeholder perspectives to develop prototypical scenario-based design solutions that can provide city and industry leadership with a model process to pursue the development and delivery of access-enabling transportation infrastructures through NMH facilities. A central thrust of this work is to provide legible examples of how NMH solutions might be designed, and how they might be produced within existing urban systems, funding frameworks, and policy-related contexts. This study is grounded within the Region V metropolitan area of Chicago, which possesses an extensive and varied multimodal transportation system which, when studied across the spectrum of communities served, offers a diverse set of contexts to test the project hypotheses to serve multiple constituencies and offer a range of spatial typologies through which to test these principles at several scales of implementation.

Findings

1. The project provides examples of NMH that fill the gap between top-down sustainable city programs and policies, and bottom-up community initiatives, by combining the paradigms of new mobility and the new economy with an explicit agenda for the delivery of access to underserved populations.
2. A data-driven combinatory mapping method was developed that visualizes both the geographies of urban disadvantage relative to primary needs (mobility, food, learning, and health) and the geographic locations of agents providing access to those needs. This method allows the visualization of the complex conditions of both need and capacity within the urban areas.
3. The combinatory method additionally enables the identification of “hotspots” within the city, where a confluence of conditions of reduced access, local capacity, and potential for transformation through New Mobility solutions could be implemented.
4. The research developed a database for actors and instruments that could be mobilized in the implementation, realization, and sustainability of access-enabling NMHs. These include state as well as federal government agencies and programs, public and private institutions, NGOs, foundations, for-profit businesses, and local community groups and organizations. Actor-network mappings enable the visualization of this solution-space for enabling urban access.

5. Prototypical design scenarios were used to test and visualize the hypothesis that the spatial assets of existing transit infrastructures could be augmented with agents and instruments of access to become hybrid NMH's that not only deliver an enhanced suite of mobility solutions for citizens, but that also address conditions of urban disadvantage by providing access to those needs within the NMH itself.

Recommendations

1. New Mobility solutions should and can be conceived to provide more than simply mobility delivery, but also to enable access for undeserved populations, with the aim of achieving increased social sustainability and quality urban space in cities through the incorporation of these concepts in the design of transit space.

2. The data-driven urban mapping methodology could be automated and developed to produce web-based maps that can be updated with new information on urban need and access as cities transform. This would allow for evolving big-data based statistical methods to be incorporated over time, and for information to be modified through a live interface. This would provide stakeholders with a live interface for assessing need, potential, and, over time, testing effectiveness of initiatives. Such a platform would also allow for participation by members of the public to refine the depiction of needs, but also to disseminate opportunities.

3. A live database for the agents and instruments that can be assembled to mobilize, fund, and sustain urban access solutions can enable stakeholders to apprehend the potential collaborations, synergies, and networks that can be brought together in the development of New Mobility-based urban access solutions.

4. Scenario-based design prototypes are productive in testing possibilities for hybrid urban infrastructures and for allowing stakeholders to visualize what may be possible, as well as rendering apprehensible the mechanisms for how these solutions might come into being.

Contacts

For more information:

Geoffrey Thün

Associate Dean for Research and Creative Practice,
Associate Professor of Architecture
Taubman College of Architecture and Urban Planning
University of Michigan
Ph: +1 734 834 9386
Fax: +1 734 763 2322
Email: gthun@umich.edu
Web: <https://taubmancollege.umich.edu/architecture/faculty/directory/geoffrey-thun>

Susan Zielinski

Managing Director, SMART
Urban Transportation Research Institute
University of Michigan
Ph: +1 734 709 4571
Email: susanz@umich.edu
Web: <http://www.umtri.umich.edu/who-we-are/staff-directory/susan-zielinski>

Kathy Velikov

Associate Professor of Architecture
Taubman College of Architecture and Urban Planning
University of Michigan
Ph: +1 734 834 9386
Fax: +1 734 763 2322
Email: kvelikov@umich.edu
Web: <https://taubmancollege.umich.edu/architecture/faculty/directory/kathy-velikov>

NEXTRANS Center

Purdue University - Discovery
Park
3000 Kent Ave.
West Lafayette, IN 47906

nextrans@purdue.edu
(765) 496-9724

www.purdue.edu/dp/nextrans

Acknowledgments

Research Team

Daniel McTavish, M.Arch	Research Associate	Taubman College, U. Michigan
Andrew Wald, M.Arch	Research Associate	Taubman College, U. Michigan
Robert Safely, M.Arch	Research Assistant	Taubman College, U. Michigan
Anthony Pins, M.Arch	Research Assistant	Taubman College, U. Michigan
Komal Anand Doshi, M.UD	Research Area Specialist	SMART, U. Michigan

Assistants

Ya, Suo M.Arch	Research Assistant	Taubman College, U. Michigan
Jennifer Ng, M.Arch	Research Assistant	Taubman College, U. Michigan
Dan Tish M.Arch	Research Assistant	Taubman College, U. Michigan
Karen Toomasian, B.S.	Research Assistant	Taubman College, U. Michigan
Kallie Sternburgh, M.Arch	Research Assistant	Taubman College, U. Michigan

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CHAPTER 1 INTRODUCTION

Background and Motivation

Transportation planning is experiencing a paradigm shift as a range of ongoing research has begun to supplant the dominant objective of the provision of mobility (movement) with the delivery of access (enabling access to needs) (Levine and Grengs, 2011). Within this context, one of the goals of sustainable transportation has been to provide maximum access with minimum resource use through a variety of mechanisms primarily focused on decision making regarding specific infrastructural improvements and land use planning utilizing accessibility metrics to inform decision making. The design disciplines' (Architecture, Urban Design, and Civil Engineering) response to issues of sustainability and access has primarily translated to guideline-based practices that privilege environmental impact minimization through the production of density and 'walkable' communities. The now well-known strategies and approaches of Transit Oriented Development (TOD) and New Urbanism tend to equate *proximity* with *access* by privileging the production of dense, walkable, mixed-use neighborhoods (Handy 1996; Congress for the New Urbanism 2001). While this is generally a positive direction, it can result in a focus on the delivery of *commercial* space as the primary form of exchange and access provision, and, as this approach often relies on market-driven forms of development, lower income residents and their needs are often excluded from such solutions. It has in fact been argued that TOD and New Urbanist planning may actually exacerbate low levels of access to non-commercial needs, and, through escalated real estate values, displace specific groups further from strategic locations of access. (Levine and Grengs 2011, Kipfer and Kiel 2002, Harvey 1997).

The term *access*, when used in urban and social studies, generally refers to the ability for people to meet their needs—effectively, affordably, and comfortably—and to thrive in urban contexts (Hansen, 1959; Handy, 1996; Scott and Horner, 2008; Grengs, Levine et al. 2011). Access is defined by a range of metrics currently being utilized by researchers and organizations across disciplines to analyze mobility systems, education, employment, healthcare, food, housing, and walkability as a means to assess, consider, and frame issues of social equity and service provision. These studies inform and shape the policies and practices of municipal, federal, NGO, and private initiatives working across a myriad of scales and modes of implementation to deliver greater access to public needs for a more inclusive constituency of publics. However, most of these access-enabling agencies, programs, and initiatives are often separated from one another – researched, governed, funded, administered, and delivered by separate mechanisms, without

holistic coordination or conception about how they might collectively interrelate, cooperate, and develop productive synergies and feedbacks that can increase urban resiliency and strengthen communities beyond the imperatives of their own individual agendas and operations. Of specific interest to this project is the question of how design might play a more active role in producing greater connectivity between these groups, organizations, activities, and initiatives towards shaping the future of urban society.

Research Questions

This work aims to address a key research gap. There has been extensive scholarship devoted to identifying, classifying, and quantifying the conditions by which existing transportation infrastructures and system operation produce uneven access to services and needs relative to socioeconomic status and its spatialization (Graham and Marvin, 2001; Farmer, 2011; Young et al., 2011). However, there has been little systemic design-based research undertaken to examine ways in which urban/infrastructural intervention might strategically alter and/or improve the conditions of uneven access in the city. Based on interviews with thought leaders globally and in the U.S., recent Rockefeller Foundation-supported work by SMART (Zielinski, 2011) has offered preliminary observations relating to how transport needs and conditions of the underserved (low income, growing seniors population, disabled) could be, and are being, more widely addressed by emerging multi-modal systems enhanced by new service models and information technologies. To date, these emerging (and often “disruptive”) systems, regionally customized and generally implemented through public-private innovation, have been associated with the shifting needs, preferences, and cultures of the growing urban population at all income levels, including specifically the millennial demographic. However it now appears these new systems-based solutions may have wider application across a broader demographic including the vulnerable and underserved. While there has been considerable focus on the new technologies and economic models involved with these systems, very little concerted spatial design research and prototyping has been carried out to a) support initial observations, b) support decision makers and practitioners, and c) inform policy.

The primary research question that this work will aim to address is: **what may be the ways and processes by which the physical and spatial assets of transportation infrastructures might be retrofitted, coupled, or hybridized with other New Mobility and New Economy systems not only to address the National Transportation Goals of Livable Communities, Environmental Sustainability and Economic Competitiveness, but also to positively impact Quality of Life for all users?**

New Mobility can be defined as “flexible and differentiated transportation modes, services, and products...accelerated by the emergence of new fuel and vehicle technologies; new information technologies...innovative land use and urban design; and new business models, collaborative partnerships” (Zielinski, 2006). The term New Economy emerged near the end of the 1990’s to generally describe the transition toward a technologically enabled and networked service-based economy. Of particular interest to this project has been the emergence over the past decade of a broad range of sharing and peer-to-peer business models community enterprises, which have become highly disruptive to conventional capitalist enterprises while also promising to enable access to a broader range of societal sectors (Rifkin, 2014).

This research project develops an urban analysis and design framework method for applying multi-modal, New Mobility-supportive spatial typologies, henceforth referred to as New Mobility Hubs (NMH). NMHs include buildings, connectivity points in the system, and open spaces supporting enhanced connectivity and social access across a variety of scales. The work includes the prototypical scenario-based design of new types of spatial interventions (at multiple scales and intensities) as well as retrofit models for existing facilities. In designing these prototypes, two goals are emphasized: (i) increasing connectivity locally at NMH locations through the incorporation of New-Mobility private sector innovations within the physical planning of such facilities (ie: car share, bike share, and other IT-enabled “disruptive” last mile and connectivity solutions) and (ii) new spatial types that support access to existing social need programs (eg: health, education/learning, food desert related) *within the space* of NMH facilities. These scenarios are designed through the application of access-based principles as a means to advance the intellectual frameworks represented by the accessibility goal and the SMART Systems methodology. This provides both a spatially-based methodological framework as well a prototypical set of design solutions for use by “city-as-client” stakeholders in pursuing sustainable transportation planning and design initiatives that seek to elevate access within their existing transportation networks.

Awareness of the need to think comprehensively and synthetically regarding the intersection of energy, mobility and dwelling has been acknowledged through the formation of the *Federal Partnership for Sustainable Communities*, an inter-agency collaboration involving DOE, DOT and HUD. Despite this, few projects, if any, have leveraged the capacity of design integration to develop proposals that couple

urban infrastructure with new built form prototypes aimed at simultaneously improving transportation connectivity and social access, while bridging questions of Energy, Access, Social Needs and Economic Innovation. For many existing agencies, the need to think and act through integrative frameworks is a known concern, but often a lack of personnel, expertise or clarity on methodologies and procedures to enable the initiation of pilot projects constitute an impediment.

This study is situated within the Region V metropolitan area of Chicago, which possesses an extensive and varied multi-modal transportation system that, when studied throughout the diverse spectrum of communities served, will be able to produce a robust range of models of need, opportunity and implementation feasibility that can be adaptable and/or scalable in other Region V cities.

Organization of this Report

This report is organized into four subsequent chapters. Chapter 2, APPROACH AND METHODOLOGY, discusses the methodology utilized in the research as well as the theoretical bases behind the primary approaches deployed throughout this project: Design Research, Combinatory Cartographies, Actor-Network Theory, and Scenario Planning. The three chapters that follow describe the primary design-research activities. Their organization can also serve as a methodological framework for the process of urban analysis and scenario design that is realized through this project, and may serve as a template for future work. The “Summary and Discussion” section at the end of each chapter reflects on the results of each part of the work, and makes recommendations for future research.

Chapter 3, DATA-DRIVEN ACCESSIBILITY ANALYSIS, undertakes a cartography-based visualization and spatialization of data to better understand the distributions of access demand and opportunity within the city. Within this part of the work are examined infrastructural conditions and capacities and potential sites of intervention. In addition, section 3.5 “Community Narratives” describes the mining of digitally-available information that was used to gather information from local community members, stakeholders, and leaders regarding access-related concerns specific to local constituencies.

Chapter 4, ACCESS-ENABLING ACTORS AND INSTRUMENTS, describes the assembly what are referred to as the Agents and Instruments of Access already present in the city to better understand existing networks, gaps, and opportunities within in the field of intervention. Simultaneously, New

Mobility, New Economy, and Funding mechanisms are assembled into Actor-Network Diagrams that allow visualization of possibilities, synergies, and opportunities.

Chapter 5, SCENARIO-BASED NEW MOBILITY HUB DEVELOPMENT describes the design process of identifying sites for scenario development, and the prototypical design proposals for modification of existing infrastructures and specific systemic or spatial interventions that can produce NMHs to enhance access provision. Three sites within the City of Chicago are selected, and design scenarios are explored at each through analytical drawings and visualizations. These become prototypes for three scales of NHM development.

Appendix B includes in table format the Agents and Instruments of Access gathered to produce the Actor-Network drawings in Chapter 4.

Additionally, two videos of the project were produced and shared publicly. These have been viewed over 200 times to date and can be accessed at:

<https://vimeo.com/108468499>

<https://vimeo.com/108468500>

CHAPTER 2 APPROACH AND METHODOLOGY

2.1 Overview: Design Research

This research is undertaken through a Design Research approach that PI's Thün and Velikov have been developing (Thün et al, 2015). The approach combines data driven mapping analysis, actor-network analysis, and visualizations of speculative design scenarios. This form of research inquiry couples analysis (what is going on?) with speculative scenario-based design projection (what could happen here?). The work is focused on apprehending existing urban conditions in the context of networked systems and evolving technologies. Within this context, we prioritize the understanding of space and the transformations that could occur within it due to new urban infrastructures, new policies, new forms of technology, mobility, or business enterprise. The work is combinatory, in that it aggregates multi-domain knowledge (existing social science research, data from transportation planning, logistics practices, infrastructural design, business databases, and a landscape of emerging technologies). It is also projective, in that it includes the visualization of possible future scenarios, with the ambition to propose and enable these possibilities. While the work draws upon a diverse range of data sources, increasingly the questions asked require the production of new information or combinations of information, and serve to identify important data gaps.

The three primary methodological domains that the work draws from are: combinatory cartographies, actor-network theory, and scenario planning. These will be briefly outlined below.

2.2 Combinatory Cartographies

Cartographic practices, in addition to being descriptive tools, also have the potential to reveal new insights and to enable new imaginative potentials (Cosgrove, 2008; Waldheim, 1999; Corner 1996). We refer to combinatory cartographies as the techniques of mapping that layer and combine complex and interacting human and nonhuman agents and flows within geographic space. (Thün et al, 2015) This technique is informed by the "ecological method" of landscape architect Ian McHarg, which utilized a series of layered maps to enable a multivalent understanding of place-based conditions as a result of interrelated geologic, biologic, and constructed systems, providing designers with tools and a model by which to interpret, determine, and predict compatible land uses, as well as make projections for

planning settlements that consider demand, logistics, and economics. (McHarg, 1969) While McHarg's work focused primarily on geophysical information and characteristics, the cartographic methods that we deploy combine these with a host of other geospatialized data fields. They are developed under the premise that by attempting to tease out a relational terrain of physical and non-physical agents within the space of the map, the superimposition of datasets has the potential to enable new conceptualizations of the region through focusing upon networks and interrelationships, and occasionally, causality and synergy, so that we can conceive of geospatialized urban data networks in a synthetic way (Velikov and Thün, 2017).

2.3 Actor-Network Theory

Actor-network theory (ANT) and the related “assemblage theory,” are methods recently positioned at the forefront of urban analysis and debate. Originating in the fields of social science, a shared basis of these theories is the location of human social networks on the same conceptual plane as things and organizational structures, thus enabling multi-scalar methods of analysis as well as an expanded or “thickened” understanding of urban and spatial agency (Brenner et al., 2012; McFarlane, 2010; Farias and Bender, 2010). For urban scholars who embrace these theories in their approach to the study of the city, this can provide new insights into ways to grapple with the exponentially increasing scales and complexities of contemporary urbanization, the nonlinear dynamic processes that drive urban transformation, and the agency of nonhuman actors in urban processes. However, critical urban theorists have also argued that some proponents of assemblage analysis, by “leveling” urban actants without a hierarchy of relevance and by omitting politico-economic frameworks of power and injustice, produce incomplete and potentially naïve explanations of urban process (Brenner et al., 2012).

Our work has been experimenting with ANT and assemblage theory both as a lens for urban analysis and as a means to inform design methodologies and representations for urban futures that themselves operate through systemic network and complexity logics (Thün et al, 2015). In this project, ANT is leveraged in the strategic relational drawings which assemble multiple spatial, technological, political, institutional, economic, and community actors in order to speculate synthetically on the mechanisms, co-operations, and synergies through which transformation can take place.

2.4 Scenario Planning

Scenario planning, also known as scenario thinking or the scenario method, is a mode of critical speculation on the workings of a complex and uncertain world which seeks to improve our ability to make strategy decisions about social, political, and economic futures (Salewski 2012, p. 20). It seeks a middle ground between rational, scientific forecasts and subjective, imaginative predictions. Scenario thinking was invented in the 1960's primarily as a way to improve strategic analysis and decision-making within the military in the face of uncertain, unknown, and even unknowable future possibilities. According to the method's inventor, Herman Kahn, "the scenario is not used as a predictive device" (Khan, 1962, p. 145). Rather, scenarios operate in the realm of possibility (yet not necessarily probability), and are hypothetically projected through relational and causal processes to present conditions and understandings of behavior. However, writes Kahn, "it is important not to limit oneself to the most plausible, conventional or probable situations and behaviors" (Kahn 1962, p. 145).

Within the field of physical planning, where significant levels of uncertainty and complexity accompany any form predictive analysis, scenarios have been way of "testing the limits of the 'field of possibilities'" (Salewski, 2012, p. 43). In the work of PI's Thün and Velikov, these scenarios have also become ways of testing out *desirable* alternative future possibilities (Thün et al, 2015). A variety of forms of visualization—from plans, analytical diagrams, axonometrics, scenographic vignettes—are used to describe the scenarios. Since it is important for scenarios to be understood in relation to a process which emerges from present conditions, Actor-Network drawings become an effective way to describe the complex field of actors and relations that might bring them into being and that might participate in their production.

CHAPTER 3 DATA-DRIVEN ACCESSIBILITY ANALYSIS

3.1 Accessibility Metrics Cartographies

The contemporary urban condition is one characterized by drastically uneven development, where cities comprise expanding territories of dispossession, marginalization, and, to use urban geographer Ed Soja's term, "(in)justice" (Soja, 2010). This is an increasingly urgent issue in US cities, where, urban concentrations of poverty and racial segregation have been steadily growing in recent decades (Jargowski, 2015). Chicago has historically been one of the most segregated cities in the United States, with highly uneven distribution of urban services between various neighborhoods. Urban theorist Saskia Sassen argues that contemporary conditions of exclusion—or, in her words, "expulsion"—go far beyond conventional discourses of inequality, implicating networks of systems, institutions, and instruments that operate through the logics of complexity to produce a pervasive and brutal biopolitics resulting in a "sharp growth in the number of people, enterprises and places expelled from the core social and economic orders of our time" (Sassen, 2014, p. 1).

The first stage of the research involved a visualization of a rough picture of the uneven conditions of access within the city of Chicago. This was undertaken by geographically assembling a range of existing metrics and GIS-based datasets that capture the city-wide conditions of disadvantage (which, in these drawings is referred to with the more urgent term "exclusion") in relation to four basic urban rights: mobility, food, learning, and health. These are defined by the metrics and datasets described in the following paragraphs.

Mobility Exclusion. (Figure 1) This cartography assembles two metrics: Vehicle Ownership and Transit Deserts. One of the variables now commonly included as a measure of disadvantage or material deprivation is households that do not own a car. Vehicle ownership as a measure of disadvantage is a variable in the "Townsend Deprivation Index," first proposed in 1987 by Prof. Peter Townsend (1987). Increasingly however, car ownership in some metropolitan areas is becoming a matter of choice, especially when high quality transit or other options such as car share are available. A Transit Desert is generally defined as an "area that has a high demand for transit but lacks access to high-quality transit, meaning that it is more than half a mile from a rail transit stop and a quarter mile from high quality bus service. High quality transit can be rail, bus rapid transit (BRT), arterial rapid transit (ART), or bus routes

with frequent service (average headways of 15 minutes or less)...Approximately 438,500 Cook County residents live in transit deserts...[and] face restricted mobility and limited access to all of the region’s jobs and amenities” (CNT, 2014). While the city of Chicago has an extensive transit system, this system is highly fragmented and poorly integrated—administratively, spatially and operationally—leading to constrained ridership and inconsistent service (Merk, 2014). While this condition does not exist as a metric that can be captured in the mappings, it became an important factor in the “Community Narratives” (see 3.5).

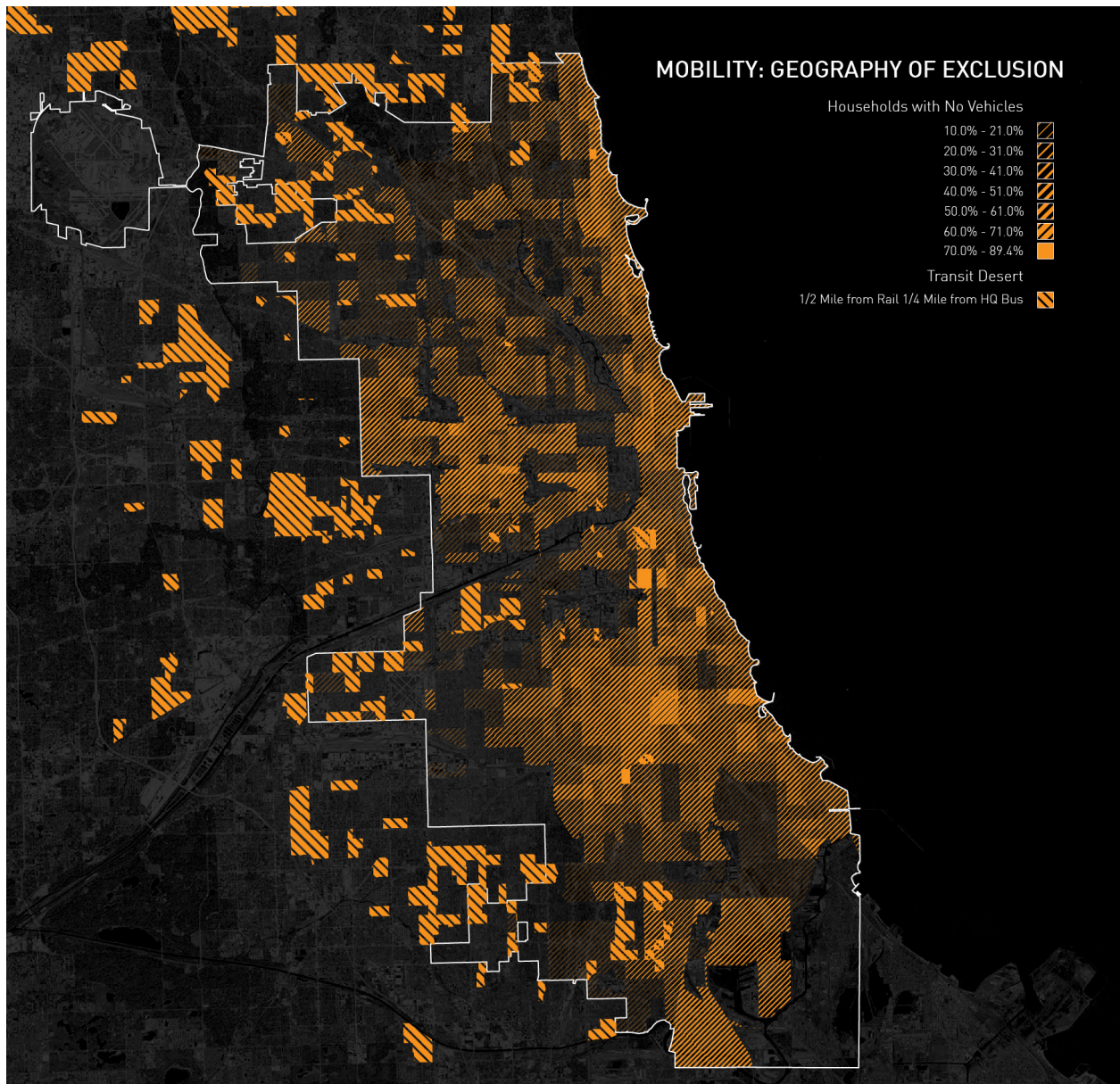


Figure 1: Chicago Geography of Exclusion for Mobility.

Food Exclusion. (Figure 2) Access to food can be understood as the ability of an individual to reach a retail point where high quality nutritious food, and not just high calorie food, can be purchased. The ability to access these points is determined by one’s proximity, the availability of transportation choices, and one’s income. The cartography for food exclusion assembled metrics for Food Deserts and Food Insecurity for the City of Chicago. Food Deserts are areas within which a significant number of people are isolated from accessing high-quality food options. The data from the USDA presents areas of low-income in addition to areas where a supermarket is greater than half a mile and greater than

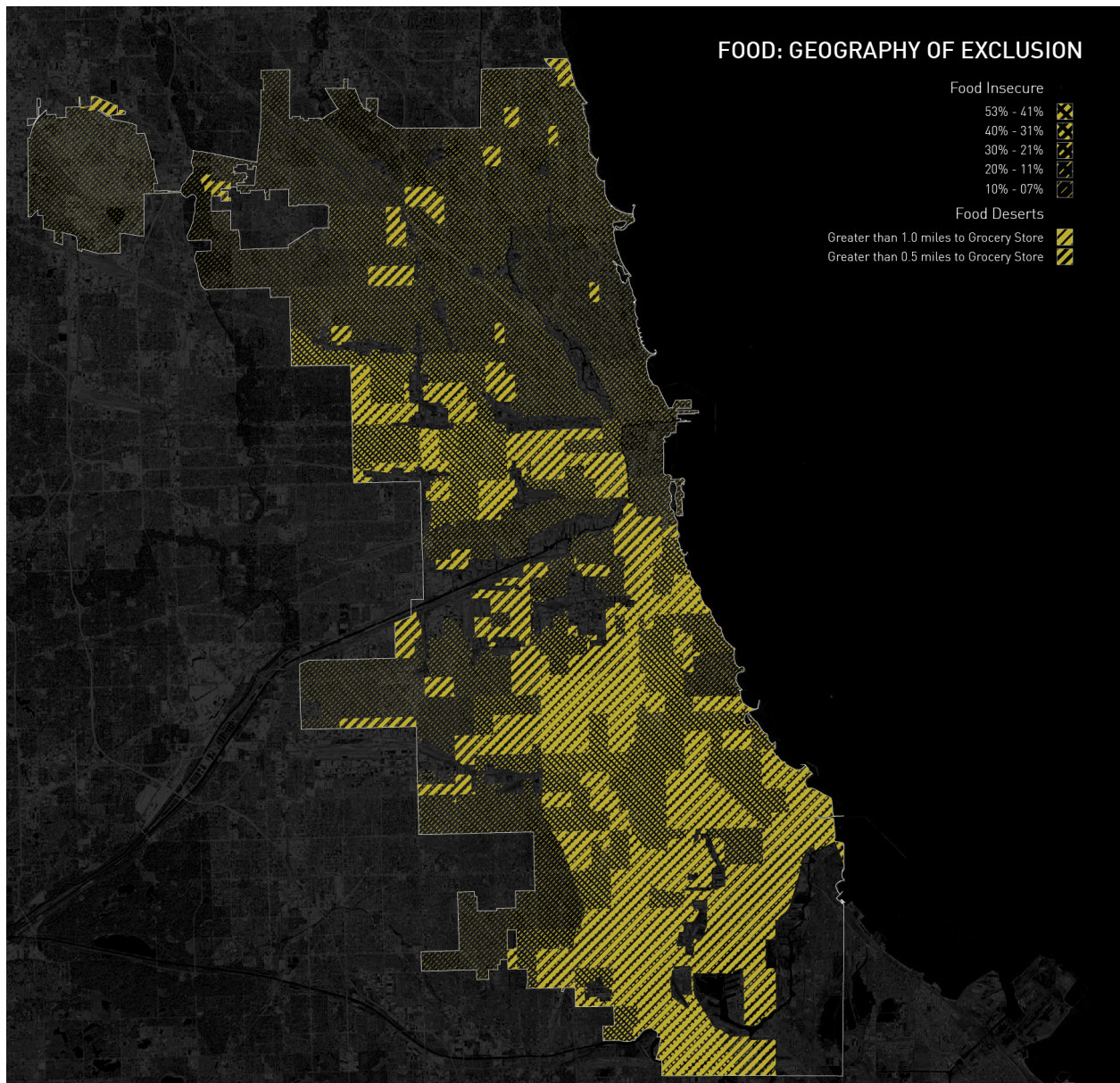


Figure 2: Chicago Geography of Exclusion for Food.

one mile away. However, “some people and places, especially those with low-income, may face greater barriers in accessing healthy and affordable food retailers, which may negatively affect diet and food security” (USDA 1, n.d.). Food insecurity is, as defined by the United States Department of Agriculture, “a household-level economic and social condition of limited or uncertain access to adequate food” (USDA 2, n.d.). The condition of being food insecure is not necessarily a constant, rather “it may reflect a household’s need to make trade-offs between important basic needs, such as housing or medical bills, and purchasing nutritionally adequate food” (Feeding America, n.d.).

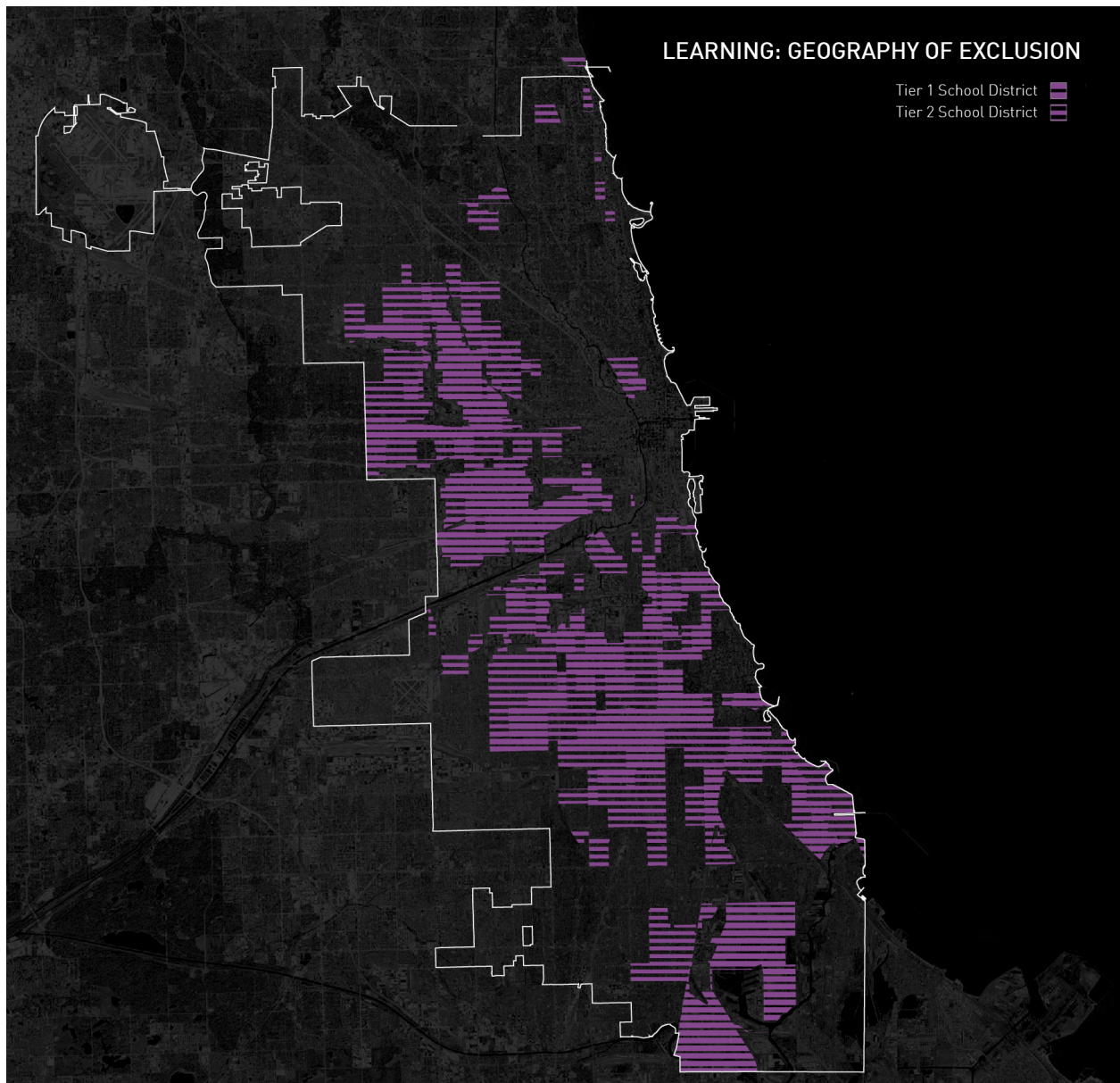


Figure 3: Chicago Geography of Exclusion for Learning.

Learning Exclusion. (Figure 3) The Chicago Public School Tier System is utilized as an indicator of the socio-economic factors that lead to relative advantage or disadvantage regarding education opportunity and attainment at the city scale. Census data on median family income, percentage of households occupied by the owner, percentage of families headed by a single parent, percentage of households where a language other than English is spoken, and a weighting of education attained, are used to place every census tract in the city into one of four tiers. Students are more or less evenly distributed among the four tiers. “On average, people from Tier 1 areas make less money and have less

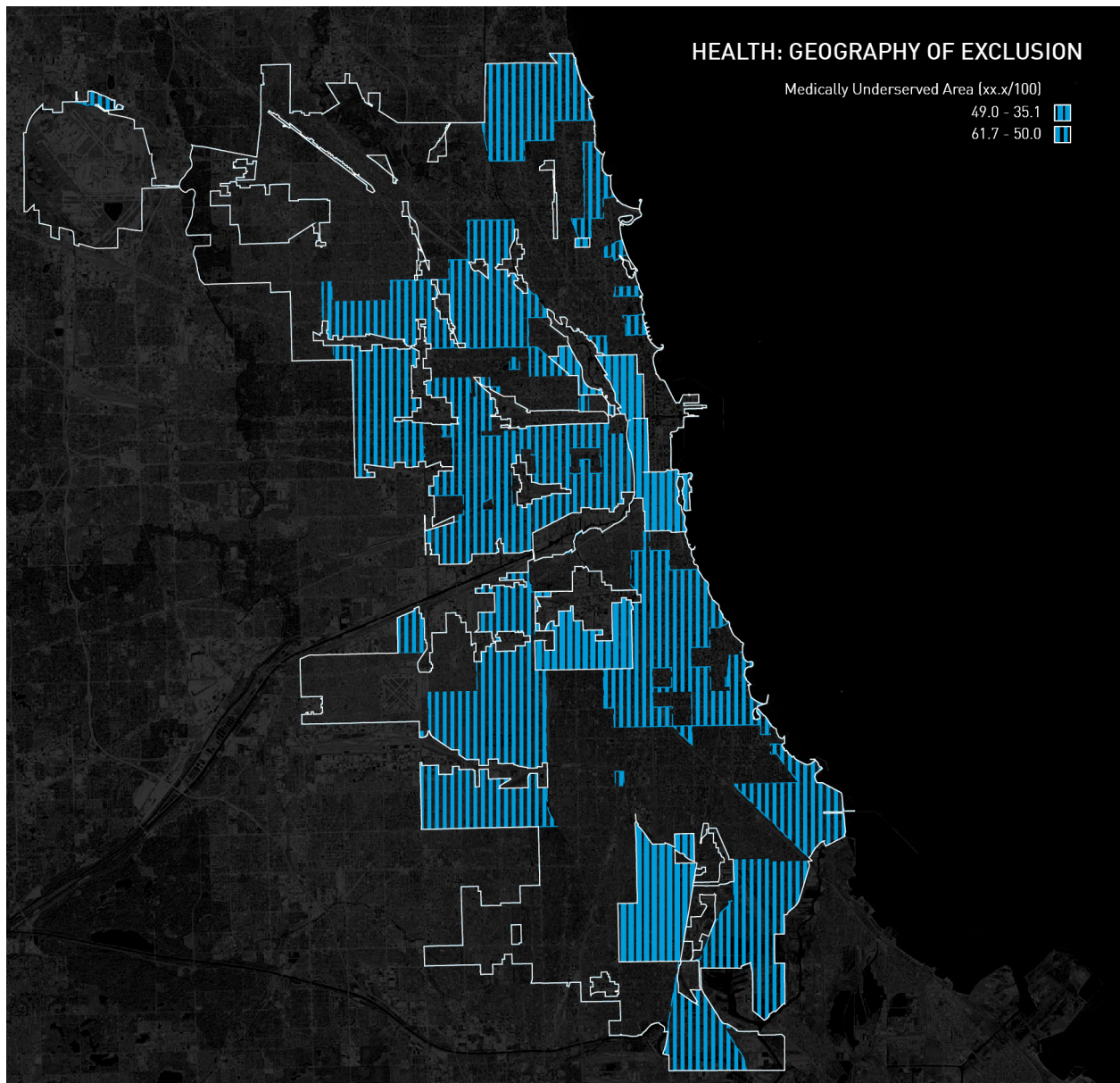


Figure 4: Chicago Geography of Exclusion for Health.

education, and people from Tier 4 areas make more money and have more education.” (Chicago Public School Tiers, n.d.) Depicted on the map in Figure 3 are Tier 1 and Tier 2 school zones. These represent areas where school aged children face higher educational challenges based on the aforementioned socio-economic factors.

Health Exclusion. (Figure 4) This cartography was developed using the US Department of Health’s metric for Medically Underserved Areas (MUAs). MUAs are designated based on the Index of Medical Underservice (IMU). The IMU uses a scale from 0 to 100, with 0 being completely underserved and 100 being the least underserved. Within this established system, those areas which are found to have an IMU rating of less than 62.0 qualify to be designated as a MUA. According to the US Department of Health, the IMU rating system “involves four variables - ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over. The value of each of these variables for the service area is converted to a weighted value, according to established criteria. The four values are summed to obtain the area’s IMU score” (HSRA, n.d.).

3.2 Infrastructural Fragmentation and Walksheds

Transit infrastructures are physical and operational paradoxes: they both connect and separate (Graham and Marvin, 2001, 11). While transit infrastructures are intended to enable accessibility and connection at local and regional scales, their spatial footprint and configuration often constitutes a disruptive condition within urban fabric. Along with other mobility infrastructures, they tend to generate urban islands, boundaries, and impediments to pedestrian connectivity and continuity. One of the hypotheses of this project is that mapping the urban fragmentation created by infrastructure would provide further insight into neighborhoods where access was a challenge due to physical boundaries caused by infrastructures and industrial lands. Figure 5 reveals the fragmenting impact of infrastructure on the urban fabric of Chicago. The spaces of transit and transport infrastructure and related industrial corridors are visually foregrounded, underscoring their role in the production of urban boundaries of separation and fragmentation whereby both spatial discontinuity and urban domains hostile to pedestrian usage and crossing are produced and exacerbated.

In order to test the level of infrastructural fragmentation in certain areas, the team undertook a series of “Travelshed” mappings to determine the impact of infrastructures on the connectability

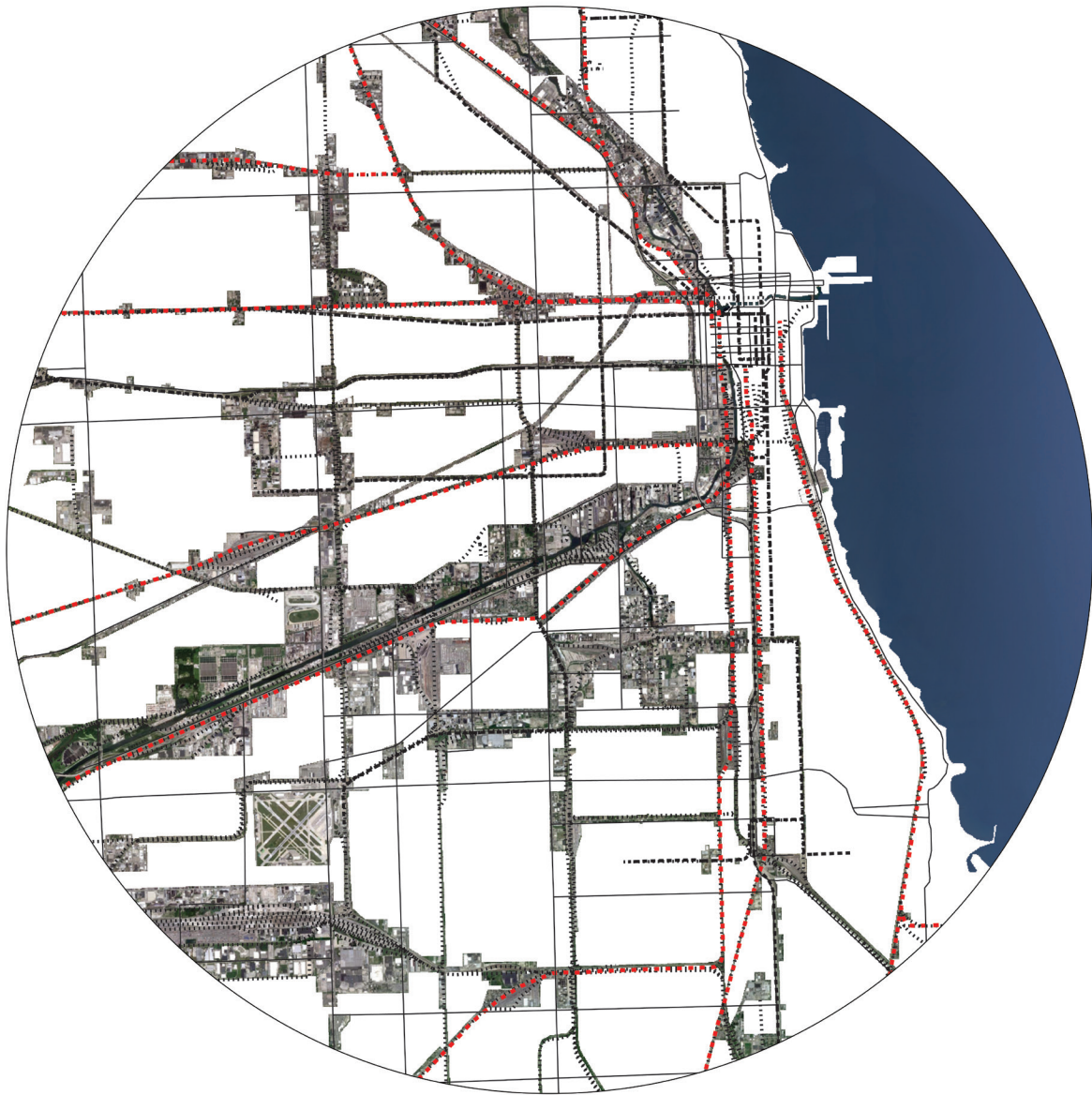


Figure 5: Mapping erasure exercise reveals the fragmenting impact of infrastructure on the urban fabric of Chicago. The spaces of transit and transport infrastructure and related industrial corridors are visually foregrounded, underscoring their role in the production of urban boundaries of separation and fragmentation.

and walkability of certain disadvantaged neighborhoods. Figures 6a and 6b images illustrate sample 20 minute transit service area for each respective point, as served by the Chicago Transit Authority “L” and bus network over a 24 hour period, or “Transitshed”. The images were produced using ESRI ArcGIS’s Network Analyst and General Transit Feed Specification data for the “L” system, processed through “GTFS to a Network Dataset” (Morang, n.d.) and Adobe Illustrator. By creating a network from the General Transit Feed Specification data provided by the CTA (CTA, n.d.) 20 minute transit service

areas were derived at 1 hour increments. These 1 hour increments were then overlaid to produce a representation of a gradation of access enabled by transit over 24hrs within 20 minutes to various services and amenities throughout the city such as grocery stores, libraries, police stations, hospitals, clinics, drugstores, public Internet access points and parks. Areas represented in white reveal those areas which are most readily accessible throughout 24 hours via transit, while areas at the edges are accessible within 20 minutes, albeit at a lower frequency. Areas in solid black, outside of the white line, are not

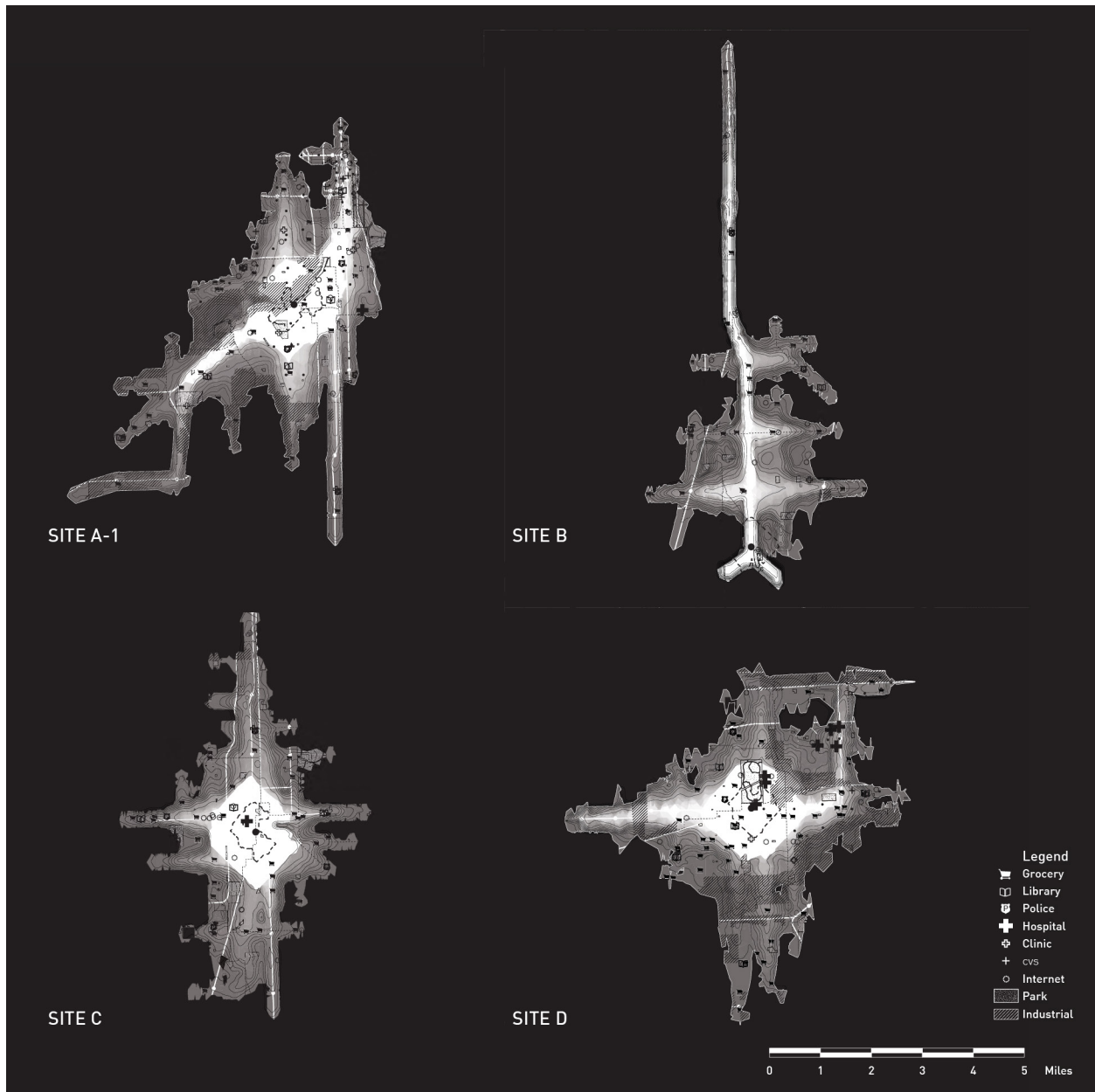


Figure 6: Transitsheds: Overlay of 20min transit service areas derived at 1hr increments for four sites in the city of Chicago.

accessible by transit within 20 minute at any point during a day.

Figures 7a and 7b represent a “WalkShed” analysis undertaken for the same locations as Figure 6. Utilizing the ESRI Network Analyst, a network was established from Chicago’s streets. The cropped urban figure-ground images represent the serviced areas within 10 minutes walk at 5 km/h from each respective point, whereas the typical representation of catchment areas is shown in the “as the crow flies” circle of a 500ft radius. The utilization of Network Analyst enables the actual network of streets and

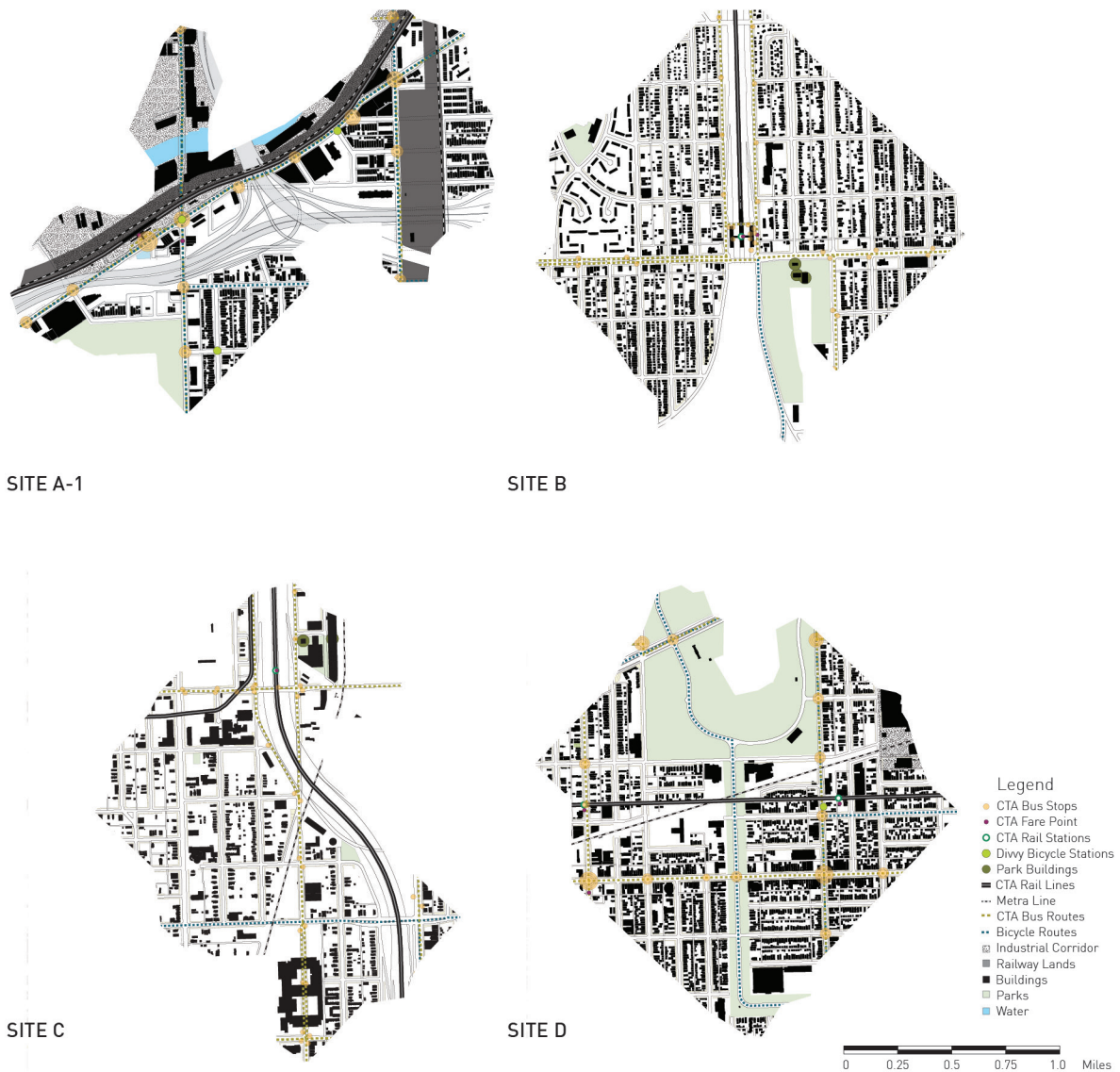


Figure 7: Walksheds: Urban crop representing accessible areas within 10 minutes walk at 5 km/h from the center of each map the same four sites as in Figure 6.

walkable paths to be used to construct the extents of a given service area.

Figure 8 is a composite “Travelshed” of the City of Chicago taken from the selection of the eight test areas investigated for this exercise. The drawing represents the CTA “L,” commuter rail lines, the boundary of the City of Chicago, and the superimposition of the 20 minute TransitSheds and 10 minute WalkSheds. This demonstrates the physical “accessibility” of the city from these locations.

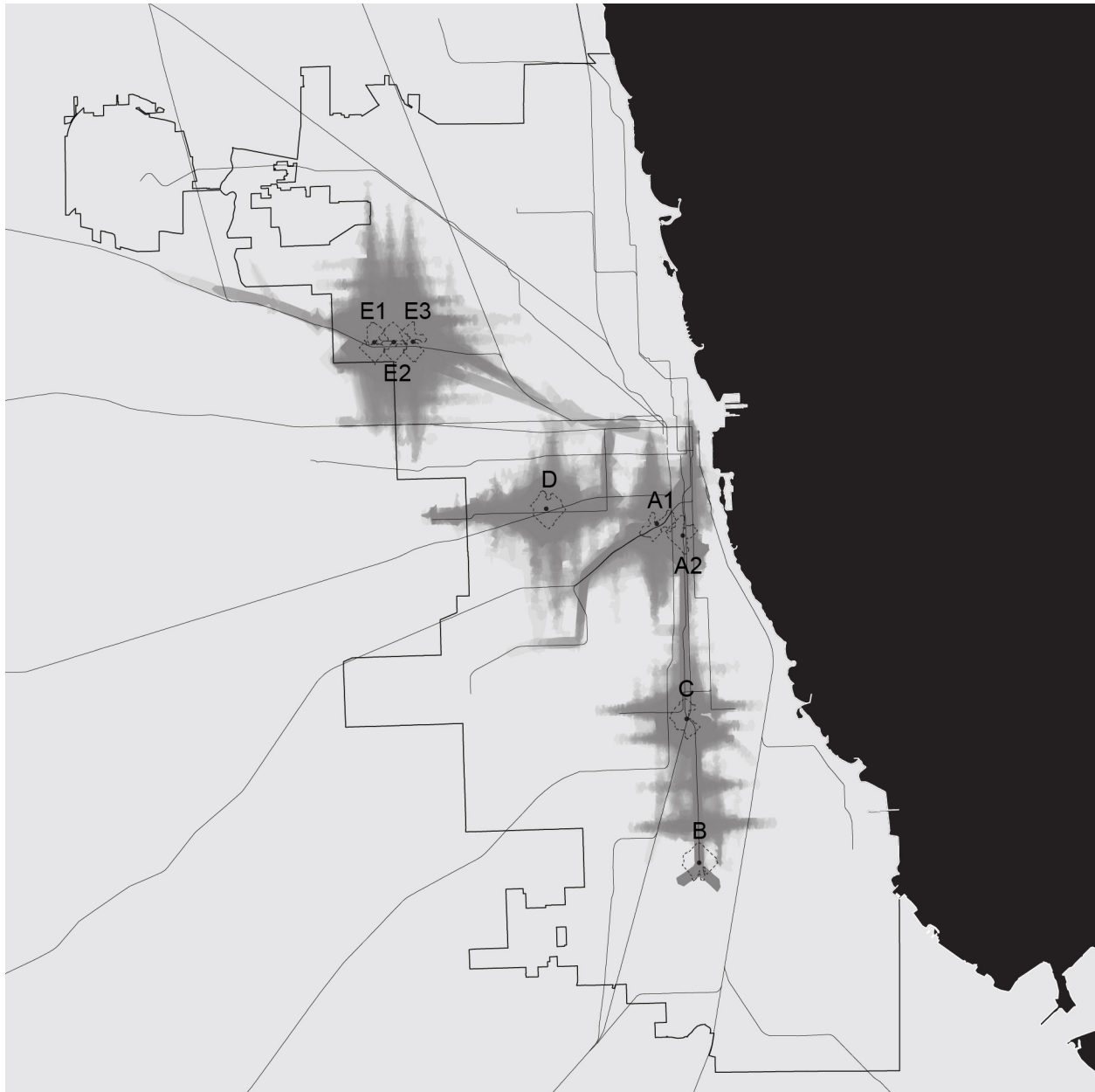


Figure 8: Travelsheds Map: Overlay of WalkShed and Transitshed mappings for eight sites throughout the city. Only sites A1, B, C, & D are illustrated in Figures 6 & 7.

3.3 Geography of Exclusion

A combinatory cartography, assembling the four metrics of exclusion (mobility, food, learning, and health) with the mapping of infrastructural fragmentation, produces what is referred to as the “Geography of Exclusion” for the city of Chicago. (Figure 9) This cartography exposes the astonishing

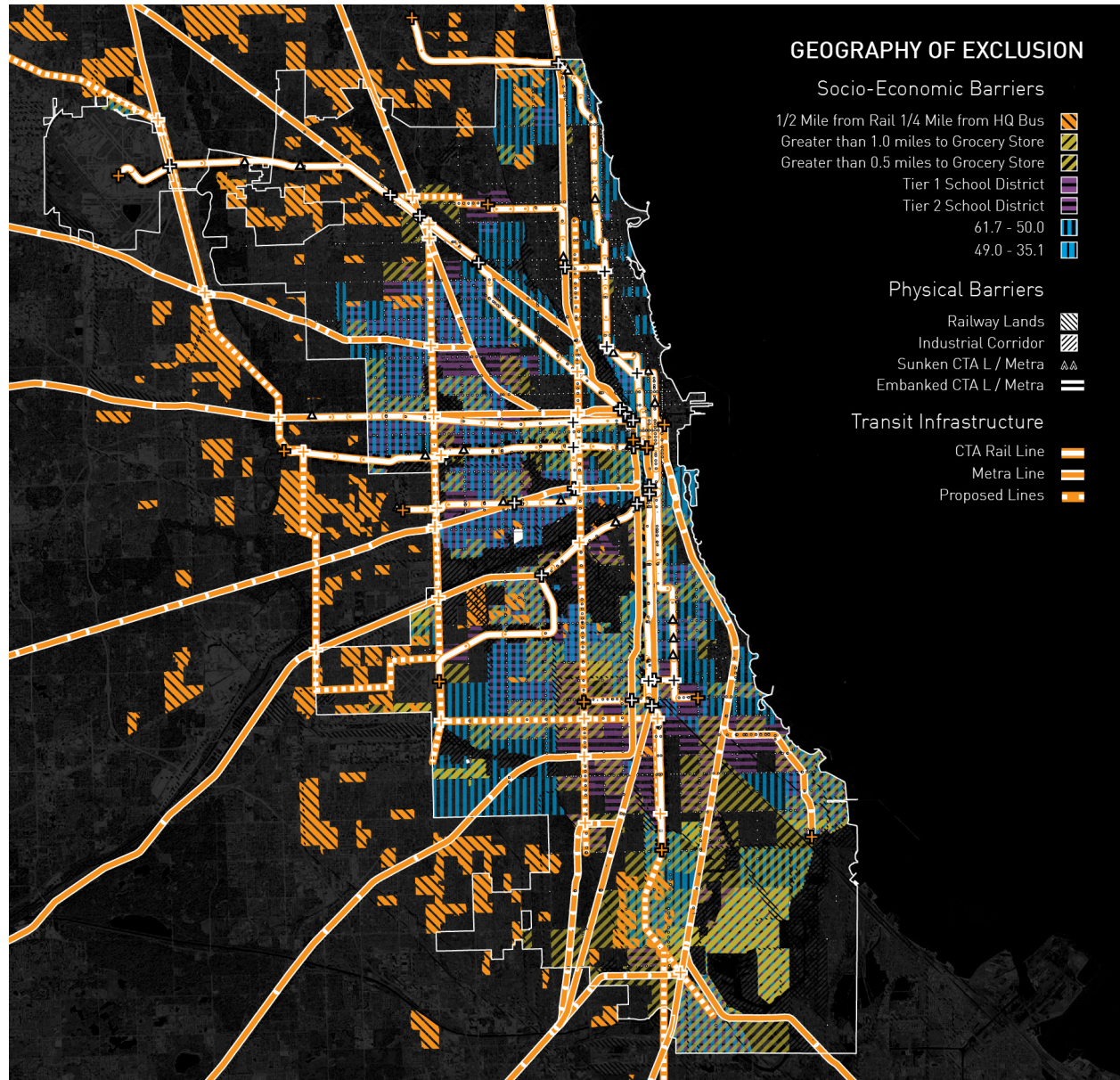


Figure 9: Chicago Geography of Exclusion. Combinatory cartography of socio-economic barriers for food, transit, learning, and health, combined with physical urban barriers of infrastructure and industrial lands. See individual “Geographies of Exclusion” figures, as well as Appendix A “Data Sources.”

extent of urban fragmentation and underservice characterized by these metrics throughout the city, and in particular, areas of intense overlap of multiple conditions of disadvantage, especially on Chicago's South Side. These areas of overlap indicate urban zones where, according to the data, citizens are most urgently disadvantaged in terms of access to needs. In further stages of the project, these are the areas where the research becomes focused, as it is here that accessibility solutions might be able to address multiple issues simultaneously.

3.4 Agents of Access

In order to inform the scenario development of future possibilities for how design might be mobilized to overcome situations of urban exclusion, disadvantage, and inaccessibility, it is important to investigate not only the geographies of need, but to also identify geographies and agents which have the capacity for transformation. Throughout the city, there exist numerous government and NGO incentive programs, community and non-profit organizations, institutional programs by schools, religious centers, and medical providers, and private initiatives and enterprises ranging from urban farms to bikeshare, that are all to working to overcome the conditions of urban disadvantage and inaccessibility. In this work, these are referred to as the "Agents of Access". Central to this research is the proposition that cities like Chicago possess an abundance of entities working towards situational transformation, and that it is through the direct engagement, assembly and choreography of these agents in space that the most plausible and transformative outcomes might be enabled. While some of these Agents of Access are spatially abstract (such as Federal incentive programs), many materialize physically within the city, forming key nodes of access delivery, or networks of access provision (such as school cafeterias, which offer healthy lunch programs for disadvantaged youth). Another of the hypotheses in this project is that *space matters*; especially in the case of Agents of Access, these organizations, groups, and programs have most capacity to enable positive transformation when they are located within the communities in need themselves, and operate as part of these communities and their local social networks.

The next stage of the cartographic research involved acquiring as much data as possible from a variety of sources, to identify and locate the Agents of Access throughout the city of Chicago. These were mapped on to the Geographies of Exclusion, so that it could be possible to simultaneously visualize both current and urgent conditions of disadvantage, while rendering legible the local agents currently working to transform these situations.

Mobility Access and Exclusion. Chicago, by US standards, has an extensive public transit system. The Chicago Transit Authority (CTA) operates mass transit (buses and trains) in Chicago and adjacent suburbs. Pace operates the suburban bus system and suburban commuter rail is operated by Metra. Currently, there is no single or coherent fare system for these three networks. In 2013, the Ventra card was introduced, providing a single fare and payment system for the CTA and Pace systems, however, at the time of the writing of this report, this fare card is yet to be integrated with Metra.

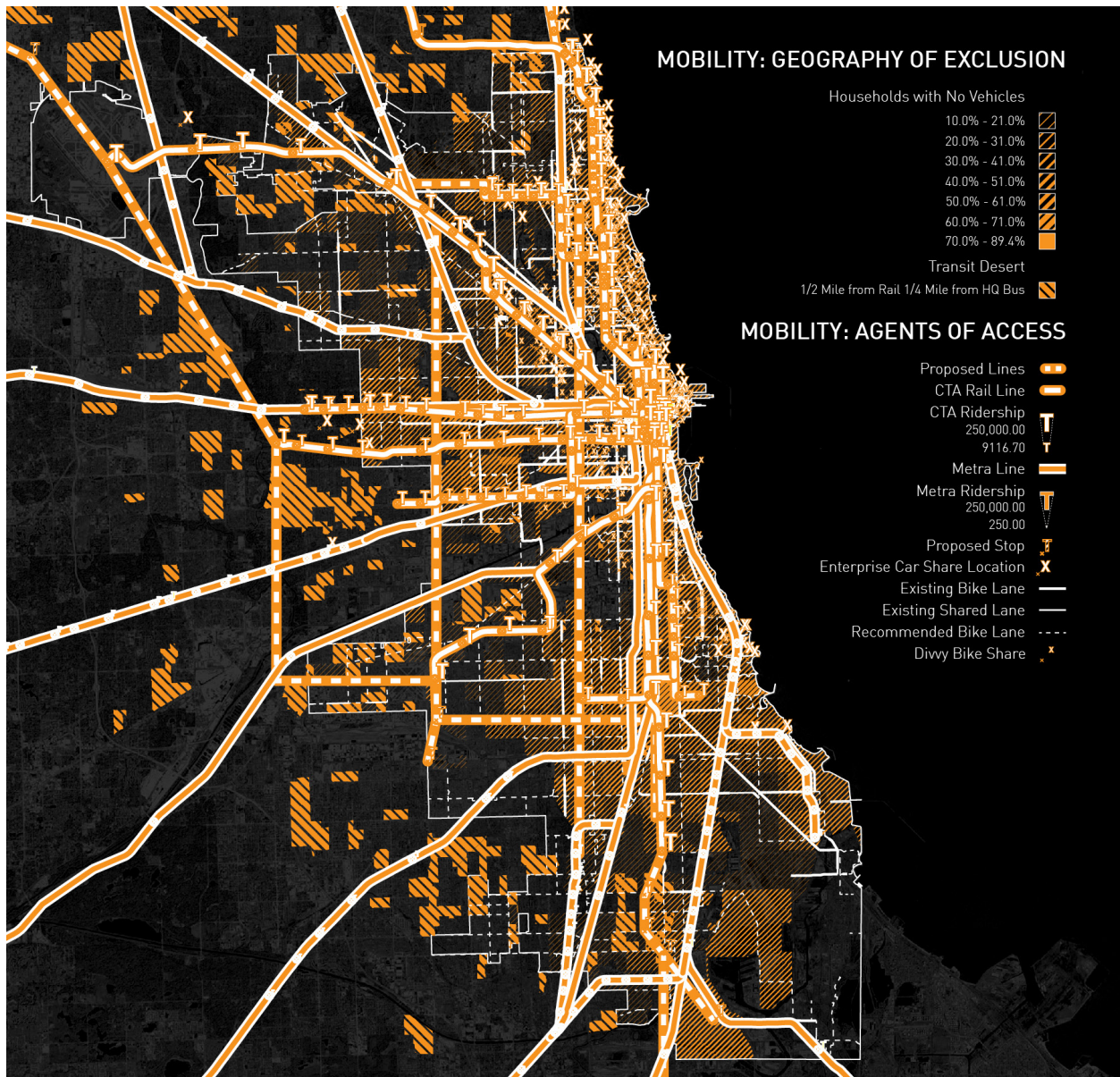


Figure 10: Chicago Geography of Access and Exclusion for Mobility. See Appendix A “Data Sources.”

The increasing use of alternative transit options through shared networks is a disruptive force for both transit and vehicle use in cities. The Divvy bicycle sharing system was launched in Chicago in 2013. Car sharing is now a service being offered by several rental car companies, and peer-to-peer ride and car sharing services are being enabled by communications technologies and smartphone apps that allow for flexible and convenient exchanges. The cartography in Figure 10 includes CTA lines and stops, Metra lines and stops, future mass transit lines and stops, Divvy bikeshare locations, and Enterprise Carshare lots.

Food Access and Exclusion. (Figure 11) Grocery stores are typically the primary point of delivery for high quality food options. However, many households that are considered food insecure may not be able to afford the food in their local grocery store, even if the retail location is proximate. Numerous organizations work to help those in need to access food, such as the Chicago Community Service Centers, non-profit and religious organizations, and Women Infant Children clinics. The Greater Chicago Food Depository provides mobile food outreach through two ProduceMobiles, a Mobile Pantry program driving tractor-trailers full of fresh produce to communities where other food assistance programs do not exist, and a mobile summer Lunch Bus that delivers nearly 1000 meals everyday to students while on summer break, when school food programs are not available. Women Infant Children clinics provide nutritious foods to eligible pregnant, breastfeeding, postpartum women, children and infants, and many non-profit and religious institutions operating within the city try to provide individuals in need with adequate access to food. Cafeterias in public schools and in places of higher education and employment mean that there are more possible chances to access food. In 2012-2013 the USDA's National School Lunch Program revised the school lunch menu in with higher nutrition standards.

Farmer's markets, food carts, and increasingly, urban farming also play a role in the city's food access landscape. NeighborSpace is a non-profit organization established by the City of Chicago, Chicago Park District, and Forest Preserve District of Cook County, that acquires vacant lands for public use as community gardens and spaces. The Kitchen Community Learning Gardens are established on school grounds as outdoor classrooms where children can learn about and participate in growing their own vegetables. Neighbor Capital gives individuals the chance to own and operate a Neighbor Cart, while simultaneously creating opportunities to access healthy food. Kitchen incubators address the opposite end of the food system spectrum; these incubators focus on the production and cooking of food, often in the form of classes, and also offer entrepreneurial opportunities and temporary space for the

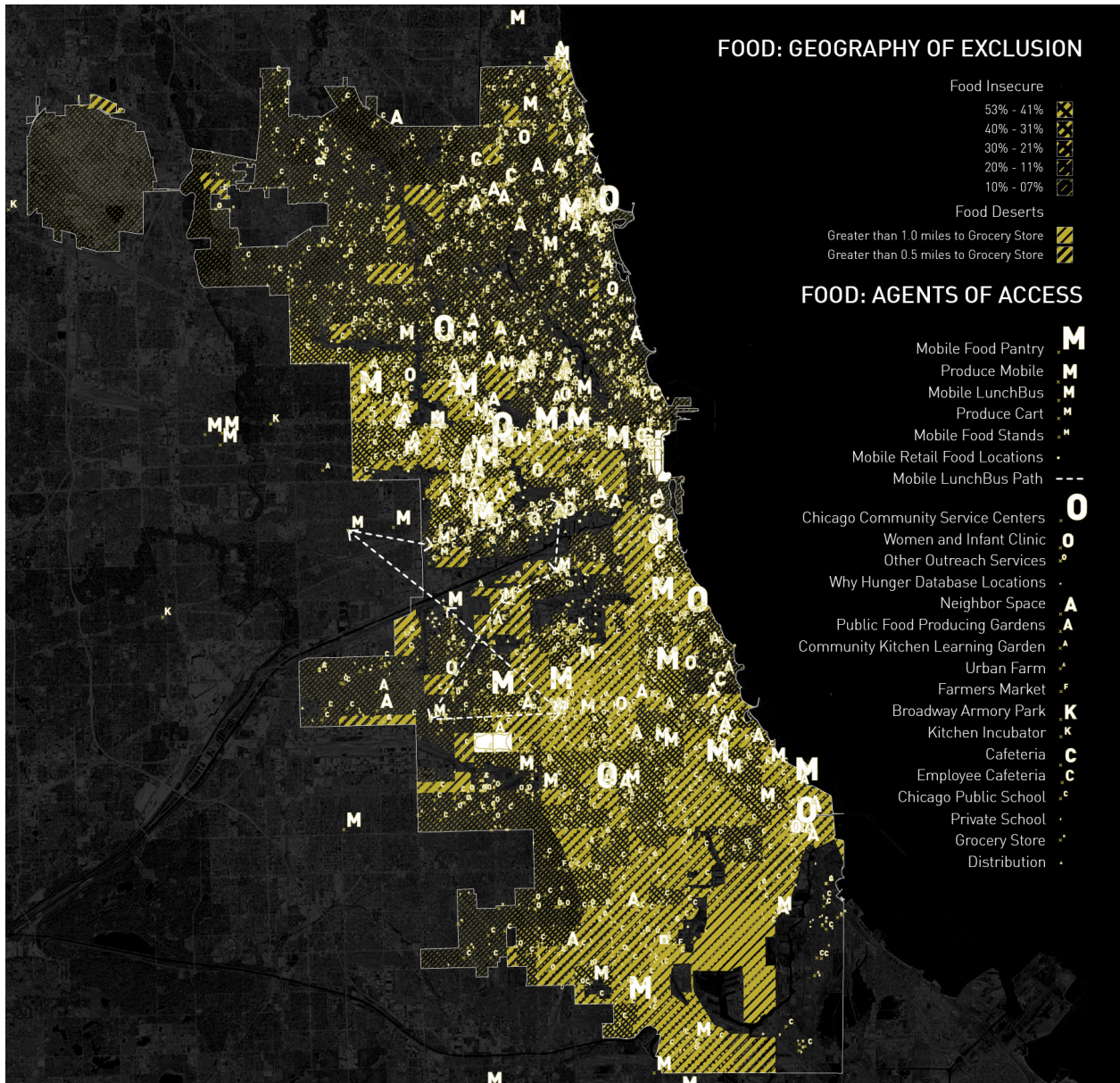


Figure 11: Chicago Geography of Access and Exclusion for Food. See Appendix A “Data Sources.”

establishment of food related businesses and start-ups. In addition to more formalized spaces, such as NeighborSpace gardens and Learning Gardens, there are numerous other spaces, both public and private, where various scales of agricultural production are underway. This allows people to access food outside of more normative food delivery mechanisms within an urban context.

Learning Access and Exclusion. (Figure 12) The city of Chicago has 522 Public, 54 Charter and 451 Independent schools city-wide. The city is also home to 20 City and Community Colleges and 13 Universities. City Colleges of Chicago (CCC) is the largest community college system in Illinois and one of the largest in the nation. However, learning is not just something that occurs in educational institutions. Community Service and Community Outreach Centers run programs that help individuals learn to navigate the landscape of the city; from understanding the city taxation system, to job training and retraining skills. The YMCA and Public Libraries offer educational programs for children, youths

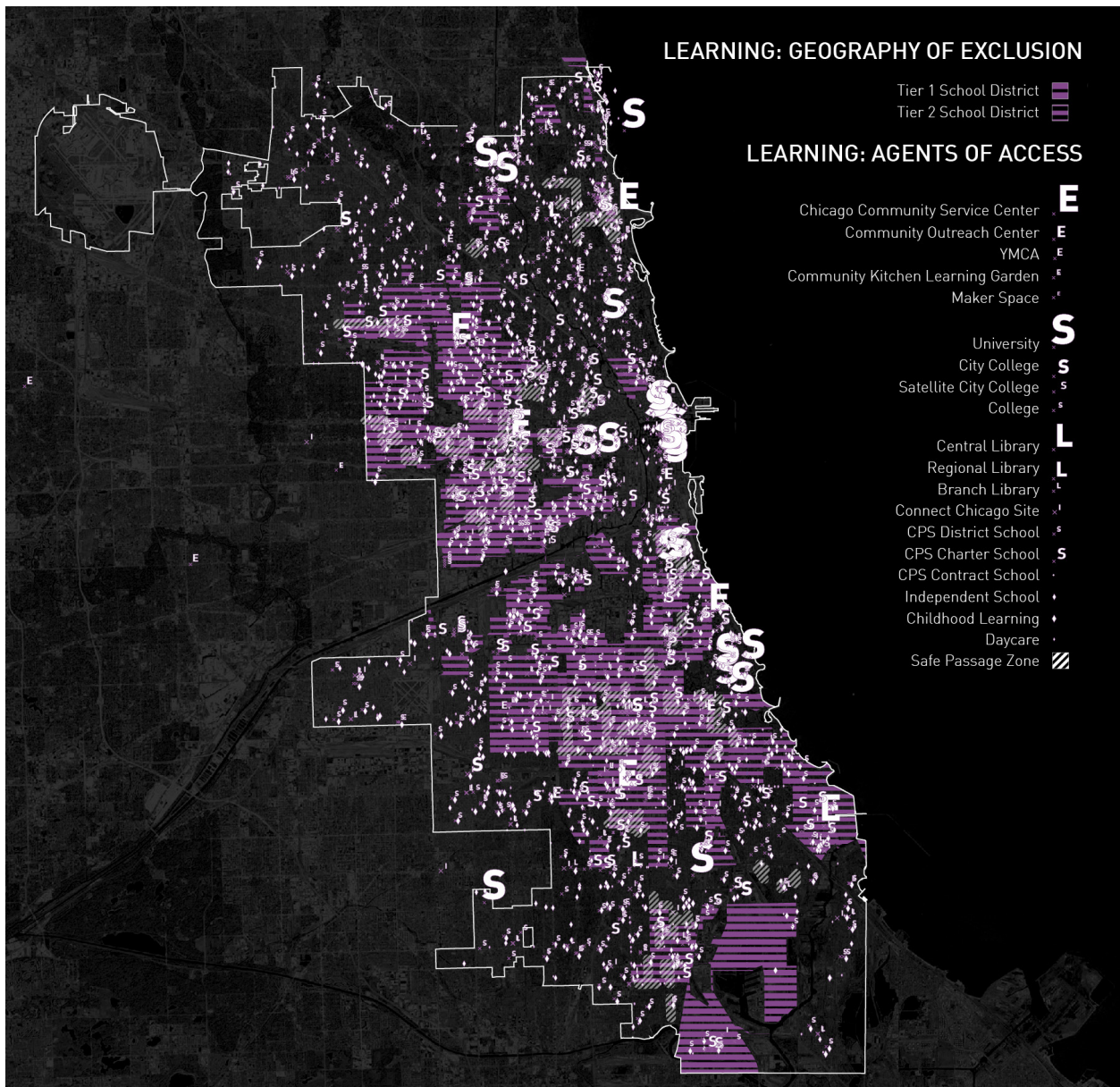


Figure 12: Chicago Geography of Access and Exclusion for Learning. See Appendix A “Data Sources.”

and adults. Libraries also offer free Internet access, and increasingly, spaces for new media education, production, and collaboration. Connect Chicago offers free Internet portals where individuals may access online learning opportunities. Alternative learning programs have in recent years been initiated by organizations such as maker spaces, and the Kitchen Community, a nonprofit who have planted over 100 learning gardens in the City of Chicago. Increasingly, “maker spaces” have become places where both children and adults can engage in forms of technology learning and collaboration.

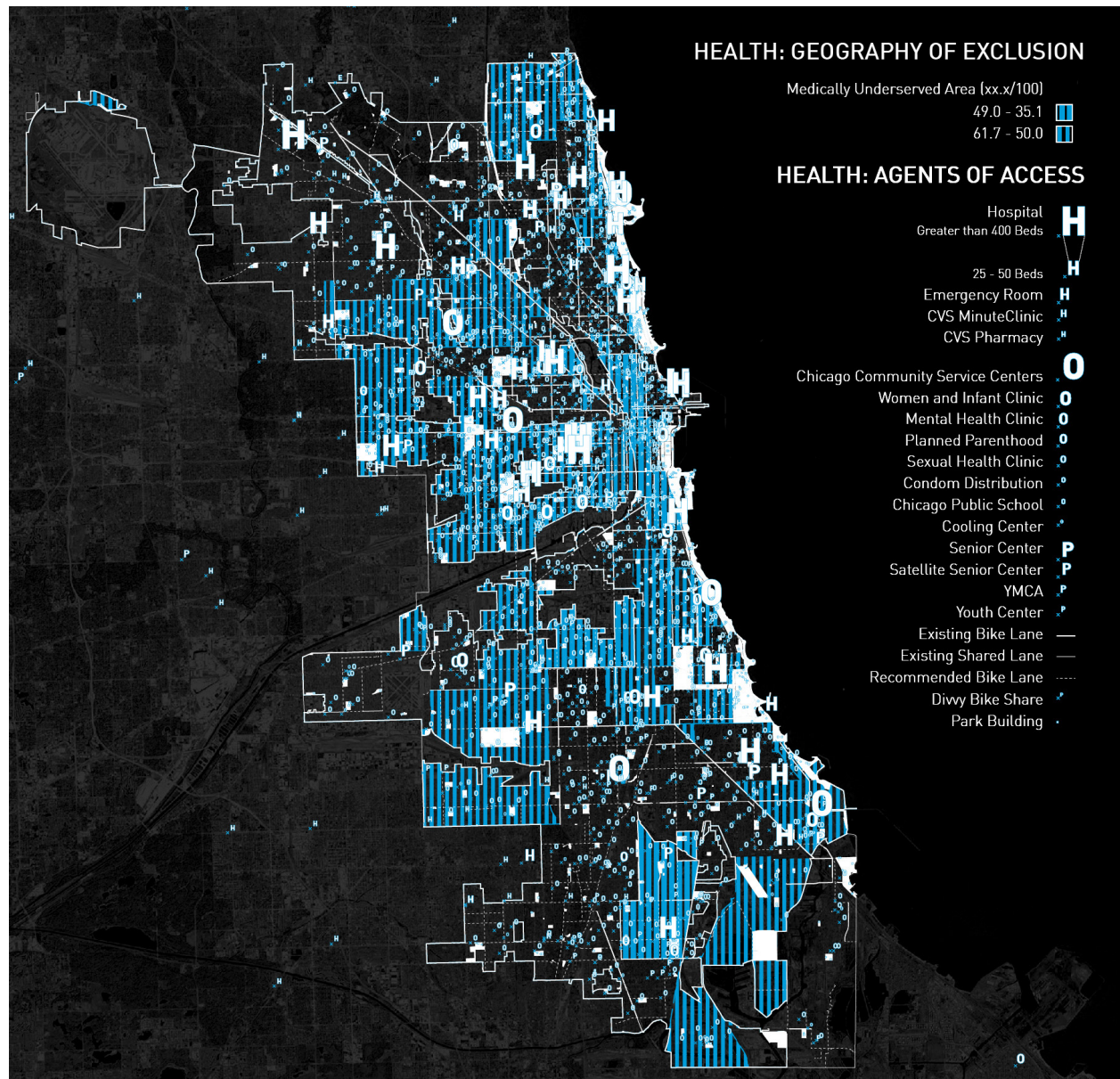


Figure 13: Chicago Geography of Access and Exclusion for Health. See Appendix A “Data Sources.”

There are also parts of the city where urban factors also play a part in influencing access to learning opportunities. Safe School Zones enforce speed limits and Safe Passage Zones mitigate violence, often gang related, on city streets that children need to use to get to schools. In 2013, the Chicago Public School system closed over fifty schools identified as “underutilized”. In the decade previous, eighty-six other schools have closed due to a number of factors including falling enrollment and poor test scores. Some of these have been replaced by Charter schools.

Health Access and Exclusion. (Figure 13) There are three primary ways to approach the question of health at the urban scale. One is through the physical distribution and accessibility of healthcare services: the proximate location of primary care physicians, hospitals, emergency rooms, clinics and pharmacies to where people live and work. The second is through the design of urban spaces and systems to support and encourage healthy lifestyles: parks, playgrounds, bike lanes, walkability, community centers, and fresh food access. Finally is the design of urban space that minimizes negative health impacts: traffic calming to protect pedestrians, reduction of vehicle traffic in general, anti-idling bylaws, zoning to reduce industrial pollution, the planting of trees and shrubs to absorb airborne pollutants, and remediation of urban brownfields and waterways. The cartography for health access and exclusion maps the urban geography of the first two of these existing conditions within the city.

3.5 Community Narratives

In previous work by PI Zielinski through SMART, projects involving New Mobility transformation in communities have involved a series of multi-stakeholder, multi-sector leadership engagement workshops, that draw on local knowledge in order to refine needs assessment, and identifying New Mobility program partners and private service providers. Given the scope and scale of this research project, the team knew that face-to-face workshop sessions would not be feasible in the time and budget available. A research question was whether online resources could provide us with appropriate information and intelligence regarding perspectives and initiatives by local stakeholders and leaders. The team mined media resources—newscasts, interviews, blogs, websites—as fora of public participation where individuals concerned with the development of their neighborhoods are making their voices, concerns, needs, and initiatives heard. In the case of Chicago, the online archive of “In the Loop” (<http://www.wycc.org/intheloop/>) a weekly discussion forum broadcast by WYCC PBS Chicago, was found to be

a valuable source of discussions and perspectives on both needs and local initiatives regarding all four of the access topics that this study was focused on—mobility, food, learning, and health. The information gathered from these online resources was used to provide further insight and specificity around the issues and opportunities that we were investigating, and, in many cases, informed the development of the prototypical design scenarios (see Section 5). A sampling of scenes from these narratives is depicted in Figure 14, and video clips are used in the project video produced and available online (<https://vimeo.com/108468499>).



Figure 14: Stills and quotations from videos compiled by the team that assemble research from media resources including newscasts, interviews, blogs, and websites. See Appendix A “Video Sources.”

3.6 Chapter Summary and Discussion

This body of research involved a data-driven approach to developing combinatory mappings of both urban exclusion and agents of access. These maps visualized the complex conditions of both need and capacity within the city. Additionally, web-based resources on stakeholder perspectives were

gathered to further inform the work. The cartographies and key clips from the video resources were compiled in a video format, which was disseminated online at: <https://vimeo.com/108468499>.

Given the scope of this project, and the goal of this research to define and test out a methodological framework, the accessibility metrics used in the cartographies were not exhaustive, nor did the team consider it part of this research to interrogate them. For example, other agencies, such as the CDC Modified Food Retail Index (mRFEI), provide different metrics for food deprivation than the USDA, and should likely be included in future work. In the scope of this research, the interest was to use common and widely available data to generate the initial cartographies. That said, the team recognizes that there are presumptions and biases inherent in many of the metrics, as well as data that has not yet been, or may never be captured (such as non-work travel informal ridesharing). Further work in cartographies of exclusion and access would aim to incorporate a broader range of databases available, in order to provide much more nuanced mappings of situations. Interrogating these various databases and the geographies they produce relative to one another can inform the development more refined visualizations of accessibility within cities.

One of the reasons that the team chose Chicago as a focus city is because it is a city which generates a great deal of urban data, and makes it freely available. It is recognized that many other American cities may not have as extensive datasets, posing challenges to a data-driven approach to analysis of urban access and actors.

Urban data changes over time, and it is therefore a recognized drawback that the cartographies produced capture a snapshot of the city at the time of their production. At the moment they are made, they are already a historical document. In future work, it would be ideal if such cartographies could be developed as live, web-enabled interfaces, that could be easily updated as urban data and statistics change with urban transformation. This capability would also enable the cartographies to capture change over time, and could be valuable in evaluating the success of certain access-enabling initiatives and projects.

CHAPTER 4 ACCESS-ENABLING INSTRUMENTS AND ACTORS

4.1 Mobility Spaces as Strategic Access-Enabling Instruments

This project is predicated on the hypothesis that, beyond the delivery of mobility by facilitating the operation of various modes of transportation, the public transportation network constitutes a particular spatial asset within cities and municipalities that recommends itself as an apparatus for the delivery of enhanced connectivity *and* access to needs in urban neighborhoods. This project proposes to rethink one of the primary assumptions regarding mobility: ***instead of looking at mobility as a way to enable people to access needs, what if mobility could be a platform (literal and operational) by which needs can be made accessible.*** By thinking urban mobility as simply a question of moving people around the city, there is a tacit assumption that the city is already working well for its citizens and that what is needed is primarily better physical connectivity. This is of course not the case, as is demonstrated by the Geographies of Exclusion mappings. The future of sustainability requires the thinking the whole of cities differently.

In discourses on public space, a primary focus has often been on the open spaces of the city and the city streets. However, urban theorist Ed Soja argues that public spaces are inclusive of all the spaces in the city that are associated with the “notion of common property”, including the spaces of public transportation infrastructure. If public space is understood to mean all “democratic spaces of collective responsibility,” then its purview must also include “all of the publicly maintained streets of the city as well as crossroads, plazas, piazzas, and the squares are part of the commons, and so too are the mass transit networks and the buses and trains...that move across the city” (Soja, 2010).

Within urban geography, transit nodes of a variety of scales and function are strategically located according to the logics of optimizing systemic connectivity in proximity to diverse communities of use, often on a daily basis. This project proposes that they can be leveraged to not only take people to places and needs, but to *bring needs to the people*. The next phases of the work use design-based strategies to explore how the physical spaces of transit within the city can be redesigned as novel, multi-modal hubs that recombine functions, spaces, and technologies in order to address multiple aspects of lack of access, resilience, and sustainability in the city (NMH). This work focuses on New Mobility and New Economy instruments to provide expanded and better connected mobility options, as well as enhanced

access to goods, services and amenities that can be integrated within the transportation network. These effectively bring social services such as food, learning, and health in greater physical proximity to sites of mobility, increasing access across these elements of urban life. Considering the spaces of transit as constituting urban public space allows their use-value to be conceptually expanded beyond the function of efficient delivery of mobility services, to become a network of potentially vibrant urban places of gathering, encounter, and exchange that might more broadly participate as spaces enabling access.

The diagram in Figure 15 visualizes the spatio-physical elements of the existing mobility system (in white) and a possible suite of new technology-based access enabling instruments (in yellow) that can be integrated within the space of transit stations, effectively bringing social services such as food, learning, and health into the space of mobility infrastructure, and increasing access to these necessities

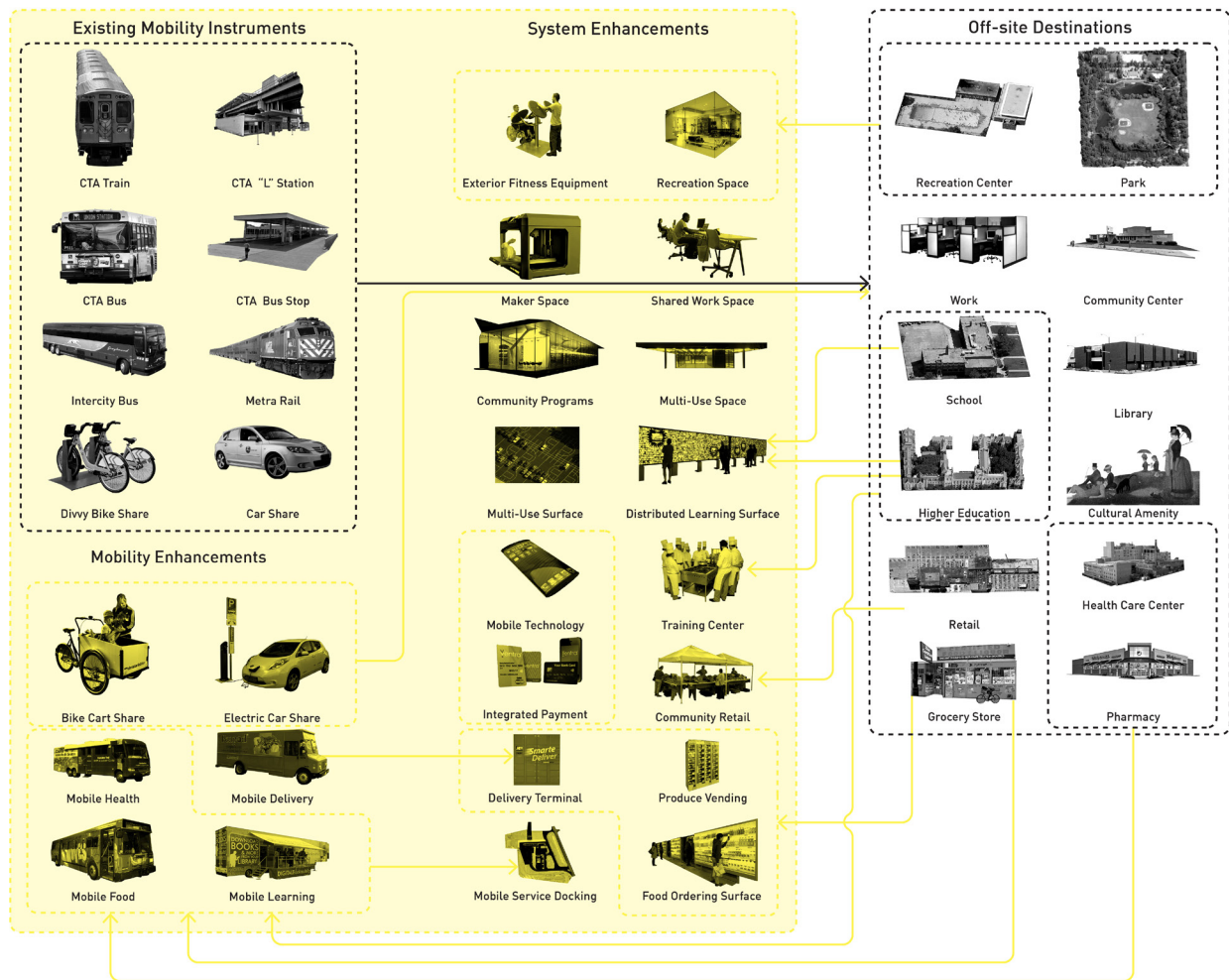


Figure 15: Cluster of New Mobility and New Economy instruments to be deployed in prototypical design scenarios for New Mobility Hubs.

of urban life. The spatial combination of these instruments, in a variety of configurations, forms the basic programs and elements of the prototypical design scenarios that aim to re-imagine the space of transportation as a vibrant access-enabling urban network (see Section 5).

4.2 Implementation Actors and Instruments

As important as the spatio-physical instruments that can be implemented to enable increased access within transit space is the identification of the existing urban actors that can be mobilized to realize this change. The implementation, realization, and sustainability of urban projects requires the cooperation, collaboration, and cost and risk sharing a diverse range of actors. These include state as well as federal government agencies and programs, public and private institutions, NGO's, foundations, for-profit businesses, and local community groups and organizations. The research assembles both agencies and champions, as well as funding sources in a comprehensive database as well as coded diagrams for each of mobility, food, learning, and health (Figures 16, 17, 18, 19 & 20, as well as Appendix B).














































































GOVERNMENT ENTITIES	PUBLIC/PRIVATE INSTITUTIONS	NON-GOVERNMENTAL ORGANIZATIONS	FOR-PROFIT BUSINESSES	INSTRUMENTS/TECHNOLOGIES
<ul style="list-style-type: none">  U.S. DEPARTMENT OF TRANSPORTATION (DOT)  FEDERAL HIGHWAY ADMINISTRATION (FHWA)  FEDERAL TRANSIT ADMINISTRATION (FTA)  FEDERAL RAIL ADMINISTRATION (FRA)  FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION (FMCSA)  NATIONAL HIGHWAY TRAFFIC SAFETY BOARD (NTSB)  ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT)  CHICAGO METROPOLITAN AGENCY FOR PLANNING (CMAP)  CHICAGO DEPARTMENT OF TRANSPORTATION (CDOT)  CHICAGO DEPARTMENT OF STREETS AND SANITATION  CHICAGO BOULEVARDS HISTORIC DISTRICT  U.S. DEPARTMENT OF ENERGY (DOE)  DOE OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY (EERE)  DOE BUILDING TECHNOLOGY OFFICE (BTO)  ILLINOIS DEPARTMENT OF COMMERCE AND ECONOMIC OPPORTUNITY (DCEO)  ILLINOIS COMMERCE COMMISSION (ICC)  REGIONAL TRANSIT AUTHORITY (RTA)  CHICAGO TRANSIT AUTHORITY (CTA)  PACE SUBURBAN BUS  METRA  CHICAGO MAYOR'S OFFICE FOR PEOPLE WITH DISABILITIES (MOPD) 	<ul style="list-style-type: none">  NATIONAL RENEWABLE ENERGY LABORATORY (NREL)  NREL ENERGY SYSTEMS INTEGRATION LABORATORY  NREL ENERGY SYSTEMS FABRICATION LABORATORY 	<ul style="list-style-type: none">  CENTER FOR NEIGHBORHOOD TECHNOLOGY (CNT)  CHICAGO AREA CLEAN CITIES COALITION  ALTERNATIVE TRANSPORTATION FOR CHICAGOLAND, INC. (ATC)  I-GO  CARSHARING ASSOCIATION  PEDAL TO THE PEOPLE  ACTIVE TRANSPORTATION ALLIANCE (ATA)  MOBILE C.A.R.E. FOUNDATION 	<ul style="list-style-type: none">  ALLIANCE FOR SUSTAINABLE ENERGY, LLC  COMMONWEALTH EDISON COMPANY (COMED)  JC DECAUX  ENTERPRISE CARSHARE  AVIS BUDGET GROUP  ZIPCAR  THE HERTZ CORPORATION  HERTZ 24/7  PAYPAL  BCD GROUP  FORD MOTOR COMPANY  FONTINALIS PARTNERS  CUBIC TRANSPORTATION SYSTEMS, INC. (CUBIC)  GREHYOUND LINES, INC.  INDIAN TRAILS, INC.  ALTA BICYCLE SHARE, INC.  BIXI  PUBLIC BIKE SYSTEM COMPANY (PBSC) 	<ul style="list-style-type: none">  ATC SOLAR CANOPY AND EV CHARGING STATION PROJECT  ATC PEER-TO-PEER CARSHARE PROGRAM  RELAYRIDES  GETAROUND  PARKMOBILE  VENTRA  STUDENT VENTRA  CHICAGO CARD PLUS I-GO  CTA TRANSIT TRACKERS  VELOGISTICS  CPL BOOKMOBILE  THE NIGHT MINISTRY HEALTH OUTREACH BUS  CATHOLIC CHARITIES MOBILE OUTREACH UNIT  CHICAGO HOMELESS SERVICES MOBILE CLINIC  SALVATION ARMY MOBILE OUTREACH UNIT  MOBILE C.A.R.E. ASTHMA VAN  MOBILE C.A.R.E. DENTAL VAN  COMER CHILDREN'S HOSPITAL PEDIATRIC MOBILE MEDICAL UNIT  RONALD MCDONALD CARE MOBILE  LOYOLA PEDIATRIC MOBILE HEALTH UNIT  ST. BERNARD HOSPITAL PEDIATRIC MOBILE HEALTHCARE UNIT  BLUE CROSS BLUE SHIELD IL CARE VAN  SUPERMARKET SHUTTLE  GCFD MOBILE FOOD PANTRY  GCFD PRODUCEMOBILE  GCFD LUNCH BUS  CRISPI MOBILE GROCERY

Figure 16: Mobility Actors and Instruments. Assembly of Government Entities, Public/Private Institutions, NGOs, For-Profit Businesses, and Instruments/Technologies related to mobility space that can be mobilized for NMH access-enabling design scenarios.

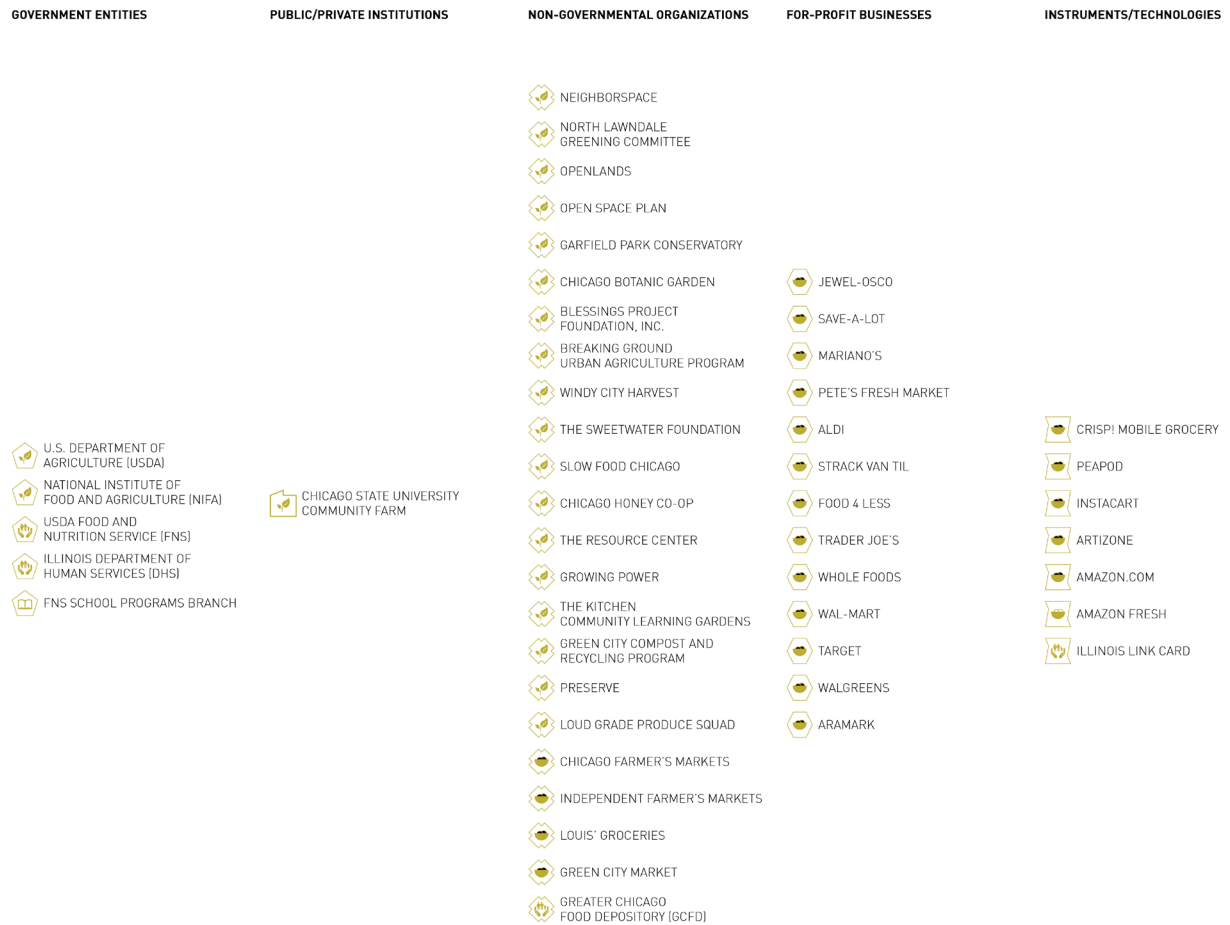


Figure 17: Food Actors and Instruments. Assembly of Government Entities, Public/Private Institutions, NGOs, For-Profit Businesses, and Instruments/Technologies related to food space that can be mobilized for NMH access-enabling design scenarios.

GOVERNMENT ENTITIES	PUBLIC/PRIVATE INSTITUTIONS	NON-GOVERNMENTAL ORGANIZATIONS	FOR-PROFIT BUSINESSES	INSTRUMENTS/TECHNOLOGIES
U.S. DEPARTMENT OF EDUCATION (ED)	CHICAGO PUBLIC SCHOOLS (CPS)			
OFFICE OF CAREER, TECHNICAL, AND ADULT LITERACY (OCTAE)	CHICAGO PUBLIC LIBRARY (CPL)			
DIVISION OF ADULT EDUCATION AND LITERACY (DAEL)	CARTER G. WOODSON REGIONAL LIBRARY	AMERICAN LIBRARY ASSOCIATION (ALA)		
ILLINOIS BOARD OF EDUCATION	UNIVERSITY OF CHICAGO	ILLINOIS LIBRARY ASSOCIATION (ALA)		
CHICAGO PUBLIC SCHOOLS (CPS)	UNIVERSITY OF CHICAGO INSTITUTE FOR TRANSLATIONAL MEDICINE	BREAKING GROUND		
INSTITUTE OF MUSEUM AND LIBRARY SERVICES (IMLS)	UNIVERSITY OF CHICAGO COMPUTATION INSTITUTE	MCCUNE CHARITABLE FOUNDATION		
ILLINOIS STATE LIBRARY	LOYOLA UNIVERSITY CHICAGO	SMART CHICAGO COLLABORATIVE		
CHICAGO PUBLIC LIBRARY (CPL)	DEPAUL UNIVERSITY	URBAN CENTER FOR COMPUTATION AND DATA		
U.S. DEPARTMENT OF LABOR (DOL)	CHICAGO STATE UNIVERSITY (CSU)	ILLINOIS TECHNOLOGY FOUNDATION (ITF)		
DOL EMPLOYMENT AND TRAINING ADMINISTRATION (ETA)	CITY COLLEGES OF CHICAGO (CCC)	YOU MEDIA		
ETA ADULT SERVICES	KENNEDY-KING COLLEGE (CCC)	DIGITAL YOUTH NETWORK (DYN)	EXTENET	E-READ ILLINOIS
ILLINOIS DEPARTMENT OF EMPLOYMENT SECURITY (IDES)	OLIVE-HARVEY COLLEGE (CCC)	LUMITY	SILVER IP	3M CLOUD LIBRARY
U.S. DEPARTMENT OF HOMELAND SECURITY	OLIVE-HARVEY COLLEGE SOUTH CHICAGO LEARNING CENTER	EVERYONE ON	COMCAST INTERNET ESSENTIALS	CONNECT CHICAGO
U.S. CITIZENSHIP AND IMMIGRATION SERVICES (USCIS)	SCHOOL OF THE ART INSTITUTE OF CHICAGO (SAIC)	JOHN D. AND CATHERINE T. MACARTHUR FOUNDATION	TEC SERVICES, INC.	CHICAGO CITY DATA PORTAL
CHICAGO DEPARTMENT OF FAMILY AND SUPPORT SERVICES (DFSS)	ARGONNE NATIONAL LABORATORY	THE CHICAGO COMMUNITY TRUST	3M	THE ARRAY OF THINGS
CHICAGO DEPARTMENT OF CULTURAL AFFAIRS AND SPECIAL EVENTS (DCASE)	TRANSPORTATION, DISTRIBUTION, AND LOGISTICS CENTER (TDL)	LOCAL INITIATIVES SUPPORT CORPORATION (LISC-CHICAGO)	MICROSOFT CORPORATION	GITHUB
CHICAGO HOUSING AUTHORITY (CHA)	UNIVERSITY OF ILLINOIS EXTENSION	CHICAGOLAND CHAMBER OF COMMERCE		PROJECT ECHO
CHICAGO PUBLIC BUILDINGS COMMISSION	ONE-STOP CAREER CENTERS	CHICAGO COOK WORKFORCE PARTNERSHIP		
U.S. DEPARTMENT OF COMMERCE	CPS OFFICE OF STUDENT HEALTH AND WELLNESS	THE KITCHEN COMMUNITY LEARNING GARDENS		
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION (NTIA)	UNIVERSITY OF CHICAGO MEDICINE	GREEN YOUTH FARM		
FEDERAL COMMUNICATIONS COMMISSION (FCC)	LOYOLA UNIVERSITY MEDICAL CENTER	SWEETWATER AQUAPONS		
NATIONAL SCIENCE FOUNDATION (NSF)	SMART CHICAGO PUBLIC COMPUTER CENTERS	COOKING MATTERS		
ILLINOIS DEPARTMENT OF COMMERCE AND ECONOMIC OPPORTUNITY (DCEO)	FAMILYNET CENTERS	CHEF IN THE HOOD		
PARTNERSHIP FOR A CONNECTED ILLINOIS	CPS EDIBLE GARDENS	HEALTHY SCHOOLS CAMPAIGN		
CHICAGO DEPARTMENT OF INNOVATION AND TECHNOLOGY (DOIT)	UNIVERSITY OF ILLINOIS EXTENSION			
CPS NUTRITION SUPPORT SERVICES	CHICAGO STATE UNIVERSITY AQUAPONICS CENTER			

Figure 18: Learning Actors and Instruments. Assembly of Government Entities, Public/Private Institutions, NGOs, For-Profit Businesses, and Instruments/Technologies related to learning space that can be mobilized for NMH access-enabling design scenarios.

GOVERNMENT ENTITIES	PUBLIC/PRIVATE INSTITUTIONS	NON-GOVERNMENTAL ORGANIZATIONS	FOR-PROFIT BUSINESSES	INSTRUMENTS/TECHNOLOGIES
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)		SOUTH SIDE HEALTHCARE COLLABORATIVE (SSHC)		
HEALTH RESOURCES AND SERVICES ADMINISTRATION (HRSA)		LAWDALE CHRISTIAN HEALTH CENTER		
CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS)		ACCESS FAMILY HEALTH CENTERS		
U.S. CENTERS FOR DISEASE CONTROL (CDC)		AMERICAN CANCER SOCIETY ILLINOIS DIVISION		
AGENCY FOR HEALTH RESEARCH AND QUALITY (AHRQ)		ROBERT WOOD JOHNSON FOUNDATION		
NATIONAL INSTITUTE OF HEALTH (NIH)		GRANT HEALTHCARE FOUNDATION		
NATIONAL INSTITUTE ON DRUG ABUSE (NIDA)		THE NIGHT MINISTRY		
NATIONAL HEART, LUNG, AND BLOOD INSTITUTE (NHLBI)	UNIVERSITY OF CHICAGO MEDICINE	FEATHERFIST		
U.S. DEPARTMENT OF DEFENSE (DOD)	UNIVERSITY OF CHICAGO COMER CHILDREN'S HOSPITAL	THE RENAISSANCE COLLABORATIVE	BLUE CROSS BLUE SHIELD ILLINOIS (BCBSIL)	
VETERANS' HEALTH ADMINISTRATION (VHA)	ANN AND ROBERT H. LURIE CHILDREN'S HOSPITAL OF CHICAGO	RTW VETERAN CENTER	VNA HEALTHCARE	
U.S. DEPARTMENT OF VETERANS' AFFAIRS (VA)	ADVOCATE CHILDREN'S HOSPITAL	ILLINOIS ALLIANCE TO PREVENT OBESITY	BAXTER INTERNATIONAL, INC.	
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES (DHHS)	RONALD MCDONALD CHILDREN'S HOSPITAL	CONSORTIUM TO LOWER OBESITY IN CHICAGO CHILDREN (CLOCC)	AETNA	
ADMINISTRATION FOR COMMUNITY LIVING (ACL)	ST. BERNARD HOSPITAL	NATIONAL CAUCUS & CENTER ON BLACK AGING, INC. (NCBA)	ILLINI CARE	ECHO CHICAGO
CENTER FOR DISABILITY AND AGING POLICY (CDAP)	CENTER FOR COMMUNITY HEALTH AND VITALITY (CCHV)	AUNT MARTHA'S HEALTHCARE NETWORK	HUMANA	
AGING AND DISABILITY RESOURCE CENTER (ADRC)	CHICAGO PARKS	LISC CHICAGO	MERIDIAN OF ILLINOIS	
ILLINOIS DEPARTMENT OF HUMAN SERVICES (DHS)	CHICAGO PARK DISTRICT FITNESS CENTERS	FAMILY FOCUS	HEALTHSPRING	
CHICAGO DEPARTMENT OF PUBLIC HEALTH (CDPH)	CHICAGO PARK DISTRICT SPORTS COURTS	CATHOLIC CHARITIES	WALGREENS	
CHICAGO DEPARTMENT OF FAMILY AND SUPPORT SERVICES (DFSS)	CHICAGO PARK DISTRICT PLAYLOTS	ILLINOIS ACTION FOR HEALTHY KIDS	CVS	
CHICAGO MAYOR'S OFFICE FOR PEOPLE WITH DISABILITIES (MOPD)	CHICAGO PARK DISTRICT SWIMMING POOLS	CHICAGO RUN	NIKE	
CHICAGO SENIOR SERVICES AREA AGENCY ON AGING		KABOOM!		
CHICAGO DEPARTMENT OF CULTURAL AFFAIRS AND SPECIAL EVENTS (DCASE)		CHICAGO YOUTH SPORTS ALLIANCE		
CHICAGO INTER-DEPARTMENTAL TASK FORCE ON CHILDHOOD OBESITY		GIRLS IN THE GAME		
CHICAGO 311 CITY SERVICES		WORLDSPORT CHICAGO		
CHICAGO DEPARTMENT OF PLANNING AND DEVELOPMENT		ILLINOIS ACTION FOR HEALTHY KIDS		
CHICAGO PARK DISTRICT (CPD)				

Figure 19: Health Actors and Instruments. Assembly of Government Entities, Public/Private Institutions, NGOs, For-Profit Businesses, and Instruments/Technologies related to health space that can be mobilized for NMH access-enabling design scenarios.

GOVERNMENT ENTITIES	PUBLIC/PRIVATE INSTITUTIONS	NON-GOVERNMENTAL ORGANIZATIONS	FOR-PROFIT BUSINESSES	INSTRUMENTS/TECHNOLOGIES
AMERICAN REINVESTMENT AND RECOVERY ACT (RECOVERY ACT)	BUS LIVABILITY INITIATIVE GRANTS (FTA)	STEM LEARNING IN LIBRARIES GRANTS (IMLS)	BROADBAND TECHNOLOGY OPPORTUNITIES PROGRAM (BTOP) (NTIA)	NATIONAL HEALTH SERVICE CORPS (NHS) (HRSA)
TRANSPORTATION INVESTMENT GENERATING ECONOMIC RECOVERY GRANT (TIGER)	INNOVATION, COORDINATION, ENHANCEMENT PROGRAM (ICE) (RTA)	LEARNING LABS IN LIBRARIES AND MUSEUMS GRANTS (IMLS)	BTOP PUBLIC COMPUTER CENTERS GRANTS (PCC) (NTIA)	HEALTHY CHICAGO ACCESS TO CARE INITIATIVE (CDPH)
TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION ACT (TIFIA)	PEDESTRIAN AND BICYCLE SAFETY INITIATIVE (US DOT)	ADULT LITERACY GRANTS (ED)	BTOP SUSTAINABLE BROADBAND ADOPTION GRANTS (SBA) (NTIA)	URBAN HEALTH INITIATIVE (UC MEDICINE)
CDAP PUBLIC INFRASTRUCTURE COMPONENT GRANT (IL DCEO)	ILLINOIS GREEN STREETS INITIATIVE (IDOT)	ADULTS GAIN SKILLS AT LIBRARIES INITIATIVE (ED)	BTOP COMPREHENSIVE COMMUNITY INFRASTRUCTURE GRANTS (NTIA)	CHILDHOOD ASTHMA MANAGEMENT PROGRAM (CAMP) (NHLBI)
MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY (MAP-21)	STREETS FOR CYCLING PLAN 2020 (CDOT)	LIVE AND LEARN CONSTRUCTION GRANT PROGRAM (IL STATE LIBRARY)	NATIONAL BROADBAND PLAN (FCC)	TEMPORARY ASSISTANCE FOR NEEDY FAMILIES (TANF) (US HHS, IL DHS)
MAP-21 §1113: CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT (CMAQ)	NEIGHBORHOOD BIKEWAYS CAMPAIGN (ATA)	PUBLIC LIBRARY CONSTRUCTION GRANT PROGRAM (IL STATE LIBRARY)	NATIONAL DIGITAL PLATFORM GRANTS (IMLS)	OLDER AMERICANS ACT (OAA)
MAP-21 §1122: TRANSPORTATION ALTERNATIVES PROGRAM (TAP)	SAFE ROUTES TO SCHOOL NATIONAL PARTNERSHIP	PUBLIC LIBRARY PER CAPITA AND EQUALIZATION GRANTS (IL STATE LIBRARY)	BUILDING DIGITAL COMMUNITIES INITIATIVE (IMLS)	OAA §321: HOME AND COMMUNITY-BASED SUPPORTIVE SERVICES (HCBS)
U.S. CODE TITLE 49 TRANSPORTATION (USC 49)	ILLINOIS SAFE ROUTES TO SCHOOL NETWORK	PROJECT NEXT GENERATION GRANTS (IL STATE LIBRARY)	STATE BROADBAND INITIATIVE (SBI) (NTIA)	SENIOR CENTERS PROGRAM (IHS AGA)
USC 49 §5307: URBANIZED AREA FORMULA GRANTS	SAFE ROUTES TO SCHOOL (CPS)	CARL D. PERKINS CAREER AND TECHNICAL EDUCATION ACT OF 2006	EVERYONE ON CONNECT 2 COMPETE	NATIONAL MINORITY AGING ORGANIZATIONS TECHNICAL ASSISTANCE PROGRAM (NHS AGA)
ILLINOIS TRANSPORTATION ENHANCEMENT PROGRAM (ITEP)	USC 49 §5310: ENHANCED MOBILITY FOR SENIORS AND PERSONS WITH DISABILITIES	COMMUNITY COLLEGE AND CAREER TRAINING (TAACCT) GRANTS (DOL)	ELIMINATE THE DIGITAL DIVIDE PROGRAM GRANTS (IL DCEO)	HEALTH AND WELLNESS PROGRAM (NCBA)
ILLINOIS JUMP START CAPITAL PLAN (IJOT)	USC 49 §5317: NEW FREEDOM GRANTS	COMMUNITY COLLEGE TO CAREER FUND (DOL, ED)	CHICAGO BROADBAND CHALLENGE (CITY OF CHICAGO)	HEALTHY CHICAGO (CDPH)
GO TO 2040 PLAN (CMAP)	SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) (USDA)	COLLEGE TO CAREERS (C2C) INITIATIVE (CCC)	SMART COMMUNITIES CHICAGO DIGITAL EXCELLENCE INITIATIVE (DOIT)	HEALTHY KIDS AND FAMILIES INITIATIVE (BCBSIL)
CITY OF CHICAGO CAPITAL IMPROVEMENT PROGRAM	SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS, AND CHILDREN (WIC) (USDA)	SERVING NEW AMERICANS: USCIS-IMLS MEMORANDUM OF UNDERSTANDING	SMART COMMUNITIES TECH TRAININGS (DOIT)	LET'S MOVE! ACTIVE SCHOOLS (WHITE HOUSE)
COMPLETE STREETS INITIATIVE (CDOT)	WIC FARMERS' MARKET NUTRITION PROGRAM (USDA)	AMERICAN RECOVERY AND REINVESTMENT ACT (RECOVERY ACT)	SMART CHICAGO DIGITAL SKILLS INITIATIVE (BTOP)	CAROL M. WHITE PHYSICAL EDUCATION PROGRAM (PEP) (ED)
SUNSHOT INITIATIVE (US DOE)	SENIOR FARMERS' MARKET NUTRITION PROGRAM (USDA)	INNOVATIVE TRANSIT WORKFORCE DEVELOPMENT PROGRAM (FTA)	DIGITAL YOUTH SUMMER JOBS PROGRAM (BTOP)	PLAYSTREETS (CDPH, BCBSIL)
DE-FOA-0001168: ENERGY EFFICIENCY OF U.S. COMMERCIAL BUILDINGS (US DOE)	FRESH FRUIT & VEGETABLE PROGRAM (USDA)	WAGNER-PEYSER ACT: EMPLOYMENT SERVICE AMENDMENT OF 1998	YOUNG MEDIA (CPL)	LET'S PLAY COMMUNITY CONSTRUCTION GRANTS (KABOOM)
ADVANCED ENERGY RESEARCH PROJECT GRANTS (ARPA-E) (US DOE)	NATIONAL SCHOOL BREAKFAST PROGRAM (USDA)	WORKFORCE INNOVATION AND OPPORTUNITY ACT (WIOA)	SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM - EDUCATION (SNAP-ED) (USDA)	BUILD IT WITH KABOOM! GRANTS (KABOOM)
ILLINOIS ELECTRIC VEHICLE INFRASTRUCTURE REBATE PROGRAM (IL DCEO)	SUMMER FOOD SERVICE PROGRAM (SFS) (USDA)	WORKFORCE INVESTMENT ACT (WIA)	EXPANDED FOOD AND NUTRITION EDUCATION PROGRAM (EFNEP) (USDA)	CHICAGO WELLNESS AND FITNESS PROGRAM (CDPH)
IMPROVED ENERGY TECHNOLOGY LOANS (US DOE)	SEAMLESS SUMMER FOOD PROGRAM (USDA)	WIA ADULT AND DISLOCATED WORKERS PROGRAMS (DOL)	ILLINOIS NUTRITION EDUCATION PROGRAM (INEP) (SNAP-ED, EFNEP, UI EXTENSION)	CHICAGO PARK POINTS PROGRAM (CPD)
PLUG-IN ELECTRIC VEHICLE CREDIT (IRS)	AFTER SCHOOL CARE SNACK PROGRAM (USDA)	WIA YOUTH FORMULA-FUNDED PROGRAM (DOL)	SHOPPING FOR CHANGE (UC MEDICINE)	COMMUNITY FITNESS PROGRAM (UC)
INITIATIVE ON PLUG-IN VEHICLES (ICC)	CHILD AND ADULT CARE FOOD PROGRAM (USDA)	SENIOR COMMUNITY SERVICE EMPLOYMENT PROGRAM (SCSEPE) (DOL)	HEALTHY CPS (CDPH, CPS)	CHICAGO FITNESS PLUS COMMUNITY EXERCISE CLASSES (CDFSS - AGING)
DRIVE CLEAN CHICAGO (CDOT)	CPS FOODSHARE PROGRAM (CPS)	WORKFIRST CHICAGO (IL DHS)	AFFORDABLE CARE ACT (US HHS)	MAKE WAY FOR PEOPLE INITIATIVE (CDOT)
DRIVE CLEAN CHICAGO CHARGING STATION PROGRAM (CDOT)	CHICAGO FARMERS' MARKETS (DCASE)	NATIONAL ENDOWMENT FOR THE HUMANITIES (NEH)	HRSA-15-016 NEW ACCESS POINT GRANTS (NAP) (HRSA)	COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) (HUD)
USC 49 §5338: CLEAN FUELS PROGRAM DISCRETIONARY FUNDS	LIBRARY SERVICES AND TECHNOLOGY ACT (LSTA) (IMLS)	CHICAGO CULTURAL PLAN (DCASE)	HRSA-15-027: HW EARLY INTERVENTION SERVICES PROGRAM GRANTS (HRSA)	COMMUNITY DEVELOPMENT AND ASSISTANCE PROGRAM (CDAP) (IL DCEO)
CLEAN FUELS GRANT PROGRAM (FTA)	NATIONAL LEADERSHIP GRANTS FOR LIBRARIES (IMLS)	BUILDING SUSTAINABLE COMMUNITIES INITIATIVE (IMLS)	HRSA-15-034: HEALTHY TOMORROWS PARTNERSHIP FOR CHILDREN (HRSA)	SMALL BUSINESS INVESTMENT COMPANY PROGRAM (SBC) (SBA)
USC 49 §5339: BUS AND BUS FACILITIES PROGRAM DISCRETIONARY FUNDS	SPARKS: IGNITION GRANTS FOR LIBRARIES (IMLS)	SMITH-LEVER ACT FORMULA GRANTS (USDA)	HRSA-15-071: STATE TITLE V MATERNAL AND CHILD HEALTH LEADERSHIP GRANTS (HRSA)	SMALL BUSINESS LOAN FUND GRANTS (SBLF) (SBA)
STATE OF GOOD REPAIR BUS INITIATIVE GRANTS (FTA)	LEARNING SPACES IN LIBRARIES GRANTS (IMLS)	HEALTHY CPS (CDPH, CPS)	HEALTH CENTER PROGRAM (HRSA)	SMALL BUSINESS JOBS ACT OF 2010

Figure 20: Funding Actors and Instruments. Assembly of Government Entities, Public/Private Institutions, NGOs, For-Profit Businesses, and Instruments/Technologies related to funding that can be mobilized for NMH access-enabling design scenarios.

In Chicago, there are a number of tax incentive and funding streams that can be directly applied to improving both infrastructure and access. These include the City of Chicago Tax Increment Financing (City of Chicago TIF, n.d.), Special Service Areas (City of Chicago SSA, n.d.), and Micro Market Recovery Program, all available through the Department of Planning and Development. Further, “recipients of Community Health Center (CHC) grant funds are legislatively required to serve areas or populations designated by the Secretary of Health and Human Services as medically underserved” (HRSA, 1995). These geographically based funding instruments are mapped in a combined cartography, visualizing

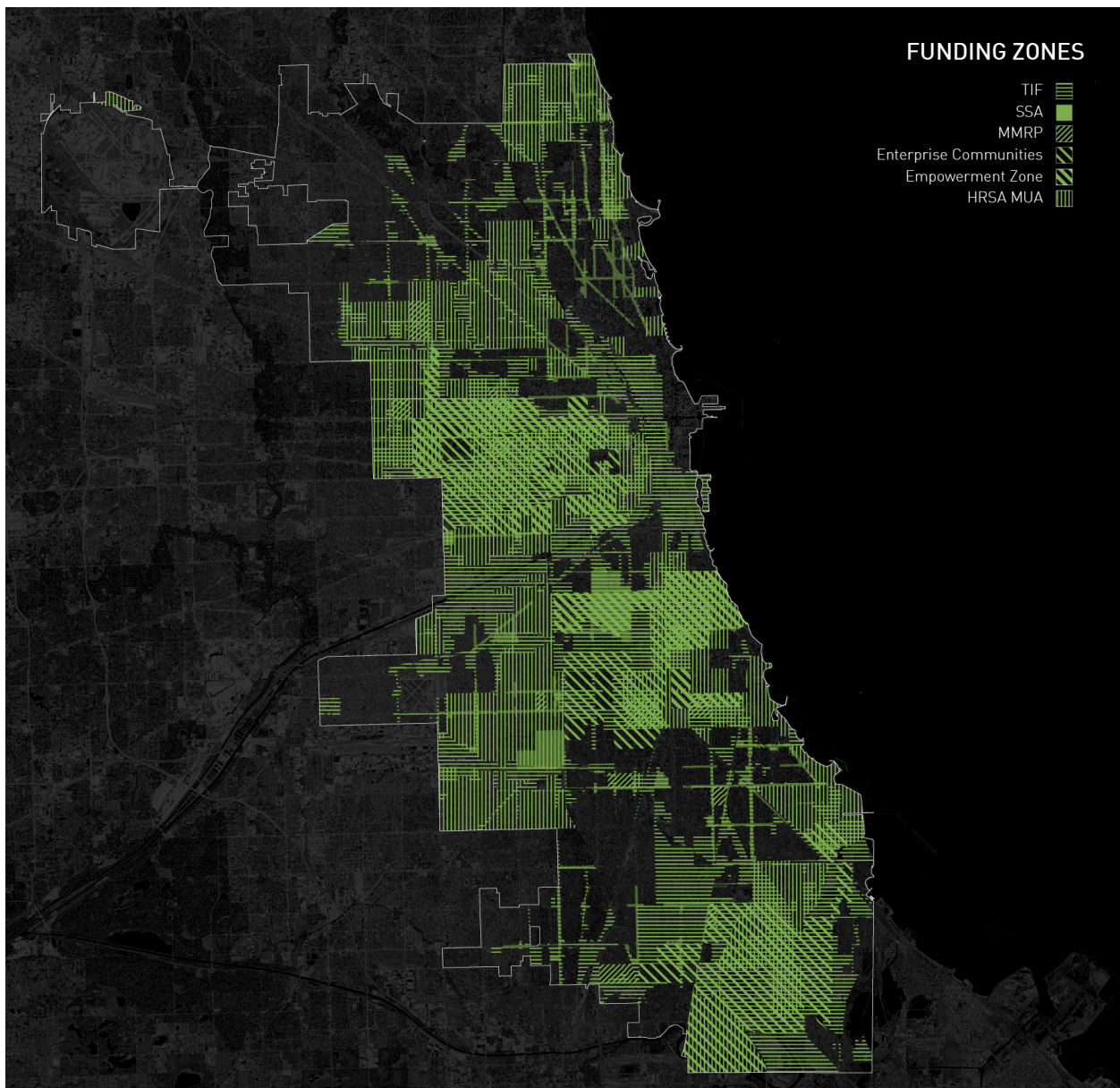


Figure 21: Geography of Funding Zones. Overlay the location-specific funding initiatives that can be deployed towards urban projects that address the access needs of this research.

areas of the city where these programs can be mobilized to financially fund and support the design scenarios described in the following section (Figure 21).

4.3 Actor-Network Matrix and Prototypical Configuration

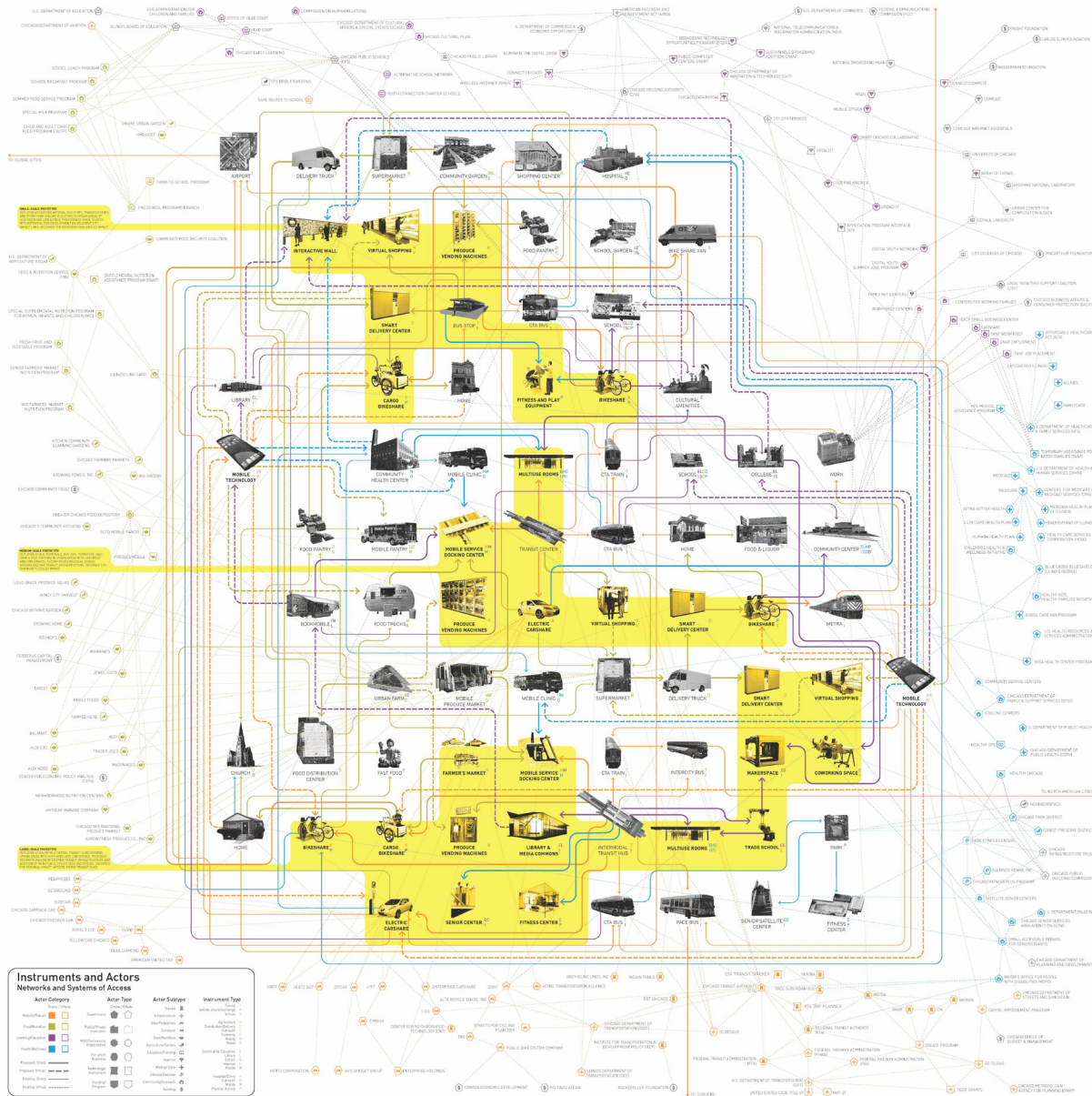


Figure 22: System-Wide Network of Instruments and Actors. This assembles existing agencies and systems, as well as new technologies, forms of mobility sharing, and access-enabling actors within the City of Chicago. Yellow fields identify the components assembled in each of the scenarios across three scales developed through typological design.

A comprehensive actor-network drawing is developed to visualize the networks of the existing and proposed access-enabling instruments as well as the implementation actors that figure access and that can be mobilized toward the development of NMHs (Figure 22). The yellow highlighted areas of the drawing indicate the various scales of prototypical scenarios – from minimal intensity retrofits of bus stops, to large-scale NMH developments at major multi-modal transit nodes.

Existing nodal sites, networks, instruments, and actors can now be combined and enhanced with New Mobility alternatives, and access-enabling infrastructures for food, learning, and health. A prototypical configuration is developed in Figure 23. At specific sites, local factors such as urban configuration, needs, local actors, and situated spatial and network opportunities factor in determining the proposal scale, its constituent elements, configuration, and design implementation. The work entailed developing detailed scenario NMH designs for three sites within the city. This is described in the following section.

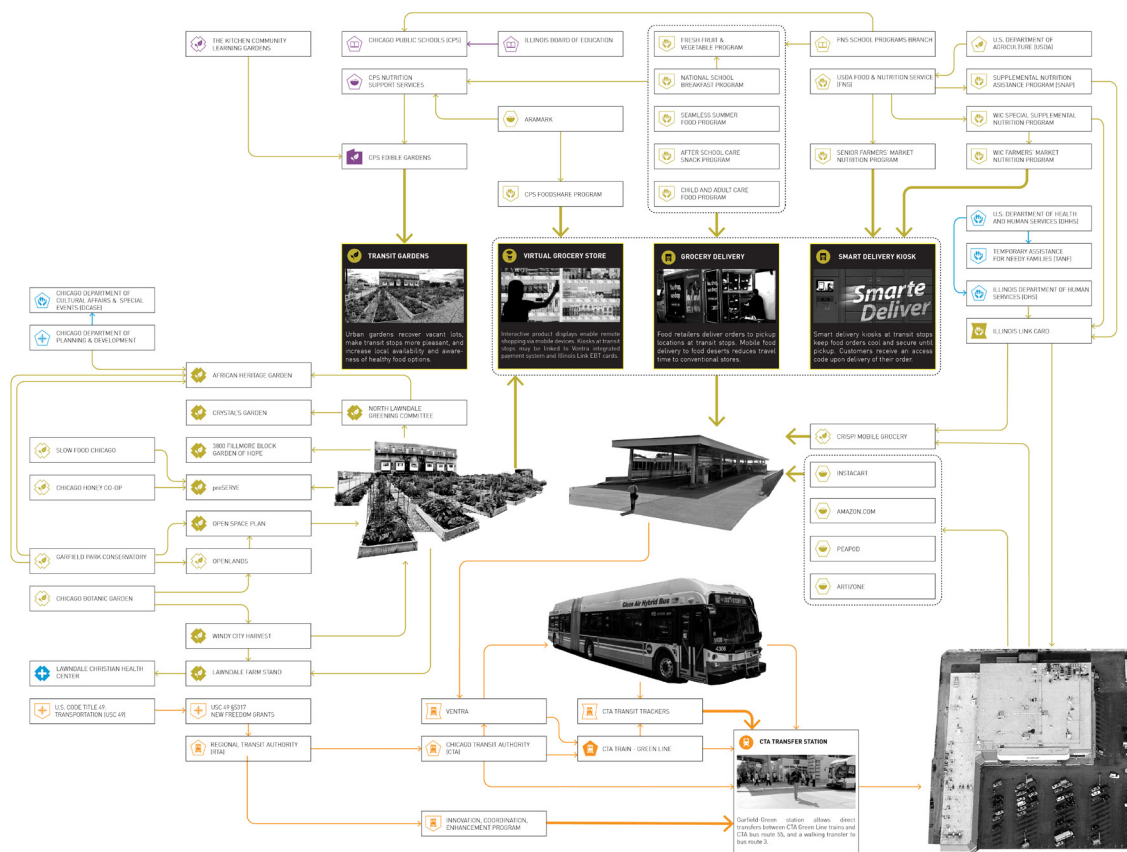


Figure 23: Prototypical Assembly of Access-Enabling Instruments. Existing transit spaces (center of diagram) can be combined with existing and emerging instruments and actors that enable enhanced access to new mobility alternatives and food, health, and learning opportunities. Colors indicate category of need (food: yellow; health: blue; education: purple; mobility: orange)

4.4 Chapter Summary and Discussion

Transforming the geography of access within cities, particularly for undeserved communities, requires a complex assembly of existing and emerging actors and enabling instruments, and these include not only organizations and business enterprises, but also legislation and funding programs and related mechanisms. There is no existing comprehensive database that assembles these entities, and so the research involved assembling these actors and instruments through a much more engaged and multi-faceted search to compile the database. As is the case in the cartographies, it is recognized that the database compiled for this research is a framework and not an exhaustive document; the database may have gaps and missing information that was not captured through the search methods. In order to ensure a more complete database, a future refinement would structure this database as a live, updatable document, that could also be wiki-based so that actors could self-report information.

In order to apprehend the potential cooperations and synergies that could be assembled from the “Actors and Instruments” database, Actor-Network drawings are used to visualize the active and potential relationships possible between actors and instruments in enabling transformation of access in the city of Chicago. The organization of information into Actor-Networks can provide new insights into ways to grapple with the exponentially increasing scales and complexities of contemporary urbanization, with the nonlinear dynamic processes that drive urban transformation, and the agency of nonhuman actors in urban processes. The authors acknowledge that some critical urban theorists have argued that some proponents of assemblage analysis, by “leveling” urban actants without a hierarchy of relevance and by omitting politico-economic frameworks of power and injustice, produce incomplete and potentially naïve explanations of urban process (Brenner et al. 2012, pp 125-134). In this project, the aim of the Actor-Network drawings, in both sections 4 and 5, is to explicitly link the agency of things (such as urban artifacts, infrastructures, and networks) with politico-economic frameworks. Through this method, it is possible to envision and develop speculative scenarios for the city that aim to overcome urban injustice and marginalization, while simultaneously expanding the subjects and mechanisms through which design operates within and upon the urban.

CHAPTER 5 PROTOTYPICAL DESIGN SCENARIOS

5.1 Focus Site Selection

One of the primary goals of the Data-Driven Accessibility Analysis described in Chapter 3 is to identify potential sites of intervention for the development of New Mobility Hubs (NMHs) explored at varying levels of infrastructural intensity. The sites of intervention are ones where could be identified a confluence of conditions of reduced access, local capacity, and potential for transformation. For the purposes of this project, the sites with most potential – i.e. “Hotspots” – would be characterized by having one or more mode of urban mobility coming together through a transit node and/or where there is a large proportion of locally served transit ridership, and located within a community that is disadvantaged relative to multiple metrics and falls within at least one of Chicago’s funding incentive zones. The process entailed choosing a number of sites based on interrogation of the cartographies. Additional information about each neighborhood was gathered through census data (in order to understand the demographic context of each community), and by searching online for local organizations, institutions, community groups, and initiatives active within the neighborhood and working to improve conditions of food, learning, and health access.

At this point however, the team found that data-driven analysis reached a limit relative to information granularity, and the next stages of work required field visits to verify site conditions, and to document situations and opportunities that are not legible through data alone. In a project with a broader scope and budget, once specific sites were identified, a process of community consultation would ideally be undertaken. It is proposed that this would take the form of the SMART multi-stakeholder, multi-sector leadership engagement, developed by PI Zielinski. While the scope of work and funding available for this project did not allow for funding this scope of work, the team instead utilized the “Community Narratives” (section 3.5) as a way to develop a more refined and informed perspective on local community concerns and initiatives, and to develop specific programs for the NMHs.

The team selected a number of potential “hotspot” sites across the City of Chicago. Following a three-day long field visit to these locations, three sites located in Chicago’s South and West sides were selected for further scenario development. These are the bus network in the North Lawndale neighborhood; the elevated Garfield Green Line station in the Washington Park neighborhood; and the

95th/Dan Ryan Red Line metro station and regional bus hub in the Roseland neighborhood. These sites were chosen not only for their fit relative to selection criteria, but also for their capacity to prototype scenario solutions at a range of intensities of infrastructural intervention. Figure 24 illustrates a partial view of the city with the sites overlaid on top of the “Geographies of Exclusion” cartography. The scenario development process and more detailed descriptions of the specific sites will be described in

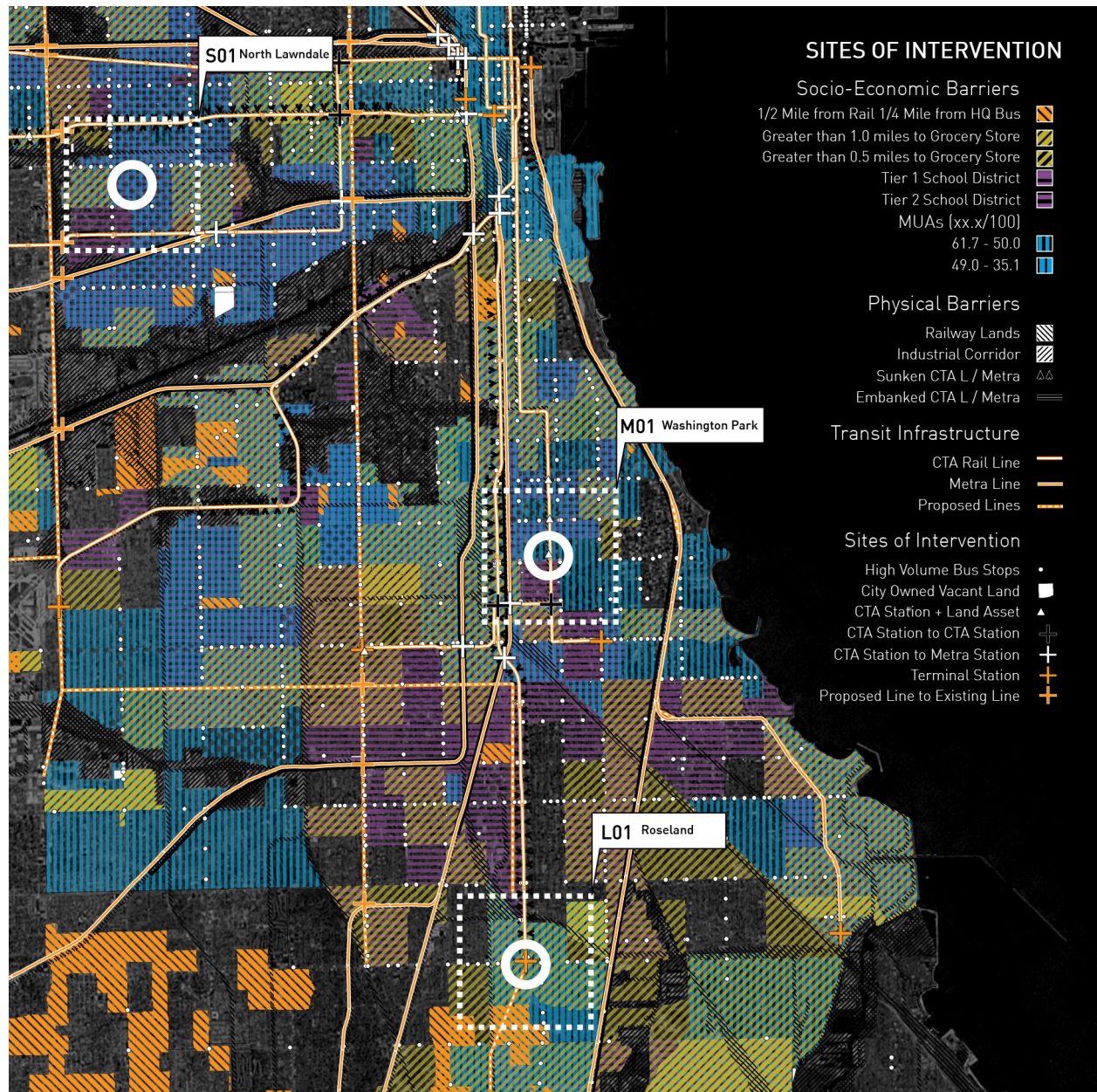


Figure 24: Detail of “Geographies of Exclusion” map, with focus sites for prototypical design scenarios identified.

the following sections 5.2 - 5.5.

5.2 Methodology

Once the field-verified site selection was made, the design methodology for the scenario development was as follows:

1. A neighborhood-scale mapping was produced that located local agents of access for mobility, food, learning, and health relative to the site of intervention. (Figures 26, 31, and 36)
2. A neighborhood profile was developed using the information on access to needs (Geographies of Exclusion metrics), census data, combined with information on local Agents of Access, as well as any access-enabling instruments, such as funding programs or initiatives, that could be mobilized for the NMH development.
3. For each site and situation, the team then developed the agents and instruments to be brought together for a right-scaled NMH scenario.
4. The team then undertook a schematic spatial and design of its urban configuration in the form of an actor-networked axonometric drawing; an exploded axonometric of the urban elements and configuration of the NMH proposal, encoded with the interconnected network of the urban actors, programs, legislative, and financial instruments that would be mobilized in the realization and operation of each of the proposed elements. It is important to emphasize that cooperation among these urban actors would be necessary to produce and maintain the proposed scenario. (Figures 27, 32, and 37)
5. Axonometric views of each NMH scenario were developed to simultaneously depict the new public space(s) produced and the various infrastructural instruments and actors that would be mobilized within it. Placing urban infrastructure and urban space in the same representational sphere emphasizes the public role of infrastructure, and reasserts its central role in figuring urban society. (Figures 28, 33, and 38)
5. Perspective vignettes were developed to describe an “on the ground” view of the NMH scenario,

illustrating possible occupations, interactions, encounters, and exchanges. (Figures 29, 34, and 39)

5.3 Focus Area 1: Low Infrastructural Intensity NMH Design Scenario

The bus stop is the most pervasive mass transit access point in many US cities. In Chicago, many



Figure 25: Photograph of a bus stop on Chicago's South Side. Photo: K. Velikov 2014.

highly used urban bus stops lack basic waiting and safety amenities such as shelter, seating, and lighting (Figure 25).

The first focus area for scenario development is the North Lawndale Neighborhood of Chicago. This neighborhood has a large proportion of bus ridership, is located in an area where between 30 and 40% of the population is food insecure, is a medically underserved zone, and in a Tier 1 School Zone. According to Chicago's City Data (City Data, North Lawndale, n.d.) this is a primarily black, low-income neighborhood (47.5% of residents below poverty level) where over 42% of the population has a less than high school degree. This neighborhood has a high crime index, a large proportion of residents under 45, and approximately 27% single mother households. The field visit revealed a number of instances of

abandoned lots situated near bus stops. The mapping of Situated Local Actors (Figure 26) revealed that a number of community gardens, youth gardens, and urban greening projects are underway in City and private lots in this neighborhood.

This neighborhood becomes the testing ground for the development of scenarios at the most modest and lightweight scale, with relatively low infrastructural intensity (Figures 27, 28, 29). The

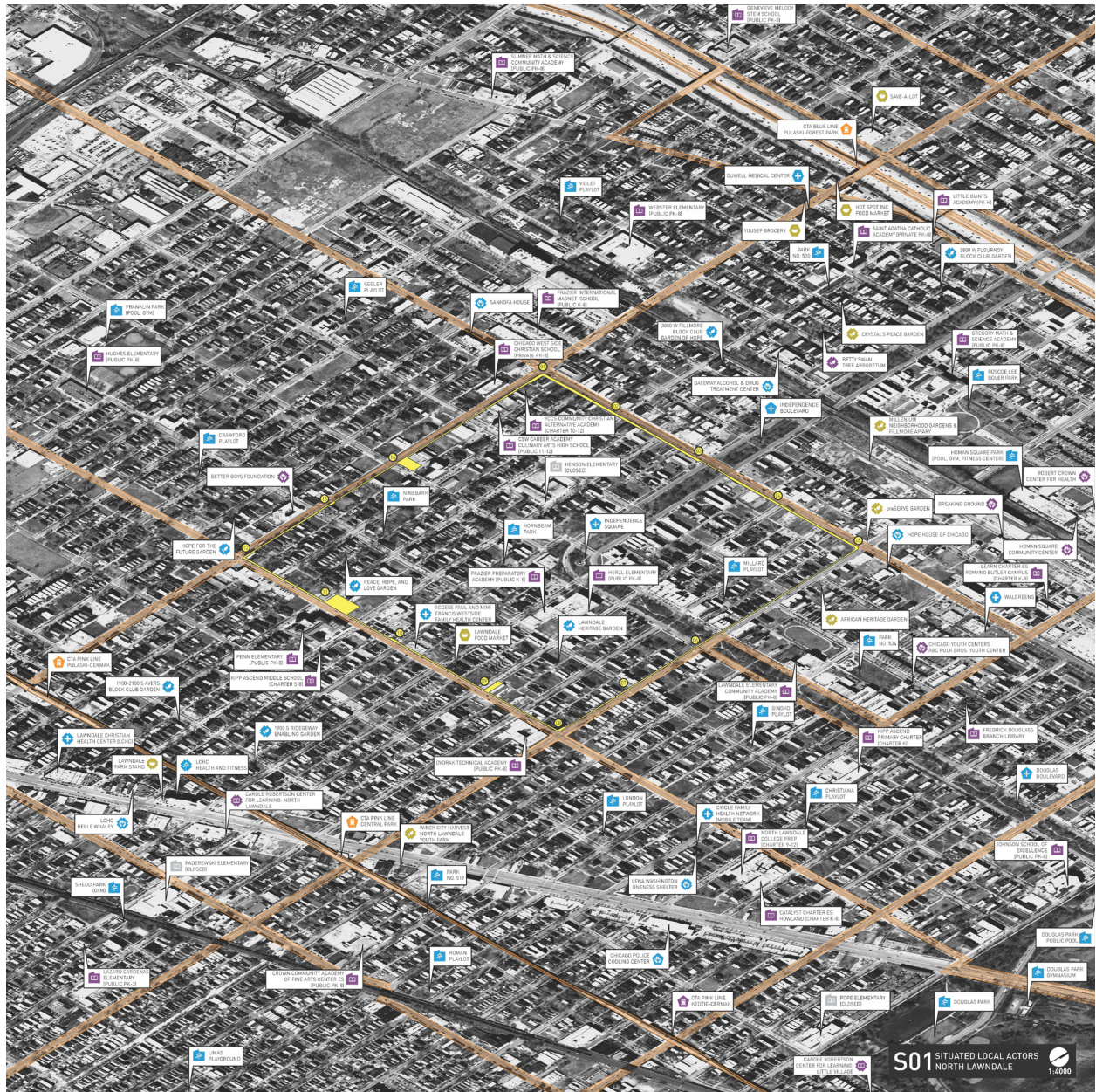


Figure 26: Situated Agents of Access in the North Lawndale neighborhood. Bus transit routes indicated in orange shading and site of prototype intervention is indicated in yellow.

scenario takes the bus stop typology and proposes these be augmented with additional access-enabling services such as bike and cart-share, fresh food delivery, and mobile produce vending, while also increasing the comfort and security of waiting. In cases where vacant City-owned lots were adjacent to a bus stop, the scenario envisions converting these to community gardens growing fresh food. Activation of the publicly-owned lots adjacent to the stops, as well as integrated lighting and shelter, would make bus stops safer and more pleasant spaces to use. At key bus stops, integrated video screens would offer not only information regarding the broader public transit system, but would also offer community news and wi-fi access to public educational programming. Although design cannot make Chicago's buses arrive any faster, interventions such as exercise bars and children's play structures integrated into the bus stop design can produce new micro-models for community space and models for active physical engagement beyond simply isolated structures to facilitate waiting. This system of low intensity urban infrastructures would transform bus stops into micro New Mobility Hubs, while increasing access to needs within the neighborhood. Instruments such as "Lets Play" and "KaBOOM" Grants can be used to fund play and exercise infrastructures, Chicago's "Broadband Challenge" program can help bring wi-fi to these public spaces, the greening of lots can take advantage of Chicago's "Green Streets Initiative," and the community gardens can partner with the existing organizations of "Neighborspace" and the "North Lawndale Greening Committee" (see Appendix B for detailed information and weblinks for Access Enabling Actors and Instruments).

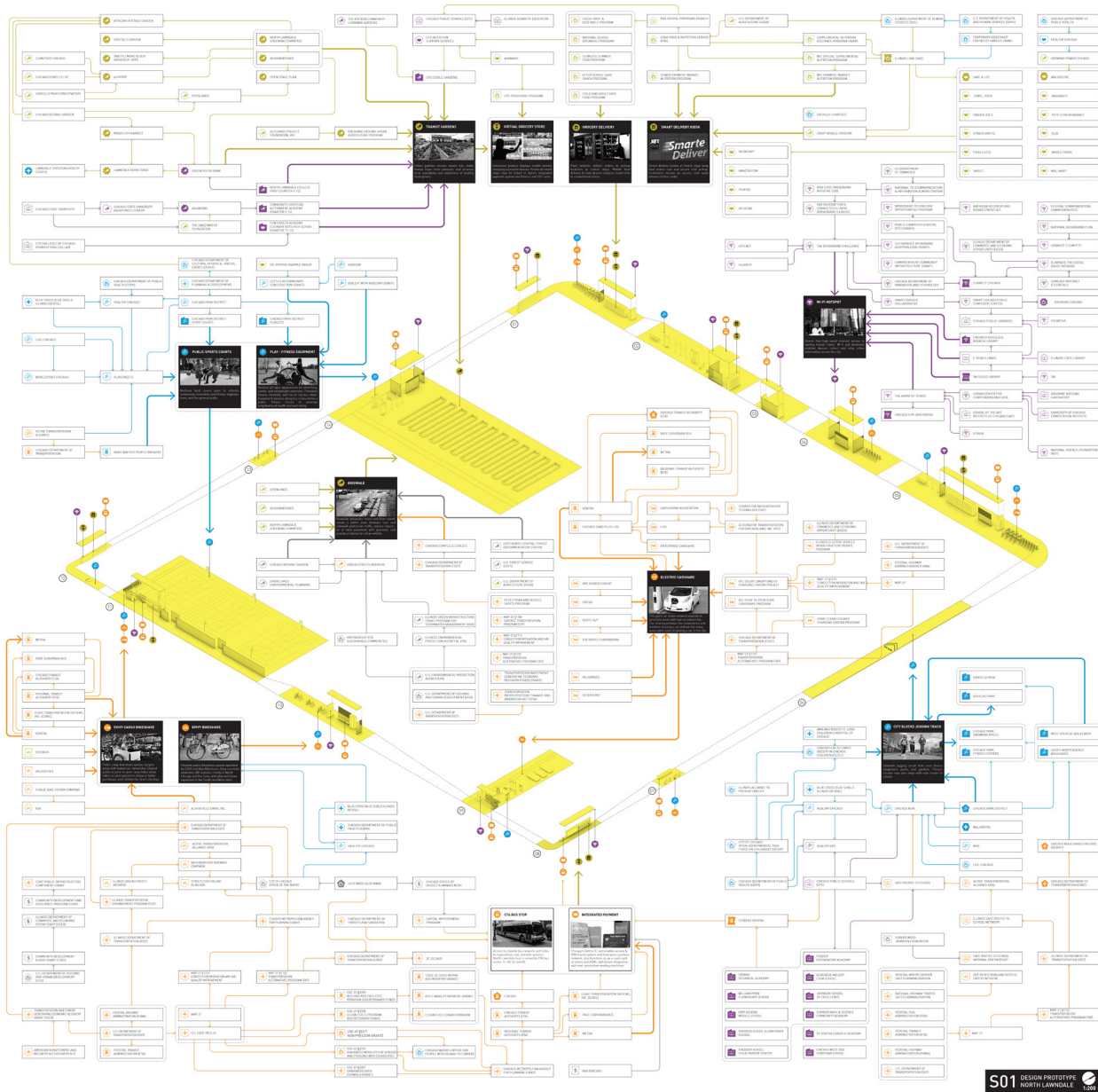


Figure 27: Exploded Axonometric of design scenario for North Lawndale with networked Access-Enabling Instruments and Actors. For low infrastructural intensity NMHs such as bus stops, the scenario proposes that the shared public space of the street gathers smart produce vending and fresh delivery, free wi-fi access and educational broadcasting, bike and bike-cart share, as well as networks of urban farming, play, and exercise equipment, expanding the agenda for low impact networks of community infrastructures.

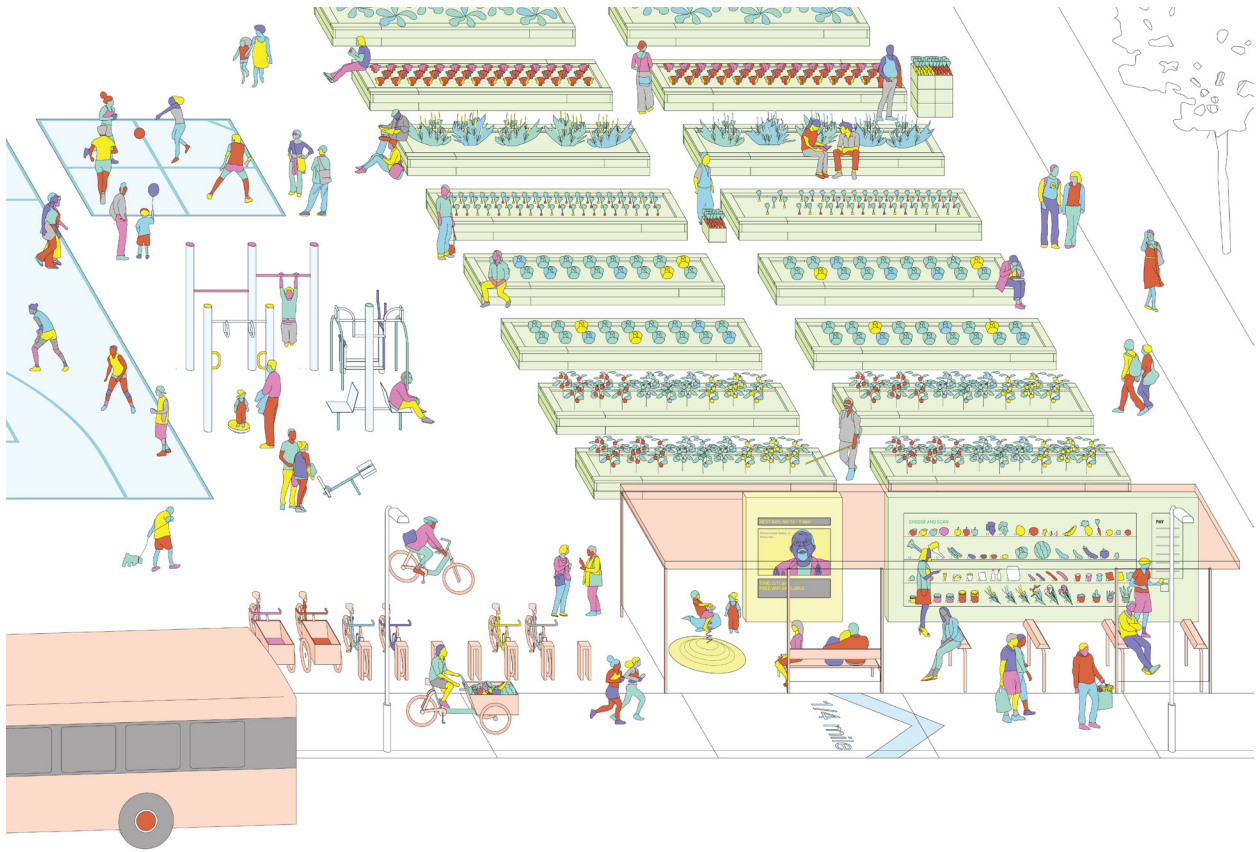


Figure 28: Urban Axonometric detail of design scenario for North Lawndale at bus stop with adjacent community garden.



Figure 29: Perspective view of design prototype for North Lawndale at bus stop with adjacent community garden.

5.4 Focus Area 2: Medium Infrastructural Intensity NMH Design Scenario

In the Washington Park neighborhood, the Green Line is part of Chicago’s well-known elevated train system. While these elevated lines allow for trains to operate separate from the ground plane of the city, they typically produce poorly used space beneath them. (Figure 30)



Figure 30: Photograph of underutilized space beneath elevated “L” line in Chicago. Photo: K. Velikov 2014.

The CTA Green Line Garfield station in this neighborhood is one such site, surrounded by an expanse of “park and ride” lots. The neighborhood has 40% food insecurity, falls in a Tier 1 school zone, and is considered medically underserved. This is also a primarily black neighborhood, with low household income (56.3% of residents below poverty level), low levels of high school degree attainment, almost 30% single mother households, and a high crime index (City Data, Washington Park, n.d.). The Situated Local Actors map (Figure 31) revealed a number of youth and community farming initiatives, as well as other youth oriented initiatives, which could be strengthened and built upon through synergistic activities.

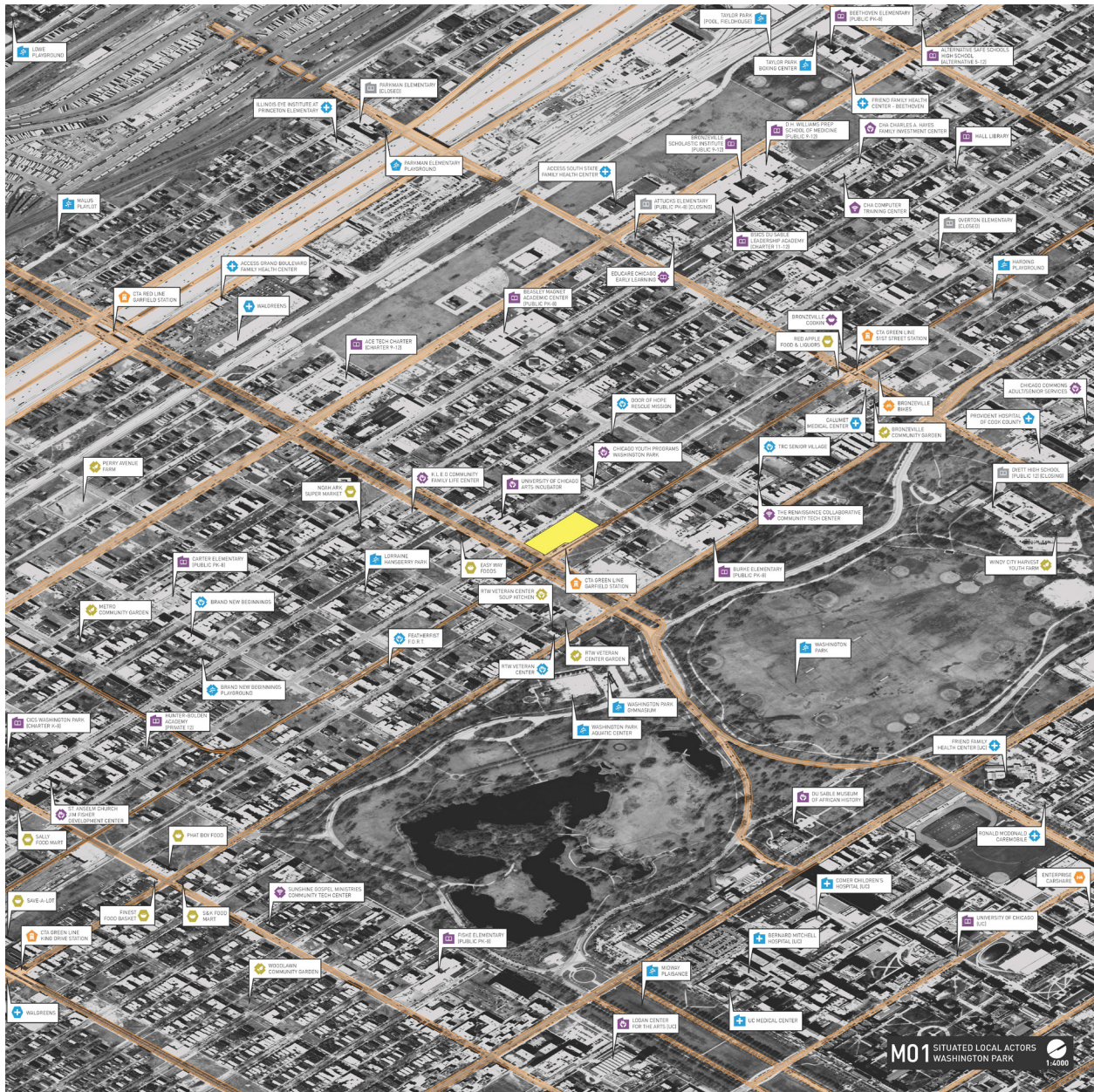


Figure 31: Situated Agents of Access in the Washington Park neighborhood. Bus transit routes indicated in orange shading and site of prototype intervention is indicated in yellow.

The medium infrastructural intensity NMH design scenario is applicable to rail-based transit stations with adjacent transit owned and operated parking lots and/or space beneath elevated rail lines that can be transformed to assemble mobile access-enabling solutions, and to consider expanded uses and programming for these spaces during low commuter usage times. In the specific case of the CTA Garfield station, the scenario envisions repurposing the spaces below the “L” and the adjacent parking lots for

weekend farmers and flea markets, as well as mobile food, medical, and book trucks (Figures 32, 33, 34). This scenario capitalizes upon the availability of existing open spaces, and consists of a lightweight overlay of surficial ground-based notations that can, for example, organize the assembly of food trucks during one moment, and script play activities in another. The codification and overlay of multiple uses coupled with a temporal programming of the ground might assemble multiple public uses that can unfold in response to local demand over time. This programming could also be augmented with multi-use pavilions that provide spaces for community group-based education, classes or meeting activities, temporary pop-up events and entrepreneurial independent businesses aggregated around the other activities occurring at this location. The scenario visualizations explore how these activities, services, and amenities might be co-located and coexist, as well as the political and economic instruments that could enable this, such as “Chicago Action for Healthy Kids”, “BTop Public Commuter Centers Grants”, the “Summer Food Service Program” and the “Green Streets Initiative”.

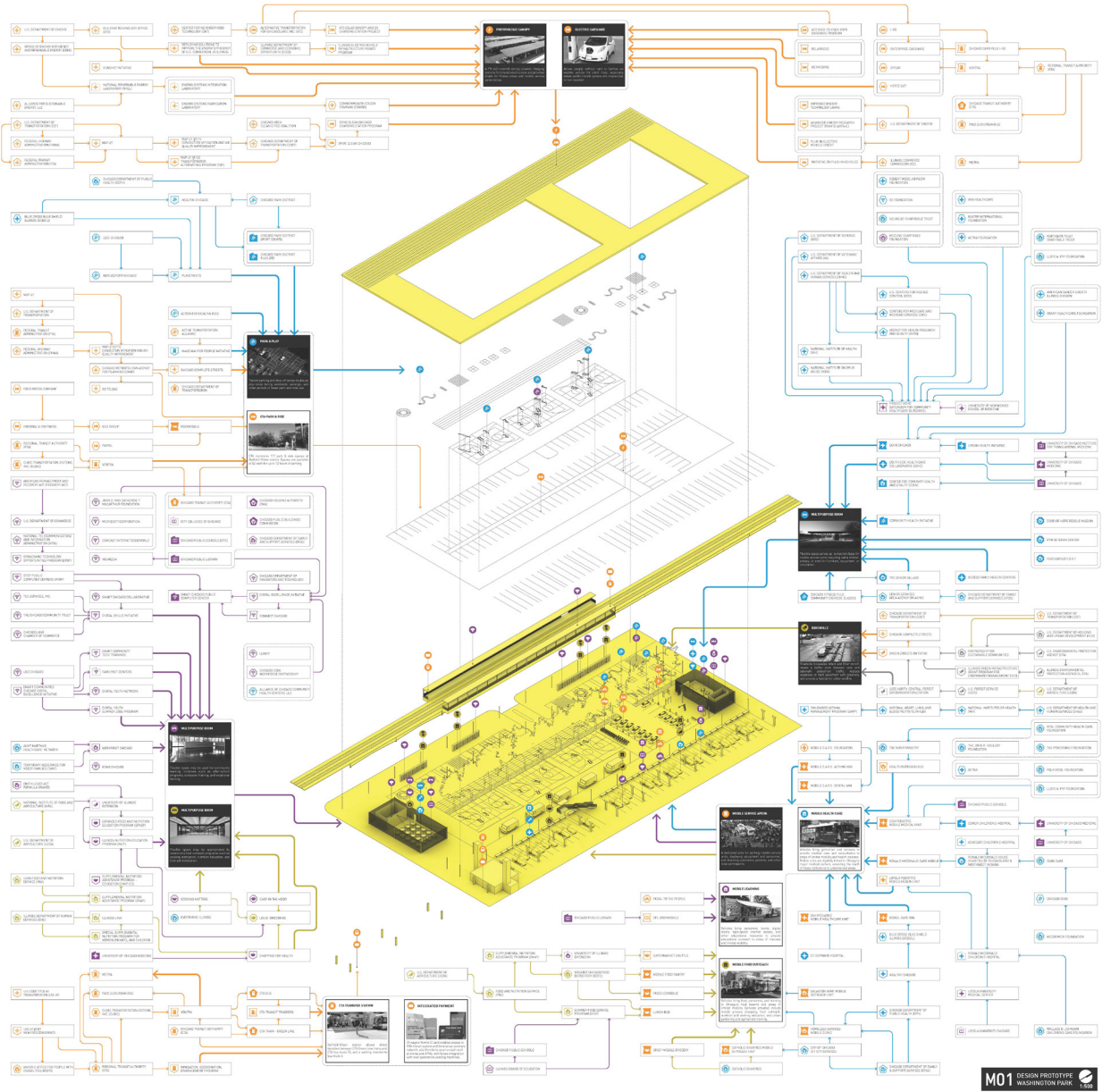


Figure 32: Exploded Axonometric of design scenario for Washington Park / Garfield Station NMH with networked Access-Enabling Instruments and Actors. For medium infrastructural intensity NMHs at transit stations, this scenario leverages the space owned and operated by transit authorities to allow for mobile food, medical services and learning programs to assemble. With a minimum of new construction, this prototype relies primarily upon cross-programming, facilitating adjacency and surface notation delineating codes of use.

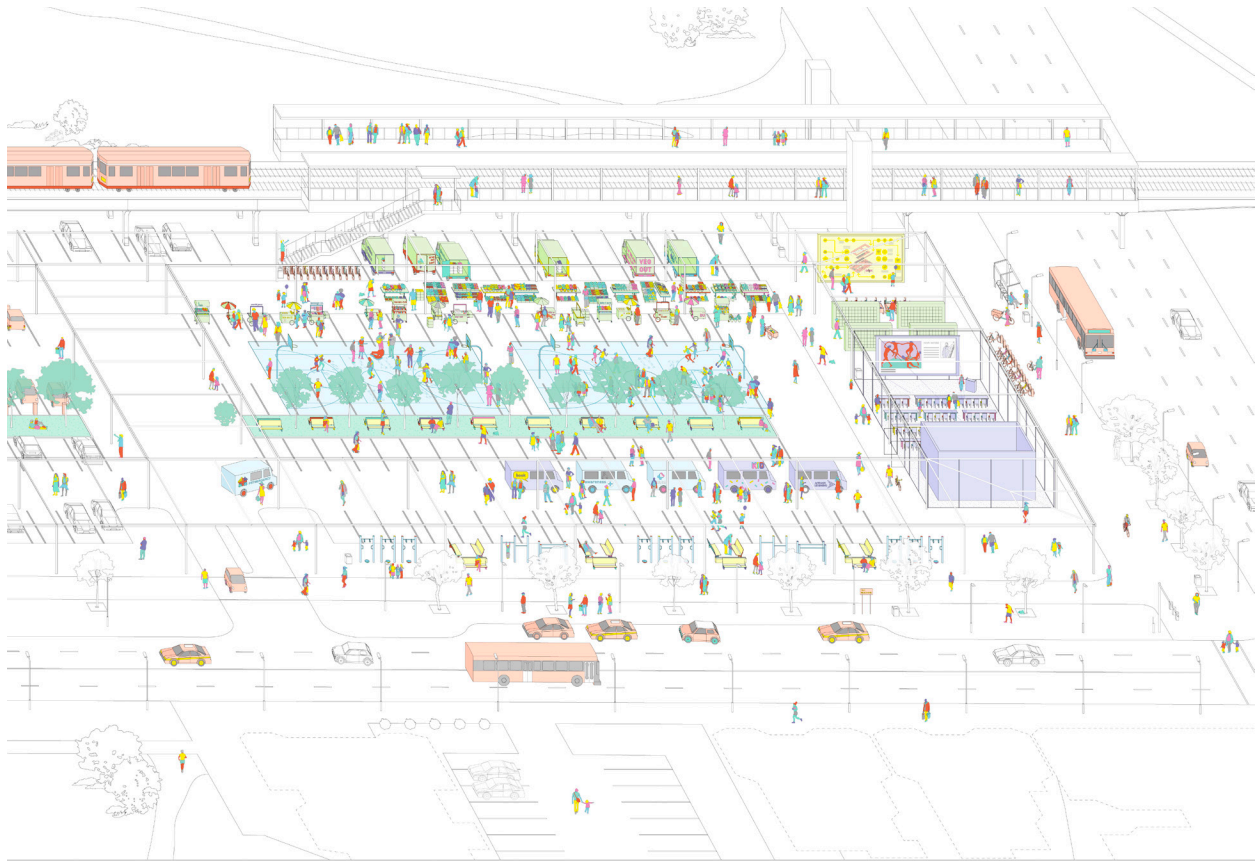


Figure 33: Urban Axonometric detail of design scenario for Washington Park / Garfield Station NMH during weekend public market.



Figure 34: Perspective view of design prototype for Washington Park / Garfield Station NMH during weekend public market.

5.5 Focus Area 3: High Infrastructural Intensity NMH Design Scenario

The research also looked to develop a scenario for a much more intense level of infrastructural intervention, specifically at sites of multimodal transit hubs that are in need of expansion. The 95th/Dan Ryan Red Line CTA station is located over the sunken 10-lane Dan Ryan Expressway and constitutes a major transit hub for Chicago's South Side and southern suburbs, accommodating fourteen CTA bus routes and four Pace bus routes. There are roughly 300,000 people who live within walking distance of the CTA bus routes serving the 95th/Dan Ryan terminal. As an urban space, this site is dominated by a variety of mobility infrastructures; however, the pedestrian spaces that access these mass transit infrastructures are poorly conceived, unwelcoming, and often unsafe (Figure 35).



Figure 35: Photograph of the sunken Dan Ryan Expressway at the 95th St. Red Line Station (left) and the condition of the urban space at the existing bus station at street level (right). Photo: K. Velikov 2014.

This intermodal transit site is located within the Roseland neighborhood; an area that falls within a food desert, a medically underserved area, and at the boundary between Tiers 2, 3, and 4 school zones. Data indicates that Roseland residents have a slightly higher household income than North Lawndale and Washington Park (26.9% of residents below poverty level) as well as slightly higher rates of post high-school degree attainment and lower numbers of single mother households (19.8%), however, the crime rate is similarly high as North Lawndale and Washington Park (City Data, Roseland, n.d.). This predominantly black neighborhood has a different demographic, with larger proportions for the population aged 45 or older. The Situated Local Actors (Figure 35) mapping revealed almost no community driven urban farming or greening, and a lower proportion of community youth organizations compared to the previous two focus areas. Additionally, the field visit revealed that a major community asset, the Woodson Regional Library, eight blocks away from the transit station and which houses an

important collection of black literature, is in a state of serious disrepair and is in need of millions of dollars in repairs and reconstruction.

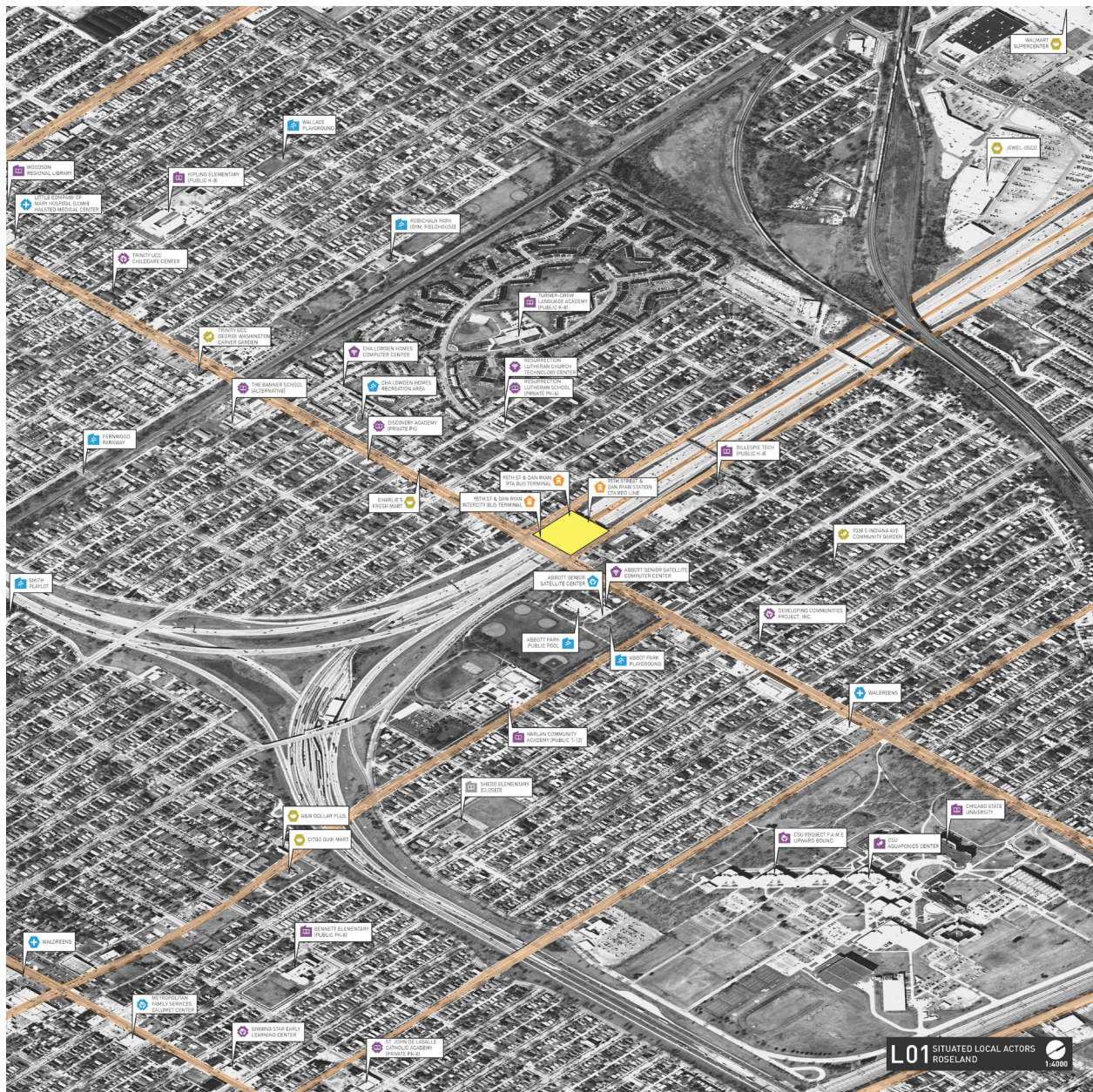


Figure 36: Situated Agents of Access in the Roseland neighborhood. Bus transit routes indicated in orange shading and site of prototype intervention is indicated in yellow.

In September 2014, ground was broken on a \$240 million project to rehabilitate existing 95th/Dan Ryan Station transportation infrastructure and to expand the volume of bus traffic that could be handled at this site. While the proposal (now under construction) involves a massive construction of cast-in-

place concrete structures spanning the expressway below, its program is fundamentally limited to physical transit infrastructure to expand bus service. The scenario for this site involves the assembly of a broader range of actors and funding instruments to develop a far more ambitious public infrastructure, combining strategic civic programs within the space of mobility (Figures 37, 38, 39). These include relocating the Woodson Regional Library collection to this new NMH development, thereby making its assets more accessible to a broader range of publics. To address the need for fresh and healthy food options, the ground space of the station is proposed include a food market, expanding to a farmers market on weekends. This will also provide the thousands of daily commuters who transfer at the station an additional food access point that does not require a separate vehicle trip. To address the needs of both youth and elderly neighborhood residents, this NMH design scenario also includes a multimedia library, media creation spaces, makerspaces, and medical clinics. The “Green Streets Initiative” will be mobilized toward sustainable landscape infrastructures such as bioswales, rain gardens, and street trees that will improve the quality of the urban space around the transit hub, as well as mitigate the negative environmental effects of rainwater runoff and bus fumes.

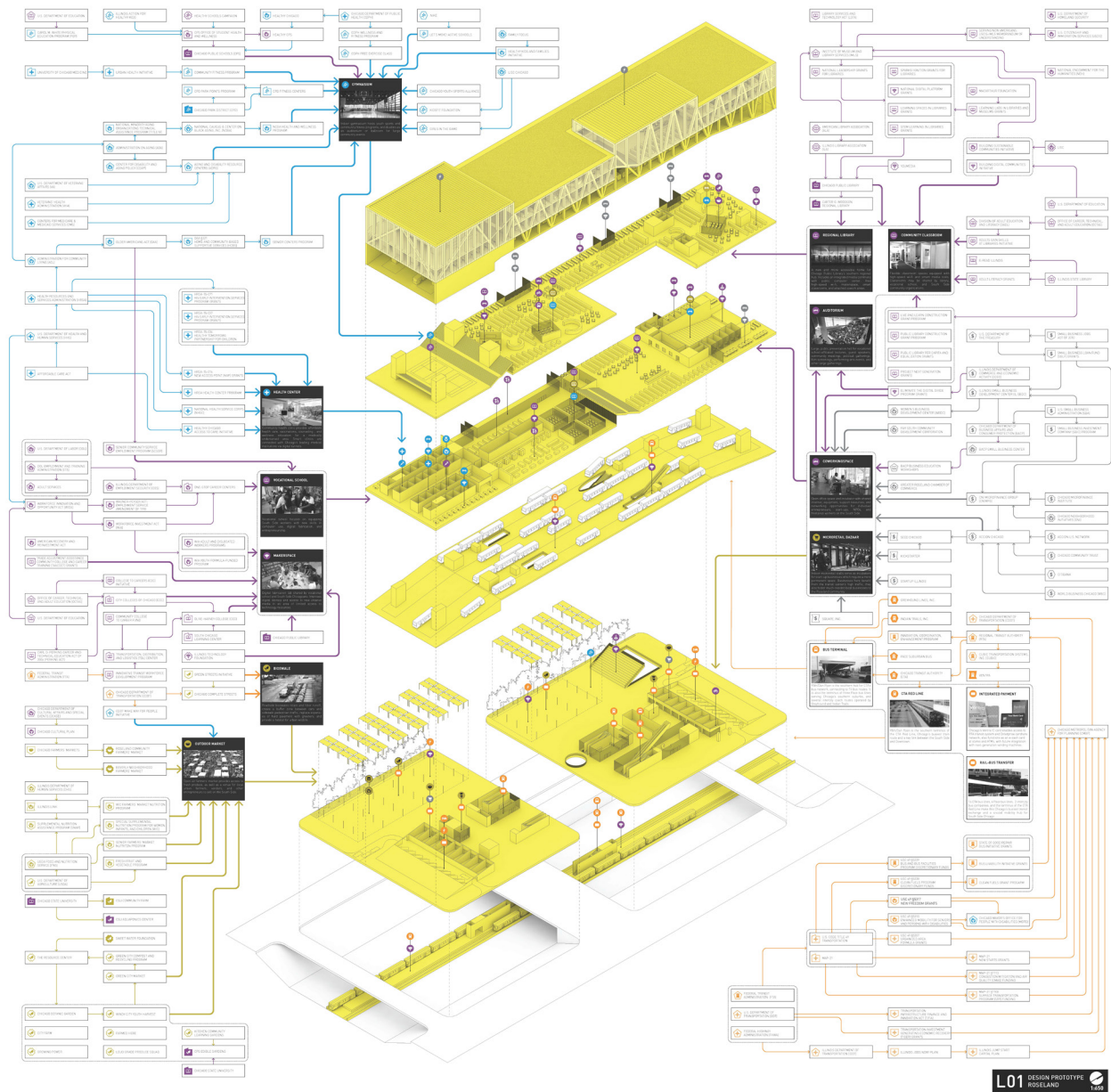


Figure 37: Exploded Axonometric of design scenario for Roseland / 95th/Dan Ryan Station NMH with networked Access-Enabling Instruments and Actors. For high infrastructural intensity NMHs at major transit hubs, this scenario assembles multiple existing city and community agencies into formalized spaces occupying the truss depth of a new structure spanning the sunken expressway below, combining civic, commercial, and NFP programs into a new form of social condenser. This scenario is developed as a counterpoint to the smaller scaled interventions, and attempts to illustrate the project principles through more capittally intensive means via currently active projects at this site.

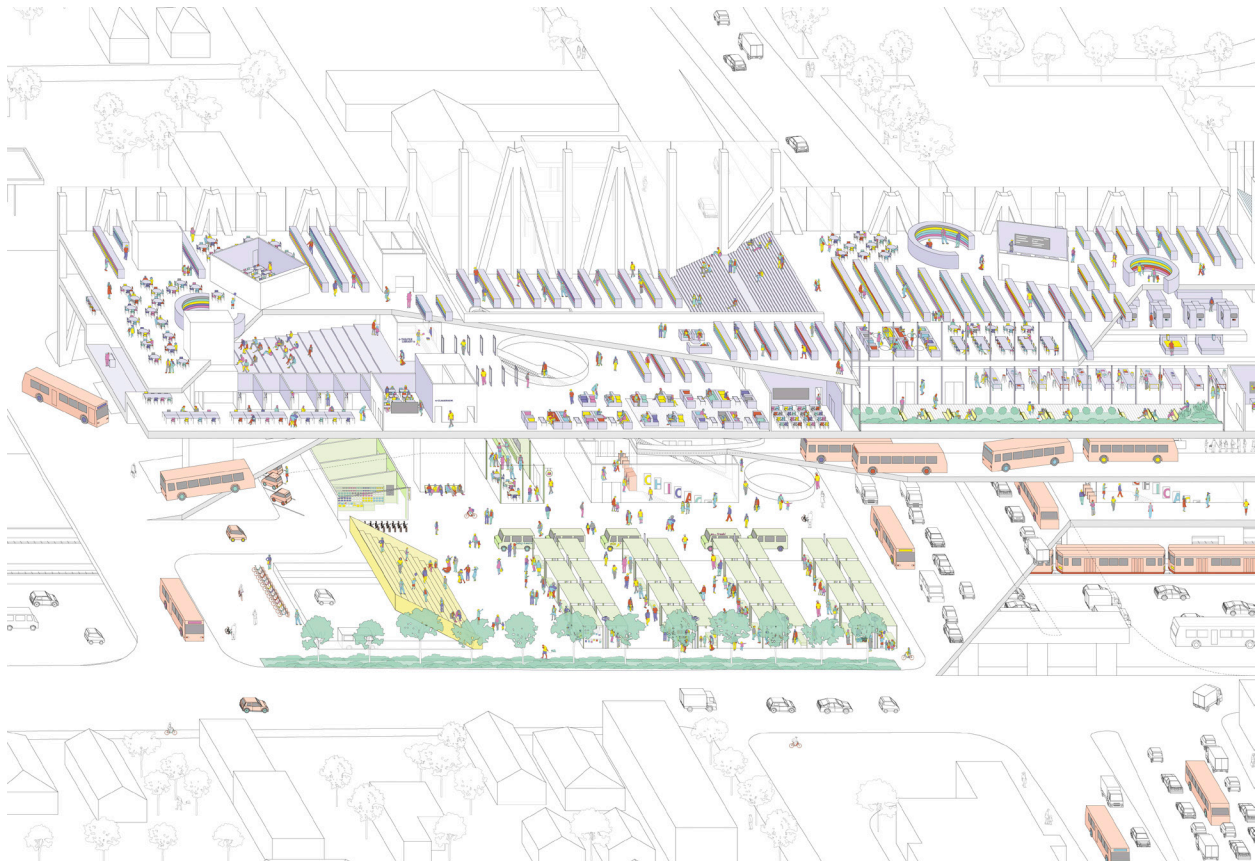


Figure 38: Urban Axonometric detail of design scenario for 95th/Dan Ryan Station NMH illustrating cutaway of proposed building and the layered public market, bus station, and library.



Figure 39: Perspective view of design prototype for 95th/Dan Ryan Station NMH at street level.

5.6 Chapter Summary and Discussion

This chapter described a process for identifying potential sites of intervention that coupled the data-driven urban analysis with field visit based verification of local conditions. Scenarios for developing NMHs in the space of transit infrastructures were developed at three different levels of intensity and scales, ranging from more lightweight infrastructural interventions at bus stops, to repurposing transit-related lots and lands for mobile delivery and re-choreography of possible uses, to large-scale structures at major transit hubs. In a real-world scenario, a community-consultation process with multiple stakeholders would be used to define the needs, opportunities, and partners. In this research, the scenarios are used to expand and illustrate the realm of the possible, and to provide visual and strategic narratives for how cooperation toward improvement of access has the power to transform and improve urban space.

The design approach reconceives transit space as an open platform for staging multiple formats of urban access. Borrowing the analogy of a smartphone as a platform where a multiplicity of apps can be gathered, we speculate on how existing transit space might be appropriated to become a physical platform for assembling access to a broader variety of urban needs, beyond the provision of public transit, while also facilitating new encounters, associations, and adjacencies to emerge. In each case, urban improvements such as lighting, shelter, seating, rainwater mitigation, and green space are conceived of as part of the infrastructural transformation.

In the design scenario cases, each prototypical design envisions an ambitious number of access-enabling agents that could be brought together within each NMH development. The agents assembled in each scenario is not intended to be a definitive list, but provide a way to think how to assemble actors in spaces and through what mode of delivery—virtual delivery, mobile delivery, permanent structure delivery. However, it is our contention that within debates regarding transit space in a context of uneven access and financial austerity, it is important that scenarios for NMH's are not limited minimal augmentation and lightweight spatio-physical footprints, but should equally be able to envision a fundamental rethinking of the redeployment of capital toward the improvement of urban spaces and structures. In locations such as the 95th/Dan Ryan Station, where a quarter-billion dollars is slated to be deployed within the space of transit infrastructure, and several million for civic building rehabilitation several blocks away, it is imperative that multi-dimensional thinking be considered. Clearly,

within existing siloed models of service delivery in the US, there is little imperative to do so, and yet it is precisely at the moment of such massive deployment of capital where the greatest possibility exists to rethink what that capital might be mobilized to deliver. Such spaces must be conceived to serve as hubs for the community, with all of the elements combined to reconfigure and redefine the space of mobility within the city. We assert that transit infrastructure should be thought of as not just a space of functional physical transition between modes of mobility, but as a space that can shape and service urban society, radically reimagining the ways in which we might deliver access through infrastructure as opposed solely to movement towards locations of access delivery.

CHAPTER 6 CONCLUSIONS & RECOMMENDATIONS

Contemporary urbanization operates and reproduces itself through networked and complex systems logics. This project experiments with how these logics, agents, and instruments might be activated toward the production of more socially just urban possibilities within strategic public spaces of the city. In this context, it is the role of design and designers to not only apprehend such territories of potential, but to work through the logics and logistics of their design and delivery. This work speculates on the potential for transit spaces to be ideologically, physically and operationally transformed into true public spaces that address the conditions of urban exclusion from access. The network of instruments, actors and design interventions would aim to produce a renewed centrality for these neighborhoods, with new spaces of difference availed to further appropriation and new uses by the urban population.

In this sense, this design-research project aims to fill the gap between top-down sustainable city programs and policies, and bottom-up community initiatives, by combining the paradigms of new mobility and the new economy with an explicit agenda for the delivery of access to undeserved populations (Figure 40). In the case of Chicago, transit infrastructure was identified as the urban space where multiple forms of access could be delivered to publics, transforming the primary use-value of

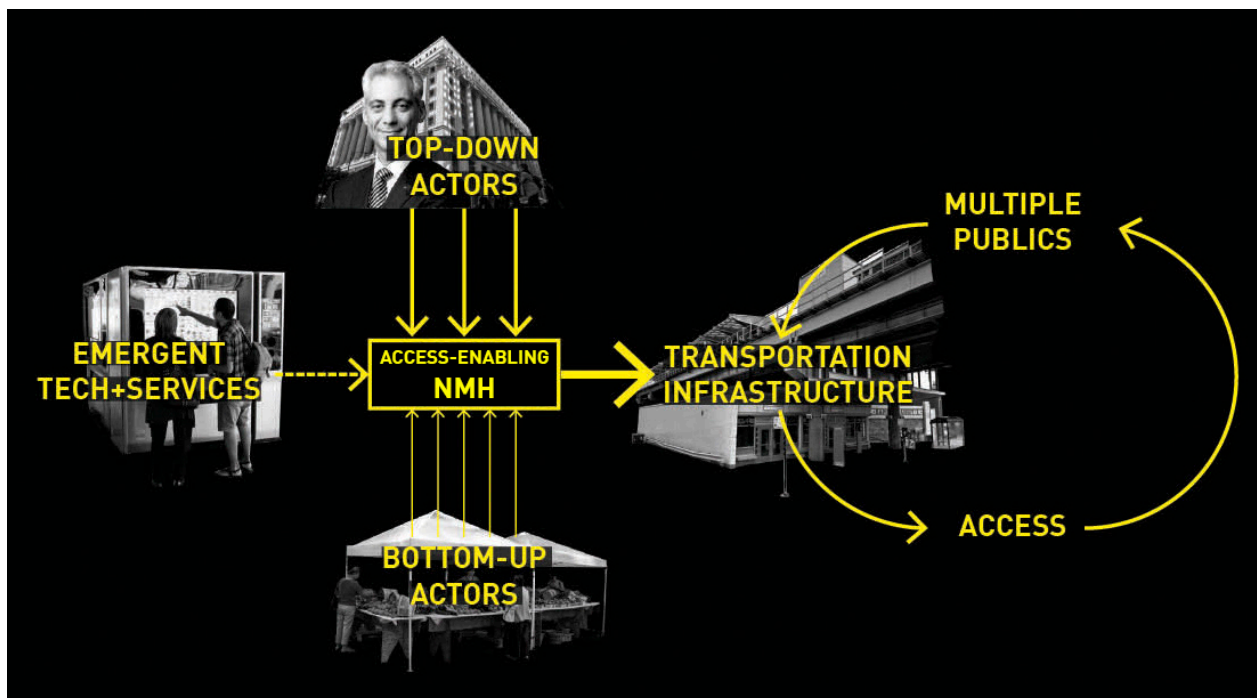


Figure 40: Diagram of Access-Enabling New Mobility Hubs situated at the intersection of top-down sustainable city programs and policies, bottom-up community initiatives, new mobility, and new economy entrepreneurship.

mobility to not be limited to *taking people to things*, but to also include *bringing things to people*. In order to achieve this, spaces of NMH should be conceived through questions of access, and specifically the prioritization of access delivery aimed to address urban inequality and marginalization in cities.

Several challenges became clearly understood through the development of the project. Central to the work is the development of a process that couples data-driven analysis with bottom-up strategies emanating from the local knowledge of community stakeholders. There are limits to the granularity of knowledge and insights available through a data-based process on the one hand, and there are time and cost related limitations to engaging with community groups and thought leaders on the other. As a result, we utilized a hybrid approach where publicly available community leader narratives were mined through available media resources as a means to assemble these perspectives while avoiding the cost implications of human subject engagement within the community not capable of being pursued within the final project budget awarded to undertake the work.

While this context formed a project limitation, it also illuminated a strategy for designing a multi-layered process moving forward where we would essentially recommend cascading layers of engagement in order to illuminate issues related to access, which can then be sequentially engaged depending on the availability of time and resources consisting of: i) High level data scrubbing and access metrics analysis, ii) Hotspot analysis at the level of neighborhoods with significant access issues, iii) remote assemblage of access-enabling agents via online resources, iv) community engagement via thought leader representatives via the SMART 4-step process, and v) detailed community engagement on both needs and movements through GIS-linked mobile device apps for high-granularity.

Cartographies and Actor Network (ANT) mappings and visualizations undertaken through this project assemble multi-layer data sources, but are essentially static at the moment of their completion. Since this project aimed to pilot these processes, this limitation is accepted as a given, however, in advancing work undertaken through this project we recommend the use of real-time database linkages to graphical platform that might be web-based and capable of multi-constituent construction. This strategy would produce visualizations that are able to be updated over time, constitute more of a 'live' resource' than a static analytic, and also become open for participation in a way that our current analytic cartographies cannot.

Additionally, the spectrum of access-enabling technologies deployed and referred to within this project also constitute a set of resources, technologies and services that are constantly evolving. Awareness of these assets is critical in order to be able to assess their deployment within the conceptual frameworks of access-enabling architectures. Similar real-time updating of the newest technologies, programs and efforts at national, state, and municipal scale should be an invaluable resource to draw upon for future work of this kind. Assembly and self-reporting of related agents to a publicly-available data base of this kind would constitute a highly-valuable future funded research project.

The tripartite method of data-driven combinatory cartographies, Actor-Network assemblies of access-enabling actors and instruments, and prototypical design scenarios of New Mobility Hubs designed to prioritize access delivery in underserved communities presents a framework for how to simultaneously understand conditions and opportunities, and also how to envision both possibilities and mechanisms for and catalyzing change.

“Work on the urban cannot limit itself to merely recording what has been produced. We must also look ahead and propose things.” (Lefebvre, 1996, p. 211)

Urban theorist Henri Lefebvre was adamant that urban studies would not be a study of the past, of the circumstances that have shaped the current conditions of the city, but that possibilities and futures were to be speculated on. He argued for imaginary urban futures that would be “studied experimentally by studying [their] implications and consequences on the ground” (Lefebvre, 2006, p. 151). In this context, the work of this project explicitly presents possible futures whose elements (spatial and otherwise) are already active and available, now assembled to produce not only increased access, but also higher quality civic space.

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APPENDIX A MAP SOURCES

Figure 1: Mobility Exclusion Map

Data Sources:

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Figure 2: Food Exclusion Map

Data Sources:

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Figure 3: Learning Exclusion Map

Data Sources:

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Figure 4: Health Exclusion Map

Data Sources:

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Figure 11: Food Access and Exclusion

Data Sources:

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Figure 12: Learning Access and Exclusion

Data Sources:

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Figure 13: Health Access and Exclusion

Data Sources:

Chicago Community Service Centers: City of Chicago, Department for Family & Support Services.

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YMCA: YMCA of Metro Chicago. “Locations.” Accessed at: <http://www.ymcachicago.org/locations> [September 2014].

Youth Centers: City of Chicago, Department of Family & Support Services. “Youth Centers.” Accessed at: http://www.cityofchicago.org/city/en/depts/fss/dataset/youth_centers.html [September 2014].

Figure 14: Community Narratives Matrix

Video Sources:

Mobility, top to bottom:

Concerns grow over ‘transit desert’ in Chicago (August 4, 2014). Accessed at: <http://wgntv.com/2014/08/04/concerns-grow-over-transit-desert-in-chicago/> [October 2014].

Concerns grow over ‘transit desert’ in Chicago (August 4, 2014). Accessed at: <http://wgntv.com/2014/08/04/concerns-grow-over-transit-desert-in-chicago/> [October 2014].

A Day on Divvy (October 7, 2013). Accessed at: <https://www.youtube.com/watch?v=52BoFMN3wYo> [January 2014].

In the Loop 304, Part 1 – Ride Sharing (February 28, 2014). Accessed at: https://www.youtube.com/watch?v=_DUmdbZUkgY [February 2014].

Food, top to bottom:

In the Loop 204 - Chicago Food Deserts (Sept. 12, 2013). Accessed at: <https://www.youtube.com/watch?v=DJuNtEC6TSw> [October 2014].

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Learning, top to bottom:

In the Loop 201 - How Prepared is CPS with Safe Passage? (Aug. 22, 2013). Accessed at: <https://www.youtube.com/watch?v=70CfPc3mfG4> [October 2014].

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Health, top to bottom:

In the Loop 207 – Childhood Obesity (October 8, 2013). Accessed at: <https://www.youtube.com/watch?v=mzPq5T2Zdqk> [March 2014].

Sheila’s Story: Southside Health Care Collaborative (October 27, 2009). Accessed at: <https://www.youtube.com/watch?v=STXqppgguag> [May 2014].

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Figure 21: Funding Zones Map

Data Sources:

Medically Underserved Areas (CHC grant funds eligible): US Department of Health and Human Services, Health Resources and Services Administration, “Find Shortage Areas: MUA/P by State and County” (2014). Accessed at: <http://muafind.hrsa.gov/> [September 2014].

Micro Market Recovery Program: City of Chicago, City of Chicago Data Portal. “Boundaries – Micro-Market Recovery Program – Zones” (2014). Accessed at: <https://data.cityofchicago.org/Community-Economic-Development/Boundaries-Micro-Market-Recovery-Program-Zones/np6m-dynq> [September 2014].

Special Service Areas: City of Chicago, City of Chicago Data Portal. “Boundaries – Special Service Areas.” (2013). Accessed at: <https://data.cityofchicago.org/Community-Economic-Development/Boundaries-Special-Service-Areas/kjav-iyuj> [September 2014].

Tax Increment Funding: City of Chicago, City of Chicago Data Portal. “Boundaries – Tax Increment Financing Districts.” (2013). Accessed at: <https://data.cityofchicago.org/Community-Economic-Development/Boundaries-Tax-Increment-Financing-Districts/fz5x-7zak> [September 2014].

APPENDIX B

ACCESS-ENABLING ACTORS & INSTRUMENTS DATABASE

ACTOR	CATEGORY	CLASSIFICATION	SITE	DESCRIPTION	ASSOCIATED ACTORS	ADDRESS	SOURCE	ADDITIONAL NOTES
Alphawood Foundation	Arts	Funding		Philanthropic foundation providing operations support for Chicago and Northwest Indian non-profit organizations. Awards grants in the arts, arts education, social advocacy, domestic violence prevention, and architecture and preservation.		1645 West Fullerton, Chicago, IL 60614	http://www.pts.org/grantcenter/funding-topic/arts-and-humanities/alphawood-foundation	
35th/Halsted TIF District	Community Development	Funding	A	The 35th/Halsted TIF District encompasses 518 acres of Chicago's Bridgeport community. The district contains a number of high-use freight and commuter corridors which are to be improved using TIF funding. Funds may also be used to preserve historic housing stock. This district was established in 1997 and expires in 2020.	City of Chicago	35th Street & Halsted Street	http://www.cityofchicago.org/content/dam/city/depts/dcd/tif/plans/T_001_35thHalstedRDP.pdf	http://www.cityofchicago.org/city/en/depts/dcd/supp_info/tif/35th_halsted.html
Archer/Western TIF District	Community Development	Funding	A	The Archer/Western TIF District encompasses 413 acres of Chicago's McKinley Park and New City communities. Funding will be directed toward a wide range of projects, including rehabilitation of existing commercial and industrial buildings; new transit-oriented development, infrastructure and public works upgrades, and pedestrian safety improvements. This district was established in 2009 and expires in 2033.	City of Chicago	Archer Avenue & Western Avenue	http://www.cityofchicago.org/content/dam/city/depts/dcd/tif/plans/T_163_ArcherWesternRDP.pdf	http://www.cityofchicago.org/city/en/depts/dcd/supp_info/tif/archer_western.html
Pilsen Industrial Corridor TIF District	Community Development	Funding	A	The Pilsen Industrial Corridor TIF District encompasses 907 acres of Chicago's Southwest Side. The district is bounded by two interstates and is crossed by major freight rail lines as well as the Sanitary and Ship Canal. TIF funding will be target transportation links in favor of local manufacturing, warehousing, and distribution interests; TIF will also assist commercial and service development, rehabilitation projects, and investment in local institutions. The district was established in 1998 and expires in 2022.	City of Chicago	Ashland Avenue & Blue Island Avenue	http://www.cityofchicago.org/content/dam/city/depts/dcd/tif/plans/T_053_pilsenRDP.pdf	http://www.cityofchicago.org/city/en/depts/dcd/supp_info/tif/pilsen_industrialcorridor.html
Benton House	Community Development	NGO	A	Benton House is a 501(c)(3) non-profit located in the Bridgeport Community on Chicago's Southwest Side. Established as a settlement house at the turn of the 20th century, Benton House now serves as a community space, offers youth and senior programs, community fitness programs, community gardening, and operates a food pantry in conjunction with Greater Chicago Food Depository.	GCFD	3052 S. Gretten Ave., Chicago, IL 60608		
Chicago Park District	Community Development	Governmental Organization	ABC	The Chicago Park District is a special-purpose tax district that oversees over 8000 acres of parklands, beaches, nature areas and other recreational facilities in Chicago.	City of Chicago		http://www.chicagoparkdistrict.com/	
Chicago Community Trust	Community Development	NGO	ABC	The Chicago Community Trust is a community foundation, a tax-exempt non-profit charity organization, which accepts donations and give grants. CCT is a major player in Chicago-area community philanthropy, supporting local institutions and organizations involved in the arts, health, education, social services, economic development, housing, and more, through mostly small grants.	Community Organizations	541 N. Fairbanks, Chicago, IL 60611	http://www.cct.org/	http://www.cct.org/impact/grant-list-map
Chicago Housing Authority	Community Development	Governmental Organization	AC	The Chicago Housing Authority (CHA) is a municipal corporation which oversees all public housing within the city of Chicago. CHA is the largest owner of rental housing in the city, with over 50,000 tenants in 128 buildings reserved for seniors and low-income families and individuals. CHA owns the 127-unit Lowden Homes near Site A, and the 125-unit Lawndale Gardens and Senior-only Albany Terrace Apartments near Site C.	City of Chicago	60 E. Van Buren, Chicago, IL 60605	http://www.thecha.org/	
Far South Community Development Corporation	Community Development	NGO	B	The Far South Community Development Corporation (Far South CDC) is a 501(c)(3) non-profit organization that works to eradicate slum conditions and foster economic development in Chicago's Far South Side, including ROTCS Site B. Far South CDC assists in registering minority and women-owned business enterprises, allocates Chicago SBIF grants to local businesses, and advises on TIF and other tax-incentive programs.	LISC, City of Chicago	9923 South Halsted St., Suite D, Chicago, IL 60628	http://www.farsouthcdc.org/	
Small Business Improvement Fund	Community Development	Funding	B	Small Business Improvement Fund (SBIF) Grants are offered by the City of Chicago that help business and property owners leverage TIF revenues for repairing and improving commercial and industrial properties in select Chicago neighborhoods. SBIF grants may cover window, floor, and roof replacement, sign removal or replacement, tuckpointing, HVAC upgrades, parking expansion, and accessibility improvements. Far South CDC is a delegate agency able to distribute SBIF funding.	Far South CDC		http://www.cityofchicago.org/city/en/depts/dcd/prov/svc_dev/svc4/apply_to_r_a_smallbusinessimprovementfundgrant.html	

ACTOR	CATEGORY	CLASSIFICATION	SITE	DESCRIPTION	ASSOCIATED ACTORS	ADDRESS	SOURCE	ADDITIONAL NOTES
Developing Community Project, Inc.	Community Development	NGO	B	Developing Community Project (DCP) is a grassroots community advocacy group based in the Roseland community on Chicago's Far South Side. DCP is active in transit equity campaigns for the Far South Side and has received CCT funding for their push to extend the CTA Red Line and promote workforce-based TOD in Roseland. Other activities include youth education and drug use prevention, and foreclosed and abandoned properties mitigation. President Barack Obama was DCP's first executive director.	CCT	212 E. 95th St., Chicago, IL 60619	http://www.dcpchicago.org/	
Abbott Park Senior Center	Community Development	Governmental Organization	B	The Abbott Park Satellite Senior Center is operated by Community Mental Health Council's Senior Connections Program. The center is located within the park and serves seniors who reside within the 6th, 9th, and 34th wards, including the Washington Heights and Roseland communities.	HUD, City of Chicago, Breaking Ground, LCDC	49 East 95th Street Chicago, IL 60619	https://www.cityofchicago.org/city/en/depts/psr/provdrs/senior/svcs/satellite_seniorcenters.html	
Neighborhood Stabilization Program	Community Development	Funding	C	HUD's Neighborhood Stabilization Program (NSP) is a component of the CDBG Program established in response to the 2008 housing market crisis. NSP grants funding to State and local governments and non-profit groups for the purchase and redevelopment of residential properties in order to stabilize moderate- and low-income neighborhoods suffering from high rates of foreclosure and abandonment. North Lawndale has been identified as an "area of greatest need" by NSP Chicago.	HUD, City of Chicago, Breaking Ground, LCDC		http://portal.hud.gov/hudportal/HUD?rc=/program_offices/comm_planning/cmmunitydevelopment/programs/nsp/neighborhoodspg	http://www.chicagosp.org/
Breaking Ground	Community Development	NGO	C	Breaking Ground is a 501(c)(3) non-profit organization based in North Lawndale, Chicago. The organization began with a focus on workforce training and local business development, but is now active in affordable housing development and rehabilitation, as well as deconstruction, recycling, and architectural salvage; since 2009, Breaking Ground has been an official developer/contractor for HUD's NSP program.	HUD, CDBG, NSP	3501 W. Filmore St., Chicago, IL 60624	http://breakingground.net/	
Lawndale Christian Development Corporation	Community Development	NGO	C	Lawndale Christian Development Corporation (LCDC) is the community development arm of Lawndale Community Church. LCDC engages in commercial and residential development including both rehabilitation and new construction, school rehabilitations, and small-scale infrastructure repairs. One project has received HUD NSP funds. LCDC also assists K-12 technology education, adult retraining programs, and homeowners education. LCDC works to reduce the digital divide in North Lawndale.	HUD, NSP, LISC	3843 W. Ogden Ave., Chicago, IL 60623	http://www.lcdc.net/	
Community Renewal Initiative	Community Development	Polcy/Legislation	C	HUD's Community Renewal Initiative included three separate programs for reducing unemployment and increasing economic development in distressed communities through the provision of tax credits and business grants. Enterprise Community (EC) and Renewal Community (RC) initiatives expired in 2004 and 2009, respectively, while Empowerment Zone (EZ) initiative remained in effect until 2014. Businesses may receive tax credits for employees who live and work in an EZ. Chicago EZ covers Site C.	HUD, IRS		http://portal.hud.gov/hudportal/HUD?rc=/program_offices/comm_planning/economicdevelopment/programs/irc	http://portal.hud.gov/hudportal/documents/huddoc?id=ez_tlc_chart.pdf
Chicago Empowerment Zone	Community Development	Funding	C	Chicago's Empowerment Zone (EZ) encompasses fragmented portions of the city's West and South Sides, encompassing portions of Pilsen, and Little Village and including ROTC Site C. Businesses, educational institutions, and government entities are eligible for a range of tax credits, deductions, and bonds for maintaining facilities in Chicago EZ and for hiring employees who live and work in the EZ.	HUD, IRS, Local Business		http://portal.hud.gov/hudportal/documents/huddoc?id=ez_tlc_chart.pdf	http://egis.hud.gov/ezrlocator/
Near West Side Community Development Corporation	Community Development	NGO	C	Near West Side Community Development Corporation (Near West CDC) is a non-profit CDC based in Chicago's West Haven community and also serving the North Lawndale neighborhood. Near West engages in a number of activities to promote local economic growth, affordable housing, and social services. Near West has launched a senior and ADA accessibility building program (SARFS), operates a shelter for families at risk of homelessness, and offers economic self-sufficiency advising services.	LISC, SARFS, HVP	216 South Hoyne Avenue, Chicago, IL 60612	http://nearwestsidecdc.org/	http://nearwestsidecdc.org/programs/
Western/Ogden TIF District	Community Development	Funding	C	The Western/Ogden TIF District encompasses 754 acres of Chicago's Near and Lower West Side communities. The district contains a number of industrial buildings, institutional buildings, railroad holdings, and vacant land which may be rehabilitated or remediated to boost land values. TIF funding may also be used for job training programs in this district. This district was established in 1998 and expires in 2021.	City of Chicago	Ogden Avenue & Western Avenue	http://www.cityofchicago.org/content/dam/city/depts/dcd/hf/plans/T_048_WesternOgdenRDP.pdf	http://www.cityofchicago.org/city/en/depts/dcd/supp_info/tif/western_ogden_tif.html
Central States SER	Community Development	C	C	Central States SER (SER) is a non-profit organization supporting financial self-sufficiency and upward mobility among low-income Chicago residents through education, job training, and employment services. SER stands for Service, Employment, and Reinvestment; it is also a play on the Spanish verb "to be," reflecting the large Latino community in the organization's service areas. SER operates employment centers in the Little Village and Garfield communities on the West Side, and one in the near West suburb of Cicero.		3948 W. 26th Street, Ste. 216, Chicago, IL 60623	http://www.centralstateser.org/	

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Enlace Chicago	Community Development	NGO	C	Enlace Chicago is a non-profit community organization serving Little Village. Enlace coordinates projects in community education, neighborhood organization and advocacy, economic development, and violence prevention.		2756 S. Harding Ave., Chicago, IL 60623	http://enlacechicago.org/	
Instituto Del Progreso Latino	Community Development	NGO	C	IDPL is a non-profit organization providing social services to Latino immigrants in Chicago. The Southwest Side's Pilsen, Little Village and Back of the Yards communities are predominantly Latino and are a major landing point for new immigrants.	CMAP	2520 S. Western Ave, Chicago, IL 60608	http://www.idpl.org/	http://www.cmap.illinois.gov/documents/10180/622443/InstitutoDelProgresoLatino.pdf
US Department of Housing and Urban Development	Community Development	Governmental Agency		The U.S. Department of Housing and Urban Development (HUD) is the department of the Federal government responsible for developing and executing national policies on affordable housing and the development of cities. HUD oversees a number of federal funding programs that assist communities in developing affordable housing and sustainable economic activity, most notably its CDBG Program.	US Executive Branch, US Congress, CDBG	Chicago Regional Office: 77 West Jackson Boulevard, Chicago, IL 60604-3507	http://portal.hud.gov/hudportal/HUD	
Community Development Block Grants Program	Community Development	Funding		HUD's Community Development Block Grant (CDBG) Program provides annual funding to State and local government units to ensure the provision of affordable housing and the expansion of economic opportunities for low- and moderate-income persons. The CDBG entitlement program provides grants to large cities and urban counties; the program also includes the Section 108 Loan Guarantee Program, which allows transfer of CDBG grants into bans for building and other physical development projects.	HUD, City of Chicago,		http://portal.hud.gov/hudportal/HUD?r=/program_offices/comm_planning/cdbg/communitydevelopment/programs	http://www.cityofchicago.org/city/en/depts/hobm/provdrs/grants.html
Section 108 Loan Guarantee Program	Community Development	Funding		Section 108 is a provision within the CDBG Program that allows State and local governments to convert CDBG funding into federally guaranteed loans for financing economic development projects, property acquisition, construction, rehabilitation, and other physical development projects. All Section 108 funded projects must principally benefit low- and moderate-income persons, ease slum or blight conditions, or address other urgent community needs.	HUD, CDBG, BEDI, City of Chicago		http://portal.hud.gov/hudportal/HUD?r=/program_offices/comm_planning/cdbg/communitydevelopment/programs/108	
Emergency Shelter Grants Program	Community Development	Funding		HUD's Emergency Shelter Grants (ESG) Program provides States, cities, and urban counties with grants supporting homelessness prevention and emergency shelter. Grants may be used for rehabilitating and converting existing buildings into homeless shelters, emergency shelters, and other homelessness prevention service centers.	HUD, City of Chicago,		http://portal.hud.gov/hudportal/HUD?r=/hudprograms/esg	http://www.cityofchicago.org/city/en/depts/hobm/provdrs/grants.html
Home Investment Partnerships Program	Community Development	Funding		HUD's HOME Investment Partnerships Program (HOME) provides States, cities, and partner local non-profit groups with grants supporting the creation of affordable housing options for low-income persons. HOME funds may be used to build, rehabilitate, or buy affordable housing, or for direct rent-assistance programs for low-income tenants.	HUD, City of Chicago,		http://portal.hud.gov/hudportal/HUD?r=/program_offices/comm_planning/affordablehousing/programs/home/	http://www.cityofchicago.org/city/en/depts/hobm/provdrs/grants.html
Housing Opportunities for People with AIDS	Community Development	Funding		HUD's Housing Opportunities for People with AIDS (HOPWA) Program provides States, cities, and non-profit groups with grants supporting affordable housing assistance and health and social services for low-income persons with AIDS.	HUD, City of Chicago,		https://www.onecpd.info/hopwa/	http://www.cityofchicago.org/city/en/depts/hobm/provdrs/grants.html
Community Challenge Planning Grants	Community Development	Funding		The Joint HUD-DOT Community Challenge Planning Grant Program provides grants in support of local planning reform. Eligible projects include master plan revision and replacement, zoning and building code reform, affordable housing construction, adaptive building reuse, and other activities which produce local and neighborhood sustainability.	HUD, DOT, EPA, CMAP, Chicago Community Trust		http://portal.hud.gov/hudportal/HUD?r=/program_offices/economic_resilience/HUD-DOT_Community_Challenge_Grants	
Sustainable Communities Regional Planning Grants	Community Development	Funding		HUD's Sustainable Communities Regional Planning (SCR) Grant Program provides grants to regional multi-interest partnerships in order to support projects targeting housing, education and workforce development, and infrastructure investments with the goal of creating jobs and stimulating economic development. The SCR program is a major part of the joint HUD-DOT-EPA Partnership for Sustainable Communities.	HUD, DOT, EPA		http://portal.hud.gov/hudportal/HUD?r=/program_offices/economic_resilience/sustainable_communities_regional_planning_grants	

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Brownfields Economic Development Initiative	Community Development	Funding		HUD's Brownfields Economic Development Initiative (BEDI) provides grants in conjunction with Section 108 Loans to CDBG entitlement communities in order to rehabilitate and redevelop former industrial and commercial sites. BEDI grants are intended for sites with immediate redevelopment plans and prioritize projects that will increase economic opportunities for low- and moderate-income persons.	HUD, CDBG, Section 108, City of Chicago		http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/bedi	
Chicago Brownfields Initiative	Community Development	Policy/Legislation		The Chicago Brownfields Initiative was established in 1993 to acquire, assemble and rehabilitate properties, returning them to productive use. The initiative links environmental restoration with economic development by cleaning up and redeveloping brownfields and by improving policies to promote private redevelopment of brownfields. The purpose of the Chicago Brownfields Initiative is to create jobs and generate tax revenues through redevelopment, thereby improving Chicago's environmental and economic health.	HUD, BEDI, City of Chicago		http://www.cityofchicago.org/city/en/depts/dps/supp_info/chicago_brownfields_initiative.html	
Internal Revenue Service	Community Development	Governmental Organization		The Internal Revenue Service (IRS) is a division of the United States Treasury responsible for administering and enforcing U.S. tax laws. The IRS administers a number of development incentive programs, including the New Markets Tax Credit (NMTC) Program; the IRS also oversees HUD's Low Income Housing Tax Credit Program and the National Park Service's Federal Historic Preservation Tax Incentive Program.	US Treasury, HUD, NPS, LIHTC		http://www.irs.gov/	
Low Income Housing Tax Credit	Community Development	Funding		Section 42 of the U.S. Internal Revenue Code authorizes Low Income Housing Tax Credits (LIHTC) for property owners who provide a certain percentage of low-income units in a residential property. Low-income housing projects qualify by the 20-50 test (20% of units are rent-restricted and occupied by individuals with income less than 50% of the area median), or the 40-60 test (40% rent-restricted units occupied by individuals with income less than 60% of the area median). LIHTC is a joint HUD-IRS-DOJ initiative.	HUD, IRS, DOJ, Property Owners		http://www.law.cornell.edu/uscode/tx/4256/42	
New Markets Tax Credit	Community Development	Funding		Section 45D of the U.S. Internal Revenue Code authorizes New Markets Tax Credits (NMTC) for taxpayers who invest up to \$15B in designated low-income Community Development Entities (CDE). CDEs trade their allocated tax credits for investment funding, which is then distributed among businesses, services, and other groups in low-income communities. Eligible communities include HUD-designated Renewal Communities, Empowerment Zones, and Enterprise Communities.	IRS, HUD, CDE, Community Renewal Initiative, Local Businesses		http://www.law.cornell.edu/uscode/tx/4256/45D	http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/economic_development/programs/rc/about/newmarkets
Federal Historic Preservation Tax Credit	Community Development	Funding		The Federal Historic Preservation Tax Incentive Program is a joint initiative between the National Park Service (NPS) and the IRS which gives tax credits to property owners who rehabilitate historic, income-producing buildings. The program offers 20% tax credits for approved rehabilitation of NPS certified historic structures, and 10% credits for the rehabilitation of non-certified structures placed in service before 1936. Tax credits are also possible for transferring historic preservation easements to preservation organizations.	NPS, IRS, Property Owners		http://www.nps.gov/tax/incentives.htm	
EDI Special Project Grants	Community Development	Funding		Program mothballed as of 2010				
EDI Neighborhood Initiative Grants	Community Development	Funding		Program mothballed as of 2010				
HUD Section 4 Capacity Building Grants	Community Development	Funding		Section 4 of the HUD Demonstration Act authorizes the distribution of HUD grants to five nonprofit intermediaries: Living Cities/The National Community Development Initiative, Local Initiatives Support Corporation (LISC), Enterprise Community Partners, Inc., Habitat for Humanity International, and YouthBuild USA. These five entities may then provide capacity-building support to smaller subgrantee organizations who engage in community development and affordable housing programs.	HUD, Living Cities, LISC, Enterprise, Habitat, YouthBuild		http://portal.hud.gov/hudportal/HUD?src=/hudprograms/capacitybuilding	
Chicago Community Development Corporation	Community Development	Business Entity		Chicago Community Development Corporation (CCDC) is a privately-owned corporation that develops, owns, and manages multifamily affordable housing in Chicago. CCDC provides consulting services and technical assistance to owners and nonprofit groups seeking to protect their HUD-insured affordable housing from disappearing into the market.	HUD, Homeowners	36 South Wabash Avenue, Suite 1310 Chicago, Illinois 60603	http://www.chitagocdc.com/	

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Small Accessible Repairs for Seniors	Community Development	Funding		Near West CDC's Small Accessible Repairs for Seniors (SARFS) Program provides free small home repairs and construction for seniors and residents with disabilities. SARFS projects include construction or repair of wheelchair ramps, handrail and grab bar installation, and repairs of steps and other minor issues. Any repairs or additions require an agreement from the landlord that rent will not be raised as a result of any work completed.	Near West CDC	216 South Hoyne Avenue, Chicago, IL 60612	http://nearwestsidecdc.org/programs	
Home Visitors Program	Community Development	Funding		Near West Side CDC's Home Visitors Program (HVP) provides confidential advising services to West Haven families to promote economic self sufficiency. Services include budget assistance, first-time homeowners' information, individual and family counseling, job services, tenant-landlord rights information, and more.	Near West CDC	123 North Hoyne Ave., Chicago, IL	http://nearwestsidecdc.org/programs	
Local Initiatives Support Coalition	Community Development	NGO		Local Initiatives Support Coalition (LISC) is a national non-profit organization that directs government, corporate, and philanthropic support to smaller community organizations in cities and rural areas. LISC-Chicago coordinates Chicago-area efforts to improve local economies, education, health, housing, finance, safety, and overall well-being. LISC was founded by the Ford Foundation with donations from several other large companies and institutions.	Ford Foundation	1355. LaSalle St., Suite 2230 Chicago, IL 60603	http://www.lisc-chicago.org/index.html	
Quad Communities Development Corporation	Community Development			Quad Communities Development Corporation QCDC is a CDC representing the South Side communities of North Kenwood, Oakland, Douglas, and Grand Boulevard.		4659 S. Cottage Grove Avenue, Second Floor Chicago, IL 60605	http://www.qcdc.org/index.html	
Voorhees Center	Community Development	NGO		The Nathalie P. Voorhees Center for Neighborhood and Community Improvement is an urban research and technical assistance center located within UIC College of Urban Planning and Public Affairs. The Voorhees Center links UIC faculty, community groups, government agencies, and other local stakeholders and provides technical assistance, often involving data collection and analysis, policy interpretation, financial planning, and market studies related to affordable housing.	UIC	400 South Peoria Street, Suite 2100	http://voorheescenter.wix.com/home	
NCB Capital Impact	Community Development			Formerly National Cooperative Bank (NCB), Capital Impact Partners is a national, non-profit, certified Community Development Financial Institution that provides financing assistance and investment capital to smaller local community organizations.		2100 Crystal Drive Ste. 750, Arlington VA 22202	http://www.capitalimpact.org/	
Civic Consulting Alliance	Community Development	NGO		Civic Consulting Alliance (CCA) is a non-profit partnership that brings together teams of experts from major firms, institutions, and government agencies to perform pro bono consulting for a wide variety of civic projects. CCA projects range in scope and have dealt with economic growth, education, the environment, healthcare, public safety, transportation, and the workforce.		21 S Clark St, Suite 4301, Chicago, IL 60603	http://www.ccdhicago.org/	
TARGET Area DevCorp	Community Development			"TARGET Area Development Corporation is a regional grassroots social justice organization with offices in Illinois, Indiana, Michigan, and South Africa building power in communities to solve stubborn problems using Research, Organizing, Mobilization, and Education (ROME)."		1542 West 79th Street, Chicago, IL 60620	http://targetarea.org/	
South Side Help Center	Community Development			Non-profit social services and community health outreach center serving Chicago's South Side.		10420 S. Halsted St., Chicago, IL 60628	http://www.southsidehelp.org/	
Kids Off the Block	Community Development			Kids Off the Block (KOB) is a non-profit youth social services organization. KOB's mission is to help Chicago youth avoid gangs, drugs, and violence, and to keep students in school and out of the juvenile justice system. KOB is most active in the Far South Side community of South Roseland.		11627 S. Michigan Ave., Chicago, IL 60628	http://www.kobchicago.org/	

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New Life Community Church	Community Development			Non-denominational Christian church with multiple locations around Chicago. Has one location in Little Village/Lawndale with Spanish and English services.		2657 S Lawndale Ave, Chicago, IL 60623	http://www.newlifechicago.mobi/	
Partnership for Sustainable Communities	Community Development	Governmental Organization		Post-2009 partnership between HUD, DOT, EPA that streamlines national transportation, housing, and environmental policies and spending programs. Allows the three departments to coordinate their own initiatives and to pursue joint efforts in order to achieve more holistic national community development policies.			http://www.fhwa.do.gov/ivability/partnership/leveraging_the_partnership/	
Smart Chicago	Community Development	Technology		A non-profit tech-advocacy organization housed by the Chicago Community Trust and largely funded by the City of Chicago and the MacArthur Foundation. Pushes for technological advance and improved digital literacy in Chicago. Also uses technology to provide public-access data about community issues in Chicago, including interactive atlases of health, education, technology, and civic resources available in the city.	City of Chicago, MacArthur Foundation, Chicago Community Trust		http://www.smartchicago.coollaborative.org/	
Center for Neighborhood Technology	Community Development	NGO		An urban design think-tank which conducts urban research and provides technical assistance and consulting services to Chicago communities.			http://www.cnt.org/	
Initiative For a Competitive Inner City	Community Development	NGO		Initiative for a Competitive Inner City (ICCI) is a non-profit urban research organization founded by Michael Porter of Harvard Business School. ICCI conducts research on inner city economies, provides advising, technical support and training services for inner city entrepreneurs, and directs banks and investors toward promising inner city businesses.	Harvard Business School		http://www.icci.org/	
HUD Housing Choice Vouchers	Community Development	Funding		HUD's Housing Choice Voucher Program assists very low income families, the elderly, and the disabled in accessing safe, sanitary, decent housing options. HUD provides federal funds to local public housing authorities, which distribute housing vouchers to qualified individuals and families. A voucher recipient is responsible for locating approved housing on their own; a subsidy is then paid directly to landlords from the housing agencies on behalf of the tenant.	HUD, CHA		http://portal.hud.gov/hudportal/HUD?rs=/program_offices/public_indian_housing/programs/hcv/about/fact_sheet	
Jane Addams Resource Corporation	Community Development			Jane Addams Resource Corporation (JARC) is a Center for Working Families that focuses on job training and workforce development. JARC's job training programs target strategic skills gaps in the manufacturing and IT sectors, such as Computer Numerical Control (CNC) machinist, welder and brake press operator.		4432 N Ravenswood Ave, Chicago, IL 60640	http://www.jane-addams.org/	
Enterprise	Community Development			Enterprise's mission is to create opportunity for low- and moderate-income people through affordable housing in diverse, thriving communities. Enterprise works with partners nationwide to build opportunity. They create and advocate for affordable homes in thriving communities linked to good schools, jobs, transit and health care. They lend funds, finance development and manage and build affordable housing, while shaping new strategies, solutions and policy.			http://www.enterprisecommunity.com/	
Instituto Health Sciences Career Academy	Education	NGO	AC	IHSCA is a Little Village charter high school founded by IDPL. Provides college-prep and career-oriented curriculum to prepare students for careers in health services.	IDPL	2520 S. Western Ave, Chicago, IL 60608	http://healthacademy.idpl.org/	
Chicago State University	Education	Governmental Organization	B	Chicago State University is a comprehensive public university in the Illinois State University system. Its campus is located in the Roseland Neighborhood on the far South Side.	State of Illinois		http://www.csu.edu/	

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Harlem Community Academy High School	Education		B	Harlem Community Academy High School (Harlem High School) is a public high school in the Chatham Community on Chicago's Far South Side. As a Community Academy and designated Option for Knowledge School, Harlem High School accepts applications from students from outside its attendance area. The school serves 1300 predominantly African American students. Harlem is located near the CTA 95th St/Dan Ryan terminal and is served by the CTA Red Line and several bus lines.	CPS		http://harlemacademy.org/about/history.jsp	
Chicago Regional Library	Education	Governmental Organization	B	Woodson Regional Library is the Southern District hub of the Chicago Public Library system. It is a full-service library with free wi-fi, and complete ADA accessibility. In addition to its regular collections, Woodson Regional Library houses the Vivian G. Harsh Research Collection of Afro-American History and Literature, the largest in the Midwest. The library's 1975 facility is located at the intersection of 95th and Halsted Streets. We propose shifting the library to 95th Street and Dan Ryan Expressway, to serve as a public education and community forum anchoring the new South Side transit hub.			http://www.chipublib.org/locations/98/	
City Colleges of Chicago	Education		B	West Side Technical Institute of Daley College		2800 S Western Ave, Chicago, IL 60608	http://www.ccc.edu/colleges/daley/departments/Pages/Arturo-Velasquez-Institute.aspx	
Alternative School Network	Education	NGO	BC	A network of Chicago charter schools aimed at out-of-school and high-risk youth. ASN-affiliated schools include Latino Youth High School and Rudy Lozano Youth Academy in Pilsen/Little Village, and Banner School in Roseland/Washington Heights.		http://www.asnchicago.org/		
Power House High	Education	NGO	C	Henry Ford Academy: Power House High (HFA-PHH) is a charter school housed in the Charles Shaw Technology Center in North Lawndale, Chicago. It is a satellite school of the Henry Ford Learning Institute based in Dearborn, MI.		931 S. Homan Ave, Chicago, IL 60624	http://phh.hfi.org/	
Homan Square	Education	NGO	C	Homan Square is a planned community development on the site of the former Sears, Roebuck & Company world headquarters in North Lawndale, Chicago. The development includes affordable housing and a community center offering a range of health, recreation, and family support services; Homan Square is also the site of the Charles Shaw Technology Center and Henry Ford Academy: Power House High charter school.	Shaw Company, LCH, YMCA, CPD, HFA-PHH,	3517 W. Arthington St., Chicago, IL 60624	http://www.homansquare.org/	
Youth Connection Charter Schools	Education	NGO	C	A network of charter schools serving high-risk students in Chicago.		http://www.yccs.us/		
Latino Youth School	Education	NGO	C	A Pilsen community alternative charter school aimed particularly at second-chance Latino students.	ASN, YCCS, CPS, Pilsen Wellness Center	http://pilsenwellnesscenter.org/latino-youth-high-school/		
US Department of Education	Education	Governmental Organization		The U.S. Department of Education (ED) is the Federal government department responsible for promoting access to quality education. The US education system is largely the responsibility of States and localities; the Federal government contributes only 10.8% of total education funding, split between ED, the USDA School Lunch program, and the DHHHS Head Start Program. ED is active in national advocacy, awareness, and policy, while its financial contributions usually perform the role of "emergency response," making up for shortfalls in State and local school funding.		400 Maryland Avenue, SW, Washington, DC 20202	http://www.ed.gov/	
Illinois Board of Education	Education	Governmental Organization		The Illinois Board of Education sets educational policies and guidelines for public and private schools, preschool through grade 12, as well as vocational education. It analyzes the aims, needs and requirements of education and recommends legislation to the General Assembly and Governor for the benefit of the more than 2 million school children in Illinois.			http://www.isbe.net/	

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Lead Poisoning Prevention Grants	Environment	Funding		The EPA's Lead Poisoning Prevention Grant Program was mothballed as of 2010. Between 2000 and 2010, EPA awarded \$17.2 million in grants for projects to prevent lead poisoning, especially in disadvantaged communities and areas with older building stock. Grants often focused on safe renovations of old homes and schools, especially targeting small children and construction workers who are especially vulnerable to lead poisoning.			http://www2.epa.gov/lead/lead-outreach-partnerships-and-grants	
Forest Preserve District of Cook County	Environment	Governmental Organization		The Forest Preserve of Cook County manages nearly 70,000 acres of land, mostly in suburban Cook County surrounding Chicago. Holdings include forests, prairies, wetlands, and waterways in designated nature preserves and other recreational lands. Forest Preserve also operates nature centers and environmental outreach and education programs serving the Chicago metropolitan area.	CPD	536 North Harlem Ave. River Forest, IL 60305	http://pdcc.com/	
Growing Power, Inc.	Food	NGO	A	Growing Power is a Milwaukee-based food access non-profit with a Chicago project office and farm at an abandoned industrial site in the Bridgeport community. Growing Power educates at-risk youth about urban agriculture and community food systems. It also operates several farmers markets on Chicago's West and South Sides and sells fresh produce in Chicago area Walgreens stores. GP Chicago has received hundreds of thousands of dollars in CCT grants over the past several years in support of its activities.	CCT, Walgreens	3333 S. Iron St., Chicago, IL 60608	http://www.growingpower.org/	
Anthony Marano Company	Food	Business Entity	A	Originally a tomato packing plant, Anthony Marano Company has grown into a large-scale fruit and vegetable wholesaler, distributor, packer, and retailer serving the Great Lakes Region; 85% of its volume is sold within 90 miles of Chicago. Anthony Marano Company operates its 420,000 square-foot main facility on the northwest corner of ROTC Site A.		3000 S. Ashland Ave., Ste. 100 Chicago, IL 60608	http://www.anthonymarano.com/	http://theproducenews.com/more-company-profiles/company-profiles/5942-anthony-marano-co-positions-operation-to-continue-growth
Mariano's Bridgeport	Food	Business Entity	A	Mariano's Fresh Market is an upscale Chicago-area supermarket chain with a Bridgeport store located at 3145 S. Ashland Avenue. Mariano's is owned and operated by Roundy's Supermarkets, Inc., a Milwaukee-based regional grocery retailer.		3145 S Ashland Ave. Chicago, IL 60608	http://www.marianos.com/	
Walgreens	Food	Business Entity	A	Beginning in 2011, 20 Walgreens drugstores began retailing locally-grown produce in Chicago neighborhoods which lack other fresh food options. 45% of Walgreens stores (in Chicago) are located in or near food deserts; their "food oasis" pilot is part of a citywide effort to reduce Chicago's food desert acreage by 20%. Urban farming non-profit Growing Power cooperates with Walgreens to source the produce.	City of Chicago, Growing Power		http://www.cityofchicago.org/city/en/depts/mayor/press_room/press_releases/2011/october_2011/mayor_emanuel_announces_the_redozennewandexpanded_grocerystoresinco.html	
Chicago International Produce Market	Food	Business Entity	A	The Chicago International Produce Market (CIPM) is a terminal produce market containing twenty-two produce merchants. CIPM sells to wholesalers, jobbers, and retail buyers in the food industry; it is not open to the public. CIPM handles shipments via freight truck and connects to nearby Midway Airport.		2404 S Wolcott Ave. Chicago, IL 60608	http://www.chicagoproducemarket.com/	
Chicago's Community Kitchens	Food	NGO		Chicago's Community Kitchens is a 14-week culinary training program for unemployed and underemployed adults run by Greater Chicago Food Depository. Students in the program assist depository staff in preparing meals for citywide hunger-prevention facilities, while acquiring hands-on job training for careers in food service.				
Kitchen Chicago	Food	Business Entity		Kitchen Chicago is a shared-use 4000 square-foot commercial kitchen on Chicago's West Side. Facilities are available for rent on an hourly basis, twenty-four hours a day, seven days a week. Kitchen Chicago serves as an incubator for new food businesses, as well as a test kitchen and training space for already established businesses.		324 N. Leavitt, Chicago, IL 60612	http://www.kitchenchicago.com/	
Kitchen Community Learning Gardens	Food	NGO		Kitchen Community is a 501(c)(3) non-profit that promotes food and nutrition education through Learning Gardens at urban schools. Kitchen Community has established over 180 Learning Gardens nationwide, including 100 in Chicago alone. Kitchen Community is the philanthropic arm of The Kitchen Family of restaurants, based in Colorado.			http://thekitchencommunity.org/learning-gardens/	

ACTOR	CATEGORY	CLASSIFICATION	SITE	DESCRIPTION	ASSOCIATED ACTORS	ADDRESS	SOURCE	ADDITIONAL NOTES
Greater Chicago Food Depository	Food	NGO		Greater Chicago Food Depository is a 501(c)(3) non profit which operates Chicago's primary food bank. The Depository receives donations of unsold food from area companies, grocers, food services, fresh markets, and growers, as well as from sponsored food drives; this food is then redistributed among member agencies such as local food shelves, churches, and other community organizations. The Depository also operates mobile pantries and two Producemobiles which deliver free produce to Chicago's most under-served neighborhoods.	Mobile Pantry, Producemobile, Benton House, (area food industry)	4100 W. Ann Lurie Place, Chicago, IL 60632	http://www.chicagosfoodbank.org/	
Producemobile	Food	NGO		Greater Chicago Food Depository operates two Producemobiles, mobile market trucks which deliver free fresh fruit and vegetables to low-income communities in Chicago's food deserts.	Greater Chicago Food Depository		http://www.chicagosfoodbank.org/	
GCFD Mobile Pantry	Food	NGO		In partnership with community food shelves, Greater Chicago Food Depository manages a mobile pantry program which delivers groceries to low-income communities in Chicago's food deserts. Since 2007, Mobile Pantries have operated at nights and on weekends, in response to limited store hours in already under-served areas.	Greater Chicago Food Depository		http://www.chicagosfoodbank.org/	
Ounce of Prevention	Health	A		Provides birth-to-five early childhood programs for Chicago families in poverty. Ounce funds Chicago's Educare, Early Start and Head Start programs. It also provides home visits and prenatal counseling services, and trains early childhood care professionals. Funds the One Hope United Child Development Centers in the Bridgeport Community.	CCT	33 West Monroe Street, Suite 2400 Chicago, IL 60603	http://www.ounceofprevention.org/	
Saint Anthony Hospital	Health	AC		St. Anthony Hospital is a non-profit community-based teaching hospital adjacent to Site C that serves the disadvantaged communities of Chicago's Southwest Side. St. Anthony provides full-service medical care, social services, and community outreach. The hospital foundation has recently received substantial CCT grants for preventing and reducing obesity in the North and South Lawndale communities.	CCT	2875 W. 19th St., Chicago, IL 60623	http://www.saintanthonyhospital.org	
Christian Community Health Center	Health	NGO	B	Christian Community Health Center (CCHC) is an HSRA Health Center Grantee program that operates in the Roseland Community of Chicago. It provides affordable primary health and dental care to a medically underserved area, as well as social services including mental health and substance abuse services, HIV/AIDS services, rehabilitation services for prostitutes, homeless shelter, subsidized housing, and job training and placement. CCHC operates four health centers and a mobile health van in South Chicago.	DHHS, HSRA	9718 S. Halsted St., Chicago, IL 60628	http://www.cchc-online.org/	
Esperanza Health Centers	Health	NGO	C	Esperanza Health Center is an HSRA Health Center Grantee program that operates in the Pilsen, Little Village, and South Lawndale communities of Chicago. It provides affordable primary health care to an officially designated Medically Underserved Area in which more than half of residents live below half the poverty level. Due to the high number of Spanish-speakers in the service area, all full-time Esperanza staff are required to be bilingual and bicultural.	CCT, HSRA	2001 S. California St., Chicago, IL 60608		
HSRA Health Center Program	Health	Funding	C	The HSRA Health Center Program supports primary health care organizations in high-need, medically underserved communities. Federally-funded health centers are majority-governed by members of the communities served. Health center fees are based on patients' ability to pay. In addition to primary care, they may also provide health support services such as education, translation, and transportation to improve local health care access.	DHHS, HSRA, Esperanza Health Center, CCHC		http://www.bph.chrsa.gov/about/	
Pilsen Wellness Center	Health	C		Pilsen Wellness Center provides healthcare and social services in the predominantly Latino communities of Pilsen and Little Village, as well as other nearby neighborhoods and suburbs. The Center offers programs addressing mental health, substance abuse, homelessness, at-risk youth, HIV/AIDS, and hunger; it also runs the Latino Youth High School for at-risk and second-chance Latino students.	IPDH, CPDH, Ounce of Prevention, YCCS, ASN, Lutheran Family Services		http://pilsenwellnesscenter.org/	
Health Resources and Services Administration	Health	Governmental Organization		The Health Resources and Services Administration (HSRA) is a Federal agency of DHHS responsible for improving access to health care. HSRA programs target underserved, high-need, and economically vulnerable individuals and communities; HSRA also funds training for health care workers and coordinates the distribution of health care providers to ensure health care access in areas of greatest need.	DHHS	5600 Fishers Lane, Rockville, MD 20857	http://www.hrsa.gov/index.html	

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Chicago Health Atlas	Health	Technology		Chicago Health Atlas is an online healthcare and information resource operated by Smart Chicago. Using data from the Chicago Department of Public Health, area hospitals, universities, and other community health organizations, the Atlas presents interactive maps of citywide health statistics: local health conditions, and local health resources such as clinics, food shelves, community centers, fitness centers, and other community wellness facilities.	CDPH, UIC, Chicago, Northwestern University, Rush Hospital, Smart Chicago, etc. etc.		http://chicagohealthatlas.org/	
Department of Health and Human Services (DHHS)	Health			The U.S. Department of Health and Human Services (HHS) is the department of Federal government that oversees the American health and welfare systems and provides essential health services to the most needy. HHS administers the Medicare and Medicaid programs, which insure one in four Americans, as well as the Affordable Care Act. HHS also runs public health and social service programs targeting the most vulnerable Americans, and supports research in science, health, and human services.			www.hhs.gov	
Illinois Department of Public Health	Health	Governmental Organization		The Illinois Department of Public Health (IDPH) is the State oversees the Illinois public health system; maintains quality and safety standards for food, health care, and public recreational facilities; provides screenings and vaccinations for newborns; collects health data and monitors the outbreak of infectious disease; and runs programs to improve community health, safety, and wellness, including efforts to decrease health disparities among racial groups and income levels.	Pilsen Wellness Center	535 West Jefferson Street, Springfield, IL 62761	http://www.idph.state.il.us/	
Chicago Department of Public Health	Health	Governmental Organization		Chicago Department of Public Health (CPDH) is the municipal department responsible for overseeing public healthcare and welfare efforts in the city of Chicago. CDPH works with other state and city agencies as well as local community health groups to offer comprehensive and affordable health care to Chicago residents; maintain food quality and safety standards; address environmental hazards such as lead and radon poisoning; preventing violence against children, including bullying in schools; and preventing the spread of infectious diseases.	Pilsen Wellness Center	333 S. State Street, Room 200, Chicago, IL 60604	http://www.cityofchicago.org/city/en/d eps/cdph.html	
Healthy Chicago	Health	Funding		Healthy Chicago is the current long-term health agenda set forth by CDPH. Its goal is to ensure citywide access to healthcare, social services, nutritious food, open space for recreation, safe environments, and information regarding healthy choices and practices.			http://www.lcfs.org/	
Lutheran Family Services	Health			LCFS Illinois is a non-profit organization that provides family counseling, adoption and foster-care services, food and clothing donations, and other social services to low-income families and at-risk children in Illinois. An affiliate of Lutheran Services in America (LSA), the largest charitable organization in the U.S.	LSA		http://www.lcfs.org/	
Health Care Services Corporation (HCSC)	Health			Parent of BlueCross BlueShield Illinois, as well as BCBS plans in Montana, New Mexico, Oklahoma, and Texas.			http://www.hcsc.com/	
BlueCross BlueShield IL (BCBSIL)	Health			BCBSIL, a division of HCSC, is the largest health insurance company in Illinois, covering over 7 million members. Supports community health and wellness efforts by providing annual grants and sponsorships to Illinois 501 (c)(3) organizations. It is the current sponsor of Divvy, Chicago's public bike share system.			BCBSIL About page<http://www.bcbsil.com/company_info/who_we_are/>	
Healthy Kids, Healthy Families Initiative (HKHF)	Health	Funding		BCBSIL grant program that awards funds to Illinois 501(c)(3) health and health service non-profits. Healthy Kids, Healthy Families initiative supports projects promoting child and family wellness and through nutrition education, physical activity, safe environments, and disease prevention and management.	BCBSIL		BCBSIL Community Grants: <http://www.bcbsil.com/company_info/community/grant>	
Childhood health and Wellness Initiative	Health	Funding		BCBSIL-led initiative to promote health, nutrition, and fitness among Chicago youth. The initiative encompasses a number of grant programs and campaigns to promote exercise, combat obesity, and improve playgrounds and safe open spaces for children.	BCBSIL		BCBSIL CHWI Page: <http://www.bcbsil.com/company_info/community/childhood_health_wellness>	

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Care Van Program	Health	Service		Three BCBSIL-operated mobile clinics that, in partnership with statewide municipal and county health departments, offer free health services including immunizations, dental sealants, and lead screenings.	BCBSIL(+), Chicago DPH, Consulate General of Mexico in Chicago, Chicago Aldermanic Offices, CPD		http://www.bcbsil.com/company_info/community/carevan	See: Recovery Act of 2009, esp. Title XII (p. 897) < http://www.gpo.gov/fdsys/pkg/PLAW-111publ5/pdf/PLAW-111publ5.pdf >
Purple Binder	Health	Technology		Chicago-based community health data portal. Contains community healthcare API for app developers.			http://purplebinder.com/	
Chicago Infrastructure Trust	Infrastructure			City of Chicago-initiated trust to fund the development of and access to both hard and soft infrastructure in Chicago. The Trust is funded by joint ventures and private equity, public-private partnerships, and state, federal, and private grants. The Trust issues RFP/RFI and also accepts unsolicited proposals for short- and long-term projects.		35 E. Wacker Drive Suite 1450 Chicago, IL 60601	http://chicagoinfrastructure.org/	
Chicago Metropolitan Agency for Planning	Planning	Governmental Organization		The Chicago Metropolitan Agency for Planning (CMAP) is a municipal corporation created by the Illinois General Assembly in 2005 responsible for regional planning in the Chicago metro counties of Cook, DuPage, Kane, Kendall, Lake, McHenry, and Will. Its board consists of five members representing Chicago, appointed by the mayor of Chicago, five from suburban Cook County, and five representing each of the remaining counties.		Willis Tower Ste. 800, 233 South Wacker Drive, Chicago, IL 60606	http://www.cmap.illinois.gov/	See: IL Regional Planning Act of 2005 < http://www.iga.gov/legislation/lis/lis-3.aspx?AccID=2731&ChapActID=0%26&mbp%3BILCS%26&mbp%3B1707%2F%26&ChapterID=15&ChapActName=SPECIAL+DISTRICTS&ActName=Regional+Planning+Act >
CMAP Land Use Inventory	Planning	Technology		The Land Use Inventory is a GIS-based land survey of the Chicago metropolitan area conducted periodically by CMAP and made available for use by the public. The inventory contains fine-grained information categories useful for local agencies and small NPOs, as well as for federal and state agencies, universities, and other NGOs.	CMAP		http://www.cmap.illinois.gov/data/land-use/inventory	
CMAP Local Technical Assistance Program	Planning	Funding		CMAP's Local Technical Assistance (LTA) Program provides Chicago area communities with resources and assistance for undertaking projects that improve community livability, education and workforce development, government efficiency, and regional mobility under the GO TO 2040 plan. The LTA program is funded by a HUD Sustainable Communities Regional Planning Grant, as well as by FHWA, FTA, EDA, IDOT, Illinois Attorney General, Illinois EPA, Illinois DNR, and Chicago Community Trust.	CMAP, HUD, FHWA, FTA, EDA, IDOT, IL Attorney General, IL EPA, IL DNR, Chicago Community Trust, Local Governments and NGOs		http://www.cmap.illinois.gov/programs-and-resources/lta	
GO TO 2040	Planning	Policy/Legislation		GO TO 2040 is CMAP's comprehensive regional plan for greater metropolitan Chicago. The plan encompasses four broad themes: livable communities, human capital, efficient governance, and regional mobility. Within those themes, the plan calls for projects addressing housing, land use, water and energy use, local food production, parks, education, workforce development, tax policy reform, information access, investment coordination, transportation investment, public transit, and freight networks.			http://www.cmap.illinois.gov/about/2040	http://www.cmap.illinois.gov/documents/10180/17842/GO+TO+2040+short-plan_10-7-2010_FINAL.pdf/2840498d-96a-43fa-9784-9d8f364b4547
Chicago Park Fitness Centers	Recreation	Governmental Organization		Chicago Park District operates 70 fitness centers in parks around the city, as a way to provide city-wide access to low-cost, quality fitness options. Fitness Centers are equipped with exercise equipment and may also offer instructor-led fitness classes. Membership fees range from \$30-\$60 for three months of access; membership fees may be waived for Chicago residents with a doctor's prescription for exercise needed for obesity-related diseases such as diabetes, asthma, or cardiopulmonary conditions.	CPD		http://www.chicagoparkdistrict.com/facilities/fitness-centers/	
NeighborSpace	Recreation	NGO	AC	NeighborSpace is a non-profit land trust formed by the City of Chicago, the Chicago Park District, and the Forest Preserve District of Cook County, in cooperation with Chicago community, land-use, and green space organizations. NeighborSpace acquires and preserves existing community-developed gardens, parks, and other open green spaces which are jeopardized by development, lack of funding, or other threats.	City of Chicago, CPD, FPDC		http://neighbor-space.org/	
Lowden Homes	Social Services	Governmental Organization	B	Lowden Homes is a 127-unit public housing complex managed by Chicago Housing Authority. The complex is bordered by 95th Street to the south and S. Wentworth Avenue to the east.	HUD, CHA	95th St/S. Wentworth Ave	http://www.thecha.org/pages/Lowden_Homes/50.php?devID=261	

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Albany Terrace Apartments	Social Services	Governmental Organization	C	Albany Terrace Apartments is a seniors-only public housing tower in South Lawndale managed by the Chicago Housing Authority.	HUD, CHA	3030 W. 21st Place, Chicago IL 60623	http://www.thecha.org/pages/Albany_Terrace_Apartments/50.php?devID=203	
Lawndale Gardens	Social Services	Governmental Organization	C	Lawndale Gardens is a 125-unit public housing complex in North Lawndale managed by the Chicago Housing Authority. The complex is one of several CHA properties selected by CHA, Smart Chicago and a citywide technology alliance to receive a NTIA-funded public computer center to boost digital literacy and broadband internet access among low-income residents in the community.	CHA, Smart Chicago, Public Computer Centers, NTIA, BTOP, IDCEO.	California Ave and 25th Street	www.oc.gov/grantees/CityofChicago2	
Chicago Department of Family and Support Services	Social Services	Governmental Organization		The Chicago Department of Family & Support Services (DFSS) is dedicated to supporting a continuum of coordinated services to enhance the lives of Chicago residents, particularly those most in need, from birth through the senior years. The department works to promote the independence and well-being of individuals, support families and strengthen neighborhoods by providing direct assistance and administering resources to a network of community-based organizations, social service providers and institutions.			https://www.cityofchicago.org/city/en/depts/fss.html	
QTS Realty Trust	Technology	Business Entity	A	QTS Realty Trust purchased a 317,000 square-foot building on a 30-acre site at 2800 S. Ashland Ave. from the Chicago Sun-Times. Formerly a Sun-Times printing facility, the building will be converted into a temperature-controlled, secured data center to host and manage other companies' servers. QTS is one of the fastest-growing data center operators in the U.S., maintaining twelve other data centers in eight states.			https://www.suntimes.com/business/2881293-420/former-sun-times-plant-solid-for-38m-will-host-data-centers.html#:~:q=OKW_IJUSV	
Charles Shaw Technology Center	Technology	NGO	C	Charles Shaw Technology Center is a North Lawndale community learning center and home of Henry Ford Academy, Power House High (HFA/PHH) charter school. The Center was established inside the converted historic powerhouse of the former Sears, Roebuck & Company world headquarters.		931 S. Honan Ave, Chicago, IL 60624	http://www.honansquare.org/charles-shaw-technology-and-learning-center-0	http://www.cmap.illinois.gov/documents/10180/262443/CharlesShawTechnologyCenter.pdf
Application Program Interface	Technology	Technology		Application program interfaces (API) specify and facilitate interactions between separate software applications. APIs may be published as an open framework for sharing dynamic data between applications. An environmental program interface (EPI) can post data representations of dynamic real-world conditions, for example the geospatial locations of buses and trains in a transit system, allowing related software and apps to make decisions based on real-time information.			http://en.wikipedia.org/wiki/Application_programming_interface	
National Telecommunications & Information Administration	Technology	Governmental Organization		NTIA is the Executive Branch agency that is principally responsible for advising the President on telecommunications and information policy issues. NTIA's programs and policymaking focus largely on expanding broadband internet access and adoption in America, expanding the use of spectrum by all users, and ensuring that the Internet remains an engine for continued innovation and economic growth.			https://www.ntia.doc.gov/home	
Broadband Technology Opportunities Program	Technology	Funding		The Broadband Technology Opportunities Program (BTOP) is an approximately \$4 billion grant program administered by NTIA to help bridge the technological divide; create jobs; and improve education, health care, and public safety in communities across the country. Funded by the American Recovery and Reinvestment Act of 2009, BTOP projects are deploying broadband Internet infrastructure, enhancing and expanding public computer centers, and encouraging the sustainable adoption of broadband service.			https://www.ntia.doc.gov/category/broadband-technology-opportunities-program	
Smart Chicago Public Computer Centers	Technology	NGO		Smart Chicago has received grants from NTIA's Broadband Technology Opportunities Program and from the Illinois Department of Commerce and Economic Opportunities to establish public computer centers across the city of Chicago. Partners CHA and Chicago Community Colleges have also agreed to construct public computer centers at their own facilities in order to improve computer and internet access among low-income communities and to help narrow the digital literacy divide among Chicago residents.	Smart Chicago, NTIA, BTOP, IDCEO, CHA, CCC, Lumity, Lawndale Gardens		http://www.ntia.doc.gov/grantees/CityofChicago2	
Chicago Department of Information and Technology	Technology	Governmental Organization		The Department of Innovation and Technology (DoIT) was introduced in 2008 to add innovation to the charter of the former Department of Business and Information Services. As the central information technology organization for the City, DoIT provides a number of technology and telecommunications services to departments, the Mayor, Aldermen, other city agencies, residents, businesses and tourists.		333 S State St #420, Chicago, IL 60604	https://www.cityofchicago.org/city/en/depts/doit.html	

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Community Technology Centers (CTC CONNECT)	Technology			Community Technology Centers (CTCs) play a vital role in communities and are in jeopardy due to declined funding. CTCs level the playing field by providing access to computers, internet, software and training for a nominal fee, if not free. CTCs are a safe place for youth and families to do homework, unemployed and underemployed to gain skills and information to improve their economic opportunities, and for the elderly to stay connected with friends, family and the community.			http://www.smartchicagocolaborative.org/work/broadband-technology-opportunities-program/ctc-connect/	
Eliminate the Digital Divide Program	Technology			The Eliminate the Digital Divide grant program seeks to provide access to computers, telecommunications technologies and related training to disadvantaged communities. Under this program, the Illinois Department of Commerce and Economic Opportunity (DCEO) is authorized to award grants of up to \$75,000 to plan, establish, administer and expand Community Technology Centers (CTCs) and to support basic computer literacy training programs. http://www.illinois.net/IBDP/IBDP.htm			http://www.broadbandillinois.org/Use-It/Eliminate-the-Digital-Divide-Grants0.html	
Connect Chicago	Technology			Connect Chicago is a unique collaboration of dynamic partners centered at The Chicago Community Trust, the region's community foundation and led by Smart Chicago, an organization serving as a center of gravity for investments around digital excellence since its inception.			http://www.smartchicagocolaborative.org/work/special-initiatives/connect-chicago/	
Canadian National Railway Company	Transportation	Business Entity	A	Owner of Metra tracks along Heritage Corridor (Chicago-Joliet). CN has been engaged in a trackage-rights agreement with Metra since purchasing the line in 1996. CN Heritage Corridor tracks run through ROTC Site A, and while Metra operates three round trip commuter services daily, no Metra station currently exists in the vicinity.	Metra (+)	935 de La Gauchetière Street West, Montreal, Quebec, H3B 2M9	http://www.cn.ca/	
Rockefeller Foundation	Transit	Funding	A	Since 2012, The Rockefeller Foundation has supported the development of CTA's Ashland Avenue BRT line, providing grants and public advocacy for the project. Rockefeller backs CTA, CDOT, Chicago Community Trust, Chicago Infrastructure Trust, Metropolitan Planning Commission, Active Transportation Alliance, Urban Land Use Institute, and Chicago Architecture Foundation in their joint campaign to raise awareness, support, and funding for BRT development in Chicago. Rockefeller also funds ITDP's campaign to develop BRT and other transit access programs nationwide.	ITDP, CTA, CDOT, CCT, CAF, CTA, Chicago Infrastructure Trust, Ashland BRT		http://www.rockefellerfoundation.org/our-work/current-work/bus-rapid-transit	
Ashland BRT	Transit	Governmental Organization	A	CTA and CDOT are currently designing a dedicated right-of-way bus rapid transit (BRT) route along Ashland Avenue from 95th Street to Irving Park Road. The first phase, still in its design phase, will travel from the 31st Street to Cortland Avenue, with connections to CTA Orange, Blue, Pink, and Green line trains. The proposed route would replace the CTA #9 Bus, which currently has the highest ridership of any CTA Bus line in the city. Development of Ashland BRT is supported by a wide range of city agencies and outside organizations, and has received over \$1 million in funds from the Rockefeller Foundation.	CTA, CDOT, ITDP, CCT, CAF, CTA, CT, Rockefeller Foundation		http://www.transitchicago.com/ashland-brt/	
CTA Orange Line	Transit	Governmental Organization	A	The Orange Line provides rapid transit train service between Midway Airport and downtown (Loop), and provides service to Chicago's Southwest Side.			http://www.transitchicago.com/orangeline/	
Amtrak	Transit	Business Entity	AC	Amtrak is a publicly-funded, for-profit corporation, and is the sole national passenger rail service in the U.S. Amtrak's shares trackage rights with Canadian National Railway and Metra trains on Chicago's southwestern Heritage Corridor, and with BNSF and Metra on the western BNSF commuter line.	DOT, FRA, IDOT, CDOT, RTA, Metra, CN, BNSF		www.amtrak.com	
Greyhound Lines, Inc	Transit	Business Entity	B	Greyhound Bus Lines is a private intercity bus company. Greyhound buses serve Chicago's South Side through the 95th Street/Dan Ryan Station; transfers are available here to the CTA Red Line, CTA Buses, Pace Regional Buses, and Indian Trails intercity buses.	CTA, Pace, Indian Trails			
Indian Trails	Transit	Business Entity	B	Indian Trails is a Michigan-based intercity bus company serving the western Great Lakes region. Indian Trails bus routes serve Chicago's South Side through the 95th St/Dan Ryan station; transfers are available here to the CTA Red Line, CTA Buses, Pace Regional Buses, and Greyhound intercity buses.	CTA, Pace, Greyhound			

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BNSF	Transit	Business Entity	C	BNSF Railway Company, now a subsidiary of Berkshire Hathaway, Inc. is one of North America's largest freight rail companies, with a network of 32,500 miles, mainly in the central and western U.S. BNSF also shares trackage rights with commuter services. In Chicago, BNSF owns and operates a Metra-branded commuter line, Metra's busiest, to Aurora serving Chicago's West Side and western suburbs, Amtrak also shares this route.	RTA, Metra, Amtrak, Berkshire Hathaway		http://www.bnsf.com/about-bnsf/pdf/fact_sheet.pdf	
Alta Bicycle Share Inc.	Transit	Business Entity	C	Alta Bicycle Share Inc. was reorganized as Motivate. Motivate is a global bike share leader. Motivate partners with governments and brands in some of the largest cities in the world.		547 W. Jackson Blvd., Chicago, IL 60661	https://www.motivateco.com/	Commuter Rail ridership statistics: http://www.apta.com/resources/statistics/Documents/Ridership/2013-q4-ridership-APTA.pdf
Metra	Transportation	METRA	A	Metra is the commuter rail division of RTA, operating heavy rail lines throughout the Chicago metropolitan area. Metra has the fourth highest annual ridership among American commuter rail systems, carrying an average of 232,600 passengers daily. Metra owns all rolling stock and is responsible for most stations, although private rail companies still own a number of the tracks and other operations facilities, and control rights of way and passenger operations on certain routes. Metra's Heritage Corridor passes through Site A, but does not maintain stops nearby.	CDOT(+), CTA(+), Rockefeller Foundation (+)	9 East 19th Street, 7th Floor, New York, NY, 10003	https://go.itdp.org/display/live/Home	https://go.itdp.org/display/live/Home
Institute for Transportation & Development Policy	Transportation	NGO	A	ITDP is a New York-based non-profit organization that advocates for community- and environment-friendly transit systems and urban development worldwide. In Chicago, ITDP is an active partner with CDOT and CTA in the development of the Ashland Avenue BRT Line (Phase 1 southern terminus at ROTC Site A). ITDP and board member/former Bogota, Colombia mayor Enrique Peñabazá have also developed connections with Chicago mayor Rahm Emanuel and the Rockefeller Foundation.				see also FHWA MAP-21 Website http://www.fhwa.dot.gov/map21/
Moving Ahead for Progress in the 21st Century (MAP-21)	Transportation	Policy/Legislation, Funding	ABC	MAP-21 is a 2012 federal act authorizing funding for surface transportation programs and infrastructure. It promotes projects that research transportation systems and technologies; which improve traffic safety, transportation infrastructure, congestion, transportation systems efficiency, the national freight network; which protect the natural environment; and which enhance project implementation and delivery. Most MAP-21 programs receive draw funding from the Highway Trust Fund, which is supported by federal motor fuel taxes. MAP-21 replaces transportation funding laws ISTEA, TEA-21, and SAFETY-LU.	US Congress(+), DOT(+), FHWA(+), FTA(+)		http://www.gpo.gov/fdsys/pkg/PLAW-112publ141/pdf/PLAW-112publ141.pdf	
§1113: Congestion Mitigation & Air Quality Improvement Program	Transportation	Funding	ABC	MAP-21 Section 1113 authorizes the Congestion Mitigation and Air Quality Improvement (CMAQ) Program, granting flexible funding to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Projects must reduce congestion and improve air quality for areas not meeting national air quality standards and for maintaining quality in formerly noncompliant areas. Eligible projects include traffic monitoring upgrades, traffic flow improvements, and implementation of multimodal traffic information systems.	MAP-21(+), FHWA(+), FTA(+), DOT(+), CDOT(+), RTA(+)		FHWA MAP-21/CMAQ Fact Sheet: http://www.fhwa.dot.gov/legislation_law/ab-out_FTA_14037.html	
Chicago Transit Authority	Transportation		BC	CTA is the urban rapid transit division of RTA, operating rapid rail and bus systems in Chicago. CTA operates the second largest public transit system in the U.S., and its bus and rail transit systems each rank third in the U.S. in terms of ridership. There are eight heavy rail transit lines radiating out from Chicago's Loop, and 140 bus lines serving Chicago's communities. ROTC Sites B and C are served by the CTA Red and Pink lines respectively. Sites A, B, and C are served by a number of CTA bus lines.	RTA(+), Metra(+), Pace(+)	567 W. Lake Street, Chicago, IL 60661	www.transitchicago.com	
Pace Regional Bus	Transportation		B	Pace is the suburban bus transit division of RTA, operating conventional fixed-route bus systems as well as ADA paratransit buses and vanpool services. Pace Routes 352, 353, 359, 381, and N9 serve ROTC Site B.	RTA, CTA, Metra	550 W. Algonquin Rd., Arlington Heights, IL 60005	www.pacebus.com	
Divvy	Transportation	Service	C	Public bike-share service operated by CDOT and sponsored in part by BCBSIL. Divvy stations are concentrated around the Loop and also cover the North Side, Blue Line corridor to Logan Park, the Near-South Side lakeshore to Hyde Park, and the Near West as far as UIC and Pilsen. The Bike station located at Site C (Pink California/Cermak) is the westernmost station in the system; Divvy does not serve Sites A or B, along with the West and South Sides of Chicago.	CDOT(+), Alta Bicycle Share, Inc(+), BlueCross Blueshield IL(+)		http://www.divvybikes.com/	Divvy station map: http://www.divvybikes.com/stations
U.S. Department of Transportation	Transportation	Governmental Organization		The US Department of Transportation (DOT) is the department of the federal government which develops, coordinates, and administers national transportation policies and programs. DOT's stated purpose is to develop policies and programs conducive to the provision of fast, safe, efficient, and convenient transportation at the lowest cost consistent therewith and with other national objectives, including the efficient utilization and conservation of the Nation's resources."	US Executive Branch, US Congress (+), DOI(+), HUD(+), USDA(+), NTSB(-), FHWA(-)	1200 New Jersey Ave SE, Washington, DC 20590	www.dot.gov	see: Department of Transportation Act of 1966 http://www.gpo.gov/fdsys/pkg/STATUTE-80/pdf/STATUTE-80-Pg931.pdf

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Federal Highway Administration	Transportation	Governmental Organization		The Federal Highway Administration (FHWA) is a DOT agency that supports State and local governments in the design, construction, and maintenance of the U.S. highway system.	DOT(+), FTA(+), MAP-21(-)	1201 New Jersey Ave SE, Washington, DC 20590/ Illinois Executive Park Drive, Springfield, IL 62703	http://www.fhwa.dot.gov/about/	
Federal Transit Administration	Transportation	Governmental Organization		The Federal Transit Administration (FTA) is a DOT agency that provides federal funding and technical assistance to public transit systems including bus, rail, ferry, and other urban mass transit modes.	DOT(+), FHWA(+), MAP-21(-)	1201 New Jersey Ave SE, Washington, DC 20590/200 West Adams Street, Suite 320, Chicago, IL 60606	www.fta.dot.gov	see also: FTA Notices of Funding Availability for current and expired grant programs < http://www.fta.dot.gov/grants/13077.html >
FHWA/FTA Flexible Funds	Transportation	Policy/Legislation		(allowance for interagency transfer of certain FHWA/FTA funding, formerly a special allowance in ISTEA, TEA-21, and SAFETEA-LU; has possibly been more smoothly integrated within current MAP-21 framework)	FHWA(+), FTA(+), MAP-21			
Tiger Discretionary Grants	Transportation	Funding		The Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant program authorizes DOT to allocate Federal funding to multi-modal, multi-jurisdictional transportation projects. These complex, multifaceted projects, such as Chicago's CREATE, had been difficult to fund under earlier federal transportation funding frameworks.	DOT(+), CREATE (-) (municipal govt, county, port authority, tribal govt, MPO, state DOT, transit agencies) (-)		http://www.dot.gov/tiger	
United States Code Title 49	Transportation	Policy/Legislation		U.S.C. 49 is the area of Federal law concerned with transportation. Subtitle III contains regulations and programs related to a wide variety of general and intermodal transportation programs, including urban public transportation and intermodal transportation and transfer infrastructure; Subtitle V relates to national passenger rail networks including Amtrak and high-speed rail development.	US Congress(+), DOT(-), MAP-21		http://www.law.cornell.edu/uscode/tx/49	
\$5303: Metropolitan Transportation Planning	Transportation	Funding		Section 5303 authorizes funding and administers procedures for short- and long-range multimodal transportation planning in metropolitan areas. Section 5303 also requires that MPOs be formed for metropolitan areas larger than 50,000 people. (See also: MAP-21 §20005)	FTA(+), State Government(+), MPO(-)		http://www.law.cornell.edu/uscode/tx/49/5303	http://www.fta.dot.gov/documents/Map-21_Fact_Sheet_-_Metropolitan_and_Statewide_and_Nonmetropolitan_Transportation_Planning.pdf
\$5307 & \$340: Urbanized Area Formula Grants	Transportation	Funding		Sections 5307 and 5340 authorize the provision of grants to urbanized areas for public transportation capital, planning, job access and reverse commute projects. Funding may also be applied to transit system operating costs in cities with population under 200,000 or in larger cities that operate no more than 100 buses on fixed routes. Federal funding may account for up to 80% of capital expenditures and ADA non-fixed-route paratransit services and up to 50% of project operating costs. (See also: MAP-21 §20007, 20026)	US Congress(+), DOT(-), State/local governments, Transportation Authorities		http://www.law.cornell.edu/uscode/tx/49/5307	See also FTA MAP-21 Fact Sheet: < http://www.fta.dot.gov/documents/Map-21_Fact_Sheet_-_Urbanized_Area_Formula_Grants.pdf >
\$5309: Fixed Guideway Capital Investment Grants	Transportation	Funding		Section 5309 allows DOT to make grants to State and local governmental authorities for fixed guideway transit projects, including any rail and dedicated right-of-way bus rapid transit systems. Funding may be used for acquiring real property, rights-of-way, and new rolling stock, and for relocation costs associated with new projects. Funding may also be used to improve the capacity of existing systems (e.g. signal updates, double-tracking, platform expansions, infill stations, etc.) if the project increases core capacity by 10+%. (See also: MAP-21 §20008)	US Congress(+), DOT(-), State/local governments		http://www.law.cornell.edu/uscode/tx/49/5309	See also FTA MAP-21 Fact Sheet: < http://www.fta.dot.gov/documents/Map-21_Fact_Sheet_-_Fixed_Guideway_Capital_Investment_Grants.pdf >
New Starts Small Starts	Transportation	Funding		The New Starts Program covered a variety of small scale or low-cost transit development projects which, under now-obsolete SAFETEA-LU, were separately eligible for Section 5309 CIG funding. Small Starts were fixed-guideway transit projects costing less than \$250M and requiring less than \$75M in Small Starts funding. "Very Small Starts" were even lower-cost, lower-risk bus, rail, or ferry projects. The New Starts Program has been streamlined under MAP-21, and projects formerly eligible for New or Small Starts funding are now rated under the more general Section 5309 CIG funding. (see: §5309).	FTA(+), DOT(+), COOT(+), RTA(-), CTA(-)		http://www.fta.dot.gov/12304_2608.html	see also: < http://www.fta.dot.gov/12304.html >
\$5316: Job Access & Reverse Commute Program	Transportation	Funding		Title 49, Section 5316 was repealed with the introduction of MAP-21. The Job Access and Reverse Commute (JARC) Program encouraged the development of public transit options connecting low-income persons and welfare recipients in poor inner-city or rural areas with new entry-level jobs primarily located in wealthier suburban areas. Under MAP-21, many JARC-type projects are now covered by the Urbanized Area Formula Grant Program (see §5307).			http://www.fta.dot.gov/grants/13093_3550.html	See also: < http://www.law.cornell.edu/uscode/tx/49/5316 >

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\$5337: State of Good Repair Grants	Transportation	Funding		Section 5337 authorizes funding for the maintenance and upgrade of rail transit systems and high-intensity bus systems that operate in HOV lanes, including BRT. Projects eligible for funding include the maintenance, upgrade, and replacement of rolling stock, track/surface lanes, signal and communications systems, power infrastructure, passenger stations and terminals, maintenance and support facilities, and operational support equipment including computer hardware and software. (See also: MAP-21 §20027)	FTA(+), IDOT(+), CDOT(+), RTA(+), CTA(-)		http://www.law.cornell.edu/uscode/text/49/5337	See also FTA MAP-21 Fact Sheet: < http://www.fta.dot.gov/documents/Map-21_Fact_Sheet_State_of_Good_Repair_Grants.pdf >
\$5339: Bus and Bus Facilities	Transportation	Funding		Section 5339 authorizes Federal funding for replacing, rehabilitating, and purchasing buses, vans, and other related equipment, and for the construction of bus-related facilities. Section 5339 funding may be allocated to designated recipients who operate fixed-route bus systems or who allocate funds to such operators; these funds may be reallocated to subrecipients such as public agencies and non-profit transit organizations. (See also: MAP-21 §20029)	US Congress(+), DOT(-), State/local governments		http://www.law.cornell.edu/uscode/text/49/5339	See also FTA MAP-21 Fact Sheet: < http://www.fta.dot.gov/documents/Map-21_Fact_Sheet_Bus_and_Bus_Facilities.pdf >
\$5310: Enhanced Mobility of Seniors & Persons with Disabilities	Transportation	Funding		Title 49, Section 5310 authorizes Federal funding for public transportation alternative projects that meet the special needs of seniors and individuals with disabilities. Grants may be applied to public paratransit systems, public transportation projects exceeding ADA requirements, public transportation projects that improve access to regular fixed-route service, or alternatives to public transportation. States, local government authorities, private non-profit organizations, and public transit operators are eligible to receive Section 5310 funding. (See also: MAP-21 §2009)	US Congress(+), DOT(-), FTA(+), IDOT(-), CDOT(-), RTA(+), CTA(-)		http://www.law.cornell.edu/uscode/text/49/5310	See also FTA MAP-21 Fact Sheet: < http://www.fta.dot.gov/documents/Map-21_Fact_Sheet_Enhanced_Mobility_of_Seniors_and_Individuals_with_Disabilities.pdf >
\$1106: National Highway Performance Program	Transportation	Funding		MAP-21 Section 1106 authorizes the National Highway Performance Program (NHPP) which funds projects that improve the condition and performance of the National Highway System (NHS). NHPP also covers the construction of new facilities on the NHS, and includes funding for highway-integrated bus terminals, pedestrian/bicycle infrastructure, information systems, as well as highway maintenance, upgrades, and construction.	MAP-21(+), DOT(+), IDOT(-), CDOT(-), RTA(-), CTA(-), Pac(-)		FHWA MAP-21/NHPP Fact Sheet: < http://www.fhwa.dot.gov/map21/factsheets/nhpp.cfm >	
\$1108: Surface Transportation Program	Transportation	Funding		MAP-21 Section 1108 authorizes the Surface Transportation Program (STP), which provides flexible funding for States and localities undertaking projects that preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.	MAP-21(+), DOT(+), IDOT(-), CDOT(-), RTA(-)		FHWA MAAP-21/STP Fact Sheet: < http://www.fhwa.dot.gov/map21/factsheets/stp.cfm >	Wide-ranging funding possibilities. See fact sheet for more detailed list of eligible projects.
\$1112: Highway Safety Improvement Program	Transportation	Funding		MAP-21 Section 1112 authorizes the Highway Safety Improvement Program (HSIP), which provides Federal funding for projects addressing hazardous road conditions and specific safety hazards. Eligible projects include roadway and shoulder widening, installation of roadway warning devices, improvement of rail at-grade crossings, removal of roadside hazards, improvement of signage and markings, installation or improvement of traffic control devices, installation of workzone protection measures, installation of emergency communications equipment, and collection of safety data.	MAP-21(+), DOT(+), IDOT(-)		FHWA MAP-21/HSIP Fact Sheet: < http://www.fhwa.dot.gov/map21/factsheets/hsip.cfm >	
\$1119: Federal Lands Access Program	Transportation	Funding		MAP-21 Section 1119 authorizes the Federal Lands Access Program (FLAP), which provides funds for infrastructure and facilities projects within, adjacent to, or accessing Federal lands.	MAP-21(+)		FHWA MAP-21/FLAP Fact Sheet: < http://www.fhwa.dot.gov/map21/factsheets/flap.cfm >	
\$1122: Transportation Alternatives Program	Transportation	Funding		MAP-21 Section 1122 authorizes the Transportation Alternatives Program (TAP); TAP funds are transferable to NHPP, STP, HSIP, CMAQ, and Metro Planning funded projects. TAP Eligible projects include pedestrian and bicycle infrastructure, conversion of railroad corridors for alternative transportation, and community improvement activities along transitways. TAP funds are allocated to the State DOT, and distributed among local governments, transit agencies, public land agencies, school districts, and any other local governmental entity that oversees transportation or recreational routes.	MAP-21(+), DOT(+), IDOT(-), RTA(-), CDOT(-), CTA(-), CPS(-), CPD(-)		FHWA MAP-21/TAP Fact Sheet: < http://www.fhwa.dot.gov/map21/factsheets/tap.cfm >	
\$2002: Transportation Infrastructure Finance & Innovation Act	Transportation	Funding		MAP-21 Section 2002 authorizes the Transportation Infrastructure Finance and Innovation Act (TIFIA) Program, which provides Federal credit assistance to surface transportation projects. Eligible projects include all projects eligible under MAP-21, intercity passenger bus and rail facilities, public and private freight rail, intermodal freight transfer facilities, and projects providing access to or improving service of the above. TIFIA is intended to supplement private investment and to compensate for market gaps.	MAP-21(+)		FHWA MAP-21/TIFIA Fact Sheet: < http://www.fhwa.dot.gov/map21/factsheets/tifia.cfm >	
\$5 52001-52003: Highway Research & Development	Transportation	Funding		MAP-21 Sections 52001-52003 authorize the Highway Research and Development (HRD) Program, which provides up to 80% Federal funding from the Highway Trust Fund for research on and implementation of improving highway safety, infrastructure integrity, and transportation system performance, operations, and productivity.	MAP-21(+)		FHWA MAP-21/Highway Research and Development Program Fact Sheet: < http://www.fhwa.dot.gov/map21/factsheets/hrd.cfm >	

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Federal Railway Administration	Transportation	Governmental Organization		The Federal Railway Administration (FRA) is the agency within DOT responsible for regulating national passenger and freight rail corridors. Of 760 railroads overseen by FRA, 640 are freight railroads, and 27 are passenger lines. FRA regulations are primarily concerned with rail safety; however, certain FRA programs also encourage research, technology development, and capital investment in national rail corridors and infrastructure.	DOT(+), FTA(+), Metra (-), Amtrak(-), UP(-), BNSF(-), CP(-), CN(-), NS(-), CSX(-), B&E(-)	1200 New Jersey Ave SE, Washington, DC 20590	http://www.fra.dot.gov	
§ 20154- RailLine Relocation	Transportation	Funding		Although formerly authorized by Title 49, Section 20154, the Rail Line Relocation and Improvement Capital Grant Program (RLR), funding is no longer available under MAP-21. RLR was established in 2008 under SAFETEA-LU to provide funding to state and local governments in order to mitigate "the adverse effects created by the presence of rail infrastructure," with respect to safety, traffic flow, community quality of life, or economic development. RLR funding also applies to any projects which involve either the lateral or vertical relocation of portions of rail lines.	FRA(+)			
Illinois Department of Transportation	Transportation	Governmental Organization		The Illinois Department of Transportation (IDOT) is an agency of the Illinois State government formed in 1972. It regulates and allocates funding for all transportation facilities and infrastructure in the state, including road, rail, waterways, air, and intermodal systems, and both freight and passenger transportation. IDOT Region 1 serves the Chicago metropolitan area.	DOT(+)	2300 S. Dirksen Parkway, Springfield, IL 62764	http://www.ilga.gov/legislation/lcs/lcs5.asp?ActID=354&ChapterID=5	
IDOT Economic Development Program	Transportation	Funding		IDOT makes available state funding for IL highway improvement projects that expand access to industrial, distribution, or tourist developments and promote the creation and retention of full-time jobs. Projects expanding access to retail, office, education, or government facilities are not eligible for EDP funding.	CDOT(+)		http://www.idot.illinois.gov/transportation-system/local-transportation-partners/county-engineers-and-local-public-agencies/funding-opportunities/economic-development-program	
Chicago Department of Transportation	Transportation	Governmental Organization		"The Chicago Department of Transportation's mission is to keep the city's surface transportation networks and public safe for users, environmentally sustainable, in a state of good repair and attractive, so that its diverse residents, businesses and guests all enjoy a variety of quality transportation options, regardless of ability or destination." "The current CDOT commissioner is Reebekah Scheinfeld, former CPO and Senior VP at CTA.	City of Chicago (+), CTA(?), CREATE(-)	30 N. LaSalle St. Ste 1100, Chicago, IL 60602	http://www.cityofchicago.org/city/en/depts/cdot.html	CDOT Org Chart: < http://www.cityofchicago.org/content/dam/city/depts/cdot/Admin/CDOT_OrgChart_2013.pdf >
Regional Transit Authority	Transportation	Governmental Organization		RTA is a special-purpose unit of government and municipal corporation of the State of Illinois. It is responsible for regional transit planning as well as financial and budgetary oversight of its three subsidiary transit operators: CTA, Metra commuter rail, and Pace suburban bus.	CTA (-), Metra(-), Pace(-)		www.rtachicago.com	
Transit Trackers	Transportation	Technology		GPS tracking application available for CTA Bus and Rail, Metra, and Pace.	RTA, CTA, Metra, Pace		http://rtpsweb.rtachicago.com/showNextTrainBusForm.htm#	
CTA Bus Tracker	Transportation	Technology		CTA Bus Tracker is an online and mobile app that allows riders to track the location and estimated arrival time of individual buses on their devices via GPS.	RTA, CTA		http://ctabustracker.com/bustime/home.jsp	
CTA Bus/Train Tracker API	Transportation	Technology		CTA Bus Tracker API and Train Tracker API are data gateways that allow app developers to access realtime bus location and timing information. The API is accessible to all CTA app users, and may be freely integrated into new software applications.	RTA, CTA		http://www.transitchicago.com/development/default.aspx	
CTA Train Tracker	Transportation	Technology		CTA Train Tracker is an online and mobile beta app that allows riders to track the location and estimated arrival time of individual trains on their devices via GPS. Train Tracker also identifies CTA stops located near the user.	RTA, CTA		http://www.transitchicago.com/traintracker/	

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RTA Trip Planner	Transportation	Technology		RTA Trip Planner is an online tool that suggests multimodal routes, provides station and timing information, and tracks RTA trains and buses via GPS.	RTA, CTA, Metra, Pace		http://tripplanner.rtachicago.org/	
VENTRA	Transportation	Technology		Combined fare system for CTA/Pace, with Metra compatibility pending. The multi-use card functions as a replenishable, contactless fare card for boarding trains and as a debit card through an operating agreement with Mastercard; can be linked to personal bank accounts in order to withdraw cash.	RTA(+), CTA(+), Pace(+), Mastercard(+)		https://www.ventrachicago.com/	
Active Transportation Alliance	Transportation	NGO		Active Trans is a Chicago-based transportation advocacy group with a special focus on cycling policy and infrastructure, including intermodal transit that involves bicycles. Past projects have involved working with Metra to allow more bikes on trains. Active Trans is the main Illinois organization promoting the establishment of local Safe Routes to School programs.	9 W. Hubbard St., Ste. 402, Chicago, IL 60654		http://www.activetrans.org/	
CREATE Program	Transportation			The Chicago Region Environmental and Transportation Efficiency (CREATE) Program is a \$1.5B program encompassing 70 rail-related projects aimed at streamlining rail operations, and creating better and safer conditions for motorists and pedestrians. It is a partnership between IDOT, CDOT, Metra, Amtrak, Association of American Railroads, and major freight carriers Belt, BNSF, CP, CN, CSX, H&B, NS, and JUP. It is funded by a DOT TIGER grant.	DOT(+), TIGER(+), State of IL, City of Chicago, Metra, Amtrak, Freight RRS		www.createprogram.org	
Safe Routes to School	Transportation/Health/Education	Funding		Safe Routes to School is a nationwide partnership of local programs promoting safer pedestrian and bicycle travel for children to and from schools. SRTS was originally funded directly by SAFETEA-LU but after the passage of MAP-21, SRTS program funding was shifted to the Section 1122 Transportation Alternatives Program. IDOT continues to secure and allocate national funding for Illinois' statewide SRTS program; in Chicago, SRTS programs operate as a part of Healthy CPS, the Chicago Department of Public Health's partnership with Chicago Public Schools.	MAP-21(+), IDOT(+), CDOT(+), CPS(+), Chicago Department of Public Health (+), Active Trans		http://saferoutespartnership.org/	http://www.idot.illinois.gov/transportation-systems/local-transportation-partners/county-engineers-and-local-public-agencies/safe-routes-to-school/index
\$520B: Technology and Innovation Deployment Program	Transportation/Technology	Funding		MAP-21 Section 52003 authorizes the Technology and Innovation Deployment (TID) Program, which provides up to 80% federal funding from the Highway Trust Fund for efforts to accelerate the implementation of new highway technology and implementation. TID funding may apply to research carried out under the Highway Research and Development Program, or unrelated projects. Pilot and demonstration projects are also eligible for TID funding.	MAP-21(+)		FHWA MAP-21/TID Fact Sheet < http://www.fhwa.dot.gov/map21/factsheets/tid.frm >	