ACCESSING CDTA

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Redesigning the CDTA for Access ——— **DIS Studio 3**

OVERVIEW & INTRODUCTION

Directing growth through community and access.

00 PROJECT ORIGINS & IMPLEMENTATION

Public Transportation across the United States suffers from aging infrastructure, lack of funding, and distrust and frustration from both riders and observers.
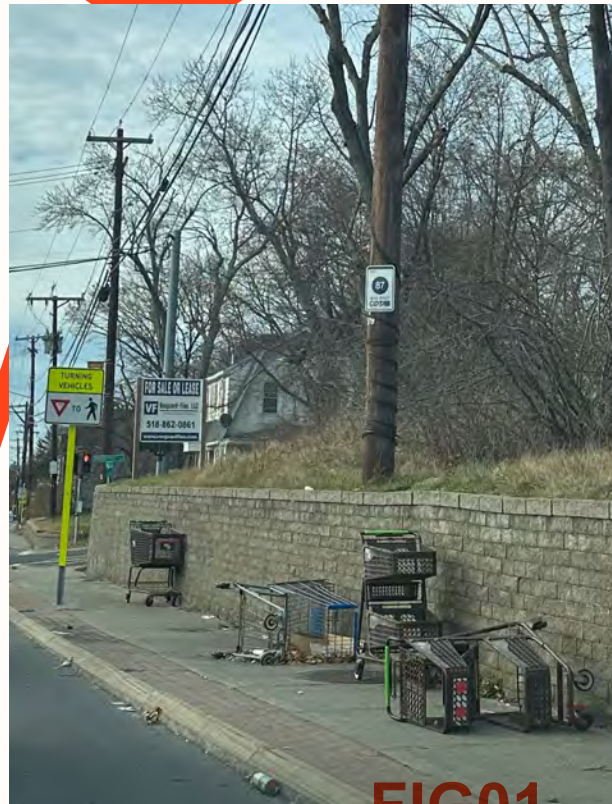
The Capital District Transit Authority unfortunately, is also subject to the issues facing public transit across the country. When focused on the Troy area, our research revealed a number of common complaints and issues.

FIG01

Hoosick Rd & Roosevelt Rd | High Density Commercial Corridor | No seating, trash receptacle, or lighting.

BUSES PROVIDE ESSENTIAL TRANSPORTATION FOR TROY RESIDENTS

For many Troy Residents, Troy's bus' provide essential transportation to work, school, and travel, providing access to housing, food, and entertainment, as well as a critical connection to the Capital Region and Beyond.

BUS STOPS ARE HARD TO FIND AND NAVIGATE

Bus stops in Troy lack visibility, infographic information, and credibility with riders. Locating a bus stop within this system relies on utilizing paper maps most commonly found on the buses, or smartphones with internet connection.

BUS DRIVERS HAVE A HARD TIME SEEING PEOPLE AT STOPS

Bus stop indicators are usually one metal sign located on an individual post or attached to existing infrastructure, difficult for both riders and drivers to easily and quickly identify.

BUS RIDERS FEEL UNHEARD

Troy Bus riders are not shy about their dissatisfaction with their riding experience, various online posts, forums, and public discussions all express the many frustrations felt by riders using this system. However, formal channels of complaint are slow to respond, and leave users feeling unheard

FIG02

Hoosick St. & 25th St. | High Density Traffic Adjacent to apartment complexes and University Housing | No seating, trash receptacle, or lighting, and minimal signage or information.

FIG03

4th St. & Canal | Located in front of a convenience store within a residential neighborhood | No seating or lighting. Often times parked cars block view of riders waiting making it hard for drivers to see them and stop.

To preserve the current system's operation while simultaneously improving rider experience, a three phase implementation strategy supplies the CDTA and City of Troy with continuous improvement, financial flexibility, and user-controlled amenity development. The key feature of this strategy is it's additive growth meaning improvements made in each phase build into a cohesive system with earlier phases.

A general timeline for this implementation strategy consists of:

PHASE 1
0-1 YEAR
Immediate implementation of low cost improvements

PHASE 2
3-5 YEARS
Rolling implementation of current stop modifications

PHASE 3
15-20 YEARS
 Long-term investment in community connection. Community and neighborhood focused bus stop designs unifying distinct neighborhoods with the whole City of Troy

Especially given Phase 2 and 3, the implementation is not necessarily linear. As Phase 2 lower budget improvements are made, site-specific, well-polished, and custom bus shelters and stops--those that would fall into Phase 3, can be implemented.
Budget and time restrictions necessitate a flexible improvement flow, and slow, continuous improvement is preferred over complete project abandonment or radio silence then sudden drastic change. This workflow also allows for community feedback and troubleshooting, ensuring that the key users are not lost during the process.

01 PHASE ONE: IMMEDIATE INFORMATIONAL IMPROVEMENTS

These improvements center largely around the communication of information related to Troy's bus network. Understanding what routes, time schedules, and stops the buses operate by can act as a large barrier to use for potential riders.

BUS STOP SIGNAGE

CURRENT ISSUES

Presently, the signs convey the following information:
- That it is a CTDA Bus Stop
- What bus routes stop there
- The bus stop ID
- The CDTA's email and phone-number

They are the size of a small no-parking sign and often placed on pre-existing street-side poles.

These signs are inobtrusive and blend into their environments--perhaps less of an eyesore, but highly impractical for actual bus users. They convey the bare minimum of information, if even that.

The route directions or final destinations are wholly reliant on users' pre-existing understanding of the bus system. Because of their size and placement, they can be incredibly hard to see for pedestrians and car-riders, especially for visually impaired users or in low-vision conditions.

CONCEPT IMPROVEMENTS

Our redesigned sign draws from bus stop signage located in other U.S. cities and towns. With the following features, this redesign strives to address the issues of visibility and lacking information:

- **Clear top graphic:** by incorporating a visual symbol at the top of every sign, our signage does not require prior knowledge or knowledge of English to identify the location as a bus stop.

FIG04

A recreation of the current CDTA bus signs

FIG05

Our redesigned CDTA sign

FIG06

Current CDTA Bus Stop sign photographed on-site

FIG07

Newly designed sign concept imagines in same location

- **Final destinations:** by including each route's final destination, users are provided the same information common navigation apps (ex. Google Maps) provide to identify which bus to board.

- **Stop name:** the sign now displays the stop name, informing users of where they are, and allowing easy reference between navigational apps and signage.

- **Larger Size:** Simply increasing the signage size can tremendously help users pick out the bus stop signage from other road signs, and simply notice the stop's existence

- **Lowered Height:** Given that these signs are intended for pedestrian-use, making sure the information displayed is actually readable for those users is integral.
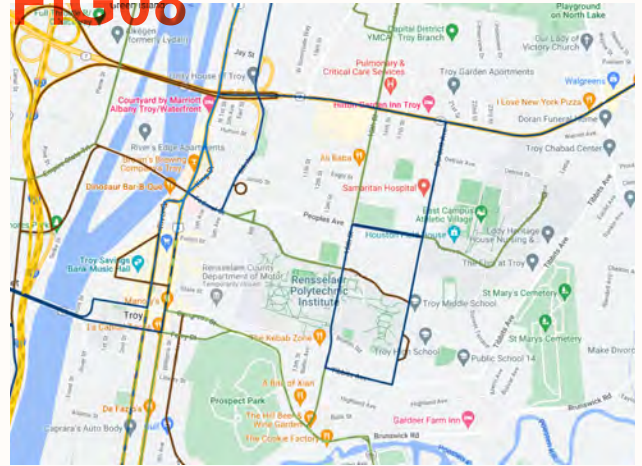
BUS ROUTE MAPS

Currently, the CDTA uses two types of maps, digital and physical. Both have some issues.

Digital:
The digital maps, which use Google's map making program have too much information. Building and street name information is treated equally to information about bus route geography. This map also has multiple bus routes shown, but their overlap and interactions are not unclear, especially when they are the same color

Physical:
The physical maps bring the routes to the informational focus but they only show individual routes, making it much harder to see route connections and plan trips that aren't just one line. It also means you need multiple maps to plan multi route trips, or requires navigating the online google map. These maps also cannot be scaled.

FIG08

Digital Map
• Crowded
• Too much information
• Bus stop interactions are not clearly readable

FIG09

Printed Map
• Too little information
• Only shows one bus route
• Requires more maps to get a full picture of Troy
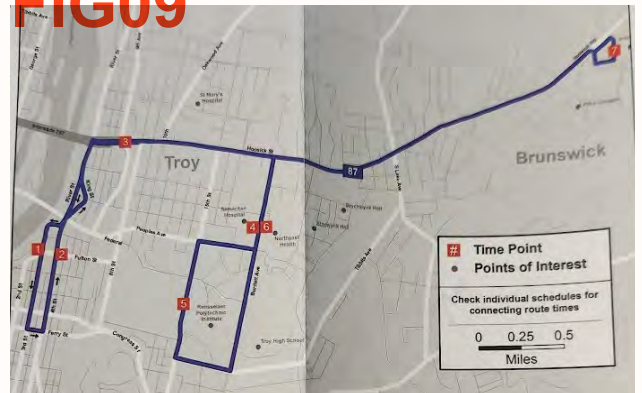
FIG10
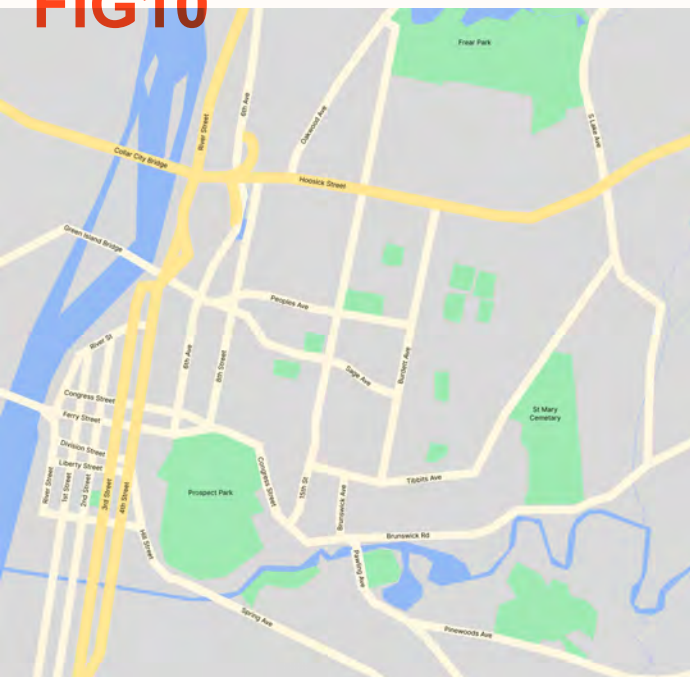
Map Base
Simplified map of Troy
Marks and labels the most important roads in Troy as well as the parks.

New Map
Our map redesign takes the best from both maps and improves upon underlying issues across CDTA maps

• **Map Base:** Simplification of the geography of Troy helps bring the bus routes to focus. Just enough information is on the map to keep Troy identifiable.

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- **Distinct color pallet:** A new color pallet for bus routes makes each route easily distinguished from another. This new color pallet is also accessible to the color blind, taking inspiration from Washington DC's public transit color scheme.

- **Scalable**: The map is an SVG file which makes it infinitely saleable. SVG files can be printed in any size, so this map can replace the digital ones, and can be viewed in any size through digital means.

- **Shows all Routes:** All bus routes through Troy are shown. Each route can be easily distinguished by color and interactions between routes are readable.

<u>Bus Route Key</u>
- Distinct color for each route
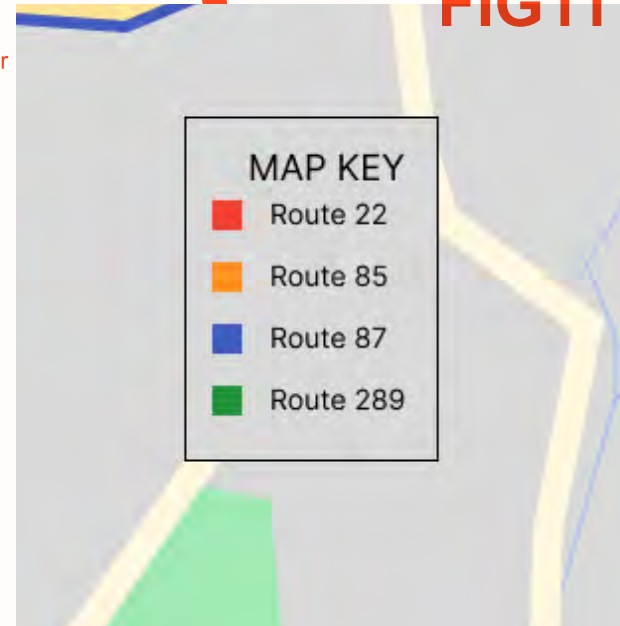- Accessible to most types of colorblindness

FIG11

FIG12

<u>Final Map</u>
- Bus route interactions shown clearly
- Bus Routes in clear foreground
- Accessible to new users

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02 PHASE TWO: ADDITIVE PHYSICAL MODIFICATIONS

Occurring 3-5 years post Phase 1 implementation, Phase 2 meets the rider-experience needs of a growing Troy and expanding route usage, while maintaining CDTA control over implementation and cost. Phase 2 also introduces a user-centered form of Implementation strategy to deliver data-driven decisions that are reflective of the riders utilizing these services.

PHYSICAL MODIFICATIONS

Currently the CDTA uses the supplier Brasco for all bus stop shelter's and amenities. Through this supplier's offerings there are many beneficial, ready to order, additive "upgrades" to address both rider and driver user experience frustrations. Through the existing *Brasco Bus Stops à la Carte* additive model, the CDTA maintains full flexibility in prioritizing amenities based on rider feedback.

By utilizing this "build your own bus stop" option, the CDTA can best address each location's unique challenges in a consistent, economical and uniform style, maintaining the brand recognition and experience of CDTA while supporting the experiences of the riders and drivers. This option also allows the CDTA to grow the amenities with the riders at the stop, creating a community reflective amenity strategy, and allowing for better collaboration between community and the CDTA.
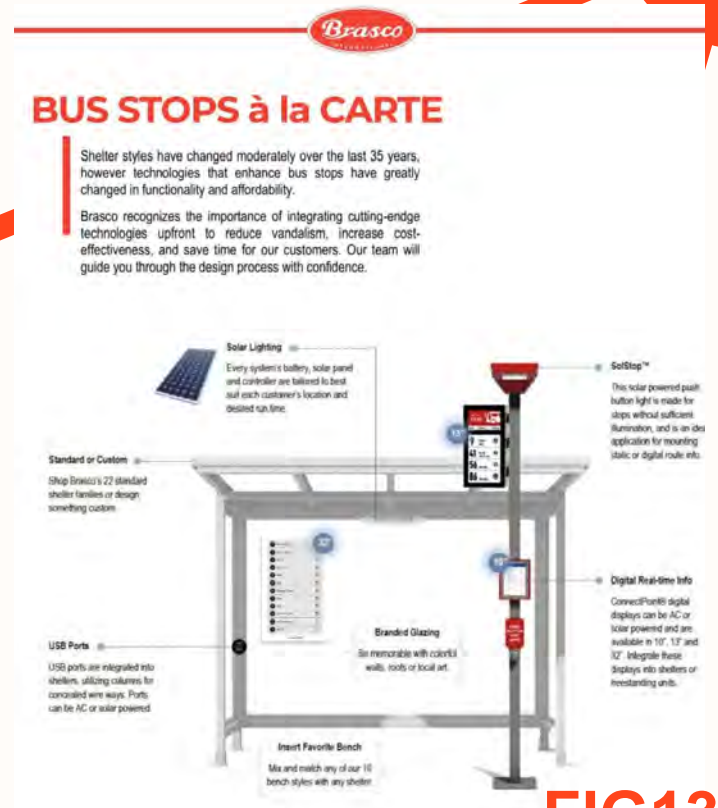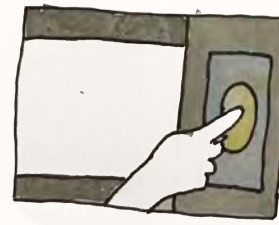

FIG13

Brasco Bus Stops à la Carte product flyer.

AMENITIES OFFERED:
- Solar Lighting
- Solar Charging
- Digital Real Time Info Board
- Lighting
- Bench
- Trash Receptacle
- Custom or Standard Shelter
- Advertisement Display Box or Screen
- Public Art Display

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POSSIBLE PHYSICAL MODIFICATIONS SPECIFIC TO THE CDTA

While the amenities offered by Brasco provide the CDTA with many great rider-experience solutions, the CDTA should also seek to solve Troy specific issues where there currently is not any mass produced solution. In an attempt to solve these issues we have designed some of our own solutions to these experiences.

RIDE INDICATOR LIGHT

To combat the experiential issue of bus stop invisibility for bus drivers, we designed a solar powered lit street street sign, to indicate to bus drivers that a rider is waiting.

USE 01
The indicator light is controlled by a rider waiting at the stop, and changes color to red to alert the bus driver a stop is requested.
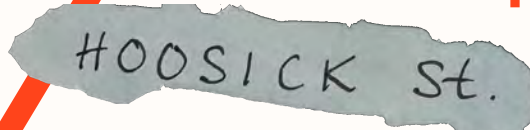
USE 02
The indicator light is connected to the already existing on bus infrastructure to alert passengers of incoming bus via color change.

USE 03
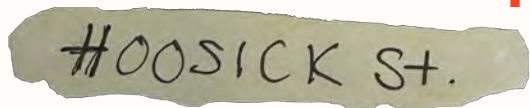The solar lit sign can be used as a way finder for riders and drivers at night.

The indicator light works in a few different ways.

FIG14

Sketch of Push Button Rider Light

FIG15

Ride Requested.

FIG16

Bus arriving in 2 minutes.

FIG17

Night Light.

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PUBLIC ENGAGEMENT AND DIRECTION

Phase Two is developed around community engagement and collaboration between the CDTA and the public.

To develop and sustain this relationship the CDTA should promote a campaign of growth and invite the public to provide feedback and rider experiences to help guide amenity implementation and development. This data would provide crucial real experiences of riders and build a connection between community and the CDTA and foster a collaborative and innovative system, reflective of the community it exists within.

To notify the public of this campaign of growth, marketing and branding should represent this statement and have easy accessible links to a feedback page for rider input, including specific location issues or improvement or general experiential issues or improvements.

To the right is an example marketing campaign "Together We Grow" which establishes a dialogue between the CDTA and the communities served by the CDTA
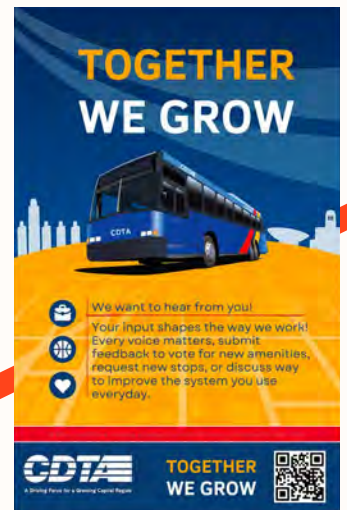

FIG18

FIG19

FIG20

FIG21

FIG13 - FIG16 Examples of campaign implementation and style.

03 PHASE THREE: COMMUNITY CONNECTION

The final phase, occurring 10-15 years after phase 2, transforms the Troy bus system to a celebration of Troy and centerpiece of several Troy landmarks. This will not only bring more community engagement to within Troy but also act as an attraction for the city.

## UNITY THROUGH COMMUNITY REPRESENTATION & CONNECTION

Unequal economic development and lack of public transit discourage Troy residents from traveling anywhere other than downtown. This not only worsens the economic development, which is already too focused on downtown, but also makes Troy very socially disconnected. Neighborhood focused bus stops center each part of Troy, exploring the history and culture of each region. For residents this makes all of Troy more recognizable, not just a bunch of neighborhoods to drive through on your way to downtown or somewhere outside of Troy. For the city as a whole it gives more representation to each part while also giving a sense of identity Troy, possibly making it a tourist attraction similar the the Murals in the Boston T.

COMMUNITY OF TROY & CONNECTION TO THIRD SPACE

Loss of third space, spaces that are neither home nor workplace, is an issue all across America—and Troy is no exception. A meaningful way the CDTA redesign could work to enrich the Troy community is by emphasizing connections to third spaces-- which have been proven to strengthen social networks and stabilize communities (brookings.edu) via the bus network.

Troy's community spaces are becoming less accessible and, in the case of the South Troy Pool, are at risk of disappearing all together. Phase 3's site-specific stop designs bring more focus to already existing community centers all across Troy. Our four current designs bring attention to the South Troy Pool, Frear Park, The Troy Public library with each stop being in a different neighborhood. As the project is being implemented new bus stops will also be designed with the help of the community outreach system from phase 2, bringing attention to more third places in Troy.

SITE-SPECIFIC REDESIGNS
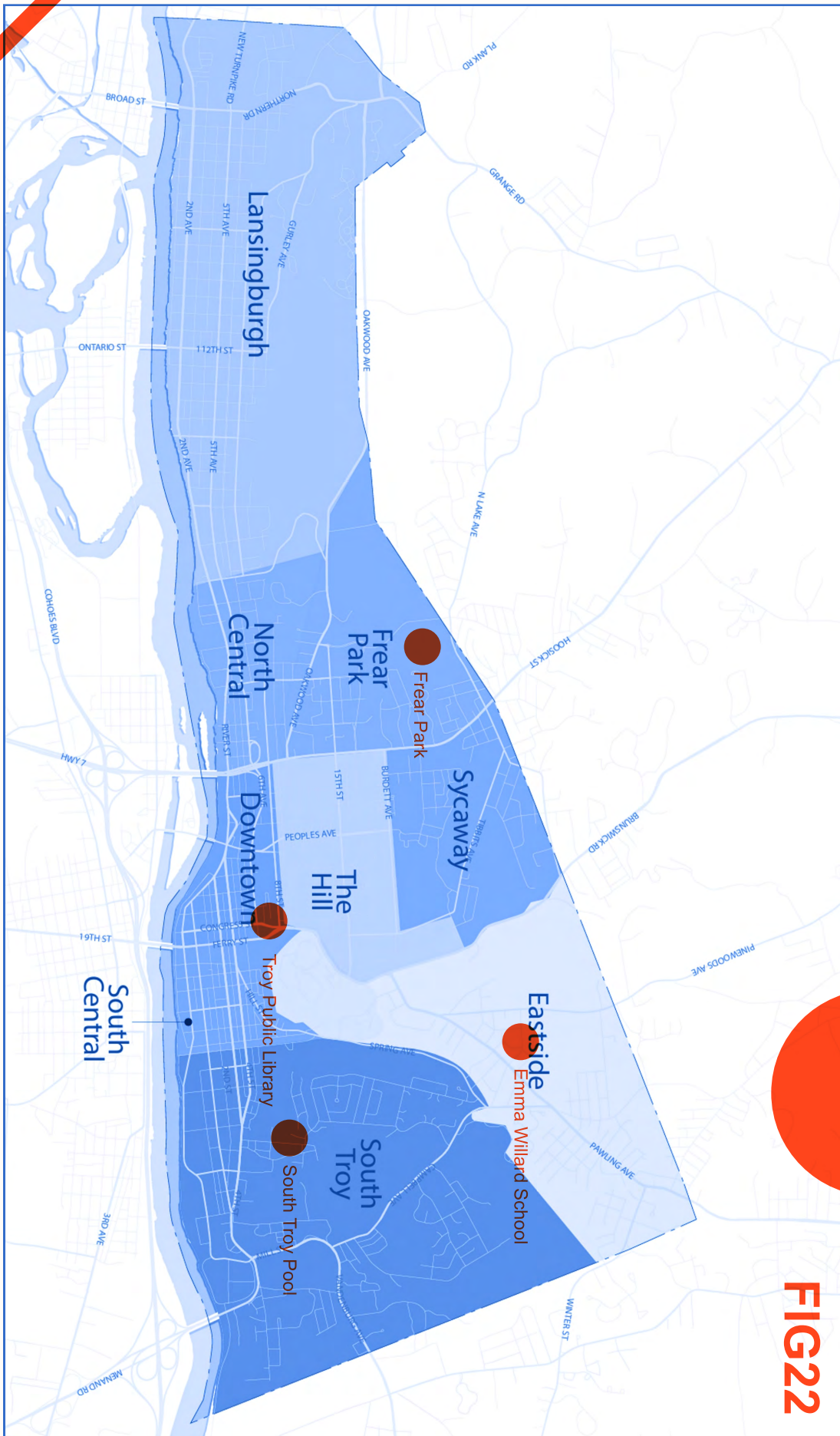
We chose to distribute our redesigns across the great Troy area, placing each in a different neighborhood. Substantial bus shelters are disproportionately placed in the downtown Troy area, especially in near the Rensselaer Polytechnic Institute. ADD MORE STUFF HERE

Lansingburgh

North Central

Frear Park

Frear Park

Sycaway

Downtown

The Hill

South Central

Troy Public Library

Eastside

Emma Willard School

South Troy

South Troy Pool

FIG22

FIG23

Emma Willard Campus - Photo by Emma Willard School

EASTSIDE NEIGHBORHOOD | Emma Willard School
Pawling Avenue

- Founded in 1814, the Emma Willard School is one the U.S.A.'s oldest all-girls schools.
- Gothic Revival Campus is a prominent feature of Eastside Neighborhood
- Located on Pawling Ave, a main travel artery

SHELTER FEATURES
- Intended to be used heavily by residents of East Side and Emma Willard Students
- Draws inspiration from nearby Gothic Revival Architecture used in the school
- Prioritizes safety with glass walls and lighting
- Spacious, to allow for many waiters, such as students returning home from school
- Features bench, trash receptacle, indicator light, arrival time panel for an informed and comfortable waiting experience

FIG24 Imagining a a bus stop that represents Emma Willard and the Eastside.

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FIG25 Troy Public Library - Photo by friendsofthetroylibrary.org

DOWNTOWN
Troy Public Library
3rd & Ferry Street

- Requested by the public of Troy in1799, the Troy Public Library settled in a permanent location in 1885.
- Architecture inspired by Italian renaissance palaces, and features prominent examples of stained Tiffany glass.
- Provides books and other written materials, digital entertainment and information resources, hosts free, public education and recreational events, and provides public access to computers.

SHELTER FEATURES
- Features glass or glass substitute that references the Tiffany glass featured in the library.
- Features ample greenery to improve space aesthetics and lessen exposed amounts of heat-trapping pavement
- Includes basic amenities such as seating, weather protection, and a bin to encourage rider usage and comfort
- Eye-catching aesthetics encourage passerby interest in the Troy Public Library

Imagined bus stop on the corner of the Troy Public Library, inspired by the historical building and its contents - Original photo by Google Earth

FIG26

FIG27

FREAR PARK | Frear Park

- Frear Park is both an unofficial residential neighborhood and a park
- The park was founded in 1917 by the Frear family as a public park and is used today as a park, nature reserve, golf course, and more.

FIG28

Exploring a bus stop that celebrates Frear Park and brings it closer to the Troy community
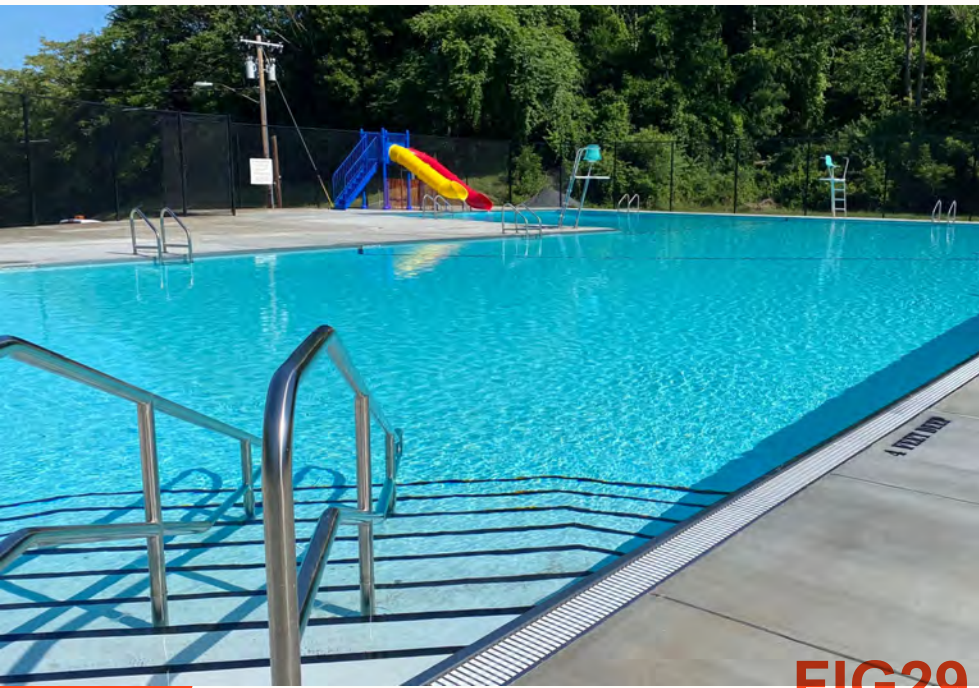
SHELTER FEATURES

- Aesthetically minimalist and biophilic to draw attention to the park.
- Creates connections between Troy residents and the local ecology
- Design incorporates both organic (local tree and green roof) as well as synthetic

South Troy Pool - Photo by saphena.edu.bd **FIG29**

SOUTH TROY | South Troy Pool

- Since the closure of the Knickerbacker Pool in 2016, the Troy South Pool is the only public pool in Troy, and has served the Troy community since July 1960.
- The pool offers free children's swimming lessons in the summer and is a popular place for school-aged kids to hang out during the summer.

SHELTER FEATURES
- Unabashed and eye-catching design that celebrates the pool
- Easy to recognize for young riders who may be riding alone for the first time.
- Pool-themed amenities to increase community awareness of the pool, which is out of street view.
- Solar panels on top that power lights at night on the underside to prioritize safety.
- Stop likely to see less use in non-summer months, so prioritized shade over wind protection, keeping open sides for added visibility and security and potential for pool-goers to dry off in open air waiting for the bus.

FIG30 Imagined South Troy Pool stop

04 CONCLUSION

This project is designed to growth with the Troy community and the CDTA. This product is designed to strengthen both the CDTA and Troy and establish direct and lasting communication.

PROJECT SUMMARY

Bus stops in Troy typically lack visibility, infographic information, and credibility with riders. In our observations, we realized this was a barrier to accessing not only the CDTA bus system, but third spaces and Troy as a whole. With a priority set on highlighting the unique spaces of Troy, we have created a multi-step plan for the CDTA spanning several years to increase public relations and interconnectedness with the community it serves.

NEXT STEPS

This plan is set to last around 20 years, but is adaptable according to user feedback and expectations. The next steps would begin with conversations with important stakeholders and the community. Looking ahead for final phases should start as well, so budgets may be planned accordingly.

PHASE IMPLEMENTATION

The phase implementation timeline laid out is capable of operating individually for each stop or area of Troy. This means, depending on budget available, high-priority stops may be updated sooner than others and continue according to schedule without waiting for other stops to reach the same phase first. This would allow a continual rollout of improvements across the timespans of each phase. The phase system also allows for a seamless improvement over time and the opportunity for user feedback throughout the process.

Redesigning the CDTA for Access ——— *DIS Studio 3*

ONE WAY