

Golden Triangle
REvisioning
Towards a Sustainable Suburbia





Golden Triangle



REvisioning
Towards a Sustainable Suburbia

Acknowledgements

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UNIVERSITY OF PENNSYLVANIA, MEYERSON HALL

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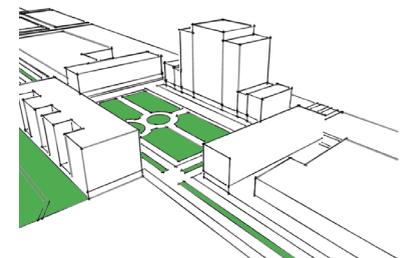
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Executive Summary

Golden Triangle REvisioning is a comprehensive analysis and set of recommendations for the study area in Cherry Hill. The following pages lay out a summary introduction, site analysis, preliminary design alternatives, green systems plan, access plan, energy plan, development plan, and implementation to ensure a sustainable future for the Golden Triangle.

Executive Summary



Introduction

Like so many American inner-ring suburbs, Cherry Hill is at a crossroads. While parts of the township have flourished, smaller pockets of the area are ready for new ideas. The Golden Triangle—framed by Route 38 to the north, the Cooper River to the South, and Haddonfield Road to the east—was once a locus of commercial activity and entertainment, with the Garden State Pavilion drawing in activity from all over. But now it faces a host of challenges in the form of empty stores, difficult-to-cross roads and disconnected development. The good news is that not only are these holes fillable, but that once addressed, they can usher Cherry Hill into the 21st century.

By focusing initially on transit-oriented development around the train station, and using that to promote walkable growth throughout the area, the Golden Triangle can be a hub of activity, whose development is marked by sustainability, drawing in people from South Jersey, Philadelphia and beyond.

Site Analysis

Recent changes in Cherry Hill's population have created specific needs for the township. While Cherry Hill's overall population has slipped in recent years, the region has seen significant growth among Asians and young people, ages 18 to 24. Additionally, population growth in Cherry Hill has not kept pace with the rest of Camden County, and housing development has fallen behind state regulations for affordable units. Consequently, the Golden Triangle needs a new school, to accommodate the influx of younger residents, and more development in accordance with New Jersey's Council on Affordable Housing (COAH) regulations.

Fortunately, the Golden Triangle contains a wealth of potential sites for both a school and affordable housing.



IMPLEMENTATION: A BOULEVARD FOR ROUTE 70

The linchpin of the proposed changes to the street network is in Route 70, which will be transformed from a faceless demi-highway to a tree-lined boulevard where walkers, bikers, bussers and drivers share the road and contribute to its bustling activity. Ground-floor retail establishments draw in strollers, while the floors above boast ample office and residential space. In the street, naturally slower traffic creates a safer environment for walkers and bikers, while improved bus service—including possible bus rapid transit—decreases the number of cars on the road over time. And because much of this Route 70 improvement is happening within easy walking distance of the train station, residents, workers and visitors will all benefit from the amenities of this transit-oriented development.

With an oversupply of commercial space, and numerous currently vacant sites, there is ample opportunity for development that's easily accessible by New Jersey Transit and PATCO.

Green Spaces and Stormwater

The Golden Triangle's natural features provide a solid foundation on which to build a network of green pathways. Beginning with the beautiful Cooper River and its accompanying park, we seek to incorporate existing stream corridors into the larger river trailway. Following these natural streams as guides, the green network will be punctuated with several larger green parks and natural forests that will provide areas for respite, active recreation and restored wildlife habitat.

Enhancing the green network will take a refined approach to stormwater management. Through state-of-the-art hydrological technology, we will seek to limit disruption

to the area's natural features by reducing impervious cover, increasing on-site filtration, eliminating contaminants, and reducing or eliminating pollution from stormwater runoff.

Transportation and Access

A future Cherry Hill relies more on the train station and less on cars. By expanding the network of streets in the Golden Triangle, walkers, bikers, bussers and drivers alike will have more options for getting around. More options means greater freedom to choose modes of transport that are most economical and sustainable.

Our proposed street grid expansion will create a connected network specifically designed to encourage walking and biking. Green streets emphasize the importance of tree-lined, people-friendly avenues, while creating boulevards and calming traffic make streets more livable for residents and safer for everyone.

Executive Summary

Development

The Golden Triangle's future development will be based on zones defined by the street types in the transportation network. To catalyze development throughout the site, a dense, mixed-use main street will rejuvenate the Garden State Pavilions, with a focus on activity emanating from the train station. At this location, the township can take advantage of current land ownership and the relative ease of changing the pavilion's makeup. This main street will be transit-focused, walkable, sustainable and bustling.

Development along the pavilion main street will be used to spur growth elsewhere in the Golden Triangle. Routes 70 and 38 will be targeted for enhancement as boulevards, with additional trees, space for bikers, grassy medians, improved safety for pedestrians and added retail opportunities at the street level.

The Executive Campus area to the north of Route 70, meanwhile, will be targeted for the growth of green jobs. In order to be sustainable into the 21st century, Cherry Hill will need to focus on attracting sustainable jobs in green industries, and the existing office infrastructure, located within reasonable walking distance of the train station, is ideal for such development.

Energy

To meet New Jersey's guidelines for a renewable energy system, this plan reduces consumption of nonrenewable resources by 20 percent. Our plan advocates for the use of renewable supplies and conservation techniques that provide a less costly alternative to the diminishing fossil fuels currently powering the township. We will lay out several options—including rooftop-solar, wind and LEED-certified buildings—as alternatives for securing a renewable future for Cherry Hill.

Commitments by both the public and private sectors will be required to meet the outlined objectives. Implemented in its entirety, this plan will introduce the township to an energy system designed to reduce costs as it also significantly reduces the Golden Triangle's impact on the region's natural resources.



IMPLEMENTATION: MAIN STREET AS A CATALYST FOR DEVELOPMENT

A transit-oriented main street, located near the train station at the Garden State Pavilion site, will act as a catalyst project for growth throughout the site. The proposed development—ground-floor retail and restaurants with residential units above—blends with a park, a walkable street network and a nearby school to reactivate this former parking lot.

IMAGES (LEFT TO RIGHT):

View of Philadelphia from project site; Train coming into Cherry Hill Station; Cooper River



Policy Implementation

A wide variety of policy levers exist, both at the state and federal level, for the planning implementation process. The primary state-level agent is the New Jersey Economic Development Authority (NJEDA), which offers programs and policies specifically targeted to redevelopment plans including bond financing, housing, tax and nonprofit incentives, and environmental/remediation programs. At the federal level, agencies such as the Department of Housing and Urban Development (HUD), the Department of Health and Human Services (HHS) and the Small Business Administration (SBA) offer myriad redevelopment programs designed to provide effective implementation for redevelopment projects nationally.

We present a phased plan that prioritizes three implementation levels. Providing for and incorporating pathways for superior policy implementation must be strategic and synergistic in that recommendations will be woven together in a complementary manner. In this way, implementation of the plan is more realistic and possible, given the often limited resources on the ground. Ultimately, the phased implementation of the plan relies on a contextual analysis of the existing conditions of the site and case studies pertaining to specifically layered policy points.

Preparing for the Future

We realize that many of the ideas in *Golden Triangle REvisioning* are ambitious, and that the cold, hard realities of the economy and existing barriers to development will make many of these changes a challenge. At the very least, this plan can provide a vision for Cherry Hill to strive for in the coming decades. We hope that, with careful implementation and an eye toward sustainability, it can be a roadmap to a Golden Triangle where people are more inclined to bike, walk and take public transit than they are to drive; where green jobs incubate and drive the township's economy; where efficient energy use and reuse becomes a model for the state; and where shoppers, walkers and workers come from all over to experience the natural beauty and opportunity of Cherry Hill.

Appendix

Proforma Analysis

| | | Office |
|--|--------------|---------------------------------------|
| Inputs | | Moderate Cons. Costs, rents, Cap Rate |
| PROJECT OUTLINE | | |
| Unit Type | Office | |
| Total Retail Square Feet | 420,000 | |
| Density/ (units per acre) | 17.46000 | |
| Parking Spaces per Unit | 0 | |
| Square Feet per Parking Space | 0 | |
| Open Space (%of Parcel Size) (Zon. Req.) | 0% | |
| Average Unit Size | 2500 | |
| Common Area Percentage | 10% | |
| Floor Area Ratio | 1 | |
| DEVELOPMENT COST STRUCTURE | | |
| Land Cost/SQFT | \$0 | |
| Remediation cost/ SQFT | \$0 | |
| Construction Cost/SQFT | \$174.00 | |
| Parking Cost/Space | \$0.00 | |
| Soft Costs as a % of Construction Costs | 0% | |
| FINANCING STRUCTURE | | |
| Required Debt-Coverage Ratio | 1.25 | |
| Interest Rate (%) | 7.5% | |
| Term (years) | 20 | |
| Cap Rate | 0.08 | |
| OPERATING COST STRUCTURE | | |
| Stabilized Vacancy Rate | 5% | |
| Expense Ratio (%) | 30% | |
| RENTS (month/unit) | | |
| Market | \$5,000 | |
| Affordable | n/a | |
| DEVELOPMENT SUMMARY | | |
| Land Cost | \$0 | |
| *Residential Units | 168 | |
| Unit Square Footage | 420000 | |
| CommonArea Square Footage | 42000 | |
| Total Square Footage | 462000 | |
| Residential Square Footage | 462000 | |
| Parking Square Footage | 0 | |
| (Residential) Construction Cost | \$80,388,000 | |
| Parking Spaces | 0 | |
| Parking Construction Cost | \$0 | |
| Soft Costs | \$0 | |
| Total Development Cost | \$80,388,000 | |
| Project Value | \$80,388,000 | |
| OPERATING SUMMARY | | |
| Gross Scheduled Rent | \$10,080,000 | |
| -Vacancies | -\$504,000 | |
| -Expected Expenses | -\$3,024,000 | |
| Net Operating Income | \$6,552,000 | |
| VALUE PROPOSITION | | |
| Project Cost (from above) | \$80,388,000 | |
| Supportable Mortgage | \$53,435,446 | |
| Required Initial Cash (Gap) | \$26,952,554 | |
| Effective loan to Value | 66.5% | |
| Project Value from Cap Rate | \$81,900,000 | |
| Net Gain or Loss | \$1,512,000 | |

| UNDERGROUND PARKING GARAGE | |
|--|----------------------|
| Inputs | |
| Moderate Cons. Costs, rents, Cap Rate | |
| PROJECT OUTLINE | Underground Parking |
| Unit Type | 179,450 |
| Parcel Size (Square Feet) | 124 |
| Density (units per acre) | 1.3 |
| Parking Spaces per Unit | 350 |
| Square Feet per Parking Space | 0% |
| Open Space (%of Parcel Size) (Zon.Re) | 1,300 |
| Average Unit Size | 15% |
| Common Area Percentage | 5 |
| Floor Area Ratio | |
| DEVELOPMENT COST STRUCTURE | |
| Land Cost/SQFT | \$23 |
| Remediation cost/ SQFT | \$2 |
| Construction Cost/SQFT | \$86.00 |
| Parking Cost/Space | \$30,000.00 |
| Soft Costs as a % of Construction Cost | 0% |
| FINANCING STRUCTURE | |
| Required Debt-Coverage Ratio | 1.25 |
| Interest Rate (%) | 7.5% |
| Term (years) | 20 |
| Cap Rate | 0.08 |
| OPERATING COST STRUCTURE | |
| Stabilized Vacancy Rate | 5% |
| Expense Ratio (%) | 25% |
| RENTS (month/unit) | |
| Market | \$100 |
| Affordable | n/a |
| DEVELOPMENT SUMMARY | |
| Land Cost | \$4,127,350 |
| *Residential Units | |
| Unit Square Footage | |
| Common Area Square Footage | 179,450 |
| Total Square Footage | 0 |
| Residential Square Footage | 179,450 |
| Parking Square Footage | \$0 |
| (Residential) Construction Cost | 513 |
| Parking Spaces | \$15,390,000 |
| Parking Construction Cost | |
| Soft Costs | \$19,517,350 |
| Total Development Cost | \$19,517,350 |
| Project Value | |
| OPERATING SUMMARY | |
| Gross Scheduled Rent | \$615,600 |
| -Vacancies | -\$30,780 |
| -Expected Expenses | -\$153,900 |
| Net Operating Income | \$430,920 |
| VALUE PROPOSITION | Bottom Lines |
| Project Cost (from above) | \$19,517,350 |
| Supportable Mortgage | \$3,514,408 |
| Required Initial Cash (Gap) | \$16,002,942 |
| Effective Loan to Value | 18.0% |
| Project Value from Cap Rate | \$5,386,500 |
| Net Gain or Loss | -\$14,130,850 |

Proforma Analysis

| AFFORDABLE HOUSING PROFORMA WITH TAX CREDITS v.1: Page 1: Concept, Assumptions, and Baseline Data | | | | | | | | |
|---|-----------------------------------|------------|-------------|---------------------|----------------------------|----------------------------------|------------|--|
| Item | | | Source | | Item | | Source | |
| Concept | Avg Unit Size | # | Size (sqft) | 253 | 1300 | Concept Plan | | |
| | | | | | | Concept Plan | | |
| | | | | | | Concept Plan | | |
| | Net rentable space(sqft) | | | | 328,900 | | | |
| | Common area (10%) | | | | 0 | Concept Plan | | |
| | Total Constructed Space | | | | 328,900 | | | |
| | Parking spaces | | | | 276 | Concept Plan | | |
| Land | Parcel size (sqft) | | | | 0 | BRT | | |
| | Cost (per sqft) | | | | \$0 | BRT Market Value | | |
| | Total Land Cost | | | | \$0 | | | |
| Soft Costs | Architecture & Engineering Fees | | | \$0 | | 5% of Const. Costs | | |
| | Legal Fees | | | \$586,000 | | Research (5% of Tot. Dev. Costs) | | |
| | Permits | | | \$200,000 | | City Hall | | |
| | Pre-leasing | | | \$30,000 | | Estimate | | |
| | Developer fee | | | \$3,486,340 | | 10% of Hard Costs | | |
| | Contingencies | | | \$1,743,170 | | 5% of Total Hard Costs | | |
| | Total Soft Costs | | | | \$6,045,510 | | | |
| Hard Costs | Construction Cost (per sqft) | | | \$106 | | MEANS | | |
| | Construction Cost (total) | | | \$34,863,400 | | | | |
| | Per Space parking Cost | | | \$0 | | MEANS | | |
| | Parking Cost (total) | | | \$0 | | | | |
| | Landscaping | | | \$0 | | Concept | | |
| Total Hard Costs | | | | \$34,863,400 | | | | |
| Total Development Costs | | | | \$40,908,910 | | Land+Hard+Soft | | |
| Permanent Financing | Interest Rate | | | 7.50% | | Lender | | |
| | Term | | | 30 | | Lender | | |
| | Debt-coverage ratio | | | 1.25 | | Lender | | |
| | Points | | | 0 | | Lender | | |
| | Mortgage Constant | | | .084671236 | | = PMT(rate,term,-1) | | |
| | Stabilized NOI (year 2) | | | \$1,404,346 | | from page 3 | | |
| | Supportable Mortgage | | | \$13,268,695 | | =NOI/(DCR*MC) | | |
| | Yearly Debt Service | | | \$1,123,477 | | = Mortgage * MC | | |
| | Point Costs | | | \$0 | | Points * Mortgage | | |
| | Construction Lending | Hard Costs | | | \$34,863,400 | | from above | |
| | % financed | | | 100% | | Lender | | |
| | Construction Loan Amount | | | \$34,863,400 | | Hard costs * % financed | | |
| | Interest rate | | | 9.00% | | Lender | | |
| | Term (months) | | | 12 | | Constr. Schedule | | |
| | Drawdown Factor | | | 0.55 | | Lender | | |
| | Construction Interest | | | \$1,725,738 | | Loan*Rate*Term*DDF | | |
| | Fees | | | 3% | | Lender | | |
| | Construction Fees | | | \$1,045,902 | | Constr. Loan * Fees | | |
| Rents & income | Market | # | Mo. Rent | 190 | \$1,200 | Market Study | | |
| | Affordable | | | 63 | \$835 | 60% of AMI | | |
| | % Low-income units | | | | 25% | | | |
| | Other Income | | | | \$200 | Market Study | | |
| Rent Inflation Factor | | | | 4% | Bureau of Labor Statistics | | | |
| Vacancy Rates | Year 1 | | | 8.0% | | Marcus & Millichap | | |
| | Year 2 and thereafter | | | 5.0% | | Marcus & Millichap | | |
| Expenses | Utilities | | | \$143,704 | | Dollars & Cents: Table 3-286 | | |
| | Property Taxes | | | \$409,089 | | 1% of Proj. Cost | | |
| | Maintenance | | | \$287,155 | | Dollars & Cents: Table 3-286 | | |
| | Maintenance Reserve | | | \$287,155 | | Dollars & Cents: Table 3-286 | | |
| | Insurance | | | \$39,721 | | Dollars & Cents: Table 3-286 | | |
| | Management | | | \$108,790 | | Dollars & Cents: Table 3-286 | | |
| | Other/Contingency | | | \$574,310 | | Dollars & Cents: Table 3-286 | | |
| Total Expenses per unit | | | | \$1,849,924 | | | | |
| | as % of rents | | | 55% | | x-check to IREM or ULI | | |
| Expense Inflation factor | | | | 4% | | Bureau of Labor Statistics | | |
| Tax Info | Depreciable Basis | | | \$38,421,040 | | Hard Costs + Some Soft Costs | | |
| | Useful Life (years) | | | 27.5 | | IRS | | |
| | Annual Depreciation Deduc. | | | \$1,397,129 | | Deprec. Basis/UL | | |
| Amount of Personal Property | | | \$759,000 | | Estimate | | | |
| Personal Property Life | | | 7 | | IRS | | | |
| Personal Property Depreciation | | | | \$108,429 | | Property/UL | | |
| Financing Amortization | | | | \$0 | | Mortg. Points/Term | | |
| Annual Passive Loss Limit | | | | \$1,000,000 | | Investor | | |
| Marginal Tax Rate | | | | 37% | | Fed+ State - Interaction | | |
| Sale & Reversion Info | Sales Cap Rate | | | 17.5% | | Lender | | |
| | Selling Costs | | | 6% | | Industry standard | | |
| | Capital Gains Tax Rate | | | 20% | | IRS | | |
| | Discount (Hurdle) Rate | | | 9% | | Developer Requirement | | |
| Syndication Info | Tax Credit Basis | | | \$13,281,350 | | Deprec. Basis + Personal Prop | | |
| | Applicable Credit | | | 11.7% | | IRS | | |
| | Limited Partner Share | | | 99% | | Deal | | |
| | Limited Partner Required IRR | | | 10% | | Deal | | |
| | Syndication Costs | | | \$50,000 | | Deal, per JDJL | | |
| | Annual Ground Lease | | | 0 | | Deal | | |
| | Interest on Ground Lease | | | 0 | | Deal | | |
| Years of Tax Credit Pay-in | | | 1 | | Deal | | | |

Page 2: Development Accounts

| <u>Item</u> | <u>Year -1</u> | <u>Year 0</u> |
|--------------------------------|--------------------|---------------------|
| Land Purchase Price | \$0 | |
| Soft Costs (incl. Synd.) | \$6,045,510 | |
| Syndication Costs | \$50,000 | |
| Construction Loan Fees | \$1,045,902 | |
| Construction Cash In | \$0 | |
| Construction Interest Costs | | \$1,725,738 |
| Syndication Proceeds | | \$15,579,690 |
| Permanent Loan Points | | \$0 |
| Additional Cash-in at Take-out | | \$6,015,016 |
| | | |
| Cash In This Year | \$7,141,412 | \$23,320,444 |
| Total Cash In | \$7,141,412 | \$30,461,856 |

| <i>Sources and Uses Accounts</i> | <i>Total</i> | <i>Per unit</i> |
|----------------------------------|--------------------|-----------------|
| SOURCES | | |
| Permanent mortgage | \$13,268,695 | \$52,445 |
| LIHTC Syndication | \$15,579,690 | \$61,580 |
| Other Gap (1) | \$9,971,051 | \$39,411 |
| <u>Other Gap (2)</u> | <u>\$4,911,115</u> | <u>\$19,412</u> |
| Total Sources | \$43,730,550 | \$172,848 |
| USES | | |
| Land acquisition | \$0 | \$0 |
| Soft costs | \$2,559,170 | \$10,115 |
| Hard costs | \$34,863,400 | \$137,800 |
| Construction Loan Fees | \$1,045,902 | \$4,134 |
| Construction Loan Interest | \$1,725,738 | \$6,821 |
| Permanent Loan Fees and Points | \$0 | \$0 |
| Developer Fee | \$3,486,340 | \$13,780 |
| <u>Syndication Costs</u> | <u>\$50,000</u> | <u>\$198</u> |
| Total Uses | \$43,730,550 | \$172,848 |

Proforma Analysis

| Page 3: Operating Accounts | | | | | | | | | | | |
|--------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|
| Cash Accounts | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Gross Scheduled Rent | \$3,366,165 | \$3,500,812 | \$3,640,844 | \$3,786,478 | \$3,937,937 | \$4,095,454 | \$4,259,273 | \$4,429,643 | \$4,606,829 | \$4,791,102 | \$10,497,895 |
| - Vacancy Adjustment | (\$269,293) | (\$175,041) | (\$182,042) | (\$189,324) | (\$196,897) | (\$204,773) | (\$212,964) | (\$221,482) | (\$230,341) | (\$239,555) | (\$524,895) |
| + Other Income | \$2,400 | \$2,496 | \$2,596 | \$2,700 | \$2,808 | \$2,920 | \$3,037 | \$3,158 | \$3,285 | \$3,416 | \$7,485 |
| Effective Gross Income | \$3,099,272 | \$3,328,267 | \$3,461,398 | \$3,599,854 | \$3,743,848 | \$3,893,602 | \$4,049,346 | \$4,211,320 | \$4,379,772 | \$4,554,963 | \$9,980,485 |
| - Expenses | (\$1,849,924) | (\$1,923,921) | (\$2,000,878) | (\$2,080,913) | (\$2,164,150) | (\$2,250,716) | (\$2,340,744) | (\$2,434,374) | (\$2,531,749) | (\$2,633,019) | (\$5,769,268) |
| - Ground Lease | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Net Operating Income | \$1,249,348 | \$1,404,346 | \$1,460,520 | \$1,518,941 | \$1,579,698 | \$1,642,886 | \$1,708,602 | \$1,776,946 | \$1,848,023 | \$1,921,944 | \$4,211,217 |
| - Yearly Debt Service | (\$1,123,477) | (\$1,123,477) | (\$1,123,477) | (\$1,123,477) | (\$1,123,477) | (\$1,123,477) | (\$1,123,477) | (\$1,123,477) | (\$1,123,477) | (\$1,123,477) | (\$1,123,477) |
| - Ground Lease | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| BTCF (Cash Throw-off) | \$125,871 | \$280,869 | \$337,043 | \$395,464 | \$456,221 | \$519,409 | \$585,125 | \$653,469 | \$724,547 | \$798,468 | \$3,087,740 |
| + Tax Shelter | \$374,170 | \$374,170 | \$374,170 | \$374,170 | \$374,170 | \$374,170 | \$277,360 | \$198,596 | \$166,026 | \$131,944 | (\$1,546,383) |
| After Tax Cash Flow | \$500,041 | \$655,039 | \$711,213 | \$769,634 | \$830,391 | \$893,579 | \$862,485 | \$852,064 | \$890,573 | \$930,412 | \$1,541,357 |
| Taxable Income Accounts | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Cash Throw-off | \$125,871 | \$280,869 | \$337,043 | \$395,464 | \$456,221 | \$519,409 | \$585,125 | \$653,469 | \$724,547 | \$798,468 | \$3,087,740 |
| + Principal Amortization | \$128,325 | \$137,949 | \$148,295 | \$159,417 | \$171,374 | \$184,227 | \$198,044 | \$212,897 | \$228,864 | \$246,029 | \$1,045,095 |
| - Depreciation | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$0 |
| - Finance Amortization | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| - Personal Property Depreciation | \$108,429 | \$108,429 | \$108,429 | \$108,429 | \$108,429 | \$108,429 | \$108,429 | \$0 | \$0 | \$0 | \$0 |
| - Pre-leasing | \$30,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Taxable Income | (\$1,281,362) | (\$1,086,739) | (\$1,020,219) | (\$950,676) | (\$877,962) | (\$801,921) | (\$722,389) | (\$530,763) | (\$443,718) | (\$352,632) | \$4,132,835 |
| Tax Due (Shelter) | -\$374,170 | -\$374,170 | -\$374,170 | -\$374,170 | -\$374,170 | -\$374,170 | -\$277,360 | -\$198,596 | -\$166,026 | -\$131,944 | \$1,546,383 |
| Adjustments to Taxable Income | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Current Period Taxable Loss (Income) | \$1,281,362 | \$1,086,739 | \$1,020,219 | \$950,676 | \$877,962 | \$801,921 | \$722,389 | \$530,763 | \$443,718 | \$352,632 | (\$4,132,835) |
| Annual Passive Loss Limit | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 |
| Losses Taken This Year | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$741,268 | \$530,763 | \$443,718 | \$352,632 | (\$4,132,835) |
| Total Carryforward | \$281,362 | \$368,101 | \$388,320 | \$338,996 | \$216,958 | \$18,880 | \$0 | \$0 | \$0 | \$0 | \$0 |

| Page 3A: Key Operating Schedules | | | | | | | | | | | |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
| Mortgage Amortization | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Beginning Balance | \$13,268,695 | 13,140,370 | 13,002,421 | 12,854,126 | 12,694,708 | 12,523,335 | 12,339,108 | 12,141,064 | 11,928,167 | 11,699,303 | 1,045,095 |
| Yearly Debt Service | \$1,123,477 | \$1,123,477 | \$1,123,477 | \$1,123,477 | \$1,123,477 | \$1,123,477 | \$1,123,477 | \$1,123,477 | \$1,123,477 | \$1,123,477 | \$1,123,477 |
| Interest | \$995,152 | \$985,528 | \$975,182 | \$964,059 | \$952,103 | \$939,250 | \$925,433 | \$910,580 | \$894,613 | \$877,448 | \$78,382 |
| Principle | \$128,325 | \$137,949 | \$148,295 | \$159,417 | \$171,374 | \$184,227 | \$198,044 | \$212,897 | \$228,864 | \$246,029 | \$1,045,095 |
| Ending Balance | \$13,140,370 | \$13,002,421 | \$12,854,126 | \$12,694,708 | \$12,523,335 | \$12,339,108 | \$12,141,064 | \$11,928,167 | \$11,699,303 | \$11,453,274 | (\$0) |
| Building Depreciation | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Beginning Basis | \$38,421,040 | 37,023,912 | 35,626,783 | 34,229,654 | 32,832,525 | 31,435,397 | 30,038,268 | 28,641,139 | 27,244,010 | 25,846,882 | 0 |
| Current Depreciation Claimed | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$1,397,129 | \$0 |
| Cumulative Depreciation Claimed | \$1,397,129 | 2,794,257 | 4,191,386 | 5,588,515 | 6,985,644 | 8,382,772 | 9,779,901 | 11,177,030 | 12,574,159 | 13,971,287 | 38,421,040 |
| Ending Balance | 37,023,912 | 35,626,783 | 34,229,654 | 32,832,525 | 31,435,397 | 30,038,268 | 28,641,139 | 27,244,010 | 25,846,882 | 24,449,753 | 0 |
| Personal Property Depreciation | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Beginning Basis | \$759,000 | 650,571 | 542,143 | 433,714 | 325,286 | 216,857 | 108,429 | | | | |
| Current Depreciation Claimed | 108,429 | 108,429 | 108,429 | 108,429 | 108,429 | 108,429 | 108,429 | | | | |
| Cumulative Depreciation Claimed | \$108,429 | 216,857 | 325,286 | 433,714 | 542,143 | 650,571 | 759,000 | | | | |
| Ending Balance | \$650,571 | 542,143 | 433,714 | 325,286 | 216,857 | 108,429 | 0 | | | | |
| Finance Amortization | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Beginning Basis | \$0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Current Amortization | \$0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative Amortization | \$0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ending Balance | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Ground Lease Accrual | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Initial Balance | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Ground Lease Payment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Accrued Ground Lease | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| LI Housing Tax Credit | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Remaining Applicable Basis | \$13,281,350 | \$11,727,432 | \$10,173,514 | \$8,619,596 | \$7,065,678 | \$5,511,760 | \$3,957,842 | \$2,403,924 | \$850,006 | (\$703,912) | |
| Annual Credit | \$1,553,918 | \$1,553,918 | \$1,553,918 | \$1,553,918 | \$1,553,918 | \$1,553,918 | \$1,553,918 | \$1,553,918 | \$1,553,918 | \$1,553,918 | |
| Partner Share of Credit | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | |

Proforma Analysis

| Page 4: Reversion (Termination) Accounts | | | | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------------------|
| Cash at Sale (using Cap Rates) | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Estimated Sales Price | | | | | | | | | | | \$24,064,096 |
| - Selling Costs | | | | | | | | | | | (\$1,443,846) |
| - Mortgage Balance | | | | | | | | | | | \$0 |
| Before Tax Cash on Sale | | | | | | | | | | | \$22,620,251 |
| - Capital Gains Tax on Sale | | | | | | | | | | | \$4,524,050 |
| - Write-off of Unamortized Fees | | | | | | | | | | | \$0 |
| After Tax Cash on Sale | | | | | | | | | | | \$18,096,201 |
| Calculation of Taxable Gain | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Project Sale Price | | | | | | | | | | | \$24,064,096 |
| - Selling Costs | | | | | | | | | | | (\$1,443,846) |
| - Remaining Depreciable Basis | | | | | | | | | | | \$0 |
| - Remaining Personal Property | | | | | | | | | | | \$0 |
| - Loss Carryforward | | | | | | | | | | | \$0 |
| Taxable Gain | | | | | | | | | | | \$22,620,251 |
| Tax (Shelter) on Gain | | | | | | | | | | | \$4,524,050 |
| Other Adjustments at Sale | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Unamortized Financing Fees | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Write-off Value of Financing Fees | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |

| Page 5: Syndication Pricing | | | | | | | | | | | |
|--|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 30 |
| Yearly Value of LIHTC | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$1,538,379 | \$0 |
| NPV of LIHTC if taken in Year 0 | \$9,452,672 | | | | | | | | | | |
| Limited Partner Share of Operating Tax Shelter | \$370,428 | \$370,428 | \$370,428 | \$370,428 | \$370,428 | \$370,428 | \$274,587 | \$196,610 | \$164,366 | \$130,625 | -\$1,530,919 |
| NPV of Operating Tax Shelter in Year 0 | \$2,003,039 | | | | | | | | | | |
| Limited Partner Share of Cash Flow | \$124,612 | \$278,060 | \$333,673 | \$391,509 | \$451,659 | \$514,215 | \$579,274 | \$646,934 | \$717,301 | \$790,483 | \$3,056,863 |
| NPV of Cash Flow in Year 0 | \$4,123,979 | | | | | | | | | | |
| Limited Partner Share of ATCF at Sale | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$17,915,239 |
| NPV of Reversion | \$0.00 | | | | | | | | | | |
| Total Yearly Value to Partnership | \$2,033,419 | \$2,186,868 | \$2,242,480 | \$2,300,316 | \$2,360,466 | \$2,423,022 | \$2,392,239 | \$2,381,923 | \$2,420,046 | \$2,459,487 | \$19,441,182 |
| Total NPV of LIHTC, Tax Shelter, Cash Flow | \$15,579,690 | | | | | | | | | | |

| Retail | |
|---|---------------------------------------|
| Inputs | Moderate Cons. Costs, rents, Cap Rate |
| PROJECT OUTLINE | |
| Unit Type | Office |
| Total Retail Square Feet | 104,300 |
| Density (units per acre) | 17.46000 |
| Parking Spaces per Unit | 0 |
| Square Feet per Parking Space | 0 |
| Open Space (%of Parcel Size) (Zon.Req.) | 0% |
| Average Unit Size | 2500 |
| Common Area Percentage | 15% |
| Floor Area Ratio | 1 |
| DEVELOPMENT COST STRUCTURE | |
| Land Cost/SQFT | \$0 |
| Remediation cost/ SQFT | \$0 |
| Construction Cost/SQFT | \$141.00 |
| Parking Cost/Space | \$0.00 |
| Soft Costs as a % of Construction Costs | 0% |
| FINANCING STRUCTURE | |
| Required Debt-Coverage Ratio | 1.25 |
| Interest Rate (%) | 7.5% |
| Term (years) | 20 |
| Cap Rate | 0.08 |
| OPERATING COST STRUCTURE | |
| Stabilized Vacancy Rate | 5% |
| Expense Ratio (%) | 30% |
| RENTS (month/unit) | |
| Market | n/a |
| Affordable | \$4,167 |
| DEVELOPMENT SUMMARY | |
| Land Cost | \$0 |
| *Residential Units | 42 |
| Unit Square Footage | 104300 |
| CommonArea Square Footage | 15645 |
| Total Square Footage | 119945 |
| Residential Square Footage | 119945 |
| Parking Square Footage | 0 |
| (Residential) Construction Cost | \$16,912,245 |
| Parking Spaces | 0 |
| Parking Construction Cost | \$0 |
| Soft Costs | \$0 |
| Total Development Cost | \$16,912,245 |
| Project Value | \$16,912,245 |
| OPERATING SUMMARY | |
| Gross Scheduled Rent | \$2,086,000 |
| -Vacancies | -\$104,300 |
| -Expected Expenses | -\$625,800 |
| Net Operating Income | \$1,355,900 |
| VALUE PROPOSITION | |
| Bottom Lines | |
| Project Cost (from above) | \$16,912,245 |
| Supportable Mortgage | \$11,058,169 |
| Required Initial Cash (Gap) | \$5,854,076 |
| Effective Loan to Value | 65.4% |
| Project Value from Cap Rate | \$16,948,750 |
| Net Gain or Loss | \$36,505 |

Credits

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Introduction

After developing out of the postwar boom in American suburbia, Cherry Hill experienced several decades of expansion and change that led to the area's current conditions. Looking forward to the coming decades of growth, Cherry Hill is committed to the availability of resources for future generation and preserving the integrity of natural systems. This plan aims to serve the area's economic, environmental and social well-being while not compromising the quality of life of future generations.

Introduction



ABRAHAM BROWNING'S CHERRY HILL FARM, C. 1875



CHERRY HILL MALL, C. 1958

History of Cherry Hill

Cherry Hill was first settled as a part of Gloucester County in the 17th century and achieved modest success as an agrarian center and mill town. In 1844 the town officially incorporated as Delaware Township, soon to be a part of what would become Camden County. Helping inspire New Jersey's "Garden State" nickname, Delaware Township grew as an increasingly successful farming town. Just as western Pennsylvania prospered by supplying coal and steel to the industrial city of Philadelphia, Delaware Township grew out of its ability to supply produce to the Campbell's Soup Company in Camden.

The 1920s afforded Delaware Township its first wave of suburbanization. As metropolitan Philadelphia expanded, early tract housing developed in the township, but it remained less developed than many of its neighbors. Its growth would not hit its full stride until the 1940s.

In the early 1940s developers took advantage of inexpensive land, and the township had become a regional destination. Resort development took off, including hotels and casinos on Abraham Browning's former Cherry Hill Farm, and culminating with the construction of the racetrack at Garden State Park. After World War II, returning GIs flocked to Delaware Township rather than returning to South Philadelphia or Camden. Many professionals from reputable Camden companies like Campbell's and RCA sought out easy suburban living outside of the city. Delaware Township was becoming the quintessential mid-20th-century American suburb.

Delaware Township had earned a reputation as a regional destination, and needed to open a new U.S. Post Office. Since New Jersey already had a town by the name of

Delaware, renaming the township was considered. Given the regional association of destinations like the Cherry Hill Shopping Center (which would become the mall) and Cherry Hill Inn, and developments like Cherry Hill Apartments and Cherry Hill Estates, an easy conclusion was drawn. In 1961 Delaware Township voted by referendum to rename itself Cherry Hill.

Cherry Hill continued to grow in the 1970s and '80s, touting excellent schools, support of the arts, an enhanced park system and a robust business presence, including Lockheed Martin, Commerce Bancorp and Subaru of America. Though the racetrack ceased operations in 2001, the township maintains its regional centrality.

Project Discussion and Boundaries

The project site is approximately within what is commonly known as the “Golden Triangle.” For the purposes of this project, the study area is bounded by Route 38 to the north, the New Jersey Transit Atlantic City rail line to the east, the Cooper River to the south, and Cavalry Cemetery to the west. The site’s location at the nexus of two major state thoroughfares has guided its development over the years and continues to position it strategically within the greater region today. The site lies just west of the former racetrack, which is currently undergoing redevelopment as a regional lifestyle center.

Project Approach

SUSTAINABILITY

Cherry Hill is committed to the availability of resources for future generation and preserving the integrity of natural systems. This plan aims to serve the area’s economic, environmental and social well-being while not compromising the quality of life of future generations.

GUIDING PRINCIPLES

- Promoting multimodal transportation and thoroughfares that serve social and economic functions, in addition to mobility.
- Fostering a symbiotic relationship between residents and the area’s natural features.
- Encouraging an enduring sense of place; a place must be loved, or else it will be abandoned or replaced.
- Promoting economic vitality through plans that are flexible and adaptive to changing circumstances.

PLANNING PROCESS

The project team will:

- Identify existing conditions and trends, and the issues and opportunities they raise as a framework for our recommendations.
- Develop a concept for change by investigating best practices and case studies where sustainability and smart growth have been effectively applied.
- Generate alternatives and recommendations focused on creating a sustainable suburbia.

Site Analysis

In order to figure out how to diversify Cherry Hill's transportation usage, take advantage of and protect its natural features, and improve the area's economic position, it is necessary to fully understand the place as it now stands. While the area presents many opportunities for positive growth—such as a fertile stream network and a growing young population—numerous barriers to progress exist, both physical (fences, railroad tracks, difficult-to-cross roads) and nonphysical (institutional land uses unlikely to change).

Site Analysis

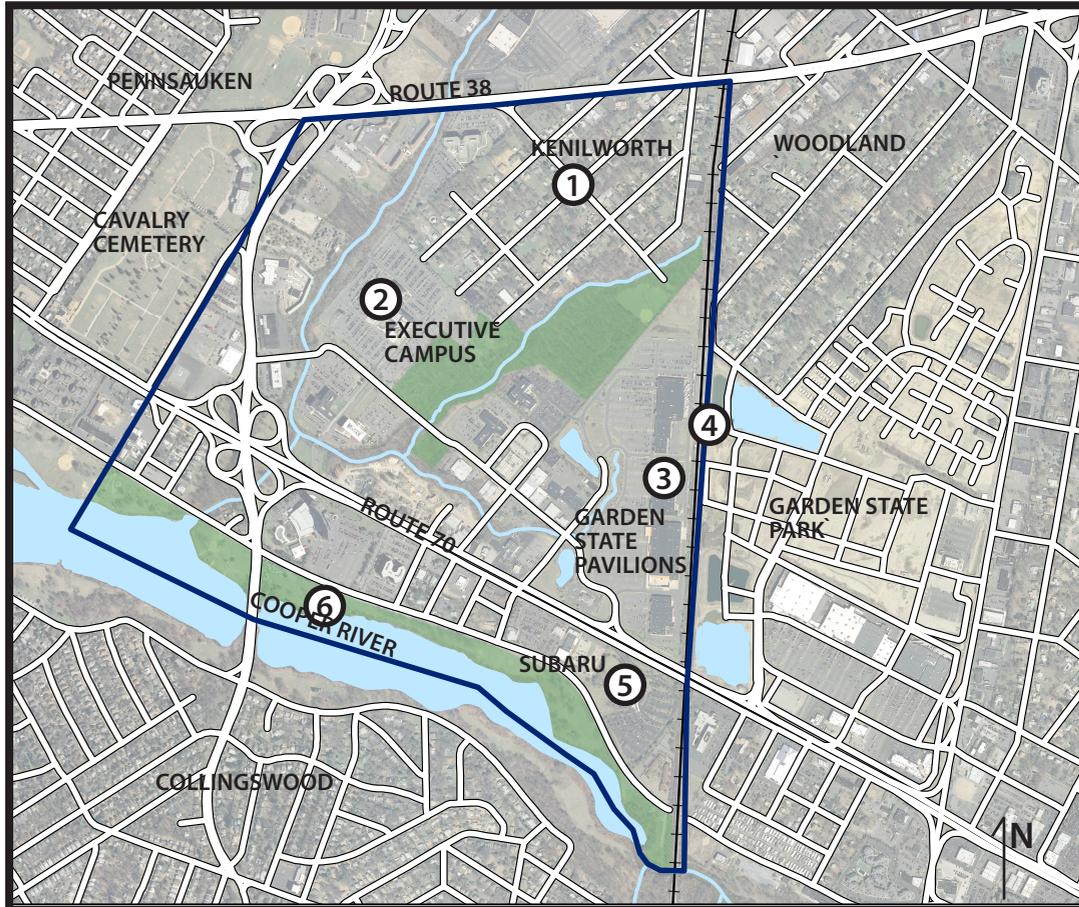


0 500 1,000 2,000 Feet

Project Boundaries

The project area is approximately 1,000 acres in the northwest of the Township of Cherry Hill, New Jersey, approximately within what is known as the “Golden Triangle.” The site is north of the Cooper River and south of Route 38, west of the New Jersey Transit Philadelphia-Atlantic City line and east of the Calvary Cemetery. The project area is a suburban redevelopment area that includes a portion of a former state-licensed horse racing facility, an old light-industrial area, office and hotel sites, residential neighborhoods, a river and stream system, and the New Jersey Transit Cherry Hill Station. Adjacent to the area is a phased development of the remainder of the former horse racing facility into a planned community, a retail “power center,” and a retail “lifestyle center” and a cemetery. The project area borders two other municipalities—Pennsauken and Haddon townships.

Site Map



LEGEND

- | | | |
|-----------------------|--------------------|--------------------------|
| ① Kenilworth | ② Executive Campus | ③ Garden State Pavilions |
| ④ Cherry Hill Station | ⑤ Subaru | ⑥ Cooper River Park |

Site Map

The Golden Triangle is bordered by residential and commercial areas to the north and east, the Cooper River to the south, and Calvary Cemetery to the west. The site is characterized by residential and commercial areas and scattered open space.

KENILWORTH

- ① A primarily residential neighborhood in the northeast portion of the Golden Triangle. There are some mixed-use commercial-residential buildings scattered throughout the neighborhood.

EXECUTIVE CAMPUS

- ② An office park with access along Route 70 and Route 38. This commercial area is composed of seven buildings. Tenants include Lockheed Martin Advanced Technology Laboratories, Pinnacle Foods Corporation and the New Jersey Department of Transportation.

GARDEN STATE PAVILIONS

- ③ A commercial area with access along Route 70 and King Avenue characterized by suburban strip mall development and expansive surface parking.

CHERRY HILL STATION

- ④ Located at the western edge of the Golden Triangle. The only access to this station is through Garden State Pavilions.

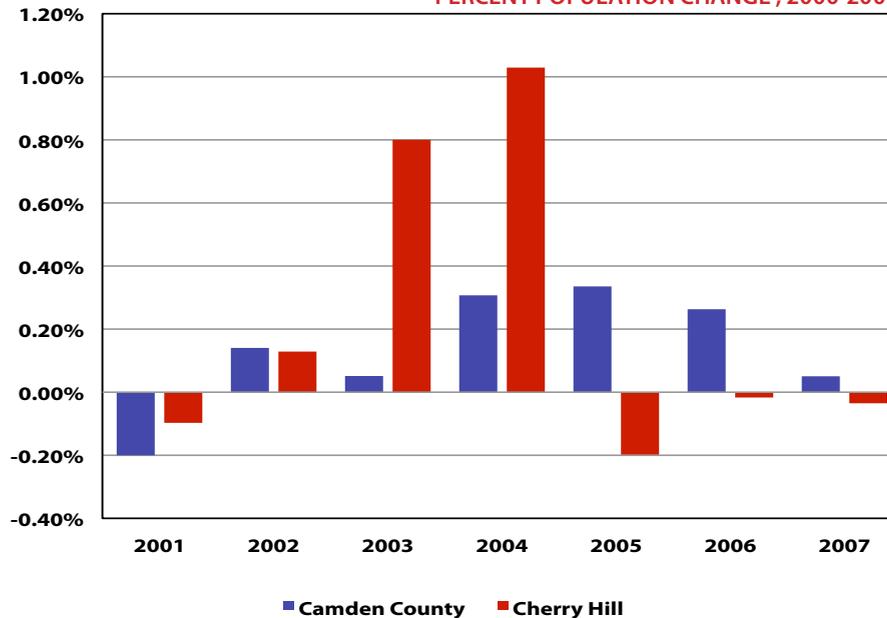
SUBARU

- ⑤ An economic anchor for the region, it is located in the southeast of the Golden Triangle near Garden State Pavilions.

COOPER RIVER PARK

- ⑥ A Camden County-owned and -maintained public park. This park forms the edge between the Golden Triangle and the Cooper River.

PERCENT POPULATION CHANGE, 2000-2007



Existing Conditions

POPULATION

Until 2002, Cherry Hill served as a driver of Camden County's population growth. This trend ended in 2003, and population declined through 2007. Between 2000 and 2007, the population of Cherry Hill grew by about 1.6 percent. In contrast, Camden County grew by 3.1 percent and New Jersey grew by 3.4 percent. The year-to-year fluctuations in growth patterns experienced by the township, county and state, however, appear to be unrelated to one another.

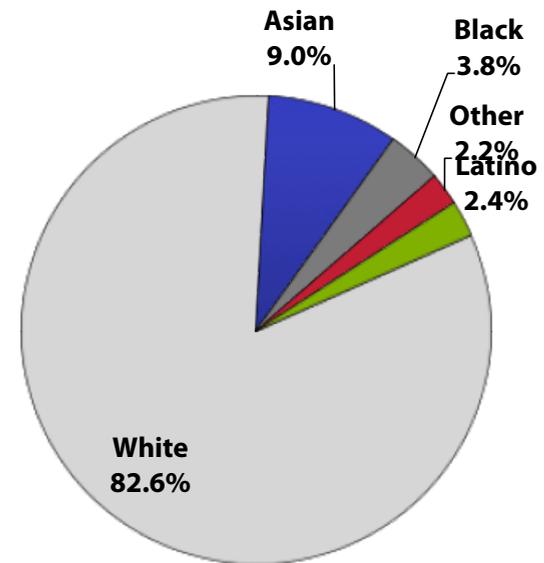
(Source: US Census American Communities Survey)

RACIAL COMPOSITION

Caucasians represent the township's largest racial category, though less so each year. The Asian population has witnessed a three-fold increase in Cherry Hill over the last 25 years. The area's African-American and Latino populations both doubled during the same time period.

As is true elsewhere, traditionally underrepresented racial demographics represent a substantial portion of the population in Cherry Hill. Housing and commercial design must mirror this change in order to adequately capture all market potential.

(Source: US Census American Communities Survey)



CHERRY HILL RACIAL COMPOSITION, 2005

AGE CHANGE

Cherry Hill, despite being a bedroom community with strong schools, has a low school-age population relative to Camden County and the nation. School-age children comprise just 24.9 percent of Cherry Hill’s population, compared to 27.8 percent of Camden County’s and 27.5 percent of the nation’s, according to the U.S. Census Bureau’s American Community Survey three-year average for 2005-2007. This age cohort is shrinking as a share of the total population in Cherry Hill, Camden County and nationally. In 2000, 25.6 percent of Cherry Hill residents were under age 19, compared to 29.2 percent in Camden County and 28.6 percent nationally.

Residents ages 65 and older comprise a larger share of Cherry Hill’s population than Camden County’s or the nation’s. According to 2005-2007 estimates by the American Community Survey, the elderly make up 17.4 percent of Cherry Hill’s population, compared to 12.2 percent of Camden County’s and 12.5 percent of the nation’s. As a share of Cherry Hill’s total population, the elderly have remained largely stable since 2007.

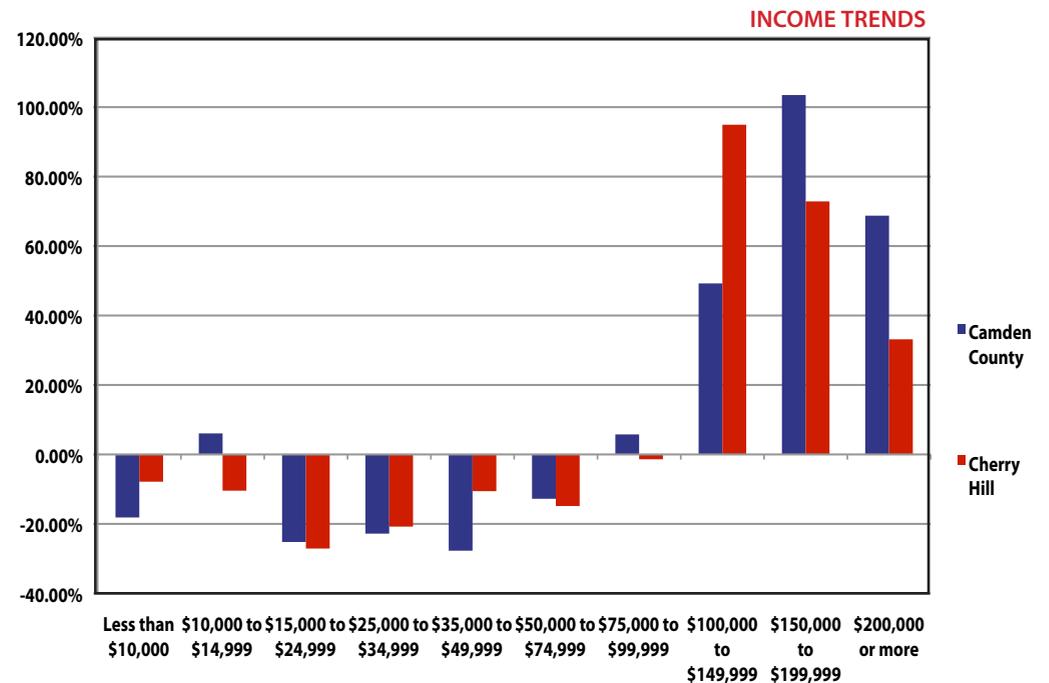
(Source: US Census American Communities Survey)

INCOME TRENDS

Between 2000 and 2007 Cherry Hill saw a dramatic rise in income. The highest three household income brackets, those more than \$100,000, grew by 10.4 percent, while the percentage of households below \$100,000 saw modest declines. By 2007 the median income rose to \$83,143 and average household income reached \$102,632. The township’s poverty rate in 2007 was 4.5 percent, well below the national rate of 11.3 percent.

In light of the area’s apparent income discrepancies, the township is best served through flexible redresses of community and economic need. Public services have the opportunity to focus on developing local strengths, particularly with respect to the township’s schools.

(Source: US Census American Communities Survey)





IMAGES (LEFT TO RIGHT):

Cooper River Stream Network; Garden State Pavilions; Kenilworth Neighborhood

ENVIRONMENTAL CONDITIONS

Poorly draining soils, extensive commercial developments and large surface parking lots within the study area create a lot of impervious surfaces, posing a challenge to stormwater management. Some eutrophication, or an excessive increase in chemical nutrients in soils, has occurred in this area that once served as an agricultural engine for Camden County. There are also five environmentally compromised sites within the project area, as cited by the New Jersey Department of Environmental Protection (NJDEP).

Hydrology within the site falls under the purview of NJDEP regulations, and includes the Cooper River and a series of streams. The wetlands qualify as “intermediate resource value,” resulting in 50-foot buffers. The streams are regulated within 50 feet of the top of the bank, and the Cooper River and some of its tributaries are regulated as a flood-hazard area as defined by the FEMA 100-year flood elevation maps. The goals of their stormwater management practices are to reduce flood damage, maintain groundwater recharge, reduce stormwater runoff and minimize pollutants in stormwater runoff.

ZONING

Zoning regulates land use by designating districts—such as residential, business and industrial—where specific uses are permitted and others prohibited. The idea is to avoid incompatible activities in proximity to one another and to embrace and preserve the livability of the community. An effective zoning code can encourage beneficial land use patterns for the present and future occupants of Cherry Hill. Compliance by all can result in maintenance of a

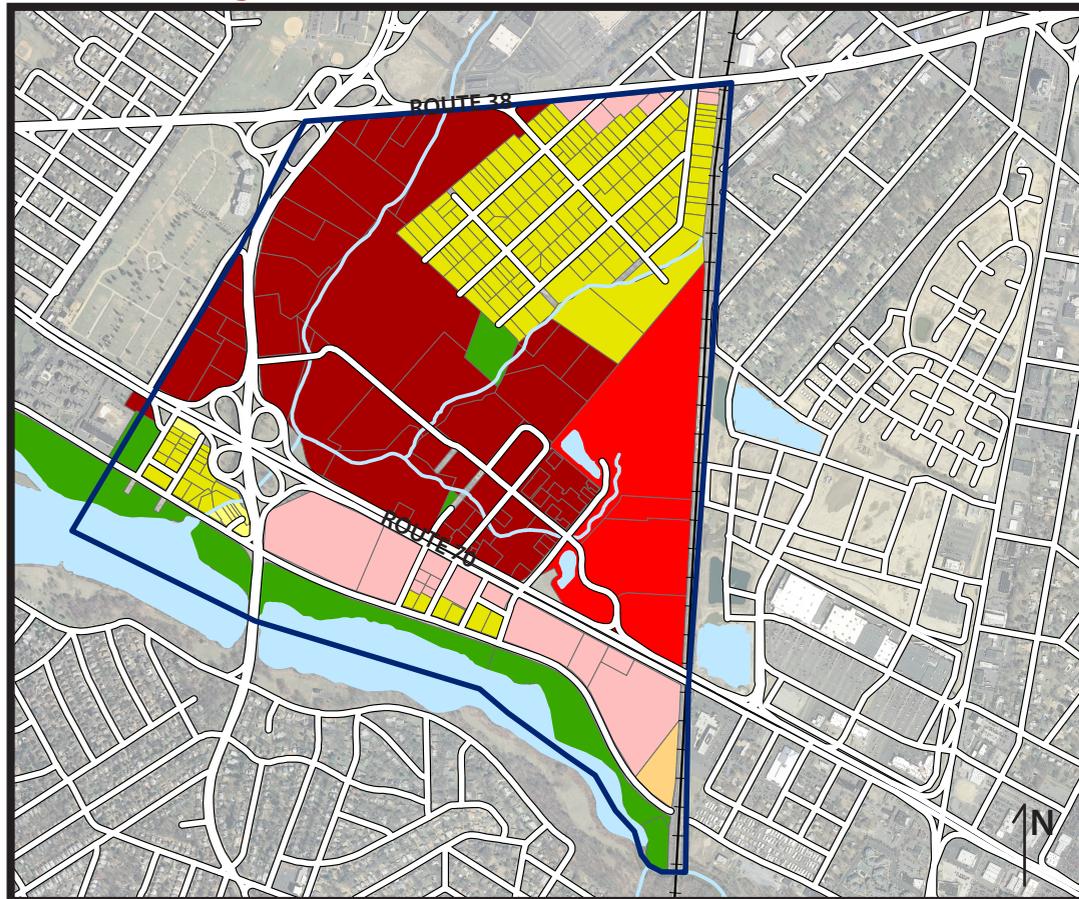
high quality of life, stable property values and physical integrity of the environment.

In New Jersey municipalities are given zoning authority by a state statute called the Municipal Land Use Law. There has been a zoning ordinance in the area now known as Cherry Hill since 1947. The current zoning ordinance was drafted in 1976 and amended as needed. The project area is located within the largest commercially zoned district within the municipality and can function as a commercial hub in the region. The site does include many nonconforming uses, and is currently zoned primarily for single-use districts.

COMMERCIAL SPACE

The project area features abundant commercial space, much of which is currently vacant. The Garden State Pavilions were built in December 1998 with 400,000 square feet of commercial space. It was commercially viable for some time, but an oversaturation of big-box retail coupled with the opening of the adjacent \$500 million Garden State Park “lifestyle center” has left Garden State Pavilions a potentially harmful and aesthetically bland dying suburban strip mall. Some commercial space also exists along routes 70 and 38.

Current Zoning



LEGEND

| | | | | | |
|---|---------------------|---|-----------------------------|---|-----------------------------|
|  | 01 Limited Office |  | R2 Residential |  | R7 Multi-Family Residential |
|  | B2 Highway Business |  | B3 Shopping Center Business |  | B4 Regional Business |
|  | IN Open Space | | | | |

ZONING

Compliance with a sound zoning ordinance can encourage beneficial land use patterns for the present and future occupants of Cherry Hill. Doing so can result in the maintenance of a high quality of life, stable property values and physical integrity of the environment. The idea is to avoid incompatible activities in proximity to one another and to enhance and preserve the livability of the community.

Current Zoning in the Golden Triangle

01: LIMITED OFFICE

Minimum 10,000-square-foot lot. Minimum frontage 100 feet. Maximum height 35 feet.

R2: RESIDENTIAL

Minimum 9,200-square-foot lot, or approximately 4.7 units per acre. Minimum frontage of 80 feet. Maximum height 35 feet. No building design and site plan review required.

R7: MULTI-FAMILY RESIDENTIAL

Minimum 10 acre lot. Maximum height 35 feet.

B2: HIGHWAY BUSINESS

Minimum 20,000-square-foot lot. Minimum frontage 100 feet. Maximum height 35 feet.

B3: SHOPPING CENTER BUSINESS

Minimum 1-acre lot. Minimum frontage 200 feet. Maximum height 35 feet.

B4: REGIONAL BUSINESS

Minimum 20,000-square-foot lot. Minimum frontage 150 feet. Maximum height 60 feet.

ZONING TRENDS IN CHERRY HILL

The majority of the residential zoning in the project area is zoned R2, which calls for minimum lot sizes of 9,200 square feet, or approximately 4.7 units per acre. This zoning designation results in low densities and sprawl, which is typical of suburbia. Within the residential neighborhood of Kenilworth are a number of nonconforming uses. Manufacturing and utility uses in such a neighborhood, as seen throughout Kenilworth, may be considered undesirable by many residents.

Site Access

TRANSIT

The site is serviced by New Jersey Transit and PATCO, but the existing transit network is rather fragmented. The train station is inaccessible, located behind the Garden State Pavilions, and there are poor biking and walking options. Finally, anecdotal evidence abounds that traffic congestion is common on routes 38 and 70.

RESIDENTIAL AREAS

There is a high level of pedestrian use in residential areas. Residents can be seen strolling, jogging, biking, and walking their pets. Residents walk by themselves or in pairs. Park trails along the Cooper River are popular places to walk and jog. The park trails can accommodate large groups of joggers.

Sidewalks are disconnected and not well maintained in residential areas and parks. The residential neighborhoods do not have a well-connected sidewalk system. Only lots with recently built structures and some commercial buildings have sidewalks. This forces pedestrians to walk on the street, which is used for on-street parking.

Crosswalks are not clearly marked. The presence of crosswalks is important for safety because there are some awkward intersections. The grid of the Kenilworth neighborhood is on a diagonal, so awkward intersections are created where the diagonal shift occurs.

COOPER RIVER PARK

In the park, the trail is clearly marked, but it is adjacent to Park Boulevard, which has a busy intersection that divides the trail. There is no buffer between the pedestrian trail and the street. The trail crossing at the intersection is inconvenient for pedestrians. Cuthbert Road, the street that must be crossed, is wide and signage that directs pedestrians at the crosswalk does not work.

COMMERCIAL AREAS

In contrast to the residential areas and the park, the commercial enclaves are not popular places for pedestrian use, but they have amenities that are useful for pedestrians. There is better sidewalk connectivity, although many of the sidewalks connect to parking lots. Crosswalks are clearly marked. Landscaping, benches and garbage cans can be found along the sidewalks of the

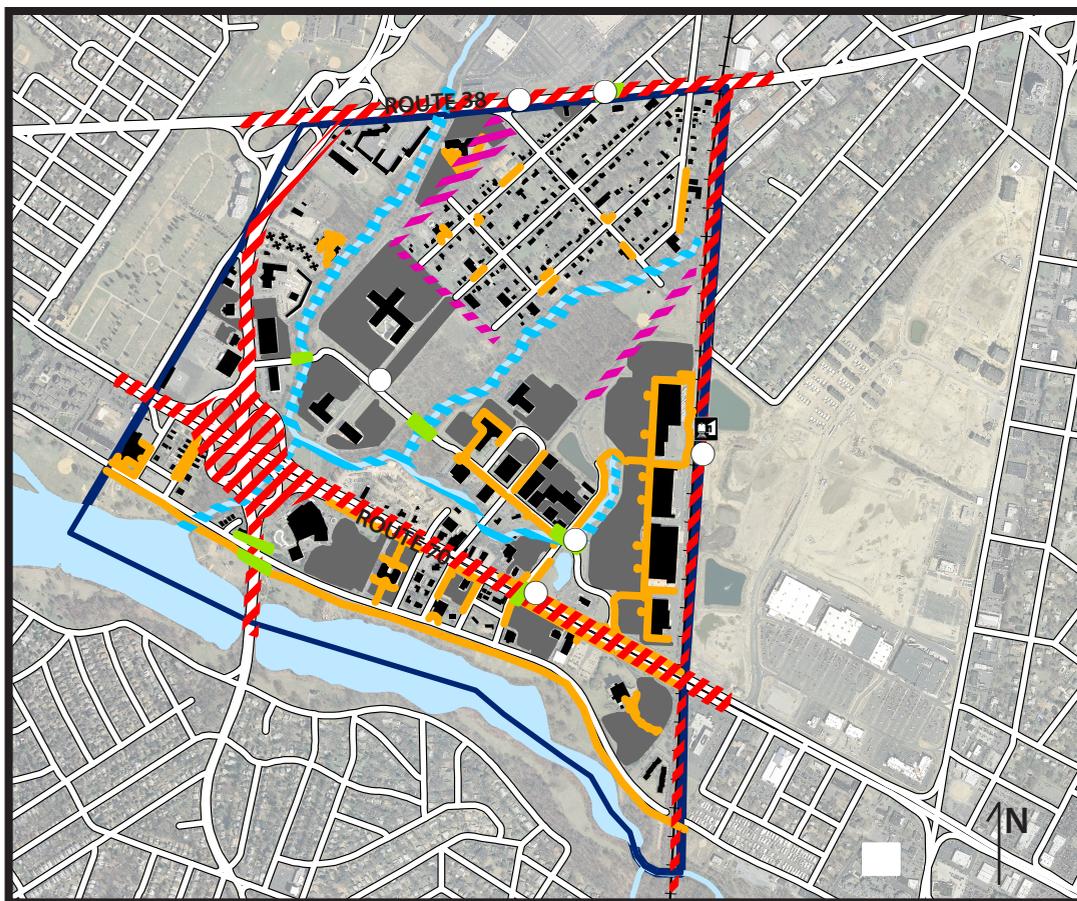
shopping center. The lampposts are still more suited for car use than pedestrian use.

Bike paths are not marked along streets, and there is no network of bike lanes. Bikers are forced to share space with cars. There are some bike racks at the train station to provide bike storage.

Opportunities

Despite some of the project area's shortcomings, it is fortunate to have a number of beneficial features to build on. The Cooper River and natural stream network provide an amenity for residents and commercial tenants alike. Green space along the river and streams provides a pleasant place for walking or biking paths as well as recreational space. Effectively taking advantage of these waterways and open space can add value to property values and increase the tax base. Additionally, there is a strong and steady residential base, including a growing population aged 18-to-24 to build upon. This demographic, part of what is known as the millennial generation, is "mostly single, highly social, more likely to be renters, ethnically and culturally diverse, and green" according to Zimmerman Volk & Associates (Volk 2007). This high-achieving demographic and future generations will look to live near transit and recreational amenities. The project area is located in close proximity to Philadelphia, another valuable asset. It is also fortunate to have the infrastructure for an extensive transit system serviced by New Jersey Transit and PATCO, which connects residents to Philadelphia and the metropolitan region at large.

Barriers



LEGEND



BARRIERS

An understanding of existing barriers and pathways helps illuminate problems related to connectivity and site circulation.

Barriers

There are barriers that prevent connectivity in the Golden Triangle. These barriers divide the site by preventing accessibility for pedestrians, bikers and cars. There are three types of barriers: transit barriers, natural barriers and man-made barriers. Even though the barriers prevent connectivity, there are limited ways to cross these barriers.

TRANSIT

Transit barriers occur at the major highways in the Golden Triangle, such as Route 38, Route 70, Cuthbert Road and at the New Jersey Transit rail line. The streets are wide and the cars travel at high speeds along these roads. It is difficult for cars to navigate these highways, with challenges both entering and exiting them. There is also poor signage to indicate when and where pedestrians can cross these streets. The rail tracks cannot be crossed.

NATURAL

Natural barriers also divide the site. Streams from the Cooper River branch into the site and form delicate, natural environments that are difficult to cross.

MAN-MADE

Man-made barriers prevent connectivity, especially between residential and commercial areas. Fences are erected between Kenilworth and the Executive Campus and Garden State Pavilions. Although a fence is required around the water tower, these fences prevent connections to other parts of Garden State Pavilions.

PATHS OVER BARRIERS

Paths exist at crossings along existing roads. However, these crossings are limited and do not occur frequently.

SIDEWALKS

In addition to these crosswalks, there is a network of sidewalks for pedestrians. Sidewalk connectivity is greater in commercial areas and around Cooper River Park. Sidewalks are not well connected in residential areas. The sidewalks do not connect the places where people live to destinations like commercial areas or open space.

BUS STOPS

There is public transit access to the site through bus stops and the New Jersey Transit train station. Most of the transit access occurs at a barrier. After arriving at the Golden Triangle, the range of access to the site is limited.

Susceptibility Definition

VERY LOW

Residential area characterized by single-family detached housing; infrastructure, like transit or utilities; site ownership by institutions unlikely to move, like a churches or schools.

LOW

Residential area characterized by multi-family structures and rental units.

MEDIUM

Commercial area characterized by hospitality industry, like hotels and motels; commercial area with large buildings that are in good shape and have had recent (within the last 10 years) investment or change in ownership; mixed-use area with irregularly shaped commercial property.

MEDIUM HIGH*

Commercial area characterized by midsize buildings; property in which investment has been made within the last 20 years.

HIGH

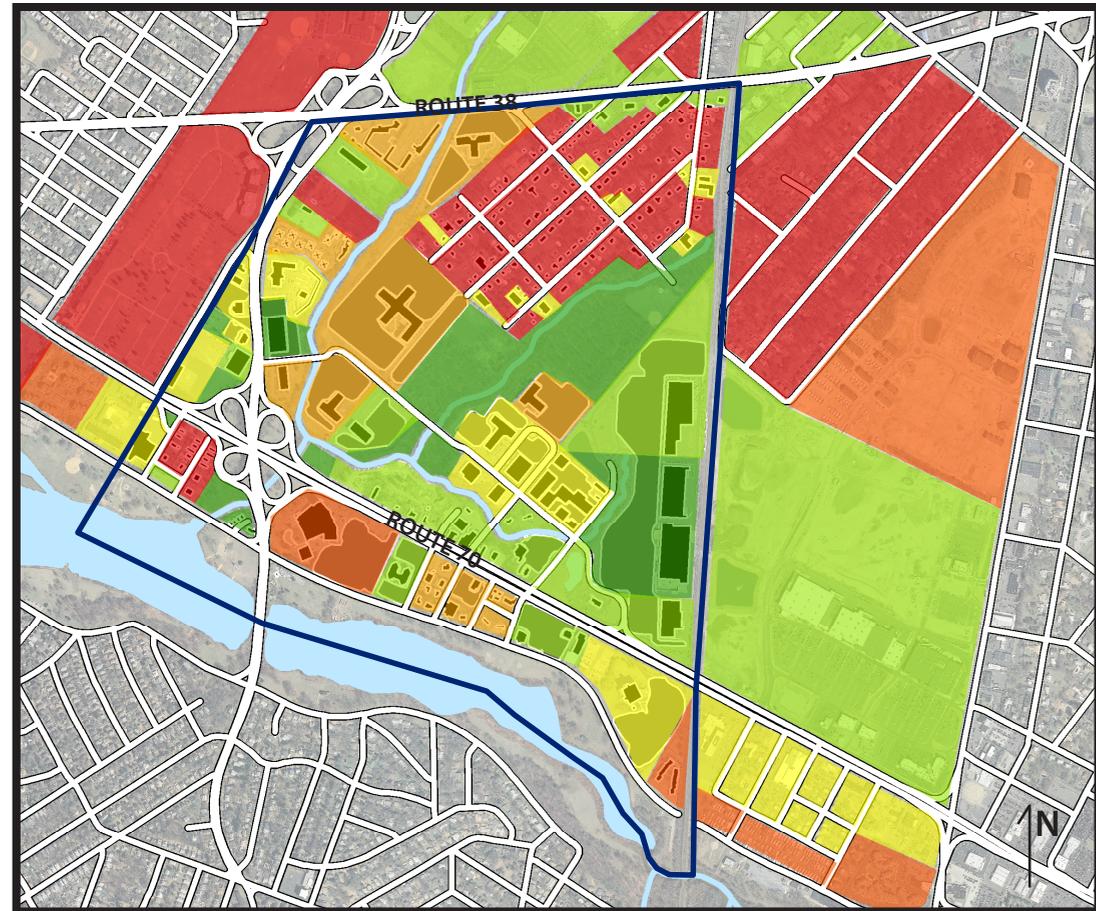
Commercial area characterized by small structures and large surface lots; property in which investment has been made within the last 30 years; property at which immediate neighbors are vacant commercial structures; property owned by the state.

VERY HIGH

Open space; vacant commercial property; property in which investment has not been made within the last 30 years; property owned by the township.

** Subaru is an important institution for Cherry Hill and the Golden Triangle. The use of the site has low susceptibility to change, but Subaru can play a important role in influencing the change in the Golden Triangle. It can be a catalyst for changing the form of the area.*

Susceptibility to Change



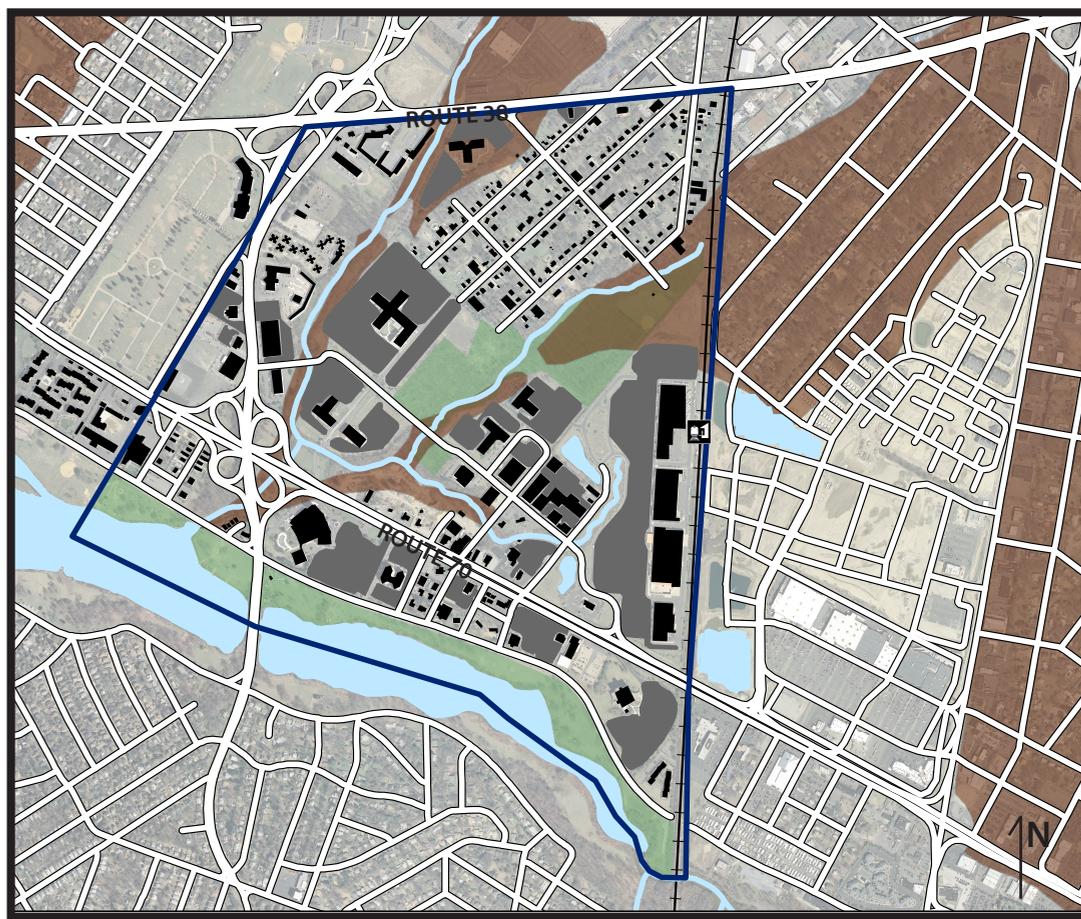
LEGEND



SUSCEPTIBILITY TO CHANGE

The purpose of this analysis is to identify where future change may occur based on existing conditions. Future real estate development will be guided by the susceptibility to change of a site and its immediate neighborhood.

Figure Ground



LEGEND

- Buildings
- Surface Parking
- Open Space
- Poorly Draining Soils

FIGURE GROUND

The degradation of water quality begins when sites are covered with greater than 10% of impervious surfaces. A figure ground map depicts the current extent of impervious surfaces on the site.

FIGURE GROUND

This map shows the permeable and impermeable surfaces of the Golden Triangle.

The impermeable surfaces are composed of buildings, parking lots, local roads and highways. The proportion of parking lots to buildings is an important indicator of how space is used. Impervious surfaces make up 32 percent of the total site area. (More than 10 percent impervious surfaces causes water quality degradation.) Parking lots make up 15 percent of the total impervious surface (see table). This is about half of the total impervious surface of the Golden Triangle.

The amount of paved surfaces in the site has implications related to stormwater management and the infrastructure of the site. It is also important to consider the type of soils in the site and their permeability. The map identifies the areas of the Golden Triangle with soils that do not drain well. This is an important factor to consider in conjunction with impermeable surfaces and stormwater management.

| Impervious Surface | Area (Sq. Ft.) |
|------------------------------------|-------------------|
| Existing Buildings | 1,804,334 |
| Parking Lots | 3,383,774 |
| Highways | 1,017,520 |
| Local Roads | 1,053,100 |
| Total Impervious Surface | 7,258,728 |
| | |
| Total Site Area | 22,667,391 |
| | |
| Percent Impervious of Total Site | 32% |
| Percent Parking Lots of Total Site | 15% |

Alternatives

Before proposing changes for the Golden Triangle, the site analysis and existing conditions are used to develop alternatives for land use and infrastructure. These plans, which lay out different elements of growth strategy, can eventually be combined to create a stronger, smarter development plan.

Alternatives

Summary

Based on our site analysis and existing conditions data, we developed three plan “alternatives” to guide our concepts for development. The first alternative focuses on infrastructure, while the second two alternatives are land use concepts building on the infrastructure concept.

From these three alternatives, and based on conversations with representatives from Cherry Hill Township, we chose plan elements that would inform our proposal for development.

Infrastructure Alternative: Creating Accessibility

GREEN SPACE AND STREAMS

The concept proposes the creation of a network of green spaces which will span either side of the streams, protect the sensitive wetlands around them and serve as parks for recreation.

ROUTES 38 AND 70

In order to address pedestrian connectivity issues, we are proposing the transformation of routes 38 and 70 into boulevards. This will help calm traffic on both highways, as well as restructure the highways to better accommodate pedestrians as they cross from one side to another. The cloverleaves on the intersections of routes 38 and 70 and Cuthbert Road, which also constitute boulevards, are removed in order to de-fragment the study area.

CUTHBERT ROAD

The concept proposes the shift of Cuthbert Road from its current location (represented by the dashed outline) further inland in order to render the plots between Haddon Road and the streams on the west end of the study area more suitable for development.

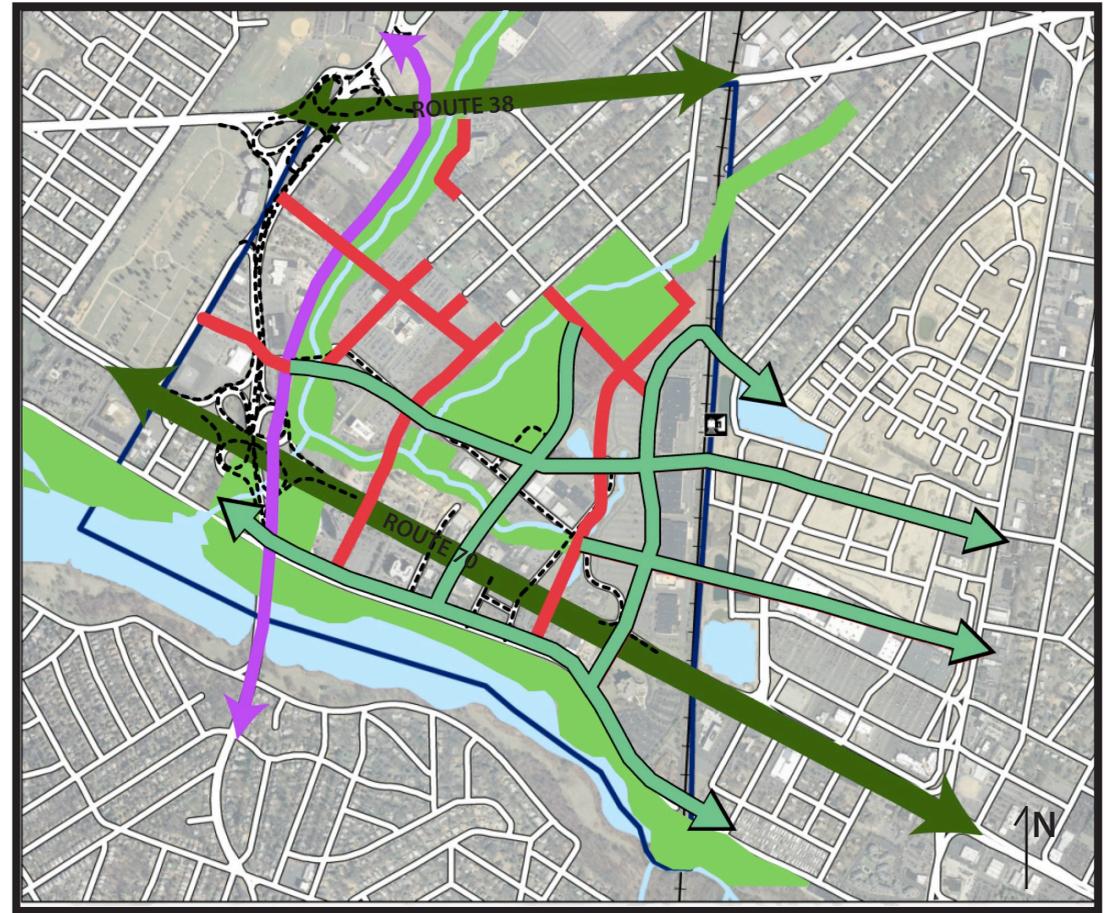
KING AVENUE AND NEW GRID

We also propose the extension of the current road network (proposed streets and green streets) in order to increase connectivity within the study area, reduce congestion on routes 38 and 70 by providing alternative east-west connections, and create more walkable block sizes and foster connection with retail in the Garden State Pavilions.

GREEN STREETS

Finally, we are proposing a network of green streets (part of the overall grid expansion) in order to help address some of the environmental and stormwater issues. This will also increase connection and accessibility to the green infrastructure such as Cooper River Park and the proposed network of green spaces.

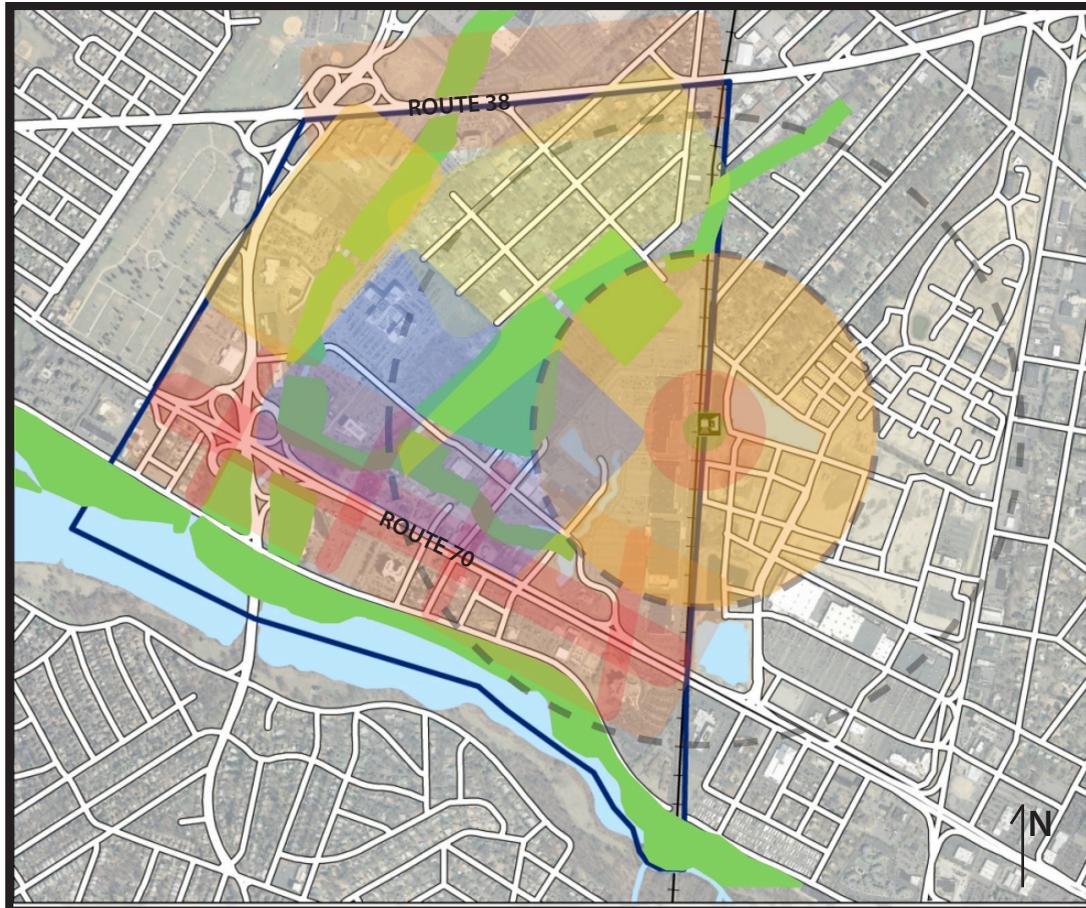
Creating Accessibility



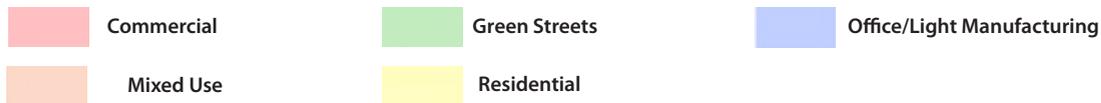
LEGEND

| | | | | | |
|--|---------------|---|------------------------|---|------------|
|  | Green Spaces |  | Green Streets |  | Boulevards |
|  | Expanded Grid |  | Relocated Culbert Road | | |

Land Use Concept 1: Repositioning Retail Highways



LEGEND



Repositioning Retail Highways

GREEN SPACE

The green space network laid out in the infrastructure alternative lays the foundation for Land Use Concept 1. This network of green space is based on the natural features of the land—Cooper River to the south, and streams throughout the site—and is focused on preserving those natural features.

ROUTE 70 BOULEVARDIZATION

Commercial development will be focused on routes 70 and 38, which are ripe for boulevardization. In particular on Route 70, boulevardization would incorporate traffic-calming measures to enhance the pedestrian environment and promote street-level retail activity. Developing commercial activity along 70 would also include improving connectivity between the green network to the north and the Cooper River Park to the south.

TRANSIT-ORIENTED DEVELOPMENT

We would like to see transit-oriented development around the train station, with the quarter-mile radius acting as a hub for mixed use. Within a half-mile radius—a very walkable distance for most—is most of the Kenilworth neighborhood and half of the newly boulevardized Route 70. At the center of this mixed-use development is the train station and an accompanying intensely commercial use.

RESIDENTIAL KENILWORTH

Kenilworth is now and should remain the residential “home base” of the region. In accordance with the expressed wishes of the neighborhood, we do not seek to change the uses in this area, but we want to enhance connectivity to the mixed-use development around the train station. Being within a half-mile of the station, residents should be able to easily take advantage of it. While we acknowledge that some in Kenilworth worry about the increased traffic that could come with increased connectivity, we hope that as transit-oriented development progresses, residents will begin to enjoy their easy access to it.

MIXED-USE DEVELOPMENT

We see the opportunity for further mixed-use development along the northern part of Cuthbert within the site study area. This development, hopefully of a higher density than what exists there now, will improve connections between routes 38 and 70 once those two streets are more active, pedestrian-friendly commercial centers.

JOBS

The center of the site is ripe for development of office and light manufacturing jobs. This use builds on the existing infrastructure, and can take advantage of the boulevard on 70. Additionally, most of the office buildings are within a half-mile of the train station, and that walkability should be better utilized.

Localized Sustainability

GREEN SPACE AND TOD

Our second land use concept is again predicated upon the green space network that is vital to ensuring sustainability in the area. From there we wish to develop an intensely mixed-use network within a quarter-mile radius of the train station. In this transit-oriented development, the train station is the hub for the entire neighborhood. This mixed use would incorporate both residential and retail, and would be surrounded at the half-mile radius level with somewhat more residential development—catching the Kenilworth neighborhood in its net.

MAIN STREET

At the heart of this mixed-use development, leading from Route 70 to the train station, we see the potential for a dense, urban main street. This entire stretch lies within easy walking distance of the train, and at the Garden State Pavilion site there lies roughly 43 acres of highly developable land. If developed at a high density, this land could function as a commercial hub for the region.

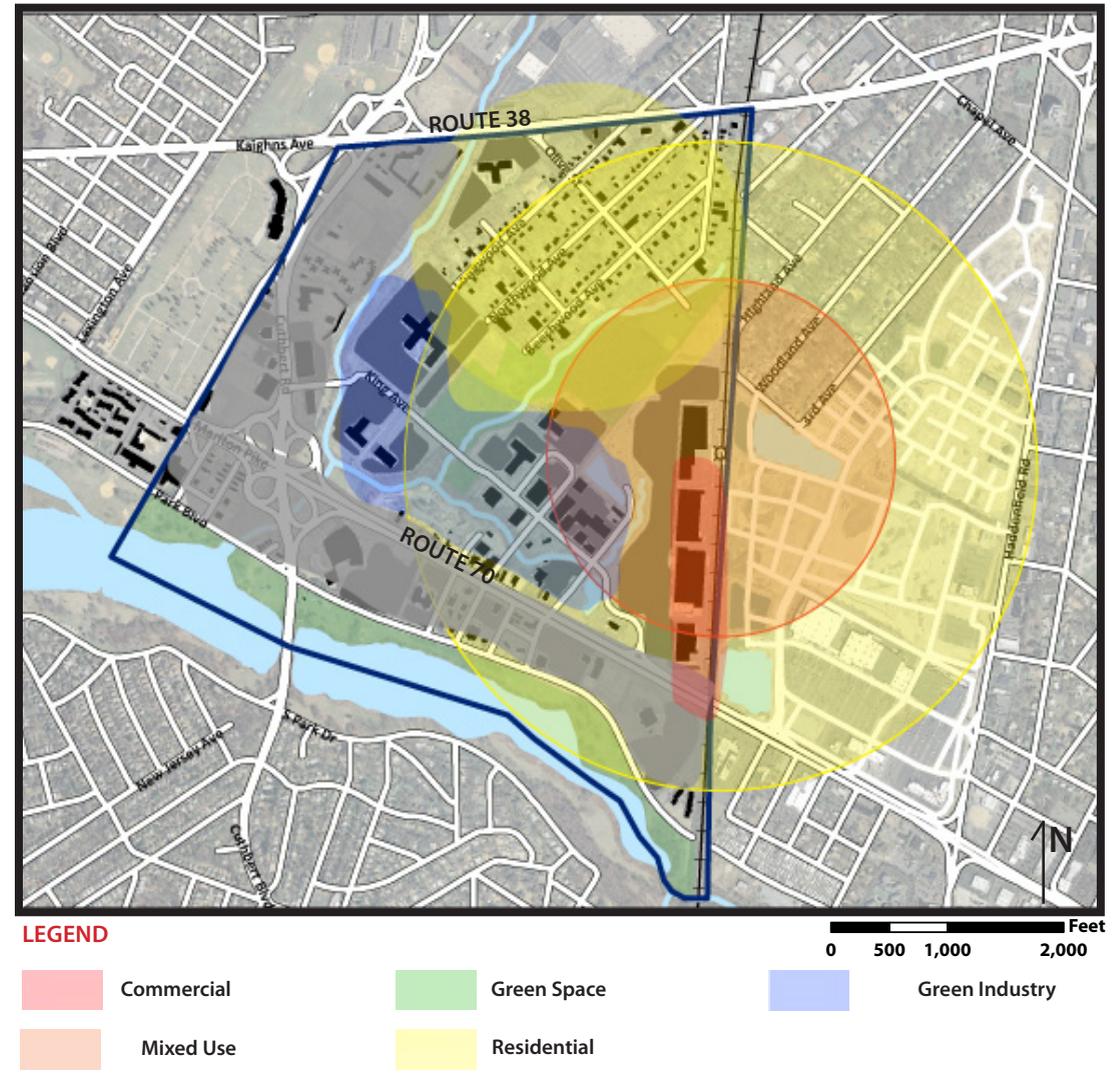
GREEN JOBS

Taking the previous land use concept a step further, we would like to see the office/light manufacturing jobs at the center of the site evolve into green industry jobs—21st-century jobs that will propel Cherry Hill's economy forward. Maybe these jobs are in production of solar or biomass energy. Maybe it's a site ideal for a facility like the Googleplex—the computing giant's sustainable California home base, which provides its employees opportunity to live, work and play in one place. Whatever the specific use, the focus should be on attracting jobs that are sustainable for the future.

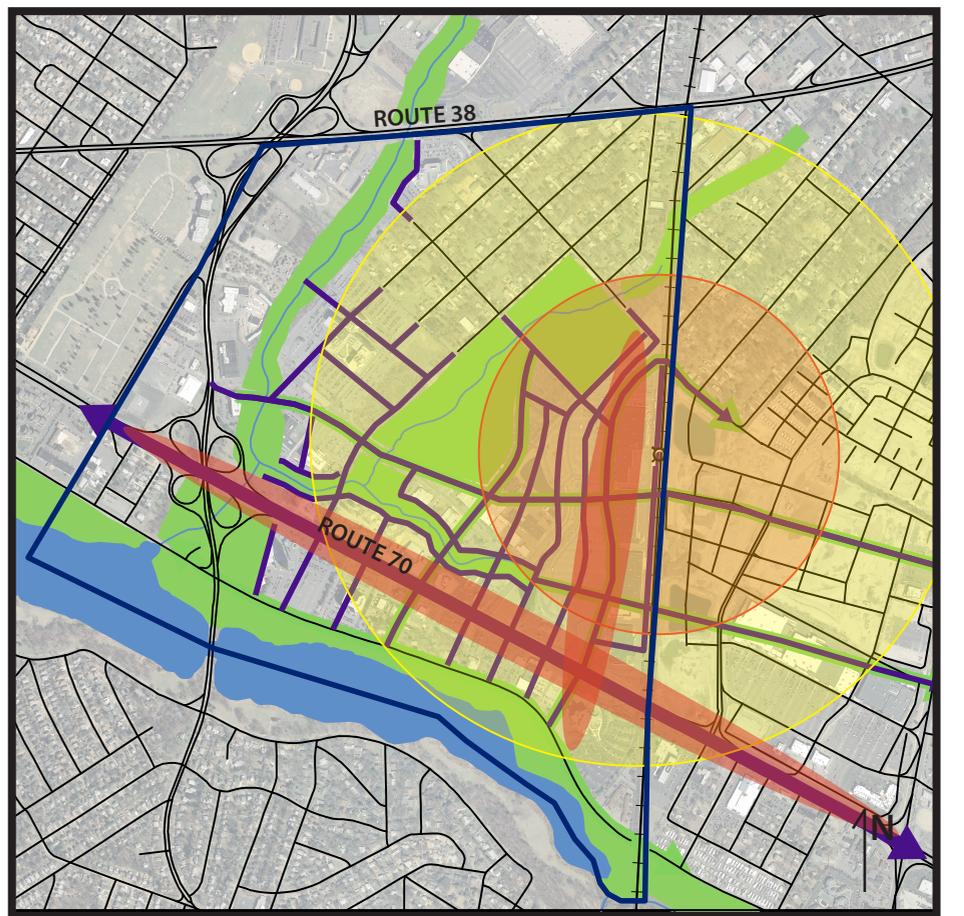
FLEX SPACE

We envision the area along Cuthbert and between Route 70 and the Cooper River to be “flex space”—land whose use we do not want to dictate just yet. The land could be used for urban agriculture, growing foods that could be consumed locally. It could be the site of a wind farm, generating electricity to be used by Cherry Hill. The cemetery to the west could expand in a more sustainable fashion into an eco-cemetery. Or the uses along 70 could simply expand southward, with the commercial main street, mixed-use development and green industry jobs stretching out to the river. By keeping this land flexible, we can ensure that Cherry Hill is able to adapt its land uses as is needed in the new century.

Land Use Concept 2: Localized Sustainability



Guiding Concept



LEGEND

- Green Infrastructure
- Existing Street Network
- Streams and Waterways
- Commercial Corridors
- Expanded Street Network
- Transit-Oriented Development

Combining the Alternatives Into a Guiding Concept

ENVIRONMENT

Environmental protection in a community serves to guard against the depletion of its valuable natural resources. In order to protect this resource and promote sustainability within the Golden Triangle, the plan proposes a network of green infrastructure.

SOCIAL WELL-BEING

A sense of community enhances the social fabric of a neighborhood, and a key component of this is a connection between the residents and the area's resources. The plan proposes solutions to enhance this connectivity through an expanded street network.

ECONOMY

Economic stability is important for the functioning of society as it increases its viability. This final element of sustainability will be enhanced through restructuring of land use patterns and development programs.

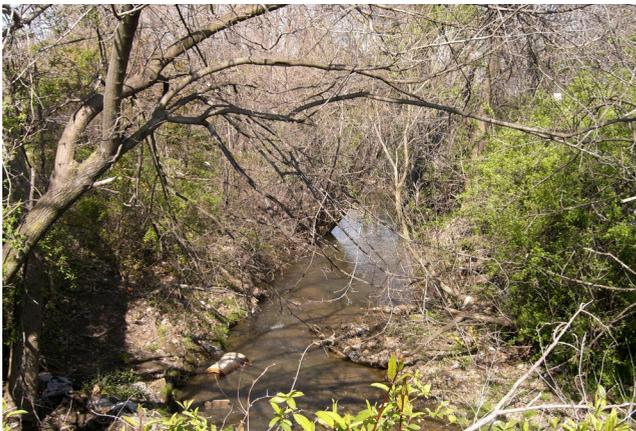
Green Systems

Sustainability is more than just a buzzword. In the case of Cherry Hill, it's the guiding principle beyond every recommendation to be made. By creating a clearly defined network of green spaces throughout the site, preserving and protecting woodland habitats, and providing recreational areas, the Golden Triangle can enjoy an integrated green system that benefits the whole region. Incorporating that with effective stormwater management techniques will ensure that residents can both use and respect the area in a way that sustains it for future generations.

Green Systems: Parks and Open Space Network



COOPER RIVER



DEGRADED STREAM

Summary

The Golden Triangle lies at the confluence of the Cooper River and a potentially beautiful network of streams and woodlands. The green system is anchored at its center by an undeveloped area of woodland habitat and framed along the southern edge by the Cooper River Park. In the northeast portion of the site lies Kenilworth Park, which marks the transition from the site's southern commercial zone into the Kenilworth residential neighborhood. And running throughout the site is a group of three streams that merge into the Cooper River at the southwestern edge. This portion of Cooper River was widened in the 1930s into a beautiful waterway that enjoys a four-mile-long county-sponsored park running alongside the river.

Green spaces, be they actively managed parks or wildlife management areas, provide residents of urban areas a much needed place for respite and active recreation, and an opportunity to reconnect with the nature. They improve neighborhood sustainability by increasing adjacent property values and helping create pleasant places where people want to live and work.

In its current form, the Golden Triangle's system of green spaces fails to reach its full potential because of a disconnect between the large Cooper River Park area, the central woodlands and the interspersed streams.

There is currently no clear maintained pathway that creates a cohesive pedestrian-oriented system of green spaces that encourages residents and workers within the Golden Triangle to take advantage of the tremendous opportunities provided by Cooper River Park and the existing woodlands.

Furthermore, many of the green spaces that do exist have become degraded due to a lack of management and environmental stewardship. The continuing development upstream of the tributaries has increased the amount of runoff entering the streams, resulting in increased scouring of the streambed.

Green Systems: Parks and Open Space Network

IMAGES (LEFT TO RIGHT):
Woodland trail network; Baseball field within woodland park; Crew Regatta on the Cooper River.



Finally, any plans for the green system within the site should be done in conjunction with an area-wide stormwater management plan. Many of the improvements made to the green system, such as stream-bank restoration and enhancement of existing wetlands, will have benefits beyond their aesthetic qualities including providing an area for temporary storage of excess stormwater after large storm events.

Our plan recommendations aim to:

- Create a clearly defined network of green spaces throughout the site.
- Preserve and protect woodland habitat and water quality by maintaining buffers along all existing streams and restoring existing woodland habitat.
- Provide areas for passive and active recreational use.

Key Elements

STREAM NETWORK

The streams within the site provide a natural network that connects the site's existing amenities. To protect the woodland habitat along the streams and water quality within the stream, a vegetative buffer of at least 50 feet should be established on both sides of the streams.

GREEN STREETS

A new street grid should include tree-lined landscaped "green streets" that provide additional vehicular and pedestrian connections to the Cooper River.

PARK AREAS

Portions of the greenway should include park areas that are programmed either as active recreational uses or for passive recreation.

NATIVE WOODLAND HABITAT

The centrally located densely wooded area to the south of Kenilworth Park should be managed as a native woodland habitat, while including the development of a school on the eastern portion of the woodland site. The natural woodlands, stream and wetlands surrounding the school can serve as an innovative hands-on learning approach to hydrology and ecology.

PUBLIC PLAZAS

New plazas should be centrally located and framed by proposed downtown development. In this plan these public spaces are proposed near the Cherry Hill train station and across the street from the proposed school location.

Network of Green Spaces

STREAM NETWORK

A system of trails that runs alongside the streams should be laid out within the 50-foot buffer. These green corridors will provide a major pedestrian network that connects the green spaces throughout the site with the Cooper River Park system.

ACTIVE RECREATION AREAS

The area known now as Kenilworth Park should build upon the existing baseball field and basketball courts. The park is in a prime location for use by Kenilworth residents, students of the proposed school and incoming residents from the plan's proposed residential development.

PASSIVE RECREATION AREAS

The central shrub meadow area to the east of the Executive Campus and north of King Avenue should be restored and programmed as a natural park area designed for passive recreation. This area has the potential to serve as both an area where residents and workers can walk and relax, while also connecting the commercial corridor on the western end of the park with the proposed residential enclaves to the east.

PUBLIC PLAZAS

The plaza near the Cherry Hill train station can play the dual role of a civic meeting ground as well as a gateway to the downtown.

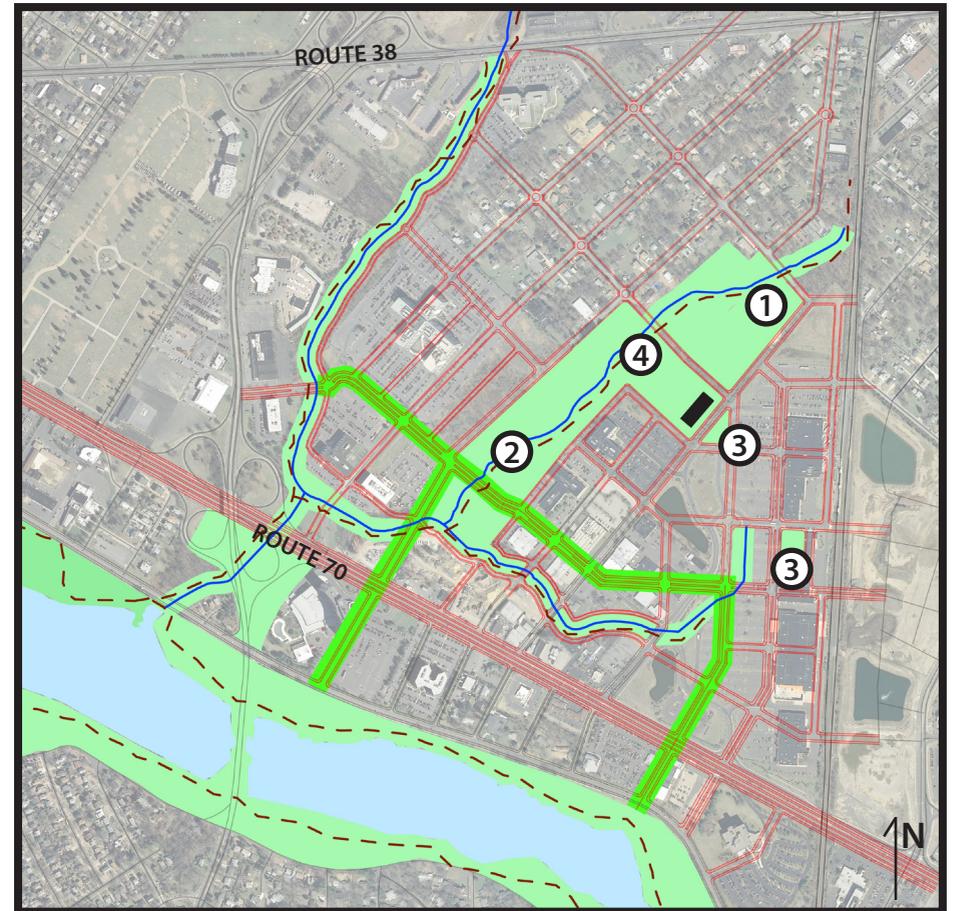
NATIVE WOODLANDS

The woodlands should be restored to a more native South Jersey habitat by removing invasive species and promoting healthy forests through selective tree harvesting.

GREEN STREETS

The "green streets" provide a lateral connection between the stream network and the park areas at the center of the site. They also extend south framing two additional pedestrian and vehicular connections to the Cooper River.

Network of Green Spaces



LEGEND



Phases of Implementation

SHORT TERM

1. Existing New Jersey Department of Environmental Protection regulations protect the streams from any development within 50 feet of the streambank. As such, the securing of vegetative buffers along the length of the stream should meet with little resistance.
2. Stakeholders have expressed a strong desire to preserve open space within the site and have lamented a lack of pedestrian connections. If the township commits to protecting the stream buffers, a volunteer group of local residents could be organized to aid in the construction and maintenance of a trail network.

MID-TERM

1. The redevelopment of the Garden State Pavilions into new residential, office and commercial space will create a need for green space preservation as an amenity for the growing neighborhood. This provides the ideal opportunity for the township to secure area designated as active recreation areas and native woodlands.
2. These green spaces will also fit into the area's stormwater management needs by providing storage space for excess stormwater during large storm events.

LONG TERM

1. Further neighborhood development along Union and Northwood avenues, as well as increased commercial development along the western end of King Avenue, will create a need for additional green space within the center of the site.
2. Preserving the areas noted for passive recreation will create the final link between the native woodlands to the north the confluence of two streams to the south.



We abuse the land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.

Aldo Leopold

Green Systems: Stormwater



BIORETENTION BASIN



FLOODED MEADOW STORING EXCESS STORWATER

Summary

An effective stormwater management policy is one that enhances a site's natural features to promote a stormwater program that allows for natural infiltration of rainfall. Cherry Hill's current stormwater management plan has made great strides in ensuring that new developments design systems that manage stormwater onsite instead of allowing it to run off to other properties or downstream to adjacent water bodies. However, the township's current approach relies heavily on using stormwater detention basins as the go-to technology. This is an inefficient use of valuable land, since more progressive stormwater management techniques that use systems of pervious paving and various types of smaller holding systems (vegetative swales, bioretention basins or rain gardens) can be just as effective at managing stormwater with a much smaller footprint. Furthermore, these small-scale bioretention basins can be planted with native vegetation and serve the additional benefit of providing aesthetically pleasing gardens.

Plan recommendations aim to:

- Reduce runoff at every stage and slow it down to allow the stormwater to infiltrate into the ground and recharge the groundwater.
- Incorporate vegetation into stormwater management techniques to help filter and treat the stormwater before it enters the groundwater.
- Implement a variety of stormwater management techniques throughout the site to reduce or eliminate the need for stormwater detention basins.

IMAGES (LEFT TO RIGHT):

Green roof on suburban home; Infiltration planter in Philadelphia; Vegetated swale with pervious sidewalk in suburban neighborhood.



Stormwater Management: Site Planning

PERVIOUS PAVEMENT

Constructing parking lots, sidewalks and pathways with pervious paving on top of a gravel basin can be an effective way to eliminate the need for large stormwater detention basins. Stormwater seeps through the pervious pavement and is stored in the underground gravel basin while it infiltrates into the soil.

ENHANCING EXISTING WETLANDS

The implementation of progressive stormwater management techniques may eliminate any runoff that occurs during small or medium storm events, but there is still a need to provide holding areas for stormwater from larger storm events. This can be accomplished by directing excess stormwater from large storm events to naturally wet areas that can temporarily contain the water in large shallow ponded areas. These temporary storage areas give the water time to infiltrate into the soil or allow vegetation to take up the water and release it back to the atmosphere through evapotranspiration.

Stormwater Management: Roof Runoff

GREEN ROOFS

Vegetated roofs reduce the amount of runoff that needs to be managed at ground-level by absorbing rainfall. Vegetated roofs also reduce the building's heating and cooling costs by insulating the roof and minimizing any large temperature shift to the roof surface.

INFILTRATION PLANTERS

An alternate means of dealing with roof runoff diverts stormwater from the roof by connecting drain pipes to infiltration planters, where the stormwater is given time to soak into the soil. This is a cost-effective stormwater management system for existing buildings, but does not have the benefits of reducing heating or cooling costs.

Stormwater Management: Road and Surface Runoff

BIORETENTION BASINS/RAINGARDENS

Stormwater that flows off of parking areas or other impervious surfaces can be gathered by strategically placed vegetated gardens that are growing over a gravel bed, known as a bioretention basin. Stormwater flows into these basins, where it is filtered by the growing vegetation and given time to infiltrate into the soil. These systems can be incorporated in center medians of roadways, embedded with curbs on the edges of streets, or built up in low-lying areas to allow time for stormwater to infiltrate after larger storm events.

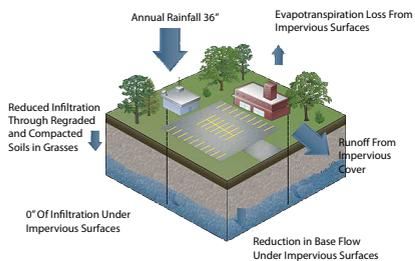
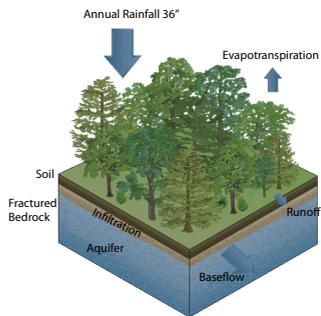
VEGETATED SWALES

Similar to bioretention basins but more linear in form, vegetated swales are built alongside streets or parking areas to gather stormwater runoff. Just like bioretention basins, the stormwater is filtered by the planted vegetation and stored below ground in gravel beds while it infiltrates.

EFFECTS OF DEVELOPMENT ON GROUNDWATER

Prior to development, stormwater is managed by the natural system. Rainfall is filtered and treated by vegetation prior to infiltrating into the soil. Some of the stormwater is taken up by plants and returned to the atmosphere through evapotranspiration while a majority of the water seeps into the groundwater and replenishes the aquifer.

As development occurs it severely decreases the land area available for infiltration through soil compaction and construction of impervious surfaces. These changes to the natural system result in increased levels of stormwater runoff, which reduce the levels of groundwater recharge and cause dramatic drops in aquifer levels.



Phases of Implementation

Progressive stormwater management techniques implemented within the Golden Triangle area can serve as a demonstration project of sustainable stormwater management policies. The work done in the Golden Triangle can serve as a guide for Cherry Hill Township and for the state as a whole.

SHORT TERM: GOLDEN TRIANGLE-SPECIFIC

1. Promote a policy that restores a minimum 50-foot vegetative buffer outlining the streams and Cooper River in the Golden Triangle area, along with a “no-mow zones” within the first 25 feet.
2. Ensure that the completion of a network of sidewalks in the Kenilworth residential neighborhood includes the use of vegetated swales and pervious sidewalks.
3. Promote the use of green roofs and/or infiltration planters to manage all roof runoff onsite.
4. Enhance low-lying areas by creating bioretention gardens as temporary storage of stormwater during storm events.
5. Enhance existing wetlands to create areas where excess stormwater from larger storm events can be directed and given time to infiltrate.



GREEN ROOF AT THE PHILADELPHIA FENCING ACADEMY

Green roofs can be installed on existing buildings, as is the case with the Philadelphia Fencing Academy building, or they can be designed into the construction of new buildings. The roofs are often seeded with native, drought-tolerant vegetation that minimizes or eliminates the need for irrigation.

In addition to absorbing rainfall and reducing roof runoff, green roofs also lower a building's energy costs by insulating the roof and mitigating against large temperature fluctuations. This insulation also provides further benefits by protecting the roof from damaging ultraviolet radiation, resulting in a longer lifespan of the roof structure.

MID-TERM: TOWNSHIP WIDE

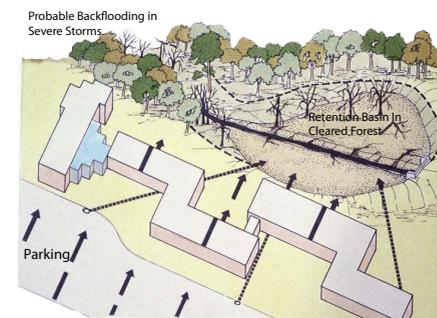
1. Modify the existing stormwater management policies to promote more progressive techniques and discourage the use of large stormwater detention basins for any new developments.
2. Incorporate progressive stormwater management techniques, including pervious paving, bioretention basins and vegetated swales into city-sponsored projects to serve as demonstration projects.
3. Work with local horticultural societies to develop a program that trains residents how to build raingardens, to collect stormwater from roof drains and local runoff.

LONG TERM: STATEWIDE

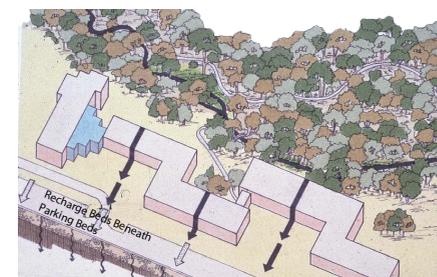
1. Cherry Hill's successful implementation of more land-efficient stormwater management techniques can become the example for the state to modify its regulations to move away from relying on large stormwater detention basins.
2. The state should mandate the use of progressive stormwater management techniques such as pervious paving, vegetative swales and/or bioretention basins on all state-sponsored highway projects.

DUPONT BARLEY MILLS OFFICE

The initial stormwater management plan for the site called for the destruction of an adjacent woodland lot to construct a large stormwater detention basin. Meliora Environmental Design, LLC, was to preserve the woodland lot and eliminate the need for a stormwater detention pond by directing stormwater into a constructed pervious pavement parking lot. The stormwater drains away from the building, through porous pavement into a gravel bed built below the parking lot. The stormwater passes through the gravel bed, infiltrates into the soil and recharges the area's groundwater.



ORIGINAL DESIGN WITH DETENTION PONDS



MODIFIED DESIGN WITH PERVIOUS PARKING LOTS

Access Plan

Incorporating multimodal transportation is crucial to any region's sustainability, and the Golden Triangle is rich with opportunities to diversify its transit options. When transportation options improve through increased train, bus and pedestrian access, residents and works have more freedom to move and work as they please, which ultimately benefits Cherry Hill's economy. By improving connections to Philadelphia and the greater region, the economic possibilities for the township are endless.

Access Plan: Traffic and Circulation



**INTERSECTION OF NORTH PARK DRIVE AND CUTHBERT RD
CHERRY HILL, N.J.**



**INTERSECTION ALONG OCTAVIA BLVD
SAN FRANCISCO, CALIF.**

Summary

Primary travel modes change over time. They shape and are shaped by land use patterns. The traffic and circulation plan for Cherry Hill supports the coordination of transportation and land use with the aim of reducing auto dependence, providing greater choice in travel modes and increasing network connectivity. Our proposed street grid expansion will create a connected network specifically designed to encourage walking and biking. Green streets emphasize the importance of tree-lined, people-friendly avenues throughout the site. Additionally, the utilization of boulevards and traffic-calming measures will contribute to safer streets for drivers and more livable streets for residents. By creating an intermodal transportation system in Cherry Hill, our plan will induce the market for transit-oriented development.

Plan recommendations aim to:

- Support transit use through coordinated land use.
- Balance the use of street right-of-way to accommodate pedestrian and bicycle needs, as well as automobiles.
- Design streets to enhance safety, improve walkability and create attractive viewsheds.
- Improve parking lot location and design.
- Integrate bike routes and trail networks into the circulation system.

Key Elements

TRANSFORMING ROUTES 70 AND 38 INTO MULTI-WAY BOULEVARDS

These busy six-lane roadways are characterized by medium to high-speed traffic and aging commercial structures serving auto, retail and some service businesses. Both routes are poorly landscaped and do not provide a distinctive entrance to Cherry Hill, nor do they adequately serve short trips. Implementing a multi-way boulevard along these corridors would accommodate fast-paced through traffic while creating access lanes that would better serve the commercial and residential needs of the area. The boulevard would also create a strong pedestrian realm.

Access Plan: Traffic and Circulation

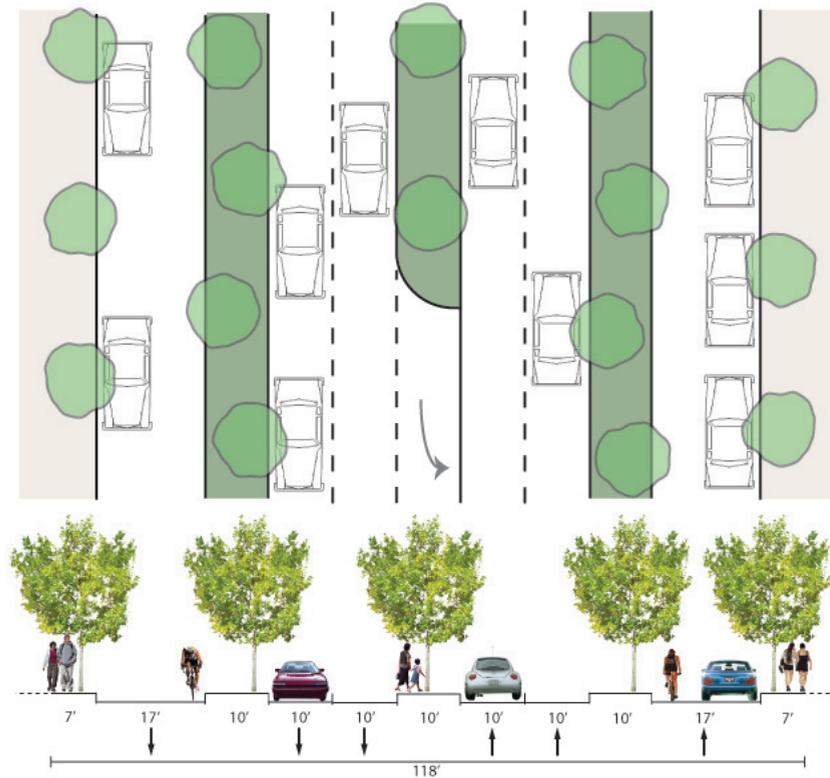
After: Route 70 as a Multi-Way Boulevard



Before: Route 70 as a Suburban Highway



PROPOSED ROUTE 70 MULTI-WAY BOULEVARD CONFIGURATION



ROUTE 70 AS A MULTIUSE BOULEVARD

This new design for Route 70 helps transform the road into a pedestrian-friendly boulevard that fosters ground-floor retail growth and multimodal transportation. Three grassy, tree-lined medians—the center one disappearing when a turning lane is needed—create an environment that allows pedestrians to cross safely. The trees provide a traffic-calming canopy that humanizes the street scale. Ten-foot lane widths will slow down traffic, further enhancing safety for those on foot. On either side, a 17-foot local access lane gives curbside parking for the retail and restaurants lining the boulevard and gives bikers a safer space to travel, allowing them to avoid the higher-speed vehicles in the center lanes. Access lanes can be entered through breaks at intersections. Seven feet of sidewalk access is given by the township on either side, with businesses encouraged to provide at least an additional five feet of private land to improve sidewalk activity.

CASE STUDY: HIGHWAYS TO BOULEVARDS

“Boulevardization” is an increasingly popular means of converting highways to more walkable, livable thoroughways. Usually characterized by a central roadway of four lanes for faster through traffic, boulevards usually feature tree-lined medians separating these faster lanes from the local access lanes. The overall width of the center realm should be determined by balancing considerations of available right-of-way, desired traffic capacity and the need for safe street-crossing. The most successful boulevards can accommodate highway traffic volumes while creating attractive pedestrian environments.

One of the best-known national examples is in San Francisco, where Octavia Boulevard replaced a double-decker freeway. The boulevard connects Highway 101 with the city, and allows through traffic to flow with little interference. Four central lanes of fast-moving traffic—two in each direction—are divided by a planted median. On either side of the central roadway are more intimately scaled narrow streets for local traffic, buffering residents from intense vehicular activity. Several vacant lots along Octavia that once were part of the freeway right-of-way are planned by the city as sites for some 900 units of transit-oriented housing.

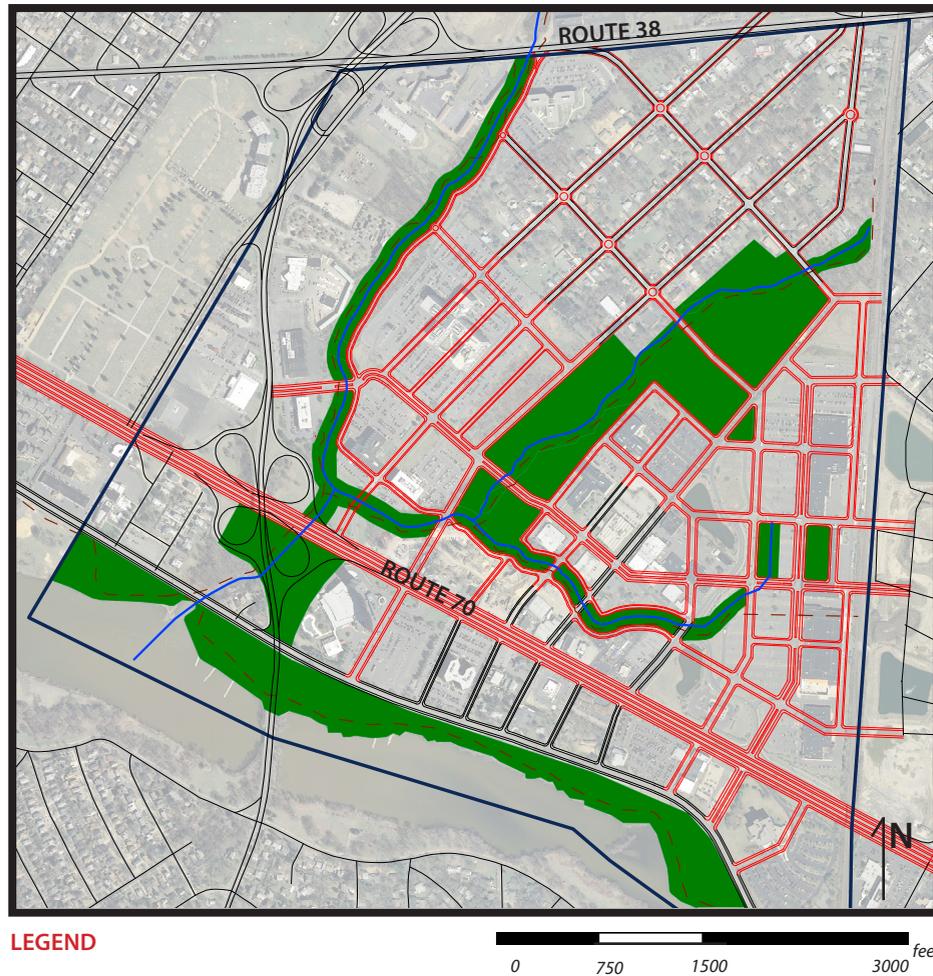
Municipalities around the country have similar plans in progress for their highways, including Route 29 in Trenton, N.J., where the city recently signed a memorandum of understanding (MOU) committing to replacing Route 29 with a boulevard and waterfront park. “The MOU ... formalizes a commitment to build what citizens and leaders endorsed 20 years ago—a new boulevard to provide access to our river and enhance a vibrant downtown in our historic capital,” said Capital City Redevelopment Corporation Board Chair Ingrid Reed. “We will make it happen.”

Trenton Mayor Douglas H. Palmer added, “Together, we can maximize the impact of investment in downtown Trenton. We can identify ‘shovel-ready’ projects like the Route 29 Boulevard conversion, recommend ways to engage in joint problem-solving across agencies, and coordinate the full set of financial and intellectual resources of our partners, knowing that each one of us has a stake in the success of the capital city.”



TRENTON'S PROPOSAL TO TURN ROUTE 29 INTO A TREE-LINED BOULEVARD

Circulation



LEGEND

- Proposed New Roads
- Existing Roads
- Proposed Roundabouts
- Pedestrian Trail
- Streams
- Green Infrastructure

CIRCULATION

The main consideration of this circulation plan is the increase of connectivity within the study area through the expansion of the existing street grid. This plan takes into account the many weaknesses of the existing road network and proposes some key improvements.

Enriching the Street Grid

The current street network lacks adequate connectivity. The plan's streets proposal would improve auto, bike and pedestrian access throughout the interior of the site while providing increased north/south and east/west access. The grid expansion will help to minimize congestion on routes 70 and 38. New streets would include tree canopies and landscaping for stormwater management and wide sidewalks on each side of the street. This grid expansion also works to establish appropriately scaled development blocks.

REDEVELOPMENT OF GARDEN STATE PAVILIONS AS NEW "MAIN STREET"

Cherry Hill currently lacks a traditional downtown commercial district. The failing Garden State Pavilions, with its proximity to the transit station, provides a strategic development site. The creation of a traditional main street integrating service retail, office and residential mixed-use development will be a strong catalyst project during the initial implementation phase.

TRAFFIC CALMING

The plan proposes incorporating modern roundabouts into the existing street network in the Kenilworth area. These roundabouts will limit incoming commercial traffic and control the speed of cars traversing the study area.

King Avenue and the Main Street will also be made more pedestrian friendly by adding median strips for effective narrowing and control of both volume and speed of vehicular traffic.

GRID EXPANSION

The grid will be expanded to the south and east of the existing Kenilworth street network in order to increase internal connectivity. This will also reduce congestion on routes 70 and 38 as interregional trips would be diverted to the new streets.

Street Hierarchy

MAIN STREETS

The main streets will be the foci of activity within the study area. These streets will support the highest degree of urban activity. Surrounding land uses include mixed use, including commercial, retail and residential buildings, as well as some green space.

GENERAL DOWNTOWN STREETS

These are the most common type of street. Less busy than main streets, they facilitate everyday urban activity and serve as a transition to the neighborhood residential districts. They incorporate mixed land uses made up of commercial, retail and residential buildings, as well as some parks.

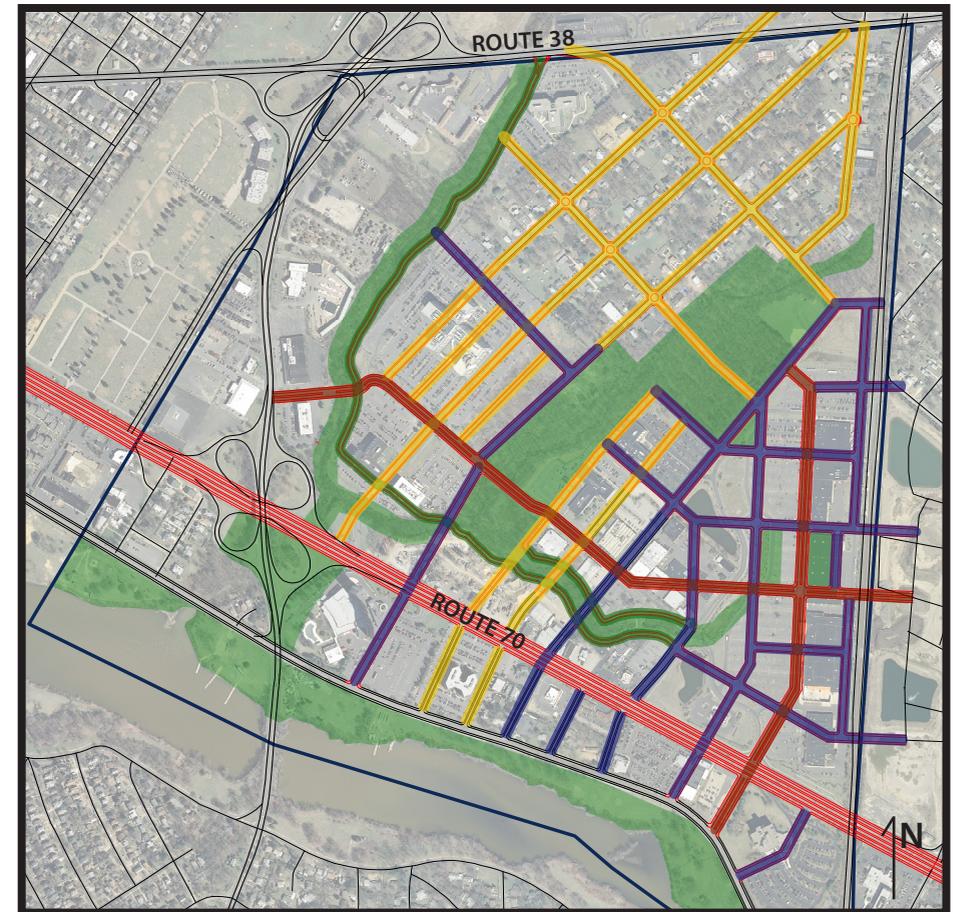
RESIDENTIAL STREETS

These are neighborhood-oriented streets that serve residential blocks.

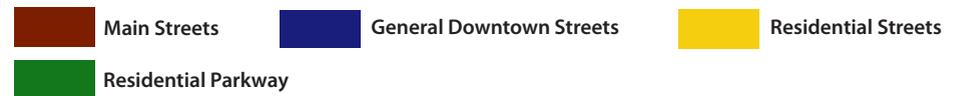
RESIDENTIAL PARKWAY

These streets provide mobility and serve as the transition to the project's park areas. They are intended to serve limited, low-speed automobile traffic while meandering along the project's streambeds.

Street Hierarchy



LEGEND



STREET HIERARCHY

The proposed expansion of the street grid will incorporate several types of streets, supporting a diverse range of land uses and development patterns.

Circulation Phasing



LEGEND



CIRCULATION IMPLEMENTATION

something here if we need it

Phases of Implementation

SHORT TERM

1. Implement first stage of new streets in the area adjacent to the transit station.
2. Convert the two-to-three-block section of Route 70, running west of the train bridge, to a multi-lane boulevard.
3. Establish regulatory framework for future development, including zoning and possible funding options for infrastructure improvements.

MID-TERM

1. Development of road network supporting the proposed school site and surrounding parkland.
2. Further southwestern expansion of street grid from the transit station toward Route 70.

LONG TERM

1. Expansion of grid to western portion of site, connecting the transit-oriented development with the existing roads within the Kenilworth neighborhood.
2. Expansion of the Route 70 boulevard further west.

FLEXIBLE FUTURE

1. Possible shift of Cuthbert Road.
2. Elimination of highway cloverleaves.
3. Westward extension of King Avenue to Cavalry Cemetery and the relocated Cuthbert Road.

Access Plan: Intermodal Transportation



CHERRY HILL TRAIN STATION



26 ALP45-D DUAL-MODE LOCOMOTIVE

Summary

Public transportation supports dense walkable development. While auto-oriented development is spread out and requires vast parking lots, public transportation leads to developments that are clustered, with multiple uses such as homes, offices and shops in easy walking distance of each other. Improved service on existing transit lines, including the New Jersey Transit Atlantic City rail line and the four bus routes that currently serve the Golden Triangle, is crucial to any redevelopment of the site.

Plan recommendations aim to:

- Reduce automobile dependence in Golden Triangle.
- Support transit ridership through coordinated land use.
- Extend the Atlantic City Line to Philadelphia's Suburban Station.
- Improve the image of existing rail and bus services.
- Support dense walkable development.

Key Elements

ENHANCED ATLANTIC CITY LINE SERVICE

To best serve future transit-oriented development in Cherry Hill's Golden Triangle, the New Jersey Transit Atlantic City Line should run more frequently, with direct service to Suburban Station, adjacent to City Hall in Center City Philadelphia. Currently New Jersey Transit operates 14 round-trips each day between Philadelphia, Cherry Hill and Atlantic City, with the first weekday westbound (to Philadelphia) train leaving Cherry Hill at 3:43 a.m. and the last eastbound (from Philadelphia) train arriving into Cherry Hill at 12:08 a.m. (On Fridays and Saturdays, the last train from Philadelphia arrives at 2:16 a.m.) Scheduled travel time between Cherry Hill and 30th Street Station in Philadelphia is 26 to 31 minutes,

Access Plan: Intermodal Transportation

IMAGES (LEFT TO RIGHT):
Distinctive bus shelter in New York state; New Jersey Transit train at Cherry Hill; commuter buses operate throughout New Jersey.



depending on the train.

Ideally, regional rail services such as the Atlantic City Line operate on clock headways, with trains leaving a station at the same time after each hour throughout the day. Trains on most of SEPTA's regional rail lines and New Jersey Transit's North Jersey routes operate on 30-or 60-minute clock headways. For example, SEPTA's R7 trains to Trenton leave Philadelphia's 30th Street Station at seven minutes after each hour during weekday off-peak periods. New Jersey Transit would have to add at least five round-trips to the Atlantic City Line to maintain the current span of service while instituting clock headways. In response to ridership growth during the morning and evening rush hours, service on the Atlantic City Line could operate every 30 minutes during peak periods.

Currently, Atlantic City trains use Comet IV coaches and are pulled by GP40 locomotives, former freight locomotives that date to the 1960s and 1970s. In the future, when these near-obsolete engines are replaced, New Jersey Transit should purchase dual-mode power, which would operate as diesel locomotives in New Jersey and draw power off of SEPTA's catenary in Philadelphia's tunnels. Dual-mode locomotives could pull trains through 30th Street to Suburban Station, which is closer to many of Center City's jobs. Finally, adding a stop at North Philadelphia, which is already passed by Atlantic City trains, would improve transfers to SEPTA's R7 Trenton and R8 Chestnut Hill East lines.

IMPROVED BUS SERVICE

The current bus routes operate infrequently, run along circuitous routes and are confusing for all but the most experienced riders. Bus routes 317 and 413 operate along Route 38, linking Philadelphia, Camden and Cherry Hill to Asbury Park and Berlin, respectively. The 406 runs on Route 70, connecting Berlin and Cherry Hill with Camden and Philadelphia. Finally, the 450 runs on King Avenue, linking the Cherry Hill Mall and Camden via the Westmont PATCO station. Buses generally operate every 30 minutes during peak hours and every 60 minutes during off-peak hours and on weekends. Scheduled bus travel time between the Golden Triangle and Center City Philadelphia is 25 to 35 minutes, depending on the route and trip. Additional bus routes serve the Cherry Hill Mall but do not stop in the Golden Triangle.

Hourly service may be adequate for long commuter bus routes to Center City Philadelphia, but it is not attractive for passengers who would like to make shorter trips within Cherry Hill and neighboring communities. NJT Bus Route 450 has the best potential to serve local passengers in Cherry Hill, as it connects King Avenue and the Cherry Hill NJT station to the Cherry Hill Mall, Westmont and two PATCO stops. The township should partner with NJT to increase service to operate every 15 minutes, at least between the Cherry Hill Mall and the Westmont PATCO station, reducing passenger waits and making the 450 a viable option for travel within Cherry Hill's commercial core. Timed transfers could be established at Westmont, scheduling the 450 to meet PATCO trains. Additionally, bus stops should be fitted with attractive signage and shelters to improve the image of bus service

OVERCOMING THE LAST MILE

New Jersey Transit's Atlantic City Rail Line brings passengers directly to the heart of Cherry Hill Park, but where will they go when they arrive? Major activity centers, such as Subaru headquarters, the Cherry Hill Mall and Cooper River Park are located beyond walking distance, making them largely inaccessible to passengers arriving by train. The current Cherry Hill station is adjacent to loading docks, dumpsters and stormwater retention basins, creating an uninviting atmosphere for rail travelers. Nearby park-and-ride lots serve local residents who need to park a car before boarding the train, but they do nothing to help incoming passengers reach their ultimate destination. Like many suburban commuter rail stations, Cherry Hill's New Jersey Transit stop suffers from a last-mile problem.

Transit-oriented development overcomes transit's last-mile problem. When activities are located within walking distance of transit stops, travelers do not need to transfer to a car, taxi or bus to reach their destination. Transit stops anchor walkable urbanism.



LOS ANGELES USES METROLINER BUSES ON THE ORANGE LINE BUS RAPID TRANSIT ROUTE.

in Cherry Hill. Transit-signal priority, which keeps lights green for buses, would speed bus trips and improve bus reliability.

As Cherry Hill's Golden Triangle redevelops, bus rapid transit (BRT) service could be launched along the major routes, such as Route 38, Route 70 and King Avenue. These BRT lines could extend from busy PATCO stations through Cherry Hill's Golden Triangle to the Cherry Hill Mall. BRT routes run frequently and are faster than conventional bus service, as they travel in reserved lanes, benefit from transit-signal priority and have widely spaced stations. BRT could help extend dense, walkable development to the western edge of the Golden Triangle, which is located beyond easy walking distance of the Cherry Hill station.



NEW JERSEY TRANSIT "BUILDING A BETTER COMMUTE"

New Jersey Transit is the country's third-largest public transportation provider. With a fleet of more than 2,000 buses, 700 commuter rail cars and 45 light rail vehicles, the agency carried nearly 225 million passenger trips in 2008. New Jersey Transit serves all 21 New Jersey counties as well as the neighboring cities of Philadelphia, Wilmington and New York.

Cherry Hill is served by the Atlantic City Line, which links Philadelphia's 30th Street Station with Cherry Hill and Atlantic City. The RiverLine, a diesel-powered light rail line, runs between the Camden waterfront, Pennsauken and Trenton, where connections are available to New Jersey Transit's Northeast Corridor line to Newark and New York, SEPTA's R7 regional rail line to Center City Philadelphia and Amtrak Northeast Corridor intercity trains. Additionally, PATCO rapid transit trains link Lindenwold, Westmont and Camden with central Philadelphia.

Since it was founded 30 years ago, New Jersey Transit has continually upgraded and expanded the state's public transportation system. Recent improvements include launching accelerated GoBus service in Newark and Irvington, expanding the Trenton intermodal station, and launching direct ACES service between New York and Atlantic City.



**BUS RAPID TRANSIT
INDUCING A NEW MARKET**

At a cost of less than \$300 million, Cleveland’s Regional Transportation Authority built the seven-mile HealthLine bus rapid transit (BRT) route, which the agency credits with spurring \$4.3 billion worth of economic development along the Euclid Avenue corridor. By reconfiguring the street to create a safe and inviting pedestrian environment, building attractive BRT stations, dedicating traffic lanes to BRT vehicles and offering high-quality local transit service, Cleveland’s HealthLine provides the infrastructure necessary to induce transit-oriented development.

In addition to Cleveland’s HealthLine, successful BRT systems are now operating in U.S. cities such as Boston; Eugene, Ore.; Los Angeles; and New York. By operating BRT routes, these cities were able to build new high-quality transit routes at less than the cost of building new rail lines.

HealthLine buses operate every five to 10 minutes throughout the day, frequently enough to attract passengers who are making short trips. Passengers pay before boarding the low-floor vehicles, allowing them to use both the front and rear doors, thereby reducing the time the bus is stopped. BRT routes like Cleveland’s HealthLine improve local circulation and spur efficient redevelopment.

Phases of Implementation

SHORT TERM

1. On the Atlantic City Line, launch hourly off-peak and 30-minute rush hour service.
2. Enhance existing bus stops with attractive signage and shelters.

MID-TERM

1. Operate the Route 450/King Avenue bus every 15 minutes to improve circulation through the site.
2. Extend the Atlantic City Line to Philadelphia’s Suburban Station using dual-mode locomotives.

LONG TERM

1. Install transit signal priority systems along King Avenue, Route 38 and Route 70 to speed busses through Cherry Hill.

FLEXIBLE FUTURE

1. Institute bus rapid transit service along major corridors such as King Avenue, Route 38 and Route 70.

GROWING MOBILITY

New Jersey’s first bus rapid transit route may run along Route 1, linking Trenton, Princeton and New Brunswick. If current development trends on the corridor continue, by 2020 Route 1 traffic is projected to increase by 55 percent, resulting in a 29 percent drop in travel speeds. Continued auto-dependent development will strangle the Route 1 corridor in Central Jersey. New Jersey Transit is studying bringing bus rapid transit line to the corridor, where currently only 2 percent of trips are made by transit.

New Jersey Transit estimates that the Route 1 BRT plan would carry 31,200 passenger-trips each weekday, reducing annual vehicle miles traveled in the corridor by nearly 400,000. By providing the transportation infrastructure to support smart growth, a Route 1 BRT route would foster economic growth.

Energy Plan

Preserving the area's natural resources is about more than just conserving. Cherry Hill must work to reduce the amount of energy it uses, and aim for greater provision of renewable energy. With enough ambition, the region can not only change usage habits, but it can become a national leader in green technologies, providing a strong base in green jobs that drives job growth and the local economy.



OIL PLATFORMS



SOLAR PANEL INSTALLATION

Summary

Coupled with federal plans to construct a smarter and more efficient grid, private efforts to “green” buildings with energy-conserving infrastructure mix well into this plan’s strategy to increase opportunities to purchase renewable supplies. By introducing a complement of renewable energy options coupled with conservation initiatives in new construction, the development of this area can serve as a model for an innovative district energy plan, as well as a demonstration project for green industries—the results of which point to a forward-thinking and sustainable destination address that would put Cherry Hill on the energy innovation map.

Plan recommendations aim to:

- Implement an energy plan that acts as a model for state energy goals by achieving a 20 percent reduction of nonrenewable energy use.
- Benefit the region’s economy by dovetailing reductions in energy costs with cutting-edge development technology.
- Generate alternatives to finance infrastructure through market-driven strategies.

IMAGES (LEFT TO RIGHT):
Energy-efficient houses in Kent, England; “green jobs” of solar installation; energy-efficient mixed-use retrofit.



Key Elements: Suburban Renewable

RENEWABLE TOWN CENTER

The major thrust of the comprehensive plan focuses on developing affordable housing options by building a dense “town center” favoring walkability and interconnectivity. The energy plan will underscore this initiative by ensuring that new construction in the area meets township-approved formulas that coincide with nationally recognized conservation guidelines and technologies. This section of the plan witnesses the formulation of a strategic partnership with Garden State Pavilions’ current owner. This partnership commits it and the township to a renewal program emphasizing energy efficiency.

DEPARTMENT OF RENEWABLE GROWTH

This second phase establishes a new Department of Renewable Growth for Cherry Hill. Based upon a model developed in Berkley, Calif., this department will be responsible for capturing the various tax incentives and revolving loan incentives supplied by state and federal subsidies on behalf of Cherry Hill’s solar initiatives. As part of this new department’s responsibilities, staff will develop and secure debt financing for renewable investments described below. Finally, the new Department of Renewable Growth will secure agreements from office real estate lease-holders to purchase their energy from renewable supplies.

RENEWABLE ENERGY DISTRICT

In Philadelphia, public officials are looking to establish a renewable energy utility responsible for ensuring the creation and implementation of a citywide weatherization strategy. Our own plan takes advantage of exciting initiatives based in Berkeley, Calif. As a region, the Golden Triangle provides a laboratory for suburban renewable energy consistent with a sustainable agenda.

Taking pride in the Golden Triangle’s future coincides with building on behalf of it. Good schools require financial resources, nearly absent in the current fiscal situation. In concert with federal stimulus financing and state mandates to build affordable communities, the Golden Triangle should advocate for a local wind union designed to fiscally enhance the township’s education system.

Key Elements: Innovative Industrial

INVESTING IN LAND, PARTNERING WITH DEVELOPERS

This plan witnesses a renewed relationship with RecycleBank to oversee the construction and management of a recycling facility emphasizing organic waste. (Cities like San Antonio are now capturing recycling methane from the decomposition of human waste.) Cherry Hill’s own pilot program will produce revenue from its sale of natural gas derived the reuse of locally generated organic food waste. To achieve this, the township’s new department will facilitate the provision of RFPs, and also manage developer selection. Further bond applications will occur to purchase desirable land.

LEED-CERTIFIED INDUSTRIAL PLANT

LEED-certified properties open the door to conservation of resources through the application of building techniques reducing a building’s energy demand. These cost reductions will continue to manifest as technology allows for greater savings. One purchaser of the natural gas provided by the Golden Triangle’s production will be the LEED-certified development built to house the industrial activity currently noncompliant with the zoning code. It will also allow for on-site burning of locally produced vegetable oil distributed by local restaurants through an on-site micro-turbine.

**TABLE 1:
GOLDEN TRIANGLE ENERGY CONSUMPTION**

This table describes annual energy consumption within the Golden Triangle during 2009, and extrapolates growth within the region up to 2020. This plan's proposed sustainable interventions, including energy conservation and the provision of renewable supplies, are described globally as "renewable supply." All information is expressed in kilowatts.

| | Residential | Commercial | Industrial |
|------------------|-------------|------------|------------|
| 2009 Consumption | 2,435 | 27,769 | 2,570 |
| 2020 Consumption | 10,808 | 40,986 | 2,570 |
| Renewable Supply | 2,702 | 10,246 | 514 |

**TABLE 2:
PUBLIC AND PRIVATE WIND PARTNERSHIP**

This table briefly describes important financial inflows and outflows pertaining to the plan's proposed wind partnership. See Table 3, next page.

| 18 MW | |
|----------------------|--------------------|
| OUTFLOWS | |
| Municipal Equity | \$9,000,000 |
| PSE&G Loan | \$27,000,000 |
| INFLOWS | |
| Projected CF | \$9,000,000 |
| NOI | \$6,300,000 |
| BT Cash Flow | \$2,700,000 |
| AT Cash Flow | \$2,475,000 |
| NPValue @ 15% | \$6,926,901 |
| IRR | 10.25% |



**CUTTING EDGE INFRASTRUCTURE
AND MANUFACTURING COMPANIES**

Clean World Technologies (CWT) tout the ability to transform industrial organic waste into a form of liquid carbon for use in hydrogen production. Unfortunately, this technology consumes an enormous amount of water. However, in concert with Xogen's pilot technology responsible for the electrolysis of water, the proposed development will find financial efficiencies from CWT's principle product, sustainably produced carbon.

Build on Successes

MOBILIZE CIVIC INTERESTS

Rising demand for renewables throughout the state mixes with local statements made by stakeholders for a public initiative favoring renewable energy options. The Golden Triangle can maintain its rooftop solar supply by ensuring that state and federal tax incentives remain in place, and incentivizing future installments by the township. New staff members will use their relationships with local constituents to foster broad support for ongoing provision of public assistance for solar installation. This will include petitions, charrettes and visitations to key state representatives to secure tax incentives for renewable infrastructure.



LONG ISLAND INVESTS IN WIND

In January of 2003, Long Island Power Authority (LIPA) issued an RFP in search of development proposals to build, own and operate an offshore wind park. Located southwest of Robert Moses State Park, the selected developer, FPL Energy, won the contract to develop a 403.6-megawatt wind park. LIPA plans to enter into a long-term purchase agreement for the electricity generated by this 100 percent pollution-free power source. At a cost of nearly \$1 billion, the project will allow for the construction of 300 turbines generating 1.5 megawatts each.

ESTABLISH AN ENERGY PARTNERSHIP

This union will behave as a public-private partnership with locally based corporations and regionally based energy developers. Utilizing new market tax credits, this phase will also link public bond financing and private equity investments with the developer's operational acumen. This combination will inform the construction of a regionally based power plant deriving its energy from wind. In return for its own infusion of capital, the township will have access to financing for the region's proposed school described as part of this comprehensive plan.

**TABLE 3:
PUBLIC-PRIVATE INVESTMENT**

The Golden Triangle's energy plan includes orchestrating a relationship between the township's proposed Department of Renewable Growth and a regional wind developer. This table outlines the resulting investment. Following the project's public-bond repayment, the proposed wind farm provides a positive return. Discounted at 15 percent, it nets a present value of \$6,926, and provides a return of 10.25 percent.

| | 6 megawatt | 12 megawatt | 18 megawatt | |
|-------------------------|--------------------------------|-------------|-------------|----------------|
| | Year 2 | Year 4 | Year 6 | Year 9 |
| Projected CF | \$3,000 | \$6,000 | \$9,000 | \$72,000 |
| less Contingencies | \$100 | \$220 | \$484 | \$484 |
| less Insurance | \$300 | \$600 | \$1,320 | \$1,320 |
| less Mngmt Fee | \$320 | \$640 | \$1,408 | \$1,408 |
| NOI | \$2,280 | \$4,540 | \$6,300 | \$68,788 |
| debt @10% | \$1,200 | \$2,400 | \$3,600 | \$4,800 |
| Bond Repayment | | | | \$33,000 |
| BT Cash Flow | \$1,080 | \$2,140 | \$2,700 | \$30,988 |
| Depreciation | \$100 | \$300 | \$500 | \$300 |
| Tax @35% | \$378 | \$749 | \$945 | \$10,845 |
| AT Cash Flow | \$602 | \$1,691 | \$2,255 | \$19,842 |
| Equity Repayments | \$300 | \$600 | \$900 | n/a |
| Equity Cash Flow | \$302 | \$1,091 | \$1,355 | \$9,921 |
| Provider Return at Sale | | | | \$9,921 |
| | Net Present Value @ 15% | | | \$6,926 |
| | Internal Rate of Return | | | 10.25% |

* dollars in thousands

Development Plan

With the sustainable components of our plan established, the development plan establishes a sense of place for the Golden Triangle. Through three phases of growth, the area can turn into a place with a strong regional identity and a robust economic vitality. And while the first phase dictates specific growth around the train station, the subsequent phases—particularly the “flexible future”—are malleable enough to adapt to changing circumstances.

Development Plan



INFORMED AND EVOLVING PLANNING



**MEMORIAL ROAD, BLUEBACK SQUARE,
WEST HARTFORD, CONN.**

Summary

Real estate development within Cherry Hill Park represents a tremendous opportunity for investment to shape sustainable growth and for the site to be a regional and statewide model.

The Golden Triangle today is perfectly representative of the development patterns of single-use, auto-dependent suburban sprawl. Despite regional access by way of Route 70, Route 38 and the New Jersey Transit Atlantic City Line, this pattern is increasingly at a competitive disadvantage against outlying areas of the metropolitan region.

Suburban development intends to create affordability by accessing cheap, distant land. In sustainable development patterns, compounding profitability and value of real estate allows affordability to be built into the same geography, without needing as much government assistance.

This plan intends to induce market growth by developing what we call Kenilworth Station. This project is intended to build a critical mass which will drive a paradigm shift and attract continued development.

Plan recommendations aim to:

- Induce a shift in suburban development patterns
- Capitalize on proximity to transit.
- Create a walkable, mixed-use environment that reduces the constant dependence on cars.
- Integrate mixes of uses appropriate to a variety of street and neighborhood types.
- Use public realm investments in streets, parks and other civic spaces to leverage value in private development.
- Be a demonstration project for sustainable development.
- Link affordability requirements to value creation.
- Further integrate with Garden State Park to transform the area into a bustling downtown for Cherry Hill and the greater metropolitan area.

Proposed Development Site Plan



LEGEND

| | | |
|--|--|--|
|  Institutional |  Retail/Professional Services |  Office |
|  Multi-Family Housing |  Single Family Housing |  Structured Parking |
|  Surface Parking |  Private Green Space |  Public Green Space |

Key Elements

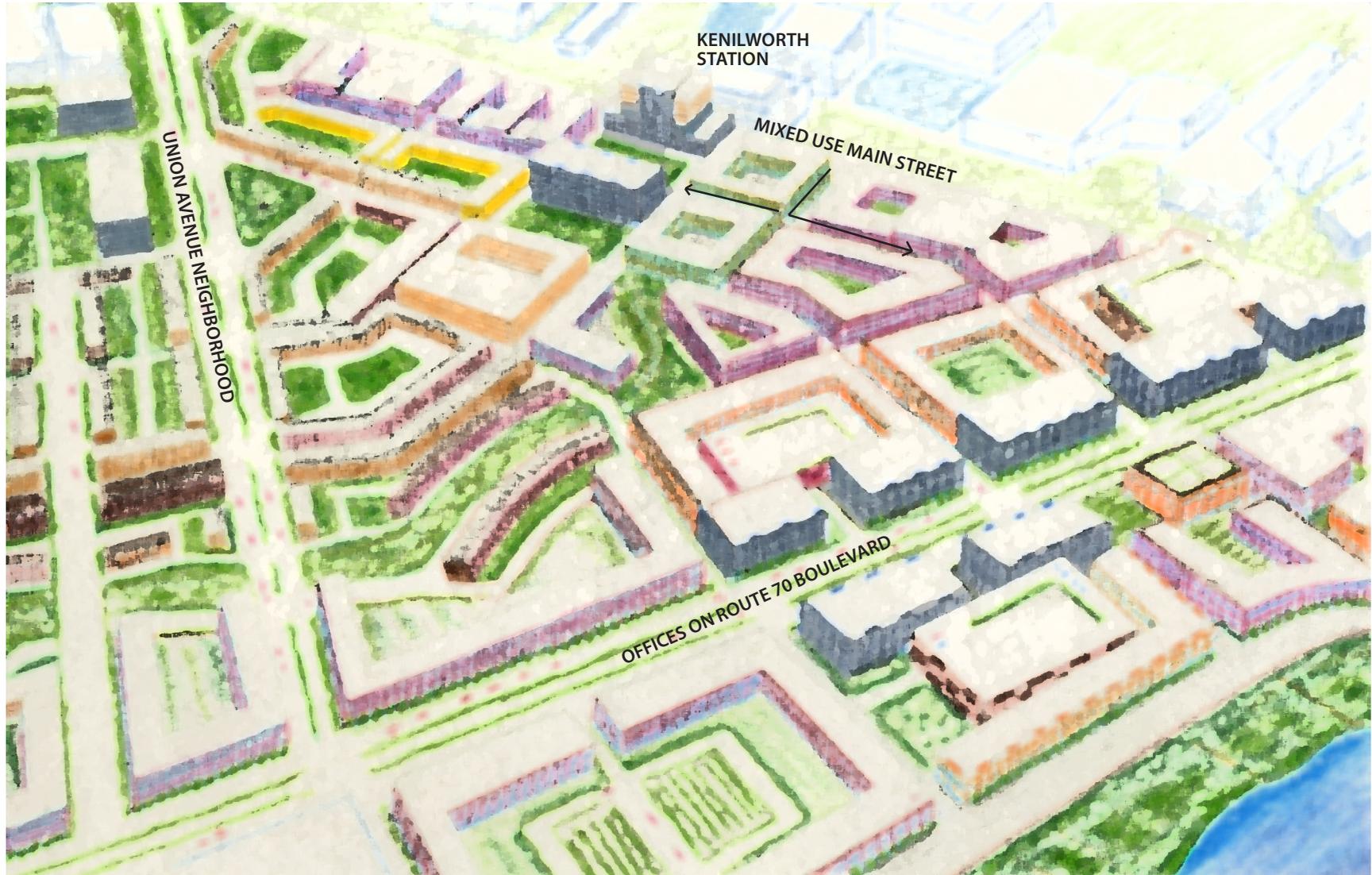
OFFICE BUILDINGS
 These are four to five stories in height and are served by parking structures hidden from the street. One parking space is allotted for each 500 feet of gross office space. This measure advances sustainable growth while recognizing that Cherry Hill is still a suburban location. Forty percent of the spaces may be shared with residential buildings.

APARTMENTS WITH GARAGES
 These buildings achieve a density between 70 and 90 units per acre and are four or five stories in height. The buildings may feature courtyards. Structured parking is hidden from the street. When feasible, the structure is to be capped with a roof, used as open space for the building. Gross apartment size averages 1,300 square feet and 1.3 parking spaces are allotted for each unit. First-floor retail parking is served by on-street spaces.

APARTMENTS WITH SURFACE PARKING
 These buildings achieve a density between 40 and 55 units per acre and are three or four stories in height. They wrap surface parking, accessed by a rear alley. When feasible, the lot is capped with a roof, used as open space for the building. Gross apartment size averages 1,300 square feet, and 1.3 parking spaces are allotted for each unit. Commercial uses may occupy the first floor on strategic streets or corners. First-floor retail parking is served by on-street spaces.

TOWN HOUSES
 These buildings achieve a density of 20 to 35 units per acre. They allow for flexibility across block types, do not require structured parking and provide the choice of greater privacy. Each parcel has a house with a rear yard. A pair of parking spaces are accessed by a rear alley and may be built as garages with accessory dwelling units above. On corner lots, such structures should be built so as to maintain a constant street wall. Commercial uses may occupy the first floor at strategic intersections and are served by on-street parking.

SINGLE-FAMILY DETACHED
 These buildings achieve a density of eight to 12 units per acre, provide a further range of housing within Cherry Hill Park and allow for flexibility across block types. Each parcel has shallow front and side yards, a rear yard and a pair of parking spaces accessed by a rear alley. These parking spaces may be built as garages with accessory dwelling units above them.



POTENTIAL DEVELOPMENT INDUCED BY KENILWORTH STATION

Phasing of Development



Phasing

Cherry Hill Park is an extensive redevelopment plan for the Golden Triangle. Analysis of development opportunities and susceptibilities to change inform a system of implementation comprised of three phases.

SHORT TERM

The short-term development phase is driven by the development of Kenilworth Station on the New Jersey Transit Atlantic City Line. The phase stretches north from the Cooper River, across Route 70, and along the existing edge of the Garden State Pavilions. The existence of large pieces of property like the Garden State Pavilions helps simplify coordination of development.

MID-TERM

The mid-term development phase is within a five-minute walk from Kenilworth Station, thereby a logical extension of the short-term phase and burgeoning Kenilworth Station neighborhood. The phase is geographically bound by a stream corridor on its west side. Including it in the short-term phase might be logical if not for the multitude of property owners within it, complicating a cohesive development process. Implementation of a form-based zoning code for the area could be pursued in the first phase in order to facilitate development of the mid-term phase.

LONG TERM

The long-term development phase is furthest from Kenilworth Station and geographically separated from the previous phases by streams on the site. A complex ownership pattern, similar to that in the mid-term phase, may also warrant implementation of form-based zoning during the short-term phase. Much of this phase is an extension of the existing Kenilworth neighborhood. Given that residents currently voice strong opinions against road connectivity and development adjacent to and in their neighborhood, delaying this phase makes strategic sense. Development of a new type of a walkable neighborhood amenity around Station Square has the potential to induce residents to demand similar development and connectivity to the short- and mid-term development phases.

Case Studies Informing Development Plan



BELMAR SHOPPING CENTER LAKEWOOD, COLO.

At the turn of the 21st century, Villa Italia was a dying, nearly empty mall from the 1960s, 10 minutes west of Denver. It is currently being redeveloped as the Belmar Shopping Destination, an \$850 million multi-use redeveloped town center development. The project features more than retail shops, nine restaurants, a Lucky Strike Lanes, a movie theater and an ice rink, along with condos apartments, row homes and office spaces. Belmar is located conveniently off a major highway and has quickly become a major lifestyle-oriented employment center in the region.

The project incorporates green building and sustainable, urbanistic design elements. Solar panels on the roofs of four parking garages generate 2.3 million kilowatt hours of clean energy, offsetting about five percent of Belmar's total power consumption. All office, retail and residential tenants have access to an extensive single-stream recycling program. Most impressively, 88 percent of the original materials, including asphalt, were reused.



ROSSLYN-BALLSTON CORRIDOR ARLINGTON, VA.

The Rosslyn-Ballston Corridor in Arlington, Va., shows how transit-oriented development can provide capacity for tremendous development and sustain the economic growth of the local area. The corridor was a poor area suffering from economic decline and population loss in the 1970s. The local government and community decided to focus development around five closely spaced rail stations, which were being planned as part of the new regional subway system.

As a result of these efforts, the corridor became the city's densest neighborhood. The value of the land around station went up 81 percent in 10 years and makes up more than a third of county tax revenue, despite accounting for only 8 percent of county land. Although several new developments have been implemented along the corridor, the city officials have successfully preserved single-family neighborhoods and contained the growth of traffic use. With additional revenue from this project, the county has invested in parks, open space, libraries, and schools for greater community benefits.

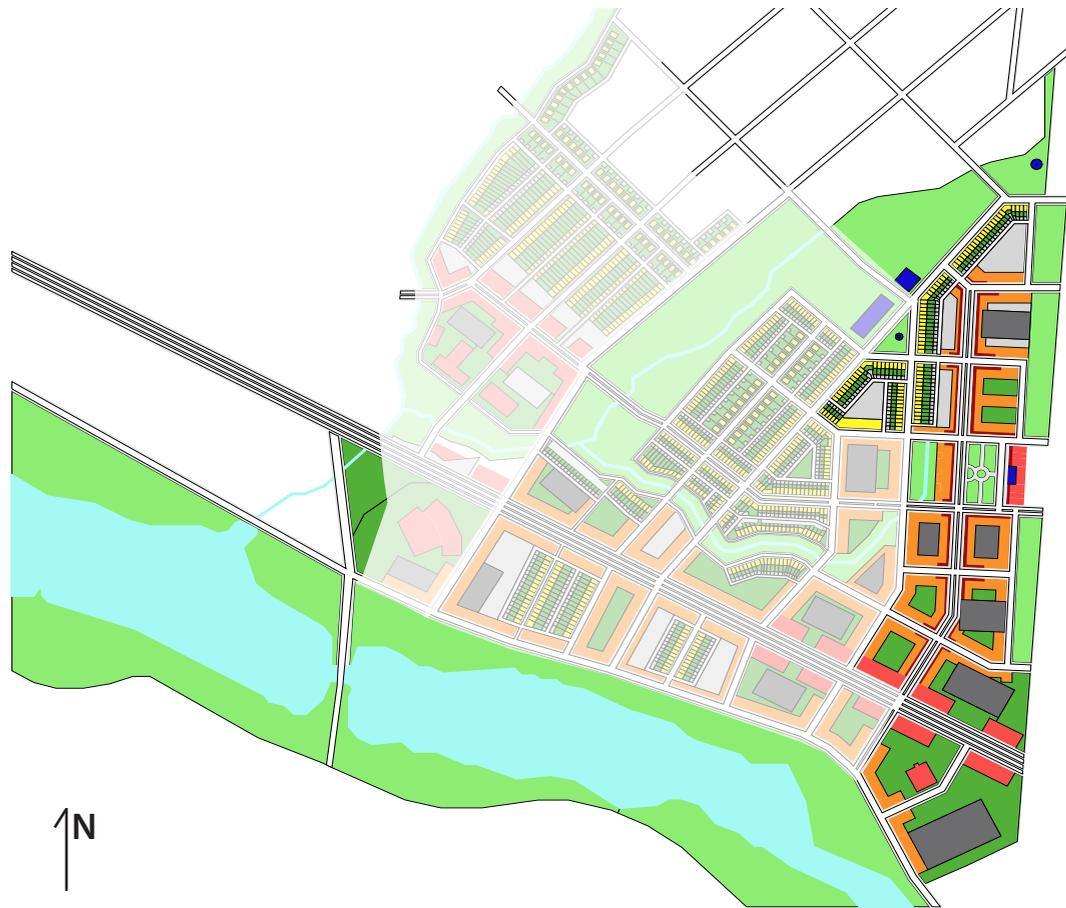


ATLANTIC STATION ATLANTIC, GA.

The Atlantic Station is located on a formerly contaminated site where a steel mill operated for almost 100 years. The public/private partnership essentially created a city within a city on 138 acres featuring retail, residential, commercial and public space in midtown Atlanta. The transit-oriented development plan calls for 15 million square feet of retail, office, residential and hotel space, as well as 11 acres of public parks and open space. The county also improved the connectivity to the downtown area by building a highway overpass and pedestrian bridge.

Specifically, Atlantic Station has three areas: the District, which functions as a town center with commercial, retail and urban-style lofts; the Commons, a predominantly high-rise residential area; and the Village, low-rise housing as well as an Ikea store. Although there were initially concerns expressed by the customers, much development has occurred and the city has grown around the site area.

Short-Term Development Site Plan



LEGEND

| | | |
|--|--|---|
|  Institutional |  Retail/Professional Services |  Office |
|  Multi-Family Housing |  Single-Family Housing |  Structured Parking |
|  Surface Parking |  Private Green Space |  Public Green Space |

Short Term

KENILWORTH STATION NEIGHBORHOOD I

This transit-oriented phase is anchored and kindled by Kenilworth Station on the Philadelphia-Atlantic City line. Relatively high susceptibility to change, as a result of a few large property owners like Subaru and the Garden State Pavilions, helps simplify this initial phase of development. Transit service to Philadelphia's central business district provides an opportunity for dense residential development in this phase. This phase is aimed at attracting "millennials" and baby boomers looking for stimulating urban environments.

The central feature of the short-term phase is a new "Main Street," running along the existing frontage of the buildings within the Garden State Pavilions. This street is characterized primarily by apartment buildings with commercial uses on the first floor. Given an oversaturation of retail in the region and immediate area, these commercial uses are intended to allow for a mix of retail, restaurants and professional "walk-in" offices.

The south side of this short-term phase is centered on the first implementation of the boulevardization of Route 70. This early investment in infrastructure opens up development opportunities along the corridor that can tie to the "Main Street" development in front of the train station. Regional access via Route 70, coupled with the presence of the Subaru North American headquarters, presents an opportunity for further office development.

Waterfront access and breathtaking views of Center City Philadelphia are unparalleled amenities along Cooper River Park. This piece of the short-term plan includes a combination of four- to five-story apartment buildings, along with taller towers, reaching as many as 15 stories.

Residential:

2,800 apartments

160 town houses

Retail: 500,000 square feet

Office: 300,000 square feet

Mid-Term

KENILWORTH STATION NEIGHBORHOOD II

This phase concerns a greater number of smaller properties. It is intended to be a physical extension of the short-term phase, introducing different development types to create a more comprehensive neighborhood at Kenilworth Station.

Northward extension of Union Avenue creates development opportunities for a medium-density residential neighborhood framed by a network of small, walkable blocks. This district is comprised of row houses, detached single-family houses, accessory units and strategically placed first-floor commercial uses. The southern section of this town house neighborhood captures a true amenity by gracefully following a stream and its adjacent green spaces.

This mid-term development increases in density along the Route 70 boulevard. Apartment buildings front onto the boulevard and North Park Drive, while town houses front onto the more intimate interior streets. Commercial uses occur at strategic intersections along Route 70 and North Park Drive.

This phase also includes allocation and possible construction of a new neighborhood elementary school at the northern end of Union Avenue. This school sits across the street from a small civic square and is intended to serve a population of aging “millennials” starting families and wanting to stay in Kenilworth Station for that stage of their lives.

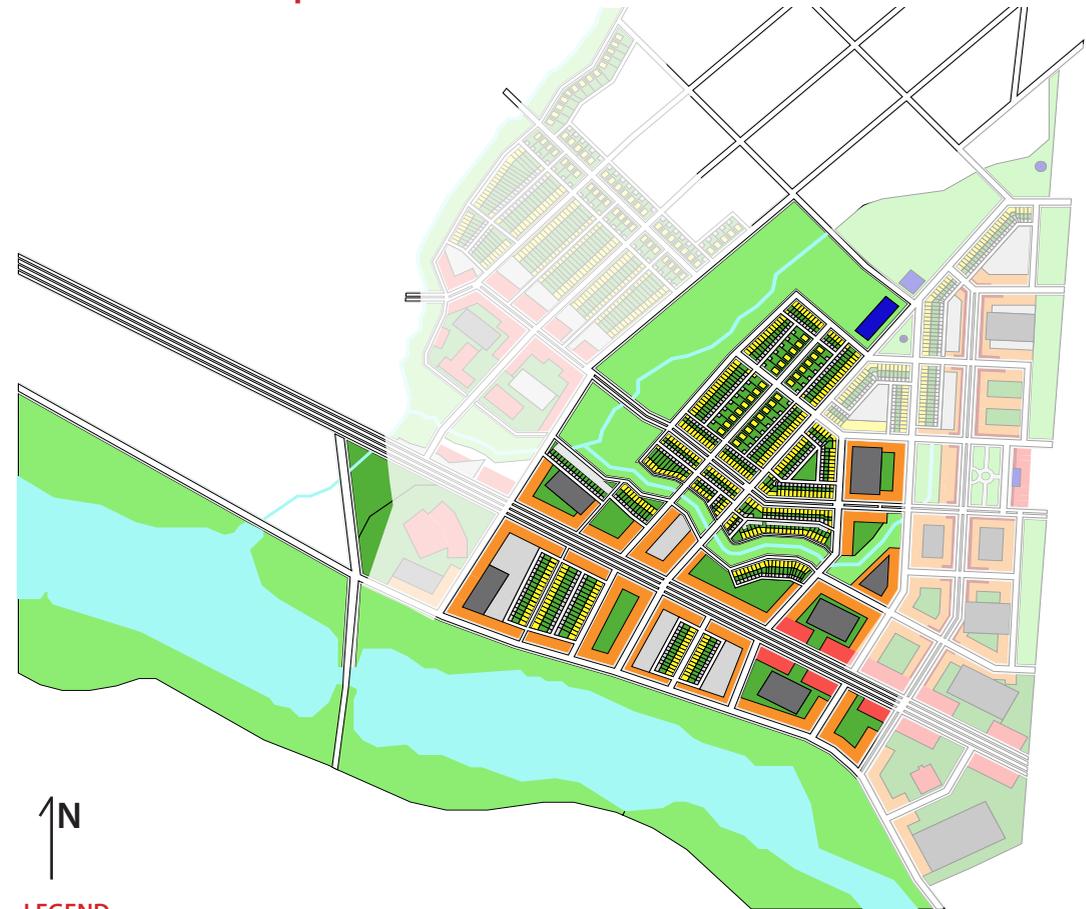
Residential:

1,500 apartments

300 town houses

Commercial: 1.5 million square feet

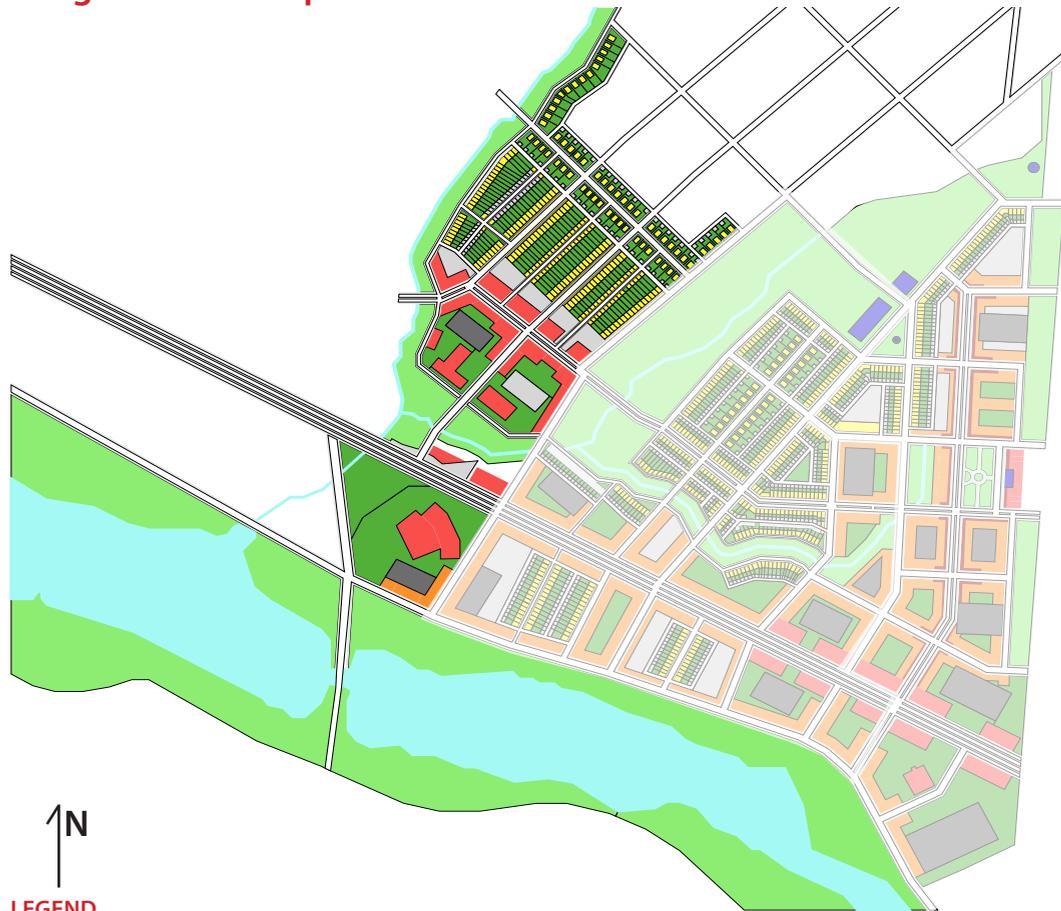
Mid-Term Development Site Plan



LEGEND

| | | | | | |
|--|----------------------|---|------------------------------|---|--------------------|
|  | Institutional |  | Retail/Professional Services |  | Office |
|  | Multi-Family Housing |  | Single-Family Housing |  | Structured Parking |
|  | Surface Parking |  | Private Green Space |  | Public Green Space |

Long-Term Development Site Plan



LEGEND

| | | |
|--|--|---|
|  Institutional |  Retail/Professional Services |  Office |
|  Multi-Family Housing |  Single-Family Housing |  Structured Parking |
|  Surface Parking |  Private Green Space |  Public Green Space |

Long Term

The Kenilworth neighborhood has existed since the 1930s, and much of this long-term phase is separated from the rest of Cherry Hill Park by natural barriers. However, extension of the streets of Kenilworth yields a potential for the neighborhood to grow as a district of many choices. Single-family detached units allow for a transition from the lower density homes in the existing neighborhood to town houses closer King Avenue.

King Avenue is a major east/west artery in Cherry Hill Park, creating a seamless connection from Cuthbert to Haddonfield Road via the Garden State Park development. Given the existing buildings of the Executive Campus, infilling the western end of King Avenue will shape it as an office-oriented main street.

The southernmost section of the long-term area is currently occupied by the Crowne Plaza hotel and conference center. Much like the waterfront property adjacent to Subaru in the short term, potential exists for 10- to 15-story apartment buildings to capitalize on riverfront access and stunning views of the Philadelphia skyline.

Finally, this phase should also involve reinvestment in the earlier development areas. This comprehensive development scheme is intended to transition Cherry Hill Park from a drivable suburban paradigm to a walkable urban one. This shift may be particularly evident in parking requirements. During the short- and mid-term phases, 1.3 parking spaces are allotted per apartment, and two are allotted per town house. These are progressive figures, but successful implementation of the plan should allow for further reduction, thereby allowing for further addition of density, without necessarily demolishing existing buildings. The parking structures included in apartment buildings would be gradually replaced with double-loaded apartment corridors. Surface parking lots wrapped by apartment buildings could be built upon with entrances facing the service alley. Such service alleys could be turned into active streets by building accessory units or full trinities on the parking spaces of town houses or detached houses.

Residential:

- 170 apartments
- 170 town houses
- 44 detached houses

Commercial: 1.2 million square feet

Flexible Future

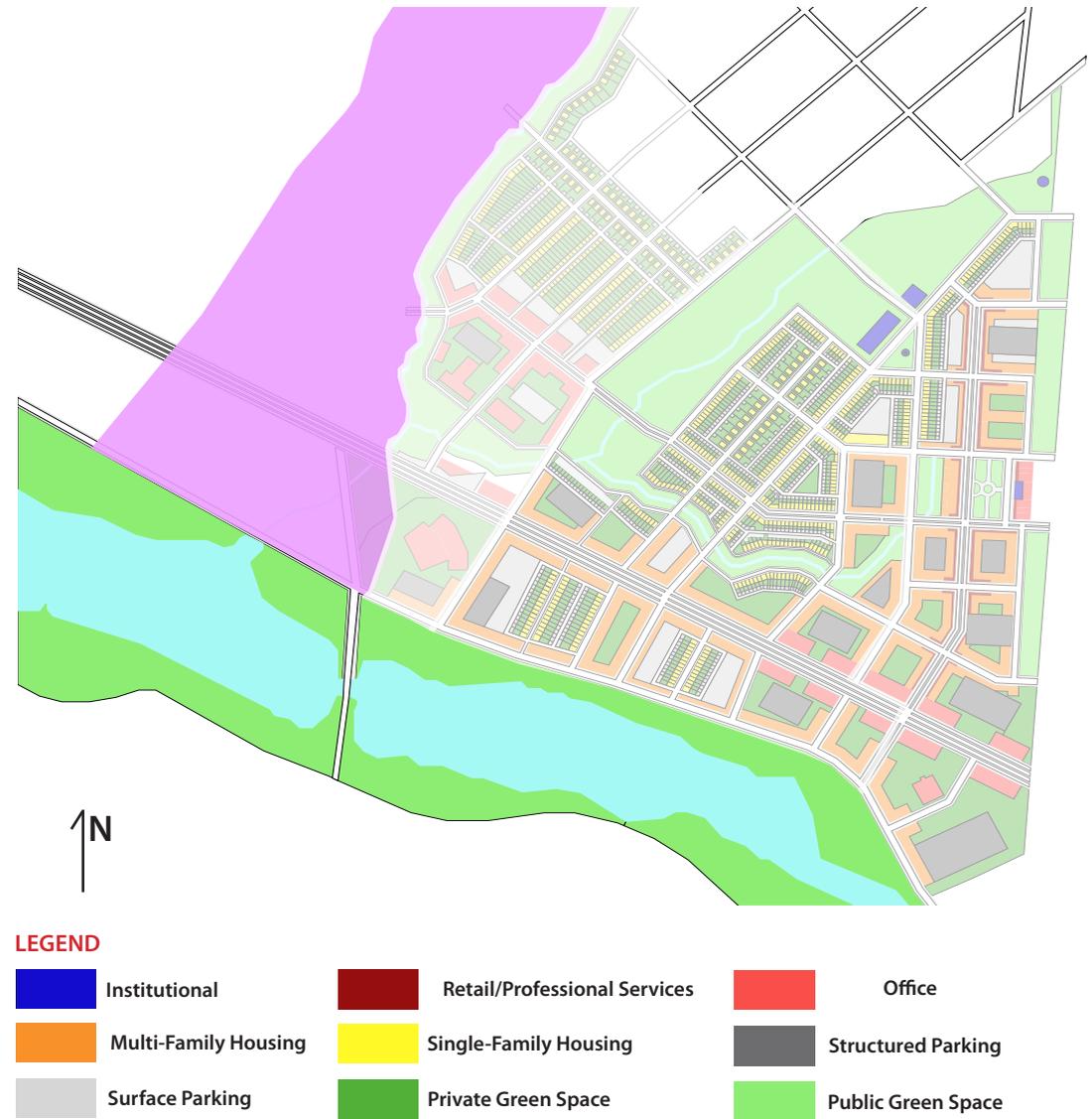
During the early phases of Cherry Hill Park, the far western portion of the study area would serve as a staging area for construction, as current manufacturing sites could be repurposed for construction uses. Street trees, to be used on the new boulevards, could be grown in this section, meeting the sustainability goal of using local resources in the redevelopment of the Golden Triangle. During development of the early phases, businesses could temporarily relocate to this area.

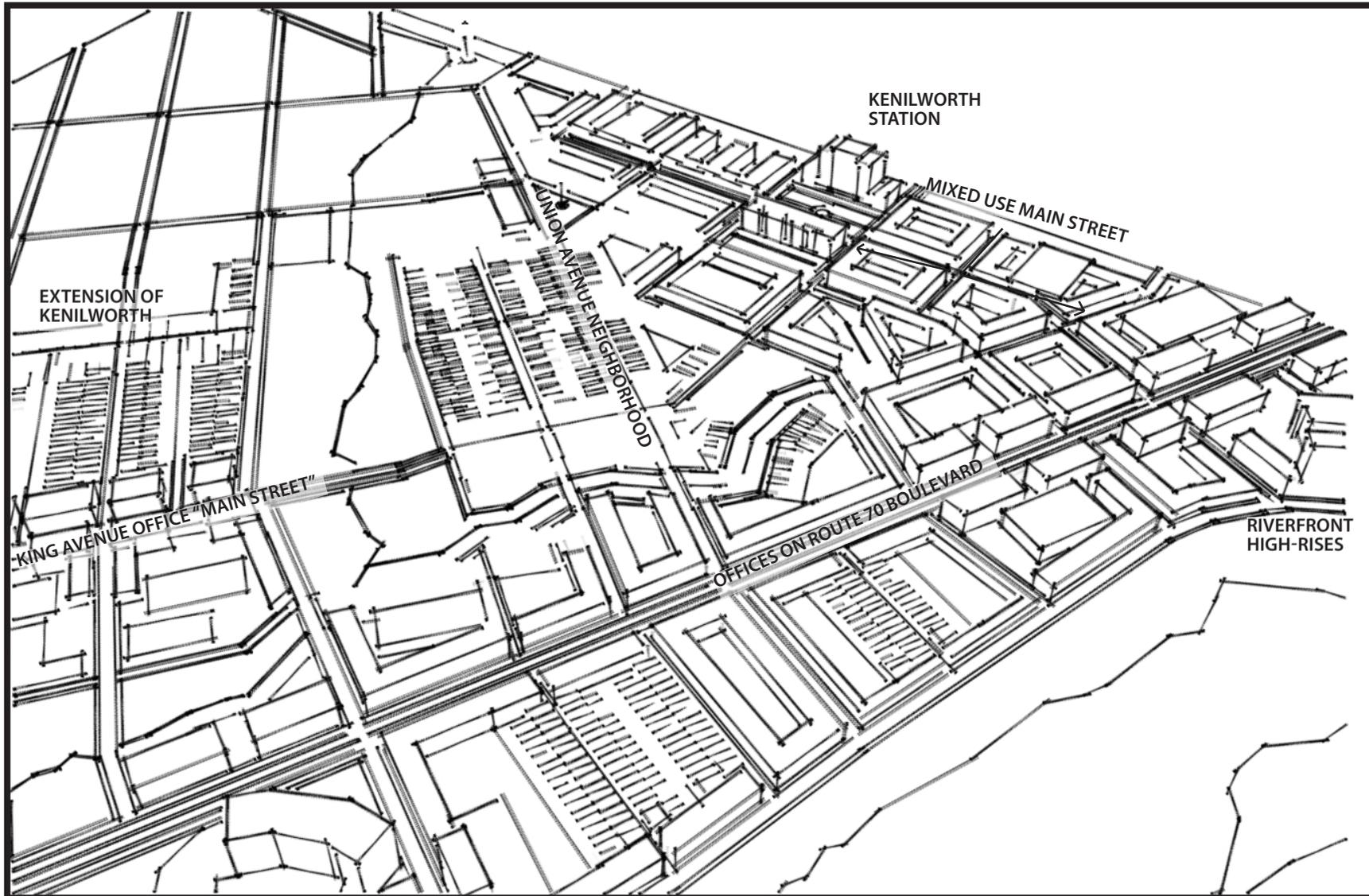
In later stages of the Cherry Hill Park build-out, once development extends further west from the train station, the Cuthbert Road corridor could house green industry, attracted to the site by the strong environmental policies implemented during the earlier phases.

Cuthbert Road would be shifted to the east, creating larger buildable lots for future green industries and better integrating the site with earlier phases of Cherry Hill Park.

The “flexible future” plan is purposely left open, reflecting the still-evolving nature of green industry. As standards for green industrial sites develop, the Cherry Hill Park plan may be revised to further spur the development of green industry along the Cuthbert corridor.

FLEXIBLE FUTURE DIAGRAM



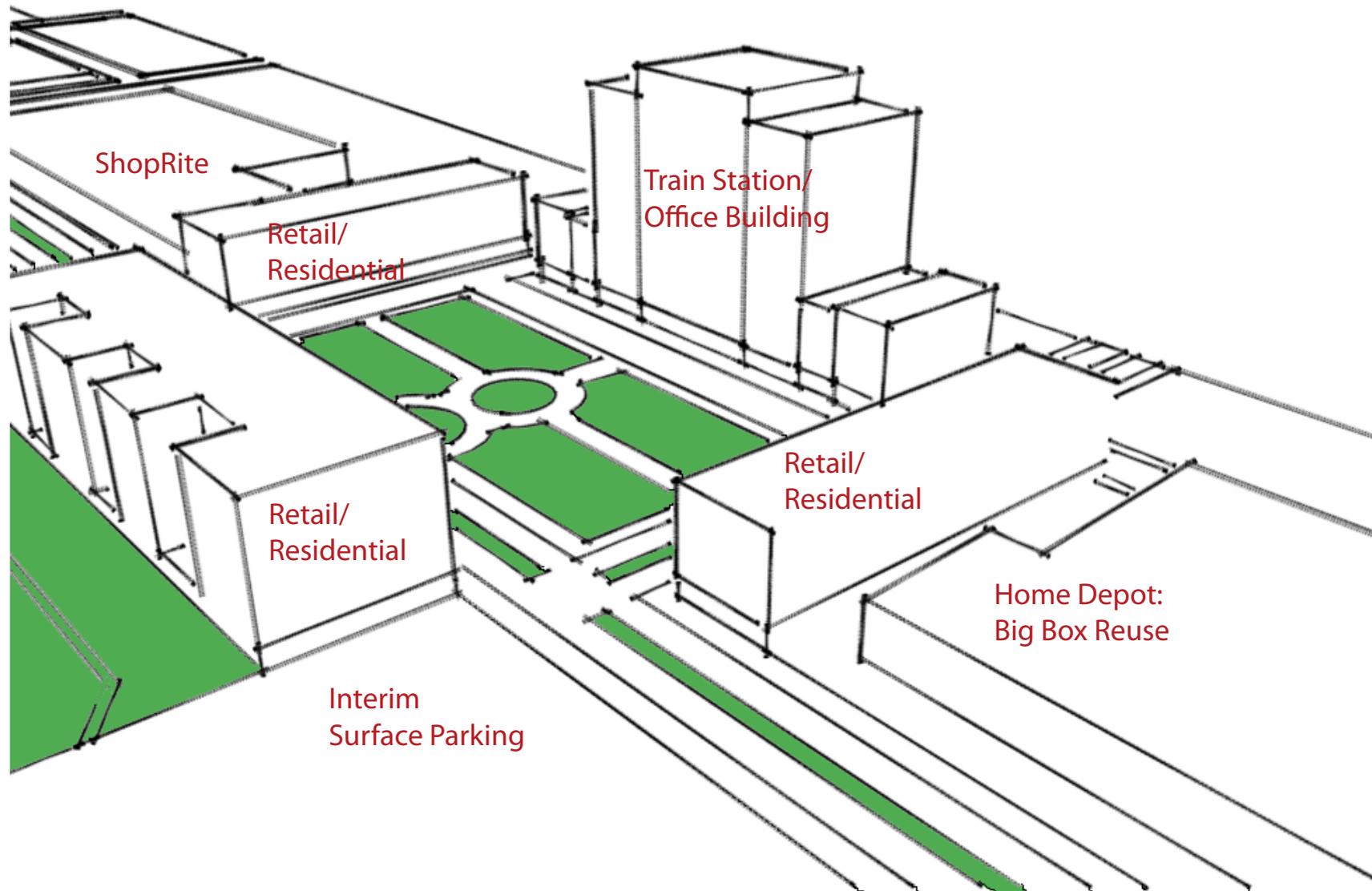


COMPLETED BUILD-OUT OF KENILWORTH STATION AND CHERRY HILL PARK

Catalyst Project

A bold initial project to kick off development of Cherry Hill Park is necessary to catalyze the economic growth necessary for development and to begin defining the region's sense of place—making it an area loved by residents, workers and visitors alike. This catalyst project seeks to do both at once: generate an identity for the area, and begin the crucial first phases of development upon which all other phases will rely.

Catalyst Project



COMPONENTS OF CATALYST PROJECT

Kenilworth Station will create a distinctive gateway and center for Cherry Hill. The Kenilworth Station tower, built directly above the New Jersey Transit station, will offer tenants views of the Philadelphia skyline and will front on Station Square, a new public space. Mixed-use development, featuring ground-floor retail and apartments upstairs, will line the square's other sides.

Summary

The catalyst project is designed to induce change and further development in the currently failing Garden State Pavilions. The walkable, transit-oriented development centers around Cherry Hill's New Jersey Transit train station. The project incorporates higher densities, adequate public space and various amenities for residents and workers alike.

The catalyst project calls for a large commercial development, which will include the train station and ground-floor retail with up to 15 floors of office space above. Across from this development is a 1.4-acre plaza/park called Station Square, surrounded by a seven-story mixed-use commercial-residential development opposite the train station and a four-story retail-residential development on the remaining two sides of the plaza. Parking will be provided for commuters, residents and workers primarily in a single-story underground garage.

The catalyst project should function as an impetus for the revitalization of this dying portion of the Garden State Pavilions and build toward the overarching principals of sustainability and placemaking. It is a realistic vision, especially since the land needed for the project has just one owner and is visible from Route 70. This commercial hub created in the catalyst project should pave the way for further development in its surrounding area.

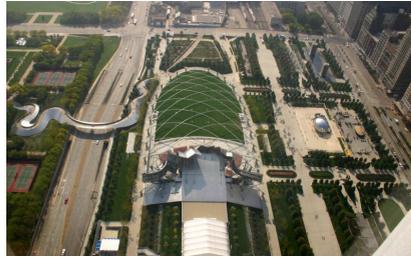
Residential: 306,600 square feet
240 apartments
Retail: 104,300 square feet
Office: 420,000 square feet
Parking: 513 spaces



PHILADELPHIA SKYLINE FROM GARDEN STATE PAVILIONS



VISION OF CATALYST PROJECT'S "MAIN STREET"

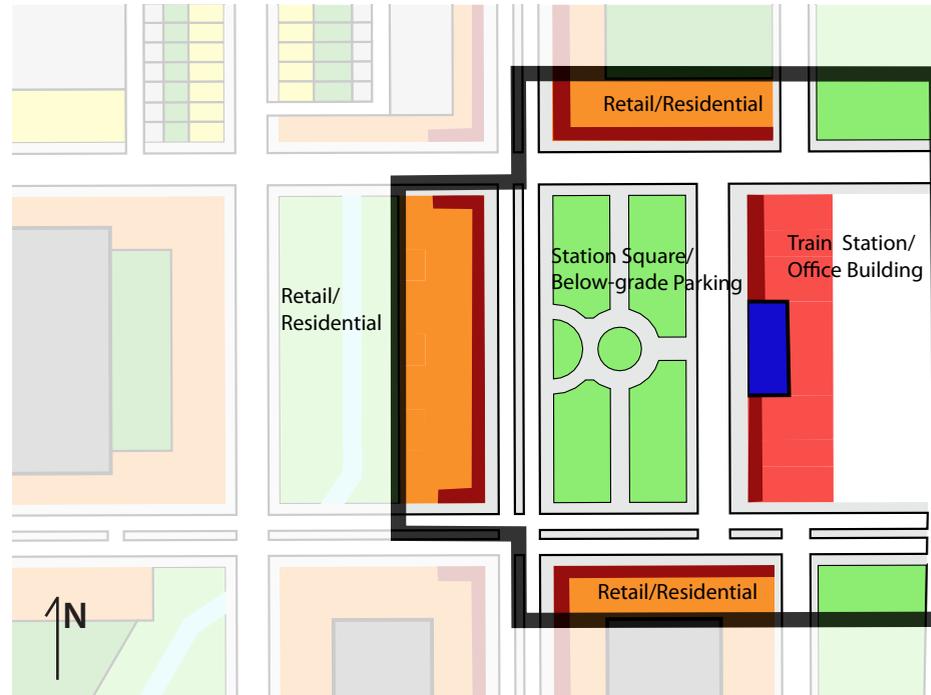


**CASE STUDY: UNDERGROUND PARKING
MILLENNIUM PARK, CHICAGO**

Surface parking creates lost space. Parking provision is a necessary evil for planners that takes up a lot of space that could be developed for other land uses. The lack of a street wall and curb cuts may deactivate the street. In order to deal with this issue in an area that was filled with rail yards and parking lots, Chicago created a parking garage under Millennium Park. By hiding parking, Millennium Park was used for placemaking.

Parking garages have high costs. Chicago financed the Millennium Park garage with bond financing and contributions from private entities. Taxes from the revenue of the parking garage are used for maintenance of the park.

Chicago and Cherry Hill clearly have their differences. Millennium Park is a more grandiose plan created for a huge space in downtown Chicago, but Cherry Hill may learn from their its and scale it down to effectively create space and address placemaking with Station Square.



Key Elements

UNDERGROUND PARKING GARAGE

Below the entire catalyst project is an underground garage to accommodate the parking needs for commuters, residents, visitors and workers. This project will total about 240 residential units and approximately 420,000 square feet of office and commercial space, which will require substantial parking. Parking requirements were allocated at 1.3 spaces per residential unit and one space per 1,000 square feet of commercial space. The Urban Land Institute suggests between one-half and three parking spaces per 1,000 square feet of office space in its Smart Growth Guidebook for Maryland, so a conservative two spaces per 1,000 square feet was applied here given the suburban location of Cherry Hill. Averaging 350 square feet per parking space, a total of 513 spaces are possible on the 179,450-square-foot parcel, exceeding the requirements for these buildings.

Underground parking will preserve the valuable land above ground that would otherwise be wasted with a surface parking lot.

STATION SQUARE

The 1.4-acre plaza and park will feature a central monument, such as a fountain, and should assist in making the catalyst project a focal point of Cherry Hill. Nearby workers and residents can utilize this space for picnics, walks and community events such as concerts, markets, festivals, etc. By transforming the existing surface parking lot into a park, the space will be activated and the land will function at a higher and better use. The park amenity should add value to the surrounding areas, and eventually pay for itself through resulting increases in tax revenues.



**CASE STUDY: CIVIC SQUARE
RITTENHOUSE SQUARE,
PHILADELPHIA**

Rittenhouse Square in Center City Philadelphia is one of the best-used public spaces in the United States. It functions as a serene sanctuary from the hustle and bustle of the Walnut Street shopping area, and users of surrounding buildings enjoy the public art, benches and green space for various purposes. The city regularly holds free concerts and other events in the park, and is frequently the scene of rallies and protests of residents.

The neighborhood around Rittenhouse Square features diverse architectural styles and a mix of residential and commercial uses. High-rise residences, luxury apartments and hotels, boutiques and shops surround the park. The area is extremely walkable, accessible by bus lines and just several blocks away from the PATCO and SEPTA rail lines.

Acclaimed urbanist Jane Jacobs describes the park and surrounding area as "the perfect urban neighborhood." In her book *The Death and Life of American Cities*, she elaborates: "This mixture of uses of buildings directly produces for the park a mixture of users who enter and leave the park at different times ... The park thus possesses an intricate sequence of uses and users." (Jacobs 1961) The park and surroundings form a symbiotic relationship and benefit from one another.

Station Square in Cherry Hill presents an ideal central location for gathering of neighborhood residents and workers. Successfully implementing Station Square should add value and aid in improving surrounding neighborhoods.



CASE STUDY: TRANSIT-ORIENTED OFFICE BUILDING LASALLE STREET STATION, CHICAGO

The LaSalle Street Station is a commuter rail terminal in downtown Chicago that also features a high-rise office building for the Chicago Stock Exchange. LaSalle Street Station serves approximately 15,000 commuters daily on Metra's Rock Island District and is a stop for railroad cars. It offers a number of bus connections as well. Commuters are met with ground-floor retail and a bar, making it a vivacious destination within the central business district.

Cherry Hill may never experience similar levels of ridership as a Chicago train station in the CBD, but comparisons may be drawn and Cherry Hill could benefit by emulating some of the things they do well. The scale of the office building proposed and the services offered at the train station in Cherry Hill are smaller in comparison, but still parallel the guiding principals learned from LaSalle Street Station.

TRAIN STATION AND OFFICE BUILDING

The train station development is the key component of the catalyst project. It should function as a central landmark and attraction to the area with an innovative mixed-use design; cafes, restaurants, small retail shops and boutiques are potential ground floor tenants. The site is fortunate to have the infrastructure laid out to connect it to both Philadelphia and Atlantic City. The existing train station, however, fails to take advantage of this amenity as it is hidden behind the shopping center by loading docks and dumpsters. The new design draws attention to the train and should promote access with better signage.

The upper floors will feature office space for a mix of tenants including legal, financial and professional services firms. Employees from surrounding areas will enjoy the convenience of working right at the train station. The development will total approximately 420,000 square feet of commercial space in a three-tiered, architecturally unique design, helping to identify a sense of place in Cherry Hill.

RETAIL AND RESIDENTIAL BUILDINGS

On the remaining three sides of Station Square, the plans call for mixed-use retail/residential developments. Directly opposite the train station is a seven-story building featuring 33,200 square feet of ground-floor retail or commercial space and 178,200 square feet of residential space above (approximately 153 residential units averaging 1,300 square feet per unit). The other two five-story buildings call for a combined 32,100 square feet of ground-floor retail and 128,400 square feet of residential space, or about 100 residential units. In total, the catalyst project calls for 104,300 gross square feet of ground floor retail and 306,600 square feet of residential, or 253 units. In accordance with COAH regulations, 20 percent of these units are to be affordable, that is the bottom 40 percent of households on the income distribution can afford rents or mortgages of no more than 30 percent of their incomes. Implementation of such policies will be discussed in the following chapter.

As previously demonstrated, Cherry Hill has a rapidly growing millennial population aged 18 to 24. Studies have shown that this demographic is more likely to be renters. Marcus & Millichap's 2nd Quarter 2009 Apartment Market Study for the Philadelphia Metropolitan Area shows that of the 28 submarkets, Cherry Hill has the second highest vacancy rate (8.1 percent). This statistic may be demonstrative of the undesirable existing apartment stock available to residents, characterized by the drivable suburban paradigm. Vacancy rates are much lower in more densely populated areas such as Center City. Cherry Hill must address the needs of this highly productive demographic by encouraging the provision of rentable housing options in a walkable, transit-oriented development with recreational amenities to attract and maintain these residents.

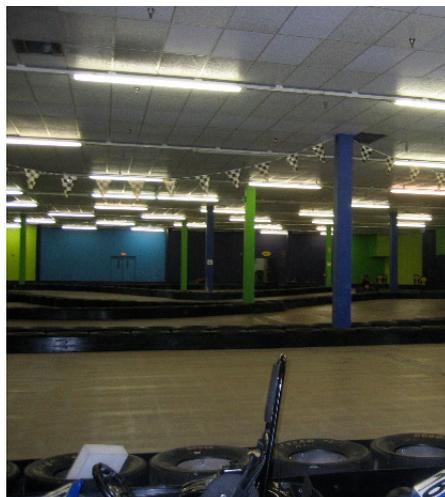


CASE STUDY: RETAIL AND RESIDENTIAL BUILDINGS WEST HARTFORD, CONN.

Blue Back Square is a mixed-use development in West Hartford, Connecticut. In a wealthy town (2005 median household income of \$79,443, American Community Survey), this project redeveloped a former car dealership as an expansion of the existing successful downtown. Proposed in 2003, the project was completed in 2008 and has increased the stature of West Hartford as a center within the metropolitan region.

In addition to office space, a movie theater, and a hospital branch, Blue Back Square includes buildings featuring apartments and condominiums above retail shops. Such calculated integration of uses helps make the project a highly successful, exemplary development.

Cherry Hill's median household income is \$83,143, even higher than that of West Hartford. If a similar suburban town sees these successful retrofit efforts, Cherry Hill certainly can.



Case Study: Adaptive Reuse

Adaptive reuse refers to reclaiming or reprocessing a structure. The building itself does not always have to change as drastically as its image has to change in the imaginations of the beholders. They are not always long-term solutions, but effective adaptive reuse can at least get value out of vacant structures on an interim basis.

In Round Rock, Texas, a suburb of Austin, developers reused a vacant Walmart building and transformed it into a go-kart facility called the RPM Indoor Raceway. The site is conveniently located next to Dell Computer’s Corporate Headquarters, which often rented out the space for corporate events. The business owners reused Walmart’s three-tiered signage, replacing the trademark “WAL-MART,” “We Sell for Less” and “ALWAYS” with “RPM Indoor Raceway,” “Speed Happens” and “Go-Kart Racing.” They rented out their parking lot space to a motorcycle safety school during the week and to an antique car club on the weekends, getting value from most of the otherwise wasted land.

Vacant big-box stores—large, freestanding, warehouse-like buildings that dominate Garden State Pavilions—are both aesthetically bland and harmful to surrounding areas. Big-box reuse refers to the attempt to make the structures useful after the retailer has vacated the premises (e.g., museums, community centers, churches and other civic groups moving in). Doing so may help fight against sprawl in that for every building reused, another one does not go up. The currently vacant former Home Depot building in the Garden State Pavilions presents an ideal structure to be reused at least temporarily.

Short-Term Implementation

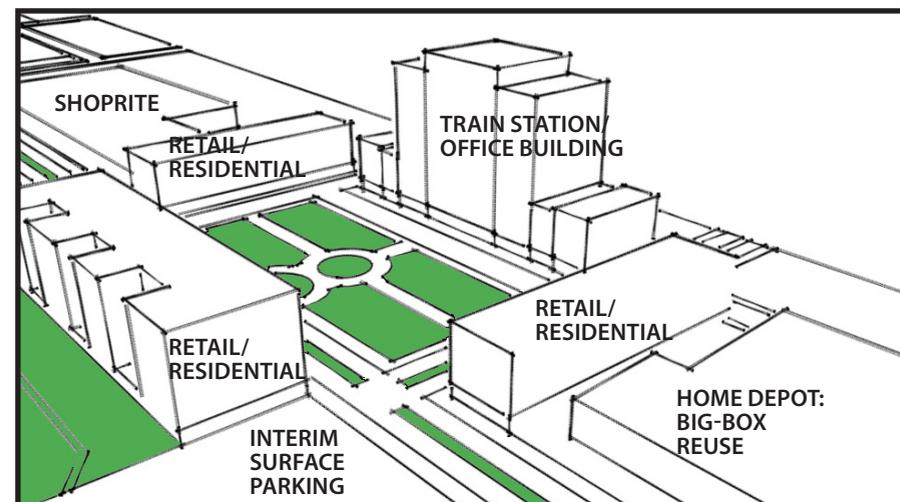
PHASE ONE: CATALYST PROJECT

The four components of the catalyst project work together to set the tone for change in the area. Land remediation and the underground parking garage are naturally the first steps, and the rest of the development can occur simultaneously after laying the foundation.

The catalyst project can be completed by 2020. We are confident that this is possible because of the single ownership of the land needed for the catalyst project. Furthermore, the proximity to and visibility from the high-traffic Route 70 makes it a desirable and commercially viable location. The catalyst project focuses on placemaking and should induce a market for further development in the surrounding area.

Concurrent with development of the catalyst project, the adjacent vacant Home Depot big box can be reused on a temporary basis. Stakeholders have expressed an interest in some sort of entertainment or recreational amenity, perhaps along the lines of a fitness center.

We expect the catalyst project will attract new development to the area and anticipate absorption of approximately 90 to 100 residential units per year. The areas surrounding the catalyst project will develop however the market determines, but the plan envisions more relatively dense housing (about 70 to 80 units per acre) directly around it with parking garages, followed by less dense apartments with surface parking beyond that (40 to 50 units per acre) and eventually town houses (about 20 units per acre) and single-family detached homes (about 10 units per acre).



CATALYST MASSING

Proforma

Basic proformas were completed to pencil out the feasibility of the catalyst project. It was broken down by use rather than by building. That is, one for the underground parking garage, residential, retail and office components. See Appendix for more detailed evaluation.

UNDERGROUND PARKING (FIGURE 1)

The Township of Cherry Hill is to purchase the land required for the catalyst project and construct the underground parking garage. The parking garage will not be profitable on its own, but other uses will gain value in the surrounding areas as a result and compensate for this loss.

The parcel is 179,450 square feet, or about 4.1 acres. Comparables show that highway-fronting land in Southern New Jersey is valued at approximately \$1 million per acre, or \$23 per square foot, totaling \$4.1 million for this site. Allocating 350 square feet per parking space, 513 spaces can be constructed for \$30,000 per space totaling \$15.3 million in construction costs. Total development cost for the parking garage is \$19.5 million. Market studies dictate rents of \$100 per month are realistic with a 25 percent expense ratio. Net operating income should be \$430,680 for a 30-year net present value at 10 percent of about \$4.9 million. The internal rate of return (-0.81 percent) reaffirms that the project on its own is not profitable, but it adds value in the surrounding area.

RETAIL (FIGURE 2)

The 104,300 square feet of ground-floor retail between the four buildings in the catalyst project totals 42 units of 2,500 square feet each. Cherry Hill can offer tenants a \$1 ground lease since they will be the landowners. Construction costs average \$120 (RS Means) for a total development cost of \$13.8 million. Rents are assumed to be \$13 per square foot, as per Marcus & Millichap's 2009 Philadelphia MSA Retail Report, yielding total income of \$2.1 million. A 30 percent expense ratio and 5 percent stabilized vacancies yield a net operating income of \$1.4 million. This net present value of these cash flows at 10 percent would be \$15.2 million with an internal rate of return of 9 percent.

OFFICE SPACE (FIGURE 3)

The upper floors of the train station have 420,000 square feet of total rentable space. Construction costs of \$141 per square foot make for total development costs of \$65.1 million. The office space can be rented at \$24 per square feet, as per Marcus & Millichap's 2009 Philadelphia MSA Office Report, yielding a total income of \$10.1 million annually. Thirty percent expense ratios and 5 percent assumed vacancies yield a net operating income of \$6.6 million. The net present value at 10 percent is \$73.6 million with a 8.9 percent internal rate of return.

RESIDENTIAL (FIGURE 4)

The residential component presumes to be about 20 percent affordable in accordance with New Jersey's Council on Affordable Housing requirements. A total of 328,900 square feet of rentable space, or 253 total units, is possible with the catalyst project. Construction costs per square foot of \$106 (RS Means) yield a total development cost of \$40.9 million. Market-rate rents of \$1.50 per square foot, or \$1,750 per unit along with affordable rents of \$835, make for a total income of \$280,514. A 30 percent expense ratio and 5 percent stabilized vacancies yield a net operating income of \$1.4 million. The net present value of these cash flows at 10 percent would be \$17.4 million with an internal rate of return of 5.5 percent.

This development is funded with low-income housing tax credits. There are more programs that can subsidize the cost of low- and moderate-income housing. The inclusion of these subsidies and favorable loans can reduce the total development costs of residential use. The use of these programs will make the residential component of the catalyst project more profitable.

FIGURE 1

| UNDERGROUND PARKING GARAGE | |
|---------------------------------|--------------------|
| Parcel size (sq. ft) | 179,450 |
| Land Cost/sf | \$23 |
| Total Land Cost | \$4,127,350 |
| Sq Ft/parking space | 350 |
| Total Parking spaces | 513 |
| Cost/parking space | \$30,000 |
| Construction cost | \$15,381,429 |
| Total Development Cost | \$19,508,779 |
| Rent/space | \$100 |
| Expense Ratio | 25% |
| Expected Expenses | \$12,818 |
| Projected Vacancies | 5% |
| Total Income | \$51,271 |
| Minus Expenses | \$15,381 |
| Net Operating Income | \$430,680 |
| Net Present Value (@10%) | \$4,876,443 |
| Internal Rate of Return | -0.81% |

FIGURE 3

| RETAIL | |
|---------------------------------|---------------------|
| Parcel Size (sq. ft) | 104,300 |
| Land Cost/sf | \$0 |
| Total Land Cost | \$0 |
| Sq ft/ Unit | 2,500 |
| Total Retail Units | 42 |
| Cost/ sf | \$141 |
| Total Construction Cost | \$16,176,930 |
| Total Development Cost | \$16,176,930 |
| Rent/unit | \$49,666.67 |
| Expense Ratio | 30% |
| Expected Expenses | -\$625,800 |
| Projected Vacancies | -\$104,300 |
| Total income | \$1,355,900 |
| Minus Expenses | -\$219,030 |
| Net Operating Income | \$1,355,900 |
| Net Present Value (@10%) | \$15,238,135 |
| Internal Rate of Return | 9.25% |

FIGURE 2

| OFFICE | |
|---------------------------------|---------------------|
| Total Rentable Space (sq ft) | 420,000 |
| Total Land Cost | - |
| Sq. Ft/unit | 2,500 |
| Total Units | 253 |
| Cost/sf | \$174 |
| Construction cost | \$73,080,000 |
| Total Development Cost | \$80,388,000 |
| Rent/unit (market) | \$5,000 |
| Expense Ratio | 30% |
| Expected Expenses | -\$3,024,000 |
| Projected Vacancies | 5% |
| Total Income | \$10,080,000 |
| Minus Expenses | \$3,024,000 |
| Net Operating Income | \$6,552,000 |
| Net Present Value (@10%) | \$73,633,943 |
| Internal Rate of Return | 8.91% |

FIGURE 4

| RESIDENTIAL | |
|--------------------------------|---------------------|
| Total Rentable Space | 328,900 |
| Total Land Cost | \$0 |
| Sq. Ft/unit | 1,300 |
| Total Units (20% affordable) | 253 |
| Cost/sf | \$106 |
| Construction cost | \$40,900,000 |
| Total Development Cost | \$40,900,000 |
| Rent/unit (market) | \$1,750 |
| Rent/unit (Affordable) | \$835 |
| Expense Ratio | 35% |
| Expected Expenses | \$98,180 |
| Projected Vacancies | 5% |
| Total Income | \$280,514 |
| Minus Expenses | \$112,206 |
| Net Operating Income | \$1,117,000 |
| Total NPV of LIHTC | \$17,400,000 |
| Internal Rate of Return | 5.50% |

Before



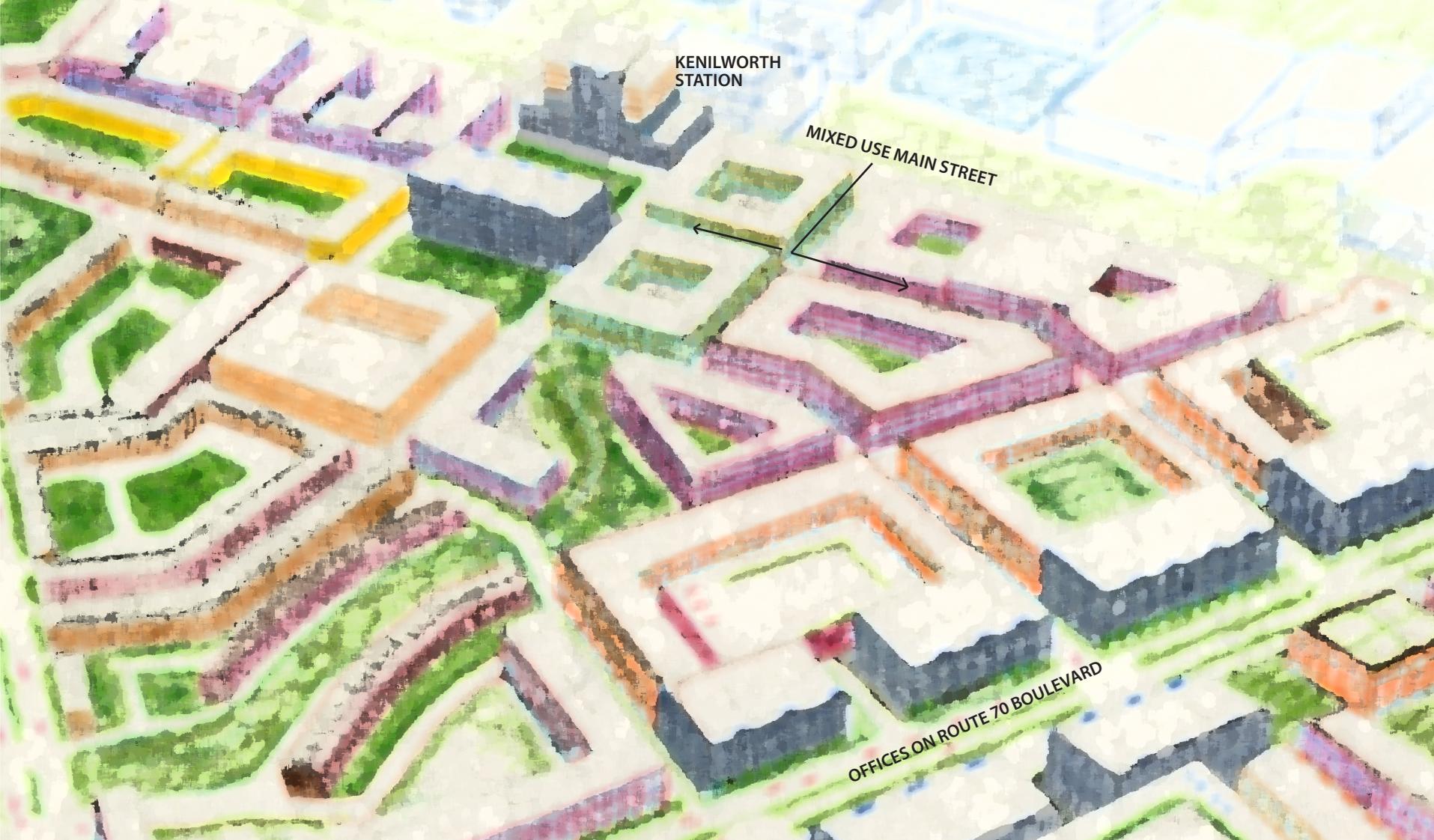
EXISTING GARDEN STATE PAVILIONS

Existing parking lots dominate the site and contribute to the lack of pedestrian orientation. Elements which enhance walkability are limited to signage, with no corresponding pavement striping. Big-box retail also contributes to the dehumanization of the scale in which the site is designed.

After

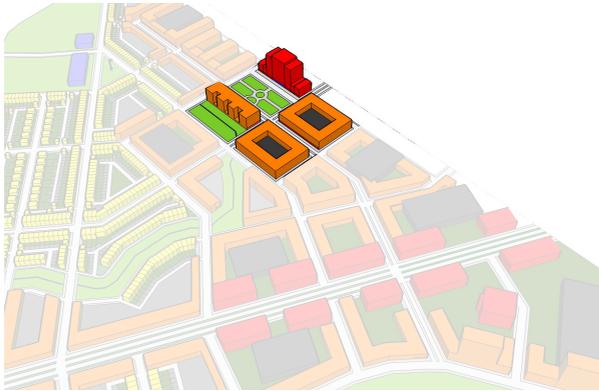
**MAIN STREET AFTER CATALYST PROJECT**

Proposed elements include tree-lined streets and other landscaping to improve the site aesthetically and environmentally; intermodal streets accessible to automobile and bicycle traffic; a park that increases options for recreation; engaging street furniture that encourages activity, thereby creating liveliness; and retail fronts designed at pedestrian scale.



POTENTIAL DEVELOPMENT-INDUCED CATALYST PROJECT

Catalysing the Short Term Phase

**PHASE TWO**

Upon completion of the catalyst project, the next phase can begin. Two four-story apartments with ground-floor retail/flex space are to be built opposite one another along the main street just south of King Avenue. A two-story parking garage inside both buildings satisfies the same previously discussed parking requirements. This phase would develop on the land currently occupied by vacant big-box retail stores and the accompanying parking lots in the Garden State Pavilions. The design would increase densities and utilize land on the main street more effectively than the current use.

**PHASE THREE**

The third phase calls for expansion north of the catalyst project with a mix of building types. Construction will replace the ShopRite grocery store, which currently occupies the space and is still commercially viable, although this viability may be waning in the wake of the opening of the higher-scale Wegman's Market at the adjacent Garden State Park Shopping Center. All developments will feature ground-floor retail/flex space and apartments and different parking options. The northernmost triangular parcel and the two single-loaded buildings to the west include surface parking while the two other structures along the rail line will use structured garages.

**PHASE FOUR**

The final phase of the short-term plan calls for the concurrent development of attached town houses to the north and further development of high-density apartment buildings with shared multilevel structured parking garages. The plan also allows for the development of a second office hub with apartments behind to be built along Route 70. This fourth phase of the short-term plan may blend with the mid-term development plans discussed in the previous chapter, depending on market conditions.

By the time the short-term development phases are completed, the main street will be fully functioning with bustling ground-floor commercial and residential space above. The walkable, vibrant community, brought on initially by the catalyst project, will cement a branding of Cherry Hill as a leading sustainable, desirable and livable community.

Implementation

The economic vitality outlined in this plan relies on effective use of available funding sources, whose investments will pay off in the Golden Triangle's redevelopment. It is important to take advantage of all available funding mechanisms—especially those for affordable housing—to maximize growth. Because ultimately, it is the people who live there and who will move there in the future who will define the place of Cherry Hill Park.

Implementation



BOULEVARD IN KENTLANDS, MD.



HOUSING IN KENTLANDS, MD.

Summary

A number of financing mechanisms are available to help make the Cherry Hill Park and Kenilworth Station plans a reality. Revenue Allocation Districts (RAD), backed by the New Jersey Economic Development Agency, allow municipalities to issue bonds that are backed by the anticipated increase in tax revenues that would result from the improved infrastructure. The New Jersey Department of Environmental Protection's Green Acres program offers low-interest loans to municipalities looking to preserve open space and develop parks, while the Freshwater Mitigation Fund allocates resources for wetlands restoration statewide. Affordable housing could be financed in part by the state's Council on Affordable Housing (COAH) and federal housing tax credits. Finally, state economic development programs could fund the creation of a business-incubator program in Cherry Hill.

Infrastructure Investment

REVENUE ALLOCATION DISTRICT

Cherry Hill could induce development within the Golden Triangle by creating a series of Revenue Allocation Districts. RADs must be located within an area in need of redevelopment, as justified by the Local Redevelopment and Housing Law in New Jersey. These districts allow municipalities to lock in a tax level and then fund development based on an increment of that tax assessment over time. The value is derived from future gains in the tax assessment and funds capital costs and improvements within the district.

The development plan for the Golden Triangle is proposed in four phases, and all could be eligible for several distinct RADs. In particular, the catalyst project and the boulevardization of Route 70 are prime candidates for RAD designation since they both contain the appropriate components from which long-term redevelopment funding streams can be generated. To access RAD funding,

IMAGES (LEFT TO RIGHT):
New Orleans; Bryant Park, New York; Haile Village Center, Gainesville, Fla.



Cherry Hill Township would make an application to the Local Finance Board, and the Board either affirms or denies the ordinance. In the case of the catalyst project, the RAD could provide funding for costs associated with residential and commercial development, as well as streetscape improvements to the site. Since the retail stores along the main street would be the driving force for revenue, the county would be able to create higher equity to offset the cost of capital improvement. In the case of the boulevardization of Route 70, the RAD will likewise help to create a steady funding stream to fund the construction of the boulevard as well as the affordable and market-priced housing in the area. Once RADs are approved, counties normally get access to a number of taxable and non-taxable bonds that can be floated to pay for the lease of the land for parking, capital improvements or the development itself. Cherry Hill would need to seek bond issues from the New Jersey Economic Development Authority (NJEDA) that can be used in the financing stages of residential, commercial and retail development within the catalyst project.

To estimate the level of RAD funds that could be generated from the catalyst project, one can use the following equation. Property tax increment = (tax rate * taxable value of property) * ((taxable value of property – tax increment base) / taxable value of property). Assuming the tax rate for 2010 is 5.203 percent, the taxable value of all the properties within catalyst district is \$110,000,000 and the property tax increment base is \$30,000, the property tax increment is computed to be \$416,000. This amount would be available for Cherry Hill to redevelop capital projects within the RAD district.

Parks and Open Space

GREEN ACRES

The Green Acres program is a public financing program administered by New Jersey's Department of Environmental Protection (DEP). The program provides low-interest-rate loans (2 percent) and grants to municipal and county governments to acquire open space and develop outdoor recreation facilities. Cherry Hill can use this model to leverage private funding and enhance parks and open space within the Golden Triangle.

Within the Golden Triangle, the Green Acres program would be a viable program to fund the measures under this plan's Green Systems proposals. Grant funding should be initially directed toward the most environmentally sensitive areas within the site, the stream network and the native woodlands area. Secondary consideration should be given to the passive recreation areas east of the Executive Campus and north of King Avenue. Additionally, Cherry Hill needs to be aware of the fact that the land obtained with Green Acres funding needs to remain as open space in perpetuity and cannot be converted to a different use.

WETLANDS MITIGATION FUNDS

New Jersey's Freshwater Wetland Mitigation Fund is a prime source of funding for the preservation and restoration of wetlands within Cherry Hill. Counties can apply for funding to purchase land to enhance or restore degraded freshwater wetlands on any public land. In the case of Cherry Hill, use of mitigation funds should focus on improving the wetlands within native woodland areas since it could be a recreational and highly educational place for school and community residents. Additionally, Cherry Hill can make efficient use of these funding streams in the restoration of wetlands outside of the phase one development plan as well.



OTHER FUNDING FOR AFFORDABLE HOUSING

The New Jersey Affordable Housing Trust Fund Balanced Housing Program and federal low-income housing tax credits can be used separately to fund development, but funding programs encourage these programs to be used together. The Home Express Program streamlines the application process of these two programs and for bond financing. Developers can apply for this financing.

The Choices in Home Ownership Incentives Created for Everyone is another program that developers can apply for in order to get subsidies for the sale of homes. The funding is intended to subsidize communities with low- and moderate-income housing and market-rate units.

As the catalyst project moves from the planning to construction phases, there are grants that help alleviate the costs of construction, professional fees, financing fees, acquisition and contingency. The HOME Housing Production Investment Fund provides grants for nonprofit and for-profit affordable housing developers.

Regulatory Tools

COAH

Cherry Hill is certified under New Jersey's Council on Affordable Housing (COAH), which ensures appropriate levels of affordable housing within the state. It is required that any new municipal plan or developments provide a fair share of low- and moderate-income housing within Cherry Hill. These affordable housing programs can be put into effect from the beginning of the catalyst project.

The municipality has access to several state funding sources that can help developers subsidize the cost of producing affordable units. The New Jersey Affordable Housing Trust Fund Balanced Housing Program stores state and municipal nonresidential development fees and money allocated by the state Legislature for affordable housing. Municipalities and housing developers (both for-profit and nonprofit) can apply for grants. This money could help subsidize the residential development of the catalyst project. The Deep Subsidy Program can augment the New Jersey Affordable Housing Trust Fund Balanced Housing Program because it provides grants to subsidize an increase in the amount of low-income housing. These grants can be used for project-related capital costs that accompany low- and moderate-income housing development.

HOUSING TAX CREDITS

On the national level, federal low-income housing tax credits provide a reduction in tax liability. Developers of affordable housing can apply for this program. Developers who receive the credits can exchange them for private equity investment or needed extra cash flow to make a project more viable. These tax credits are useful to have in the beginning of the project, during the financing and construction phases. The economic development financing programs that make the development of the short-term phase viable can trigger COAH requirements that need to be fulfilled by Cherry Hill. These state and federal funding mechanisms can make the inclusion of low- and moderate-income housing viable. As development past the short-term phase continues, these affordable housing programs can continue to be effective in the medium- and long-term phases.

FORM-BASED ZONING

Form based codes are a type of performance zoning ordinance that is useful in creating mixed use districts and a traditional neighborhood environment. This type of regulation is effective in areas where there are many land owners. The implementation of a form based code for Cherry Hill Park should be considered from the planning stages of the development. Early adoption of a form based code can allow the development of Kenilworth Station to set the tone and pattern for development. This zoning tool can regulate bulk, density, and the form of buildings. The districts of form based codes are broad and allow commercial and residential uses to be integrated. This integration can be dense, like in the development of a main street with ground floor office or retail space and residential units above.

In addition to establishing a predictable physical pattern for future development, form based codes encourage independent development by multiple property owners because they can regulate development at the lot scale. This aspect of form based codes is useful as the development of Cherry Hill Park moves from the short term phase to the mid term phase, where there are more land owners.

Form based codes can set standards to maintain a livable environment that protects existing environmental conditions. An open space ratio can determine how much of a lot should remain open. There are minimum and maximum set back standards that can help define and activate the street wall. Density measurements can help regulate the bulk of a development. Floor area ratio can dictate non-residential uses while a dwellings per acre measure can regulate residential areas. Architectural standards for buildings, signs, and landscaping help to create a cohesiveness and integrate newer development with existing areas. These codes can also have an impervious surface ratio that compares the amount of roads, sidewalks, buildings, and parking lots to open space. The impervious surface ratio is important for this area of Cherry Hill because of the poorly draining soils and other environmental conditions of the site. This standard can help with the implementation of storm water management.

Business Incubation and Retention

Cherry Hill has access to several grant programs to supplement larger funding streams. Human and social capital programs can be leveraged as needed to provide for more discrete and situation-specific funding to businesses. These following policy-financing strategies can potentially be applied to both short-term and long-term plan development:

FUND FOR COMMUNITY DEVELOPMENT

This operates as a revolving loan fund and provides loans and loan guarantees for development initiatives up to \$750,000. It has wide applicability, enabling community-based organizations to apply this funding toward microenterprise and to fill the financing gaps of needy entities. This economic development tool could be of use for working capital for a number of retail and commercial businesses within the Golden Triangle.

INVESTNJ BUSINESS GRANT PROGRAM

The InvestNJ Business Grant Program is most effective as a business retention tool, and effectively targets businesses that are looking to expand their employee base or need a capital investment to sustain or grow their business. BEIP and InvestNJ should be implemented on an as-needed basis from the first stages because of the significance of building human capital and business capital in the area. This will then drive innovation and access the capital markets for further construction.

BUSINESS EMPLOYMENT INCENTIVE PROGRAM (BEIP)

The BEIP program serves as a business attraction program. It enables eligible businesses to receive cash grants annually based on the number of jobs they have created in New Jersey. In the case of the BEIP program, the new businesses bring with them tax revenue and jobs, among other positive externalities such as better quality of life, and further investment in the municipality. This program, similar to the Fund for Community Development and the InvestNJ Business Grant Program could be applied to commercial and retail businesses within the catalyst project.



DEVELOPMENT WITH AFFORDABLE HOUSING

