BRIDGING THE DIVISION

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Complete Streets Improvements for Division Street

UPP 565 Implementing Complete Streets, Fall 2017

Prepared by A La Mode
Lucy Chen, Jasmine Gunn, Michael McCarthy, Ashley Reimann

Cover Image by Michael McCarthy

EXECUTIVE SUMMARY

To improve the Division Street corridor between Ashland Avenue and Orleans Street, A La Mode recommends adopting a complete streets approach to improve community connectedness while maintaining safety, comfort, efficiency, and future development and growth potential in the corridor. This plan combines complete streets guidelines with existing plans and visions for the city of Chicago to meet the goal of creating an improved connection between Goose Island and the different communities around it. Proposed improvements for this corridor include:

A

Improving Polonia Triangle
Bus Signal Prioritization
Added bike lanes

B

Buffered bike lanes
Lighting and beautification under viaducts
Sight Line improvements at Elston

C

Shared bike/bus lane
Sidewalk repairs and improvements
Buffered bike lanes at bridges
Potential new bridges or ped-bike bridge

D

Road diet
Bike lane connectivity
Improved signage

INTRODUCTION

About the Authors

Our team, A La Mode, is a Complete Streets-focused consulting firm made up of partners from diverse academic and professional backgrounds.

Jasmine Gunn, with a background in architecture, provides a fine-tuned approach to street design and aesthetically implementing our big picture approaches.

Lucy Chen supports our team with her extensive engineering experience and breadth of knowledge in transportation planning.

Michael McCarthy has a background in journalism and experience as an intern in Chicago's Department of Cultural Affairs and Special Events, where he assisted with vendor selection, site planning, and operations for the city's Farmers Markets program.

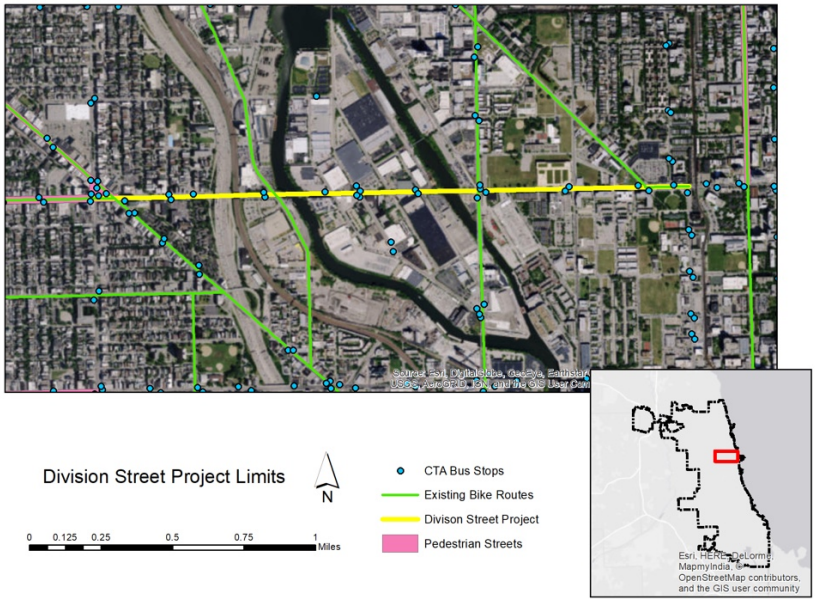
Ashley Reimann, of the University of Denver, provides her knowledge of municipal planning and community development from her experience working with the Village of Lincolnwood.

At A La Mode, we understand that there is no one-size-fits-all approach to planning. Our team offers customized and holistic improvement plans that value the specific needs of the community and visions for future economic and transportation-oriented development.

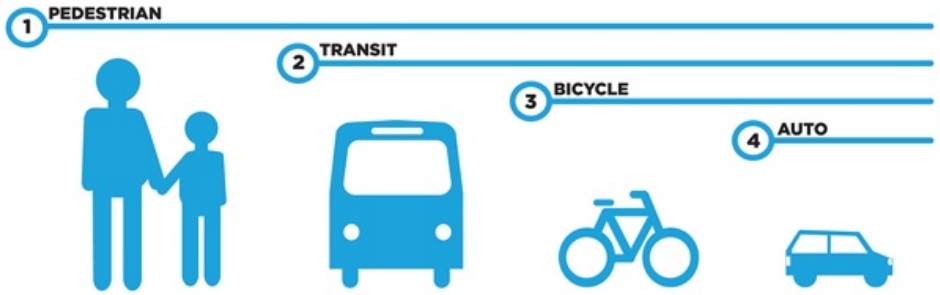
Division Street Project Corridor

This plan includes qualitative findings and project implementation plans for the segment of Division Street from Ashland Avenue to Orleans Street, as identified for improvement by the Chicago Department of Transportation and Aldermen Brian Hopkins (2nd) and Walter Burnett, Jr. (27th).

The Division Street project corridor runs approximately 1.5 miles through several Chicago neighborhoods including Noble Square, Wicker Park, Goose Island, the North Branch Industrial Corridor, and the former site of the Cabrini-Green housing complex. Aside from the intersection at Clybourn and Division, which is under Illinois Department of Transportation jurisdiction, this length of Division is under the jurisdiction of the Chicago Department of Transportation. Division Street presents unique challenges that will best be resolved through Complete Streets implementation. By balancing current auto capacity with the needs of all road users, we believe that improving walkability and bike connectivity of Division Street through pedestrian safety and streetscape enhancements will boost retail activity and address transportation concerns for nearby industrial and commercial businesses, contributing to the overall economic vitality of this corridor.



Images from ESRI. Created by Lucy Chen.



Modal Hierarchy from CDOT Complete Streets Design Guidelines

Why Complete Streets

Demand for Increased Efficiency in other Modes of Transit

Pursuant with Chicago's current initiatives towards inclusionary street design, we plan to introduce elements of complete streets to specific sections of Division Street. Broadly speaking, complete streets approaches seek to uphold the safety and comfort for all users of all abilities on all modes of transportation. Historically, traffic engineers have prioritized the needs of the automobile and paid significantly less attention to other forms of transportation in designing streets. Complete streets initiatives seek to rewrite the modal hierarchy to focus first on pedestrian users, then transit, bicycles, and lastly automobiles. Reports show that one-third of Americans do not drive and those who do would rather drive less and walk more.[1] With this in mind, we are confident that our proposal will meet the needs and interests of the community.

Economic & Sustainability Impacts

Implementing complete streets can provide local economic benefits aside from improved traffic safety, according to CDOT's 2013 Complete Streets Design Guidelines. Introducing bike facility projects, pedestrian safety infrastructure improvements, and placemaking initiatives are just a few tools that can lead to increased economic activity and tax revenues for the community. Similarly, promoting active transit is a step in the direction of becoming a more environmentally sustainable and healthy city. Most trips in large cities are between one and three miles, therefore, providing adequate infrastructure for pedestrians and bicyclists can encourage active transit for these short trips and reduce carbon emissions into our environment.[2]

Goose Island as a Catalyst to Further Economic Growth

At the center of the section of Division from Ashland to New Orleans lies Goose Island; an artificial island bordered by the Chicago river and the man-made North Branch canal. At its inception in 1853, Goose Island would function as a huge industrial hub during the late 1800s and early 1900s.[3] The Island was home to a number of industrial uses that include factories, steel, rail, and coal. Like many other areas dependent on industrial activity, Goose Island saw the first signs of decline in the Great Depression. By the 1970s, many buildings were deteriorating and vacant.

As it stands today, the 160-acre island remains the only island along the Chicago river and one of very few under-developed areas within 3 miles of downtown Chicago.[4] With recent development by businesses like Amazon and ULI Labs Digital Manufacturing and Design Institute, we believe Goose Island is poised to be revitalized into an advanced manufacturing and tech hub. One of the biggest weaknesses and things that can prevent this revitalization is not the lack of land or historic buildings, but the outdated poor quality of the transportation infrastructure. Infrastructure improvements along Division can connect Goose Island to its surrounding context and act as an economic development catalyst that spurs new investment and development.

1 Roseberry, Nathan. UPP Complete Streets 565. September 5, 2017.

2 Ibid.

3 "Goose Island." The Electronic Encyclopedia of Chicago , Chicago Historical Society, 2005, www.encyclopedia.chicagohistory.org/pages/300045.html.

4 MacRostie Historic Advisors LLC. "Goose Island's Industrial Past and Tech Future." Chicago Architecture Foundation. www.architecture.org/architecture-chicago/topics-news/retrofitting-buildings/goose-islands-industrial-past-and-tech-future/.

Overview

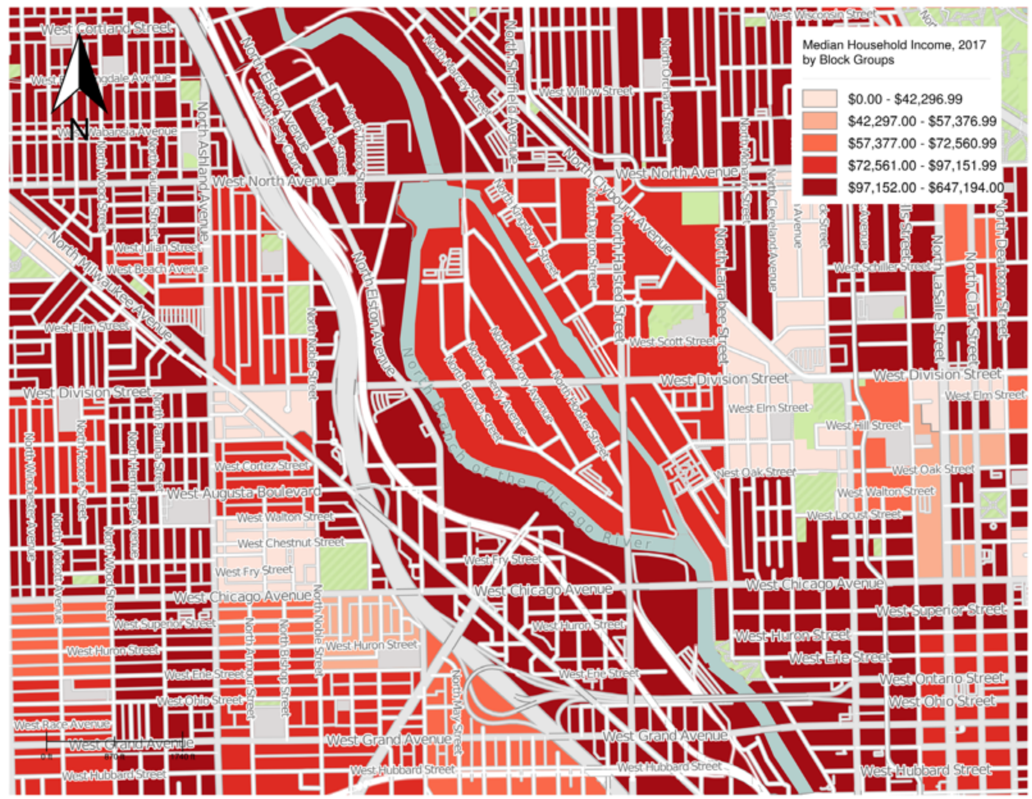
Within the project area, the Division Street right-of-way, including sidewalks, can be up to 100 feet wide. However, the street contracts to about 65 feet wide on Goose Island and east of the Chicago River. These conditions, along with the lane designations throughout the corridor, form a bottleneck that contributes to traffic congestion and makes bicycling and walking less comfortable. This corridor has adequate sidewalks for pedestrians, but points of discomfort may include long crossings at intersections with diagonal streets and near the entrances and exits of the Kennedy Expressway. With an average of 9,000 riders each weekday,[5] the #70 Division bus provides connections between Blue and Red Line rail service. The bus stops frequently along the corridor, but most stops are unsheltered and bus riders are significantly impacted by traffic congestion on Division Street. Currently, Division Street has almost no bike facilities between Ashland Avenue and Clybourn Avenue, contributing to a Level of Traffic Stress of at least 3 through most of the project corridor. However, Division Street provides connections to LTS 1 routes on Milwaukee Avenue, Elston Avenue, and Clybourn Avenue and is an important river crossing. Division is a desirable route for people in cars and trucks because it provides access between the Kennedy Expressway and Goose Island's commercial and industrial corridor, however, congestion and inconsistent lanes are problems for these road users.

Demographics

Division Street is comprised of a diverse range of socio-economic levels as seen in the varying median household income map below. Additionally, 124 units of affordable housing currently exist along Division Street from Ashland to Orleans.[6] A La Mode's inclusive community outreach methodology ensures that every community member has a seat at the planning table, regardless of resources.

Zoning and Land Use

The zoning throughout Division is diverse and includes residential, commercial, parks, schools, and manufacturing land uses. The outer edges of the project area (from Ashland to Elston and Halsted to Orleans) are



Income Map from SimplyAnalytics

5 Chicago Transit Authority. "May 2017 Monthly Ridership Report." http://www.transitchicago.com/ridership/.

6 Economic Development Affordable Housing Development Maps, City of Chicago, Chicago Data Portal, D.A. October 10, 2017. https://data.cityofchicago.org/Community-Economic-Development/Affordable-Rental-Housing-Developments-Map/k3g 7-7kgc

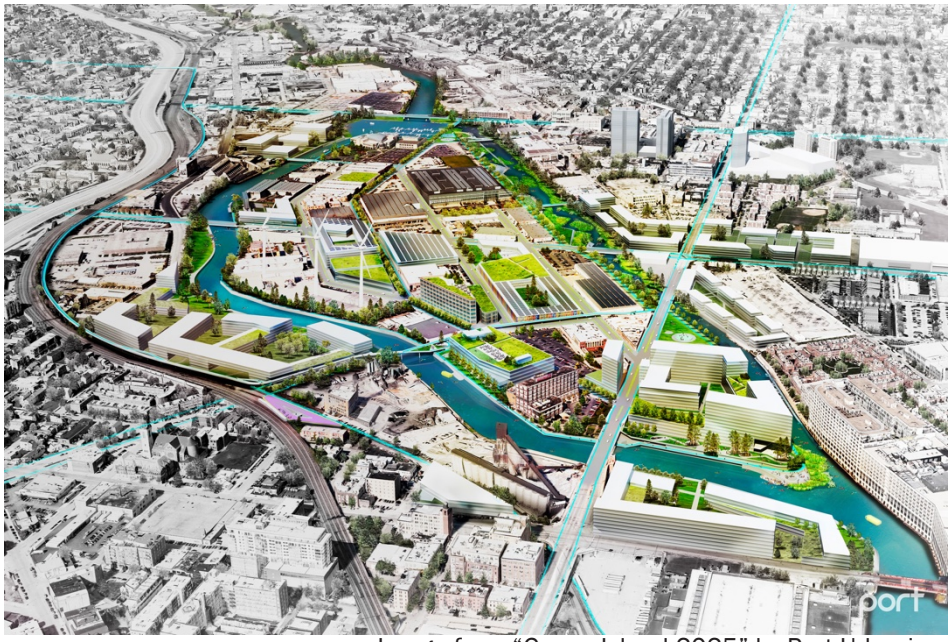


Image from “Goose Island 2025” by Port Urbanism

most dominated by mixed-use buildings that have commercial activity on the ground floor and residential or office uses above. Bisecting the area from Elston to Halsted is the industrial corridor of Goose Island that is home to many Planned Manufacturing Districts. This diversity of land use will be carefully considered in our plan to successfully implement Complete Streets strategies. Streets near Goose Island, for example, needs to accommodate large trucks. Our plan will balance the need for truck access while ensuring that pedestrians are visible and safe.

Existing Plans

A La Mode has identified disconnection as a major theme along the project corridor. At each end of the corridor, we observe neighborhoods that are walkable with a variety of residential and compatible commercial land uses, plus high quality bike infrastructure. West Town and Wicker Park on the west end of the project exhibit these qualities as does Old Town on the east end of the corridor.

Around Goose Island however, is a figurative island that lacks walkability and bike infrastructure and where land use is mostly limited to commercial and industrial buildings that orient toward trucks and automobiles rather than pedestrians and cyclists. While there is bus service through Goose Island, traffic congestion and bottlenecks near Goose Island often delay buses and can discourage ridership.

The North Branch Framework Plan anticipates the redevelopment of the riverfront industrial district surrounding Goose Island and provides for improved transportation options for all road users, increased economic activity, and environmental improvements along the North Branch industrial corridor. Specifically, the framework proposes a shift to mixed-use development as a buffer between industrial and residential areas, reconstruction of Division Street and its bridges on Goose Island, supplemental pedestrian and bike bridges for improved access to Goose Island, and a wireless traffic control system to improve bus service.

Additionally, Chicago’s Vision Zero Action Plan identifies high crash areas, including our project corridor in West Town and the Near North Side, and seeks to eliminate fatal traffic crashes. To best apply the Vision Zero plan, we can redesign Division Street to reduce vehicle speeds and provide safe options for all road users. Chicago Streets for Cycling 2020 envisions Division Street as a crosstown corridor and we are committed to providing a quality bike facility on Division throughout the project area. The Chicago Pedestrian Plan highlights specific tools for improved pedestrian safety, including pedestrian countdown timers and leading pedestrian intervals where signals exist and refuge islands at uncontrolled intersections.

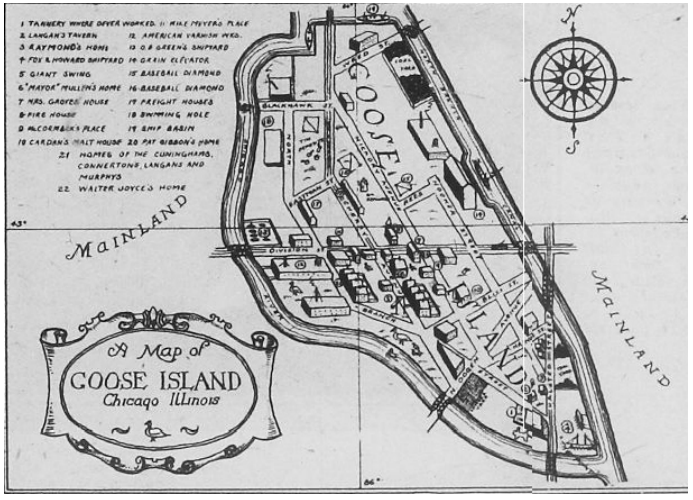


Image of John Drury’s Map of Goose Island, Chicago Daily News. 1930. https://chicagology.com/notorious-chicago/littlehell/

GOALS & STRATEGIES

1. Enhance and connect bike infrastructure to establish Division as a cross town bike corridor.

2. Make improvements along division that connect Goose island with the city and position the area for economic development

3. Increase safety and comfort of pedestrian users by connecting walkable cities.

GOALS AND STRATEGIES

Zone A: Ashland to Noble

Illustration by Jasmine Gunn

ZONE A

The historical significance of the Polish Triangle, located at the intersection of Division, Milwaukee, and Ashland avenues, and the beginning of our designated Zone A, provides an opportunity for placemaking along the Division Street corridor. Dating back

Polish Triangle. Photo by Devin Hunter

to the 1930s, this pedestrian triangle was dubbed the epicenter of the neighborhood's mostly Polish population, thus bestowing the name, the Polish Triangle or the Polonia Triangle.

In 2009, the Metropolitan Planning Council partnered with several community groups, the 1st, 27th, and 32nd Ward Aldermen, and the WPB (Special Service Area 33) to improve placemaking efforts by improving comfort and connectivity with the community. Our proposal seeks to support many of the suggested plans while enhancing other areas of the Polish Triangle to ensure connectivity for all modes of transit.

Strengths & Weaknesses

Transit

Zone A, from the Polish Triangle to the viaduct under the Kennedy Expressway, is home to a dense web of public transit options. The Polish Triangle is home to the CTA Division Blue Line station which services connections to O'Hare International Airport, the Loop, and the hospital networks located in the Illinois Medical District. Nearly 5,000 commuters utilize this particular El station daily. In addition, the 56 Milwaukee, 70 Division, and the 9 Ashland (and 9X) CTA buses stop at the intersection at the Polish Triangle. High levels of public transit ridership is a major strength in this zone. However, the intersection is routinely congested which delays transit efficiency for the buses.

Bike

Nearby bike-oriented transit initiatives continue to expand in the Wicker Park neighborhood, such as the new dashed bike lanes on Milwaukee Ave from Division to Western Ave. This supports the notion that more Chicagoans desire bike-friendly transit options. Zone A is an opportune location to implement striped bike lanes. Currently, the bike lane is insufficiently marked with a shared-lane marking, or sharrows, which does not lend to a safe biking environment.

Pedestrian

As the Polish Triangle serves as a transit hub, it is unsurprising that the space lends to high foot traffic. According to the Metropolitan Planning Council, on average, approximately 500 individuals traverse the Triangle each hour. During rush hour, this number peaks to 700 per hour. In addition, the Triangle itself is zoned as a B 1-2 Neighborhood Shopping District which will support future opportunities for economic develop-

Image from Metropolitan Planning Council, "Placemaking at the Polish Triangle," July 2010.

ment and community engagement discussed later in this report. Such improvements will change the current sentiments towards the Polish Triangle as an unclean, unsafe, and unsatisfying location where most pedestrian users of the Triangle spend less than three minutes.

Our Plan

In order to achieve our overarching goal to increase connectivity along Division Street from Ashland to Orleans, Zone A improvements include enhancing the Polish Triangle to increase comfort and a connection with the community, implementing signal priority for buses, and introducing an Eastbound bike lane.

Polish Triangle Improvements

Our proposal for the Polish Triangle is multi-pronged. We seek to increase in the area through incremental implementation.

1. Comfort
2. Community Connection
3. Economic Development

To transform the Polish Triangle into a commuter-friendly and engaging public space, we wish to establish a permanent food kiosk which will provide refreshments and coffee. Similar establishments, such as Whispers Cafe in the Gold Coast, have provided a pleasant addition to the neighborhood within similar space constraints. Last year, DoorStep, a breakfast food truck, entered a pilot program on the Polish Triangle. The food truck proved to be a success for the neighborhood for residents and commuters alike.

Whispers Cafe. Photo by Brian Cassella/Chicago Tribune.

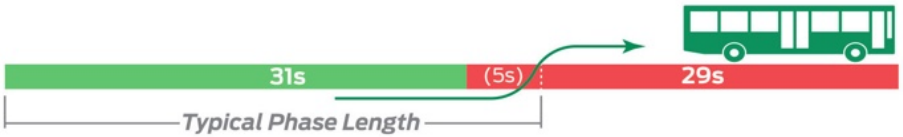


Illustration of Upstream Green Truncation from NACTO

In recent years, many community groups such as the East Village Association and the Polish Triangle Coalition have organized weekly community activities on the Polish Triangle such as farmers markets and cultural events. In order to ensure financial stability for the activities, we seek to encourage sponsorship from local businesses.

Other improvements for the Polish Triangle include rezoning the park and surrounding streets as a Pedestrian Retail Street instead of its current zoning as simply a Pedestrian Street. This change would put restrictions on the surrounding commercial properties by limiting the amount of banks, credit unions, and currency exchanges permitted. Pedestrian Retail Streets encourage uses such as cafes and open air markets which would lead to increased foot traffic on the Triangle.

Establish Signal Priority for Bus

In order to decrease the backup of bus transit, we recommend implementing transit signal priority for the CTA #70 Division bus. This method effectively reduces wait time at traffic signals for buses by shortening red lights or increasing length of green lights to increase the

"person throughput" of the street.

In the case of the intersection at the Polish Triangle, the use of an active priority strategy is most useful strategy. This method detects the presence of the bus and automatically communicates with the traffic signals resulting in minimized delays and increased consistent travel times allowing transit to serve as a more attractive mode of travel. Efforts to implement signal priority have been announced for the Ashland Avenue buses (9 and 9X). Specifically, A La Mode seeks to introduce Upstream Green Truncation (or a reverse queue jump) to achieve signal priority. This strategy allows bus boarding while traffic is stopped behind the bus, which is helpful at congested intersections.[1]

Add Eastbound Bike Lane

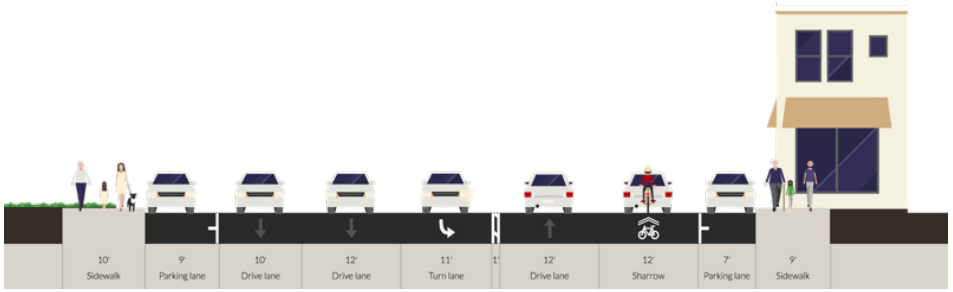
To complement the Polish Triangle Improvement efforts regarding comfort for commuters, we propose the implementation of a designated Eastbound bike lane beginning at Division and Ashland Avenue. Current conditions for bike transit are bleak throughout this intersection. The bike lane is insufficiently marked with sharrows and is uninviting to most. The Eastbound driving lanes at Division Street and Ashland Avenue are approximately 25 ft or 7.45 meters, not including a curbside parking lane. With such a wide lane width, we feel confident that there is ample room to establish a designated bike lane on this side of the road. Not only does a bike lane further our mission to increase connectivity throughout the corridor, it also reduces the risk of high impact crash speeds that are associated with lanes as wide as the current condition, effectively creating a safer environment for all modes.

We suggest placing the proposed bike lane in the current parking lane to provide a buffered path for cyclists. This has been implemented on Milwaukee Street with great success (need cross street). Additional space can be allocated from the westbound side of the Division and Milwaukee intersection where currently cars park temporarily and illegally.

In this approach, we plan to remove the westbound parking lane, shift the eastbound parking lane to the left to allow for a designated biking lane with a 1-foot butter, and extend the Polish Triangle pedestrian square by reducing the westbound driving lanes, separated by a two-foot buffer with a planter box.

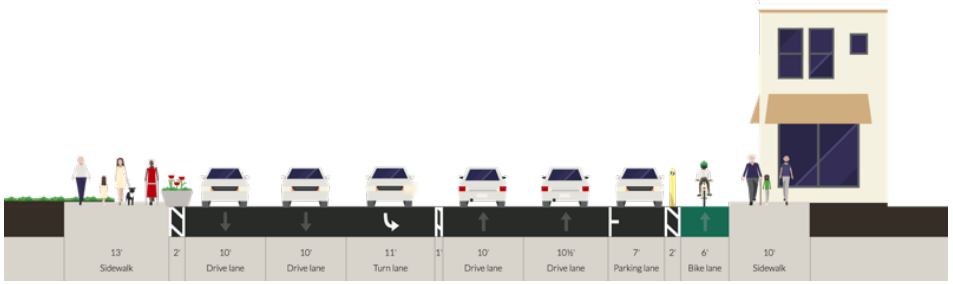
Existing Cross Section

Looking eastbound from Ashland



Typical Proposed Cross Section

Looking eastbound from Ashland



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1 NACTO. *Transit Street Design Guide.* "Active Transit Signal Priority."

ZONE A

Benefits by Mode

Bus
Increased efficiency and timeliness for commuters

Pedestrian
Added pedestrian public space enhanced with weekly events and cafe, increased placemaking on Polish Triangle

Bike
Established connectivity with surrounding communities and rest of Division Street

Auto
Increased capacity through minimized conflicts with other modes, traffic signals coordination

Implementation

Goal	Short Term	Mid Term	Long Term
Comfort	Increase Lighting Repaint Cross Walk	Increase Police Presence Decorative Sidewalk Native Plant Landscaping	ADA Compliant CTA Division 'El' Station Roundabout
Community Connection	Volunteer Cleaning Coalition (churches, schools, WP Chamber of Commerce)	Desgnated Street Art or Mural by Local Artists or Schools	Weekly commuter-friendly farmers markets (evenings on a weekday), weekly music events sponsored by businesses
Economic Development	Support Continuous Efforts of Local Community Groups (i.e. PTC)	Continue "DoorStep" Restaurant Pilot or Similar Coffee/Food Kiosk	Rezoning from "Pedestrian Street" to "Pedestrian Retail Street"

GOALS AND STRATEGIES

Zone B: Noble to Elston

Illustration by Jasmine Gunn

ZONE B

From Noble Street to Elston Avenue, the lack of pedestrian destinations and bicycle facilities is a barrier to connectivity between the West Town and Near North communities. To improve connectivity through this zone, it is necessary to create bicycle facilities that integrate with existing, intersecting bicycle routes and to make the pedestrian experience more comfortable and interesting.

Current Land Uses at Elston and Noble
Photo by Michael McCarthy

Existing Conditions

The land uses along this stretch of Division include gas stations, parking lots, overpasses for transportation, and car dealerships, all of which are not targeted toward pedestrian traffic. There are many curb cuts along this stretch that disrupt pedestrians by putting people in conflict with vehicle traffic. There are a few townhomes, a school, and a restaurant that provide more of a pleasant sidewalk environment for pedestrians.

While this zone might gain a better pedestrian experience with more mixed-use development, additional retail would require on-street parking. The current lack of parking presents an opportunity to use the existing street width for additional travel and bike lanes.

Strengths & Weaknesses

Pedestrian

Pedestrian crossing between the north and south sides of the street is not allowed between Noble and Elston. A few of the East-west pedestrian crosswalks are extremely worn or unmarked on the pavement, but most have pedestrian signals and some have detectable warning tiles. The intersection at Division and Noble is missing some pedestrian signals. At the intersection with diagonal Elston Avenue, pedestrian crossings are especially long at 95 to 110 feet, requiring green time of at least 30 seconds.

Bike

Bike facilities are non-existent on Division in this zone, but Elston has a comfortable, protected bike lane. Based on observation, cycling through this stretch of Division is fairly popular. Some cyclists prefer to travel in the unmarked on-street space, but some were seen using the sidewalk. In 2005, Alicia Frantz was struck and killed by a truck while bicycling under the railroad overpass. A “ghost bike” is installed under the overpass as a memorial. There are no Divvy stations in this zone and there in a noticeable lack of stations near Division between Ashland and Larrabee, except for one near North Branch and Halsted that requires a detour through Goose Island.

Transit

There are #70 Division bus stops at Noble (westbound only) and at Elston. At Elston, the eastbound bus stop is located almost mid-block. This placement helps buses avoid blocking the right turn only lane while passengers board and alight. However, buses must merge with traffic to continue onto the bridge. None of the bus stops have shelters, but some have benches.

Cars

From Noble to Elston, Division Street has two consistent traffic lanes in each direction, plus turn lanes. There are long queues for left turns at Elston Avenue, which has no protected left turn signal phases. The on- and off-ramps for the Kennedy Expressway also experience heavy turning movements.

To the east of Elston, Division slims down to one lane across the bridge

ZONE B

and into Goose Island, so there is a need to prepare drivers for this transition before the intersection. Existing conditions account for this transition by separating traffic into one through lane plus left and right turn only lanes.

Opportunities

Because of moderate traffic volumes and the need to maintain connectivity with the Kennedy Expressway, we do not consider a road diet to be feasible in this zone. However, there are opportunities to balance vehicle needs with the need for bike infrastructure by slimming wide traffic lanes down to 10 to 11 feet and utilizing wide sidewalks under the Union Pacific railroad viaduct.

Our Plan

To improve traffic flow and reduce speeding, lanes can be reduced to 10 and 11 feet throughout this segment of Division Street. At least one 11-foot lane should be maintained in each direction to allow for truck and bus movement throughout the corridor.[1]

Current Divvy Stations (blue) and proposed station (red)
Image by Divvy and Google

To establish bike connectivity through this segment of Division Street, bike lanes can be added by reallocating space used by existing travel lanes that are 12 feet or wider and an existing wide sidewalk from the railroad overpass to Elston.

Because of the lack of street connectivity across the river near Goose Island, we propose creating additional access points to Goose Island for pedestrians and cyclists. Blackhawk Street just north of the former Morton Salt facility offers an opportunity to reframe an old industrial area as a modern, people-friendly industrial and commercial district that is better-integrated into the surrounding neighborhoods.

Finally, an additional Divvy station at Division Street and Elston Avenue could make Goose Island more accessible by bike and provide better capacity in the Divvy network along two important cycling routes.

Noble to the Kennedy

Add 5-foot bike lanes with up to a 3-foot buffer in each direction by reducing the center median and slimming existing 19-foot travel lanes. To reduce right-turn conflicts between vehicles entering the expressway and cyclists, a dedicated right-turn lane should be provided to the right of the eastbound bike lane. (NACTO, Urban Bikeway Design Guide, “Through Bike Lanes”)

Viaducts

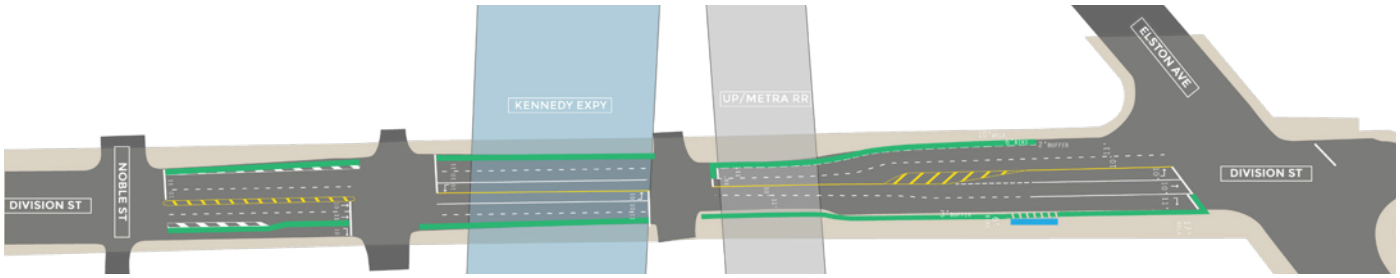
For a more pedestrian-friendly experience under the viaducts, we additional lighting and better trash removal and maintenance. To ensure that there is adequate funding to maintain clean sidewalks, the Wicker Park/Bucktown Special Service Area, which currently covers the north side of Division to the Kennedy Expressway, could be extended to cover both sides of the street and the railroad viaduct or a new Special Service Area could be established through Goose Island.

Photo by Lucy Chen

To improve bike connectivity between the bike facilities to the east on Division and on Milwaukee and those to the west on Elston, we propose building high-visibility, buffered bike lanes on Division from Noble to Elston.

1 NACTO, Urban Street Design Guide, “Lane Width”

ZONE B



Proposed bike lanes
Illustration by Michael McCarthy

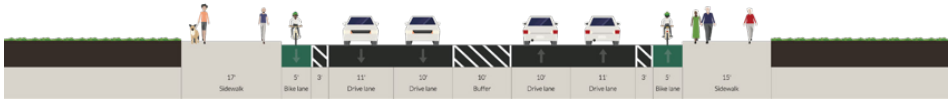
Wide lanes at Noble and continuing under the Kennedy Expressway can be reduced in width to accommodate buffered bike lanes. The wide sidewalk under the railroad can be utilized as an off-street connection for bicycles on the south side of Division from the rail viaduct to Elston. Travel lanes can be reduced and shifted to accommodate an on-street buffered bike lane on the north side of Division.

Existing Cross Section

At Noble Street

Proposed Cross Section

At Noble Street



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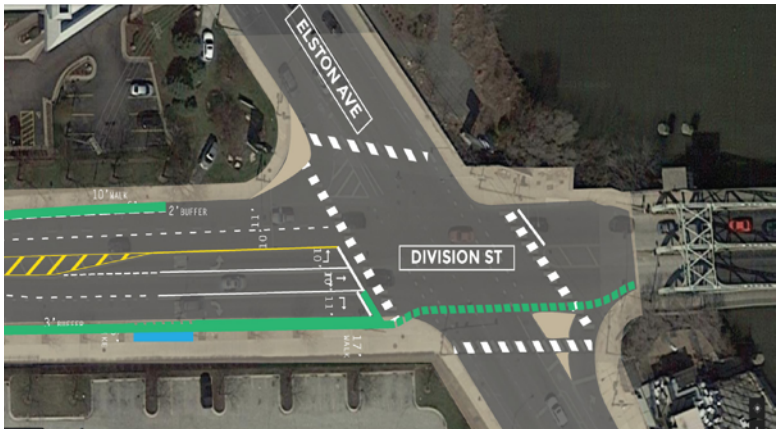
Elston Avenue Intersection

The intersection of Elston Avenue and Division Street offers an opportunity to connect existing high quality protected bike lanes on Elston with new proposed bike facilities on Division. Since intersection design is crucial to the success of bike networks, we recommend a more comprehensive study of this intersection to evaluate whether the addition of concrete barriers can provide a protected intersection for bike lanes, reduce pedestrian crossing distances, and maintain access for turning trucks. Further study is also needed to determine if the current 85 second signal cycle is appropriate for this intersection and if adding a protected left phase is feasible.



Proposed concrete improvements at Elston
Illustration by Michael McCarthy

ZONE B

Benefits by Mode

Pedestrians

Greater ADA compliant crosswalks, shorter crossing at Elston, pedestrian signals at Noble

Bike

Improved connection to Elston protected bike lane and improved safety from buffered lanes on Division

Transit

Reduced conflict with bikes under the railroad viaduct, improved bus shelter at Elston

Cars

Less queuing for left turns at Elston and maintained number of lanes

Photo by Michael McCarthy

GOALS AND STRATEGIES

Zone C: Elston to Halsted

Illustration by Jasmine Gunn

ZONE C

Goose Island presents an interesting situation for this corridor, since Division Street is the primary access route onto the island. In order to improve the connectivity of Division Street between the West Town and Near North communities, it is imperative that all modes can maintain the comfort of all modes while recognizing the needs of the manufacturing and transportation industries of Goose Island.

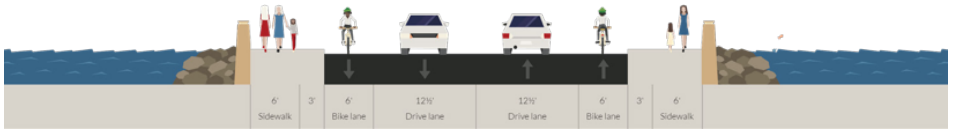
Existing Conditions

Within Goose Island, the right of way has a width of 66 feet, but lanes are not striped for any mode aside from the center-line dividing the different directions of traffic. The intersection of Division and North Branch Street is the only intersection on Goose Island with a traffic signal; all other intersections are controlled by 2 or 4-way stop signs. The streets appear to have been resurfaced recently, but there is an old train track that runs through Cherry Avenue which creates an unlevel crossing surface at that intersection.

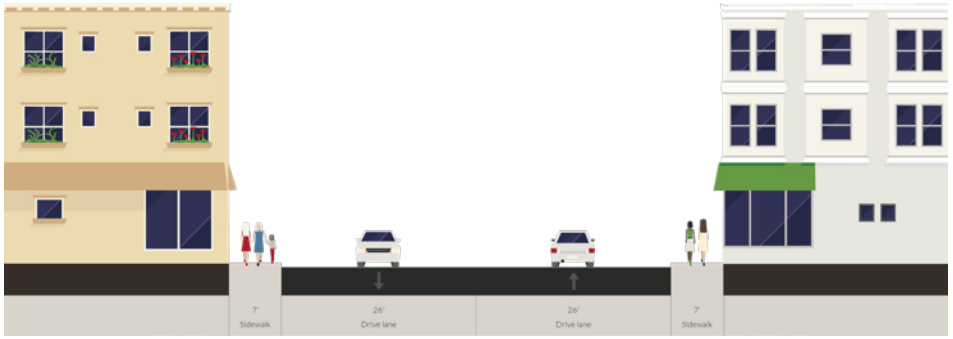
In addition to the #70 Division Street bus, Goose Island is also served by #132 Goose island Express. While there are 14 bus stops within Goose Island (including those on Halsted Street), there are currently very few boardings and alightings in the zone, and low pedestrian activity in general. The bus stop at Blackhawk and North Branch Street has a bus shelter, but the other stops do not have shelters or benches.

The major choke-points in Zone C are at the bridges crossing the North Branch of the Chicago River to and from Goose Island. The bridge on the east, while slightly narrower, currently has two drive lanes and two bike lanes, along with a 6-feet pedestrian walk. The bridge on the west, while wider, currently consists of two drive lanes that are 18-feet wide each, and 8-feet wide pedestrian walkways.

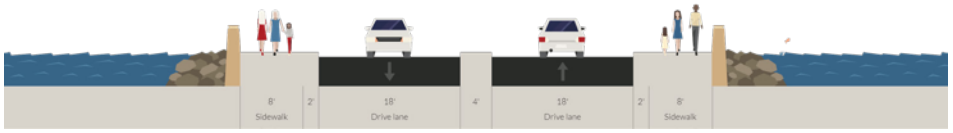
Existing East Goose Island Bridge



Existing Typical Goose Island Intersection



Existing West Goose Island Bridge



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ZONE C

Strengths and Weaknesses

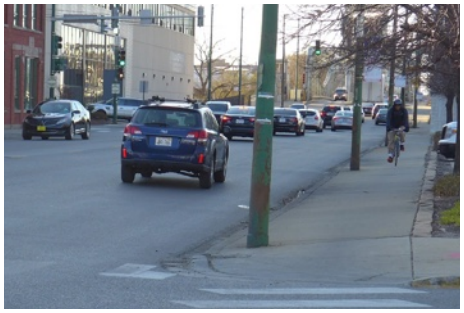
While the lack of clear delineation on the street allows for flexibility in its use, defining space within the right-of-way for each mode will allow for more predictability, thus increasing safety for all modes. Because of the current use of Goose Island, there has been little need thus far to implement improvements in this corridor. However, we believe that investing in Goose Island and bridging the gaps in connectivity will benefit the entire region.

Cars and Buses

Because of the lack of lane lines, cars will sometimes cruise in the middle of the 26-feet lane. This not only decreases the predictability of the vehicles, it also falsely suggests to drivers that higher speeds are safe and permitted. This is especially problematic, since traffic also tends to be backed up at the bridges, where all lanes have to merge. Especially at the signaled intersection of North Branch and Division Street, it is not uncommon to see cars backed up on the west bridge beyond the green light. This also poses a problem for buses, as it creates two points of conflict: when cars are blocking access to a bus stop as seen in the photo to the right, and when a bus needs to merge back into traffic.

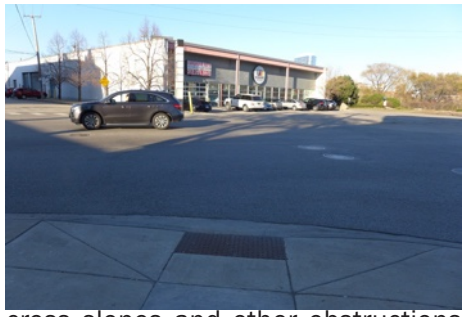
Bicycles

Despite the available bicycle lanes on the east bridge, Goose Island currently has no designated bike lane. There is only one bike rack available in the corridor, and the only Divvy station is located at the south end of Goose Island on North Branch Street. Given the proximity to comfortable bike facilities and its geographic convenience, this corridor is in relatively high demand for bikers. However, only the confident bikers are comfortable traveling on the street. During a one-hour observation, two bikers were seen riding on the sidewalk.



Pedestrians

Pedestrian facilities are also relatively poor; while certain intersections have been improved with ADA compliant curb ramps and detectable warning, others sections (particularly midblock) suffer from high cross slopes and other obstructions that reduce the usable width of the sidewalk to as low as two feet. One particular curb ramp appears to be newly constructed, however the design of the curb ramp and the lack of pedestrian crosswalk markings appear to be guiding pedestrians into the middle of the intersection.



Plans and Strategies

Considering the current capacity needs of the corridor, we recommend delineating the street for a 11-foot drive lane and a 13-foot shared bus and bike lane for each direction, with the two directions separated by a 4-foot buffer. Doing so will allow for transit prioritization, while creating

Photos by Lucy Chen

ZONE C

a more comfortable and safe connection for bicyclists utilizing neighboring bike routes. Similar bike/bus treatments are found in Chicago at sections of Clark and Cortland Streets. This solution is selected for

Cortland bike/bus lane.
Image from Google (2014)

this corridor to minimize vehicle and bicycle conflicts while creating bike lane connectivity, allowing for curb-size access for buses, and maintaining the capacity needs for cars. Transit facilities can be further improved by providing benches and bus shelters where the right-of-way allows. Though there are sometimes cars parked along Division (particularly outside of the Goose Island Shrimp House), we do not believe that removing the ability to park along this corridor will negatively affect the area. Many establishments have on-site parking lots, and the plethora of side streets and alleyways will be sufficient for meeting the low parking needs. The bridge on the west is currently quite wide in both sidewalk width and drive width, but there is currently no delineation on the street to separate vehicle and bicycle traffic. Recognizing the demand for bicycle connectivity, we aim to increase safety and comfort for bicyclists across this bridge by adding a 5-foot bike lane with a 2-foot buffer and decreasing the drive lane to 11 feet on both sides of the bridge. We also recommend that the open-grate bridge should be treated with concrete for the bike lane and buffer in order to improve cycling comfort.

In addition to these physical improvements, we recommend traffic signal coordination at the Division Street intersections with Elston Avenue and North Branch Street. Because

Proposed bike lane on the west bridge
Photo and Illustration by Lucy Chen

Proposed Typical Goose Island Intersection

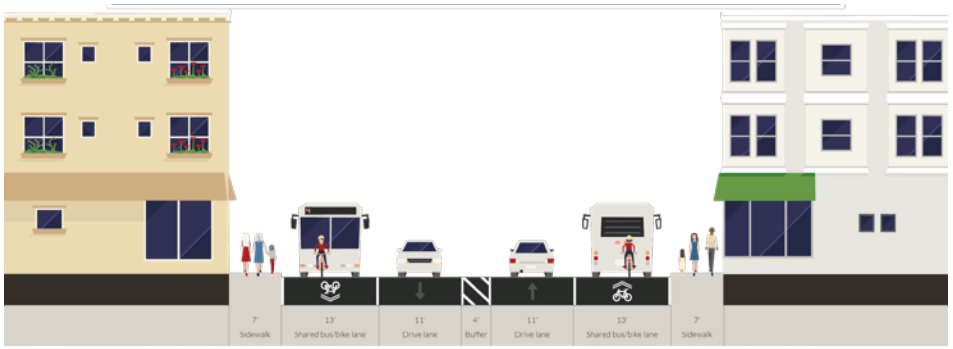


Image created with Streetmix CC BY-SA 4.0

of the merging for the bridge, traffic often pools on the bridge even when one of the signals is green. By coordinating the signals, traffic can flow more smoothly across the West bridge without sacrificing the capacity on Elston Avenue. At the same intersection, we recommend that the westbound bus stop at North Branch Street is relocated to be a near side stop. Doing so will allow for easier lane merging at the bridge.

While the east bridge is narrower than the west, it is fairly comfortable for bicyclists because of the clearly delineated bike lane as well as the concrete treatment over the open-grate bridge. To improve on this comfort, we propose that both the drive lane and the bike lane are narrowed by one foot each so that a two foot buffer can be added to separate the lanes. Doing so will leave enough space for each mode, while increasing the separation for increased comfort and safety.

It is also important that pedestrian facilities in this zone are addressed, as there are currently many sections of sidewalks with high cross slopes, widths less than four feet, and various trip hazards. Though current pedestrian traffic in Goose Island is relatively low, creating a connected pedestrian route through Goose Island will not only increase safety, but also encourage future development. Thus, we recommend that all sidewalks, curb ramps, and crosswalks in this zone should be re-evaluated for ADA compliance and that street light-

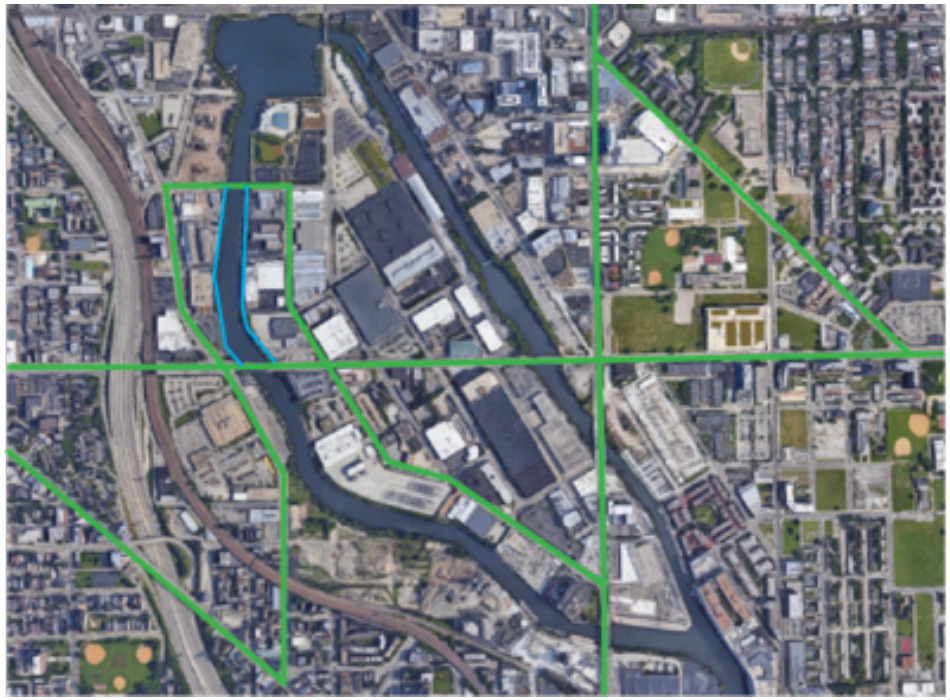
ing throughout the corridor should be improved. Currently, there is often debris that builds up on the sidewalk and other obstructions that decrease the usable walk width under what is ideal. Therefore, we also recommend the relocation of signage and other obstructions in order to maintain continuous pedestrian comfort, as well as improved trash maintenance.

Potential Future Improvements

In addition to these near and mid-term improvements, we also recommend further traffic and development studies in order to determine a more comprehensive long term solution for Goose Island. Currently, Division Street and Halsted Street are the only ways to and from the island. The bridges across the rivers on Halsted Street are both wide with designated bicycle lanes, but both bridges on Division Street commonly experience traffic backup. Depending on how the region grows, it can benefit from one or both of the following:

1. Replace existing bridges with new, wider bridges to better accommodate increased capacity demand from freight trucks, passenger vehicles, and bus transit.

2. Install a new pedestrian-bicycle bridge North of Division Street at Blackhawk Street and along the river to create a safer and friendlier route to and from Goose Island via active transportation.



Potential new bike paths and shared-used paths

Photo from Google. Illustration by Lucy Chen.

ZONE C

Benefits by mode

Pedestrians

Greater safety from lighting improvements and improved sidewalks that comply to ADA standards; new point of access from potential new shared-use bridge on Blackhawk with riverwalk path

Bike

Improved safety and comfort from buffered bike lanes with concrete treatment on both bridges and shared bus+-bike lane through Goose Island; new point of access from potential new shared-use bridge on Blackhawk with riverwalk path.

Transit

Enhanced efficiency from shared bus+-bike lane and near-side bus stops; improved comfort with bus stop benches and shelters were possible

Cars

Increased capacity through minimized conflicts with other modes, traffic signals coordination, and potential new wider bridges

GOALS AND STRATEGIES

Zone D: Halsted to Orleans

Illustration by Jasmine Gunn

ZONE D

In this section, there are a diversity of uses that include commercial, residential, and institutional. Buildings that house retail, churches, schools, urban farms,residential (including the Cabrini Green Development) and offices are located along or in close proximity to this portion of Division. With this diversity brings a diverse group of people of all ages traveling through the corridor at different times. It is vital that our plan ensures community residents in every transportation mode are able to travel through the zone safely and efficiently.

Strengths & Weaknesses

Pedestrian

For pedestrians, the sidewalks are mostly in good condition and are equipped with nice curb ramps. The sidewalks are also wide in a number of places that make walking through very comfortable. While some are a little worn down, a majority of crosswalks are also in good condition and all major intersections have walk signals. From North Clybourn Avenue to North Sedgwick Avenue, the crosswalks are far apart and potentially confusing to maneuver for first time users.

Bicycle

The only bicycle lanes in Zone D are located from N Clybourn Avenue to N Orleans St.While the existing bike lanes have light signals and are barrier protected, the lane starts in the middle of the street and can be an inconvenience to enter. While observing activity along the corridor, our team noticed a number of bike riders choosing to continue riding on the sidewalk instead of the bike lane. Additionally, there are no bike lanes located at the intersection of North Larrabee where the only Divvy station along the entire corridor is located. Residents may have a larger incentive to use Divvy if they saw bike lanes in place. The lack of bike infrastructure in zone D is causing the infrastructure that is present to be underutilized.

Transit

Like the remainder of the corridor, multiple bus stops for the #70 Division bus are present in Zone D. One bus stop has a shelter, one stop has seating, and the other has just a sign. All stops are next to crossings so pedestrians can travel safely when getting off of the bus. The current transit infrastructure does not have bike accommodations integrated into it which could improve the overall user experience.

Cars

The main issue for cars in Zone D is the lack of clear street markings. The eastbound lane, in particular, is currently marked for two driving lanes while the street in reality functions with one drive lane and a parking lane curbside. Delineating parking from driving lanes is vital to reduce confusion and traffic collisions. Additionally, emergency vehicles from the fire station at the intersection at Larrabee need better signage and signaling to ensure that fire trucks have a clear pathway that is not conflicting with ongoing traffic.

Photos by Jasmine Gunn

ZONE D

Our Plan

Illustration by Jasmine Gunn

In zone D, we identified Division and Larrabee as a crucial intersection in need of intervention. There are three main conditions to consider at this intersection:

1. How do we ensure pedestrian safety with a police station, a fire station, a Divvy Station, a Target, and a residential development all converging at one intersection?

2. How do we better accommodate bike and divvy bike riders while helping to establish division as a cross town bike corridor?

3. How can the intersection create a better atmosphere for the emergency vehicles that are frequent travelers?

With these questions in mind, we developed the following strategies

1. Reduce the driving lanes with a road diet from five to three by replacing them with a parking lane curbside on the eastbound side and adding bike lanes in both directions. The curbside lane eastbound is currently being utilized as parking so this strategy will just make that concrete with the proper street markings. The strategy of reducing the parking lanes will slow down traffic to help ensure pedestrians are safe while simultaneously making the auto signal cycle faster since the walkway will be shortened.

2. Bike lanes being added in both directions of travel will connect to existing cycling infrastructure and encourage the increased use of the Divvy station.

3. The addition of Emergency vehicle signals and signage in compliance with MUTCD guidelines will allow firefighters to progress through the intersection without conflicting with auto traffic. This will help them better serve the surrounding community

ZONE D

Other Strategies

Illustration by Jasmine Gunn

Bike Lanes

Since the current bike infrastructure is being underutilized, our strategy proposes that bike lanes be installed throughout the zone. Future development-insert drawings Currently, there is a large undeveloped lot adjacent to the Target. A long term strategy imagines that lot developed into a mixed-use building. The lot is currently zoned as planned development which would provide a little more flexibility having land-use that fits in with the community. This development could house the additional workers coming from the new businesses on Goose Island.

ZONE D

Benefits by Mode

Pedestrian
Enhanced safety and comfort for pedestrian users at crucial intersections.

Bike
Increased bike infrastructure that is protected and connected with existing pathways.

Bus
Street and traffic improvements can increase bus ridership and allow pedestrians to

Auto
Defined street markings

Photo by Jasmine Gunn

EXECUTION

Stakeholder Matrix

Stakeholders	Benefits	Outreach Strategy
Commercial & Office: Ex. Target, Fifth-Third Bank, Jewel Osco, Studio Gang Architects, etc...	• Stimulation of the local economy through increased economic activity and tax revenue • Safer sidewalks and more accessible travel for customers	• Go through local economic development organizations to attend local meetings and survey business owners • Host a shop local event where resident feedback can be gathered
Schools & Institutions: Ex. Holy Trinity Highschool, Jenner Elementary Academy of the Arts, etc..	• Safer transportation for students and families traveling to and from school. • Opportunity for students to feel more connected to the surrounding area.	• Work with the principal of schools to set up traffic safety workshops in the school to inform students how to travel through the corridor safely. • Meet with parents at local PTA meetings to see the changes they want to see to make their children safer.
Fires Station and Police Station	• Decreased conflict of emergency vehicles with traffic. • Opportunities to implement traffic education and engage with the community.	• Meet with firefighters and police officers to discuss plans for feedback • Work with officers to develop a community outreach plan
Community Residents	• Safer, healthier, and more accessible streets throughout the year. • Improved social interaction with neighbors • Gaining an increased quality of life in the neighborhood.	• Attend local community meetings and events to get feedback of potential strategies. • Host walking and bike tours of the area to discuss areas for improvement • Survey residents to hear their questions and concerns.
Alderman: Aldermen Brian Hopkins (2nd) and Walter Burnett, Jr. (27th)	• Happy and safe resident/voters • Ability to show positive impact in the community they serve to constituents and the city at large.	• Meet with Alderman to discuss the feedback they have been hearing from the community • Discuss the development of a community outreach plan to align with their potential events. • Ask for commitment of funds for the plan
CTA, DIVVY, other transportation agencies	• The ability to better serve the community and provide safer streets for users.	• Meet with transportation agencies to ensure there is alignment and agreeance on all decisions. • Discuss possible resources they may have to contribute toward the budget of the development.

EXECUTION

Potential Funding

While the final cost estimates for this plan have yet to be determined, A La Mode has identified a number of potential funding sources for the improvements in this corridor. Possible federal funding include the Federal Congestion Mitigation and Air Quality Improvement (CMAQ) program and the Surface Transportation Block Grant program under the Fixing America's Surface Transportation (FAST) Act. Since the project area is in the North Branch, Goose Island, and Near North Tax Increment Financing districts, improvements in this corridor also qualify for TIF funds. These funds have accumulated to a total of approximately $688 million in investments to date and would qualify as the local match portion of any federal funds the improvement projects are eligible to receive. To attract economic development, most of the corridor is in an enterprise zone that will give businesses a number of incentives to relocate to the area. These incentives include tax exemptions for building materials and the Enterprise zone tax credit. As the corridor develops, not only does the value of the area increase, the area also gains more stakeholders who may be able to support improvement projects.

Future improvements can also consider the use of private-public partnerships to divert a portion of risk, responsibility, and cost to the private sector. Though these agreements also sign away a portion of the control, the economic benefit of completing a project sooner may make this option attractive.
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Implementation Plan

	Short Term	Mid Term	Long Term
Zone A	Add eastbound bike lane by reconfiguring street dimensions Encourage sponsorship and civic engagement for activities and weekly events on the Polish Triangle	Establish signal Priority for Division bus Rezone Polish Triangle from Pedestrian Street to Pedestrian Retail Street	ADA compliant Division El Station Reconstruct width of Polish Triangle on Westbound side of Division Street
Zone B	Add buffered bike lanes in each direction	New signals/timing and concrete bike lane protection at Elston	Rebuilt rail viaduct with enhanced lighting and streetscape Pedestrian bridge at Blackhawk
Zone C	Improve street lighting and maintenance Lane markings, including buffered bike lane and shared bus/bike lane Traffic signal coordination Relocate bus stops and add bus benches	Sidewalk reconstruction	New wider bridges to Goose Island
Zone D	Road Diet at Division and Larrabee intersection Installation of Emergency signaling	Bike Lane infrastructure throughout the zone	New development at the corner of Division and Halsted

CONCLUSION

In sum, our approach to the Division Street corridor is guided by expert knowledge, industry standards, and our team's technical practice and training. Our recommendations suggest innovative treatments to improve the connectivity of the street while maintaining safety, comfort, efficiency, and future growth in the corridor.

Our suggestions situate Goose Island for future economic development while increasing connectivity of the surrounding neighborhoods through improved pedestrian and bike infrastructure. We look forward to embarking on this journey to enhance the Division Street corridor by ensuring that all modes have a piece of the pie.

Photo by Michael McCarthy

APPENDIX A

Capacity Analysis

Capacity Analysis

Section 1: Milwaukee to Halsted

$AADT = 19{,}330$

$ADT \sim 20{,}000$

$DHV = ADT \times K\ Factor = 20{,}000 \times 0.08 = 1{,}600 \frac{veh}{hr}$

$DDHV = 1{,}600 \times 0.6 = 960 \frac{veh}{hr}$

Section 2: Halsted to Lake Shore Drive

$AADT = 13{,}269$

$ADT \sim 14{,}000$

$DHV = ADT \times K\ Factor = 14{,}000 \times 0.08 = 1{,}120 \frac{veh}{hr}$

$DDHV = 1{,}120 \times 0.6 = 672 \frac{veh}{hr}$

Based on higher traffic in Section 1:

For one thru lane

$960 \frac{veh}{hr} < S \times N \times \frac{G}{C}$

$960 \frac{veh}{hr} < 1{,}900 \times 1 \times \frac{G}{C}$

$\frac{G}{C} > 0.51$

For two thru lanes

$960 \frac{veh}{hr} < S \times N \times \frac{G}{C}$

$960 \frac{veh}{hr} < 1{,}900 \times 2 \times \frac{G}{C}$

$\frac{G}{C} > 0.25$