

# REBUILDING PHILADELPHIA COMMUNITIES

Integrating Infrastructure Projects and Workforce



*SE District & WWOAP ~ Fall 2024*  
*Joint Technical Conference ~*  
*10/11/2024*

# OUR TEAM



Lou  
Rodriguez  
Founder/CEO



Katie Ware  
Team Leader;  
Infrastructure  
Design



Lairon  
Lawrence  
Senior Engineer



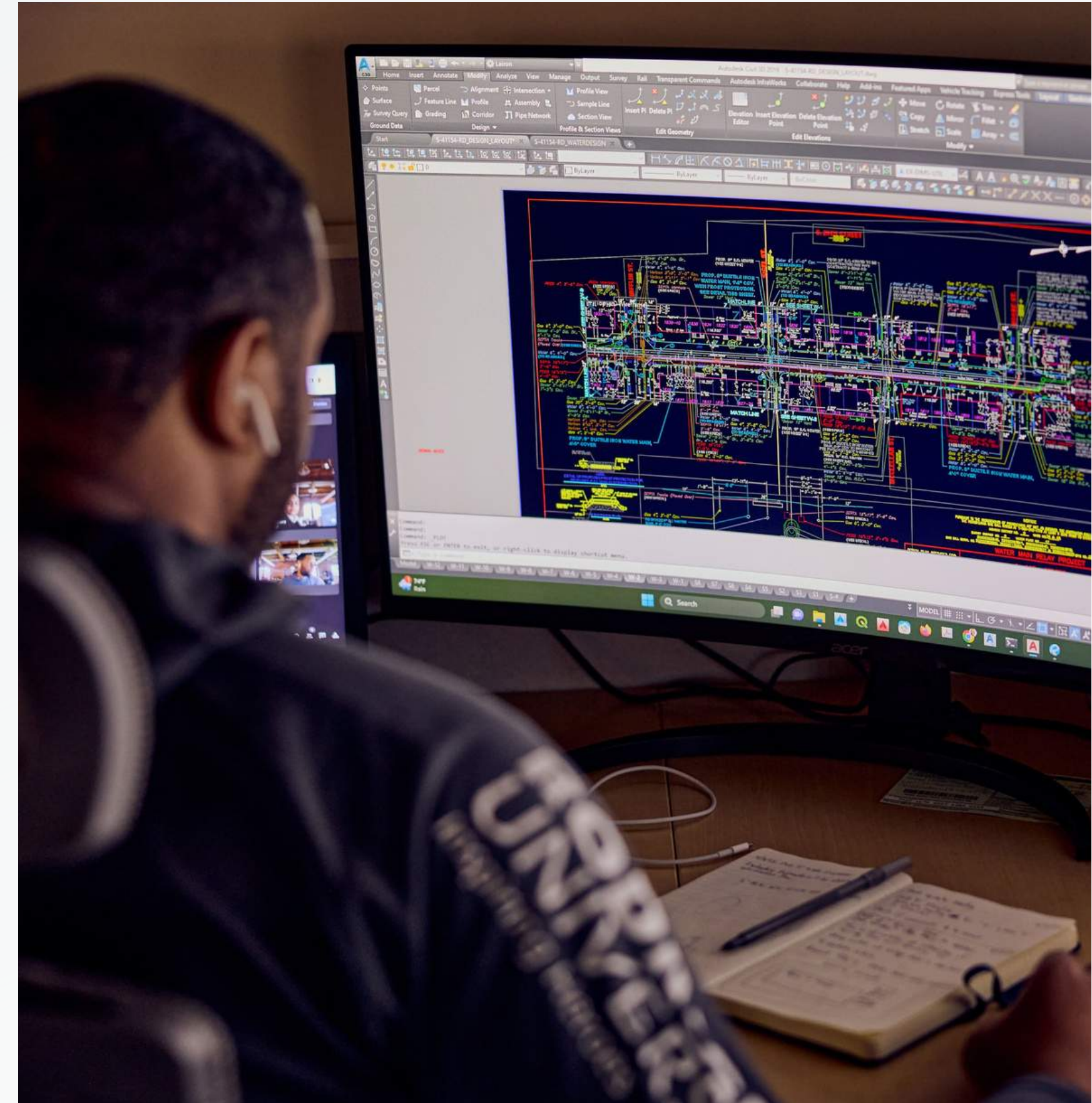
# ENGINEERING OUR FUTURE

## OUR MISSION

- Strengthening communities through innovative civil engineering and geospatial solutions.
- Empowering individuals by enhancing skills and promoting neighborhood well-being.

## OUR EXPERTISE

- **Infrastructure** - Water, sewer, stormwater, transportation.
- **Design** - Site planning, land development, redevelopment, site retrofits.
- **Geospatial** - Land surveying, 3D scanning, sUAS, GPS.





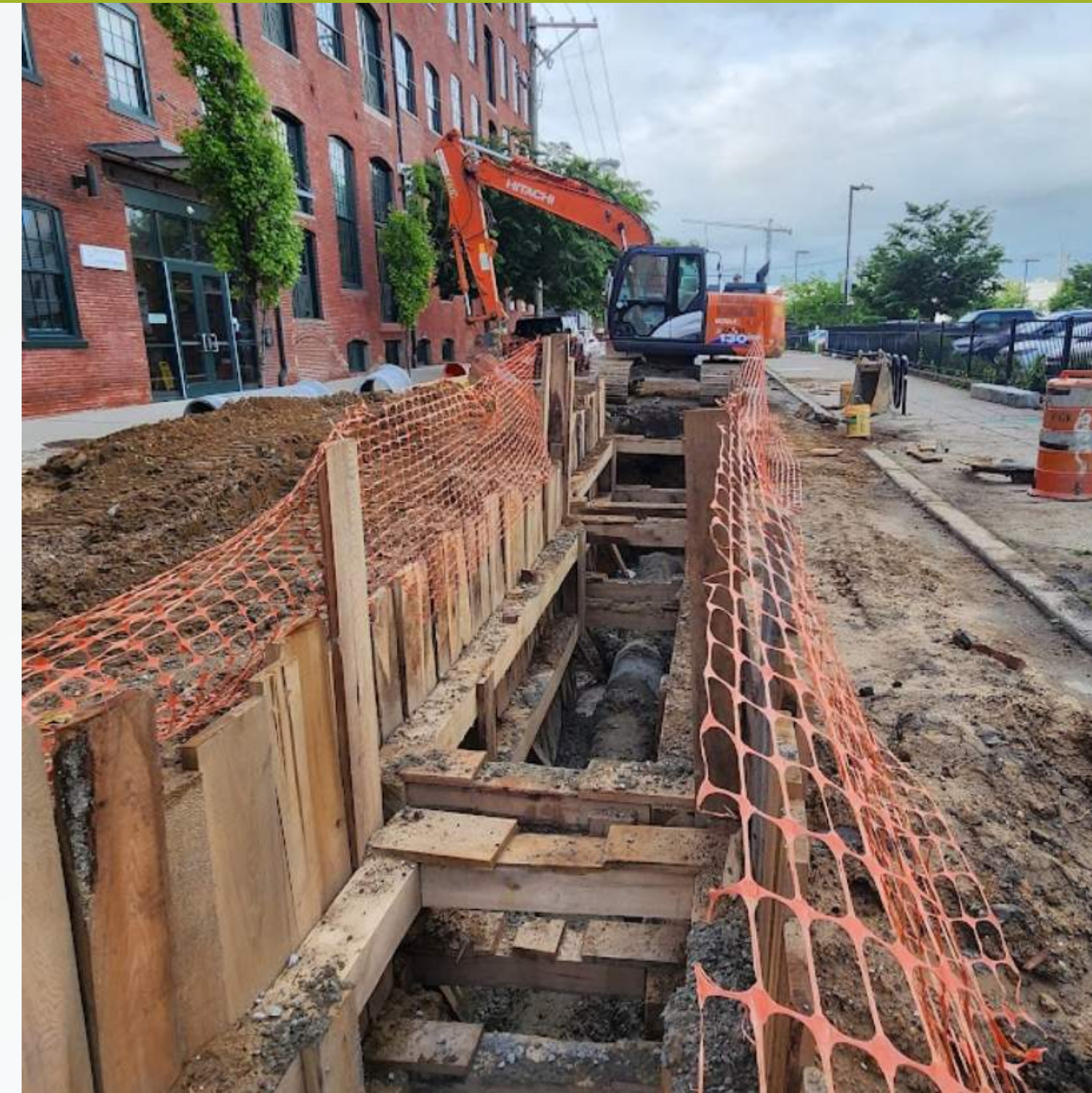
# PARTNERSHIP WITH THE PHILADELPHIA WATER DEPARTMENT

## *Background*

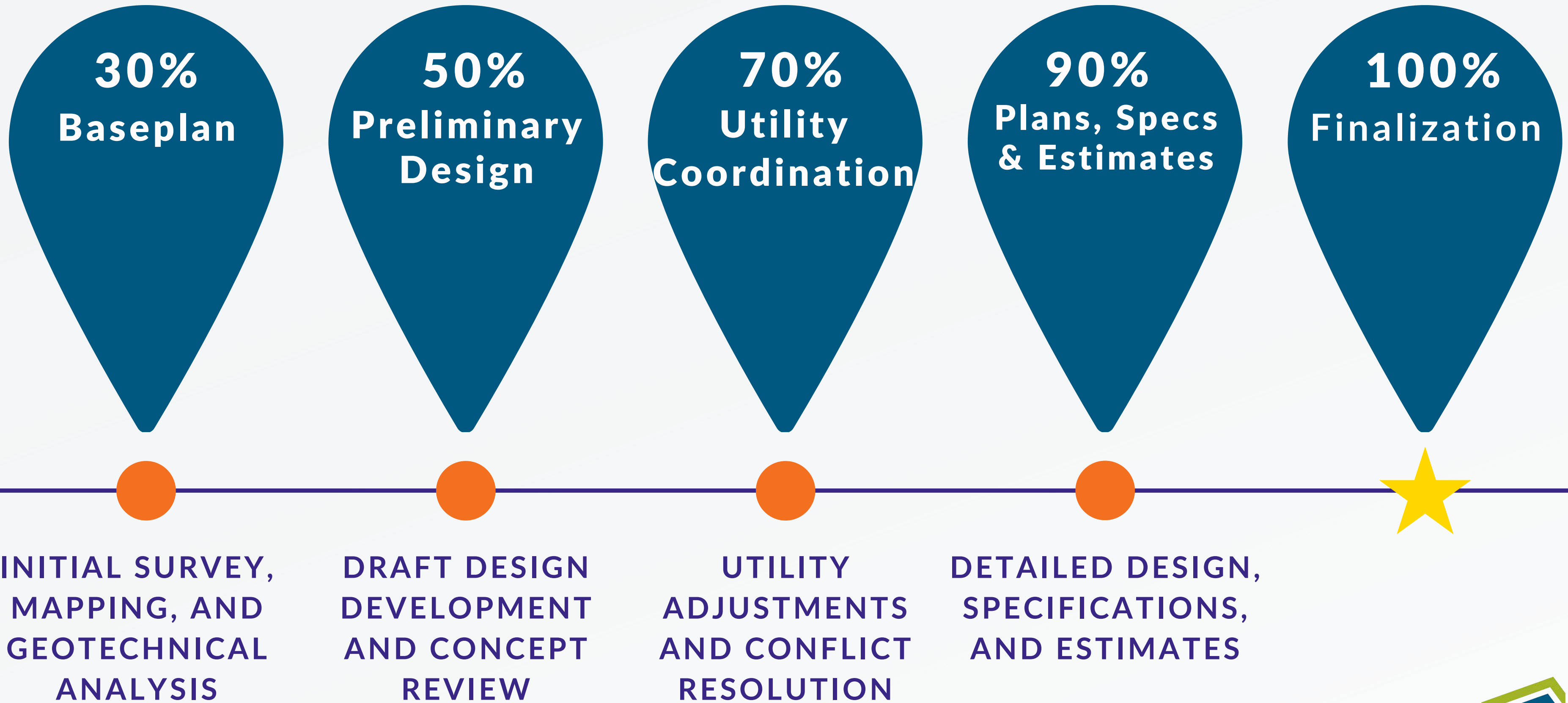
Since 2016, Rodriguez Consulting has collaborated with PWD on critical projects to enhance Philadelphia's water infrastructure and support future growth.

## *Key Project Types*

- Survey & Mapping
- Baseplan & PA OneCall Coordination
- Water Main Relay Design
- Sewer Reconstruction Design
- Green Stormwater Infrastructure Design
- ADA Compliance Design
- Roadway Grading Design



# PWD PROJECT SCOPE & TIMELINE





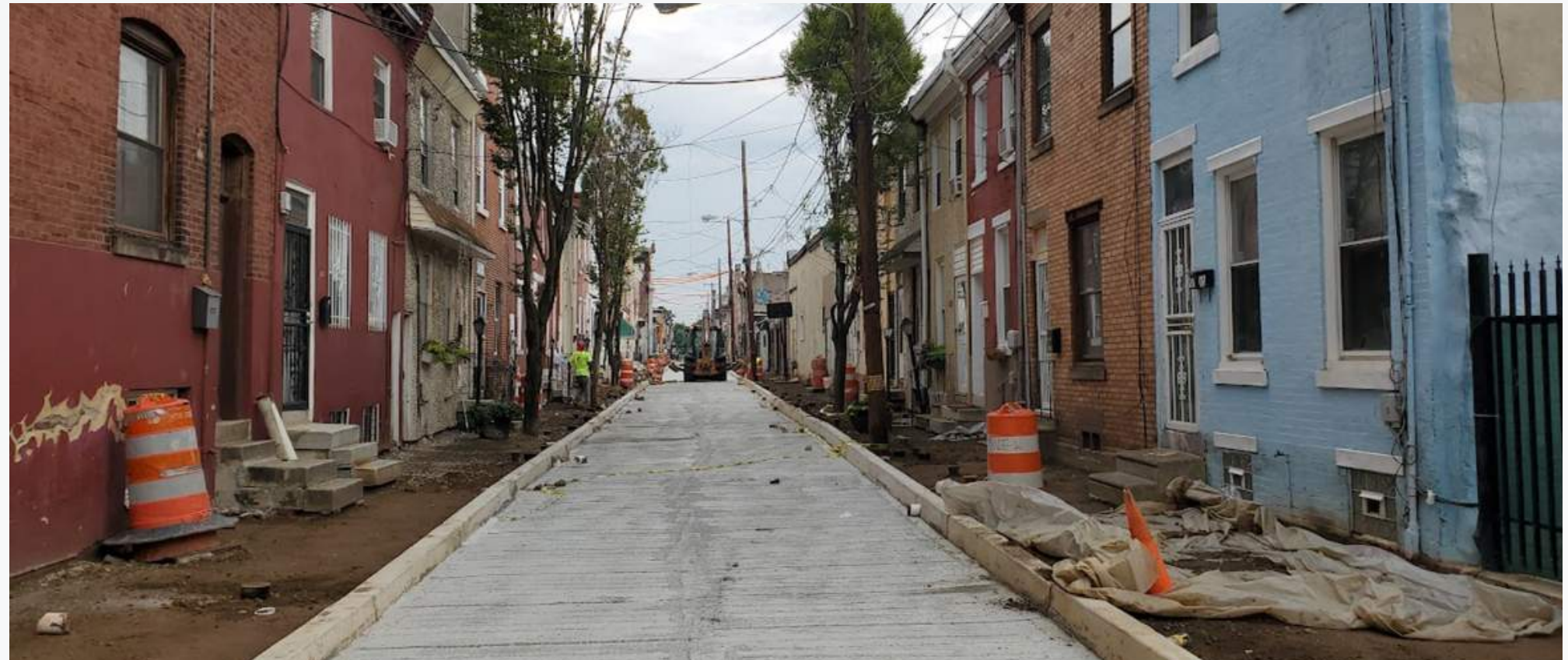
# LONG-TERM COMMUNITY IMPACT

## *Our Impact on Communities*

- **Decisions today shape the future of our neighborhoods.**
- **Every project directly affects local residents and infrastructure.**

## *Guiding Principles for Decision-Making*

- **PWD's Goals:** Align with city initiatives and objectives.
- **Resiliency:** Build durable and sustainable infrastructure.
- **Mobility:** Enhance accessibility and ease of movement.
- **Clean Water:** Prioritize water quality and resource protection.
- **Environmental Impacts:** Minimize ecological footprint.





# KEY INFRASTRUCTURE BENEFITS



## RELIABLE WATER SUPPLY

New water mains  
reduce service  
interruptions.



## OVERFLOW PREVENTION

Upgraded sewers  
minimize flooding  
risks.



## MINIMIZED DISRUPTIONS

Least-destructive  
methods maintain  
daily routines.



## SUSTAINABILITY

Long-lasting  
solutions for future  
generations.



## MOBILITY

ADA-compliant  
designs create  
inclusive  
neighborhoods.

# RODRIGUEZ INFRASTRUCTURE DESIGN

**323**  
ADA RAMPS

**14,686 LF**  
ROADWAY GRADING

**12.4 MILES**  
WATER MAIN

**5,252 LF**  
SEWER LINING

**1.68 AC-IN**  
GREENED-ACRES

**4.2 MILES**  
SEWER RECONSTRUCTION



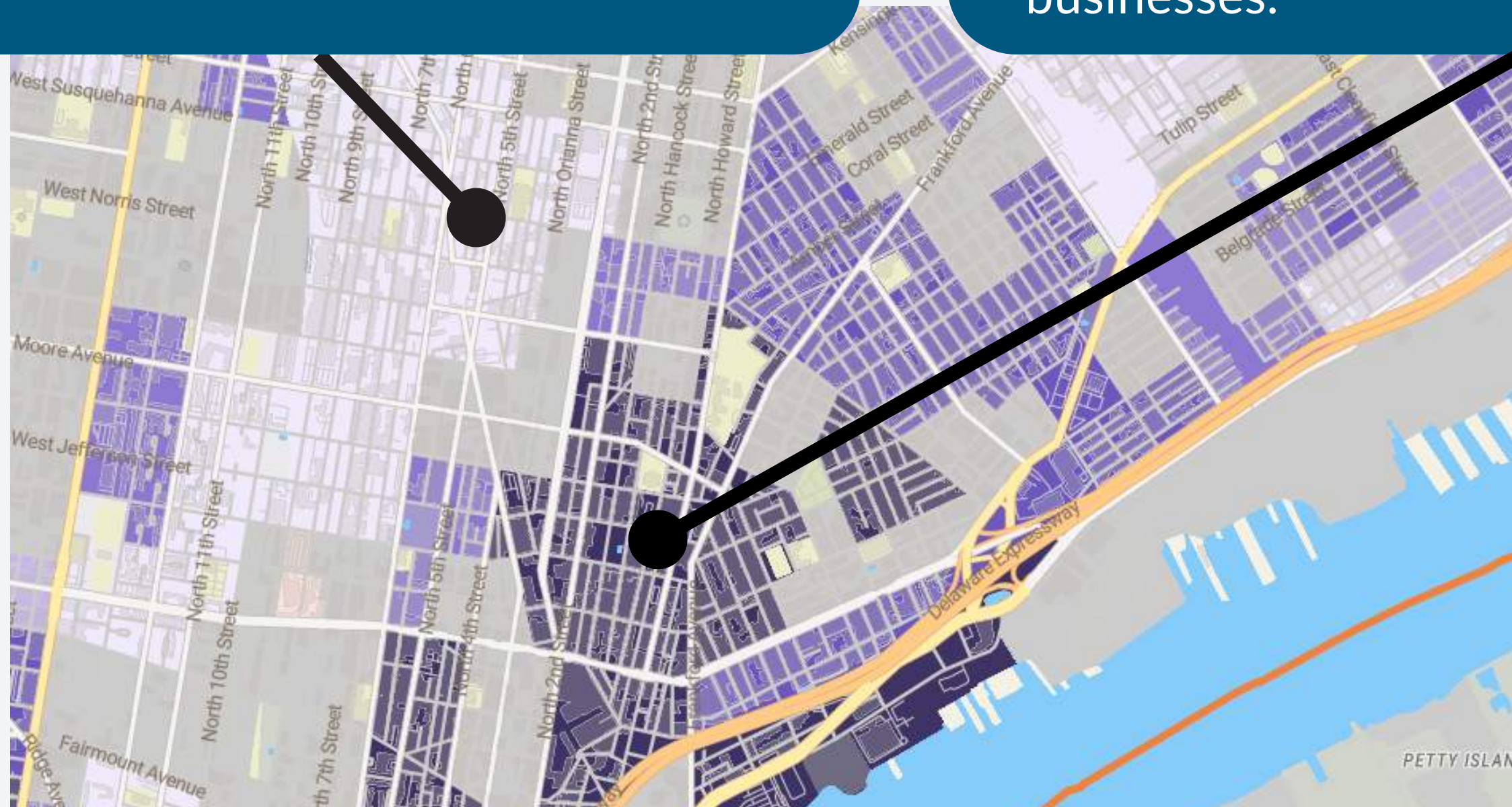
# TWO UNIQUE COMMUNITIES

## KENSINGTON

Despite Kensington being located directly next to Fishtown, this neighborhood has not had the transformation that its counterpart had. As pictured below, Kensington's typical household earns less than \$55,000 a year.

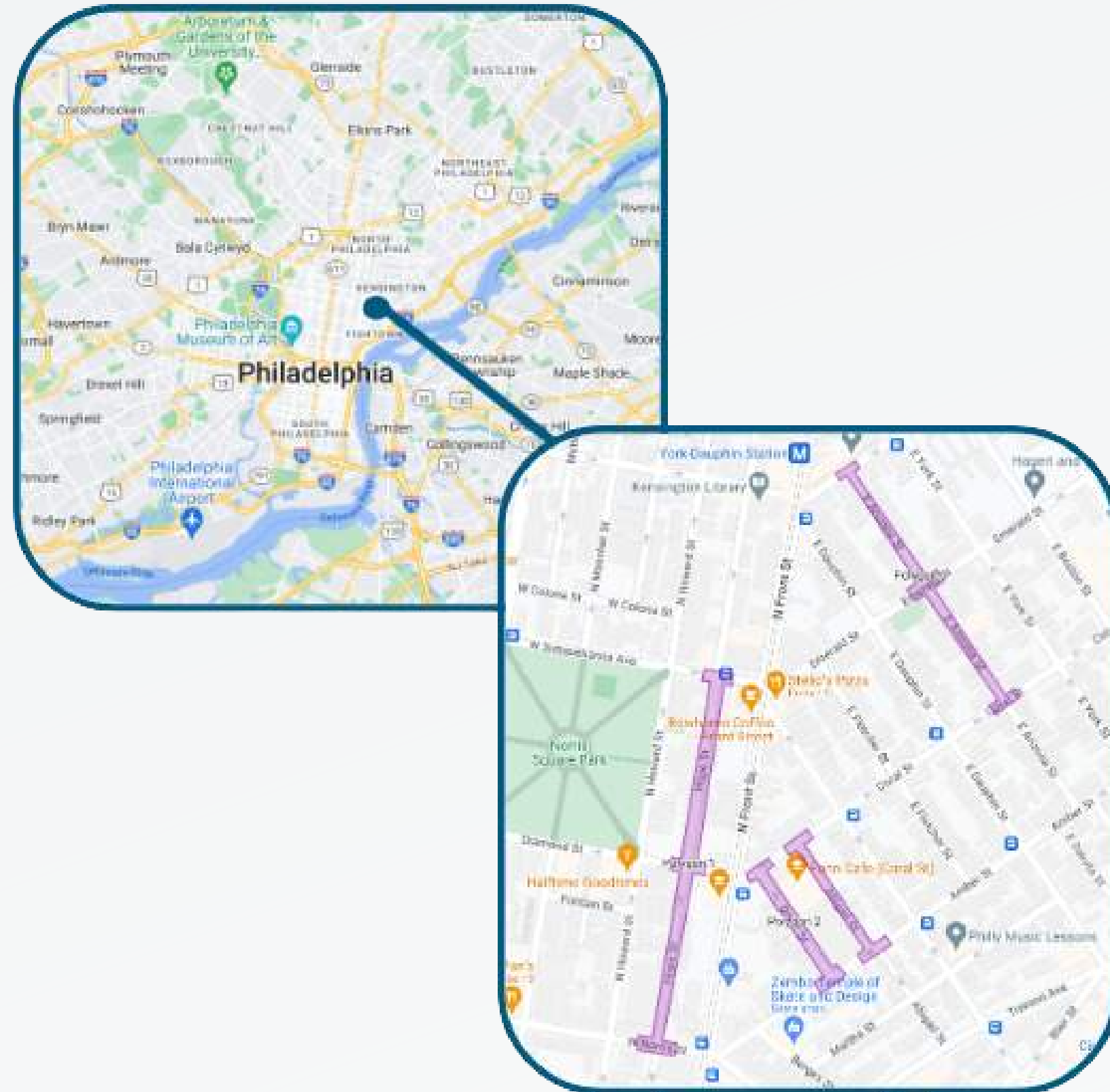
## FISHTOWN

Populated by a large amount of young professionals, Fishtown's typical household earns over \$150,000 a year. In recent years, Fishtown has transformed into a hub for young residents due to its increase in businesses.



**Data Source: PolicyMap**  
(<https://www.policymap.com/>). Census block data for Fishtown shows a Median Family Income of \$158,295, while the census block data for Kensington shows a Median Family Income of \$52,833.

# THE S-41139-RD PROJECT: BACKGROUND



## Project Scope

- **Water Main Relay Design:**
  - 2,456 LF
- **Sewer Reconstruction Design:**
  - 2,413 LF
- **Roadway Grading Design:**
  - 2,275 LF
- **ADA Ramp Design:**
  - 23 ADA Ramps



# THE S-41139-RD PROJECT: COMMUNITY IMPACT

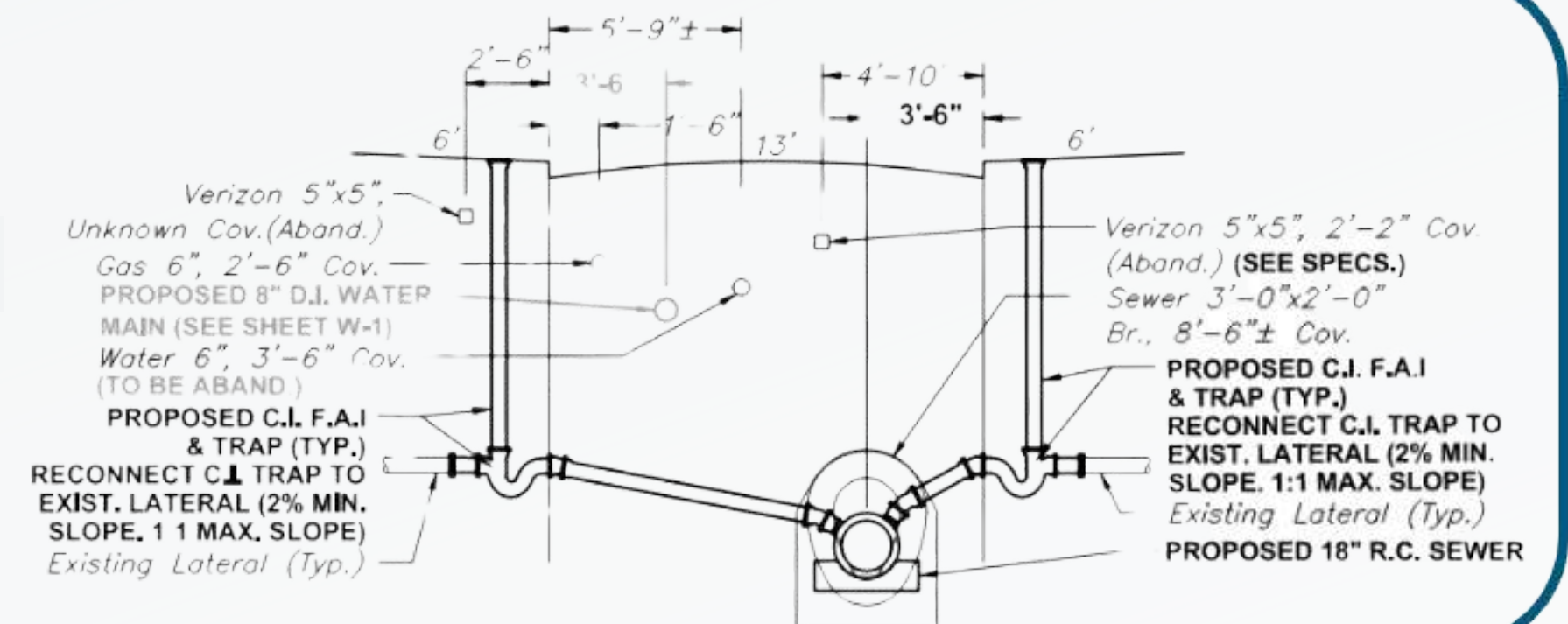
## Potential Impacts

- Abandoned utilities
- PGW Mains to be Relocated
- PECO infrastructure
- ADA Curb Ramps
- SEPTA Route Impacts

## Planned Improvements

- Full-width curb and sidewalk replacement along Hope Street
- Full-depth subbase and asphalt paving along Hope Street
- Compliant ADA Curb ramps
- New sewer laterals, fresh air inlets, and Cast Iron trap

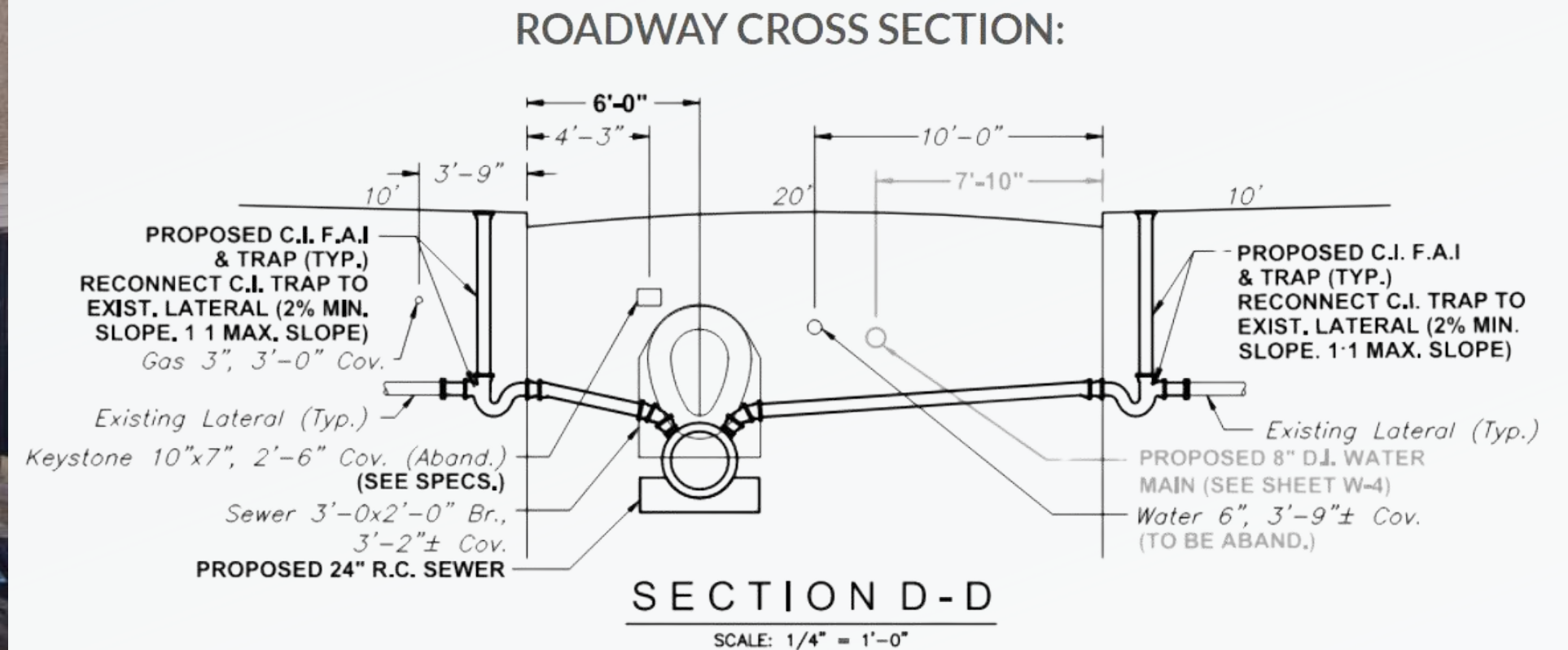
## HOPE STREET





# THE S-41139-RD PROJECT: ROADWAY CROSS SECTION

## DREER STREET





# PROJECT SETBACKS



One of the challenges faced during this project's design phase was the land development pace in the area. Shortly after we began the design phase of the project, a developer began new construction on the same block as our project.



The new development introduced new streetscape and utilities in the right-of-way leading us to revisit our design for this block.

## ABIGAIL STREET

2019



2023



# PROJECT SOLUTIONS



## SURVEY & DOCUMENTATION

Rodriguez used geospatial technology and conducted a supplemental survey along Abigail Street to capture the latest site data.



## COORDINATION WITH PUBLIC UTILITIES

A PA-1 Call request ensured that our design aligned with the latest public utility infrastructure updates.



## DESIGN INTEGRATION

Updated survey data in AutoCAD enabled efficient infrastructure design, including ADA ramps compliant with Philadelphia Streets Department guidelines.



## CITY PLAN ADJUSTMENTS

A new curb radius was established at the SEC of Abigail and Coral Streets per the City Plan.



# THE S-41139-RD PROJECT: ROADWAY GRADING





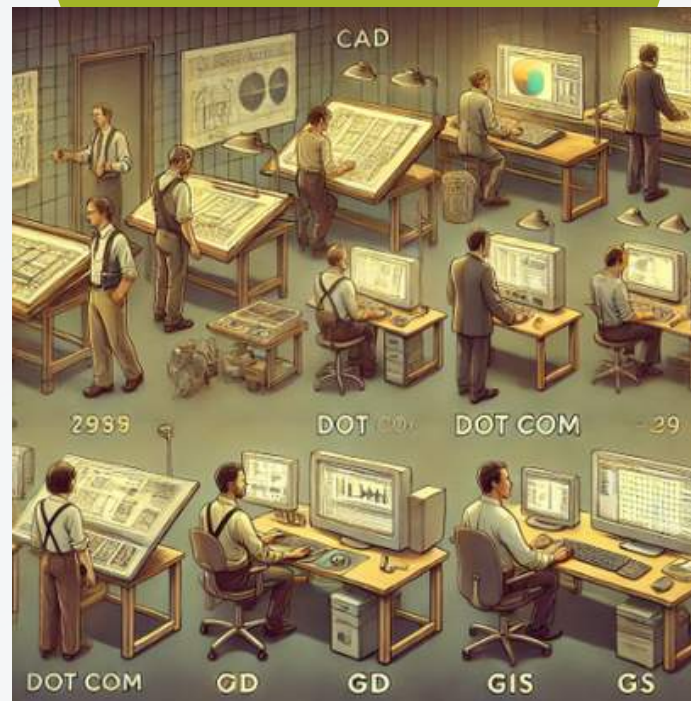
# From Drafting Desks to Digital Design: The Story of Rodriguez University

1991  
WORKPLACE



Draftsmen were essential to engineering teams, handling manual design tasks.

2000's  
WORKPLACE



The rise of AutoCAD and PCs shifted drafting to civil engineers themselves.

2004



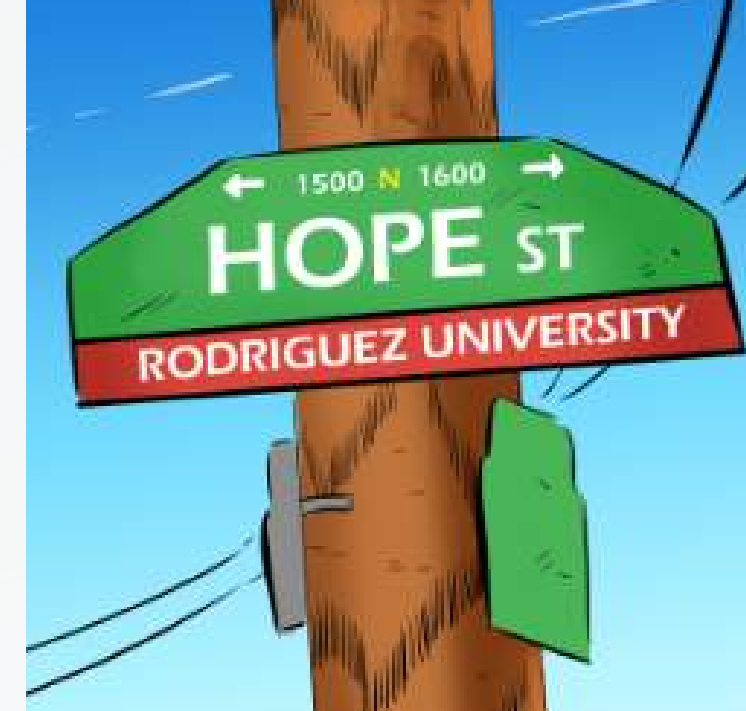
Lou crossed paths with Hopeworks, an organization training underserved individuals in Camden in GIS

2015



PWD contract highlights the struggle to find skilled drafters and surveyors in a changing industry.

2018



Reconnection with Hopeworks sparks the creation of Rodriguez University.



# 2020



## START OF RODRIGUEZ U

With funding from Spring Point Partners and support from Hopeworks and PowerCorp PHL, Rodriguez University started its first cohort in 2020.



# Uncovering Your Superhero Potential in Infrastructure



*Engineering Aides: The Unsung Heroes Building Our Communities*



# Choosing Your Path: The Diverse Roads of an Engineering Aide



*Your knowledge, skills, and relationships can pave the way to a fulfilling career—no degree required!*



# Rodriguez U Curriculum Overview

## CURRICULUM

### Infrastructure Fundamentals:

- History of Philadelphia Infrastructure
- Utility Coordination/PA One Call

### Technology & Software Skills:

- Google Workspace Proficiency
- CAD Drafting, GIS, and 3D Modeling

### Surveying & Plan Interpretation:

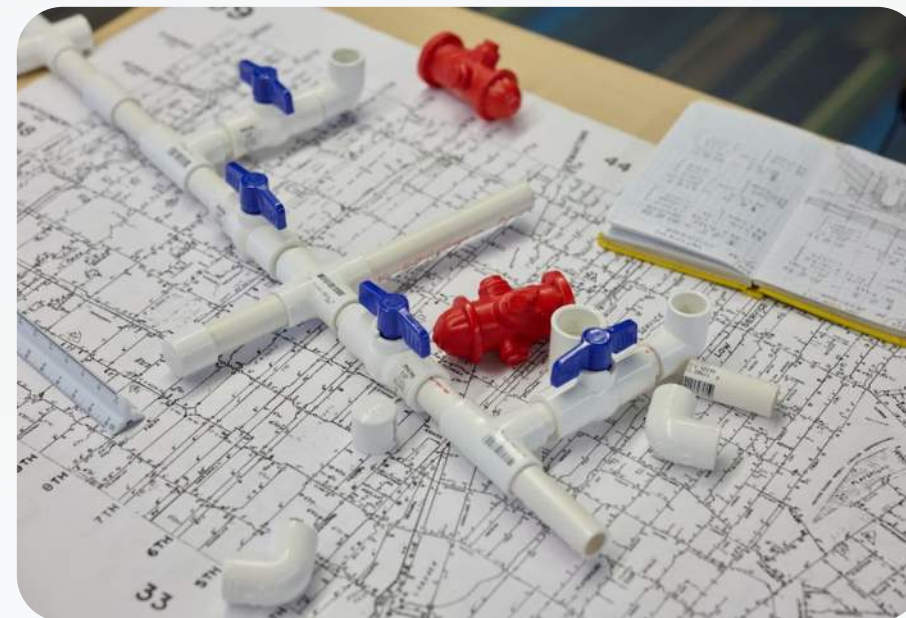
- Route & Topographic Surveys
- Philadelphia City Plans

### Construction Plan Analysis:

- Interpreting Water, Sewer & Stormwater Plans
- Interpreting Gas, Electric, & Telecom Plans

### Civic Affairs & Policy Engagement:

- Understanding the Role of Local Government in Infrastructure
- Community Impact of Public Infrastructure Projects





# Building Pathways to Careers through Relationships



*Our strong relationships with the City of Philadelphia, industry partners, and community leaders have opened doors for our graduates to secure immediate job opportunities in infrastructure.*





# Sustained Success and Growing Support



Cohort 1



Cohort 2



Cohort 3



Cohort 4



Cohort 5

Rodriguez University's success in 2020 led to ongoing support from key partners. Microsoft, via PowerCorps, funded the program in 2021 and 2022. In 2024, William Penn Partners, via Hopeworks, renewed their support, followed by the City of Philadelphia's grant for the current cohort.



# Faces of Success: RU Graduates



These faces represent the future of infrastructure, made possible through the skills and opportunities provided by Rodriguez University.



# QUESTIONS



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