

Tarheel Army Missile Plant – a New Future



Western Electric Company – Tarheel Army Missile Plant
AIA-SDAT

Burlington, NC
September 21, 2018





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1928

A.M. Johnson Rayon Company

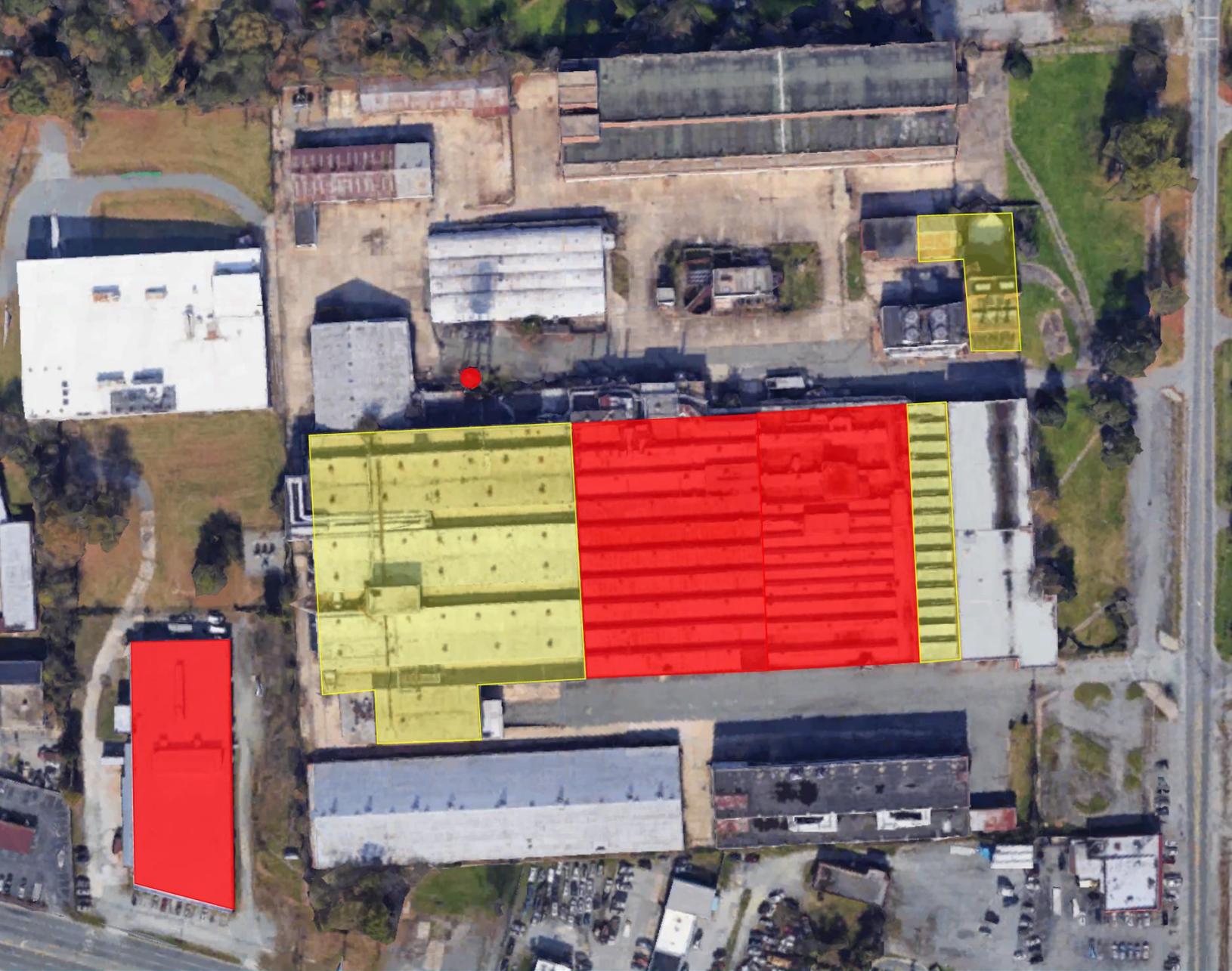
- Building 2: 50,000 SF



1930

A.M. Johnson Rayon Company

- Building 3: 60,000 SF
- Full-Knit Hosiery Mill (Building 24): 35,000 SF



1943

Fairchild Engine and Airplane Corporation

- Building 1: 15,000 SF
- Building 4: 95,000 SF



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1951-52

Western Electric Company

- Building 12: 20,000 SF
- Building 13: 50,000 SF
- Building 14; 50,000 SF
- Building 17: 15,000SF



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1959

Western Electric Company

- Building 7: 10,000 SF
- Building 16: 100,000 SF



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1970s

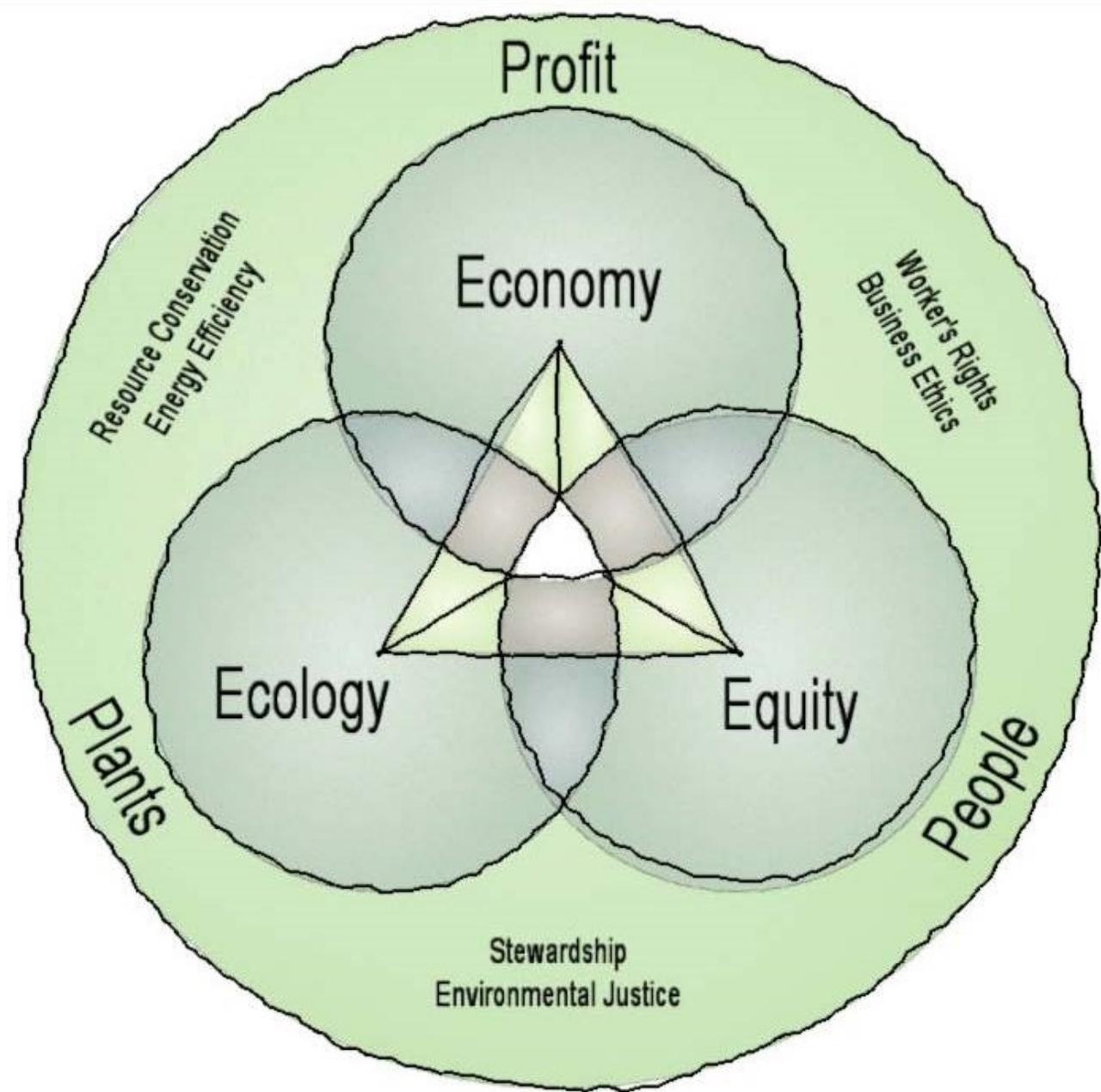
Western Electric Company

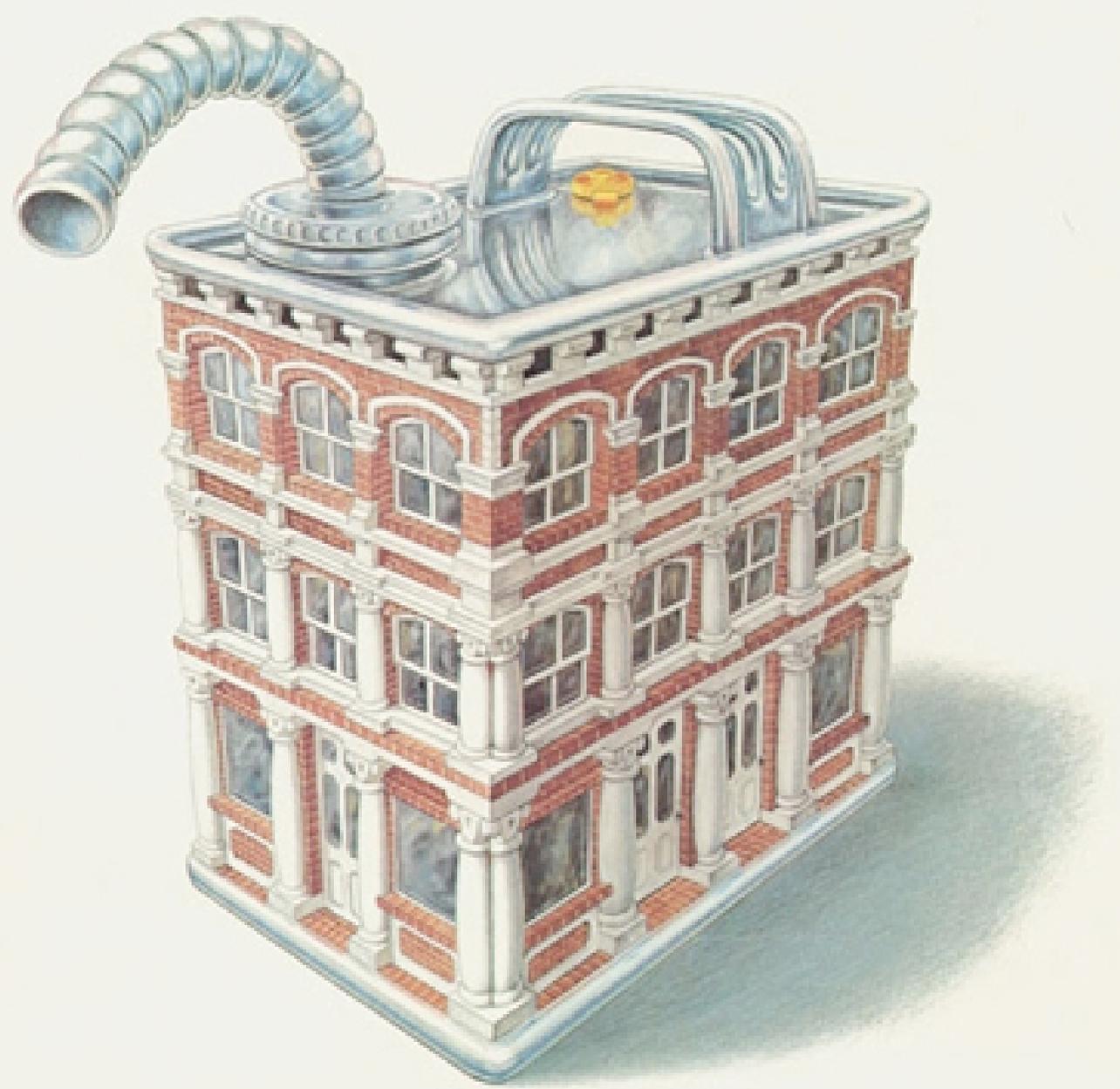
- Building 1A: 55,000 SF
- Building 22: 8,000 SF
- AT&T Building: 100,000 SF



Today

- 525,000 Total SF on site
- 135,000 Total SF adjacent



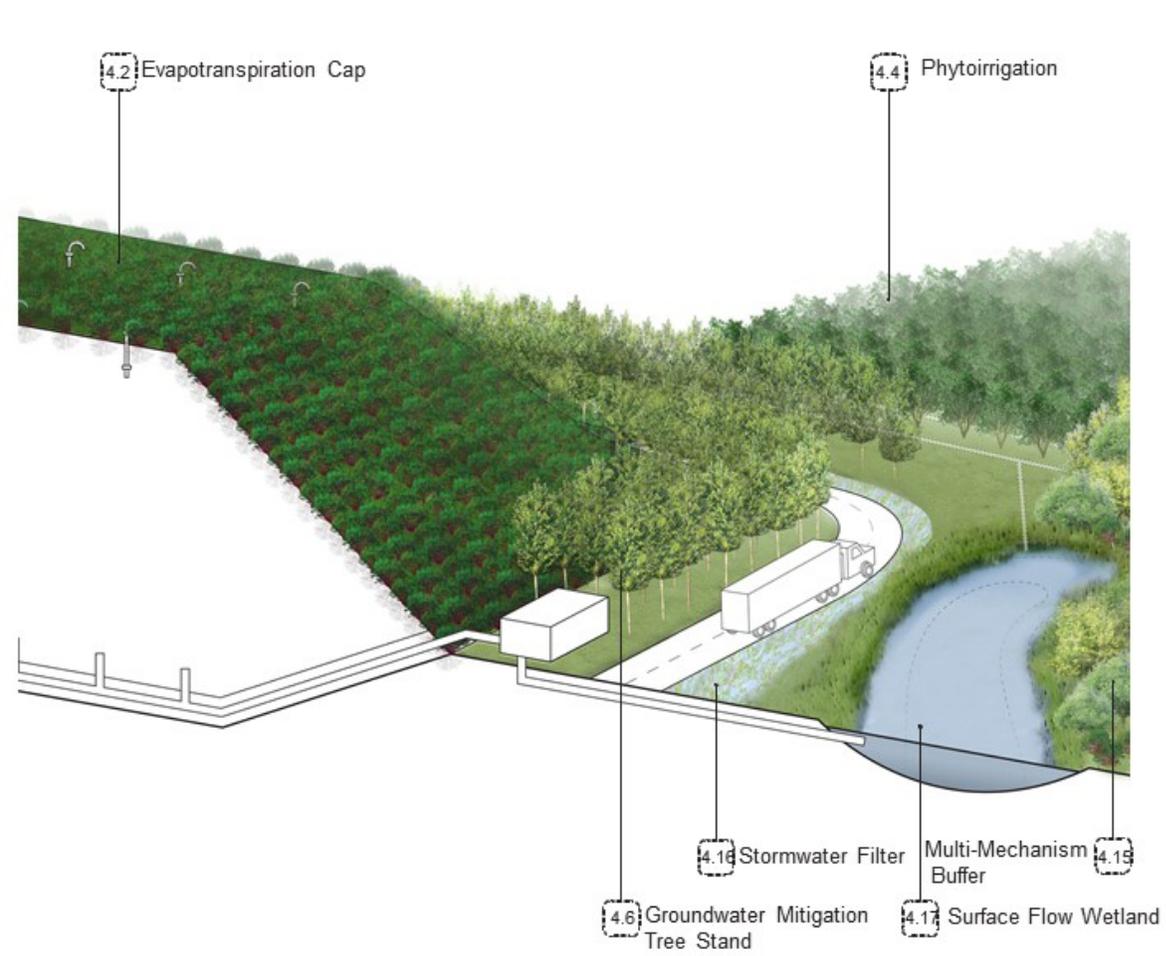




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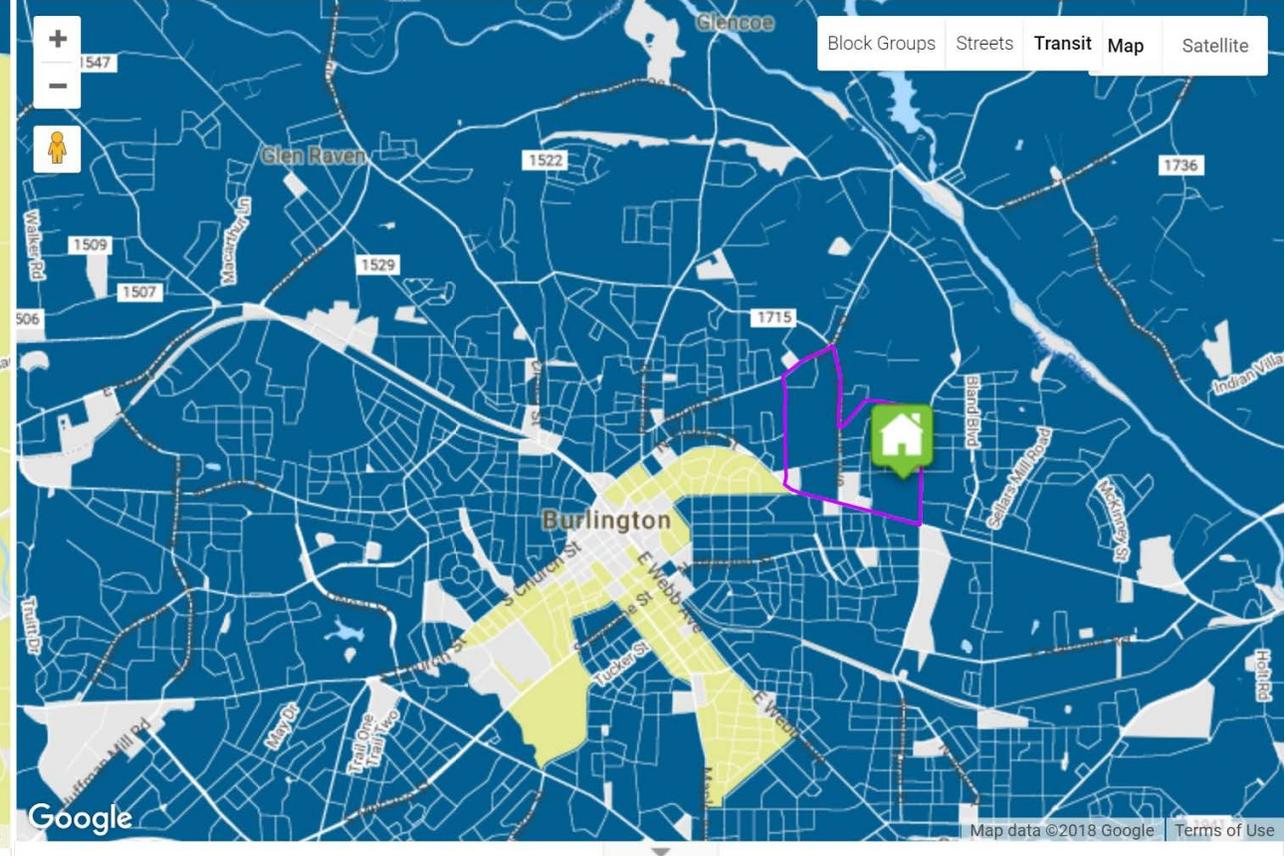
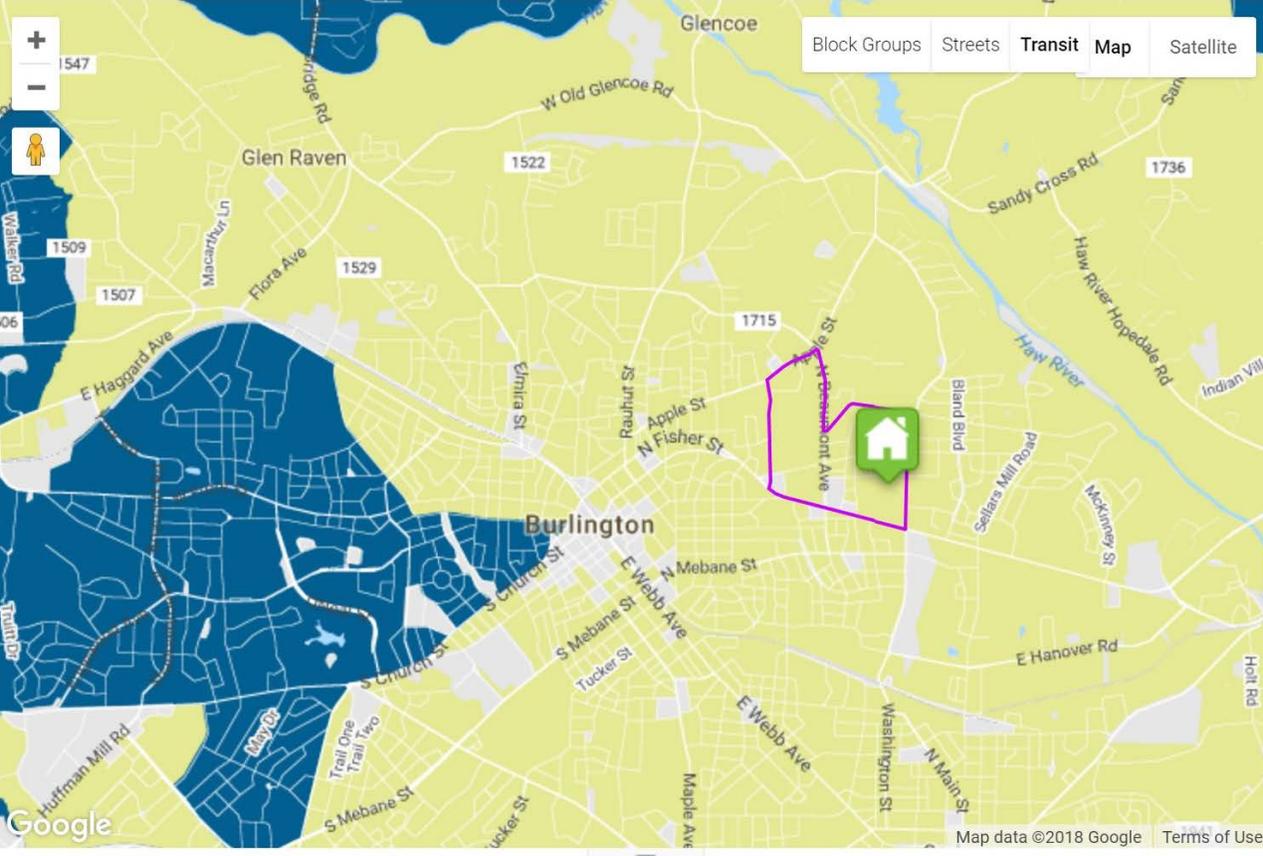


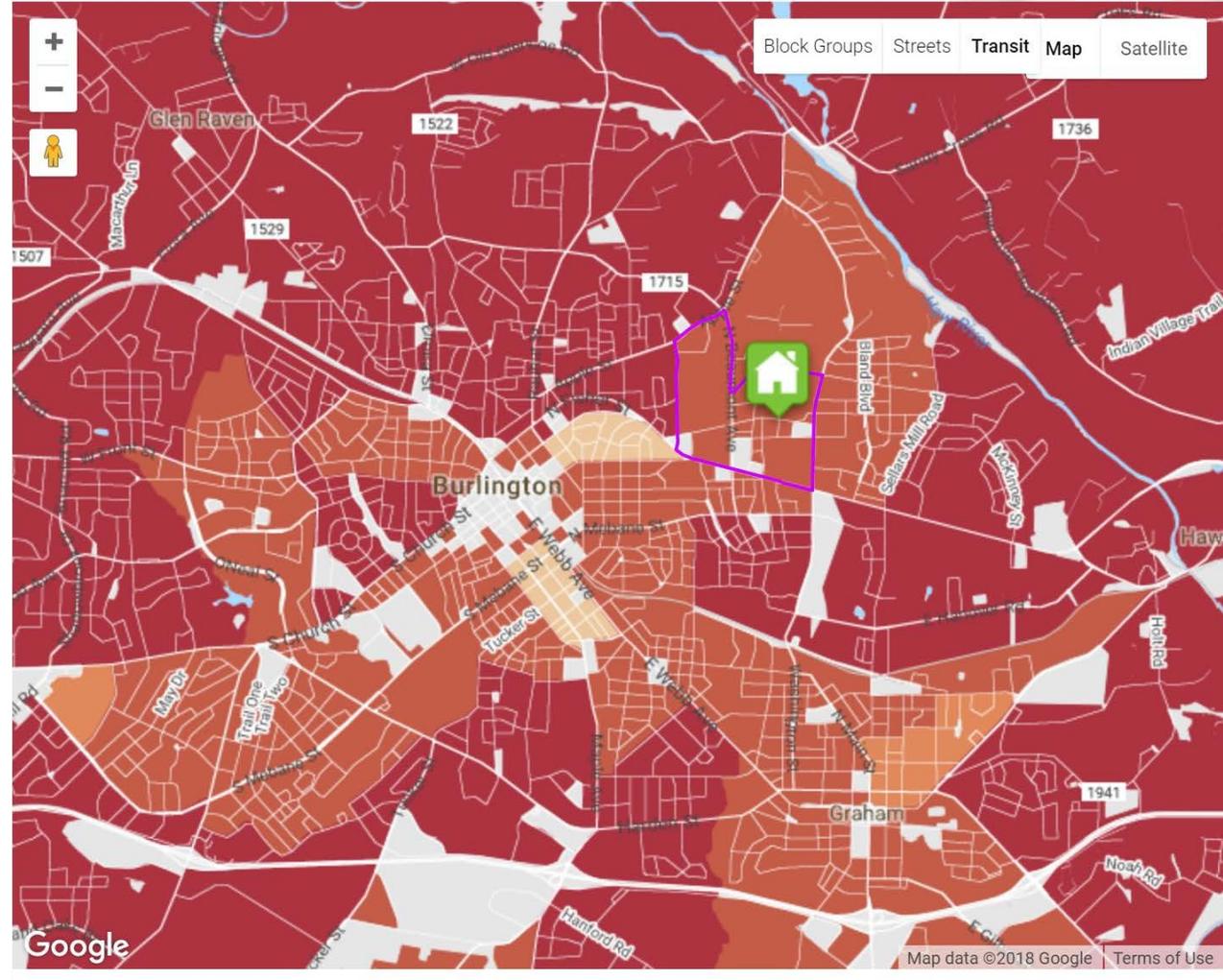
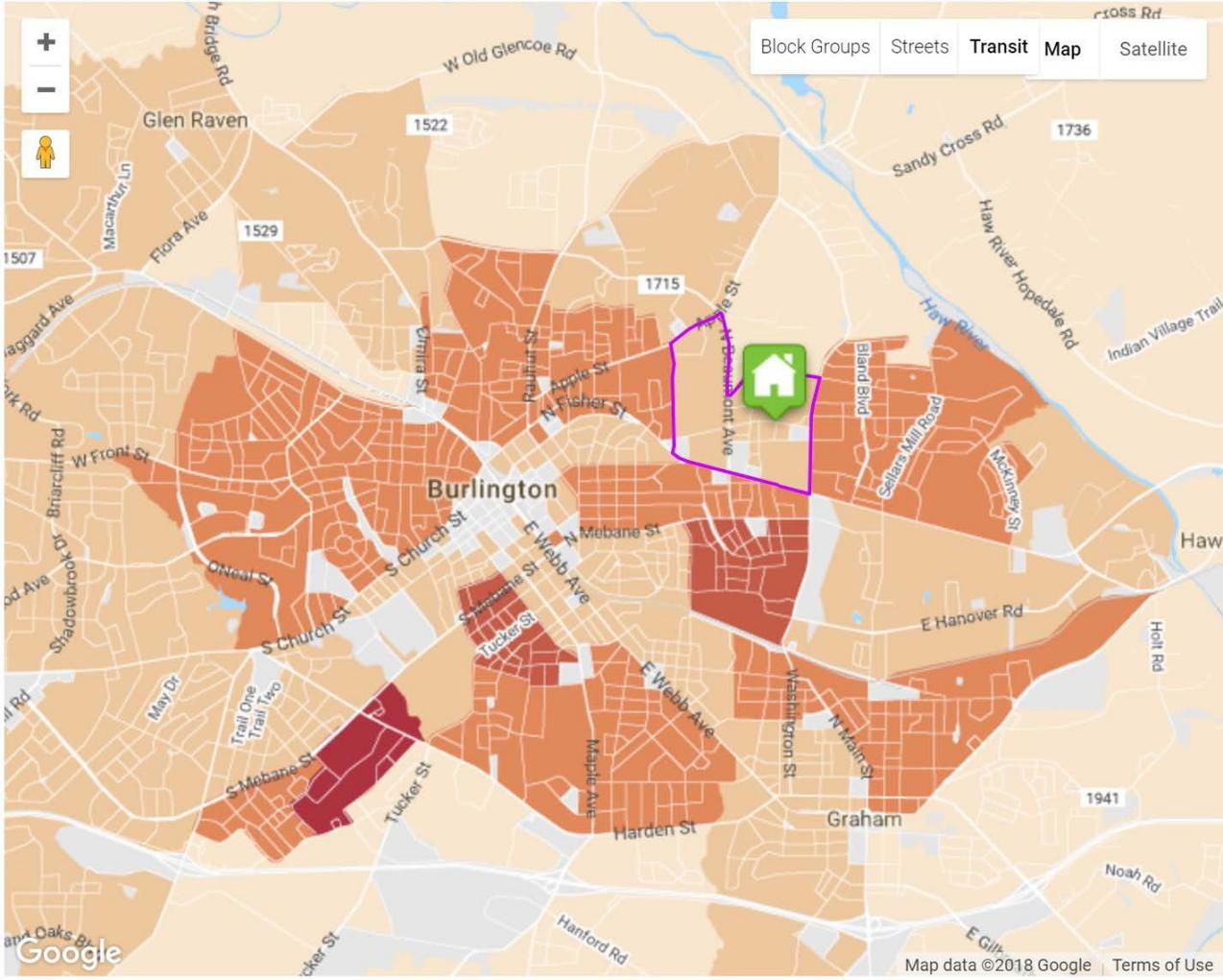
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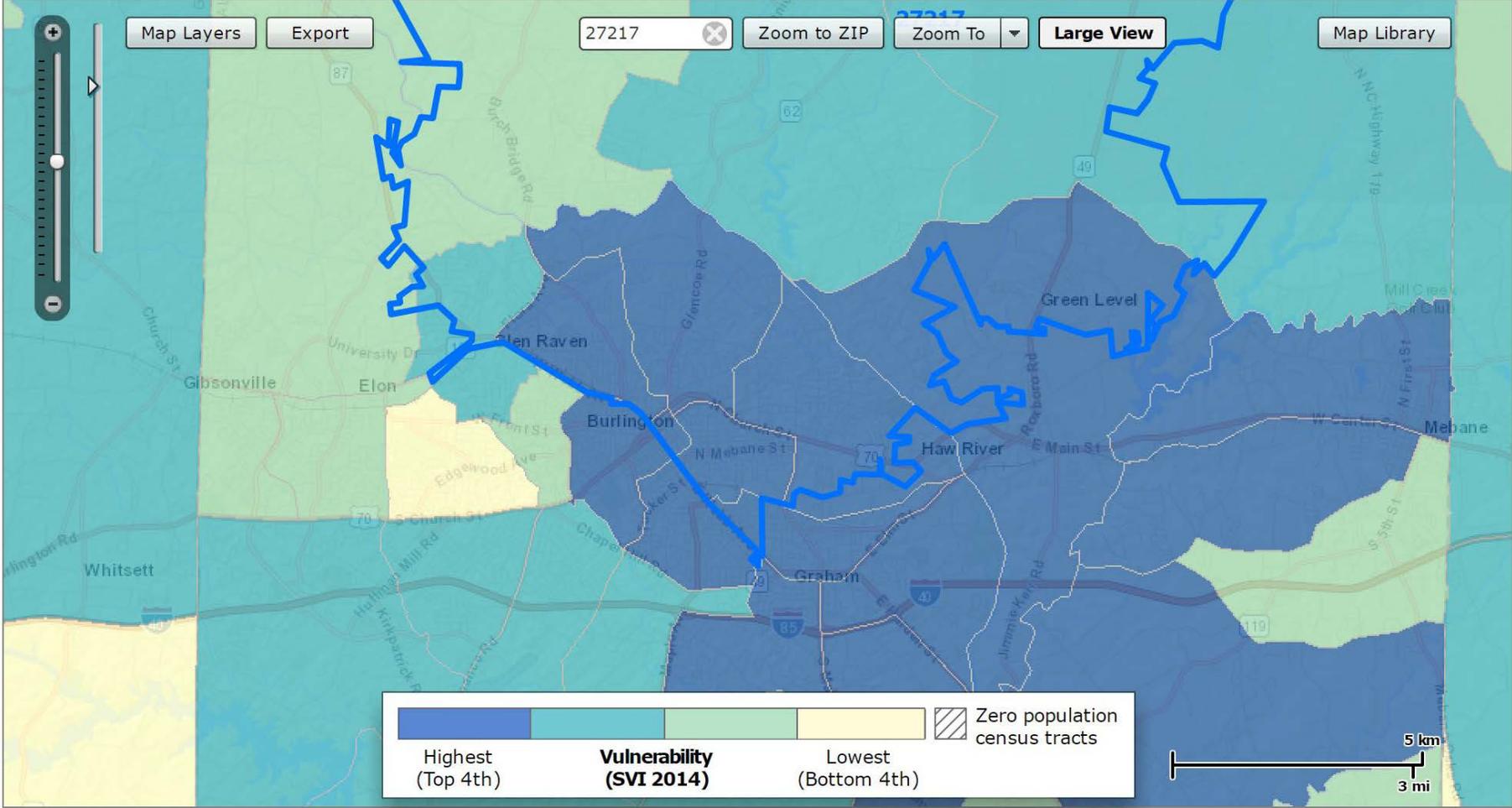
Burlington, NC
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State: All States | County: | Theme: Overall Vulnerability | SVI Year: SVI 2014 | [Go!](#) [Reset map](#)

Now Showing: **Overall Vulnerability** | All States
[Data Classified by All US Census Tracts excluding PR] **SVI 2014**



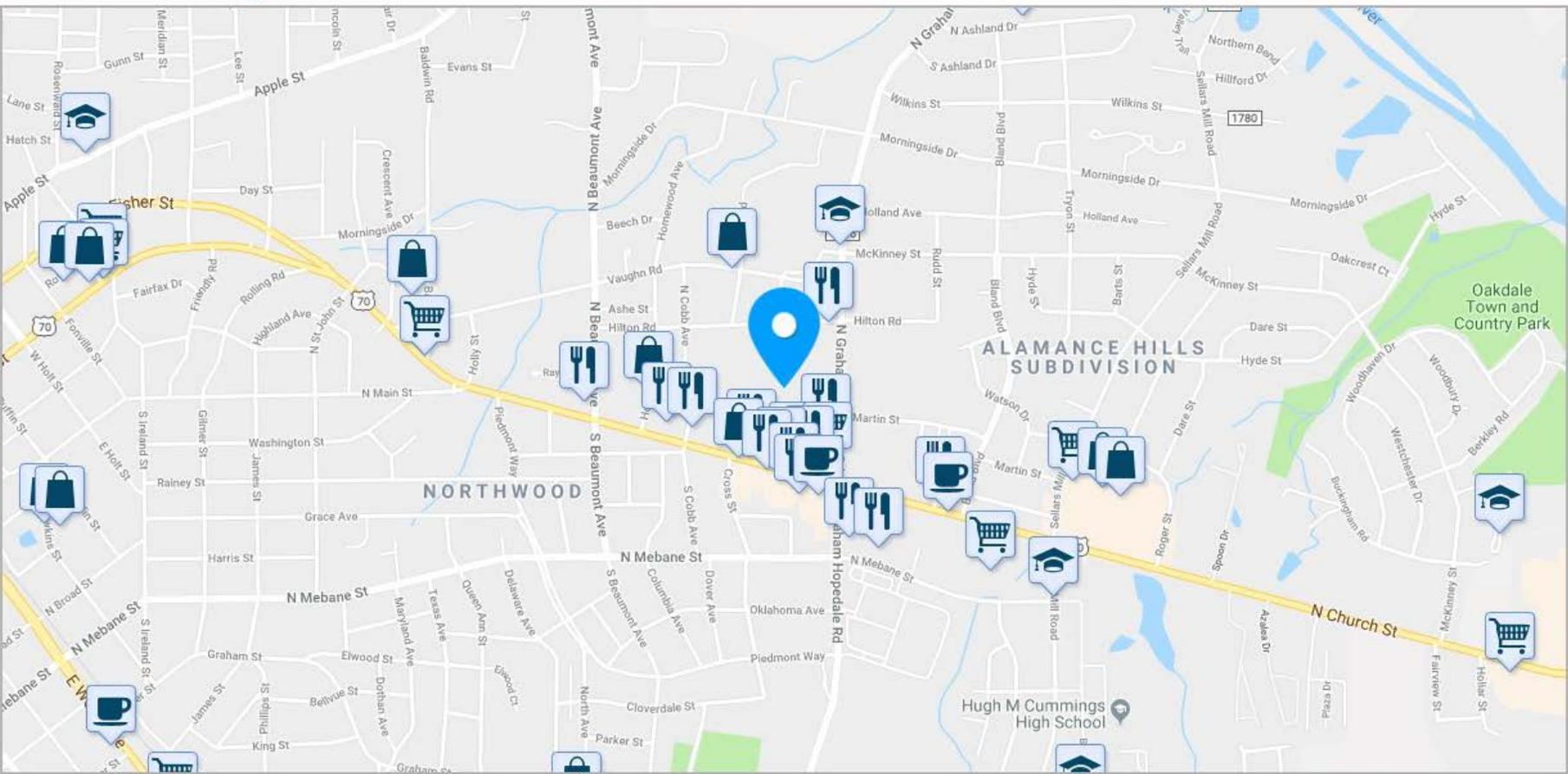
Walk Score
58

Somewhat Walkable

Some errands can be accomplished on foot.

About your score

Add scores to your site



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Commute Details

to Downtown Burlington

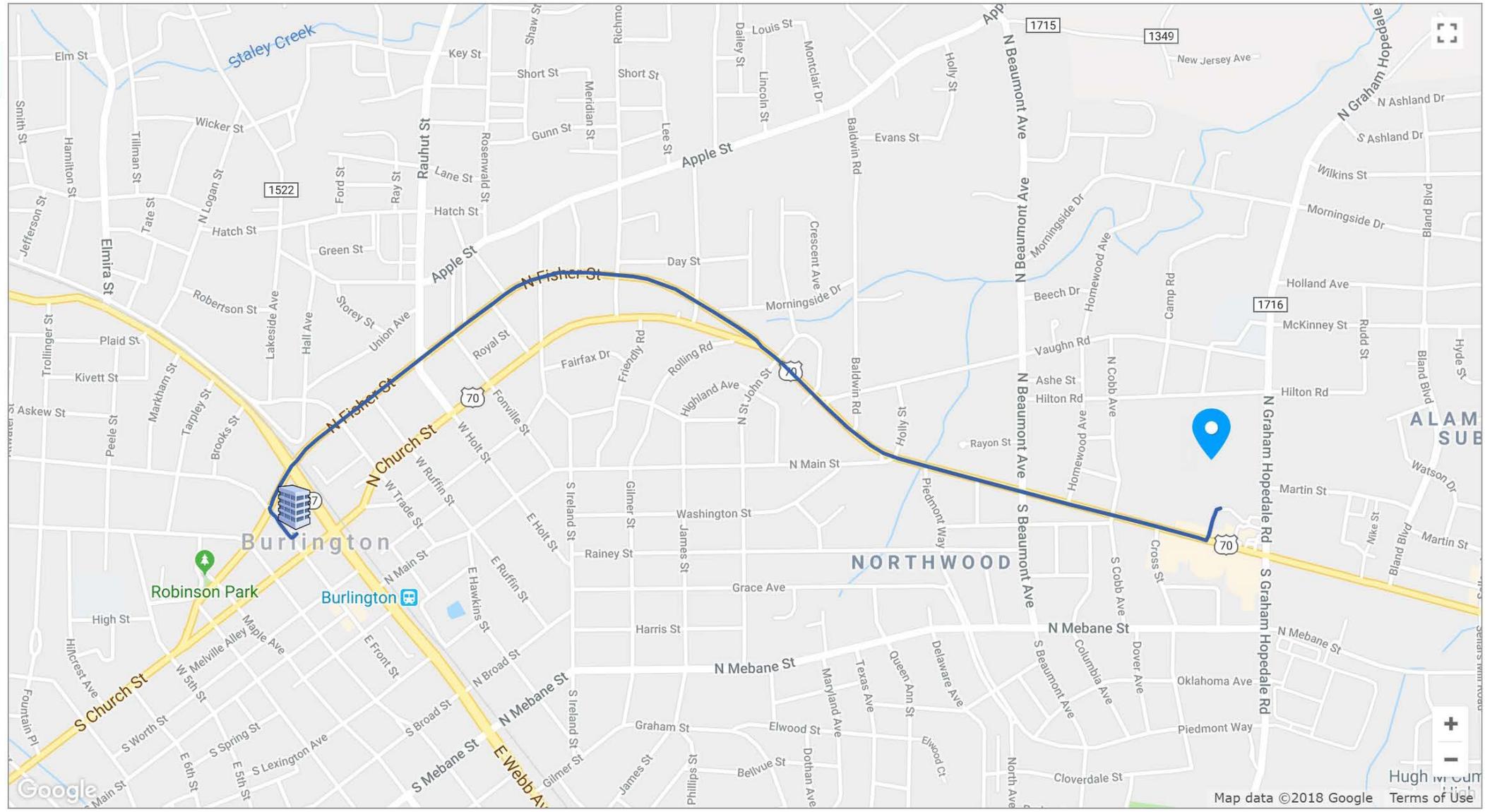
-  5 minutes (2.21 mi)
7 minutes during rush hour
-  53 minutes (6.49 mi)
-  40 minutes (1.96 mi)
-  14 minutes (2.29 mi)

Driving Costs

- \$ 66** per month
- 3** hours per month

Based on:

- **96** miles per month
- **\$.69** per mile [Learn more](#)



Who are the players and what are their roles?

- Community
- Government
- Non-Profits and Institutions
- Private Sector

“Brownfield” – Yes & No

Chris’ Definition -

An *underutilized* property that has either perceived or actual presence of contamination that inhibits its redevelopment.

Federal Definition:

With certain legal exclusions and additions, the term "brownfield site" means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

The Brownfields Site definition is found in Public Law 107-118 (H.R. 2869) - "Small Business Liability Relief and Brownfields Revitalization Act" signed into law January 11, 2002. "DEFINITION OF BROWNFIELD SITE- Section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601)

Prepare to be bored! Wait... this won't take long.

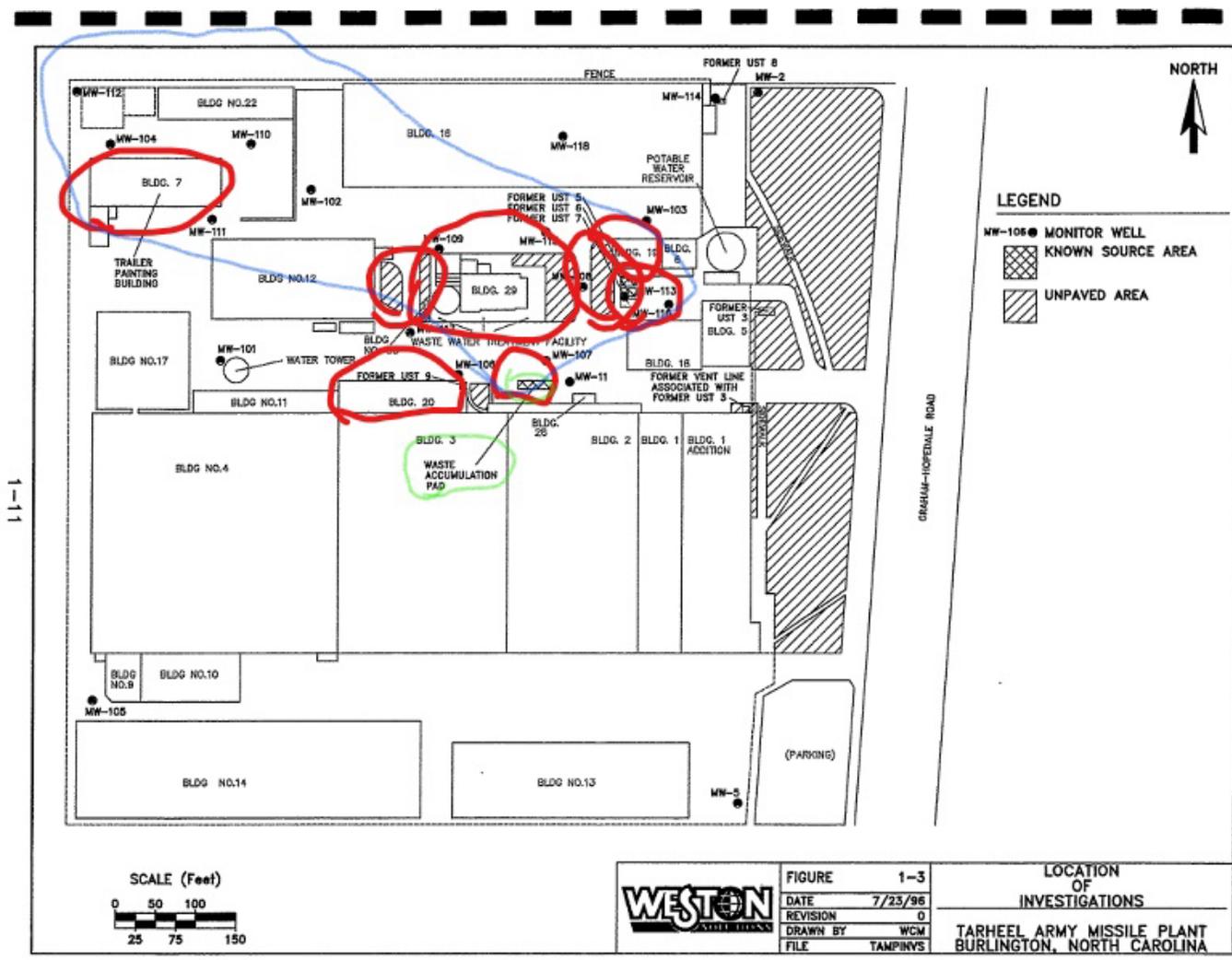
(B) EXCLUSIONS- The term "brownfield site" does not include-- (i) a facility that is the subject of a planned or ongoing removal action under this title; (ii) a facility that is listed on the National Priorities List or is proposed for listing; (iii) a facility that is the subject of a unilateral administrative order, a court order, an administrative order on consent or judicial consent decree that has been issued to or entered into by the parties under this Act; (iv) a facility that is the subject of a unilateral administrative order, a court order, an administrative order on consent or judicial consent decree that has been issued to or entered into by the parties, or a facility to which a permit has been issued by the United States or an authorized State under the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.), the Federal Water Pollution Control Act (33 U.S.C. 1321), the Toxic Substances Control Act (15 U.S.C. 2601 et seq.), or the Safe Drinking Water Act (42 U.S.C. 300f et seq.); (v) a facility that-- (I) is subject to corrective action under section 3004(u) or 3008(h) of the Solid Waste Disposal Act (42 U.S.C. 6924(u), 6928(h)); and (II) to which a corrective action permit or order has been issued or modified to require the implementation of corrective measures; (vi) a land disposal unit with respect to which-- (I) a closure notification under subtitle C of the Solid Waste Disposal Act (42 U.S.C. 6921 et seq.) has been submitted; and (II) closure requirements have been specified in a closure plan or permit; (vii) a facility that is subject to the jurisdiction, custody, or control of a department, agency, or instrumentality of the United States, except for land held in trust by the United States for an Indian tribe; (viii) a portion of a facility-- (I) at which there has been a release of polychlorinated biphenyls; and (II) that is subject to remediation under the Toxic Substances Control Act (15 U.S.C. 2601 et seq.); or (ix) a portion of a facility, for which portion, assistance for response activity has been obtained under subtitle I of the Solid Waste Disposal Act (42 U.S.C. 6991 et seq.) from the Leaking Underground Storage Tank Trust Fund established under section 9508 of the Internal Revenue Code of 1986. (C) SITE-BY-SITE DETERMINATIONS- Notwithstanding subparagraph (B) and on a site-by-site basis, the President may authorize financial assistance under section 104(k) to an eligible entity at a site included in clause (i), (iv), (v), (vi), (viii), or (ix) of subparagraph (B) if the President finds that financial assistance will protect human health and the environment, and either promote economic development or enable the creation of, preservation of, or addition to parks, greenways, undeveloped property, other recreational property, or other property used for nonprofit purposes. (D) ADDITIONAL AREAS- For the purposes of section 104(k), the term "brownfield site" includes a site that-- (i) meets the definition of "brownfield site" under subparagraphs (A) through (C); and (ii)(I) is contaminated by a controlled substance (as defined in section 102 of the Controlled Substances Act (21 U.S.C. 802)); (II)(aa) is contaminated by petroleum or a petroleum product excluded from the definition of "hazardous substance" under section 101; and bb) is a site determined by the Administrator or the State, as appropriate, to be (AA) of relatively low risk, as compared with other petroleum-only sites in the State; and (BB) a site for which there is no viable responsible party and which will be assessed, investigated, or cleaned up by a person that is not potentially liable for cleaning up the site; and (cc) is not subject to any order issued under section 9003(h) of the Solid Waste Disposal Act (42 U.S.C. 6991b(h)); or (III) is mine-scarred land."

So in the end – what's the site's situation?

- Yes, it is contaminated.
- No, this is not uncommon.
- Yes, it can be redeveloped.
- Yes, some parts of site more difficult to develop than others.
- Yes, the Army and the state are working on a solution for the contamination issues, and they are now engaging the community in the process.
- Yes, we have seen worse sites, and have seen them be redeveloped.
- No, its not easy, but we have taken this into consideration in progression of site redevelopment



- Sources of groundwater contamination identified in some areas on site in 1990s-2000s. :



Remediation & Further Investigation Needed

- In the 1988 reports no off site contamination was presumed, and additional site assessment was discouraged later in mid 1990s.
 - Record indicates desire to end investigation – presumably to not prevent redevelopment. Not uncommon sentiment before the 1990s and brownfield understanding.

TO: File
FROM: Priscilla Tyres 
DATE: April 19, 1994
SUBJECT: Conversation with Representative Fred Bowman

On Monday, April 18, 1994, Representative Bowman returned my call. I had called to inform him of the May 14, 1994 meeting with EPA, NC Superfund Section, AT&T and Redstone Arsenal to discuss the Tarheel Army Missile Plant (TAMP). Representative Bowman has expressed an interest in the site previously, and is currently receiving from this office bimonthly updates of the progress.

Representative Bowman informed me that he considered the ongoing investigation efforts at the site to equate to "fighting windmills". His memory indicates that a dry cleaning establishment was in close proximity to the facility, and that disposal practices included dumping waste out the rear of the facility. He requested the NC Superfund Section to "put pressure" on the Federal government to cease investigation efforts, which in his opinion are a waste of tax payers' money.

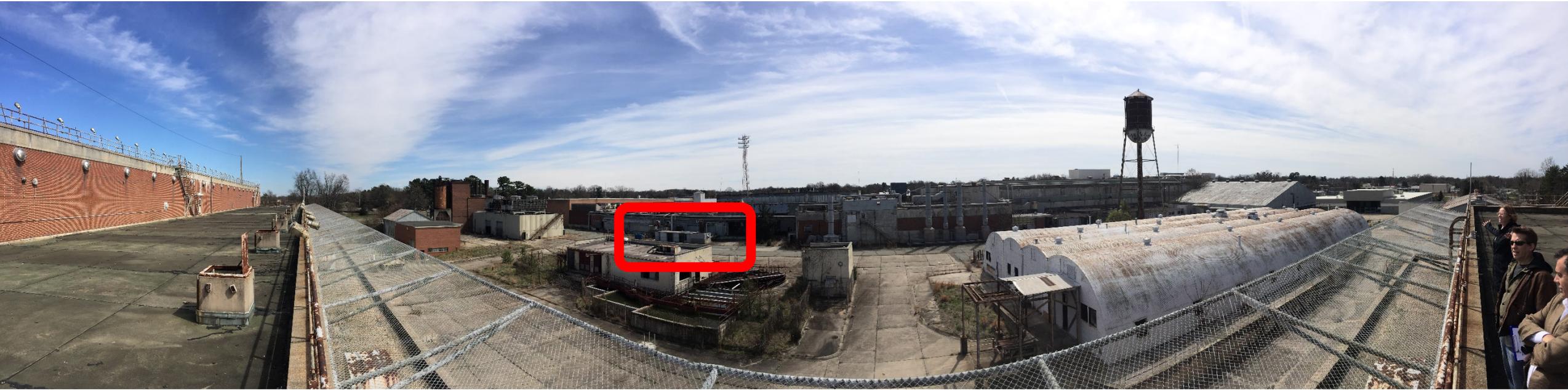
cc: Jack Butler

Remediation Occurred through 1990s – 2000s



Remediation on site occurred for over a decade:

- Air Sparging/Soil Vapor Extraction (AS/SVE) 1999-2004
- Groundwater Extraction (Pump & Treat) 1999-2013
- Bioremediation - Emulsified Oil Substrate (EOS) 2004-2006



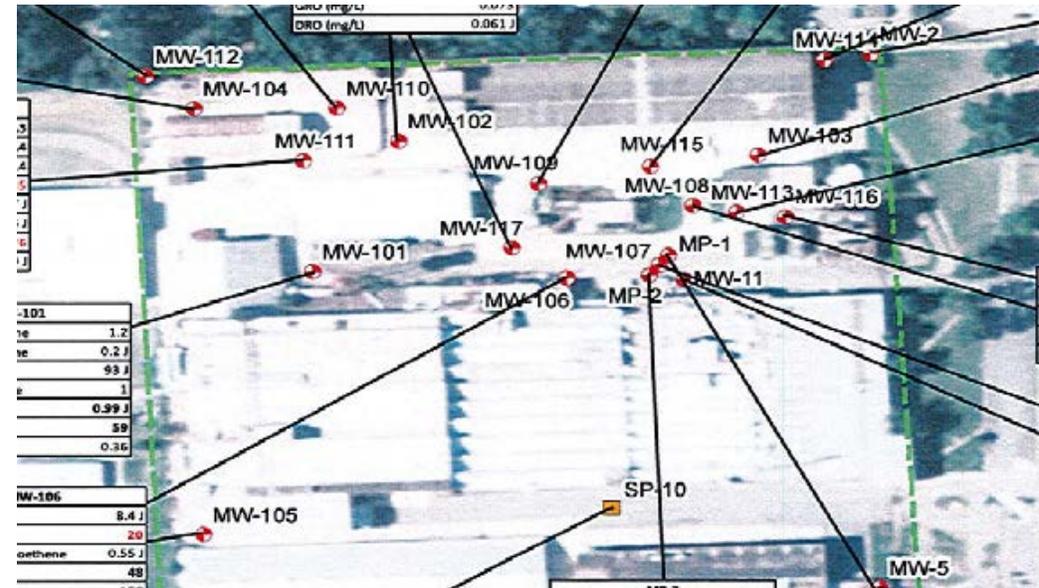
- Contamination discovered in 1992 in “Waste Accumulation Pad” area of former hazardous waste storage which prompted remediation 1990s-2000s.
- Several areas, but the largest source identified to date is this former hazardous waste storage area.

Present:

NC DHHS / ATSDR recently (May 2017) presented results of a “Health Consultation” – a health risks assessment.

- Data from sampling in 2014-2015 could not reveal the health risks from groundwater to off site residents in near NW area beyond the site along Hilton Road.
- Recommended that Army conduct Vapor Intrusion Sampling in homes northwest of site.
- Army has reviewed, and Army is to provide a work plan for NC DEQ to approve after Army receives Right of Entry to sampling indoor air in selected homes basements or beneath foundation.

Off site sampling
2014-2015



On Site Sampling 2014

What is Vapor Intrusion?



- The contaminants identified on site at TAMP site include chlorinated solvents TCE, PCE, as well as petroleum constituents.
- Solvents travel readily in groundwater flow, and have been identified off site in the nearby creek.
- Potential to be contributing to Vapor Intrusion into nearby homes.

Assessment – Indoor Air and Soil Gas

Indoor Air Sampling Silco Cannister



Soil Gas Sampling



Solutions

- For residential homes that incur vapor intrusion impacts, often the solution often include:
 - Removing pathways of contamination
 - Removing source contamination
 - Addressing pathway migration
 - Adjusting sub-slab pressure and directing vapors out of the basement and home

Vapor Mitigation System

- Active
- Passive



DESIGN / DEVELOPMENT ISSUES

- [Increase connectivity to Downtown, greenways, and the new sidewalk plan
- [Provide family resources and opportunities that do not currently exist
- [Become the center of a community health and wellness program supported by the local and regional governments and health care systems
- [Develop the site incrementally being responsive to varying and evolving community needs

DESIGN / DEVELOPMENT ISSUES

- [Concentrate community/regional resources and amenities in and around Western Electric
- [Attract future residents and improved the lives of current residents in the neighborhoods around Western Electric
- [Start with low-hanging fruit — achievable short-term goals and reasonable development options

POSSIBLE USES (by no means all of them)

Children's Museum and Activity Center

Cold War Museum

Wellness Center / Clinic / Outpatient Facilities

Recreation

Education

Event and Meeting Space

New Local Markets

Small Business Incubation / Graduation

Technology Incubation

City Presence on Site — Departmental Offices, Police Substation

Art and Maker Space

Flexible Development Space





PHASE 1

Front Yard

Children's Museum
and Activity Center

Courtyard use for
special events

Improved entrance
and parking

Orientation / Info

Limited use of
space for temporary
art installations or
exhibit





ALAMANCE COUNTY
CHILDRENS
MUSEUM

T DENITT

PHASE 2

Health and wellness clinic

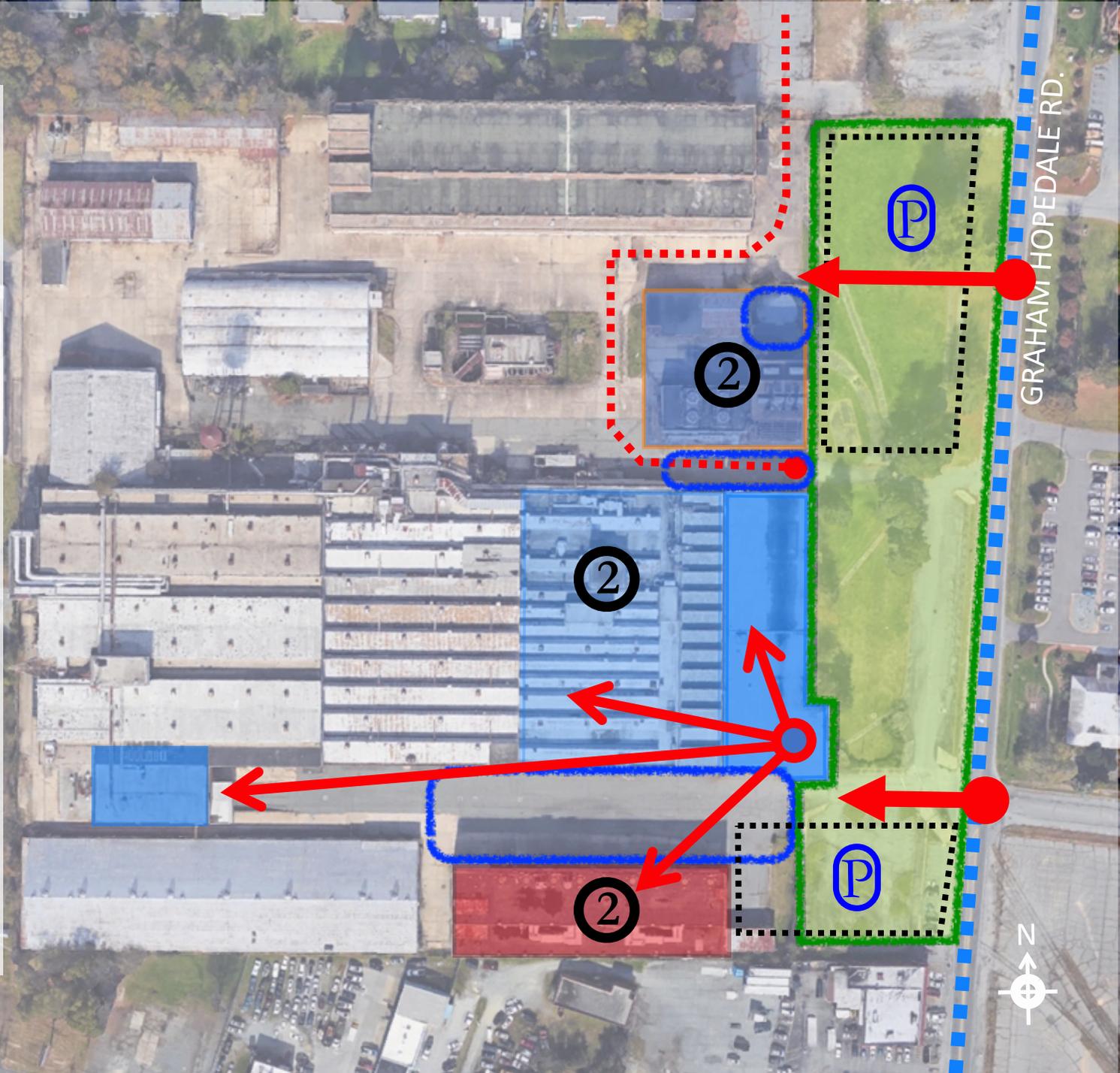
Coffee shop/Cafe

Brewery w/ beer garden

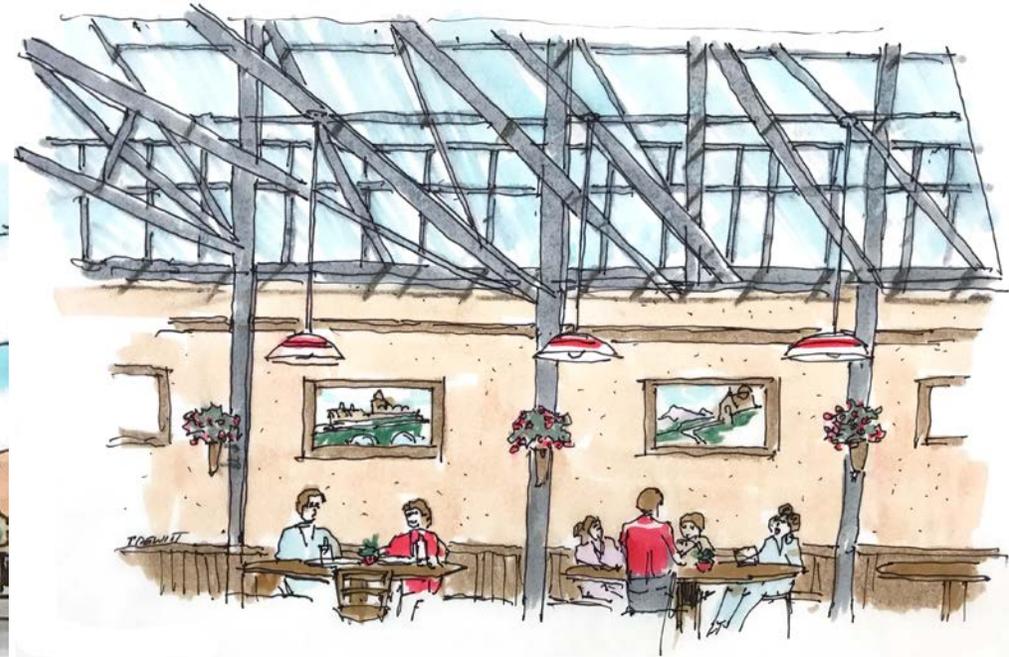
Expanding parking

Second Floor Office Development @ phase 1

Nike-1 development

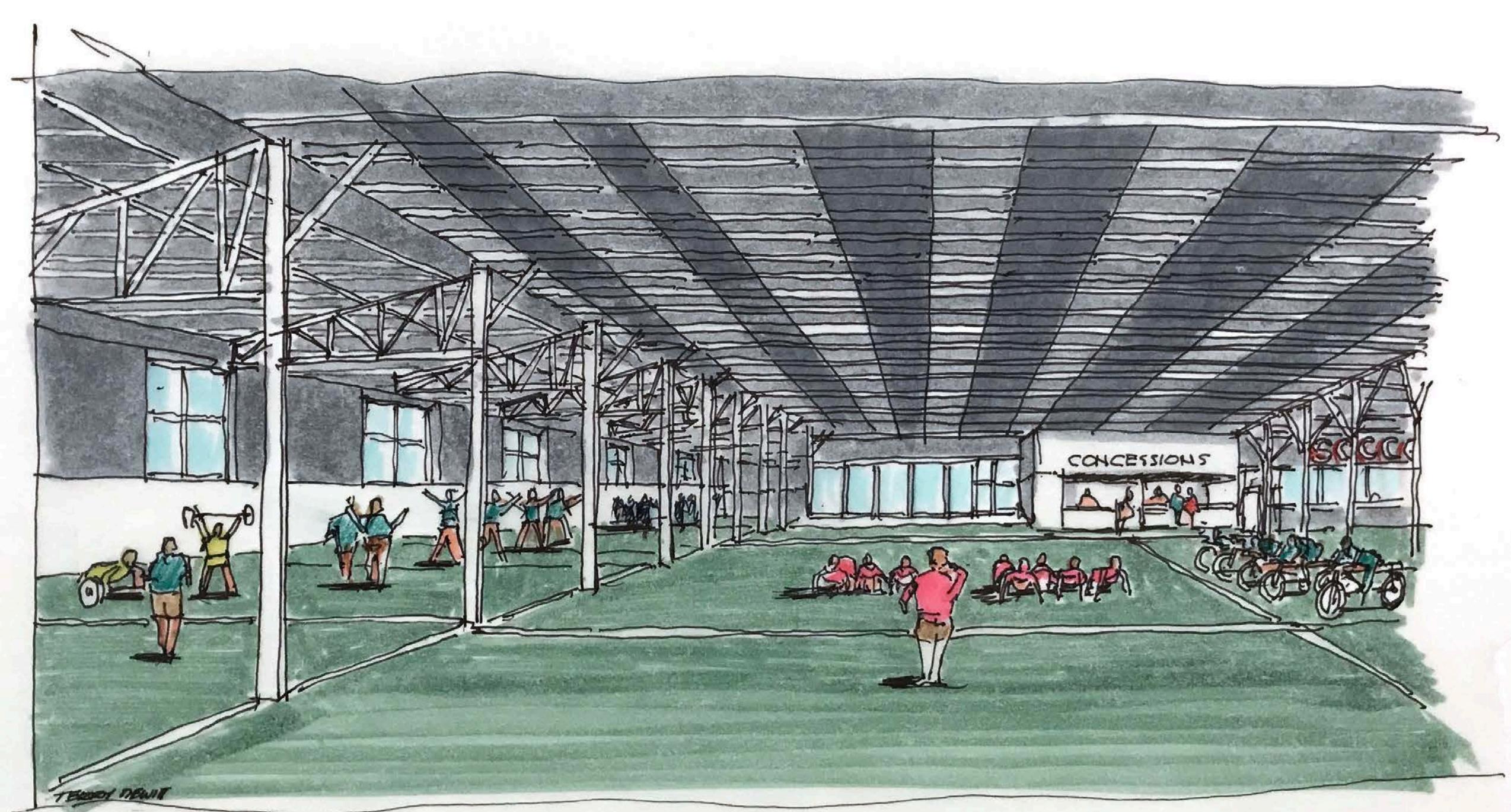






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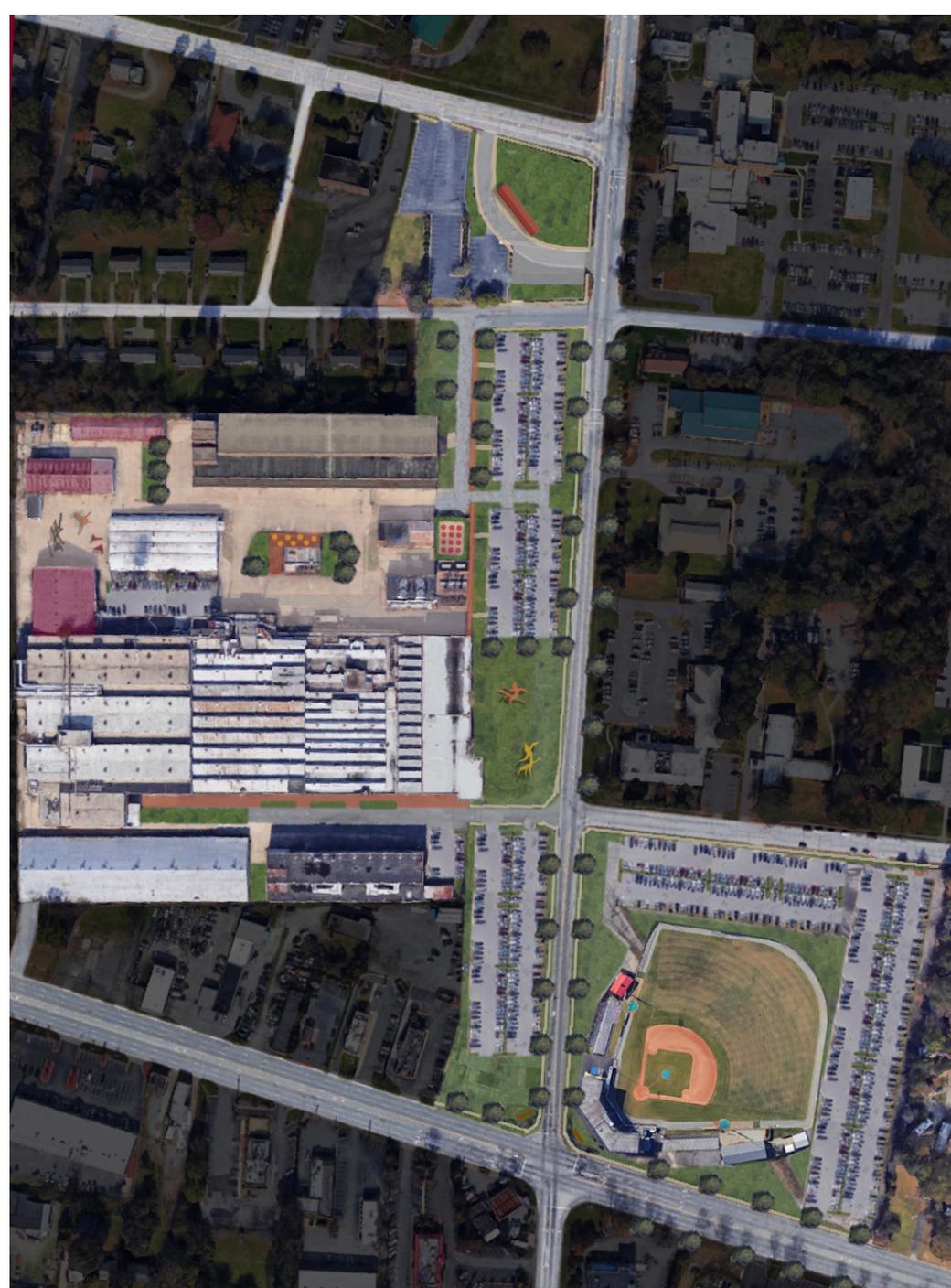
TERRY DEWIT





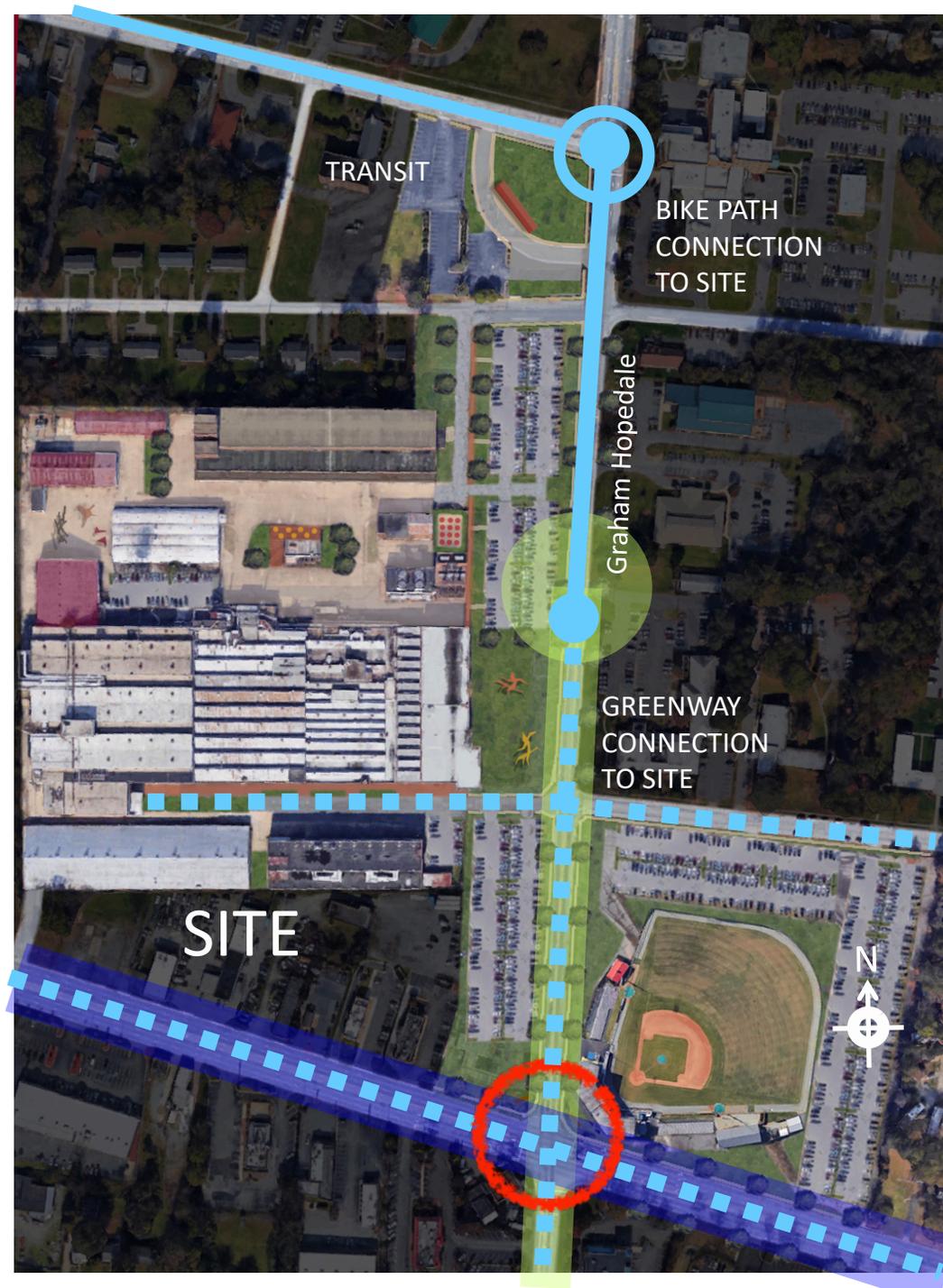
POSSIBILITIES

- + New Transit Center
- + Public Green Space
- + Expanded Parking
- + Arts & Makers
- + Outdoor Events
- + Brewery
- + Front Yard Public Art
- + Mixed Use Development - Local/
Family Services, Health, Wellness,
Recreation
- + New Sports Complex
- + Landmark Anchor at Intersection



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A word cloud featuring various acronyms and codes in different colors and sizes. The most prominent words are 'NMTG' in a large, dark teal font, and 'HTC' in a large, olive green font. Other visible words include 'LIHTC' in brown, 'EPC' in olive green, 'PILOT' in olive green, 'QALICB' in brown, 'IRB' in brown, '221d4' in yellow, 'QAP' in teal, 'EZ' in yellow, 'TIF' in olive green, 'VCP' in olive green, '179D' in olive green, 'CDFI' in teal, and 'EB-5' in brown. The words are arranged in a non-linear, overlapping fashion.

Financing Toolkit

- Private Sources
 - Debt/Bank Lending
 - Developer Equity
- Public Sources
 - Historic Tax Credits
 - Federal
 - State
 - New Market Tax Credits
 - Public Capital Funding
 - Grants

Financing Toolkit—Private Sources

- Debt/Bank Financing
- Developer Equity

Financing Toolkit—Public Sources

- Public Sources
 - Historic Tax Credits
 - Longstanding, 3-step process
 - ~20% of Qualified Rehabilitation Expenditures for both State & Federal
 - Credits can be syndicated
 - New Market Tax Credits
 - Highly complex process involving project, investor and intermediary
 - Majority of projects are not awarded credits.
 - Credits converted into project equity at discount
 - Public Capital Funding
 - Grants

Market Analysis—Office & Retail



- Ample Available Space, Vacancy 10%+
- Higher Priced Spaces in West Burlington
- Office Rents in \$8-14/sf Range, Modified Gross
- Retail Rents in the \$5-\$12/sf Range, NNN



Development Considerations

Incremental & Phased Approach.

Establishing a City Center as Unifying Program.

Unlikely to be Led by Private Sector.

Multi-Layered Financing.

Sophisticated Development Leadership

DEVELOPMENT SCENARIOS



NIKE 2

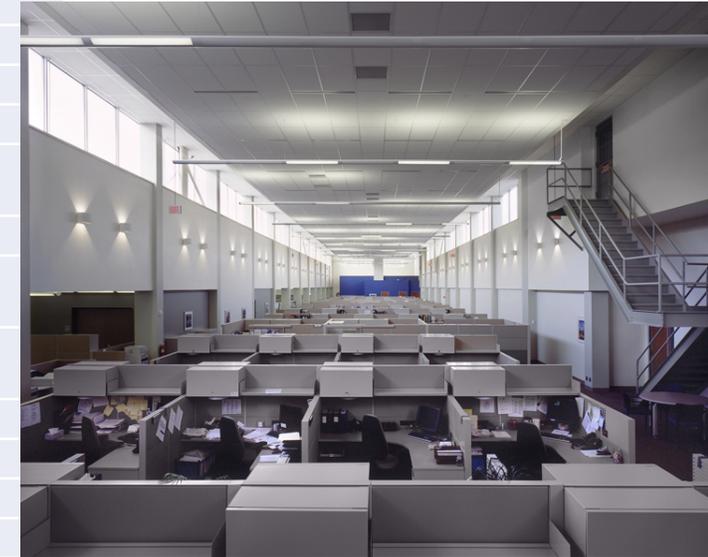
NIKE 1



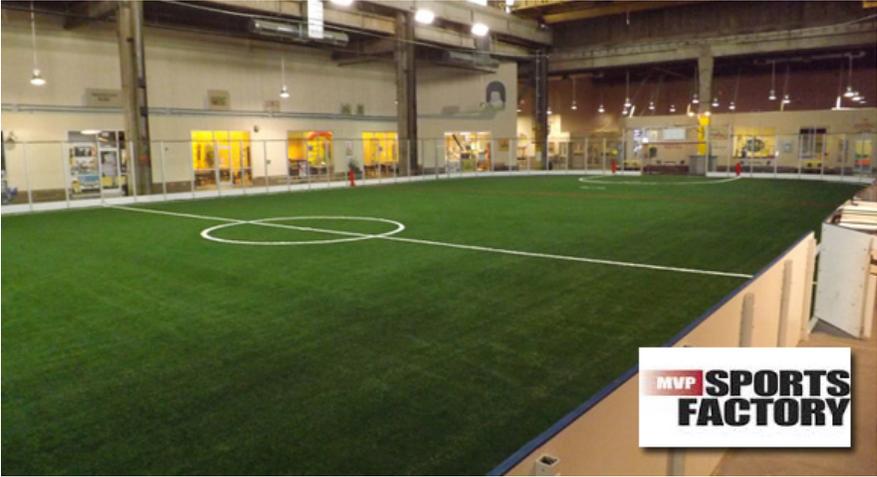
Project Model--Office



NIKE-1					
SF	50,000	\$115/sf			
Construction Cost		5,750,000			
Soft Cost		1,610,000			
Misc.		-			
Total		7,360,000			
Loan	75%	5,520,000	DS/year	(377,646)	
Equity	25%	1,840,000	Misc Expenses/yr	-100,000	
HTC		903,440			
State Credit		846,975			
Cash Equity		89,585			
GRANT		-			
Leaseable SF		42,500			
Rent/SF		Modified \$11.5 Gross			
Annual Rent		\$488,750			



Project Model—Indoor Fitness



Soccer					
SF	100,000	\$80			
Construction Cost		8,000,000			
Soft Cost		2,640,000			
Misc.		-			
Total		10,640,000			
Loan	50%	5,320,000	DS/year	(363,963)	
Equity	50%	5,320,000	Misc Expenses/yr		
HTC		1,298,560			
State Credit		1,298,560			
Cash Equity		222,880			
NMTC		2,000,000			
GRANT		500,000			
Leaseable SF		90,000			
	4.25	NNN			
		\$	382,500		



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How to move forward ?

- Be not Afraid
- Bite-sized Portions
- Comprehensive Community Development Strategy
- Attention to Site Control –
 - Ownership
 - Exploring Public Private Partnership
 - Possible Redevelopment Commission
 - Stakeholder Implementation team as Governing and Programming Board

First Steps

- Cut the grass.
- Organize and Advocate.
- Use front lawn/parking area for farmers/makers market on weekends.
- Start a friends organization to collect stories from people that lived and worked in and around the plant.
- Develop a Quality of Life Plan for neighborhoods in the vicinity of the project.

First steps

- Begin to address crime and safety concerns along the Church Street Corridor.
- Develop temporary gallery installations to start activating the site for public art and small scale events.
- Clean up the plaza for events use.
- Outdoor family movies and community gatherings in the plaza.
- Public arts installations in the plaza and front yard.







THANK YOU!

Project website:

<http://www.burlingtonnc.gov/WesternElectric>

Presentation website:

<https://www.slideshare.net/CommunitiesbyDesign>