EASTERN MARKET

Neighborhood Framework and Stormwater Management Network Plan

Planning and Development Department
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City of Detroit
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Forward

The City of Detroit launched a comprehensive neighborhood framework study for Eastern Market in January 2018. The goals of the framework were to provide a vision for future growth, preserve the market’s authentic character, improve the quality of life for residents, and become a center of job growth for Detroiters. The core partnership of the Detroit Economic Growth Corporation, City of Detroit Planning & Development Department, The Nature Conservancy, Detroit Water and Sewerage Department (DWSD), and the Eastern Market Partnership embarked on an inclusionary process that was respectful of the varied interests of residents and merchants alike. Eastern Market Partnership’s Eastern Market 2025 Strategy was in part the impetus for this framework. The 2025 Strategy captured the need for food businesses within the market to expand due to both regulatory and market forces and highlighted both Detroit’s potential and significance in local, state, and national markets. This framework illustrates how Detroit can emerge as the center of the Great Lakes food economy and seize opportunities for economic growth.

Stormwater management is a key component of the framework because of the flat topography of the city at large and in particular Eastern Market. “The world is round; but Detroit is flat” is the refrain Palencia Mobley, Deputy Director and Chief Engineer of the DWSD, often uses to emphasize the city’s difficulty to drain. Expected large footprint development and the need to properly account for the impact future development will have on the neighborhood, provided an opportunity to develop a coordinated district-wide vision that intentionally integrates new development, nature, stormwater management, and interconnected greenways. The framework provides design guidelines for greenways with examples for managing stormwater and identifies where to make critical investments. It also provides design guidelines as to how to buffer residential areas from food processing and production facilities.

Throughout the community engagement process, we heard questions about future development (particularly in the existing market district), gentrification, and displacement, as well as inquiries about truck traffic in the greater Eastern Market area. The framework seeks to answer many of these questions and presents recommendations for protecting the authentic character of the market as a historic place of commerce and vitality for all of Detroit; scaling future development to maintain intimacy in certain spaces and allow for more density in others; planning defined truck routes that lessen impacts on residential areas; and addressing safe routes for Detroit Edison Public School Academy students.

The framework also identifies new areas for residential growth via live-work opportunities, recalling historic patterns of development in the area where buildingsfunctioned as places to both live and run businesses. Eastern Market and its residents stand to gain from the development of the Joe Louis Greenway that will connect with the Dequindre Cut and can bring residents to the riverfront. Also important to note is the neighborhood’s burgeoning art scene and its famed Murals in the Market program, which has become a Detroit cultural staple.

Eastern Market at one time was one of the densest neighborhoods in Detroit. It is a neighborhood that is authentic, yet adaptable. This framework elevates Eastern Market as a place to live, work, play, and prosper. We can build on the strengths of the neighborhood by improving neighborhood conditions for current and future residents and supporting job opportunities for Detroiters in food industry areas that are properly planned and buffered by landscape.
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Growing a Food-centered Neighborhood

Eastern Market is a thriving connection to Detroit’s history. It is both an economic engine for the city, as the premier center of food industry in the Great Lakes region, and a singular cultural asset that brings Detroiter’s of all backgrounds together. Its 128-year history of operation as a working market is today challenged by new federal food safety standards enacted in the 2011 Food Safety Modernization Act and recent development pressure for non-food business uses. To maintain its status as the hub of food industry in Detroit and the Great Lakes region, Eastern Market must grow and adapt.

The framework described in the following pages positions Eastern Market for economic success well into the future, while keeping the market authentic to its past. It is based on input from residents and stakeholders, expertise from an interdisciplinary project team, and insights from past planning efforts and public processes. It will assure that Eastern Market will continue to be an exciting, diverse, and enjoyable place for residents, employees, and visitors for generations to come.

Planning Approach

The framework’s focus is on the implementation of its recommendations in the short- and long-term. Its strategic phasing aims to build initial momentum so that efforts can be sustained toward full realization. Regulatory tools are crucial to ensure that core principles are followed, but must be flexible enough to encourage development interest and innovation, and enable adaptation to unforeseen economic changes. This principled flexibility will assure long-term goals are achieved, even if their physical manifestation differs from initial concepts.

The project team regularly met with and coordinated the interests of a diverse group of stakeholders and the general public. Stakeholder roundtable discussions and local business interviews allowed the project team to have targeted conversations with key members of the Eastern Market community. Four town hall meetings gathered feedback from the general public at critical moments in the framework’s development. The project team also sought to reinforce the vision and goals generated in previous...
Three intertwined goals have guided the Eastern Market Neighborhood Framework Plan.

Three overlapping goals have guided the development of this framework:

A. Create jobs for Detroiters
B. Improve the quality of life for residents
C. Keep the authenticity and function of Eastern Market’s historic core

Achieving these goals both protects the character of the existing market district and prepares the neighborhood for the future. Central to this effort is the establishment of an expansion area for the concentration of modern food business buildings adjacent to the existing market district. Growing the market enables existing businesses to remain and expand within Eastern Market while meeting new federal food safety standards. It also opens the market to new food-related businesses that will strengthen the existing market district’s commercial character. The expansion area will feature a network of greenways that may also serve as green stormwater infrastructure (GSI) to help new developments to comply with Detroit’s Post-Construction Stormwater Management Ordinance (PCSWMO). This network will improve the area’s visual character and provide recreational amenities. Design guidelines will shape the character of new buildings and the greenways to create a neighborhood attractive to both existing and new residents. In the existing market district, guidelines and regulatory changes are intended to direct development pressure there in a way that enhances existing assets and maintains their physical and commercial character.

Following an overview of the community engagement process, the framework is presented in three chapters: Existing Conditions, Neighborhood Framework Plan, and Stormwater Management Network Plan.
Existing Conditions
The Existing Conditions chapter comprises a detailed breakdown of objectives followed by an analysis of the existing market district’s character, real estate, residential housing stock, public space assets, and mobility infrastructure. Economic and real estate analysis confirms that Eastern Market is a true functioning cluster economy, in which the close proximity of allied businesses provides operational efficiencies. It also highlights the significant amount of publicly owned land in strategically advantageous proximity to the existing market district. The relative lack of topographical change across the planning area prevented the design of a centralized stormwater feature for the expansion area. Instead, a network of greenways, which may be used for stormwater management, is proposed. It is also necessary to address the lack of designated truck routes in planning the market expansion. In these and other important ways, the existing conditions analysis forms the foundation of subsequent planning work.

Neighborhood Framework Plan
The Neighborhood Framework Plan (NFP) chapter is organized into five sections:

- An overview of regulatory and mobility recommendations for the entire planning area,
- A review of transformations planned for the expansion area,
- A review of measures planned to improve the quality of life for existing and new residents,
- A review of actions planned to maintain the market’s physical and cultural identity, and
- A recommended schedule for implementation.

Proposed regulatory and mobility changes provide a foundation for the three goal-oriented sections that follow. The first of these focuses on the expansion area and its primary role in achieving the goal of creating and retaining jobs in Eastern Market. The next section focuses on the role of mixed-use development and streetscape improvements in improving the quality of life for existing and new residents. The following section highlights preservation strategies for the existing market district. The implementation section presents the recommendations of the previous four sections in a format that makes clear their phasing with respect to one another and highlights how the market will grow and change in the immediate-, short-, and long-term.

The prototype block for new development in the market expansion area integrates food business and live-work buildings with landscape features that may act as green stormwater infrastructure.
**EXECUTIVE SUMMARY**

**ASTERN MARKET**

Neighborhood Framework and Stormwater Management Network Plan

The Stormwater Management Network Plan (SWMNP) was developed in coordination with the NFP and is integral to the development of the market expansion area. Building on the analysis of existing topography, the SWMNP chapter presents the proposed design characteristics, environmental impact, and public benefits of green space. The SWMNP describes how proposed greenways should be sized in relation to new development, how they interface with existing utilities, and how they may be built incrementally into a larger stormwater management and open space network. Three alternative scenarios for the network’s operation are examined and the preferred scenario is elaborated in greater detail. Landscape design guidelines are proposed to shape the character of the greenways. These guidelines should be used in conjunction with the Stormwater Management Design Manual developed by the Detroit Water and Sewerage Department to guide developers toward compliance with the PCSWMO.

**The Future of Eastern Market**

The attentive implementation of the strategies described in this framework will position Eastern Market to continue its growth as a food-centered neighborhood that respects its historic cultural identity, maintain its status as a working market, and sensitively integrate opportunities for a mix of other uses. These strategies will guide the neighborhood’s growth into a resilient and competitive center of modern food business that is also attractive for residents, employees, and visitors. Within 18–24 months from the conclusion of the framework study, projects will be implemented on multiple fronts, including a zoning update for the existing market district and expansion area, the issue of design standards and guidelines for new development, and pedestrian-oriented improvements to a segment of Riopelle St. These and other recommendations in this framework will ensure that Eastern Market continues to play a significant role in Detroit’s history for generations to come.
Learning from the Neighborhood

During the planning process the project team met with a variety of stakeholders including residents, business owners, developers, and city officials to ensure that as broad an array of perspectives as possible could be heard and integrated into framework recommendations. Community engagement activities took one of four forms: stakeholder roundtable discussion, public town hall meeting, business or landowner interview, and City official workshop. The engagement process was led by the Detroit Economic Growth Corporation (DEGC) in partnership with the City of Detroit Planning and Development Department (PDD), Detroit Water and Sewerage Department (DWSD), and The Nature Conservancy (TNC).

The project team initiated its engagement with in-person interviews and walkthroughs of nine market businesses and properties to gain a firsthand understanding of how the market currently operates. Also early in the process, the project team held a workshop with multiple government agencies focused on the critical issue of stormwater management in the market’s expansion. These early events formed the basis for conversations with community members from the Eastern Market and nearby neighborhoods.

Major project phases were developed through two sets of roundtable discussions with key stakeholders and four town hall meetings with the broader community that focused in turn on existing conditions, land use planning, stormwater management, and implementation. Stakeholder discussions sought targeted feedback on specific topics and consisted of a brief presentation followed by breakout group activities. Public meetings included presentation slides and boards, as well as activities that facilitated attendees to provide feedback directly to the project team. Participants could provide anonymous feedback on boards that were organized around a theme, like mobility or public open space, or they could speak directly with City staff. Feedback was recorded and integrated into the framework throughout the planning process.

The first public meeting in April 2018 was well-attended.

Photo: City Form Detroit
Phase 1: Existing Conditions

During the first phase of the framework one set of stakeholder roundtable discussions was held in March 2018 and the first public meeting on April 10, 2018. The meetings were based around four themes: Economic Development, Neighborhoods, Public Space, and Mobility. Participants in the public meeting were asked to write responses to basic thematic questions to allow a degree of flexibility in their answers. The answers below reflect those that most frequently recurred in public comments.

Economic Development: How can job growth and business growth benefit this community?

- Provide programs to expand opportunity
- Expand the food economy into the neighborhood
- Build the green economy
- Give back to the community; community benefits

Neighborhoods: What new amenities would you like to see in the area?

- Greening the market
- Preserve, improve, and expand housing options
- New neighborhood amenities
- Address neighborhood concerns regarding future development

Mobility: How can the experience of getting to and moving around the area be improved?

- Create better bike and pedestrian connections
- Separate trucks from other modes of transportation
- Improve safety and connectivity

Public Space: What makes public space enjoyable to you?

- To answer this question, respondents were asked to choose from music, play areas, bike paths, shade, natural areas, walking trails, artwork, trees, and community as their priorities for new public space. The results are on the right.

Survey Responses

What makes public space enjoyable to you?

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<thead>
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<th>Feature</th>
<th>Votes</th>
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<tr>
<td>Natural Areas</td>
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<tr>
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<tr>
<td>Play Areas</td>
<td>14</td>
</tr>
<tr>
<td>Shade</td>
<td>4</td>
</tr>
</tbody>
</table>

Attendees of the first public meeting wrote their thoughts on a thematic board.

Photo: City Form Detroit
Phase 2: Land Use

The second phase of the framework’s development focused on changes to land use to enable a greater mix of uses in the Core Market and food business development in the Greater Eastern Market (GEM). A second set of stakeholder roundtable discussions was held in May 2018 to gather focused feedback on this issue. Two public town hall meetings followed, with the first in June focused on the GEM and the second in July focused on the Core Market. In both cases, refined land use plans were presented with development prototypes that illustrated how new land uses could be translated into buildings. The transitions between different types of land uses was a particular point of emphasis in all three meetings.

Phase 3: Stormwater Management

The framework’s third phase of community engagement centered on the Stormwater Management Network Plan (SWMNP). A public town hall meeting was held in September 2018 to provide information on the importance of stormwater management in Detroit and to present three alternative scenarios for the SWMNP. Each scenario illustrated the implementation of a different system of stormwater infrastructure, including green stormwater infrastructure. The advantages and disadvantages of each was discussed and feedback sought on what scenario or elements from different scenarios meeting attendees thought was most beneficial to the future of their neighborhood.

Phase 4: Implementation

The final phase of the framework focused on the implementation plan for the framework’s recommendations. Recommendations were developed through the planning and community engagement processes. A final public town hall meeting was held in November 2019 to present projects planned for implementation in the 18 to 24 months after the conclusion of the framework.
Public town hall meetings were typically well attended (above, top left) and provided opportunities to speak with City staff and provide anonymous feedback (top, right).

Photos: City Form Detroit
3 Existing Conditions
Introduction

Eastern Market is Detroit’s living history. A public market has operated on site since the 1870s, and has been known as Eastern Market since 1891. Over the last 128 years it has remained the center of Detroit’s food industry and a true working market while the city grew, declined, and revived, and as food industry trends and technologies evolved. In part due to new facility standards defined in the 2011 federal Food Safety Modernization Act (FSMA) the historic urban fabric of Eastern Market can no longer meet the needs of its long-standing food-related businesses. It must grow and adapt.

This is the seeming paradox at the core of this framework: to maintain its place as the preeminent center of food-related business in Detroit and the Great Lakes region, Eastern Market must grow and change. This framework builds on the deep historical and cultural meaning Eastern Market carries for all Detroiter to direct the market’s expansion in a way that is both authentic to the market’s past and innovative to retain and support its future cultural significance and economic competitiveness.
Eastern Market is located just outside of Downtown Detroit and is separated from Midtown by I-75. Burgeoning development in Downtown and Midtown spurred the creation of this framework as Eastern Market seeks to chart its future before development pressures outpace considered planning efforts.

To better understand the existing physical, economic, and social conditions within Eastern Market, the team coordinated a variety of engagement activities with planning agencies, stakeholder groups, and the general public. Beyond visiting and documenting the physical state of the Study Area, the team conducted interviews with an array of businesses in the market, met with key stakeholders in two sets of roundtable discussions, and held a workshop with multiple government agencies on the topic of stormwater management. The first meeting with the wider public was held on April 10, 2018.

The information and insights gathered from these activities are synthesized in this chapter. First, the framework’s objectives and intended outcomes are presented and its physical and planning context defined. A section highlighting the historical and cultural importance of Eastern Market follows, after which the bulk of the existing conditions analysis is organized into four thematic sections: Economic Development, Neighborhoods, Public Space, and Mobility. Economic Development synthesizes the needs of local businesses, wider market trends, and land ownership patterns. Neighborhoods highlights the unique characteristics of Eastern Market’s built fabric, catalogs the distribution of residential types, and identifies planned residential development. Public Space examines the market’s varied streetscapes, lays out the criteria by which a stormwater management strategy may be implemented, and identifies some of the kinds of green stormwater infrastructure that may aid developers to comply with Detroit’s Post-Construction Stormwater Management Ordinance (PCSWMO). Mobility examines the various means by which people travel to and through the market. The conclusions drawn from each section form the foundation for the Neighborhood Framework Plan (NFP).
The Task Ahead

The aspirations of this framework are outlined in the lists of objectives and intended outcomes below. These carry forward the vision and direction established in previous planning projects for Eastern Market, but are broader in scope and address a larger geographic area. The analysis of existing conditions that follows in this chapter informs how growth may be directed and objectives achieved.

Framework Objectives

**Improve the quality of life for residents, and expand opportunities for employment.** The market’s growth should consider how businesses can make jobs more accessible to its residents and those of the surrounding neighborhoods.

**Maintain the working market’s authenticity.** Despite commercial development pressure from Downtown, preservation of the market’s commercial character through zoning and economic development strategies is important.

**Create a vibrant mixed-use district.** Eastern Market is a cultural hub of Detroit and particularly attracts people to spend time there on market days. Finding ways to also draw people there on non-market days could further enliven the market and neighborhood.

**Expand the market’s role as a regional hub of food production and distribution.** Eastern Market’s physical “footprint” must expand to accommodate the growth of existing businesses and the establishment of new ones. To maintain competitiveness in the regional food economy, new facilities must be constructed and access to highways preserved.

**Improve City of Detroit land stewardship.** Over half of the land in the Eastern Market vicinity is publicly owned. Sensitively monitoring how land is treated and preserving green space is environmentally responsible and beneficial to the local community.

**Create a Neighborhood Framework Plan with an action-oriented set of recommendations.** The *Eastern Market 2025 Strategy* set the market’s vision for growth and expansion. The NFP is broader in scope and provides actionable guidelines that both realistically set the course for economic growth and enhance the well-being of its residents.

**Create a Stormwater Management Network Plan (SWMNP) to guide infrastructure investment and catalyze future development.** Managing stormwater is critical for the economic viability and environmental sustainability of Eastern Market. Developers are required to comply with the PCSWMO, which may be addressed by implementing green stormwater infrastructure (GSI). GSI can contribute to the sustainable growth of the area by managing stormwater runoff and may provide public green open space amenities for local communities.

Market days are a major attraction for all Detroiters.
Photo: City Form Detroit (left), Eastern Market Corporation (opposite)
Intended Outcomes

Jobs for Detroiters in a diverse food economy. Eastern Market is composed of both large-scale food businesses and local small-scale manufacturers. The framework makes recommendations to ensure a range of job opportunities.

New housing that balances market demands and the needs of existing residents. New housing in Midtown, Downtown, Brush Park, and along the waterfront indicates that development pressure is growing towards Eastern Market.

Inclusive engagement with diverse stakeholders. Eastern Market is a destination for all Detroiters and home to a variety of businesses and residents. The planning process intends to bring all voices to the table for a framework that benefits everyone.

Context-sensitive industrial building prototypes. The growth of Eastern Market beyond its existing core must be sensitive to the scale and character of the adjacent neighborhoods. Designing building prototypes that are compatible with other uses is of paramount importance.

Interconnected transportation modes and parking. The framework makes recommendations to safely accommodate truck, private vehicle, and pedestrian movement together. Dedicated truck routes, clear circulation, and a parking strategy will mitigate conflicts in the future.

A stormwater management network. The framework proposes the incorporation of stormwater management features into new development sites as an asset to businesses and the neighborhood.

An integrated implementation strategy. The framework will only be as successful as its component parts. A strategy that is intentionally coordinated between economic development, design, transportation, sustainability, and neighborhood cohesion will provide an outcome that is ambitious and achievable.
The Framework Area

The area of analysis and planning for Eastern Market is broken into three sub-areas:

- **The Core Market** is the existing market district and what is most commonly understood as Eastern Market today. It is bounded by Mack Ave to the northwest, Saint Aubin St to the northeast, Gratiot Ave to the southeast, and I-75 to the southwest. Land use in the Core Market is primarily for food-related business with some smaller commercial/retail businesses around the market sheds. Space constraints, facility modernization requirements tied to the FSMA, and future demand for development are spurring growth beyond the core, although the framework aims to preserve the identity of Eastern Market defined by the Core Market.

- **The Greater Eastern Market (GEM)** is the focus of detailed planning and economic development recommendations. It is defined by Dequindre St northwest from Mack Ave to Superior St, Superior St northeast to Grandy St, Grandy St southeast to Erskine St, Erskine St southwest to Chene St, Chene St southeast to Wilkins St, Wilkins St southwest to Saint Aubin St, Saint Aubin St northeast to Mack Ave, and Mack Ave southwest to Dequindre St. The GEM encompasses a mix of residential and industrial uses. Much of the land in the area is publicly owned, and thus presents the best opportunity for the future growth of the market. However, market expansion must be sensitive to existing residents.

- **The Study Area** is the general “area of influence” outside of more detailed planning areas. It is bounded by I-75 to the southwest, E Warren Ave to the northwest, Joseph Campau Ave to the northeast, and Gratiot Ave to the southeast. The framework takes into account that the Study Area contains not only the Eastern Market neighborhood, but also overlaps some or all of the neighborhoods of Forest Park to the northwest and McDougall-Hunt to the east. What happens in the Study Area impacts other nearby neighborhoods like Brush Park, Brewster Homes, and Lafayette Park.

Planning Context

The *Eastern Market 2025 Strategy* is the foundation for the NFP. Its major objectives for the inevitable growth of the market are as follows:

- **Expand to areas served by major roads.** Truck-based transportation logistics require direct and easy access to highways for the local, regional, and national movement of goods in and out of the market.

- **The expanded food industry should be near the existing market and allow for further growth.** Eastern Market is a cluster economy in which business relationships between operators depend on adjacencies and proximity for the exchange of goods.

Detailed planning efforts within the Study Area focused on the Core Market and Greater Eastern Market.
**EXISTING CONDITIONS**  The Task Ahead

*Eastern Market 2025 Strategy*

**Public Market: Strengthen the Core**

**Food industry: Expand the footprint**

**Daily Business: Redevelop former sites**

**Residential Focus**

**Design flexibility for phasing, expansions, and additional future demand.** Land assembly for future development should consider the relative unknowns of shifting demand and ensure that development areas are able to accommodate different types of food-related business uses.

**Establish preferred truck routes based upon efficiency and proximity to a modern food distribution hub.** Dedicated truck routes are important for future growth and existing operations. There are presently no dedicated routes within the Study Area. As the market grows this is sure to cause vehicular conflicts.

**Integrate green stormwater infrastructure into food business expansion.** The PCSWMO requires any new development or re-development that includes over one half-acre of impervious surface to manage stormwater on-site. Green stormwater infrastructure may be implemented to reach compliance. Many green stormwater infrastructure practices have the ability to capture and filter excess runoff before it enters the combined sewer system.
**Authentic Character**

Embedded in Eastern Market is the cultural fabric of Detroit. It is a place where all Detroiters, spanning multiple generations, gather. As much as the produce from local growers or the smell of sausage from Detroit Sausage Company, people are drawn to Eastern Market because of the deep sense of community that is shared by everyone. Eastern Market is unique; similar historic market entities are rarely found in U.S. cities, and none at this scale. It is a key part of Detroit’s identity, and will remain so well into the future.

**History and Continuity**

Unlike many outdoor markets in urban areas, Eastern Market has remained an active and significant food production and processing district for over 150 years. Its small blocks and low buildings produce a pedestrian-oriented environment that speaks both to Detroit’s history before cars became dominant, as well as to its future as a city accessible by means of transportation other than the private automobile. The variety of local shops and the continued operation of the market sheds in the historic center lend the area an authenticity that must be retained even as the neighborhood undergoes significant transformations. The intention of this framework, developed by the City of Detroit, the Detroit Economic Growth Corporation, and the people of Detroit to ensure that the area remains a food industry hub and an employment center for Detroiters for decades to come.
Commerce
Eastern Market's allure lies well beyond a sense of nostalgia. Its lifeblood is the businesses that exist within it. Maintaining it as a viable and competitive district for food-related businesses is the driving force behind this framework.

Eastern Market is in a precarious position. If it does not structure its development and growth well, it may lose its competitive edge to sites that are cheaper and more easily assembled in suburban locations. Part of the allure for being in Eastern Market is its history, but that alone cannot sustain the economic viability of the district.
EXISTING CONDITIONS  Authentic Character

Community
Community in Eastern Market expresses itself in many ways. It encompasses the residents who live within and adjacent to the market. The weekend market, retail businesses, and public programming together bring a diverse audience to the market. The business community is also thriving. Relationships are established between businesses that fuel the culture and productivity of the district.

Culture
Detroit’s cultural ambitions are to remain steeped in its own history of entrepreneurship and community-based growth. Nowhere are these characteristics more pronounced than in Eastern Market. From small-scale manufacturers like Detroit Distillery, to the nationally recognized Wolverine Packing, the businesses and industry in Eastern Market are intimately tied to their association with Detroit.

Eastern Market is ingrained in the cultural fabric of Detroit, a place where generations of people have come to work in its production facilities or visit on the weekends to purchase groceries, in either case taking part in the perpetuation of this key element of Detroit’s identity. This cultural significance should be carried forward in the growth of Eastern Market, taking care to preserve it as an active food business district while welcoming new businesses and residents to contribute to its unique character.
EXISTING CONDITIONS

Authentic Character
Economic Development

The historical and cultural significance of Eastern Market has been a key factor influencing the decision of local businesses to remain located there. Yet, these businesses cannot grow in place; current spaces are too small to allow for significant expansion and are difficult to upgrade to comply with the standards of the 2011 federal Food Safety Modernization Act. To maintain the character of Eastern Market as both a working market and a significant center for local business and employment, the area to the northeast of the Core Market was identified for the expansion and modernization of existing businesses and the incubation of new businesses. This forms the basis for an expansion area (the GEM) tied to retail and market activities in the core. The development of the GEM will secure Eastern Market’s status as the hub of modern and sustainable food production and distribution for the Great Lakes region.

The growth of the market into the GEM also means the ability to retain and create jobs for Detroiters. The diversity of businesses and their requisite skill sets ensures that new job opportunities will arise. Commercial and residential development pressure around the market will require that the City take measures to protect the neighborhoods and food businesses via zoning changes or development controls. Eastern Market must balance the commercial growth of the urban core of Detroit with the need to preserve the food economy and its job base in the city.
Feedback from Businesses

The planning team met with nine businesses over two days. The interviewees included large-scale warehousing and distribution facilities, local retailers, small-batch manufacturers, and developers. Each company represented a different perspective on Eastern Market’s growth and its future direction. They all shared a profound attachment to Eastern Market as a place, one that is deeply embedded in the culture and history of Detroit.

Market Gentrification

A refrain heard from some of the more established businesses was a concern about the potential for gentrification in the Core Market as development interest in commercial uses there increases. Increased land values may price out existing tenants, and the introduction of commercial uses, and associated traffic, may cause conflicts with trucks for production and distribution operations.

Room for Expansion

The businesses interviewed spoke of the need to expand their facilities. Due to size limitations and food safety requirements, new facilities will need to be constructed to handle this additional demand. Interviewees saw a natural extension of the market area and related food businesses beyond the core, particularly to the north where there is a significant concentration of publicly owned land. One goal of the GEM is to provide such a place to keep existing businesses in the area.

Synergies

Part of the appeal of Eastern Market for many business operators is the ability to build relationships with other food-related businesses. It is common for companies to share storage facilities, source from Eastern Market businesses, and provide distribution services locally. The proximity to complementary businesses provides operating efficiency.

Real Estate Value

The Dequindre Cut is not only a recreational greenway, but also a real estate asset. Future land use planning will need to take measures to balance pressures for new development and the preservation of existing food-related uses and the commercial character of Eastern Market. Some property owners are land banking and waiting for higher bidders, which prevents food businesses from growing locally in the core. Interviewees want the core to stay food-related, but also recognize the shifting tide of development there.

Managing Mobility

It was noted by several business owners that the district lacks dedicated truck routes. Conflicts with increased vehicular traffic on the weekends are common and day-to-day truck operations pose a nuisance to the neighborhoods and future non-food-related development. Conversely, additional commercial or residential development runs the risk of interfering with the “just-in-time” nature of shipping and logistics for the food industries.
Market Analysis

As development pressure expands beyond Downtown, Eastern Market needs a strategy to leverage a growing mixed-use market opportunity while retaining the active food businesses that form the core of its economic value to the city and region.

There are three critical reasons to believe that the market trajectory for Eastern Market can and should differ from analogous urban industrial areas elsewhere:

- First, Detroit’s economic growth fundamentals are more moderate than even some other mid-size Rust Belt cities, like Pittsburgh.
- Second, mixed-use development interest in the neighborhood is only just beginning and most projects still require some level of subsidy or gap financing to be feasible.
- Due to the active market presence, strong interstate access, and proximity to a local customer base, Eastern Market still maintains the locational advantages necessary to attract and retain an economic cluster of food-related industrial businesses.

Overview of Opportunities

Demand-driven market opportunity for Eastern Market—unconstrained by current construction feasibility or land availability—totals approximately 4.1 million square feet over the next 15 years, comprising 2.5 million square feet of mixed-use and 1.6 million square feet of food business uses.

The City and its community development partners, through the disposition of publicly owned land and public/gap finance tools, have more capability to shape where and how new development is realized outside of Downtown than many other cities.

The GEM is perhaps the best and only opportunity within the City of Detroit to attract major food processing and wholesale businesses that require large sites with good truck access.

Residential uses may be a risk for attracting food businesses, which desire control over their immediate environment and are not willing to take the chance that nearby residents or employees may voice concern over noise, traffic, or smells and seek to impact their business operations.

Scales of Food Industry

Smaller buildings, more cars and pedestrians, greater public access.

Larger buildings, more trucks, limited public access.
Food-related Business

Eastern Market is the most significant concentration of food-related businesses in the Detroit metropolitan region, containing an estimated 15% of the area’s food-related industrial employment. Food-related businesses occupy about 80% of Eastern Market’s industrial space.

Across the metropolitan region, growing consumer expenditures are projected to drive demand for an additional 5.4 million square feet of food-related industrial space over the next 15 years, which can be categorized into three distinct business profiles that each have specific spatial needs:

- **Processing/Manufacturing businesses** need large contiguous spaces and have significant truck activity, but no consumer-facing presence.

- **Wholesale/distribution businesses** can utilize smaller-footprint facilities with more vertical storage than manufacturing businesses. They have highly concentrated truck traffic at certain times of the day and very little street presence.

- **Specialty food businesses**, such as a coffee roaster, have the most potential synergy with a mixed-use environment, as they derive value from a consumer-facing space that may look indistinguishable from a retail storefront and fronts a light industrial space. They may still need truck access, but the vehicles are smaller and can potentially service only the rear of the space.

Eastern Market is likely to capture some of this demand through the planned expansions of existing businesses, and can position itself to capture a much higher share of growth if it can assemble and prepare appropriately sized sites to market to future users.

### Critical Investments for Success

Across all land uses, the market area is underperforming its market potential today as a result of several barriers and challenges:

- The construction feasibility of new development and complexity of renovation/reuse
- The lack of existing spaces easily occupiable by new businesses
- The lack of contiguous, shovel-ready sites of 5 acres or more for food industry uses
- The need for better infrastructure to improve pedestrian safety and truck access

### Existing Food-related Employment

<table>
<thead>
<tr>
<th>Food-related industry sectors</th>
<th>Number of businesses</th>
<th>Estimated jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>12</td>
<td>511</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>39</td>
<td>486</td>
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<tr>
<td>Specialty food services</td>
<td>24</td>
<td>223</td>
</tr>
<tr>
<td>Restaurants &amp; bars</td>
<td>22</td>
<td>321</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>97</strong></td>
<td><strong>1,541</strong></td>
</tr>
</tbody>
</table>

Data as of April 2018
Public Land Ownership

Just over half of parcels in the Study Area and in the GEM are publicly owned. This wealth of public land ownership reduces the acquisition burden on the City to assemble properties and thus allows the market to more easily expand from the Core Market. While there are some publicly owned parcels in the Core Market, the need for large sites for industrial expansion will drive new food business uses to move into the GEM.

The GEM and the Market’s Future

The City of Detroit has targeted an area to the north of the Core Market for future market growth. In this area—the GEM—55% of land is publicly owned, making it the best opportunity to assemble properties large enough to host contemporary food business buildings in Eastern Market. On average, a five-acre site for a 50,000 square foot floor plate is typical, but buildings may be smaller or larger depending on the type of their use.

Beyond allowing the market to grow, utilizing currently vacant land for future food-related business uses could have the collateral effects of new job creation and additional business development.

Takeaways

Sensitivity to the existing residential neighborhood north and east of the GEM is of paramount importance. Providing jobs for local residents is a key component of this growth plan, but developing uses that are not invasive and do not negatively impact the existing neighborhoods is of equal importance.

As the Core Market runs out of area for expansion, finds difficulty in right-sizing parcels, and sees land values increase, expansion into the GEM will be needed to keep food-related jobs in Detroit.

Despite high levels of public land ownership in the GEM, development there will require negotiations with private owners to assemble industrial-scale parcels.
**Neighborhoods**

The necessity for market expansion puts development pressure on the neighborhoods to the north of the Core Market. For decades these areas have been characterized by their vacancy and population loss, yet the needs of the remaining residents must be respected and addressed in future planning. Similarly, economic growth puts pressure on the core for new kinds of retail and loft residential development, but any new development in the Core Market must respect its unique historical and cultural character. Taken together, the Study Area’s single-family houses, loft apartments, and the multi-family residences northwest of the Core Market in Forest Park suggest the foundation of a diverse and mixed-income greater market community. Yet, existing public amenities inadequately serve existing residents, let alone a growing community, and remain both few in number and unevenly dispersed throughout the GEM.

**Historic Character**

The historic character of Eastern Market derives from more than select designated buildings of architectural merit. Its longstanding status as a center of culture and the food industry for Detroit and the surrounding region are reflected in the typical built fabric of the neighborhood.

Although much of the Core Market is designated as a historic district on the National Register of Historic Places (NRHP), a reconnaissance-level survey found that some buildings of historic character fall outside these boundaries, and that no local historic district, with its attendant protections, has been designated for the area. It is recommended that the existing NRHP Eastern Market historic district be expanded to include additional buildings of historic significance, such as Shed 6 and the Schmidt Brewing complex, to make these properties eligible for federal historic tax credits. Although a local historic district designation would provide greater protection for historic structures in Eastern Market, private property owners may see the review process it requires for external changes to be a barrier to redevelopment. It is recommended to pursue preservation by other means, such as a zoning update or design guidelines.

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Shown here in 1922, Eastern Market has been an active part of Detroit city life for over 150 years. Many buildings in the area, including the sheds, are of historic value, but lack local protection.
**Murals**

The Eastern Market mural program, Murals in the Market, which brings local and internationally known muralists and street artists together, has created a veritable outdoor museum in Eastern Market. Official tours and brochures of the more than 100 murals on buildings between Gratiot and Mack Avenues are indicators of the draw that the murals of Eastern Market have for the city.

Using the facades of the relatively nondescript industrial buildings that characterize the area, the mural program has given a public life to the market beyond the sheds and retail center. The gallery of murals transforms the market’s public space, which is otherwise lacking in landscape amenities.

*Left and below: Some of the more than 100 murals found around the market core. Photos: Utile*
RESIDENTIAL TYPES

Most housing in the Study Area is outside of the Core Market in the neighborhoods of Forest Park and McDougall-Hunt. The vast majority of the housing stock is single-family residential and is located north of Saint Aubin St. Some multi-family loft apartment buildings exist in the core, but most multi-family housing is northwest of Mack Ave along I-75 in Forest Park, where there are more than 800 units in clusters of low-rise buildings.

NEIGHBORHOOD AMENITIES

Eastern Market’s core and Gratiot Ave provides the most concentrated commercial uses serving the Study Area. In addition to weekend market days, Gratiot Central Market provides access to fresh food.

The Dequindre Cut provides recreational green space for the neighborhood, but there are only a few small neighborhood parks scattered across the rest of the GEM. Public open green space should be increased in the Study Area and could double as stormwater management infrastructure as part of developers’ compliance with the PCSWMO.
Planned Mixed-use Residential

Demand for residential development in Downtown and Midtown continues to grow, and is now heading towards Eastern Market. The existing market district’s amenities, historical character, and walkability make it a natural draw for new residential uses.

Developments along Gratiot Ave represent the inevitable growth of real estate values in this area. While the influx of new residents may be welcome to commercial business owners, the needs and wishes of existing residents of the adjacent neighborhoods should also be considered. All residents, new and old, can benefit from Eastern Market becoming a more active neighborhood throughout the day and week.

Takeaways

The Study Area, and in particular the Core Market, offers a destination unlike anywhere else in Detroit. Its proximity to greenways, Downtown, Midtown, Lafayette Park, and even the waterfront, along with its own commercial district and attractions, comprise a complete neighborhood. Future development must, however, accommodate existing food production and distribution operations in the district and should consider anti-displacement measures.

The proposed Eastern Market Gateway project along Gratiot Ave would add 200 mixed-income residential units with ground-level retail. Image: Detroit Economic Growth Corporation
Public Space

Designated public open spaces, such as parks, are unevenly distributed throughout the Study Area, with the Core Market especially lacking not only formal green spaces, but tree cover as well. The abundance of hardscape in the core reflects the density of truck staging areas there, which similarly impact the quality of streets. Although streets are the most common form of urban public space, concessions to servicing trucks in the Core Market have weakened their public character. There is great potential in the core for street design to better mediate between pedestrians and trucks. In the design of both streets and formal public open spaces, there are opportunities to integrate GSI. GSI filters stormwater runoff and delays its entry into the sewer system to prevent overflows during a storm, reduces surface flooding, and can provide visual and recreational amenities. In Eastern Market, a plan for continuous green open space across adjacent parcels, which may be used for stormwater management, will be explored.

Tree Canopy

Like most urban industrial districts, Eastern Market lacks tree coverage, with few or no street trees in much of the Core Market. This reflects the need for large impervious areas for parking and truck staging. The lack of trees reduces shade for pedestrians and exacerbates the heat island effect in the core. In the residential neighborhoods east of Dequindre Street and the Dequindre Cut, however, the tree canopy is consistent and full. Introducing shade trees in the core is important to the market’s appearance and the personal comfort of people walking in the neighborhood and market. They also act as a means to buffer noise and absorb air pollutants.

Hardscape and Softscape

Detroit’s ongoing complications from excess stormwater runoff into its combined sewer system is only exacerbated in industrial areas like Eastern Market, where large building footprints and vast amounts of impervious ground surface for parking and truck movement and staging means that water enters the combined sewer at a high flow rate. Introducing GSI into the market area through developers’ compliance with the PCSWMO could alleviate this condition.

In addition, such large areas of impervious surface have a “heat island” effect, in which sunlight is not absorbed by the asphalt surface and no shade is provided, thus heating the area more than its surroundings. Additional green space or trees would be a first step in addressing this condition.
EXISTING CONDITIONS  Public Space

Streetscape

Since there are few dedicated areas for public space in the traditional sense of parks or other green spaces, the streets of Eastern Market become the primary arena for public dialogue and interaction. Improvements in the streetscape in Eastern Market that cater to both pedestrians walking through the market and consider the requisite dimensional standards for semi-trailer trucks would be of great benefit towards making the market an even more public space.

Four primary types of streets in the market include:

- **Residential**
  Found primarily east of the Dequindre Cut and Dequindre Street, these streets are slower speed with low traffic volumes.

- **Commercial**
  Generally in the Core Market, they provide access to retail and commercial establishments and are pedestrian-oriented.

- **Service**
  Also in the Core Market, these streets provide access to loading and “back-of-house” for industrial and commercial uses.

- **Industrial**
  Streets that have no front door experience, are not pedestrian-oriented, and solely cater to trucking and logistics.
High elevation

Topography

High point

Low point

Low elevation

EXISTING CONDITIONS

Public Space

Core Market

Study Area

E Warren Ave

High point

Kilgore Field

E Canfield St

Dequindre St

Chene St

Core Market Study Area

E Warren Ave

Low point

Mack Ave

Core Market

Low point

Russell St

Wilkins St

E Warren Ave

Saint Aubin St

Low point

1,000'
**Stormwater Management**

Increasing the amount of green space and decreasing the impermeable nature of Eastern Market's public areas is important to improve the quality of life for residents and visitors to the area and may have the potential to manage stormwater runoff. The market’s need to expand and the large amounts of vacant land in the GEM present unique opportunities for developers to manage stormwater on their site to comply with the PCSWMO, potentially through the use of GSI. GSI can provide greater recreation and mobility options for those living, working, and visiting the GEM and the surrounding neighborhoods.

Stormwater management benefits development by easing the burden of drainage charges and reducing the impact of runoff on the sewer system. The following assessments factor into the development of a stormwater management strategy for runoff in Eastern Market.

**Stormwater Management in Detroit**

The City of Detroit has invested over $1 billion in stormwater infrastructure over the past two decades and made great strides to better manage stormwater and reduce combined sewer overflows (CSOs). Part of the stormwater management program is a system of monthly charges based on the amount of impervious area on a parcel. The charges help the City pay the debt on the major sewer investments, maintain and improve its extensive sewer system, and cover operations and maintenance costs for CSO facilities. The PCSWMO requires stormwater management on newly developed or re-developed parcels over one half-acre in area.

The charges also incentivize property owners to implement engineered solutions to manage stormwater on site. Up to 80% of required charges can be removed, depending on measures taken on the property owner’s parcel to keep stormwater out of the combined sewer system.

**Topography, Slope, and Subcatchment Areas**

The Study Area is relatively flat, with only a 0.15% average slope, though it does have some topography. Generally, the Study Area is gradually sloped toward the southeast and the Detroit River. Within the Study Area, the Dequindre Cut and Dequindre Street act as a mild divide. To their southwest, drainage generally tends toward the Core Market and the I-75 interchange near Gratiot Ave. Northeast of the divide, drainage tends to head southeast toward the historic channel of Bloody Run. Due to the Study Area’s relative flatness, minor changes in topography define numerous surface-drainage subcatchment areas into which runoff water flows.

**Soils**

Data from the Wayne County soil survey was obtained from the Natural Resources Conservation Service (NRCS). The dominant drainage class attached by the NRCS to most Study Area soils is “somewhat poorly drained.” Another measure of drainage, hydrologic soil group, indicates that essentially all Study Area soils drain poorly. Soils northeast of the Dequindre Cut and Dequindre Street promote moderately high runoff and those on the southwestern side tend to promote even higher runoff volumes. All of the soils are heavily impacted by past development.

**Combined Sewer System**

All Study Area sewers are part of Detroit's large combined sewer network. Wastewater from homes and businesses drain to the same pipes that collect stormwater runoff from buildings and pavement.

Generally, the network of sewers in the Study Area flow southeastward toward the Detroit River and the large interceptor there that ultimately sends flows to the wastewater treatment plant on the far west side of the city.
EXISTING CONDITIONS

Public Space

Green Stormwater Infrastructure

After topography, soil, and the sewer system have been considered, GSI may yet take a number of different forms, each with specific advantages and disadvantages. Detroit has a number of GSI projects to look to for examples, two of the largest of which are near Eastern Market.

- **GSI Example 1: Recovery Park**
  North of the Study Area is Recovery Park, a 22-block urban agriculture project. Stormwater runoff is handled there via the creation of a system of earth berms and swales along the southwestern edge of the project area. The berms increase stormwater infiltration to reduce runoff. When the berms are saturated, adjacent swales retain water, allowing it to infiltrate more slowly into the ground. It is important to be aware that the berms have a significant impact on the streetscape which may not be appropriate for application in other projects.

- **GSI Example 2: William G. Milliken State Park**
  The water feature at William G. Milliken State Park is both an effective piece of infrastructure and a visual and recreational amenity for visitors to the Detroit River waterfront. Runoff is directed from adjacent land to a central reconstructed wetland for retention and filtration. The wetland has become a habitat for migratory birds and other species and is an attractive landscape through which visitors can walk, run, and bike. It is this synthesis of functional, visual, and recreational considerations that future GSI features in Eastern Market must strive to achieve.

GSI can also take other forms that might lend themselves to smaller-scale interventions or integration with large systems like those discussed above. Permeable pavement may allow for greater integration of recreational paths into GSI. Green and blue roofs similarly lessen the runoff load on sewers.
Takeaways

The urban fabric of the Core Market is predominantly hardscape. Efforts should be made to soften it with street tree plantings and small-scale green space. Developing a SWMNP is critical to the success of the market expansion and ensuring that it does not reproduce the impermeability of the core. The PCSWMO requires developers to manage their stormwater in a way that does not increase the load on the combined sewer system. Consideration should be given to encourage developers to consider GSI in their site plans to help them to comply with the PCSWMO. GSI can be designed to be assets for the neighborhood that are functional, visually appealing, and encourage public recreation.

It is important to remember that the public space of the market also includes both streets and storefronts. Streets should be designed for the comfortable coexistence of all of the market's users: pedestrians, bicyclists, private motorists, and, where designated, semi-trailers. As the market expands it will be important to not only provide street trees and green spaces, but also design industrial buildings that acknowledge the street presence of pedestrians.

Above: A wetland landscape treats and retains runoff from the parking area of the Herman Miller Factory in Cherokee County, GA. Photo: Michael Van Valkenburgh Associates

Below: Ground-level retail could be paired with industrial uses for an improved pedestrian experience. Image: Utile
Mobility

Access is critical to Eastern Market’s continued success, but it is not equal across different modes of transportation. Infrastructure for active transportation—biking, running, or walking—has seen recent investments, although opportunities for improvement remain. Access via buses is poor due to infrequent scheduling. Private motorists are best served as the market has ample parking, although its distribution and management create issues during peak-use times. Food business trucks have easy access to the market via the highways that bound the Study Area, although they too have parking issues where narrow streets do not provide adequate space to pull in and out of loading bays. Trucks also present potential navigational hazards for pedestrians as there are no designated truck routes within the Study Area. Through-navigation is further complicated for all modes by numerous breaks in the street grid.

Active Transportation and Transit

Eastern Market is most accessible to motorists. There is an opportunity to improve walkability and bikeability, which can foster both retail and commercial success as visitors and employees benefit from walkable, human-scale environments. Indeed, the City has made great strides in recent years to improve active transportation and public transit options with additions like the QLINE. Notably, DDOT ridership has been increasing, in contrast to other Michigan cities.

In Eastern Market active transportation infrastructure is mostly concentrated in the Core Market. Sidewalks are generally present, but they start to disappear as one moves away from the core. Pedestrian enhancements, such as curb extensions and

Bike Lanes and Greenways

The Dequindre Cut is a successful recreational greenway, but direct connections to the Core Market could be improved.

Photo: Detroit Economic Growth Corporation
protective planters, are concentrated along Russell Street. Marked crosswalks (partial or full/four-way) exist, albeit only in the heart of the market between Rivard and Riopelle Streets from Wilkins St to Fisher Service Dr. Traffic levels in the Core Market are generally low, which reduces the likelihood of pedestrian-vehicle conflicts. However, with empty roads, motorists tend to travel beyond the speed limit, making traffic accidents more dangerous.

The Dequindre Cut is an important asset for Detroit’s bicycle network; however, it serves more as a recreational trail. Trailheads exist on the south sides of Gratiot and Mack Avenues and on Wilkins St, although there are no bike lanes on Gratiot Ave or Mack Ave west of the Cut. Once in the core, there are bike racks along Russell St, allowing bicyclists to easily access the sheds and other retail there. Additionally, there are two MoGo bike share stations (one each at the intersections of Russell St with Gratiot Ave and Wilkins St) which help provide access for residents and tourists alike.

While overall DDOT bus ridership is increasing, service to the market is lacking. Although there are three primary thoroughfares in the Core Market served by transit—Mack Ave, Gratiot Ave, and Russell St—only Russell St actually cuts through the core. The market sheds are serviced there by the #40 bus, but it only comes once an hour. There may be opportunities to increase its frequency by adjusting its snaking route and combining service with nearby north-south routes. The #31 bus service along Mack Ave that runs one bus every half-hour. Service along Gratiot Ave is frequent, with the #34 bus arriving every 15 minutes and SMART commuter buses (#530, 560, and 580) during the morning and evening rush hours; however, the bus stop on Gratiot Ave that is closest to the Core Market requires crossing I-375 to get there.
**Truck Circulation**

Eastern Market’s location and highway access is ideal for commercial operators and makes it very competitive as an industrial district. Framed by Gratiot Ave and the State Trunkline Highways, I-75 and I-94, Eastern Market allows regional distributors to circumvent urban traffic jams, while also being accessible to workers near downtown.

Major north-south (Saint Aubin, Chene, and McDougall Streets) and east-west (Wilkins St, Mack Ave, Warren Ave) roads provide ample options and redundant paths for trucks to enter and exit the market. However, with no formalized truck routes, when trucks pass through residential neighborhoods, they create noise and vibration nuisances. Designated truck routes are constructed differently than normal roads, allowing them to withstand the 40-ton loads from fully loaded 18-wheelers and mitigate the accompanying vibration. When trucks deviate from these routes, there is unnecessary wear on the pavement, road deterioration, and a reduced quality of experience for motorists, bicyclists, and pedestrians alike.

Rivard St (right) is wide enough for semi-trailers, while Brewster St (left) is too tight and leads trucks to encroach on the sidewalk. Photos: Google Earth
Parking and Truck Staging

Within the Core Market, there are 438 on-street spaces and 1,125 parking lot spaces available to the public. There are also 713 spaces for employee/permit parking and 331 truck and trailer spaces over 8.6 acres of truck aprons and staging areas.

It can often seem like there is an undersupply of parking in the most desirable locations. Most visitors want to park along Russell St or as close to the sheds as possible. Even on non-market days, the shed parking lots are filled with cars. Employees in the area prefer to park by the sheds, instead of employee parking areas, as they are more visible and there is perceived to be less of a security risk. On market days, visitors want to park there for the same reason, and tend to avoid the Wilkins St lots.

These concerns can be alleviated—and parking more evenly distributed around the core—with parking management programs. For visitors, the Wilkins St lots can be staffed with attendants who would also serve as a deterrent to crime. Overall congestion will decline with fewer cars searching for parking along Russell Street and within the shed lots. The perceived undersupply of parking may be fully resolved by addressing safety concerns and tapping into these underutilized lots. If parking is efficiently managed there is also the potential for some lots to be entirely freed up for new development.

Most truck activity is concentrated along Rivard St, servicing the main processing, packaging, and distribution businesses. With a typical curb-to-curb distance of 40 feet, and deep setbacks for semi-trailer loading bays, trucks can back in without “hopping the curb” across the street. However, off Rivard St, semi-trailers struggle to make turns exiting their lots. Curb-to-curb distances drop to 30 feet or less, and semi-trailers making wide turns encroach on the sidewalk and occasionally come into contact with street signs, utility poles, and trees. Future development in the Market should ensure that appropriate setbacks for truck bays exist, especially where street width is limited.
The Street Network

The Eastern Market street network provides a competitive advantage for commercial success. However, there remain connectivity issues that create challenges for pedestrian, private vehicle, and bicycle access and limit the ability for a “sense of place” to be established, which in turn hinders retail success. These challenges can be mitigated through tactical improvements and larger urban design decisions.

Grid Discontinuities and Navigability

Eastern Market’s street network is mostly laid out in an orthogonal grid pattern. The blocks adjacent to the market sheds form a dense grid, but the pattern becomes less dense and more irregular to the northwest of Mack Ave. The “superblocks” found there are detrimental to the pedestrian experience. A dense, regular street grid of blocks between 150 and 300 feet long is easily comprehensible for pedestrians, bicyclists, and drivers and encourages walking, which aids retail success.

Despite being somewhat hindered by an irregular grid, the entire Core Market is accessible within a 10- to 15-minute walk (traveling by bike, 5-10 minutes covers most of the Study Area). Although travel time is less an issue for motorists, vehicular travel also suffers from the navigational challenges of an irregular grid. Drivers are likely to prefer straight through-streets, which in Eastern Market translates into overburdening Russell St.

Connectivity to Adjacent Neighborhoods

Gratiot Ave is a physical and psychological barrier to access Eastern Market from Lafayette Park to the south. While it is possible to cross it and I-375 by walking along Russell St, this is an unpleasant, wind-swept, and car-oriented stretch that feels longer than it actually is. However, there are ongoing plans to rectify this condition. The I-375 Improvement Project will replace the I-375 connector and a portion of the Fisher Freeway with boulevards and stitch Eastern Market together with Lafayette Park’s large, vibrant community. The Regional Transit Authority of...
Southeast Michigan proposed converting Gratiot Ave into a transit-oriented “complete street” in its 2016 Gratiot Avenue Transit Study. This will improve access to Eastern Market from neighborhoods along the length of the street.

I-75 poses a greater challenge. Brush Park can only be accessed via Mack Ave and Wilkins St, but these are unpleasant crossings similar to the bridging of Russell St over I-375. However, with a series of crosswalk improvements, signage, street tree plantings, public art, and sound barrier installations, these access points can be significantly improved.

On the opposite side of the Core Market, the Dequindre Cut is both a connectivity asset and obstacle. Although it is an important open space and active transportation corridor, it interrupts the street grid and disconnects the Core Market from areas to the northeast. However, some connections could be revived with bridges.

Takeaways

Eastern Market’s transportation network is central to its success, yet there remain significant challenges to access, mobility, and safety. Gaps in the active transportation and public transit networks limit mobility options for workers and visitors alike. Highways are essential for commercial trucking, but present physical and psychological barriers to accessing the Core Market by other means. The lack of designated truck routes causes quality-of-life nuisances in neighborhoods in the Study Area.

Improvements to the Core Market and plans for the market’s expansion must balance commercial demands for food business truck activity with the creation of a place that is welcoming and navigable for pedestrians, bicyclists, and motorists alike. To improve access, mobility, and safety, the Neighborhood Framework Plan in the next chapter presents recommendations to create safer intersections, improve road crossings, formalize truck routes, and consolidate parking.
Conclusion

Eastern Market is well-positioned to retain and grow its status as the hub of the local and regional food industry. Yet, expansion and modernization will require the relocation of some businesses and new kinds of development in the core. This must be done in a way that both respects the Core Market’s historical, cultural, and commercial character and the needs of existing residents in the surrounding neighborhoods. As development pressure grows in Eastern Market, anti-displacement measures in the Core Market and new zoning regulations in the GEM will be critical tools to guide growth to these ends.

The market’s expansion is an ideal moment to implement a new model of industrial development. New food business buildings should avoid the typical model of introverted industrial development by integrating pedestrian-oriented uses at ground level to activate street edges and maintain an urban character. The market’s expansion also represents a critical opportunity to encourage developers to choose green stormwater infrastructure to meet the requirement for compliance with the Post-Construction Stormwater Management Ordinance. Doing so will reduce ground surface imperviousness and can also provide visual and recreational amenities to the neighborhood.

Finally, to smooth the transition of both the core to more mixed-use and its surroundings to food-related business uses, access from different transit modes must be enhanced. Designating truck routes in the district will minimize nuisances for residents. Bus service should be improved and recent investments in active transportation should continue.

Implementing these recommendations will allow the GEM to develop into a rich neighborhood that comfortably interweaves residential, commercial, and food business uses; pedestrian, bicycle, car, and truck traffic; built and green open space; and history and innovation. As the hub of the region’s modern and sustainable food industry, and a great place to live and work, Eastern Market will secure its role in Detroit’s ongoing history for decades to come.
4 Neighborhood Framework Plan
Introduction

An analysis of the existing conditions in the Study Area arrived at a simple conclusion: Eastern Market must grow and adapt to maintain its status as a hub of the local and regional food industry and to remain the vital working market and cultural icon that it is today. What follows is not simply a vision plan—it is an implementation plan that strikes a balance between the sometimes-competing goals of preservation and transformation to provide a framework for the short- and long-term development of the greater Eastern Market area. Throughout, this framework strives for both authenticity to the historical and cultural importance of the market and innovation to guide the evolution of the area into a resilient and competitive hub of the modern food sector that can flourish for generations to come.

Goals of the Plan

Three goals form the foundation for this neighborhood framework plan:

A. Create jobs for Detroiters (see p.60)
B. Improve the quality of life for residents (see p.76)
C. Keep the authenticity and function of Eastern Market’s historic core (see p.84)

Central to the achievement of these goals is establishing an expansion area to concentrate new modern food business buildings in close proximity to the existing market district. This expansion is in part necessitated by the 2011 federal Food Safety Modernization Act (FSMA), which established new standards and regulations for food businesses intended to prevent widespread food contamination or tampering. Historic warehouse buildings in the market core are difficult and expensive for food businesses to expand within or upgrade to comply with these standards. The expansion area is a means for these businesses—many of which are locally owned, multi-generational endeavors—to expand and remain in Eastern Market for the long-term. The largely vacant area immediately northeast of the historic market is the best opportunity for expansion in the area with minimal impact on existing residential communities. As businesses expand from the core to the expansion area, any historic structures that cannot be upgraded for continued food-related operations may be repurposed for a mix of uses, including new food startups, retail, office, and residential.

The market sheds have been and will remain the heart of Eastern Market.

A cohesive greater Eastern Market that knits together the existing and expanded market areas will be facilitated through regulatory changes and improved mobility networks. These will ensure that new uses are sensitively integrated into existing neighborhoods and that residents of these areas benefit from new development through enhancements to pedestrian and bike infrastructure, the addition of greenways that may be utilized to manage stormwater runoff, and access to job opportunities in an expanding food economy. Changes to land use and zoning are intended to guide growth toward the desired expansion of food-related business, while providing enough flexibility to attract development and allow for innovation and a mix of compatible supporting uses. A long-range, robust plan for street improvements—including elements as ambitious as the redesign of street sections and as simple as planting street trees—aims to create overlapping systems of pedestrian, bike, car, and semi-trailer circulation that coexist safely and comfortably. This should also enable the cluster economy that currently exists amongst food processors, distributors, and retailers in the market core to expand to operate between the core and the expansion area.

The intent of this framework is to integrate the existing and expanded market areas into a greater Eastern Market, not to create two separate entities. If realized, the sum of these areas will be a compelling neighborhood grown around food businesses comprising a walkable and vibrant mix of activities that present opportunities for both existing and new residents, businesses, and visitors to live, work, and enjoy together. It will enable Eastern Market to both keep existing jobs and create new ones, create an environment that is attractive to and meets the needs of both new and existing residents, and preserve the authenticity of the area as a working market and cultural icon within Detroit and the Great Lakes region. The framework that follows is organized into five sections:

- An overview of the proposed regulatory and mobility frameworks that affect the entire framework area
- A review of the transformations planned for the expansion area to achieve the goal of retaining and creating jobs through the realization of an enlarged food business-centered neighborhood
- A review of measures planned to make the greater Eastern Market even more attractive for both existing and new residents
- A review of actions planned to preserve the physical and cultural identity of the Core Market,
- A final chapter focused on the implementation of recommendations in the immediate-, short-, and long-term

Three intertwined goals have guided the Eastern Market Neighborhood Framework Plan.
Integrated Networks

The successful implementation of the recommendations laid out in this framework will integrate the existing and expanded market areas into one cohesive food business-centered neighborhood. The network of local business relationships that exist in the Core Market between producers, distributors, and retailers will be encouraged to continue and to grow into the Greater Eastern Market (GEM). But because current land use and zoning does not permit food business uses in much of the intended expansion area, a revised regulatory framework is a critical foundation for the market’s future growth. Changes to land use and zoning aim to enhance Eastern Market’s status as the hub of food-related business in the Detroit metropolitan area, while acknowledging increasing development pressures for a greater mix of uses in the Core Market.

Improvements to mobility infrastructure are also important to facilitate the smooth transportation of people and goods between the Core Market and the GEM. Designated truck routes simplify the transportation of goods from the highways at the edges of the Study Area to future food businesses in the GEM and minimize semi-trailer traffic in residential areas. The proposed expansion of the bike network emphasizes the installation of protected lanes. It is also proposed that pedestrian corridors be enhanced and better defined with new street trees. These mobility networks are organized to minimize conflict so that the expanded market can be accessed equally easily by foot, bike, car, or truck.

The revised regulatory framework and proposed mobility network encompass both the Core Market and GEM. The section that follows provides a high-level overview of how recommended changes in these areas address the Study Area, while later sections provide greater detail on these integrated networks in the context of specific framework goals and recommendations related to their realization.
Regulating for a Cohesive Market

Land Use
The Core Market is primarily commercial in character, with smaller-scale production and distribution uses mixed in with wholesale, retail, and office uses throughout. Larger production and distribution uses line Rivard St and the northern end of the Dequindre Cut. The area northeast of the Core Market, into which the market district is intended to expand, is primarily vacant, former residential land.

The Core Market’s commercial character will be maintained with a mix of uses allowed on its periphery. Mixed-use residential buildings are encouraged along the Dequindre Cut and on land that will be made available through the removal of the I-375 connector, while a mix of production/distribution and commercial uses are encouraged along Rivard St to encourage more active street-facing functions over time. The GEM will see the greatest change in land use, as vacant land will largely be converted to food business uses.

Proposed land use changes (right, existing top) maintain the existing commercial core around the market sheds, promote a mix of uses around it, and convert vacant land in the GEM to food business uses.
Zoning

The Core Market is split almost in half between B6 (General Services) and M3 (General Industrial) districts, with the former geared toward light manufacturing and the latter to a wider array of manufacturing uses including some, like chemical manufacturing and motor vehicle services, that are undesirable for the market’s food-centered economic and cultural character. Industrial zoning continues into the expansion area along the Dequindre Cut, but the rest of the area is zoned for low-density residential uses, except for B4 (General Business) districting on parcels facing Chene St.

It is recommended that the B6 district designation, the use of which is primarily concentrated in Eastern Market compared to the rest of Detroit, be redefined to more specifically tailor it to the needs of food-related businesses and the plans for Eastern Market elaborated in this report. This includes restricting the types of manufacturing allowed in the area to those compatible with food-related businesses and allowing multi-family residential uses conditionally so that any such projects require a formal review to ensure that they fit within the larger vision for the market. If the B6 district designation is redefined, the majority of the Core Market (including new parcels created by the removal of the I-375 connector) and the GEM should be zoned as B6. Select corridors in the GEM should be zoned as SD2 (Special Development, Mixed-use) so that less intensive uses can be built near existing residential areas.

Proposed changes to zoning (left, existing top) would update most of the market areas to best suit food-related uses.
Table 1. Uses permitted by zoning district

<table>
<thead>
<tr>
<th>Manufacturing use</th>
<th>B6</th>
<th>M3</th>
<th>SD1</th>
<th>SD2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low-impact manufacturing</strong></td>
<td>R</td>
<td>R</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Food uses include bakeries, creameries, food product manufacturing other than animal slaughtering or rendering, and non-alcoholic beverage manufacturing and bottling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Low/medium-impact manufacturing</strong></td>
<td>N</td>
<td>R</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>The only included food use is coffee roasting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High/medium-impact manufacturing</strong></td>
<td>N</td>
<td>R</td>
<td>Furniture (C)</td>
<td>Furniture (C)</td>
</tr>
<tr>
<td>Food uses include alcohol production (excluding microbreweries) and canning of food products other than fish</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High-impact manufacturing</strong></td>
<td>N</td>
<td>C</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Food uses include meat processing and the manufacturing of carbonic gas, glucose, starch, and sugar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Very high-impact manufacturing</strong></td>
<td>Abattoir (C)</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Food uses include abattoirs and fish smoking, curing, canning, or cleaning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Selected other uses</strong></td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Confection manufacturing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microbrewery</td>
<td>C</td>
<td>C</td>
<td>*</td>
<td>R</td>
</tr>
<tr>
<td>Motor vehicle services (minor)</td>
<td>R</td>
<td>R</td>
<td>N</td>
<td>C</td>
</tr>
<tr>
<td>Motor vehicle services (major)</td>
<td>C</td>
<td>C</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Game &amp; poultry preparation &amp; storage</td>
<td>R</td>
<td>R</td>
<td>N</td>
<td>C</td>
</tr>
<tr>
<td>Trucking terminals</td>
<td>R</td>
<td>R</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Storage warehouse</td>
<td>R</td>
<td>R</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Loft (residential reuse)</td>
<td>C</td>
<td>C</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Multi-family residential</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Wholesale market</td>
<td>R</td>
<td>R</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Bulk oil &amp; gasoline tank storage</td>
<td>N</td>
<td>R</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Chemical processing</td>
<td>N</td>
<td>R</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Machine shop</td>
<td>N</td>
<td>R</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Scrapyard</td>
<td>N</td>
<td>C</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Key: by right (R), select uses by right (S), conditional (C), not permitted (N)

* Permitted by right if <3,000 SF and not adjacent to residential uses; otherwise conditional
Three Intertwined Mobility Systems

It is critical to the continued success of Eastern Market that its various user groups—residents, employees, and visitors—be able to move freely in the market without hindering the ability of other groups to do the same. These groups interact with the market through various means of transportation, including by foot, bike, car, bus, and truck; this framework aims to integrate these modes into a cohesive network that allows for their comfortable coexistence.2

Semi-trailer routes should be designated from the primary access points to the market—I-75 at Mack Ave and I-94 at Chene St—to the GEM to service new food businesses there. Routes within the GEM should be organized on spurs that run perpendicular to these access routes. This minimizes truck traffic near single-family houses in the GEM and enables east-west Safe Routes to School (SRTS) from the Detroit Edison Public School Academy (DEPSA) to its playing field to be established with minimal overlap with semi-trailer traffic.3 Because semi-trailers will need to use Saint Aubin St north of Mack Ave to access future food businesses there, and because bicyclists cannot be safely accommodated with semi-trailer traffic within the existing right-of-way on the existing unprotected bike lanes, protected bike lanes should be added within the right-of-way of Chene St two blocks away to accommodate north-south bike traffic. These protected bike lanes could be extended along Chene St to link the area to Hamtramck to the north and all the way to Aretha Franklin Amphitheatre on the riverfront in the south.4 The Chene St vehicular bridge over I-945 is wide enough to accommodate on-street bike lanes to link to existing on-street bike lanes on either side of E Grand Blvd. These could be incorporated into the Joe Louis Greenway as a parallel north-south route to the proposed Dequindre Cut North extension and provide different points of access with the existing street grid.

The existing unprotected bike lanes on the block of Mack Ave between the Dequindre Cut and the north-south bike lanes on Saint Aubin St should be converted to one eastbound protected bike lane running from Mack Ave to the new protected bike lanes on Chene St. New protected east- and westbound bike lanes should be incorporated into the redesign of Mack Ave west of the Dequindre Cut. These should be complemented by one protected westbound bike lane on E Canfield St from Chene St, a northbound bike lane on Dequindre St from the Dequindre Cut to E Canfield St, and a southbound bike lane on Russell St from E Canfield St to Mack Ave to create a safe travel loop for bikes in the area. The alternating east- and westbound bike lanes on Mack Ave east of the Dequindre Cut and on E Canfield St would continue the pattern of such lanes on Forest and Warren Avenues to the north. The existing bike lanes on Wilkins St are proposed to be converted to protected bike lanes, however, this would come at the expense of on-street parking there unless the width of the street is changed.6 Sharrows (road markings that indicate where bicycles should travel when a lane is shared by bicycles and motor vehicles) should be added to continue the bike route to the new bike lanes proposed on Chene St because Wilkins St narrows significantly after passing DEPSA. Bike lanes on Gratiot Ave would provide connectivity from the new north-south spine on Chene St to the larger citywide network.

Additional improvements to the streetscape in the Core Market should be made to enhance Russell and Wilkins Streets and establish Riopelle, Orleans, and Division Streets as pedestrian-oriented corridors. These should include sidewalk repair where needed, new pedestrian-scaled streetlights like those on Russell St, and the planting of street trees where possible.8 Design guidelines for new developments along these streets will encourage active street-level uses. In the long-term, a new bridge should be added to Alfred St that can provide vertical access to the Dequindre Cut for pedestrians and bicyclists. A future study should be conducted to determine if the bridge should also carry vehicular traffic, or if it should be accessible solely to pedestrians and bicyclists.

Opposite: The proposed mobility network adds protected bike lanes and carefully interweaves pedestrian corridors and designated truck routes for minimum overlap.
Goal A: Jobs for Detoners

Historic warehouse buildings in the Core Market may be difficult and expensive for businesses to expand within or to upgrade to comply with the new food safety standards established in the FSMA. However, they still have a significant role to play in the economic development of the GEM. While some businesses will find their current buildings cannot meet their needs for required upgrades or future expansions, a key goal of this framework is to retain these jobs within Eastern Market by facilitating their relocation to the GEM. The GEM has the greatest potential in the Study Area to facilitate job growth related to Eastern Market because it has large areas of vacant land and over half of the land there is publicly owned. Over the next 15 years, it is projected that the GEM’s market capture of regional demand for additional food business, office space, and retail will support an additional 6,000 jobs (approximately 3,140 in food businesses, 1,900 in commercial offices, 900 in retail, and 60 associated with residential developments). This includes both new jobs and jobs retained by enabling existing businesses in the Core Market to expand into the GEM. Meanwhile, new jobs can be created through the reuse of historic structures in the Core Market for new food startups or for a mix of new uses including various combinations of retail, office, and residential.

A multi-faceted strategy is required to retain and create jobs in Eastern Market and should include:

• Updated zoning to allow the construction of food business buildings
• The adaptation of the existing street grid to accommodate food business building footprints
• A plan to create public greenways, which may be used to manage stormwater runoff
• Designating routes for semi-trailer traffic to minimize their overlap with other neighborhood uses
• Establishing design guidelines for the development of new food business, live-work buildings, and greenways

The design of new food business facilities and their urban environment according to this strategy will capture and direct economic demand in Eastern Market toward the creation of an innovative food business-centered neighborhood that allows a mix of uses and modes of transportation to coexist in comfort and safety.
A Regulatory Foundation for New Food Business Development

The GEM is primarily vacant, with scattered residential and institutional uses throughout and large industrial uses north and east of the Dequindre Cut. Existing industrial areas and most of the vacant land will be converted to food production and distribution uses. The area with the densest concentration of houses today, between Mack Ave and E Alexandrine St and between Saint Aubin and Chene Streets, will remain for residential use. Future processing and distribution facilities will be buffered from existing homes by areas of mixed commercial and residential use along Mack Ave and Chene St, and by live-work uses along Saint Aubin and Grandy Streets. Residential uses in the proposed mixed use and live-work areas may be denser than the single-family fabric that exists in the area today.
The majority of the largely vacant blocks in the GEM are publicly owned.

Photos: Nadir Ali / 3andathird (above), PEA (below)
If the recommendation to revise the B6 district definition to tailor it specifically to food businesses is followed, the majority of the expansion area can be updated to B6. The new definition of B6 would allow for a range of food-related manufacturing uses, but restrict other, non-compatible industrial uses. Select non-food processing uses like wholesale storage warehouses, trucking terminals, and cold storage plants, would be conditionally permitted, meaning plans for such projects are subject to review before approval. This would prevent the proliferation of such projects while allowing for their selective development in supporting roles to the primary use of the area for food production and distribution.

The zoning of parcels intended for new development that face Chene St, Saint Aubin St, and Grandy St, the south side of the current E Alexandrine St right-of-way, and the two blocks on either side of Mack Ave between Saint Aubin St and Chene St, should be updated to SD2 to allow for live-work developments, but preclude large-scale manufacturing uses. The SD2 designation only allows a selection of manufacturing uses below 5,000 square feet by right, and so encourages a mix of residential and manufacturing or commercial uses. Updating the selected corridors to SD2 allows for a sensitive transition in scale and use from large-scale food business uses to smaller live-work and commercial uses before meeting the surrounding single-family residential areas. The DEPSA playing field and the more populated residential-zoned area in the center of the expansion area should retain their existing zoning designations.

*Existing Zoning, GEM*

*Recommended Zoning, GEM*

Proposed zoning changes in the expansion area (right, existing on left) will tailor the area to food-related uses, with corridors for a mix of uses that buffer existing residential uses from new manufacturing uses.
Expanding the Food Business Neighborhood

The existing residential block structure must be adapted to provide parcels large enough to meet the demands of modern food businesses. By decommissioning select segments of streets in the GEM two existing blocks can be merged into one larger block to provide development sites of the necessary size. This would allow long-time tenants of the market to expand to new buildings only a few blocks away while maintaining their existing business connections to other processors, distributors, and retailers in the area. This also would provide space for new large-footprint businesses to move in and similarly benefit from the synergies enabled by the proximity between businesses in Eastern Market. Food business buildings should be laid out to present continuous facades with no setbacks along public east-west streets, while vehicles slip off of north-south streets on to shared drive aisles between buildings to access surface parking and truck staging areas. A secure perimeter fence with gate access can separate semi-trailer staging areas from employee and visitor parking. All new development should be fully integrated with greenways that may manage stormwater to help to comply with the City’s Post-Construction Stormwater Management Ordinance (PCSWMO) and minimize drainage utility charges.

The existing block structure (left) is sufficiently large in the east-west dimension to accommodate food business development but is too narrow in the north-south dimension. It is proposed that select street segments be vacated to create larger blocks that can accommodate new food business developments (right).
NEIGHBORHOOD FRAMEWORK PLAN  Jobs for Detroiters

CONCEPT PLAN, GEM
- Food business building
- Live-work building
- Greenway

500'
Each block features a greenway that separates food processing and distribution from live-work or residential uses. Greenways may operate as green stormwater infrastructure (GSI) or cover underground storage tanks that manage stormwater runoff from roofs and paved parking and staging areas. Trees should be planted in these buffers and public paths should be integrated to provide passive recreational opportunities, which may be further enlivened through the integration of public art. These greenways may incorporate active recreational features, such as basketball or volleyball courts, depending on the manner in which stormwater runoff may be managed, and the desire to do so by prospective developers.
The expansion area block prototype merges two existing blocks so that food business buildings can be organized to share drive aisles and minimize the visibility of parking and staging areas. Greenways separate food businesses from cross streets and live-work buildings and may include stormwater management features and public art.
Live-work buildings are planned to be primarily located along Saint Aubin and Grandy Streets where they would smooth the transition from single-family residential areas to the larger-scale food business areas. Based on market demand, these may operate as any combination of workforce housing, loft studio flats, or true live-work units to invite a variety of residents to make the area their home. Together with the greenways and design guidelines that encourage active street-facing uses along pedestrian routes in food business buildings, this framework lays the foundation for the creation of a neighborhood centered around food-related business.

Live-work buildings smoothly integrate the new market expansion area into existing residential fabric.
Food Business Buildings on Scott St

Greenway along Chene St

Ground-level activity, setbacks, and the integration of public art in the design of food business buildings, and street tree plantings, create pedestrian-friendly streets through the market expansion area.

Greenways separate residential from food business uses and will include recreational paths.
Complying with the Post-Construction Stormwater Management Ordinance

The build-out of the GEM will dramatically increase the area of impervious surface there due to the roofs of large-footprint buildings, private vehicle parking areas, and semi-trailer staging areas. The City’s PCSWMO requires developments that create or replace more than one half-acre (21,780 square feet) of impervious surface to mitigate runoff and its impact on the existing combined sewer infrastructure. The City’s Stormwater Management Design Manual provides guidance for developers to implement approved stormwater management practices. Under the Detroit Water and Sewerage Department (DWSD) GSI credit program, it is possible to earn up to an 80% credit on City drainage charges through the implementation of GSI. There are various options for the implementation of GSI, including piped conveyance, underground storage, and swale systems that can achieve the desired credit beyond what developers may implement as part of compliance with the PCSWMO.

Proposed Designated Truck Routes

The organization of semi-trailer routes in the GEM limits conflict with other uses and Safe Routes to School (SRTS).
Mobility Routes through the Expansion Area

Designated truck routes are organized as spurs from the primary semi-trailer access routes of Mack Ave and Chene St to minimize truck through-traffic in nearby residential areas. These routes should be repaved with high-impact roadbeds that can handle the weight of high volumes of loaded semi-trailer traffic without being damaged. During community meetings, residents raised concerns that the vibrations caused by heavy truck traffic were damaging their homes; high-impact roadbeds and the selective designation of truck routes can minimize the vibrations felt by residents.

Semi-trailer routes should run perpendicular to the main access routes to minimize truck traffic around single-family houses and to enable east-west Safe Routes to School (SRTS) from the Detroit Edison Public School Academy (DEPSA) to its playing field to be established with minimal overlap with semi-trailer traffic. These SRTS are along the two blocks of Erskine and Scott Streets between Saint Aubin and Chene Streets, from which point pedestrians may then move northeast to the playing field along Chene St. Both Erskine and Scott Streets have wide tree lawns, but no street trees; new trees should be planted there to improve the pedestrian experience of schoolchildren and others moving between DEPSA and its playing field.

Because semi-trailers will need to use Saint Aubin St north from Mack Ave to Superior St to access future food businesses there, and because bicyclists cannot be safely accommodated with semi-trailer traffic within the existing right-of-way on the existing unprotected bike lanes, protected bike lanes should be added within the right-of-way of Chene St two blocks away. These new protected bike lanes would also buffer pedestrians on the SRTS from semi-trailer traffic. The proposed bike lanes can run from Gratiot Ave northward all the way across I-94, and can link up with existing on-street bike lanes on E Grand Blvd. The proposed Chene St bike lanes could be incorporated into the Joe Louis Greenway as a link between the Dequindre Cut to the south and Hamtramck to the north.
Design Guidelines for an Innovative Food Business Neighborhood

Guidelines for new development in the GEM will shape a walkable neighborhood with active street edges rather than a typical industrial district of blank facades and negligible street life. Food business buildings will not be required to be set back from the street and will be encouraged to share parking and staging area access points to create consistent street edges throughout the area. Guidelines will further encourage robust landscaping, more windows at street level, and the integration of public art, in acknowledgment that food businesses will likely require significant areas of solid facades. If blank walls were made available to Murals in the Market the continuity of identity across the existing and expanded markets could be reinforced.

Greenways will augment the landscape recommended in food business developments and may contribute significantly to the management of stormwater runoff in the expansion area. Guidelines

Design guidelines will direct how food business buildings are articulated on public streets and encourage the incorporation of landscape features and public art.

Design guidelines will encourage pedestrian access and the planting of trees in greenways.
will direct the size and distribution of these buffers to form a cohesive network that separates food businesses and their parking and staging areas from residential uses. Trees should be planted throughout greenways to screen views of food business operations. Guidelines will determine the number and type of trees to be planted. The buffers should also provide an alternative means of moving through the neighborhood for pedestrians that separates them from semi-trailers and allows them to experience firsthand any stormwater management landscapes that may be developed within buffers.

Guidelines for live-work buildings define this building type’s maximum envelope to better transition these buildings into the surrounding single-family residential fabric. The use of shared alleys for parking access will be encouraged to minimize curb cuts and allow for consistent street edges uninterrupted by driveways. Doing this enables the creation of a townhouse-like condition where multiple units are aligned in a row with shared fire walls, which would create variety in the residential options in the area, and thus potentially a greater diversity in the types of residents who live in the area.

Conclusion

Plans for the expansion area require a coordinated effort to redesign the neighborhood from the ground up, including changes to land use, zoning, block structure, roadbeds, landscape, and building typologies. The comprehensive nature of this effort enables the sensitive integration of elements traditionally left out of industrial district planning: pedestrian routes, bike lanes, public landscapes, and new residential units. When implemented, these additions will seamlessly blend the market expansion area into its surrounding context and result in a unique neighborhood that expands Eastern Market in a way that is equally welcoming to residents, employees, and visitors.
Goal B: Improve the Quality of Life for Residents

Ongoing developments in the Core Market leave no doubt that Eastern Market is a desirable location for new residents, yet care must be taken to meet the needs of existing residents while preserving the character of the working food market. Street improvements should be made throughout the existing neighborhood to add greenery and improve accessibility for pedestrians and bicyclists. Proposed changes in land use and zoning encourage new residential developments to locate on the periphery of the Core Market along the Dequindre Cut and on land created by the removal of the I-375 connector between I-75 and Gratiot Ave. This would absorb the majority of market pressure for residential development and preserve historic warehouses for continued food business uses. Design guidelines will ensure that new developments along the Cut address the unique condition of their location and present active edges at both the street and Cut levels. In the GEM, live-work units are proposed to provide new residential options and to provide a transition in scale and use between new food businesses and the existing single-family residential areas.

The Dequindre Cut has transformed a derelict rail corridor into a popular recreational trail linking Eastern Market to the Detroit River.

Photo credits: Historic Designation Advisory Board, October 2005 (left), LimnoTech, January 2017 (right)
Regulating a Mix of Uses

The commercial character of the historic center of the Core Market will be maintained while a wider mix of uses will be encouraged. Proposed changes to land use recognize that the Dequindre Cut is not only a recreational greenway, but also a major real estate asset. Concentrating mixed-use residential uses along it acknowledges growing development interest in Eastern Market more broadly, and, by concentrating these uses along the Cut, will help ease pressure elsewhere in the core to allow it to maintain its status as a working market. This strategy is complemented by the proposal for mixed-use residential developments on new land gained from the removal of the I-375 connector. This band of mixed-use residential uses around the commercial center is completed by proposed changes in land use on the east side of Rivard St; however, it is not expected that this area will transform in the near future. It is proposed that the traditional production/distribution areas on the west side of Rivard St, the east side of the Dequindre Cut between Division St and Gratiot Ave, and in the area north of Wilkins St and south of Mack Ave be opened to a mix of office/retail and production/distribution uses to encourage more public-facing activities.

Existing Land Use, Core Market

Proposed changes in the Core Market (right, existing on left) maintain its commercial center while opening the periphery to a greater mix of uses.
The zoning of most of the Core Market should be updated to B6, so long as that designation has been redefined to more specifically gear it toward food-related manufacturing uses. A zoning update should also be made to conditionally allow mixed-use multi-family residential developments in B6 districts in the areas designated for such uses in the land use plan. The conditional review process should prevent such developments from displacing commercial uses in the center of the Core Market. The update should also limit the height of mixed-use multi-family residential development to 70 feet in height along either side of the Dequindre Cut; on new land created by the removal of the I-375 connector; and on blocks north of Erskine St, east of Russell St, south of Mack Ave, and west of Orleans St. Any mixed-use multi-family residential development that may happen along the east side of Rivard St in long-term would be subject to the by-right B6 district height limit of 80 feet.

Existing single-family residential areas in the GEM will not see changes in zoning and should be augmented by the addition of areas of SD2 zoning around them to buffer them from food business uses. SD2 zoning is intended to support the development of live-work units that could be designed to provide a greater mix of residential living arrangements in the neighborhood, such as townhouses or apartments. In this way live-work units can strengthen the existing residential neighborhoods while concentrating food business uses in select defined areas.

**Strategies for Affordable Housing and Mixed-Use Development**

Due to the desirability of Eastern Market as a residential location and the increasing real estate market pressures that are driving up land values and the cost of development, it is critical that future mixed-use residential developments provide opportunities to Detroiters regardless of their economic background. Affordable housing should be included in any newly constructed multi-family development of more than eight units, with at least 20% of units set aside for households making no more than 80% of the area median income.

**Improving Walkability and Bike Access**

Most proposed street improvements are focused on enhancing the pedestrian experience and facilitating bike access within the GEM and to the Core Market. Russell and Wilkins Streets are the primary pedestrian-oriented corridors in the core and should be complemented by improvements to establish first Riopelle St, then Orleans and Division Streets as additional corridors of pedestrian activity. Improvements such as sidewalk repair and street tree plantings will occur incrementally throughout the core as funds become available. As a critical piece in both the larger bicycle and truck circulation networks, the intersection of Mack Ave with the Dequindre Cut and Dequindre St should be redesigned to create a safer crossing for both vehicles and pedestrians and bicyclists leaving the Dequindre Cut. Bike lanes should be added on Mack Ave west of the Cut. In the GEM, improvements to bike infrastructure will be made upfront and in parallel to those intended to facilitate food business operations, while pedestrian-oriented improvements will be made incrementally as new developments are built.

**Russell Street**

The status of Russell St as the primary retail corridor in the Core Market has been enhanced in recent years by investments in street trees, pedestrian-scaled lighting, curb extensions, and more on-street parking. Russell St is also the only bus route through the existing market district, but its conclusion in a cul-de-sac before it meets E Canfield St makes bus routes longer and less frequent than is desirable. A study should be conducted to understand the potential time savings for buses gained by reconnecting with E Canfield St, and if reconnection would have any adverse effects. The south end of Russell St should also be studied to understand if creating a connection with Antietam Ave is desirable. Russell St may be further enhanced in the long-term by the development of a new public green space on the current site of a surface lot to the south of Shed 2. This can only happen if parking can be managed elsewhere; the use of the cavity left by the removal of the I-375 connector for below-grade parking should be studied to achieve this.
Wilkins Street
Recent improvements to Wilkins St have established it as the key east-west pedestrian and bike connection from Eastern Market west to Brush Park and beyond. These include a widened sidewalk, plantings, and pedestrian-scaled street lighting on the north side of the street. Street trees should be planted on the south side of the street, and can be enhanced in the long-term by converting the unprotected bike lanes to buffered bike lanes separated from vehicular traffic by bollards and striping, although this will require the removal of on-street parking unless curbs are relocated.

Wilkins St, existing
(from I-75 to DEPSA)

Wilkins St, proposed
(from I-75 to DEPSA)

Street trees should be planted on the south side of Wilkins St in the short-term. In the long-term, bike lanes should be buffered and either on-street parking removed (as above) or the north curb relocated to maintain adequate width for both parking and buffers.

Riopelle Street
Several key investments are focused on Riopelle St to establish it as the secondary north-south pedestrian-oriented corridor after Russell St. A “shared street” condition will be implemented on the two blocks between the northern E Fisher Service Dr and Adelaide St, in which the roadbed is raised to the level of the sidewalk to privilege pedestrian usage there. This facilitates the closure of the street for events or even on a regular basis (for example, nightly) to encourage ground-level uses to spill out on to the street. In parallel with the shared street, head-in parking will be striped, curb extensions added, and street trees planted in the block to the north, up to Division St. It is proposed that these improvements be carried through the two blocks up to Wilkins St except where they would conflict with the staging area for Shed 6. Travel lanes in the next block north to Erskine St should be realigned to the east to better align with the future reconnection of Riopelle St between Erskine and Scott Streets. The roadway can be narrowed and sidewalks widened while maintaining on-street parking. Shifting the roadway east creates an opportunity to integrate a landscaped area or GSI feature between the road and sidewalk on the west side of the street. North of Scott St, sidewalks should be improved and street trees planted where space allows.
The Mack-Dequindre Intersection
On the northern edge of the Core Market, Mack Ave is currently a six-lane divided highway and is oversized for the volumes of traffic that use it today. Its intersection with the Dequindre Cut and Dequindre St is particularly challenging (and dangerous for pedestrians and bicyclists) as three travel lanes merge into one in each direction without the aid of a traffic light or stop sign. Unprotected bike lanes begin east of the intersection, but their connection with the north end of the Dequindre Cut is not well marked. Further complicating the intersection, Dequindre St splits as it meets Mack Ave. Northbound traffic from Mack Ave meets via a typical perpendicular intersection while southbound traffic from Dequindre St merges into Mack Ave in two lanes at a stop sign after an extremely generous 300-foot-radius arc. One block to the west at the Riopelle St intersection Mack Ave widens to add two turning lanes in place of a median.

It is proposed that the large right-turn arc be minimized and a traffic light and crosswalks be added at the intersection. West of the intersection, the outside travel lanes on Mack Ave should be replaced with protected bike lanes in each direction. The two unprotected lanes east of the intersection should be replaced with one eastbound protected lane and complemented by a westbound protected lane on E Canfield St (the next parallel street to the north). These lanes continue the existing bike network’s pattern of alternating east- and westbound bike lanes on Forest and Warren Avenues further to the north. One north- and one southbound bike lane between Mack Ave and E Canfield St should be added to Dequindre St and Russell St, respectively, to complete a loop of bike lanes through the area. Lastly, the turning lanes in the center of Mack Ave should be replaced by a median and a lighted intersection at Riopelle St for safer vehicular turns.

Riopelle Street Redesign

A shared street will be implemented on Riopelle St to encourage more pedestrian activity and event use.
**Additional Street Improvements**

In the long-term, another large infrastructure investment is recommended to replace the Alfred St bridge that once crossed the Dequindre Cut to improve east-west connectivity across the Core and to the Cut. A pedestrian and bike bridge that also provides a vertical connection to the Cut would significantly improve the Cut’s connection to the Core Market. Currently there are only two access points besides the Cut’s at-grade terminus at Mack Ave. Further study is recommended to determine if designing the bridge for vehicular crossings is desirable.

Finally, improvements for bicyclists and pedestrians are linked to the development of the area for food-related businesses. Bike infrastructure improvements are integrated into upfront investments to facilitate semi-trailer traffic for food business operations in the GEM. Street tree plantings and more general sidewalk repair and replacement will be made throughout the district in parallel with the development of each new food business building in the GEM. This will include the establishment of Safe Routes to School (SRTS) on Erskine and Scott Streets between Saint Aubin and Chene Streets to minimize the overlap between semi-trailer traffic and the primary pedestrian routes used by students at the Detroit Edison Public School Academy (DEPSA) to reach the school’s playing field. Both Erskine and Scott Streets have wide tree lawns but lack street trees, so new trees plantings will be prioritized along both sides of each street to improve the pedestrian experience along the SRTS.
Design Guidelines for New Development in the Core Market

Two sets of guidelines will help shape the desired outcomes for new ground-up development in the Core Market. One focuses on mixed-use residential development and the other on the ground level of buildings facing pedestrian-oriented streets. Mixed-use residential buildings are intended to take the form of slab-and-podium development, with a mix of uses in the lower podium levels and the bulk of residential units in a slab above. The guidelines promote active, publicly accessible street-level uses that are articulated with glassy facades. For those mixed-use buildings facing the Dequindre Cut these uses are encouraged at the level of the Cut as well as the street. Beyond this, mixed-use residential development along the Cut should provide public access between the street level and the Cut and should provide additional public space contiguous with the Cut.

Pedestrian-oriented corridors are those streets in the Core Market that are intended for a greater concentration of foot traffic and ground-level uses. The street improvements highlighted above will improve the pedestrian experience for people walking along their lengths. Design guidelines will spur further activation of these corridors by encouraging active ground level uses and articulated facades that will break up the scale of and add visual interest to any larger buildings built along their length. Residential uses other than lobbies are discouraged on building faces along pedestrian-oriented corridors.
Conclusion

Plans to improve the Core Market require an approach that provides an outlet for development pressures for new mixed-use development while conserving the physical and socioeconomic character of the existing market district.

This section highlights the first strategy, which comprises regulatory changes and street improvements. Land use and zoning are the primary tools to direct the location of new, dense, mixed-use development to the periphery of the Core Market. It is critical that affordability policies be enforced to ensure that future projects are as open to the full range of Detroiters as the market itself. Design guidelines will amplify the activity of the market along key corridors and will tie the Dequindre Cut more strongly to the Core Market so it feels more like a public space in the market rather than one that simply passes through it. Street improvements will further enhance the market’s commercial activity through improvements to the safety and quality of the pedestrian experience.

The next section will detail the second strategy for the Core Market, which comprises strategies to conserve its physical and socioeconomic character.
Goal C: Keep the Authenticity and Function of Eastern Market

Even as new residential development is directed away from the historic core, there will be pressure for structures within it to be converted to lofts and other uses. Additional zoning controls should be implemented in the area with the greatest concentration of historic structures to limit the height of buildings there and encourage the redevelopment of and addition to existing structures, rather than their demolition and replacement. Design guidelines will further shape new development to specify setbacks and permissible material palettes for new additions so that the character of the historic building fabric is preserved. Changes to zoning are proposed with the intent to preserve and enhance the existing commercial character of the core and its use as a working market. Also to better facilitate the operation of the existing market district, a parking plan lays out strategies to streamline the flow of traffic and reduce congestion caused by visitors jockeying for parking spaces on market days. The long-term recommendation to consolidate parking in the core would open up new sites for development and limit development pressure on historic structures.

Though tenants have changed, the commercial character of the Core Market has been constant throughout its history and should remain so for future generations.

Photo credits: William Kevin Murphy, September 1974 (left), BuroHappold, September 2017 (right)
**Zoning for Historic Character**

A key objective of this framework is to maintain the status of Eastern Market as a working market. Proposed changes to land use preserve the commercial character of areas around the market sheds and allows for a greater mix of uses nearby. Encouraging new, dense, mixed-use residential buildings along the Dequindre Cut and on land created through the removal of the I-375 connector is intended to reduce pressure to replace historic structures in the market area.

Through a proposed zoning update, mixed-use multi-family residential uses would be only conditionally permitted in key locations and would require a review before approval. It is proposed that the zoning of the majority of the Core Market be updated to a redefined B6 designation that is tailored to food-related uses. To encourage the renovation and addition to historic structures, rather than their demolition and replacement, the heights of buildings on parcels that either face Russell St, Alfred St, Orleans St, and E Fisher Service Dr or are within the area bounded by these streets will be restricted to four stories. As most historic structures are only one or two stories, this allows for small vertical additions. Residential uses should be permitted in historic structures within the defined area above the ground level, either in an existing or added floor level. Development outside of the height-restricted area will continue to follow the by-right height limit for development in B6 zoning districts, which is 80 feet above street level.

The proposed zoning update (right, existing top) would tailor the Core Market to food-related uses. The update would limit the number of stories that can be added to historic buildings to encourage additions and renovations rather than demolitions.
Preserving Eastern Market’s Historic Core

Other steps should be taken in addition to the proposed zoning update to preserve Eastern Market’s historic built heritage. While only a few buildings in the Study Area are worthy of preservation on an individual basis, many contribute to the historic character of the market district. The gritty, turn-of-the-20th-century industrial character of the area is critical to Eastern Market’s sense of place and must be preserved. A National Register of Historic Places (NRHP) district was established in 1977 and expanded in 2006 to include most buildings of historic character. The greatest concentration of these buildings is around the market sheds and is the basis for defining the height-restricted area in the proposed zoning update. Beyond this, it is recommended that the NRHP boundary be increased to include three additional areas: the block bounded by Russell, Wilkins, Riopelle, and Alfred Streets; the portion of the block on the south side of Wilkins St between the Dequindre Cut and the alley parallel to Saint Aubin St; and the area on the south side of Gratiot Ave and north of Antietam Ave and Maple St between Rivard St and Orleans St. Including these areas in the NRHP district would allow property owners to apply for historic tax credits to help finance renovations.

Local and state historic designations for individual buildings may be pursued at property owners’ discretion. While a Detroit historic building or district listing provides more protection for buildings in that it initiates a review process when significant exterior renovations are proposed, such a review process may be seen as a barrier to development, even if this is more perception than fact. It is therefore recommended that the impacts of a local historic district designation be studied further. Meanwhile,
other measures, like the previously described zoning update, should be pursued to create an overall set of regulatory tools that preserve the district’s character without duplicative and burdensome review processes. However, local or state historic designations for a building or district should not be discouraged either.

Several renovation or rehabilitation projects are underway in the Core Market, but some key buildings remain derelict. In particular, historic buildings along the Dequindre Cut with frontages on both the street and Cut levels are important to rehabilitate. If retrofitted well, they will go far in preserving the industrial heritage of the neighborhood and could facilitate greater access to the Cut from the streets above. Of the five such buildings, only 1957 Brewster St has active plans for rehabilitation.

The NRHP district boundary should be extended to include other eligible structures like Shed 6 and former Schmidt Brewing Company buildings. Photo credits: Eastern Market Corporation, Kraemer Design Group.
Keep the Authenticity and Function of Eastern Market

NEIGHBORHOOD FRAMEWORK PLAN

Design Guidelines for Vertical Additions to Historic Structures

While the proposed zoning update previously described would limit the height of development in the area around the market sheds to encourage the renovation and expansion of the historic structures there, design guidelines will further shape proposed vertical additions. Guidelines for the massing and material palette of vertical additions aim to create a clear distinction between old and new structures. Material differentiation between the additions and the original structures is strongly encouraged to maintain the legibility of historic structures as the district develops. Such differentiation is more respectful of the existing structures than attempting to mimic the appearance of historic structures; the character and extent of the original buildings are preserved for future generations of market-goers to read in the urban fabric around them.

A Parking Plan for the Core Market

The availability of parking is critical to Eastern Market’s success, but the organization of access to most parking in the Core Market from Russell St congests traffic as cars pull in and out of spaces and lots along the thoroughway. Congestion is problematic for the market; if someone is stuck in their car searching for parking, they are spending less time walking in the market and patronizing businesses. Also, demand for surface parking is not evenly distributed, even on market days. Strategies to improve wayfinding and implement use restrictions should be explored in the immediate- and short-term to better use existing parking infrastructure in the near-term. Long-term strategies for consolidation could eventually open up surface parking parcels for future development.

Improved Wayfinding

Wayfinding can reduce traffic congestion by taking some of the guesswork out of searching for an open space. The two public lots on Wilkins St are underutilized during peak hours; signage directing...
visitors to these lots could aid in relieving traffic congestion. Eventually a parking guidance system could be installed that tracks and displays in real-time the number of parking spaces available at the various lots or garages throughout the market. Availability can be tracked by level in garages, by lot, and by aisle within a garage or lot.

**Use Restrictions**
Use restrictions can more significantly reduce congestion in the Core Market by limiting the stop-and-go traffic caused by cars entering and exiting lots and spaces on to Russell St. Within the 800 or so feet from the northern E Fisher Service Dr to Alfred St there are eight intersections or curb cuts on Russell St. Head-in on-street parking on the west side of the road further increases the number of cars pulling in and out of spaces along this length. The small lots around Sheds 2 and 3, known colloquially as “quads,” are used by both vendors and customers which can cause problems for vendors loading or unloading their goods. A few spots in each quad should be designated as bulk-load pickup locations exclusively for visitor use, while the other spaces in the quads should be restricted for only vendors to use. This should limit visitors’ in-and-out search for spaces and reduce interruptions to traffic flow on Russell St.

Use restrictions can also minimize competition for spaces between market employees and visitors. The spaces closest to Sheds 2 and 3 are most desirable to both groups; designating employee parking in a less convenient location could eliminate employee-visitor competition and should be explored further. Studies should also explore how best to institute fee parking in a systemic manner that better utilizes prime on and off-street parking resources. Fee parking should be explored not for financial gain, but as a way to deter visitors (or employees) from taking choice spaces for long periods of time.

**Consolidation**
It should be a long-term goal for Core Market parking to be consolidated into fewer parking facilities. Based on current land ownership and the size of available parcels, the publicly owned lot at 1580 Wilkins St can accommodate a single structure large enough to meet most of the parking needs for the northern end of the public market complex. While this parking structure is being built, current parking demand can be displaced to the other publicly owned lot two blocks west on Wilkins St and to the existing parking structure next to Shed 4 after it reopens following repairs. The existing deck will be restricted to municipal employees during weekday work hours for some time, but will be made available to visitors on weekends and evenings. After a parking structure is built at 1580 Wilkins St, parking from the other Wilkins St lot can be absorbed into the new parking structure so that site can be developed for other uses. The continued need for the existing parking structure adjacent to Shed 4 should be reassessed after the redevelopment of the two Wilkins St surface lots is completed. If sufficient capacity is found to exist within the Core Market, it is recommended that the existing parking structure be demolished so that its lot can be combined with the adjacent Shed 4 block to create a larger redevelopment opportunity for a new Shed 4 and additional commercial space.
Conclusion

Specific measures must be taken to protect Eastern Market’s built heritage in tandem with strategies to channel pressure for new development to the market periphery. 27 Within the Detroit development community, historic preservation is sometimes perceived as a deterrent to development when in fact a NRHP designation enables owners to apply for federal tax credits to help finance renovations. The proposed zoning update would protect historic structures in a way that is both targeted and flexible enough to accommodate new development. Design guidelines will help ensure that additions are respectful of the existing character of these buildings and the market generally. Improvements to the management of parking in the Core Market will increase the efficiency and improve the experience of visiting the market and open up new opportunities for development in prime locations near the sheds. While other measures in this framework aim to capture new opportunities for significant growth in and around the market over the coming decades, the strategies in this chapter seek to ensure that Eastern Market’s identity remains intact long into the future.
Implementation

This complex and multi-faceted framework will require significant time and financial investment to implement. While large investments are required, significant benefits will be realized. Funding will come from a variety of public and private partners, including local, state, and federal sources. The focus of public sector involvement will be on mobility infrastructure and land assembly. Private developers will build greenways, which may be GSI, as part of individual food business developments in the GEM to adhere to design guidelines and help to comply with the PCSWMO. The implementation of the NFP will increase revenue for existing businesses and the values of existing property throughout the area, bring new residents and employees to the area through new mixed-use development, and both retain and create jobs in the food business sector that will maintain the character of Eastern Market as a working market for future generations.

Concept Build-out of the Core Market

The projected 15-year build-out of the Core Market will see mixed-use multi-family development along the periphery, the retention and expansion of historic structures in the center, and new food business developments in the north (top left) and on I-75 (bottom left).
Implementation Matrix

The matrix below represents an overview of the recommendations in this document. Action items are categorized by column and arranged in three rows of implementation phases. Immediate (within one year) action items at the top, followed by those for the short-term (within five years) and the long-term (more than five years), both of which are contingent on future funding. Arrows signal if items in later phases build directly on previous actions. Icons indicate which of the framework’s overarching goal(s) are addressed by each category in each phase and whether continued community engagement is required, necessary, or optional. Each phase is described in detail on the following pages.

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<tr>
<th>Zoning</th>
<th>Design Guidelines</th>
<th>Historic Preservation</th>
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<tr>
<td><strong>Immediate</strong> (within one year)</td>
<td><strong>Update Zoning</strong></td>
<td><strong>Implement Guidelines</strong></td>
</tr>
<tr>
<td>• Redefine B6 district zoning</td>
<td>• Issue standards and guidelines</td>
<td></td>
</tr>
<tr>
<td>• Update Core Market and GEM to B6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Define sub-areas for additional uses or regulations</td>
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<table>
<thead>
<tr>
<th><strong>Short-term</strong> (within five years)</th>
<th><strong>Expand Districting</strong></th>
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<tr>
<td>• Expand the NRHP district</td>
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<tr>
<td>• Study local district designation</td>
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<th><strong>Long-term</strong> (more than five years)</th>
<th><strong>Rehabilitation</strong></th>
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<tr>
<td>• Rehabilitate heritage structures along the Dequindre Cut</td>
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</tbody>
</table>

**Legend**

- Cumulative recommendation
- A Primary focus
- B Secondary focus
- C Goal(s) targeted
- ☀ Required
- ☻ Necessary
- ☺ Optional

**Goals**

- A Create jobs
- B Improve resident quality of life
- C Keep authenticity and function
### Mobility

**Enabling Projects**
- A "shared street" on Riopelle St
- Decommission street segments
- Install high-impact roadbeds

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### Parking Plan

**Improving Use of Assets**
- Staff and signs for wayfinding
- Designate visitor and vendor spaces
- Limit lot entries from Russell St
- Study paid parking

**Photo: BuroHappold Engineering**

- Install a guidance system
- Institute paid parking
- Study parking consolidation to open sites for development

### Greenway Network

**First Greenways**
- Implement greenways in the GEM

**Greenway Expansion**
- Implement greenways in the GEM

### Development Opportunities

**Issue First RFPs**
- Facilitate GEM developments
- Issue RFPs for 1923 Division St and 3480 Russell St

**Issue Additional RFPs**
- Facilitate GEM developments
- Issue RFPs for 3033 Russell St, 1580 Wilkins St, and 3402–3482 Saint Aubin St

**Complete the GEM**
- Facilitate final GEM developments

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### Critical Infrastructure

- Redesign the Mack-Dequindre intersection
- Redesign Chene St
- Extend Riopelle St

### Investing in Efficiency

- Install a guidance system
- Institute paid parking
- Study parking consolidation to open sites for development

### An Open Space Network

- Complete GEM greenway network
- Build the Market Green

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### Qualitative Upgrades

- Install tabled intersections on Russell St
- Build Alfred St Bridge
- Complete enhancements to SRTS

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### Greenway Network

- Implement greenways in the GEM

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Recommendations for Immediate Implementation

**Zoning**
- Revise the definition of B6 districts to better align with the needs of food businesses (see p.56).
- Update zoning in most of the Core Market (including new parcels created by the removal of the I-375 connector) and the GEM to B6, if revised as described above (see p.56).
- Update zoning in select areas along Mack Ave, Saint Aubin St, Chene St, and Grandy St to SD2 (Special District, Mixed-Use) to encourage live-work uses that transition between new food business and existing residential uses (see p.63).
- Update zoning (see p.85) so that it:
  - conditionally permits mixed-use multi-family residential uses of up to 70 feet in height on either side of the Dequindre Cut, on new land created by the I-375 Improvement Project, and on blocks north of Erskine St, east of Russell St, south of Mack Ave, and west of Orleans St;
  - restricts the heights of buildings on parcels within or facing the streets that bound the area defined by Russell St, Alfred St, Orleans St, and Fisher Service Dr to a maximum of four stories;
  - and restricts the heights of buildings in the GEM to 45 feet or one story, whichever is greater.

**Mobility**
- Decommission the street segments of Pierce and Watson Streets between Saint Aubin and Dubois Streets, E Alexander St between Dequindre and Chene Streets, and the stub of Leland St between Dequindre and Saint Aubin St (see p.64).
- Construct a "shared street" on Riopelle St between Adelaide St and E Fisher Service Dr. Widen sidewalks, plant street trees, and formalize head-in parking on the east side of Riopelle St between Division and Adelaide Streets (see p.79–80).
- Install high-impact roadbed on Saint Aubin St between Superior St and Mack Ave and on Dubois St between Mack Ave and Gratiot Ave with high-impact roadbeds to handle high volumes of semi-trailer traffic. These segments should be designated as truck routes (see p.73).

**Parking Plan**
- Deploy staff and signs to redirect visitors to the Wilkins St lots (see p.88–9).
- Restripe the Wilkins St lots to make them more organized and attractive for visitors to use.
- Designate spots within the "quad" lots around Sheds 2 and 3 for either visitor use only or for vendor use only (see p.89).
- Modify the Shed 1 and Shed 5 lots so that existing entry/exit access points on Russell St become exits only.
- Study the effects of on- and off-street paid parking.

**Greenway Network**
- Develop greenways in parallel with new food businesses in the GEM (see p.64–72, 74–5).

**Historic Preservation**
- Apply to expand the existing National Register of Historic Places (NRHP) district to include the block bounded by Russell, Wilkins, Riopelle, and Alfred Streets; the portion of the block on the south side of Wilkins St between the Dequindre Cut and the alley west of and parallel to Saint Aubin St; and the area on the south side of Gratiot Ave and north of Antietam Ave and Maple St between Rivard St and Orleans St (see p.86–7).
- Study the effects of creating a local historic district with the same boundaries as the NRHP district.

**Design Guidelines**
- Implement design guidelines for new development in the Core Market and the GEM (see p.74–5, 82–3, 88).

**Disposition of Public Land**
- Dispose of public land in the GEM to facilitate new food business or live-work development.
- Issue a request for proposal for a live-work development in the GEM.
- Issue a request for proposal for 1923 Division St for mixed-use, mixed-income multi-family residential development (see p.100).
- Issue a request for proposal for 3480 Russell St for mixed-use, mixed-income multi-family residential development (see p.100).
Improvements for Immediate Implementation

Note: the build-out shown here is only illustrative and does not reflect actual planned development.
Recommendations for Implementation in the Short-term

**Mobility**

- Decommission the street segments of Hale St between Saint Aubin and Dubois Streets, Watson St between Dubois and Chene Streets, and E Alexandrine St between Chene and Grandy Streets (see p.64).
- Extend Riopelle St from Erskine St to Scott St, realign travel lanes between existing segments and the extension, and facilitate the repair of sidewalks where needed and the planting of street trees where space allows on all segments between Fisher Service Dr and Mack Ave (see p.79).
- Redesign Mack Ave and its intersection with the Dequindre Cut and Dequindre St to better facilitate pedestrian and bike crossings and install a high-impact roadbed on Mack Ave between I-75 and Chene St. This segment of Mack Ave should be designated as a semi-trailer route (see p.80–1).
- Redesign Chene St to incorporate protected bike lanes, street trees, and a high-impact roadbed from Gratiot Ave to I-94. This segment should be designated as a semi-trailer route (see p.58–9, 73).
- Install one-way protected bike lanes running north on Dequindre St between Mack Ave and E Canfield St, running west on E Canfield St from Chene St to I-75, and running south on Russell St from E Canfield St to Mack Ave (see p.58–9).
- Facilitate street tree planting on the south side of Wilkins St from I-75 until the street narrows at the Detroit Edison Public School Academy (DEPSA) parking lot, on both sides of Wilkins St from DEPSA to Chene St, and on Erskine St between Saint Aubin and Dubois Streets to enhance Safe Routes to School (SRTS) for DEPSA schoolchildren (see p.58–9, 72–3, 81).
- Facilitate sidewalk repair on Division St between Orleans and Saint Aubin Streets.
- Study the effects of a bridge reconnecting Alfred St over the Dequindre Cut for pedestrian, bicycle, and vehicular use.

**Parking Plan**

- Install a parking guidance system (see p.88–9).
- Institute on- and/or off-street paid parking in select locations, if found to be beneficial after study.
- Study if the consolidation of parking in one or more structures can enable the redevelopment of the Shed 1 parking lot into a public green open space.

**Greenway Network**

- Develop greenways in parallel with new food businesses in the GEM (see p.64–72,74–5).

**Historic Preservation**

- Facilitate the rehabilitation of heritage properties along the Dequindre Cut at 2902 Orleans St, 1957 Brewster St, 1857 Alfred St, 1901 Adelaide St, 1911 Gratiot Ave, and 1451 Gratiot Ave (see p.87).
- Designate a local historic district with the boundaries the same as or modified from the proposed expanded NRHP district, if such a designation is found to be beneficial for the Core Market after study.

**Disposition of Public Land**

- Dispose of public land in the GEM to facilitate new food business or live-work development there.
- Issue a request for proposal for 3033 Russell St for commercial and/or food-related manufacturing uses (see p.101).
- Issue a request for proposal for 1580 Wilkins St for a combination of commercial and food-related manufacturing uses and a public parking structure to serve the district (see p.101).
- Issue a request for proposal for 3402–3482 Saint Aubin St for live-work units (see p.101).
Improvements for Implementation in the Short-term

Note: the build-out shown here is only illustrative and does not reflect actual planned development.

- New development
- RFP site
- Street improvement
- Decommissioned street
- Street trees
- Food business building
- Live-work building
- Greenway
Recommendations for Implementation in the Long-term

**Mobility**
- Decommission the street segments of Hale and Pierce Streets between Dubois and Chene Streets and the stub of Saint Joseph St between Dequindre and Saint Aubin Streets (see p.64).
- Install tabled intersections on Russell St at Gratiot Ave and the northern Fisher Service Dr as part of the I-375 Improvement project.
- Install protected bike lanes on Wilkins St between I-75 and the parking lot for DEPSA and paint sharrows on from the parking lot to Chene St (see p.58–9).
- Facilitate the repair of sidewalks on Orleans St between Fisher Service Dr and Mack Ave, Erskine St between Rivard and Orleans Streets, Alfred St between Riopelle and Orleans Streets, and Adelaide St between Orleans St and Gratiot Ave.
- Facilitate the planting of street trees on Scott St between Saint Aubin and Chene Streets and on Erskine St between Dubois and Chene Streets to enhance SRTS for DEPSA schoolchildren (see p.58–9, 72–3, 81).
- Build a new Alfred St bridge over the Dequindre Cut, if found to be beneficial for pedestrian, bicycle, and/or vehicular mobility in the market.

**Greenway Network**
- Develop greenways in parallel with new food businesses in the GEM (see p.64–72, 74–5).
- Study the replacement of the Shed 1 parking lot with a public "Market Green," including an analysis to determine if a consolidated parking structure(s) can absorb the lot's parking capacity with minimal negative impact.

**Disposition of Public Land**
- Dispose of public land in the GEM to facilitate new food business or live-work developments there.
NEIGHBORHOOD FRAMEWORK PLAN Implementation

Improvements for Implementation in the Long-term

Note: the build-out shown here is only illustrative and does not reflect actual planned development

- New development
- Street improvement
- Decommissioned street
- Tabled intersection
- Street trees
- Food business building
- Live-work building
- Greenway
Opportunity Sites as Models for Future Development

Five publicly owned sites have been identified as key locations for projects intended to serve as models for future private developments elsewhere in the Core Market and GEM. All projects are intended to increase the density of market tenants and thereby increase the walkability of the market. Individual projects will provide models for residential mixed-use development along the Dequindre Cut and elsewhere in the Core Market, consolidated parking opportunities, new food business and commercial development in the Core Market, and the development of live-work buildings. The concepts that follow illustrate the type of development that the City of Detroit would like to see realized on these sites and will guide the writing of future requests for proposals in the disposition of these public parcels.

1923 Division St is currently a vacant parcel on the east side of the Dequindre Cut just blocks from the market sheds. Development on the site is intended to serve as a model of mixed-use residential development that provides active, publicly accessible uses at both the level of the street and the Cut. The development should also provide public access between the street and Cut levels and should provide additional public open space contiguous with the Cut. It is encouraged that the mix of residential and non-residential uses, including commercial and/or light manufacturing, be disposed in a slab and podium arrangement.

3480 Russell St is currently a vacant parcel on the east side of Russell St to the north of the FD Lofts and not far from the market sheds. Development should provide residential units above ground-level retail along Russell St to extend the existing pedestrian-oriented corridor northward. The site is large enough to accommodate both residential development on Russell St and food business development along Riopelle St with adequate space to separate these uses with parking and landscaped areas. A food business building on the east side of the site would benefit greatly from the reconnection of Riopelle St between Scott St and Erskine St to increase pedestrian and vehicular access.
1580 Wilkins St is the largest publicly owned site in the Core Market, and because of this and its location on Wilkins St near both the Dequindre Cut and the market sheds it is ideal for a consolidated parking structure. The existing surface lot’s peak utilization rate is only 52% on market days, and is often nearly empty on non-market days. A parking structure could accommodate the surface lot spaces in both the existing lot on site and the other publicly owned surface lot two blocks away, even while adding additional spaces to the market’s overall capacity. Beyond this the site is large enough to also accommodate 60,000 square feet of food businesses with their attendant parking and semi-trailer staging needs, and office floors above. These tenants could benefit from proximity to The Riopelle development immediately across Erskine St from the site.

3033 Russell St is the second of two publicly owned surface parking lots along Wilkins St and occupies the prime intersection of Wilkins and Russell Streets. Like 1580 Wilkins St, the lot’s peak utilization rate is low, even on market days, and is empty most days of the week. Given its location, the site should provide active ground level uses on both Wilkins and Russell St frontages to enhance those pedestrian-oriented corridors. These could be front-of-house spaces for food businesses or more traditional retail or restaurant spaces. The site is somewhat constrained by its narrower north-south dimension, which would limit food businesses to the use of box trucks rather than semi-trailers.

The parcels at 3402–3482 Saint Aubin St are currently vacant. The GEM concept plan calls for these to be developed as live-work buildings to better separate food business development to the east from DEPSA on the other side of Saint Aubin St. Although the specific mix and model of residential and commercial or maker space will be selected through a public request for proposal (RFP) process, it is intended that the live-work buildings provide a denser model of residential development that maintains the scale of existing houses in the GEM.

A parking structure on 1580 Wilkins St would enable the consolidation of other public parking in the market and open other sites for development. A food business building can fit alongside the garage.

3033 Russell St provides space for modern food business(es). It should create an active, publicly accessible ground level that further activates Russell and Wilkins Streets as pedestrian corridors.

3402–3482 Saint Aubin St should be developed to provide live-work units with unit parking accessed from a shared alley, as shown in the example above.
Conclusion

The attentive implementation of the preservation and transformation strategies described in this document will position Eastern Market to grow as a food-centered neighborhood that respects its historic cultural identity, continues its status as a working market, and sensitively integrates opportunities for a mix of other uses. These strategies balance respect for the market’s historical and cultural importance with transformative plans to guide its growth into a resilient and competitive center of modern food business.

The expansion of the market into the GEM is a singular opportunity for existing businesses to expand within the market and for new businesses to move into Detroit, which together promise to create thousands of jobs for Detroiter. Design guidelines for new buildings and the network of greenways that will be integrated into new development there will ensure that the GEM does not reproduce the urban design shortcomings of typical food business developments. Improvements to pedestrian, bike, and road infrastructure will benefit existing and future residents, and the planned locations for new residential development address real estate pressures while maintaining the commercial character of the existing market. Additional regulatory measures will be taken to preserve the physical character and identity of Eastern Market’s historic core, but are flexible enough to enable new development there as well.

Implementing the recommendations described in this document will enhance the existing market and blend its expansion into a greater Eastern Market. The expanded neighborhood will be attractive for residents, employees, and visitors and ensure that Eastern Market continues to play a significant role in Detroit’s history for future generations.
Endnotes

1. See documents related to the I-375 Improvement Project available at [https://www.michigan.gov/mdot/0,4616,7-151-9621_11058_75084---,00.html](https://www.michigan.gov/mdot/0,4616,7-151-9621_11058_75084---,00.html).

2. Michigan Department of Transportation (MDOT) funding will be sought for some of the most critical improvements to facilitate initial investments in the GEM. Sidewalk repair and street tree planting will be implemented by property owners in the GEM as new food business buildings are developed. Property owners are also responsible for sidewalk repair and street tree plantings in the Core Market, however, responsibility for these may be taken on by Eastern Market Corporation (EMC) at EMC’s discretion.

3. Safe Routes to School (SRTS) is a federally recognized strategy to promote walking and biking among school-age children as their primary means of commuting to school through infrastructure improvements, policy changes, education, and incentives. Federal funding for SRTS may be applied to implement initiatives developed at the local or metropolitan level, as well as by school districts themselves.

4. For more detailed information on bike lane improvements on Saint Aubin and Chene Streets see page 73.

5. The replacement of this bridge was completed in December 2018 as part of the I-94 Modernization Project. For more information see documents available at [https://94detroit.org](https://94detroit.org).

6. For more detailed information on the proposed protected bike lanes on Wilkins St see page 79.

7. Bike lanes on Gratiot Ave were proposed in the Regional Transit Authority of Southeast Michigan’s Gratiot Avenue Transit Study: Locally Preferred Alternative Report, dated 5/31/16.

8. Cost estimates for these street improvements include only rough estimates for sidewalk repair and street trees. The exact amount of sidewalk that will need to be replaced and the exact number of trees that can be planted within the existing width of sidewalk should be determined through on-site reconnaissance. The number of streetlights should be determined in the same manner, and can be assumed to cost $5,000 per unit, including installation. This assumes the same street light model that is used on Russell St will be used on these corridors as well.


10. For a list of street segments that are proposed to be decommissioned, see pages 94, 96, and 98.

11. See Chapter 5, which covers the Stormwater Management Network Plan, for more information on greenways and their role in helping new development to comply with City stormwater management regulations, including the PCSWMO.

12. See note 3 above.

13. For more detailed information on design guidelines than is provided in this section, see Appendix C, available at [https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market](https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market).

14. See documents related to the I-375 Improvement Project available at [https://www.michigan.gov/mdot/0,4616,7-151-9621_11058_75084---,00.html](https://www.michigan.gov/mdot/0,4616,7-151-9621_11058_75084---,00.html).

15. For more information on the proposed land use and zoning for the GEM, see page 61.


17. For more information on improvements for bike and semi-trailer movement, see page 73.

18. The Eastern Market 2025 Strategy noted that residents of the adjacent Forest Park neighborhood commented that the cul-de-sac “creates a circulation problem for everyone and is not an adequate traffic-calming solution” and recommended reconnecting Russell and E Canfield St.

19. For more information, see page 73.

20. For more detailed information on design guidelines than is provided in this section, see Appendix C, available at [https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market](https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market).

21. For more information on proposed land use changes in the Core Market, see page 75.

22. See note 1 above.

23. Michigan does not currently have a state historic preservation tax credit program, although two pending bills, Michigan Senate Bill 469 and Michigan House Bill 5178 (both introduced in 2017), would reinstate it.

24. These include the buildings at 2902 Orleans St, 1957 Brewster St, 1857 Alfred St, 1901 Adelaide St, 1911 Gratiot Ave, and 1451 Gratiot Ave.

25. See note 20 above.

26. Plans proposed as part of the I-375 Improvement Project present another opportunity to reduce in-and-out traffic congestion on Russell Street. They include widening the northern E Fisher Service Dr so it can be converted from one-way to two-way traffic, which would enable the surface lot south of Shed 2 to close its access point on Russell St and have all traffic come into and out of E Fisher Service Dr.

27. See page 77 for more information.

28. See note 20 above.

29. See note 20 above.
References

- I-94 Modernization Project (ongoing)
- I-375 Improvement Project (2019)
- Eastern Market 2025 Strategy (January 2016)
- Bridging Food & Families: Living, Working and Growing in Greater Downtown (Summer 2016)
- Detroit Wholesale Produce Terminal Feasibility Study (July 2016)
- Gratiot Avenue Transit Study: Locally Preferred Alternative Report (May 2016)
- Clean Water, Good Food, Great Place: Eastern Market Green Stormwater Management Strategy (March 2015)
- Eastern Market Targeted Redevelopment Area Project (July 2013)
Introduction

The redevelopment of the Greater Eastern Market (GEM) is important for the economic health of Detroit. New development will increase the area of impervious surfaces due to the large footprints of food business buildings and their corresponding paved areas for vehicle parking and semi-trailer staging.

The Stormwater Management Network Plan (SWMNP) suggests sustainable strategies that require an allotment of green space on each development site that in turn may be used for stormwater management. Development sites collect and convey runoff to the wastewater treatment plant through a network of pipes, ultimately discharging it to a local body of water. The SWMNP looks beyond traditional stormwater management systems, utilizing green stormwater infrastructure (GSI) practices that employ plants and mimic natural systems as a way to manage stormwater. The SWMNP proposes guidelines that will eventually result in the creation of a network of owner-constructed green spaces to aid in the management of stormwater. The GSI options provided by this plan may aid in compliance with the City of Detroit’s Stormwater Management Regulations and, if properly maintained, can reduce business owners’ drainage charges.

The SWMNP unites transformative landscape methodologies with innovative approaches to stormwater management and makes them operational at the GEM’s neighborhood scale. The larger framework, of which the SWMNP is a part, unites the City of Detroit’s major programmatic and regulatory initiatives into a single vision for the Study Area that will simultaneously make it both more ecologically focused and more urban as part of the City’s plan to redevelop the GEM.

The GEM is intended to accommodate the expanded food business district and integrate it into an existing neighborhood while creating a network of open spaces and connective circulation infrastructure. Urban and natural elements have the potential to introduce complex new systems to the site that will evolve over the course of many years, create interim conditions that are interesting in their own right, and give form, focus, and character to the area’s development.

The spatial demands of modern food production and distribution development require the block structure of the GEM to be reconfigured in a manner that supports development and stormwater management practices. The requirements of the ordinance provide unique challenges and opportunities to rethink stormwater management in a district of the city that requires large-footprint buildings and large paved areas for vehicles. The greater the impervious area (roofs and pavement), the larger the dedicated area required for stormwater management. This necessity is often difficult to achieve in urban environments. The spatial constraints of the redevelopment require that stormwater management be considered on a holistic scale for the GEM, while recognizing that development rates and demand are likely to vary across the area. A series of greenways were designed to be implemented incrementally as the market expands to address the stormwater management of the GEM as a whole. These greenways also have the potential to be used for Stormwater Management Practices (SMPs). SMPs are structural, vegetative, or managerial practices used to treat, prevent, or reduce water pollution.
An Integrated Plan

The SWMNP proposes a robust public realm that provides social and environmental benefits to Eastern Market and its adjacent neighborhoods. Together with the Neighborhood Framework Plan (NFP), the SWMNP is intended to achieve these benefits through a landscape-based vision for the growth of Eastern Market. The basic structure of the SWMNP proposes a series of up to four north-south greenways that are integrated into new development to manage stormwater as part of compliance with the City’s Post-Construction Stormwater Management Ordinance (PCSWMO). These greenways are delineated by robust linear tree groves which establish a strong landscape character that will define the GEM. In addition to providing an overall identity, the greenways provide a connective circulation linking the district south to Gratiot Ave and north to existing neighborhood assets. East-west streets and sidewalks complement the greenways by providing a safe connective network linking the GEM through to adjacent neighborhoods. This network of open spaces supports the mobility routes proposed in the NFP supporting pedestrians, cyclists, and vehicles. These greenways also provide robust buffers between the expanded market and adjacent residential neighborhoods.

Existing Policy and the Neighborhood Framework Plan

Historically, managing stormwater from site developments in the City of Detroit had not been required. However, a National Pollutant Discharge Elimination System (NPDES) permit required the City to develop a stormwater control plan for areas of new development and redevelopment. This permit and its associated mitigation plan are required to aid in the elimination of untreated combined sewer overflows within the City. On November 13, 2018, City Council passed Stormwater Management Regulations found under Chapter 56, of the 1984 Detroit City Code, Utilities, Article III, Sewer and Drains, Division 4, Stormwater Management. This City of Detroit ordinance establishes performance standards,
A Stormwater Management Network Plan
This plan looks beyond traditional stormwater management systems, utilizing green stormwater infrastructure practices that employ plants and take cues from nature to manage stormwater.
Benefits to Eastern Market and Surrounding Neighborhoods

The SWMNP proposes a robust public realm that provides social and environmental benefits to Eastern Market and its adjacent neighborhoods. The NFP and SWMNP establish a landscape-based vision for the expansion of Eastern Market. The basic structure of the plan proposes a series of four linear north-south greenways that may contain stormwater management landscapes. These greenways will be defined by robust, linear tree groves which will establish a strong landscape character across the GEM. In addition to providing an overall identity, the greenways may be utilized for stormwater management and will provide connective circulation linking the district south to Gratiot Ave and north to existing neighborhood assets. The greenways will also provide robust buffers between the market expansion and adjacent residential areas to the north and east. East-west streets and sidewalks complement the greenways by providing a safe connective network of sidewalks linking the GEM to these adjacent East Side neighborhoods and Midtown and the Woodward corridor to the west.
Streets and Sidewalks

A Connected Green Network

GEM boundary
Streets and sidewalks
Linear tree groves
Stormwater management practice areas
Streets and sidewalks
Neighborhood parks and institutional landscapes
Goals and Objectives
A series of goals and objectives form the foundation for the SWMNP:

The SWMNP WILL:

1. Provide a comprehensive vision for how property owners and developers could manage stormwater as part of redevelopment activities in the GEM.

2. Layout conceptual designs for managing stormwater runoff from proposed new development in a way that provides benefits to property owners, abutting property owners, and the larger community.

3. Provide a flexible framework that will support the existing Eastern Market neighborhood and accommodate market expansion over a 15- to 20-year horizon.

4. Demonstrate a commitment from the City to encourage neighborhood benefits through the restoration and creation of open space.

5. Provide a unified vision for how the GEM can be developed in a manner that ensures existing and future residents and businesses will not be negatively impacted by market expansion through the creation of impervious surfaces.

6. Provide concepts for the greenways that aid in both compliance with the PCSWMO and obtaining green credits.

7. Establish design guidelines that ensure an intentional integration of landscape spaces that allow access and provide environmental and social benefits to the community.

8. Establish design guidelines that supplement the City of Detroit Stormwater Regulations guiding future landowners in developing solutions to manage their stormwater using the greenways.

The SWMNP will NOT:


10. Suggest a single landowner for the open space greenways.
The greenways have the potential to manage stormwater as well as provide an enhanced and connective public realm for the GEM and its adjacent neighborhoods.
Context

GEM boundary
Existing buildings within the GEM
Existing buildings outside the GEM
Existing vegetation
Areas for non-food-related uses
Brownfield

Existing Conditions

500'

EASTERN MARKET Neighborhood Framework and Stormwater Management Network Plan

STORMWATER MANAGEMENT NETWORK PLAN
Context

The GEM has large vacant tracts of land occasionally dotted with houses. Neighboring areas can benefit from redevelopment so long as the needs of the residents are respectfully considered in future planning. The GEM’s close proximity to the Core Market and existing City infrastructure presents opportunities for parcel consolidation. The GEM affords a unique opportunity to rethink how an urban food district can be integrated into the city while improving quality of life and including green space. This SWMNP will suggest innovative stormwater management thinking into the build-out plan for an expanding Eastern Market.

Existing Neighborhood Landscape Character

The majority of the GEM is vacant land with a small number of houses. There are a few industrial parcels located between Dequindre and Saint Aubin Streets. A few institutions operate in the area, such as the Detroit Edison Public School Academy (DEPSA) and its associated playing field, along with some active churches. The Dequindre Cut provides recreational green space for the neighborhood and there is a scattering of small neighborhood parks throughout the rest of the Study Area. One potential means of expanding neighborhood open space would be to allow access to greenways and any future stormwater management features to be designed within them.

Topography and Soils

The Study Area is relatively flat. Generally, the entire Study Area is gradually sloped toward the southeast and the Detroit River, like much of Detroit. The terrain is so flat that road infrastructure, including paved streets, alleys, curbs, gutters, and the associated combined sewer network, define the existing drainage patterns within the GEM far more than topography or soil conditions.3

The dominant drainage class for most of the Study Area soils is “somewhat poorly drained,” according to the Natural Resources Conservation Service. Another measure of drainage, hydrologic soil group, indicates that essentially all of the Study Area soils drain poorly. Each development site will need soil borings analyzed to plan for adequate SMPs and to ensure there is no contamination from previous uses. If soil contamination is present, it does not necessarily eliminate the implementation of the open space greenway, but it could eliminate the potential for the space to be used for some GSI practices or comply with the PCSWMO. Topography and soils have a direct impact on the design of SMPs. Sites with relatively flat topography and poor drainage often suggest that SMPs need to function at a localized scale. For the purpose of this plan the SMPs are internalized to each development site.

There is a significant level of uncertainty regarding existing soil and subgrade conditions within the GEM. This is because the area was once a dense residential neighborhood and a number of building foundations may remain below the surface of the ground. Prior to conducting any detailed design and engineering, landowners or developers must commission a number of critical site investigations that will inform the SMP design. These should include subsurface reports, soils characterization, and environmental and geotechnical investigations. In addition, infiltration testing is critical before the project advances to the design and engineering phase for compliance with the PCSWMO. It is also recommended that a detailed site survey, including a geophysical analysis, be commissioned by the landowner or developer to discover any foundations that remain, but are not visible.

Tree Canopy

East of the Dequindre Cut in the residential neighborhoods, the tree canopy is consistent and full. Introducing shade trees in the core and planting them for expanding growth is a relatively straightforward way to enhance the appearance of the area and the personal comfort of people walking in the neighborhood and market. Moreover, a more consistent canopy throughout the district could help absorb air pollutants and buffer noise.
Brownfields

There are three listed brownfields within the GEM. These brownfield designations relate to buried fuel tanks, but the exact level and type of contamination will require further physical and environmental investigation to be known. Additional brownfields may be present, but they are not currently registered with the State of Michigan. The Detroit Brownfield Redevelopment Authority offers assistance to promote the revitalization of environmentally distressed and blighted areas within the boundaries of the City of Detroit.

The following resources can be used to learn more about brownfield locations and policies in the area:

**The City of Detroit Brownfield Redevelopment Authority (DBRA)**
http://www.degc.org/public-authorities/dbra/

**Michigan Department of Environment, Great Lakes, and Energy (EGLE) Environmental Mapper**
https://www.mcgi.state.mi.us/environmentalmapper/

**EGLE Facilities Inventory**
https://secure1.state.mi.us/FacilitiesInventoryQueries/

Existing Water and Combined Sewer Network

In general, within the Study Area, it appears that all parcels have gas mains, electrical lines, water mains, and sewer mains readily available without the need for long utility extensions. Unneeded utilities can be removed as streets are taken offline as part of redevelopment. Parcels for future development contain existing sewer and water infrastructure that can be removed as part of the development project construction. The condition of the existing sewer infrastructure is relatively unknown. Investigations and existing conditions surveys need to be undertaken by the landowner or developer at the time of detailed site engineering and design.

Generally, the network of sewers in the Study Area flow southeastward toward the Detroit River and the large interceptor there ultimately directs flows to the wastewater treatment plant on the far west side of the city. Sewers running under Saint Aubin and Chene Streets serve as the primary collectors in the GEM. These north-south collectors range from 25 to 72 inches in diameter. It is important to note that all future SMPs that utilize infiltration require a 10-foot setback from DWSD sewers. Therefore, even sewer interceptors that are not connected to the GEM sewers, but are located nearby must be considered within the GEM wastewater system. The North Interceptor East Arm under Mack Ave is the largest sewer line in the Study Area and is far larger than local sewers. It runs from the northeast Detroit suburbs to the wastewater treatment plant.
Gratiot Ave looking southeast toward Downtown

Photo: Alex MacLean, 2014
Intersection of Mack Avenue and Chene Street looking northwest through the GEM

Photo: Alex MacLean, 2014
A Block Plan for Market Growth

The existing residential block structure will be modified to provide development sites large enough to meet the demands of modern food businesses and greenways that may also function as stormwater management practices. Select street segments in the GEM will be decommissioned so that two existing blocks can be merged into one larger block for food business development.

Existing and Proposed Land Uses

The GEM comprises significant tracts of vacant land, with scattered residential and institutional uses throughout and large industrial uses north and east of Saint Aubin St. Existing industrial areas and most of the vacant land will be converted to food production and distribution uses. The area with the densest concentration of houses today, between Mack Ave and E Alexandrine St and between Saint Aubin and Chene Streets, will remain for residential use. Future processing and distribution facilities will be buffered from existing homes by areas of mixed commercial and residential use along Mack Ave and Chene St, and by live-work uses along Saint Aubin and Grandy Streets. Residential uses in the proposed mixed-use and live-work areas may be denser than the single-family fabric that exists in the area today. The greenways support the proposed land use changes by providing landscape buffers between different uses. The greenways are primarily located adjacent to live-work and residential areas providing a landscape transition between food business and residential areas.

Proposed Block Plan

The block plan has been designed to reorganize the existing road network, creating larger blocks that accommodate the demand for larger building footprints that meet the needs of new food business development in the GEM. The block structure is intended to provide adequate space for stormwater management and create a network of greenways. Each block would feature a landscape buffer that separates food processing and distribution from live-work or residential uses.

These proposed greenways have the potential to be used for on-site stormwater management and could potentially serve as shared SMPs for neighboring sites. Shared SMPs accept runoff from multiple privately owned development sites with different owners. Agreements would need to be reached with the landowners in compliance with the city’s stormwater management regulations. Public paths will run through these greenways to provide passive recreational opportunities, which may be further enlivened through the integration of public art. Trees planted in these greenways will vary in species to accommodate the types of SMPs chosen to implement in the landscape buffer area.

Greenway and SMP Siting Criteria

The greenways are sited to optimize the potential for landowners to incorporate SMPs that may obtain Green Infrastructure Credits to offset DWSD drainage charges and achieve compliance with the City of Detroit PCSWMO. Additional considerations were established to capture a broader list of considerations that could influence the design of the publicly accessible greenways.

Required Siting Criteria
1. Does not remove culturally significant structures
2. Supports economic development potential
3. Inclusive and publicly accessible
4. Considers public safety with adjacent land uses

Additional Considerations
5. Preserves healthy mature trees
6. Provides benefits to local schools and cultural institutions
7. Enhances multimodal connectivity within the district
8. Avoids relocation of major sewer utilities (a major utility is defined as any sewer line greater than 24” diameter)
Proposed land uses within the GEM strengthen the mixed-use corridors of Saint Aubin and Chene Streets while protecting residential areas and allocating parcels for new food business development. The four greenways work with the proposed land uses by providing transitions and buffers between residential and food business uses.
By decommissioning select segments of streets in the GEM, two existing blocks can be merged into one larger block to provide development sites of the necessary size.
Greenways

The SWMNP utilizes the physical structure of the proposed GEM block plan and establishes up to four greenway corridors. The linear greenways along Dequindre, Saint Aubin, Chene, and Grandy Streets between Gratiot Ave and E Canfield St can be developed as SMPs for the adjacent businesses while providing an enhanced and connective public realm for the GEM and its adjacent neighborhoods. GSI built in the greenways could manage a portion of the on-site stormwater volume needed to comply with the City’s PCSWMO.

Design Characteristics

Continuity
The greenways will be constructed incrementally and may not be contiguous initially because individual parcels within the GEM will be redeveloped at different times. Because the framework will take a number of years to implement, a consistent and bold design vision is very important. The publicly accessible greenways will be defined by robust linear groves of trees, simple and easy-to-maintain ground cover, and a pedestrian path network connecting one end of the greenway to the other. The greenways follow a series of straightforward design guidelines described in an appendix to this report.

Linear Tree Groves
The linear groves of trees are the most significant character-defining element within the greenways of the GEM. The species of trees selected should grow to be tall and robust and be tolerant of weeks of root inundation, especially in the late winter or early spring. The selected trees are typically bottomland or floodplain species that are best adapted to withstand flooding if a developer chooses to develop the greenways as GSI. To ensure that the groves have a strong and continuous presence, they will be primarily composed of Bald Cypress and Dawn Redwoods. These trees will be complemented by a number of secondary species.

Ground Cover
In GSI plants typically prevent erosion, slow water movement, hold or convert pollutants, encourage wildlife, and enhance infiltration and evapotranspiration (the combined evaporation of water from the soil and from plant surfaces like leaves and flowers). Plant species or mixes should be selected to meet critical objectives and survive the extremes of local climate conditions. Native grasses produce fibrous root systems that tolerate fast-moving water. Woody and herbaceous species add aesthetic value, provide wildlife food and habitat, assist with evapotranspiration, and prevent erosion. It is also important that the ground cover species be easy to maintain. This plan recommends a durable meadow mix comprised of short plant species that are easily mowed for maintenance purposes.

Path Network
The greenways support connectivity within the GEM and adjacent neighborhoods. Each greenway will include an 8’-wide limestone gravel path (MDOT 26A aggregate) that serves as an off-sidewalk circulation path continuously connecting one end of the corridor to the other. The edge of pathways should be maintained by regularly mowing a 3’-wide strip on both sides of the path.
The publicly accessible greenways will be defined by robust linear groves of trees, simple and easy-to-maintain ground cover, and a pedestrian path network connecting one end of the greenway to the other. This series of images shows the trees as they are being planted, three years after planting, and at maturity.
Public Benefits

The greenways provide an opportunity to improve mobility and provide passive recreation spaces throughout the GEM. The path network will enhance access from areas south of Gratiot Ave north to the DEPSA track and field, Perrien Park, Dabrowski Playground, and the Dequindre Cut. Small pocket parks or other public recreation amenities could be designed into the greenways. However, these programs cannot be included at the cost of compromised stormwater management. Funding sources for such amenities may vary, but could occur in collaboration with certain developments.

The most significant program of the GEM landscape is the connective landscape, which could be enhanced by the stormwater management features. This landscape will be publicly accessible, providing safe and shaded routes through the district.

Environmental Benefits

The greenways are marked by the presence of robust linear groves of trees and would complement other SMPs that could be constructed while providing structure for the linear public space. Mature trees can perform a multitude of environmental, social, and economic services. Water quality and flow, for example, can be dramatically improved by planting, not just trees, but the right trees. The tree groves encourage evapotranspiration as well as stormwater soil infiltration. By matching specific tree species to sites, trees can fulfill particular functions in the landscape. In urban settings, trees can reduce the amount of runoff and pollutant loading.

Trees intercept and absorb air pollution from the atmosphere. Increased tree canopies in cities also include carbon sequestration benefits that can be attained at higher rates by planting tree species that grow to be large. Trees lower air temperatures, making urban areas more inhabitable for humans and wildlife. Green spaces such as the greenways help offset the formation of heat islands by establishing microclimates through shading and evapotranspiration, and thus also reduce the energy needed to cool buildings during hot periods. In addition, trees planted as wind breaks can significantly reduce heating costs for buildings during the winter. Other ecological benefits of the greenways include establishing habitat (shelter, food, and water) for birds, mammals, insects, amphibians, and reptiles. Patches of vegetation such as those in the greenways and or on green roofs provide habitat.

Greenway SMP (Early Stages of Growth)

A conceptual rendering from the viewpoint of standing in the greenway of block A8 looking north toward Erskine St.
The design for each swale must include engineered soils and infrastructure so that the swale adequately drains within a 24-hour period following a rain event. The topography of the swales must accommodate an accessible path network that transverses the entire length of each greenway.
Stormwater Management Network Plan

The SWMNP establishes a flexible framework for managing stormwater that responds to the proposed block plan and phased development of the GEM. It suggests a proactive approach to compliance with the City of Detroit’s PCSWMO and aims to assist the City and private businesses in achieving solutions to stormwater management. The SWMNP uses nature to drive design in a way that not only offers stormwater management solutions, but also creates a network of connected greenways and opens up the district in the interest of accessibility.

City of Detroit Post-Construction Stormwater Management Ordinance

The PCSWMO, approved by the Board of Water Commissioners and the Detroit City Council in 2018, requires stormwater management practices to mitigate infrastructure and water quality impacts of stormwater runoff from impervious surfaces. The ordinance requires regulated projects to install controls to manage the amount of stormwater that enters the city’s infrastructure and the rate at which this stormwater enters the system. In addition, project applicants will be required to submit a Post-Construction Stormwater Management Plan (PCSWMP) which specifies how these controls will accomplish the required level of management. Implementation of the PCSWMP is required during the project and proper operation and maintenance of the controls will be required after the project is complete.

DWSD sought and secured the unanimous approval of the Board of Water Commissioners (August 2018) and the Detroit City Council (November 2018) to implement the City of Detroit’s first stormwater management regulations by adopting the PCSWMO. DWSD created this ordinance to become a more sustainable city that also meets federal and state stormwater management regulations. It is now included in Chapter 56 of the 1984 Detroit City Code, Utilities, Article III, Sewers and Drains, Division 4, Stormwater Management.

Historical development and redevelopment activities in Detroit have not been subject to stormwater management requirements. This lack of a consistent, proactive approach to managing the stormwater runoff from impervious, hard surfaces flowing to Detroit’s combined sewer system has contributed to overflows of untreated sewage entering the Detroit and Rouge Rivers. It has also caused localized flooding and basement back-ups, leading to public health and safety risks and property damage.

Detroit’s Stormwater Management Regulations are in response to DWSD’s National Pollutant Discharge Elimination System (NPDES) and Municipal Separate Storm Sewer System (MS4) permit obligations to develop stormwater control requirements for areas of new development and/or redevelopment.

The City’s Stormwater Management Regulations are applicable to most land development that creates/replaces one-half acre (21,780 square feet) or more of impervious surface. Projects that meet this threshold must:

- Develop and submit a PCSWMP as part of the overall site plan
- Submit the PCSWMP review fee
- Obtain DWSD approval for the PCSWMP
- Obtain all necessary permits for construction
- Construct approved stormwater management practices in the approved PCSWMP
- Receive a Certificate of Occupancy from the Building, Safety Engineering and Environmental Department
- Perform annual inspections and allow DWSD on site to perform annual inspections
- Ensure the PCSWMP includes a restrictive covenant and easement agreement for DWSD access
The Stormwater Management Design Manual is a technical resource for developers and property owners that guides stormwater management site design to meet the regulations. The Design Manual enables DWSD and other key City departments to maintain uniformity with stormwater design standards and to conduct effective and efficient design reviews. It also allows developers the flexibility to choose stormwater controls. The Design Manual also includes information on alternative options for compliance with the Stormwater Management Regulations if retaining stormwater on-site is not feasible, as well as design and PCSWMP submittal checklists.

Implementation of the PCSWMO further advances efforts by DWSD to avoid future costs in constructing additional Wet Weather Treatment or combined sewer overflow control facilities to comply with federal and state NPDES regulations.

**Detroit Water and Sewerage Department Drainage Charge**

Since 1975, most DWSD customers have been paying for drainage as part of their water and sewer bills. State regulation requires DWSD to work toward eliminating combined sewer overflows. Together with the business and nonprofit community, DWSD is using GSI to meet permit requirements and make Detroit one of the “greenest” cities in America.

DWSD launched a drainage charge credit program in October 2016. A drainage charge credit is a reduction in the drainage charge to a property based on the implementation and continuing proper operation of Stormwater Management Practices (SMP). SMPs focus on reducing runoff and improving water quality. SMPs help maintain natural hydrologic cycles through site grading, vegetation, soils, and natural processes that absorb and filter stormwater. SMPs include, but are not limited to, green roofs, blue roofs, rain barrels and cisterns, permeable pavements, bioretention areas, vegetated swales/dry swales, curb and gutter elimination, vegetated filter strips, sand/organic filters, and constructed wetlands. Customers are encouraged to adopt sustainable SMPs, such as GSI, that reduce stormwater flows to the drainage system, enhance the natural environment, and protect against flooding and sewer overflows. The installation of SMPs that result in a measurable reduction in volume and/or peak flow rates will qualify the property owner for a credit to their bill. By installing SMPs, a credit of up to 80% of the drainage charge could be obtained for volume reduction and controlling peak flow rates. The remaining 20% of the charge is a mandatory base cost.

In order to be eligible for a drainage charge credit, the SMP must be approved by DWSD. To obtain a drainage charge credit, the property owner will need to meet eligibility requirements, apply for and receive an approval from DWSD, and fulfill ongoing operations and maintenance requirements.

To be eligible for a credit, the SMPs must:

- Be located on a property that is geographically located within DWSD’s Drainage Service Area
- Reduce annual runoff volume and/or control peak flow rate
- Document design and performance in a manner acceptable to DWSD
- Comply with all applicable city, county, state, and federal construction, building, and stormwater codes and permits
- Be fully installed and functioning properly
- Not create a safety hazard or nuisance
Compliance with the PCSWMO and Maximizing Drainage Credits

Any new development or redevelopment over one-half acre (21,780 square feet) must comply with the PCSWMO. This includes performance standards that ensure water quality, channel protection, and flood control. Once a development site has constructed SMPs to comply with the ordinance, the development is eligible to apply for drainage credits.

When complying with the ordinance for the flood control standard, the size of the site dictates the size of the storm a site must comply for. Sites less than 5 acres in area need to manage a 10-year, 24-hour storm event; sites over 5 acres must manage a 100-year, 24-hour storm event. To obtain any drainage credit for detention, a minimum 2-year, 24-hour storm event must be managed. To obtain the maximum 40% credit, a 100-year, 24-hour storm event must be managed.

The PCSWMO requires that a volume of stormwater equivalent to one inch across the site (also known as a 90th-percentile storm event) be retained on-site. By complying with the ordinance and retaining one inch of rain on-site, 30% of the available 40% retention drainage credits may be received by property owners. Landowners and developers that are not required to comply with the ordinance may still choose to construct SMPs to obtain drainage credits.

A Balanced System

The NFP and SWMNP were developed as an integrated planning effort. The result is a framework that strikes a balance between development goals and a sustainable approach for stormwater management within the GEM. To facilitate this integrated planning approach, three scenarios were studied that closely integrated the built form and landscape of future development in the GEM. It is important to note that compliance with the PCSWMO is the responsibility of individual property owners on their parcels; the concept scenarios that follow are broad ideas of how stormwater may be managed in the GEM. Each of the three studied scenarios manages stormwater differently and provides different opportunities for the amount of water that can be managed. As a result, they each have unique built form and public space implications. The scenarios were developed to facilitate a discussion of how SMPs might appear and interact with the surrounding neighborhoods. The feasibility of each scenario was also considered for how it may assist...
business owners and property developers to comply with Detroit’s Stormwater Management Regulations and DWSD’s GSI credit program.

In coordination with the stormwater planning assumptions, a Storm Water Management Model (SWMM) was used to study how differently scaled stormwater facilities would respond to the built form of the GEM’s market expansion. The SWMM is a dynamic rainfall and runoff simulation that can be used for continuous or single-event study of the quantity and quality of surface and subsurface hydrology. The model was developed to simulate rainfall, runoff, evaporation, infiltration, and groundwater connection for roofs, paved areas, grass areas, swales, wetlands, and pipes within the GEM. The hydrology component of SWMM operates on a collection of subcatchment areas divided into impervious and pervious areas with and without depression storage to predict runoff and pollutant loads from precipitation, evaporation, and infiltration losses from each of the subcatchment areas. The model allowed the planning team to accurately represent combinations of low-impact development controls within the Study Area to determine their effectiveness in managing stormwater within the GEM. The SWMM model was created using published data of the existing soil conditions and topography of the GEM.13

Each of the scenarios operates based on two sources of runoff. The first source is roof runoff, which is roughly half of the total runoff from impervious surfaces within the proposed development sites. The other half of impervious site runoff comprises paved areas related to truck staging areas and parking on the development sites. It is not a requirement that the sources of water be separated, however, there may be advantages to separation. Roof runoff would be relatively cleaner water while pavement runoff may contain suspended solids, oil, grease, metals from vehicles, and salt from snowmelt. Pavement runoff will need to be directed to a pretreatment facility prior to entering an SMP. Each scenario identifies SMPs such as green or blue roofs, cisterns, porous pavement, and filter strips, as well as potential shared stormwater management practices.

The final build-out of the GEM does not need to solely rely on using any of the three scenarios in totality. The final development could use a combination of the recommendations presented in this document.14 The GEM will be developed on a site-by-site basis and each property owner is responsible for managing the stormwater on their land. There may be potential for several property owners to manage stormwater and comply with PCSWMO in a shared SMP adjacent to their development site.

The alternative scenarios were intended to demonstrate multiple ways in which the goals of stormwater management and the reduction of drainage charges could be achieved. The basic geometries of the features combined with the volume calculations are critical to meeting the stormwater management goals for the greenways. Stormwater features within the greenways need to be dry most of the time to provide a linear network of paths and open space that knits the district together and enhances connectivity through the district. Greenways will adhere to a set of specific design guidelines developed to achieve and maintain continuity.15
Scenario Studies for Stormwater Management Options

Each of the three studied scenarios manages stormwater differently and provides different opportunities for the amount of water that can be managed. As a result, they have unique built form and public space implications. Each scenario assumes that the owner would construct the stormwater management and greenway infrastructure according to the design guidelines that accompany this framework.16

Scenario 1 proposes that relatively clean roof runoff be conveyed through a piped network to a stormwater wetland park.17 This landscape would be located north of Mack Ave, south of E Alexandrine St, and between Saint Aubin and Chene Streets. All pavement runoff generated by future development would be directed into a series of shallow swales. These two different types of stormwater management features would connect to four linear tree groves that work as connective corridors through the district. The stormwater wetland area would be designed as an asset to the neighborhood, providing walking paths and a parklike landscape.

Scenario 2 proposes that relatively clean roof runoff be conveyed through a piped network to a series of subgrade storage facilities (storage tanks) located below shallow swales located within each development site.18 All of the site runoff generated by the proposed development sites would be directed into a series of shallow swales similar to Scenario 1. These two different types of stormwater management practices would connect to four linear tree groves that work as connective corridors through the district.

Scenario 3 proposes that all runoff from the proposed development sites is directed to a series of linear wetlands located within each development site.19 Four linear tree groves would work as connective corridors through the neighborhood to organize the district.
Scenario 2
Shallows Swales and Subgrade Storage

Scenario 3
Linear Wetlands
The Preferred Scenario

Based on the analysis of the three concept plan scenarios, it was determined that a modified version of Scenario 2 should be used as the basis for the SWMNP. Scenario 2 provides the most flexible approach to providing a comprehensive management plan that responds to the incremental growth of the GEM, provides the greatest amount of public benefit to the GEM and adjacent neighborhoods, and provides the greatest amount of ecological benefits to the district. Scenario 2 allows businesses to individually construct stormwater management practices, which is the most direct approach for meeting the City’s stormwater ordinances. The most significant modification to Scenario 2 is that developers are encouraged to utilize additional types of SMPs in addition to the subgrade storage in order to comply with City regulations. Additional SMPs that should be considered include green roofs, blue roofs, cisterns, pretreatment capture systems in parking areas, filter strips and oil/grit separators, and forebays. These additional SMPs would reduce the volume of runoff to be managed and the depth of the greenway swales, resulting in shallow swales that meet the DWSD criteria for drainage within a 24-hour period after a storm event. The other types of SMPs would need to be constructed independently of the greenway system as part of compliance with the PCSWMO. Owners could construct additional SMPs on their development sites to supplement the greenways’ stormwater management capacity and, if they meet the DWSD stormwater regulation guidelines, may receive drainage charge credit.

Stormwater Management Practice (SMP) Areas

The areas allocated for SMPs are sized proportionally to the associated block structure and development sites.
Greater Eastern Market

The GEM has large vacant tracts of land occasionally dotted with houses. The GEM affords a unique opportunity to rethink how an urban food district can be thoughtfully integrated into the city while improving quality of life and including green space.

Photo: Nadir Ali / 3andathird, August 2019
**Greater Eastern Market**

This aerial view shows a possible full build-out scenario of the GEM with mature linear tree groves.
1. Existing Blocks
- Assemble the site.
- Establish a site plan and SMP area.
- Site preparation including the removal of buildings, foundations from previously demolished buildings, and trees.

2. Planning for Detroit’s Stormwater Management Regulations
- All roof and site runoff will be directed to on-site SMPs.

3. Earthwork And Utilities
- Engineer the greenway SMP to accommodate roof and site runoff to achieve desired DWSD drainage charge reductions.
- Construct the SMP, plant it with specified meadow seed mix, and include a gravel path system.
- Add subgrade retention to reduce the depth of the SMP.
- Construct outlet controls as a controlled overflow to the existing sewer system.

4. Roof Runoff
- Design roofs to retain runoff or convey it to a location where it can be piped to the greenway shallow swale.
- Green roofs, blue roofs, or cisterns could be considered as additional SMPs.

5. Site Runoff And Pretreatment
- Engineer parking and truck staging areas to convey runoff with sheet flow or a non-mechanical system to direct runoff to SMP.
- A sediment forebay (or an oil/grit separator) could be located between the paved areas and the SMP.
- Porous pavement and filter strips could be considered as additional SMPs.

6. Linear Tree Grove
- Construct landscape elements that complement the SMP.
- Plant the tree buffer.
- Develop and implement operations and maintenance protocols.
Sizing the Greenways for Performance

The most critical component in developing both the NFP and SWMNP is ensuring that the sizing of the linear greenways is appropriate. Existing conditions related to soil, topography (drainage patterns), vegetation, and infrastructure also must be factored into the design if developers and business owners choose to use this area for GSI.

This report recommends site developers direct pavement runoff from their site(s) to a series of shallow swales. The swales should be located within greenways that are clearly delineated and contiguous across the GEM’s development parcels. A requirement for the SMPs, if chosen to be constructed by individual site developers, is to reduce the amount of standing water, primarily in the interest of public safety. The proposed shallow swales would typically be dry and provide shaded corridors and green buffers within the GEM. The swales and other SMPs should have overflow connections to the city sewer system as protection against very large storm events.

Projected market expansion is mapped out with the assumption that roughly 20% of each development site will be used for the greenways. Up to 80% of the development sites’ area would be covered by impervious surfaces such as buildings, truck docks, parking, and paved walkways. The SWMM model was developed to provide runoff estimates from each of the proposed development scenarios, allowing the planning team to study a variety of design iterations.

Greenway Hydrology, Conveyance, and Baseline Design Criteria

Based on the predicted runoff volume calculations from the SWMM model for the preferred scenario, retention volumes were calculated for each shallow swale based on the planned impervious surfaces for each development site. The resulting swales are shallow retention facilities that are designed to have maximum allowable side slopes of 5% or less. The designed volume for each swale is directly related to the size of the proposed adjacent development. This plan does not include engineered solutions for each swale, but does contain a series of metrics for how the facilities should be sized as they are developed in the future. The design for each swale must include engineered soils and infrastructure so that the swale adequately drains within a 24-hour period following a rain event. The topography of the swales must accommodate an accessible path network that traverses the entire length of each greenway. In order to prevent erosion and encourage infiltration, the shallow swales should be planted with linear groves of trees and a low maintenance meadow. If predicted volumes are greater than the swale can manage, additional types of on-site stormwater management would need to be pursued within the development sites.

A stormwater utility conditions survey is necessary to verify the condition and sizes of the existing system. The proposed stormwater system within the greenway reduces the amount of water piped into the GEM’s sewer infrastructure. Because the GEM is so flat, the location of infiltrating greenways are integrated into the revised block pattern which allows for minimal piping. The owner or developer would construct the proposed conveyance system that would pipe runoff to the proposed greenways.
All additional SMPs are shown as optional components of the stormwater management network. It is important to remember that these SMPs will take some of the burden off of the stormwater management facilities.
Additional Stormwater Management Practices

To achieve the goal of having the swales remain as dry as possible, the SWMNP acknowledges that developers are likely to utilize other methods to manage their stormwater. The City of Detroit’s Stormwater design manual outlines sewer SMPs that should be considered by developers as part of compliance. Subsurface detention SMPs are underground structures that are used to temporarily detain and release stormwater. They can include vaults, stone storage, pipe storage, and plastic grid storage. Subsurface detention SMPs can be combined with other SMPs in series to meet the DWSD Stormwater Regulations. An outlet control structure regulates the level of water within the stormwater wetlands.

The following lists summarize what would be needed to achieve a maximum drainage charge credit for peak flow detention. Additional SMPs can provide additional benefits to property owners:

**Peak Rain**
- The “design storm” (rainfall at a rate of 2.9 inches per hour) rains on a green roof.
- The green roof contains the beginning of the storm and fills up.
- By the peak of the design storm, the roof is already full and runoff enters the piped conveyance network at a rate of 2.9 inches per hour.
- Runoff reaches the SMP.
- The green roof slowly drains the stored stormwater to the SMP, taking up much less capacity in the sewer than the peak flow.

**Average Annual Rain**
- A small rain event (rainfall at a rate of less than one inch per hour) rains on a green roof.
- The green roof contains the entire rain event, or nearly contains it.
- The green roof slowly releases stormwater to the piped conveyance network (if anything).
- Runoff rarely reaches the SMP.
Site Section 1
See the Stormwater Management Network Plan on page 138 for the location of this section.

Site Section 2
See the Stormwater Management Network Plan on page 138 for the location of this section.
**Detail of Site Section 1**

*See Site Section 1 on page 148 for the location of this section.*

Filter strips along Saint Aubin St will collect parking lot runoff from the DEPSA parking lots. The filter strips should have range fence around the perimeter.

Soil trenches and large open tree pits should be utilized on the street network to capture sidewalk run-off.

Water from the roofs is captured and released into a piped conveyance system and directed to underground storage tanks below the Shallow Swales.

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Soil trenches and large open tree pits should be utilized on the street network to capture sidewalk run-off.

Water from the roofs is captured and released into a piped conveyance system and directed to underground storage tanks below the Shallow Swales.
Porous pavement could be utilized to direct run-off to the Shallow Swale.

The Swale could include a shared use path system for pedestrians and bicycles.

Parking lot run-off is directed to pretreatment before it enters the swale system.

The blue hatch in the shallow swale depicts stormwater that will be held for a short time after rain events. Typically the swale would be dry.
Detail of Site Section 2
See Site Section 1 on page 148 for the location of this section.

In addition to the designed depth all swales must include 6" of freeboard and have outfall controls for unique storm events to prevent flooding. The swale on the west side of St. Aubin would not have a bicycle path included.

Soil trenches and large open tree pits should be utilized on the street network to capture sidewalk run-off.

Water from the roofs is captured and released into a piped conveyance system and directed to a stormwater storage facility.

Conveyance to Storage

Food Business Facility

Shallow Swale (75')

Sidewalk

Saint Aubin St

Sidewalk

12'

30'

12'
The blue hatch in the shallow swale depicts stormwater that will be held for a short time after rain events. Typically the swale would be dry.
Endnotes

1 For more information on the proposed mobility routes for the GEM, see pages 58–9 and 73.
2 For more information on the City of Detroit Post-Construction Stormwater Management Ordinance, see pages 132–3.
3 For more detailed information on existing public and open space in the GEM, see pages 36–9.
4 For more detailed information on brownfields, see Appendix B, available at https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market.
5 For more information on the proposed block plan for the GEM, see page 64.
6 For more information on the linear tree groves, see page 128.
7 For more information on the proposed block plan, see pages 64 and 124.
8 For more detailed information on design guidelines than is provided in this section, see Appendix C, available at https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market.
10 For more detailed information on design guidelines for ground cover species and maintenance than is provided in this section, see Appendix C, available at https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market.
11 See note 10 above.
12 For more detailed information on the SWMNP Concept Scenarios than is provided in this section, see Appendix F, available at https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market.
13 See note 3 above.
14 See note 12 above.
15 See note 8 above.
16 See note 8 above.
17 For more detailed information on this SWMNP Concept Scenario than is provided in this section, see Appendix F, available at https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market.
18 See note 17 above.
19 See note 17 above.
20 For more information on the path network, see page 128 and the greenway design guidelines in Appendix C, available at https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market.
21 For more information on the linear tree grove and ground cover species, see page 128 and the greenway design guidelines in Appendix C, available at https://detroitmi.gov/departments/planning-and-development-department/central-design-region/eastern-market.
References

City of Detroit Stormwater Management Regulations
stormwater-management-regulations

City of Detroit Post-Construction Stormwater Ordinance

City of Detroit Stormwater Management Design Manual

A Guide to the Non-Residential Drainage Charge
nonresidential-drainage-credits

A Guide to the Drainage Charge Credits
A healthy and beautiful Detroit, built on inclusionary growth, economic opportunity, and an atmosphere of trust.

City of Detroit
Mayor Michael Duggan
Arthur Jemison, Group Executive for Housing, Planning and Development

Planning and Development Department
Maurice Cox, Director (past)
Katy Trudeau, Deputy Director