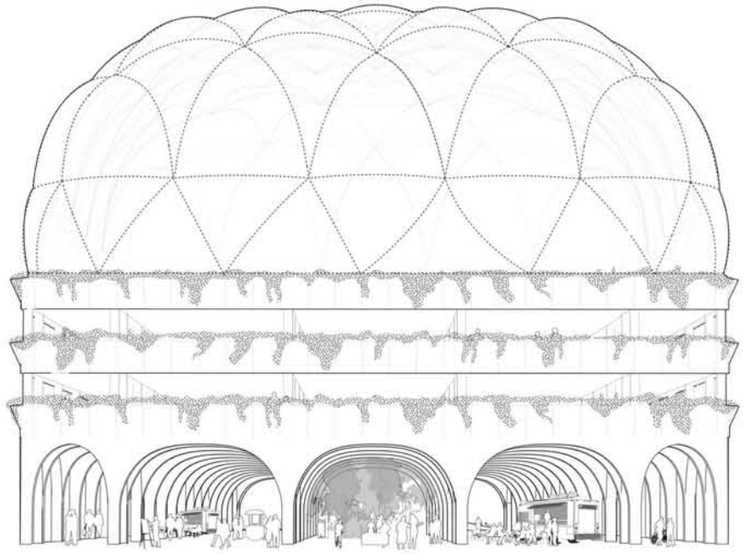
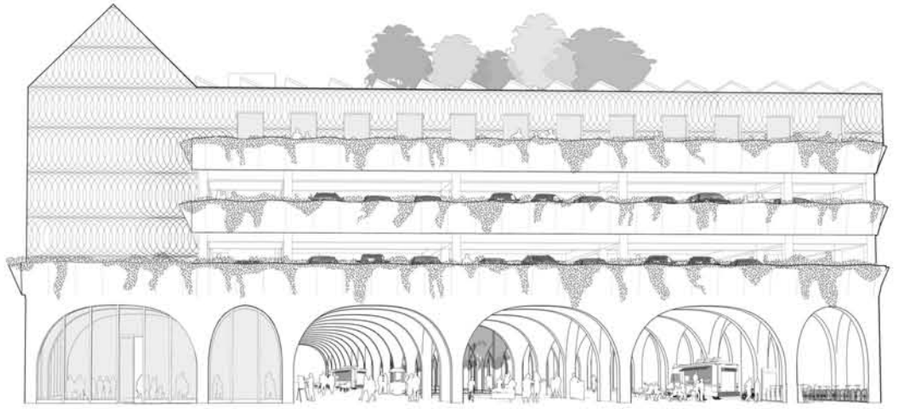
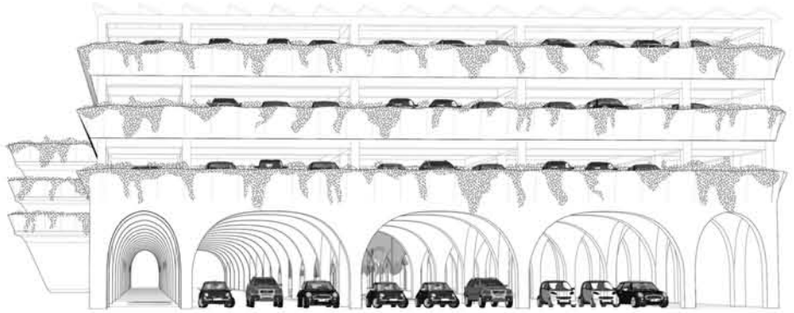






Build a Better Burb

PARKING PLUS

Rockville Centre, LI

DESIGN TEAM

Utile, Inc. ARCHITECTS AND URBAN DESIGNERS

Eran Ben-Joseph PROFESSOR, MIT

Nelson\Nygaard URBAN MOBILITY CONSULTANTS

Buro Happold STRUCTURAL ENGINEERS

Simon Design Engineering PARKING GARAGE ENGINEERS

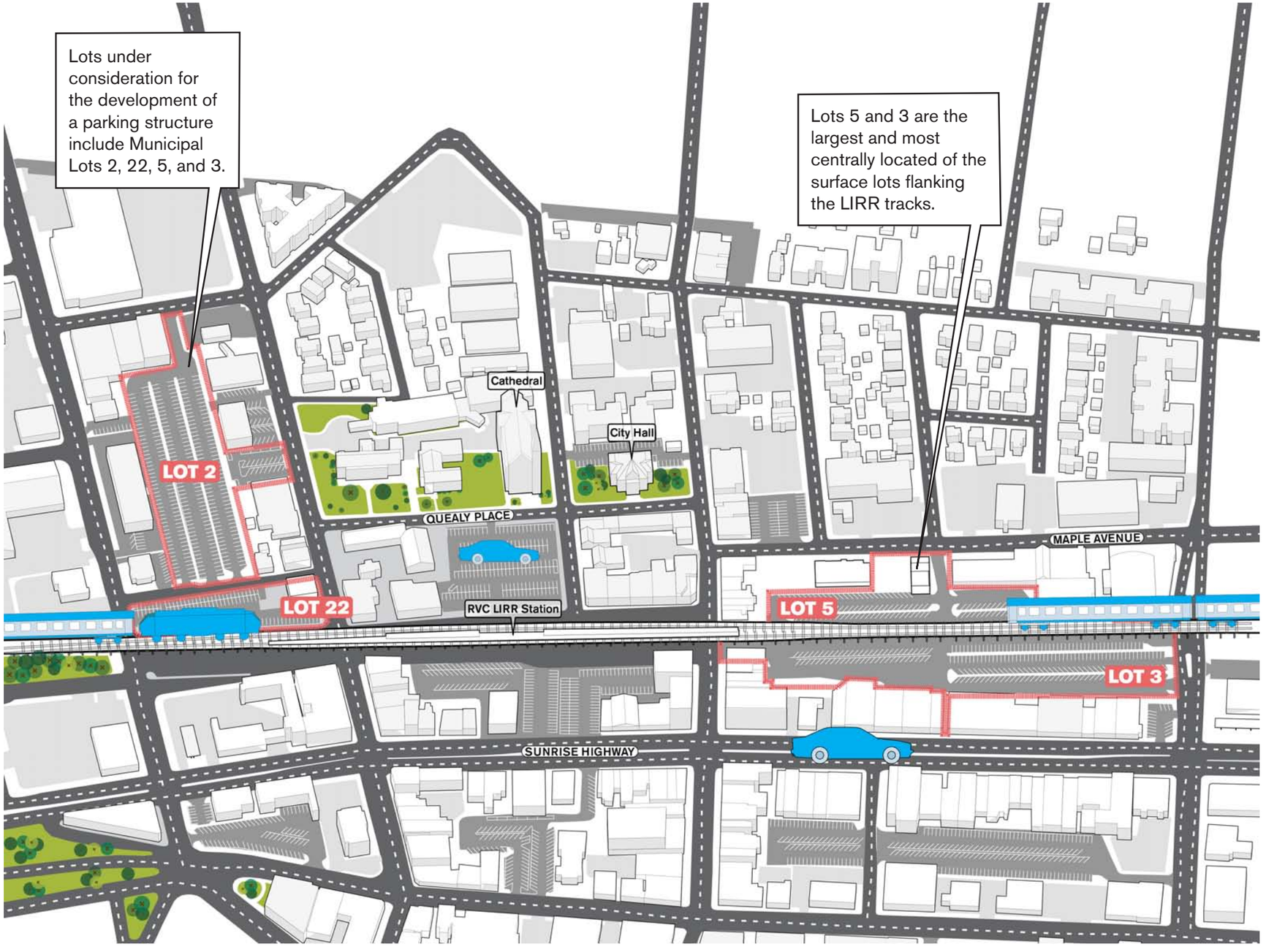
The Rockville Centre garage prototype accommodates a wide range of add-on program, including housing, tennis courts, restaurants, shops, and office space. The garage have a monumental arcade on the ground level that functions as commuter parking during the work week and as a public space on the weekends and holidays.

Rockville Centre is Thriving.

Rockville Centre is a hub of daytime and evening activity.

With more than 500 diverse shops, restaurants, and entertainment venues, the Long Island Index recently identified Rockville Centre (RVC) as a downtown with potential to grow.*

Rockville Centre is a desirable place to live and visit. The village has "one-seat" access to Penn Station via the Long Island Railroad's (LIRR) Babylon Branch and is a dining and entertainment destination for surrounding communities. Long Island's South Shore commercial traffic passes through the heart of Rockville Centre via Sunrise Highway, a major NYS Highway (Route 27).

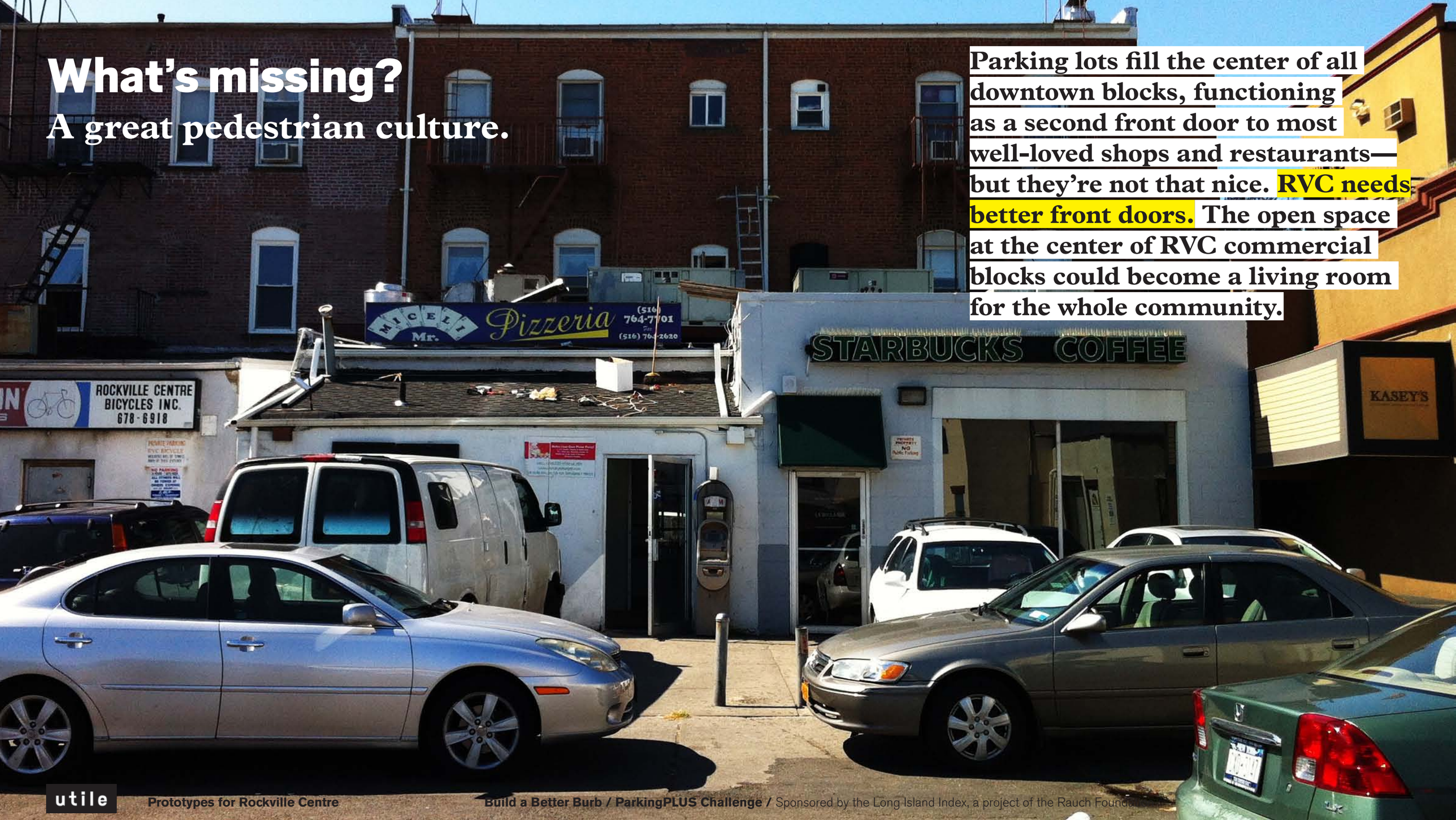


* *Places to Grow: An Analysis of the Potential for Transit-Accessible Housing and Jobs in Long Island's Downtowns and Station Areas.* Report Prepared by Regional Plan Association, January 2010.

What's missing?

A great pedestrian culture.

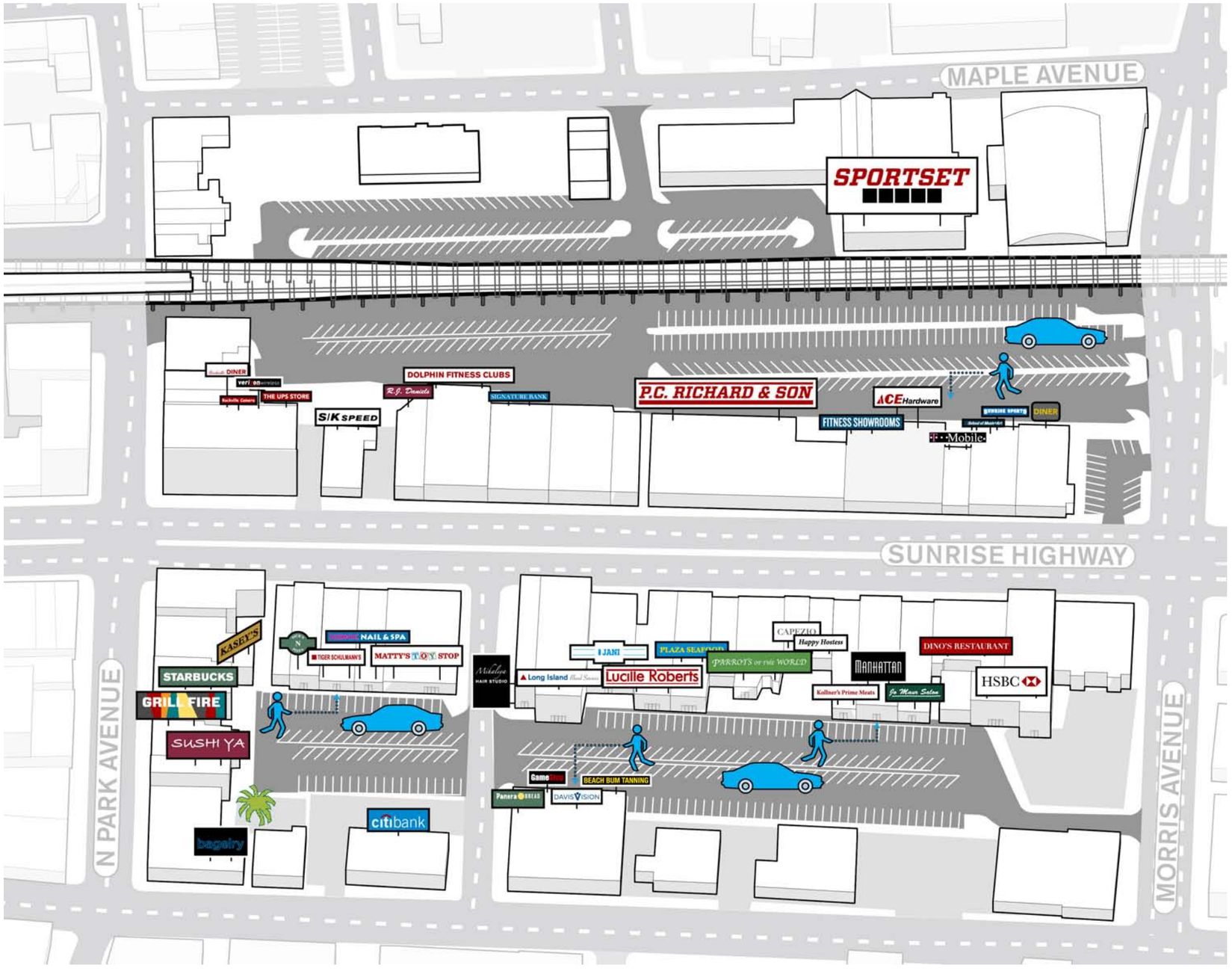
Parking lots fill the center of all downtown blocks, functioning as a second front door to most well-loved shops and restaurants—but they're not that nice. **RVC needs better front doors.** The open space at the center of RVC commercial blocks could become a living room for the whole community.



Most of the social interactions take place in the parking lot.

It is an inside-out village.

Sunrise Highway, conceived to celebrate the car, has left the buildings that line it with a double life. As a result of high speeds, the noise of truck traffic, and the need for parking lots to accommodate an automobile culture, **pedestrian life has been driven to the middle of the block.** Many RVC businesses have “front doors” backing up to mid-block surface lots. A safer and better connected pedestrian culture is needed in Rockville Centre.New parking garages can help remedy this.



Parking structures can be the catalyst for an even better Rockville Centre.

We can leverage the need for additional parking to make a better pedestrian experience—and add needed program like apartments and four-season recreation facilities.

While there are many perspectives on development and parking, the need for smarter parking *and* a better downtown is clear. Well-designed parking structures can enhance the pedestrian environment—which needs connected sidewalks lined with shops, new open spaces, and beautiful mid-block parking areas and plazas.

LIRR wants a parking garage prototype that is affordable and that will be embraced by local communities because it is attractive, convenient to use, well-maintained, and has broader benefits to the area surrounding the train station.

The Nassau County Planning Commission is focused on increasing "the availability of mixed-income housing and jobs in transit-accessible, energy-efficient, and vibrant locations."*

Rockville Centre needs more commuter parking spaces for its residents to retain and attract families and young professionals. In addition, new garages can liberate land-hogging surface parking lots for better uses such as new village-center shops, apartments, and open spaces.

**Nassau County Infill Redevelopment Feasibility Study.* Http://www.nassaucountyny.gov/Agencies/Planning/NassauCountyProject.htm

The robust colonnade under the elevated track inspired the architectural expression of the new garages. Together with the new structures, they could be part of an **enhanced pedestrian network** through the village center.





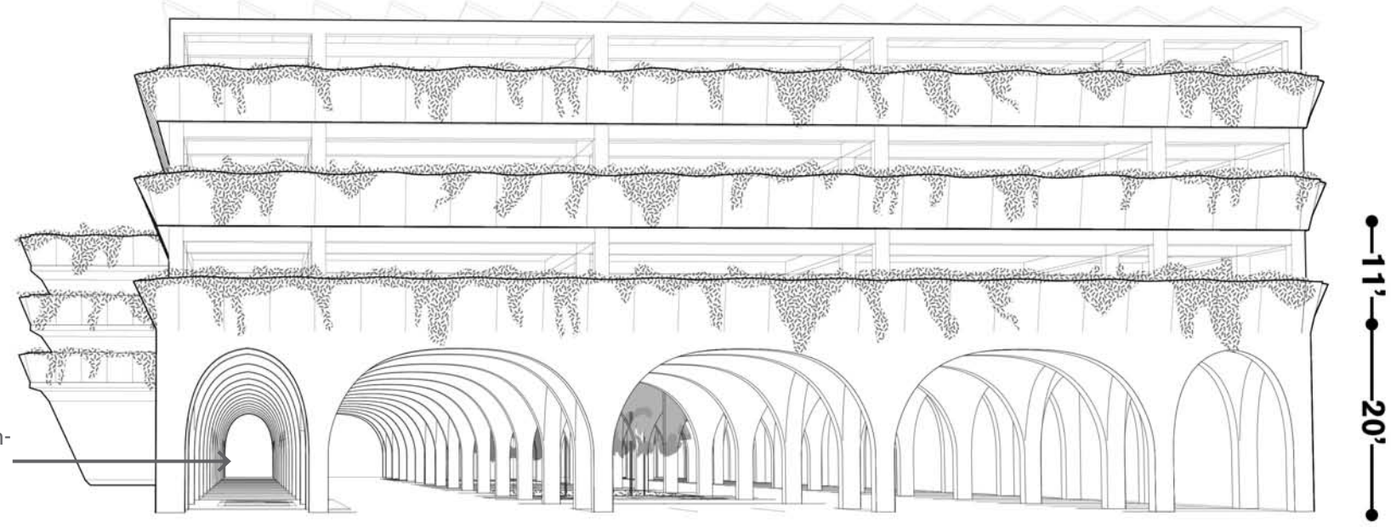
Precedents (from left to right): Under the Gowanus Expressway, Brooklyn, NY; Seven Arches Bridge, Rivington Terraced Gardens, Lancashire; Queensboro Bridge, New York, NY; Viaduc des Artes, Paris; Toyo Ito's Library of Tama Art University, Tokyo.

The Strategy

A flexible garage prototype with tall ceilings on the ground level will accommodate temporary festivals and markets on the weekends and allow for active non-parking uses along the primary street edges.

The structure of the proposed parking garage prototype is inspired by the columns of the elevated tracks and grand arches of historical engineering projects such as aqueducts and bridge viaducts.

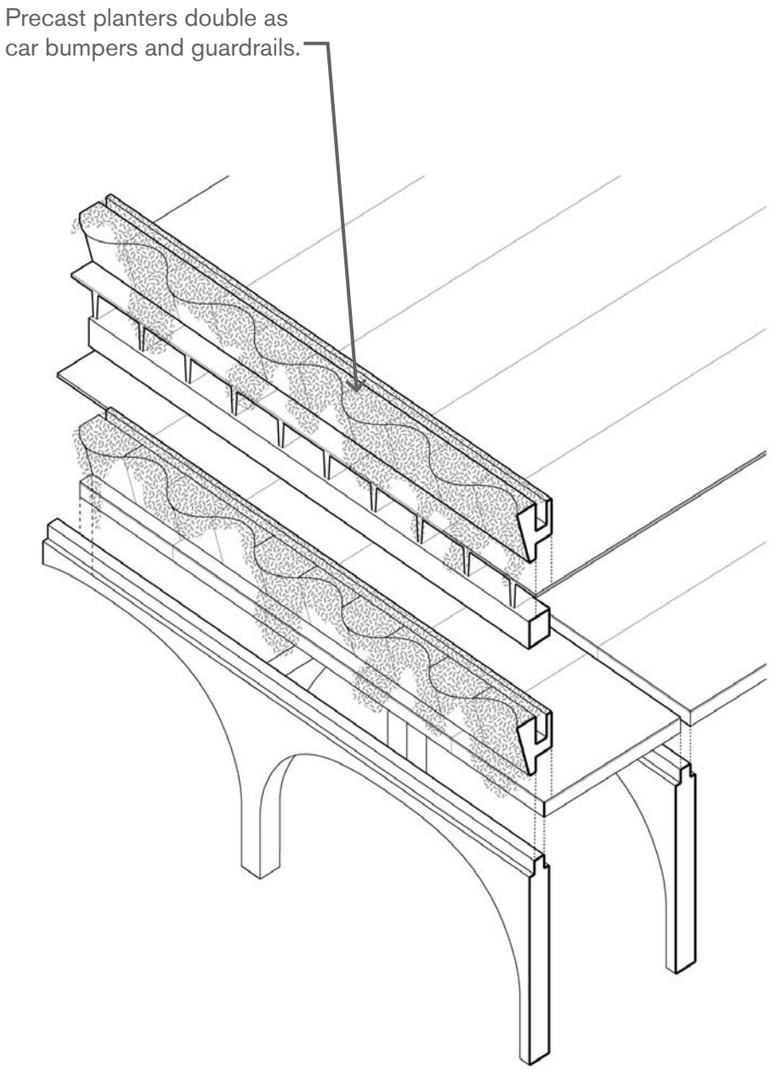
The Rockville Centre Garage Prototype will feel safer than conventional garages because of clear sight lines, attractive lighting, and welcoming high-ceiling spaces.

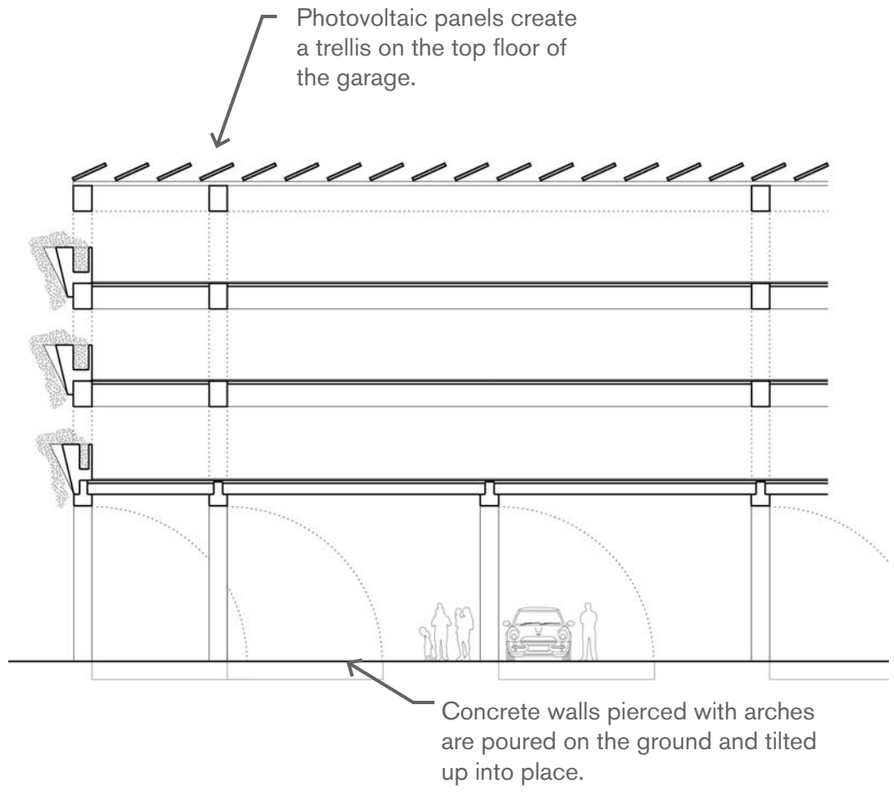


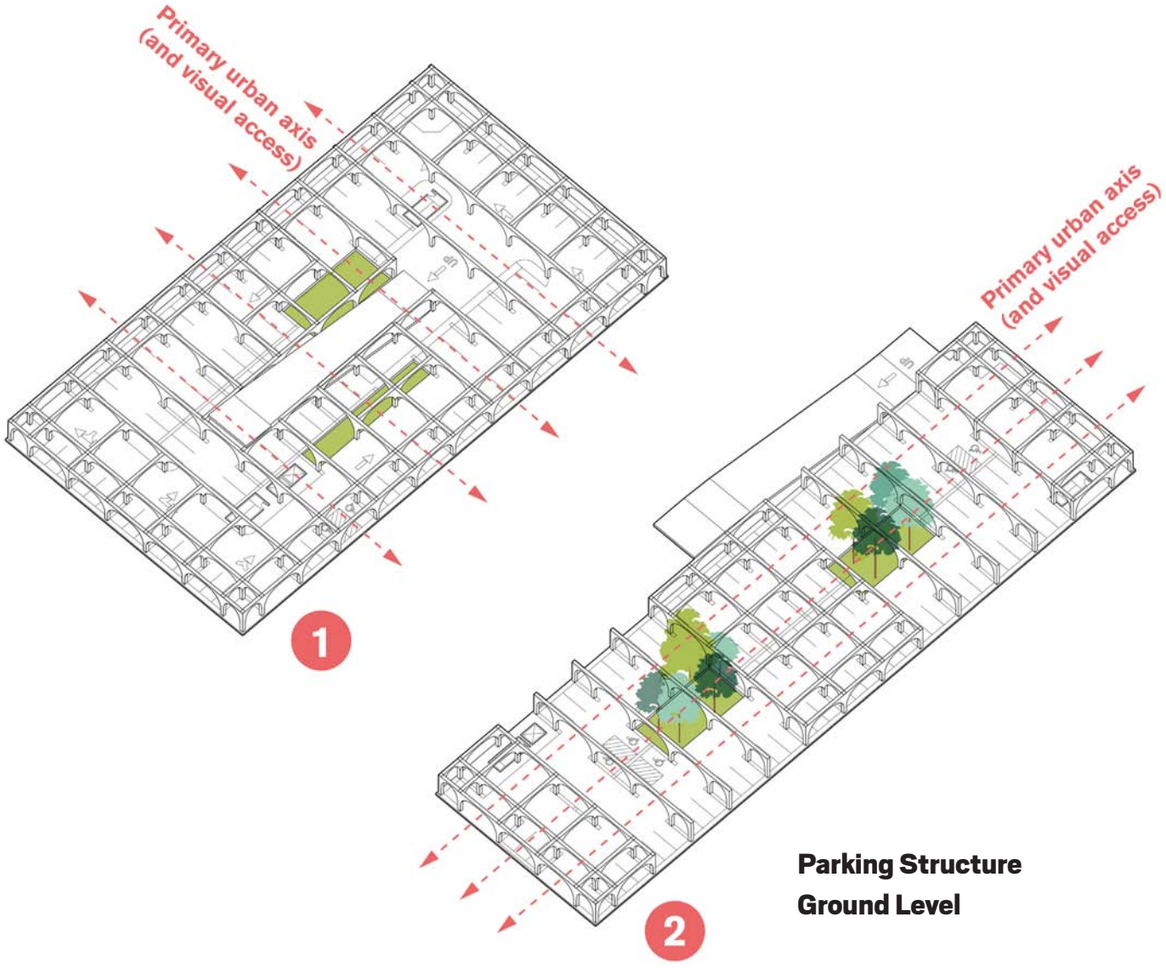
Parking Structure Prototype

The RVC Garage Prototype uses standard off-the-shelf construction techniques in unexpected ways. Twenty-foot-tall (20') walls—which are pierced by arches constructed using low-cost tilt-slab technology—are located every thirty feet (30'). This creates a memorable space that complements the columns that support the elevated tracks. Above the ground floor, the structure is a simple trabiated pre-cast system of piers, beams, and tees. Sculptural pre-cast planters on primary street edges double as a guard rail and car bumper.

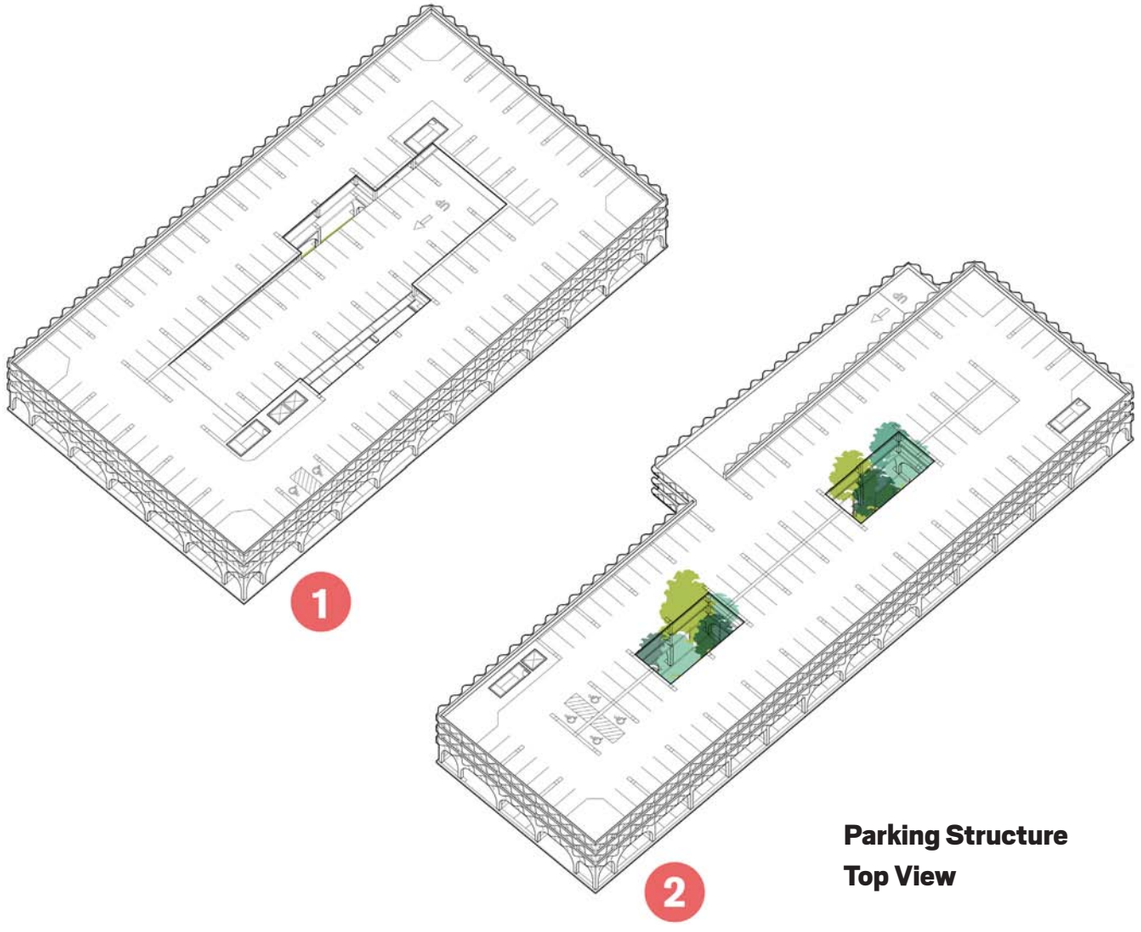
Irving Gill tilt-up construction. La Jolla Woman's Club, 1914-1915.







Parking Structure
Ground Level



Parking Structure
Top View

The prototype, rather than being conceived as a necessary public utility, has been designed as an uplifting public building that will enhance the overall public realm of the Village.

The 1 three-bay prototype provides the maximum parking efficiency but requires a 200'-wide site. The narrower 2 two-bay prototype fits within more constrained urban sites. Courtyards bring light and air deep into the garages.* This creates a pleasant experience for commuters and visitors starting from the moment they exit their cars and continuing until they reach their destination in downtown Rockville Centre.

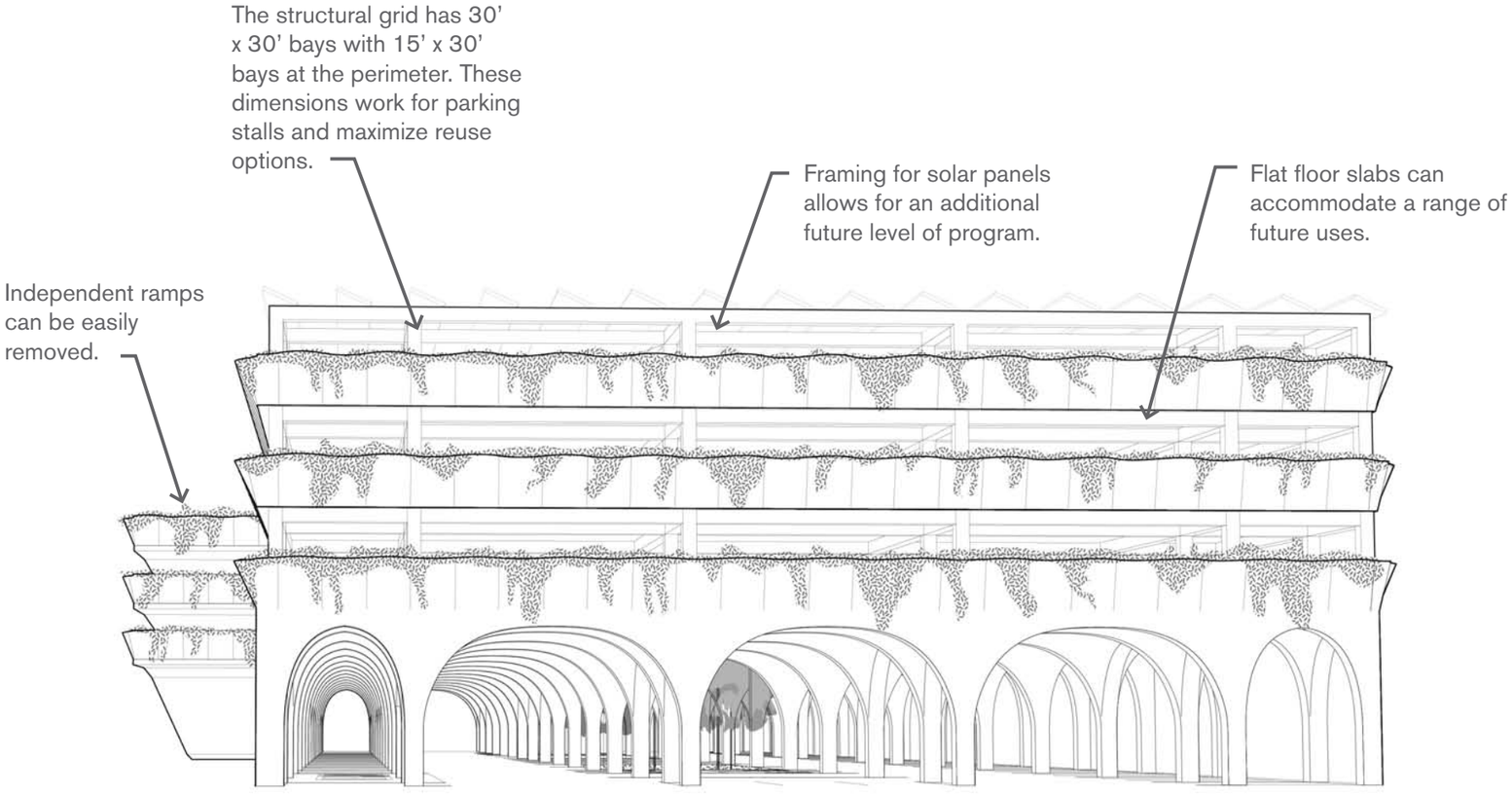
The arch walls are designed to work in two orientations to provide maximum visual impact for different tight urban locations and to frame the downtown plazas, parks, and streets.

*Courtyards can be removed to increase parking efficiency.

Let’s think about the Future.

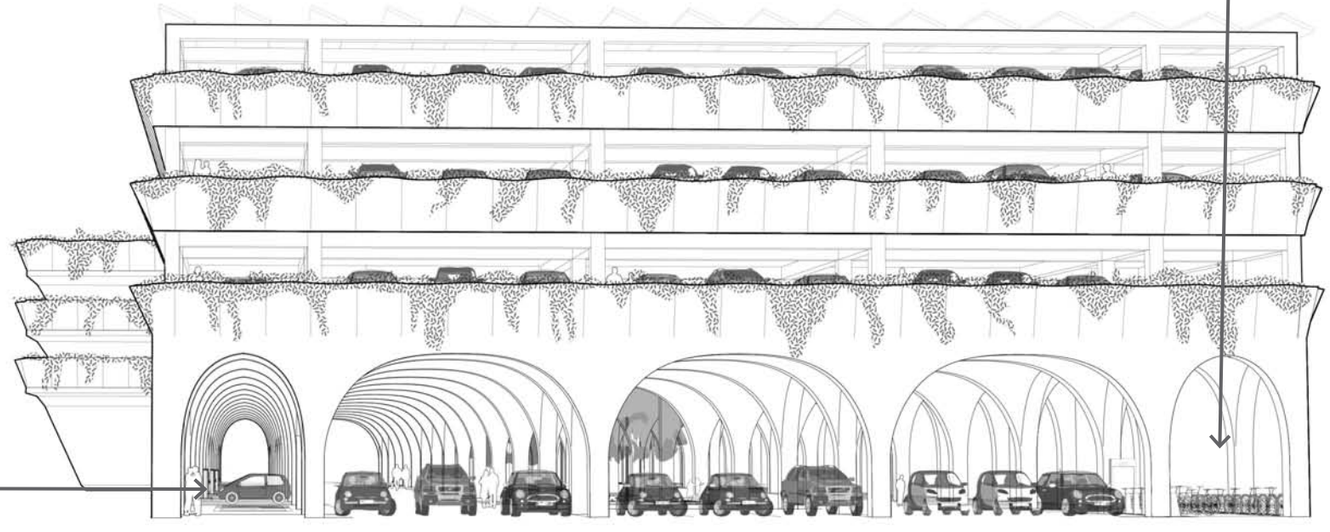
Parking garages could leverage the weekly ebbs and flows of the commuter population, and shift from inefficient, redundant lots to consolidated, shared parking facilities.

Let’s build flexible infrastructure that is made to be enjoyed for many years. As parking demand diminishes, parts of the ground level can be colonized by permanent ground-level shops and restaurants. Shared parking will allow the city to recapture real estate that can become infill development, enhance the streetscape, and help create a more cohesive town center.



During the workday the garage is filled with cars.

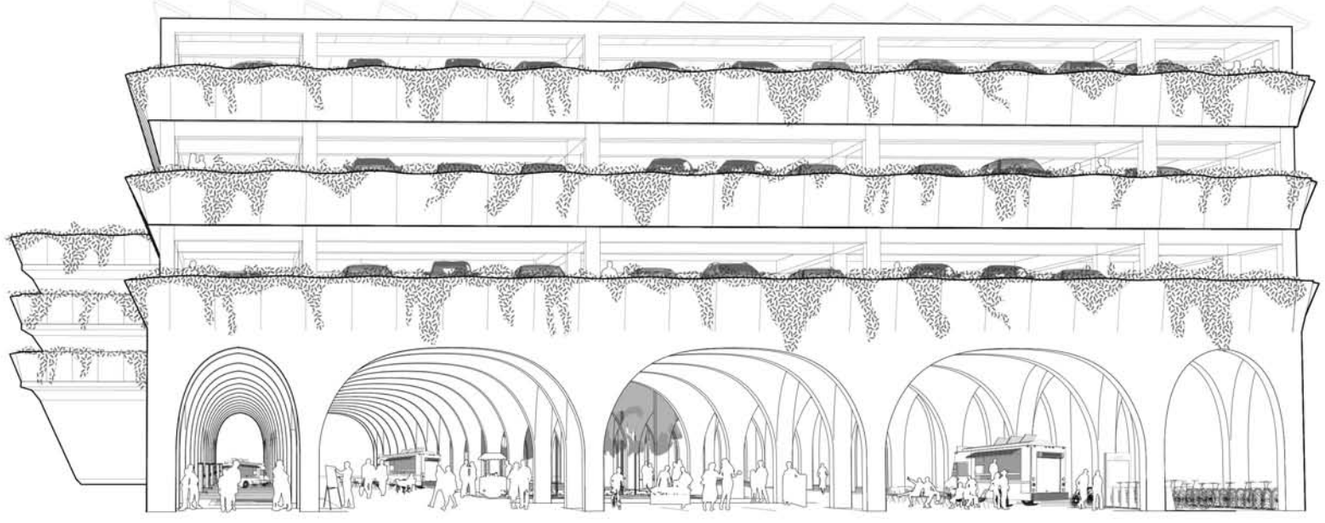
Monday to Friday, the ground-level hypostyle hall is a commuter garage.



On the weekend, the ground level is colonized by markets, festivals, and pedestrian life.

The arcaded hall is a covered public space that provides shortcuts through the village and a venue for markets and festivals.

Farmers' markets, antiques markets, village movie nights, and concerts are a few of the many uses that can occupy the covered hall.

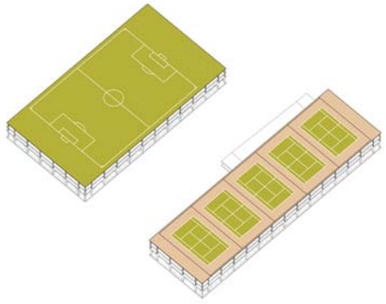


Plug ’n Play Flexibility

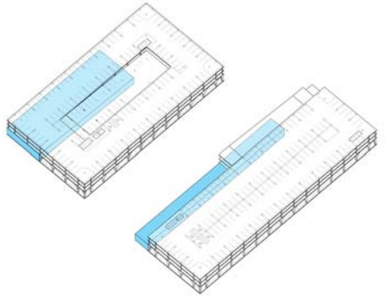
A plug-and-play strategy provides flexibility for future infill and additions, based on the evolving needs of the Village.

The garage prototypes allows for a wide range of additional uses because of the rational column grid and elevator core locations, flat floor plates, and structural capacity. Without significantly changing the vertical circulation systems for vehicles and pedestrians, a range of “plus” programs can be plugged in to fill evolving community and economic development needs.

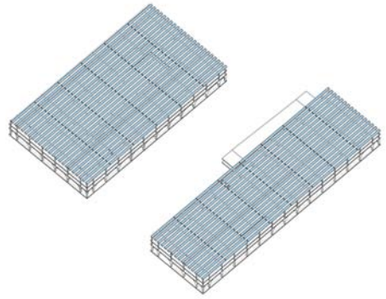
Potential “Plug-in” Program



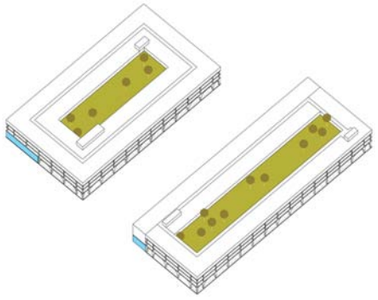
Recreation Facilities



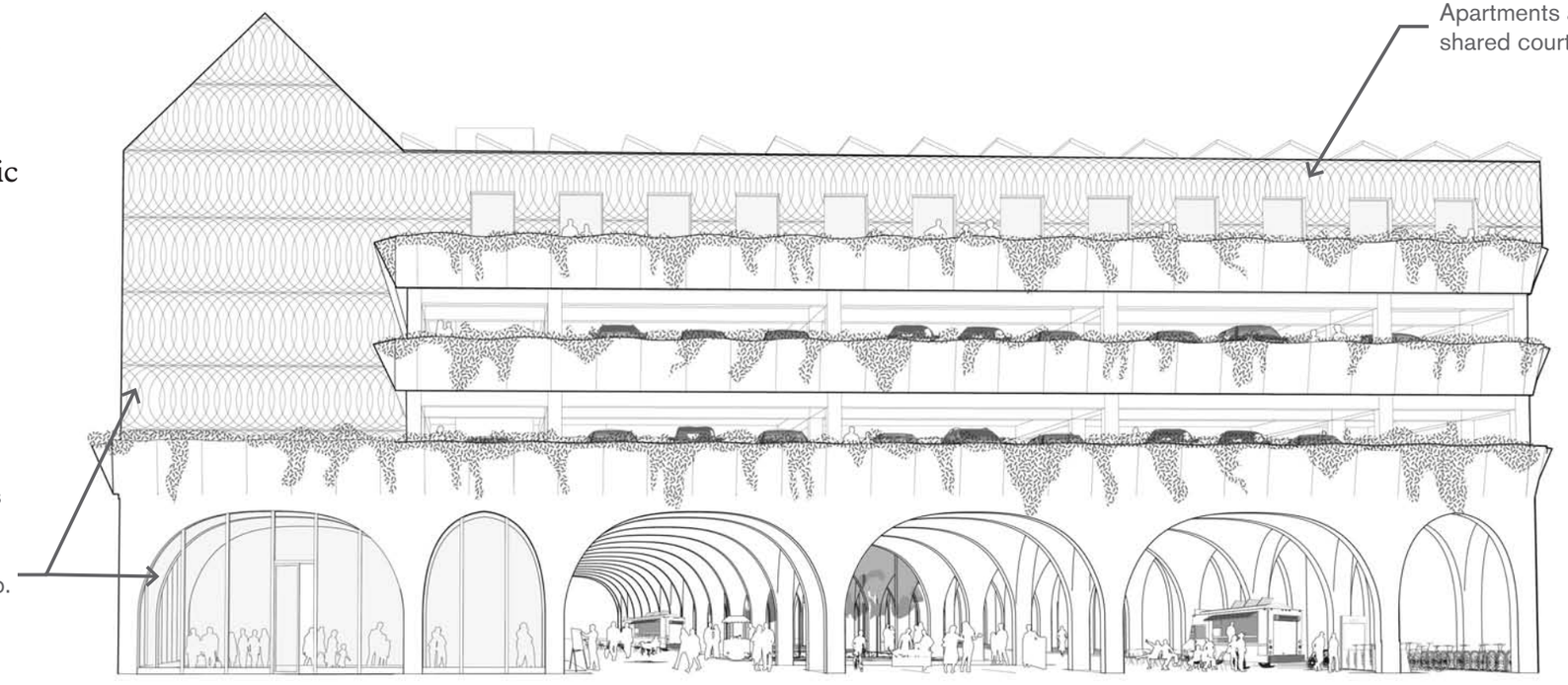
Restaurants, Shops and Offices



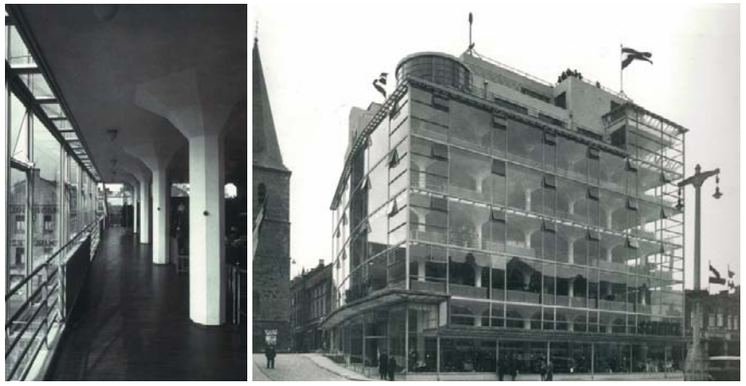
Photovoltaic Array



Multifamily Housing

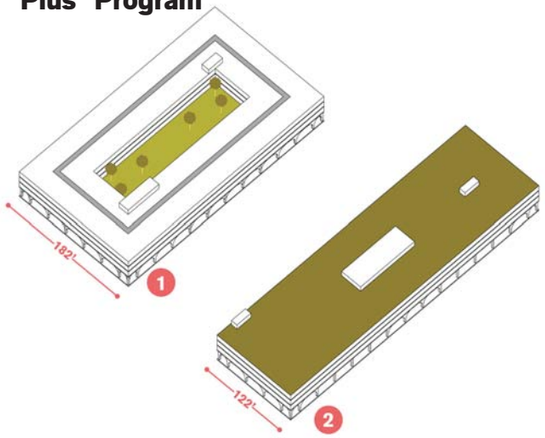


Thinking ahead 50 years, what will make Rockville Centre an even better place to live, work, and play?



Fritz Peutz, Schunck's Glass Palace (Department Store), Heerlen, Netherlands, 1935

"Plus" Program



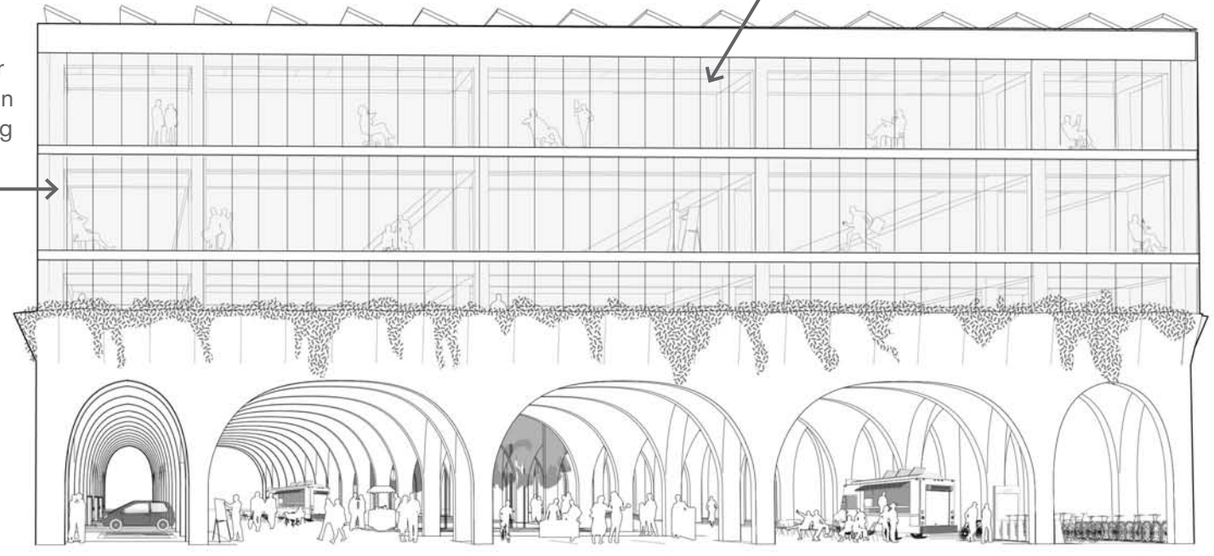
Vertical circulation cores are strategically located to accommodate future phases of development.
❶ The three-bay-wide prototype can accommodate a future double-loaded corridor residential building around a center courtyard.
❷ The narrower two-bay prototype is ideally dimensioned for a future office building.

A repurposable "future use" garage will allow Rockville Centre flexibility as it grows to accommodate the new economy.

More bikes, more shared transit, and a reduced demand for parking means more commercial and residential development along the Babylon Branch Line. Imagine Rockville Centre as a commuter destination: busy offices and reasonably priced apartments to house a young workforce will line the streets, parks, and community spaces.

A new "skin" can accommodate new program (office uses, in this case).

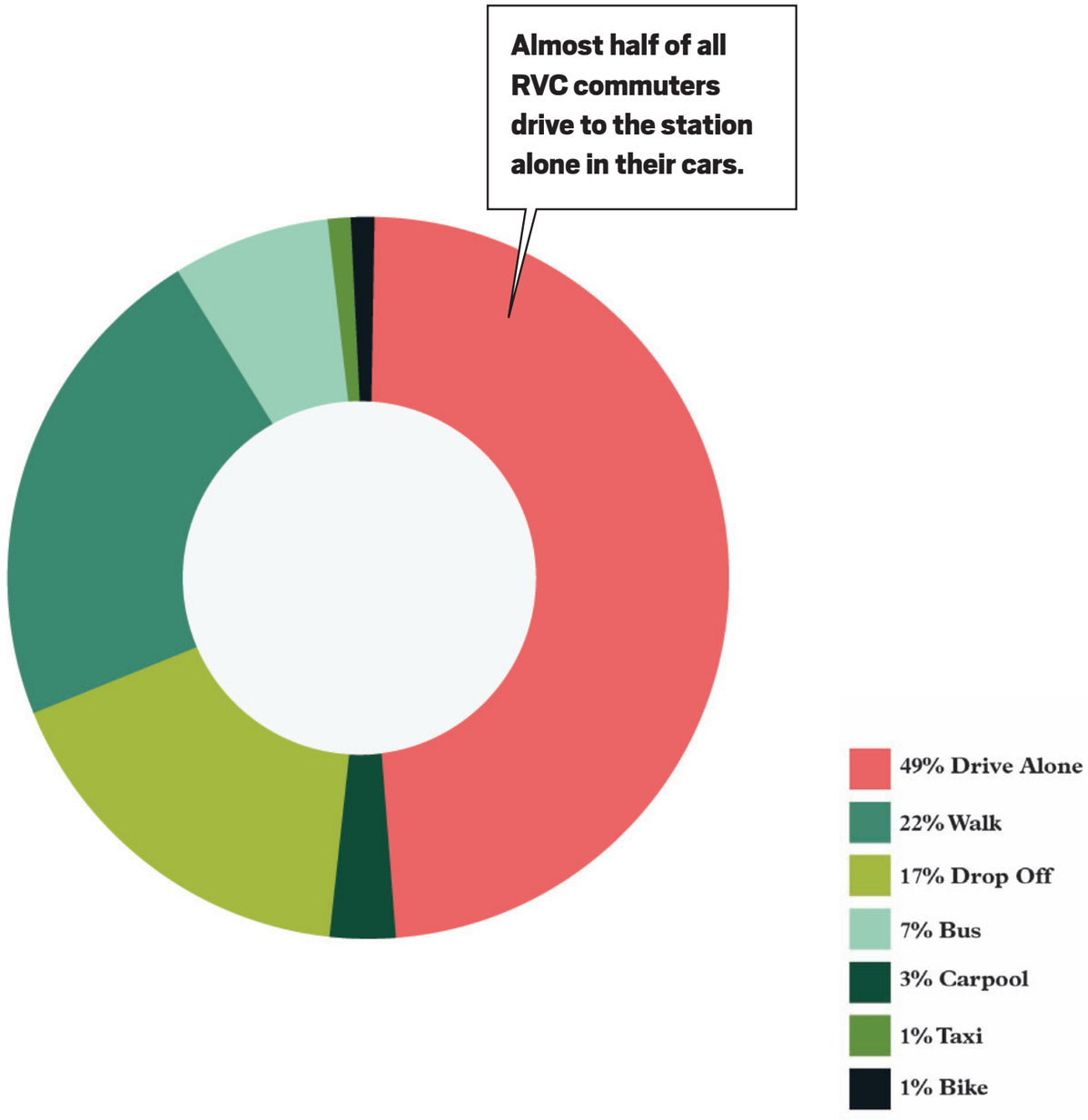
The straightforward structural system allows for the relatively simple addition of mechanical and plumbing systems required for more intensive uses.



Shifting parking capacity away from surface lots will free up land for future development.

Can better planning slow the insatiable demand for more parking?

Surface lots dominate the downtowns of many Long Island villages and have a negative effect on the vitality of local commercial districts. Smarter and more flexible parking structures should be the catalyst for a larger integrated planning effort that will allow for additional residential and commerical development. Better bus networks, car shares, and bike infrastructure will reduce long-term parking demand and result in a more vibrant village center.



Source: Long Island Railroad 2006 Origin and Destination Study.

Rockville Centre's municipal parking studies, which date back to the middle of the 20th century, show repeated requests to increase the number of parking spaces.

Target Sites and Existing Capacity

Reacting to overflowing residential commuter lots, Rockville Centre wants more commuter parking spaces for residents. The conversion of surface parking lots into parking structures will liberate downtown lots for new development. Smarter and more flexible parking structures will contribute to a reduced parking load by making alternative commutes easier.

Existing Capacity

895 Spaces Current number on lots 2, 3, 5

1025 Spaces Current number on lots 2, 3, 5, *and* 22

Target Parking Numbers

1525 Spaces Number needed to fill the RVC request for increased residential permits

1825 Spaces Number needed to supply an additional 300 non-resident spaces (optional)

More capacity is good, but smarter planning is better.

Parking structures liberate parcels for development or open space.

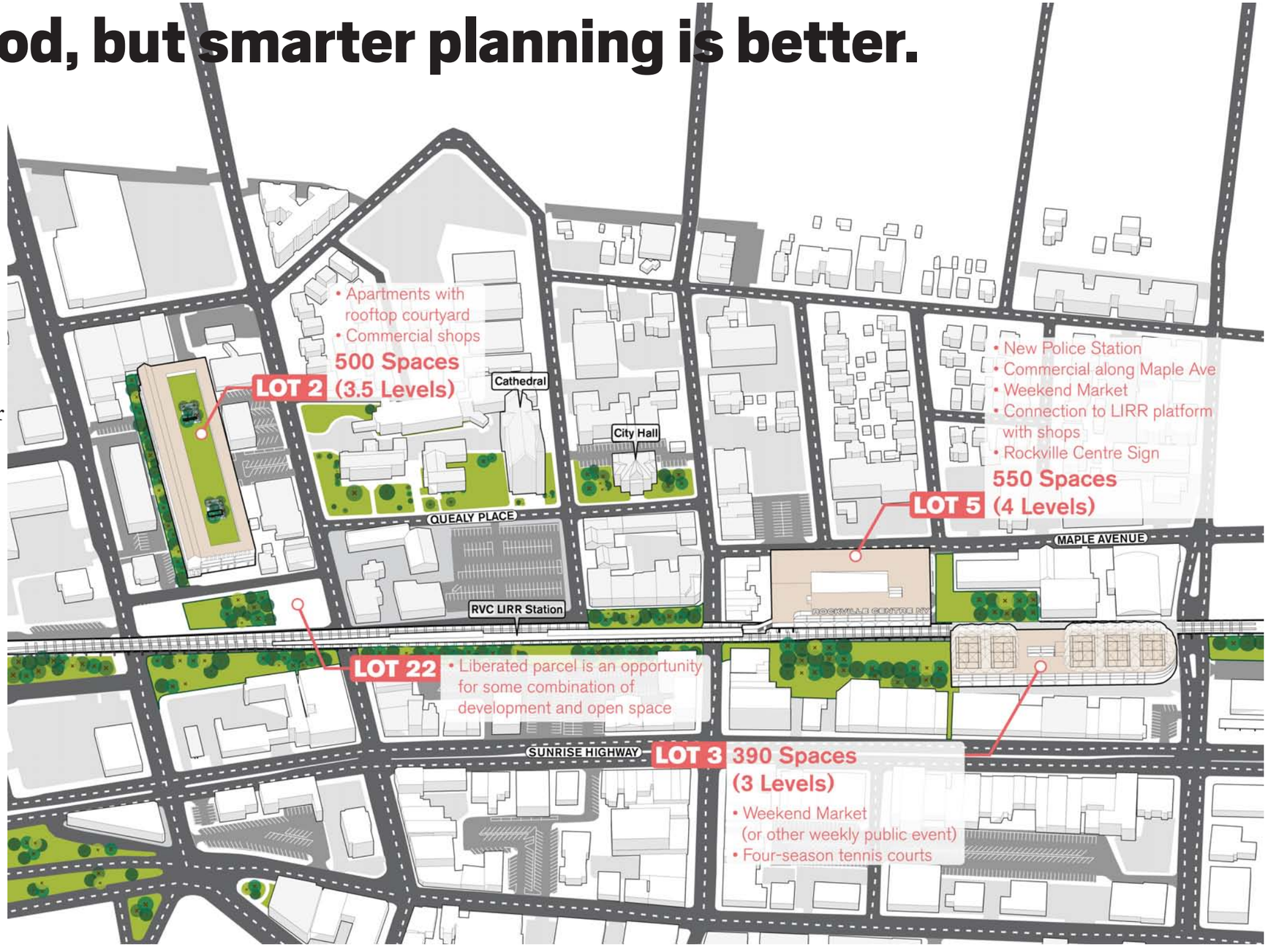
The addition of housing, recreation, and other "plus" program adds vitality and value to the RVC urban fabric but decreases garage efficiency. As new commuting habits decrease the number of spaces needed, "plus" program can be phased into plans for future Rockville Centre development.

New Capacity

1810 Spaces Total number provided in maximum efficiency parking structures on Lots 2, 3, and 5 *without "plus" program and central courtyards.* Lot 22 is liberated of parking and free for open space or other development.

New Capacity PLUS Program

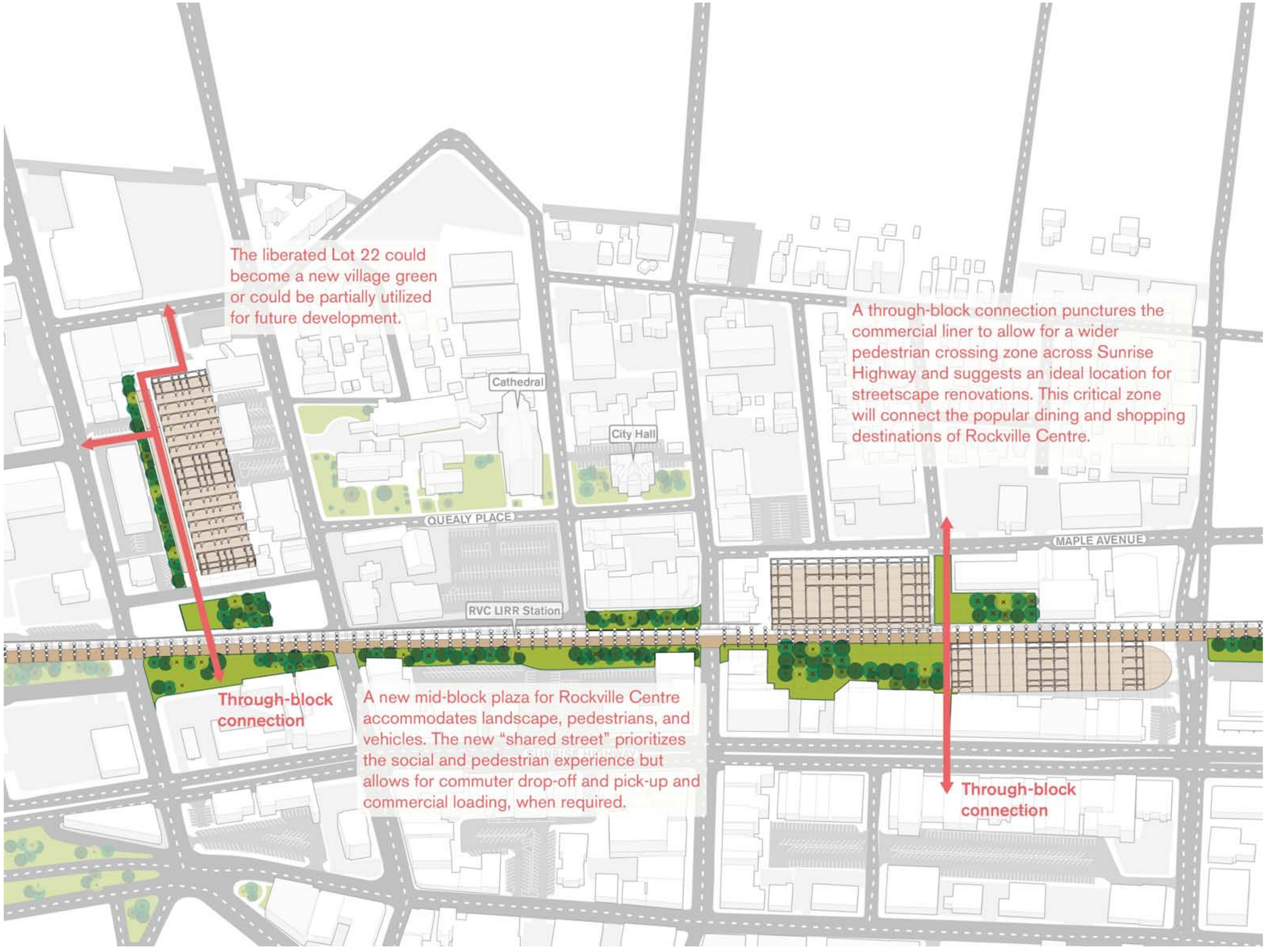
1440 Spaces Total number provided in parking structures on Lots 2, 3, and 5 *with courtyards and "plus" program including 4-season tennis courts, a new police station and reasonably priced apartments.*



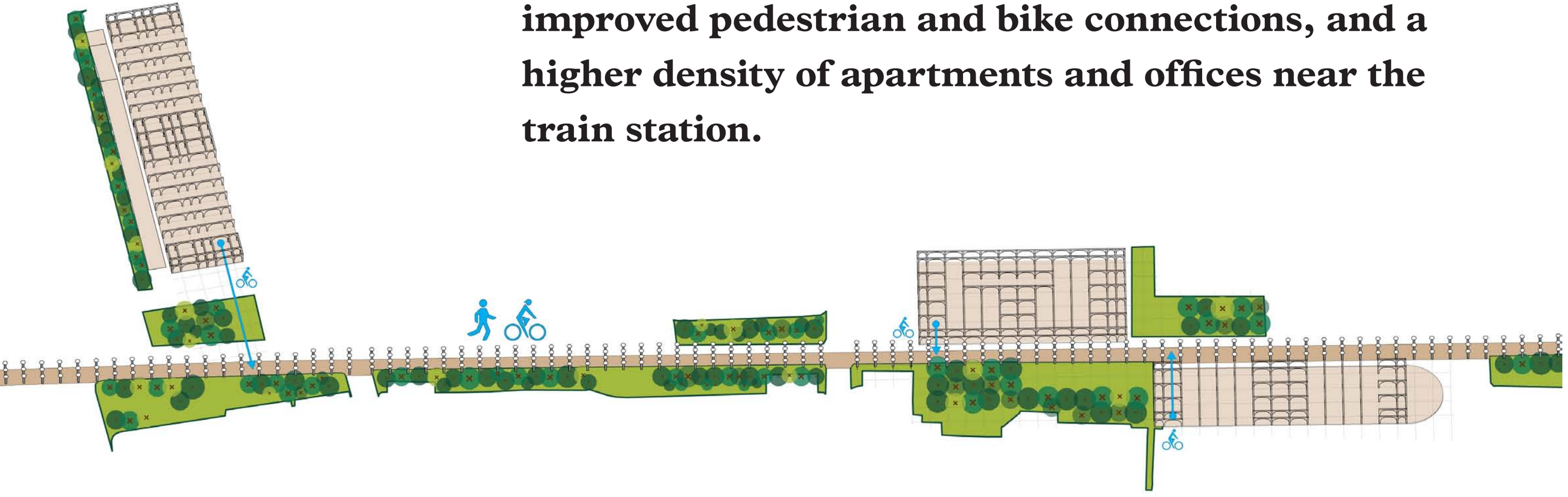
New access to new amenities!

New through-block connections and increased walkability will improve the pedestrian experience and connect social spaces in the Village.

The newly liberated blocks can be integrated into an open space network that engages underutilized LIRR property, links together previously isolated areas, and dramatically improves the pedestrian and bike network in Rockville Centre. The new parking structures host bicycle and car share infrastructure and tie into the new bike and pedestrian trail system, resulting in safer commutes and reducing parking needs.

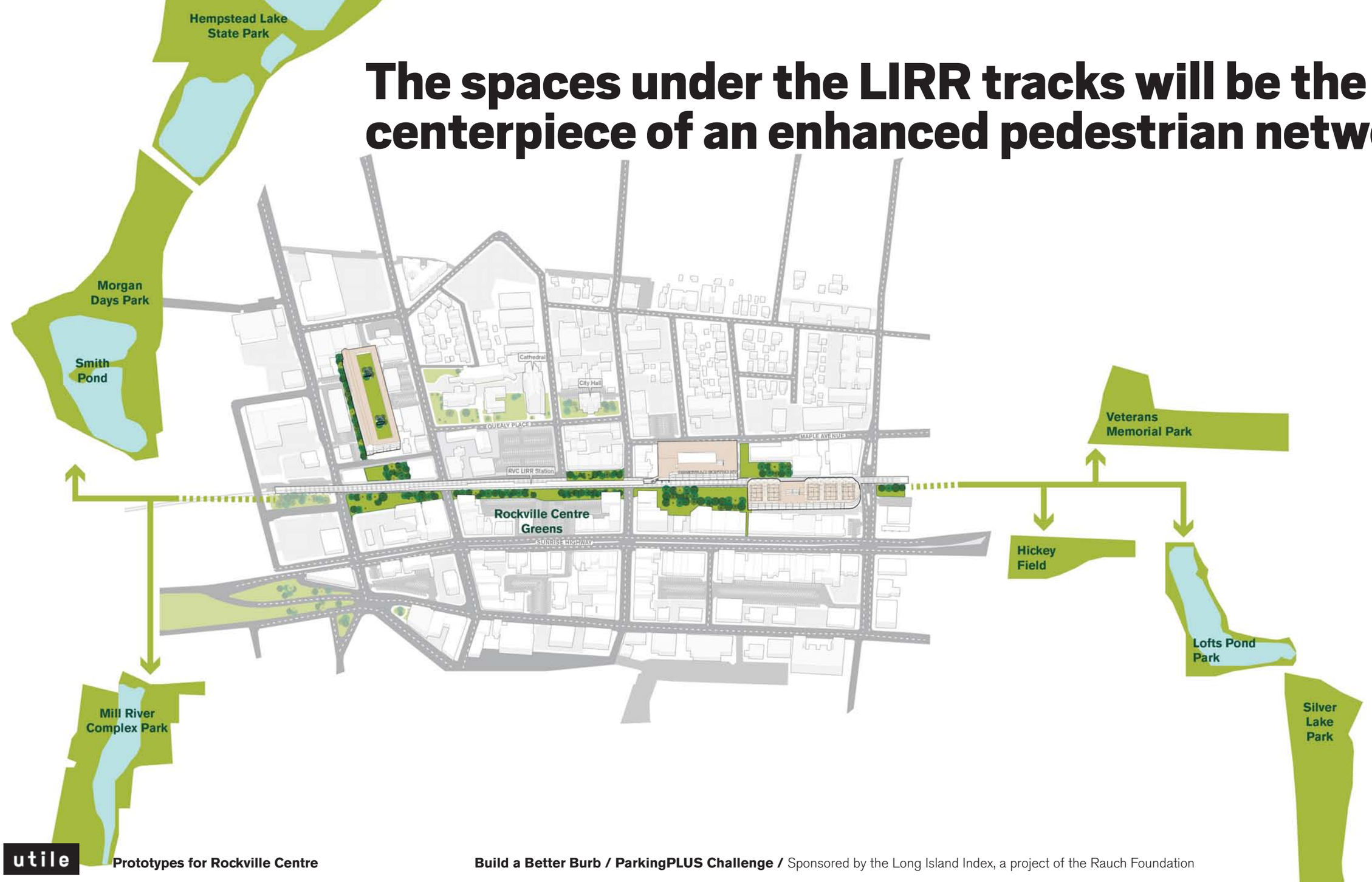


Rockville Centre will benefit from new open spaces, improved pedestrian and bike connections, and a higher density of apartments and offices near the train station.



More open space!
Safer car-free commutes.

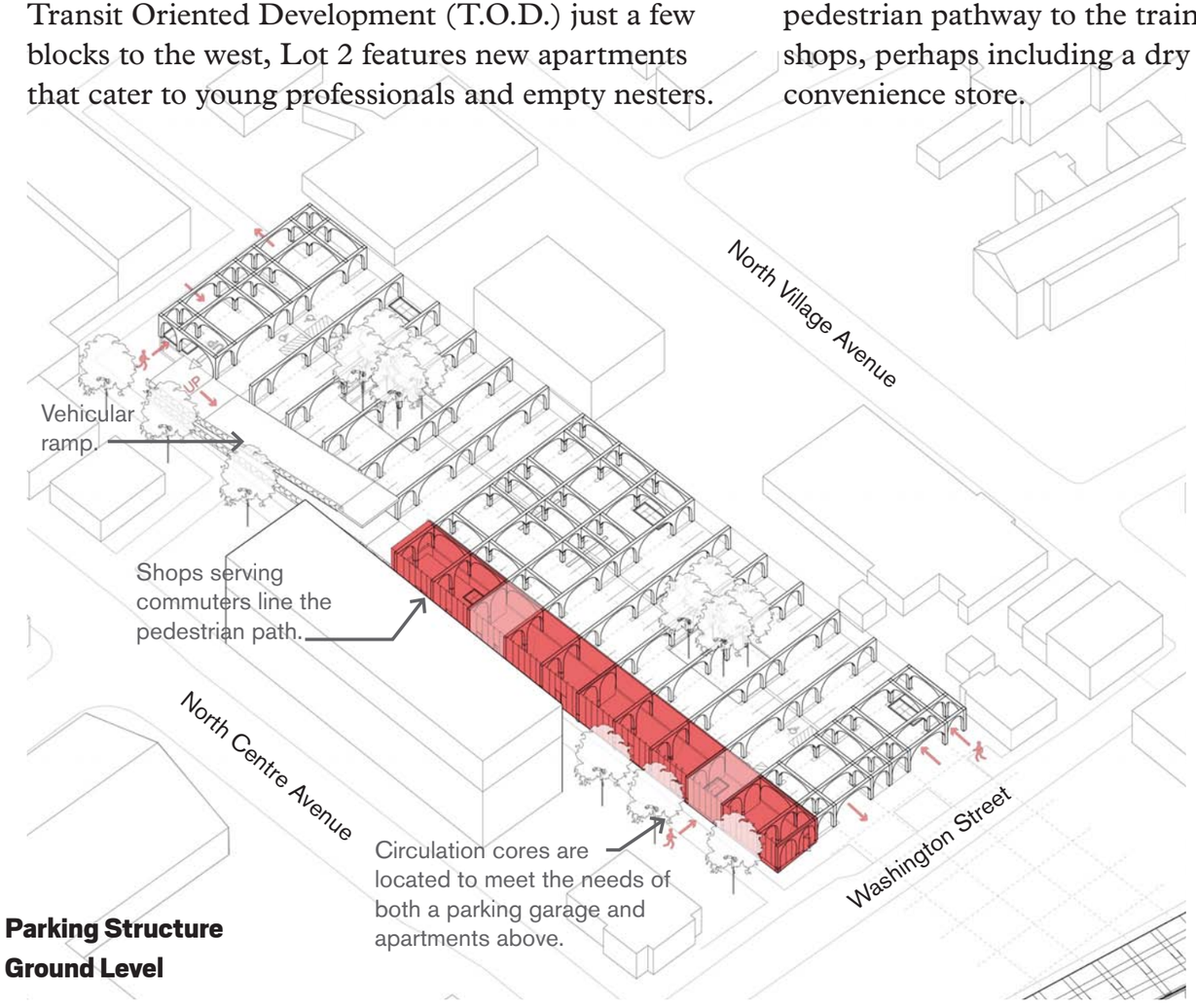
The spaces under the LIRR tracks will be the centerpiece of an enhanced pedestrian network.



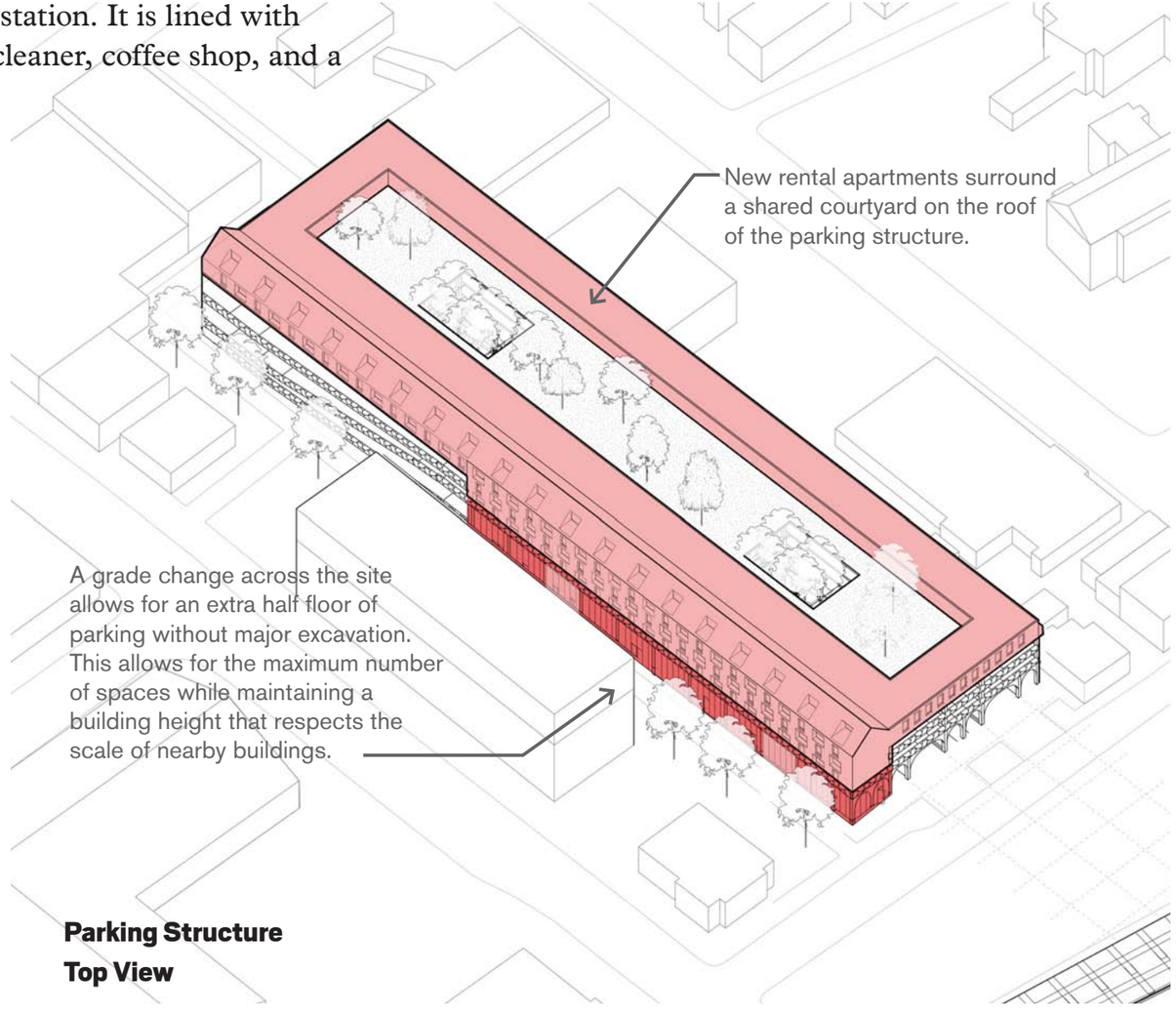
Lot 2:
Apartments and Shops

Building on the momentum of a recently constructed Transit Oriented Development (T.O.D.) just a few blocks to the west, Lot 2 features new apartments that cater to young professionals and empty nesters.

The western edge has been designed as an inviting pedestrian pathway to the train station. It is lined with shops, perhaps including a dry cleaner, coffee shop, and a convenience store.



Parking Structure
Ground Level

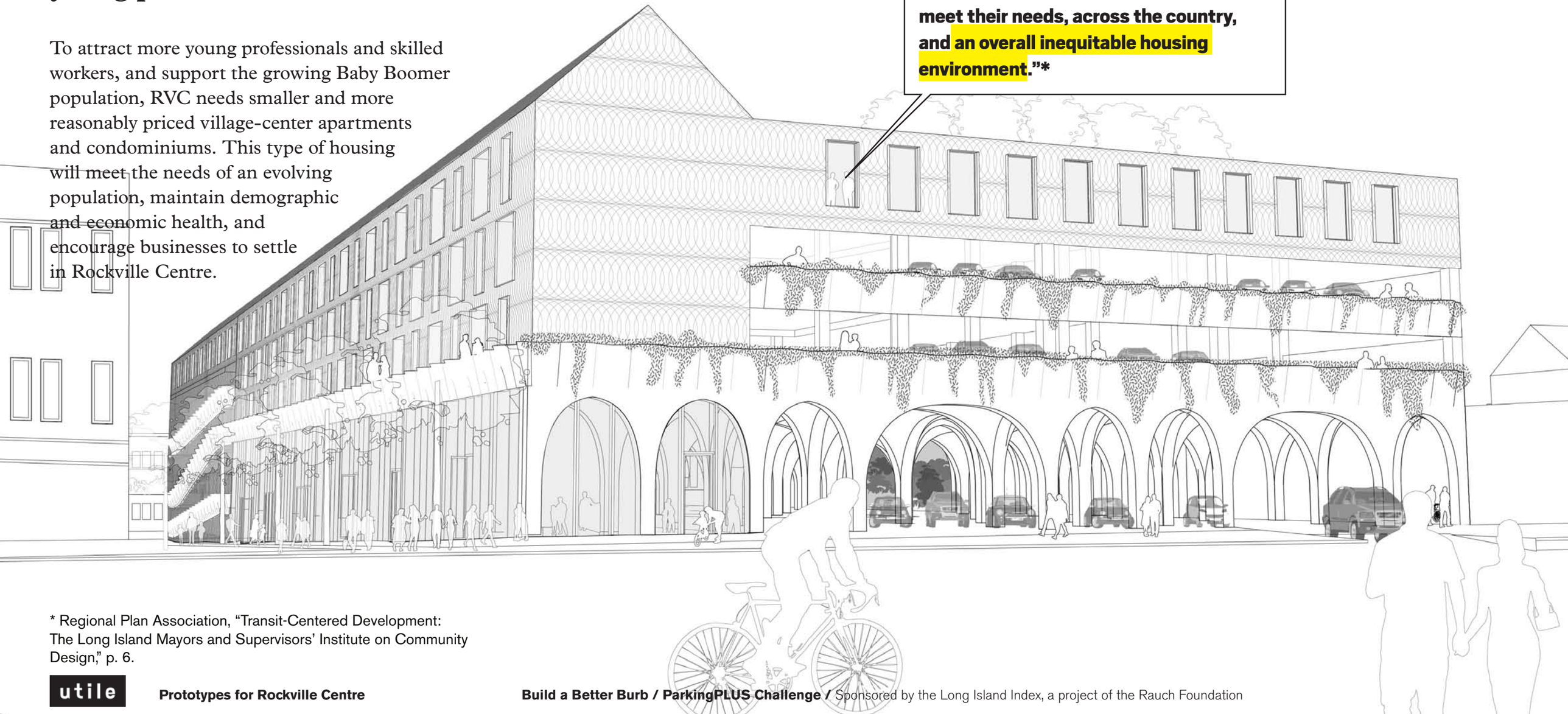


Parking Structure
Top View

Rockville Centre needs more housing for Baby Boomers and young professionals.

To attract more young professionals and skilled workers, and support the growing Baby Boomer population, RVC needs smaller and more reasonably priced village-center apartments and condominiums. This type of housing will meet the needs of an evolving population, maintain demographic and economic health, and encourage businesses to settle in Rockville Centre.

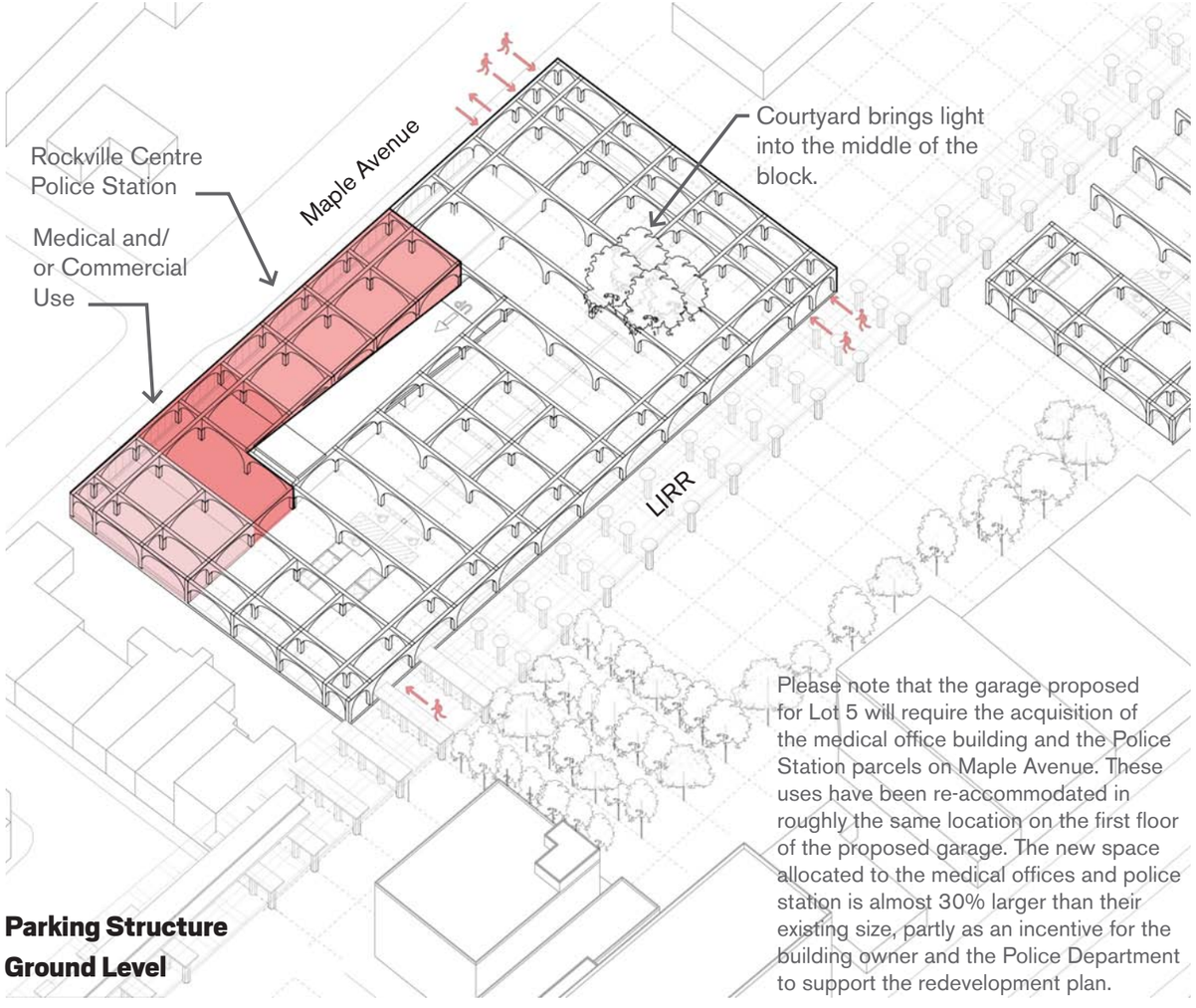
"The Island has suffered losses including the 'brain drain' of young people leaving for better jobs and cheaper housing, the migration of empty nesters to more dense, suburban, downtowns that meet their needs, across the country, and an overall inequitable housing environment."*



* Regional Plan Association, "Transit-Centered Development: The Long Island Mayors and Supervisors' Institute on Community Design," p. 6.

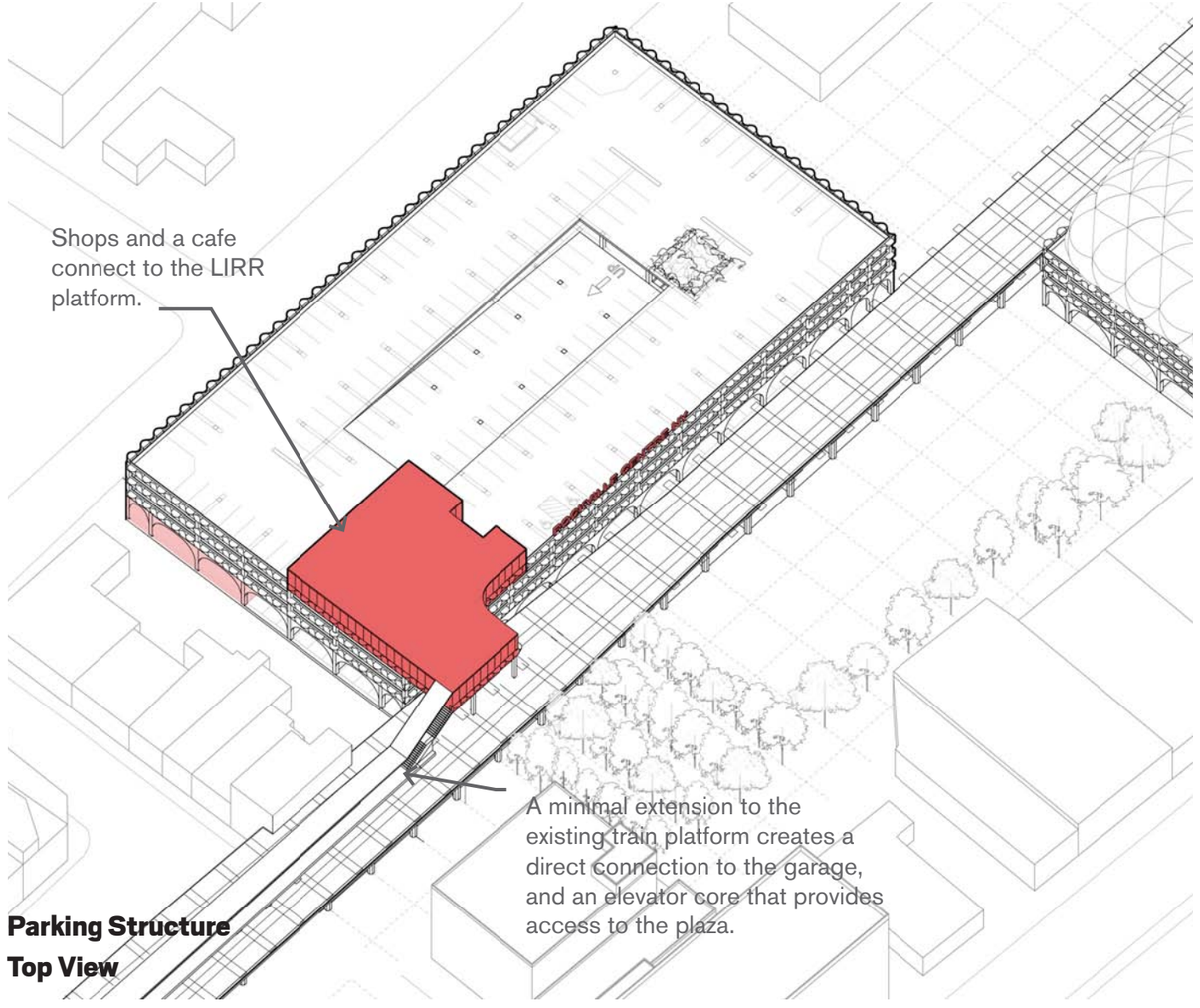
Lot 5:
A New Police Station, Office Space, and Shops

Currently there is not convenient access to the train platform east of North Park Avenue. Lot 5's new vertical circulation core will connect bicycle, pedestrian and car commuters directly to the platform—and with hot coffee and a breakfast sandwich available along the way.



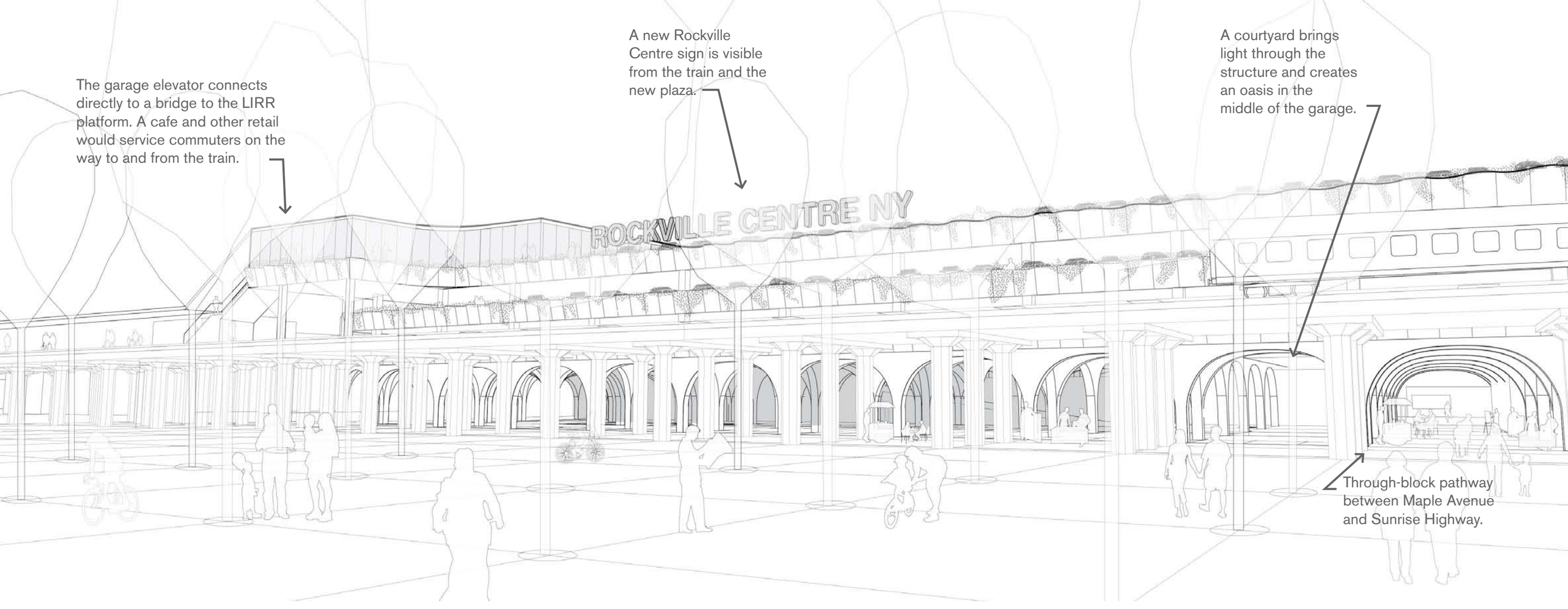
Parking Structure Ground Level

Please note that the garage proposed for Lot 5 will require the acquisition of the medical office building and the Police Station parcels on Maple Avenue. These uses have been re-accommodated in roughly the same location on the first floor of the proposed garage. The new space allocated to the medical offices and police station is almost 30% larger than their existing size, partly as an incentive for the building owner and the Police Department to support the redevelopment plan.



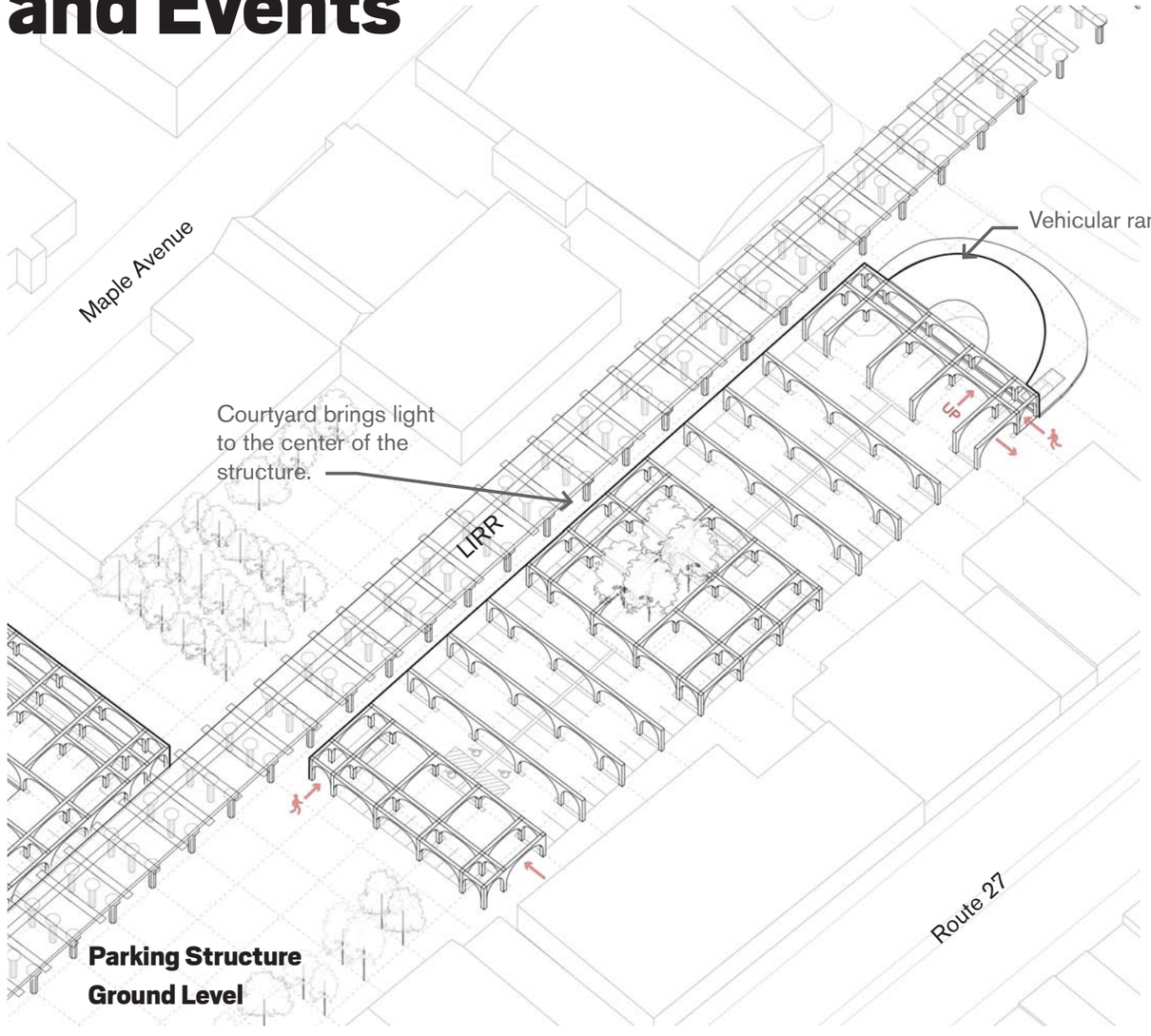
Parking Structure Top View

The colonnade under the elevated train tracks, the ground floor of the garage, and a new plaza create a richer pedestrian network.

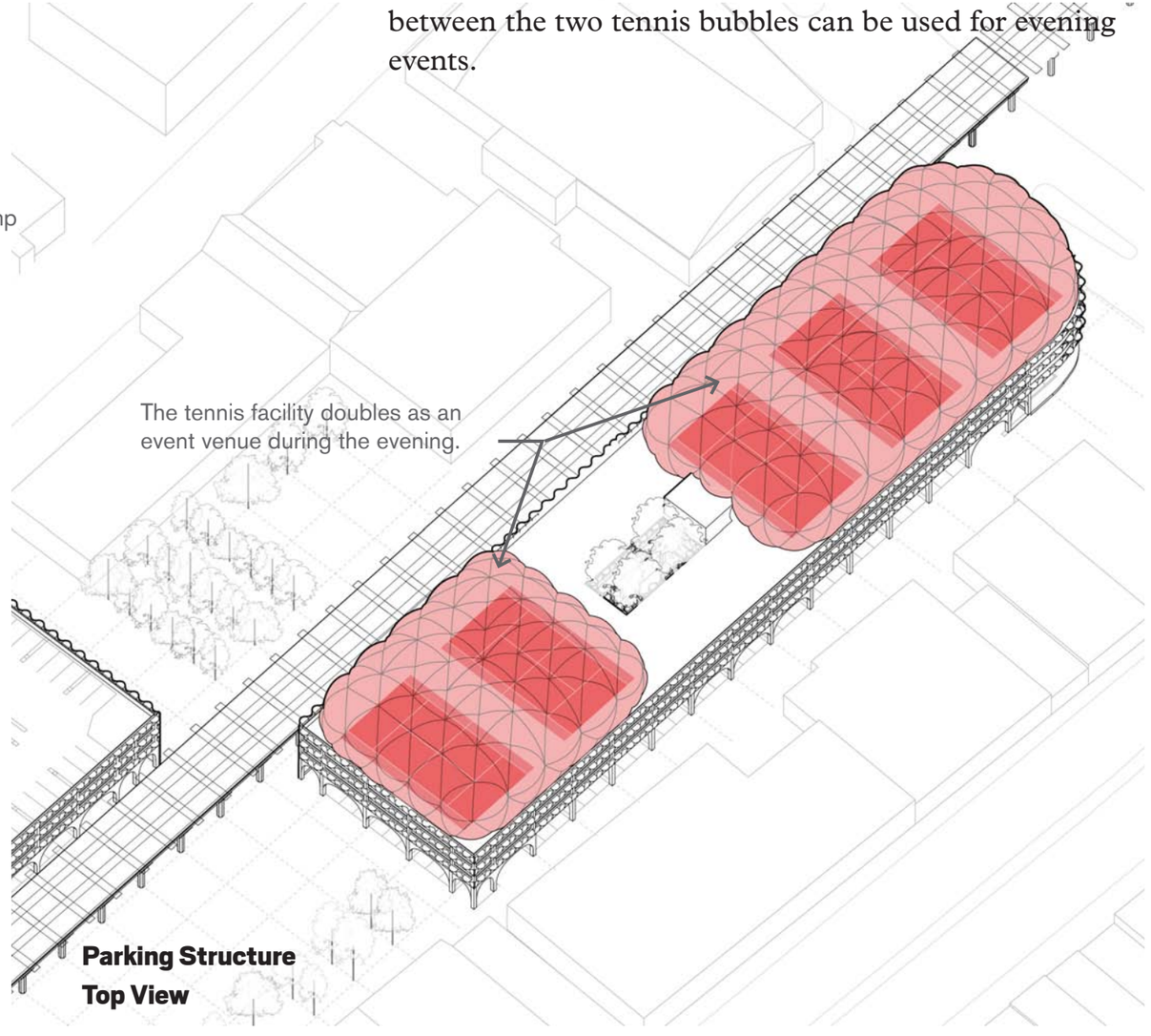


Lot 3:
An Extended Plaza, Four-Season Tennis, and Events

Lot 3 is the most visible of the three sites, forming a clear frame to the new public plaza and a new covered space for weekend markets and events. Five new covered tennis courts, requested by Rockville Centre officials, are located under a pneumatic bubble on the roof. The deck between the two tennis bubbles can be used for evening events.

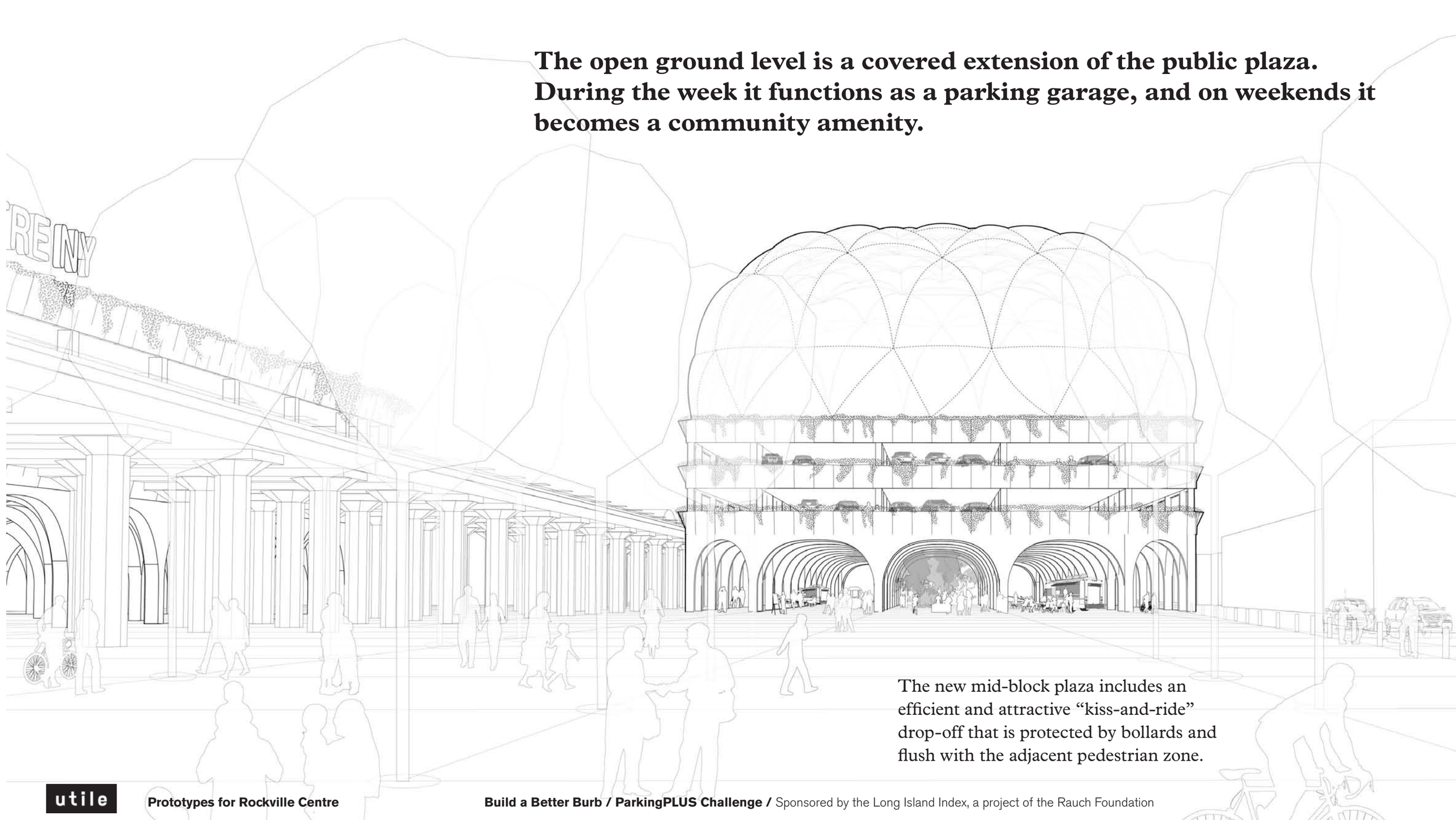


Parking Structure
Ground Level

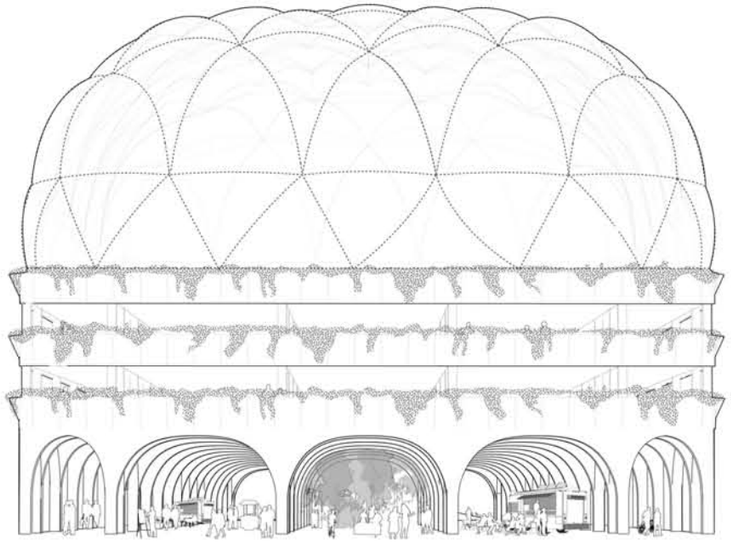


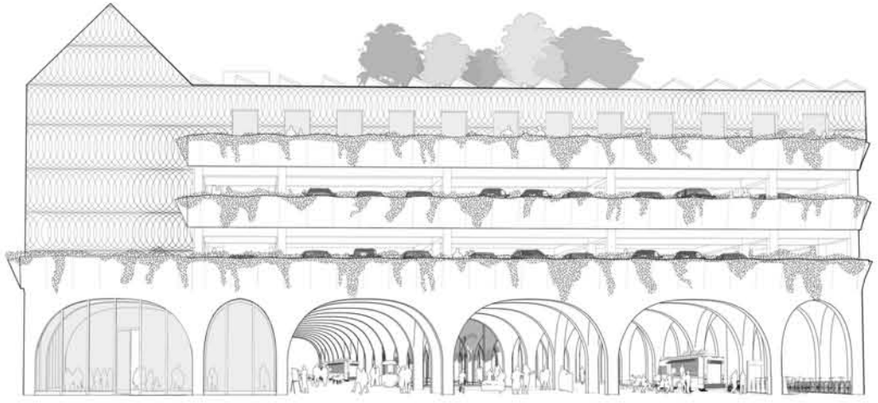
Parking Structure
Top View

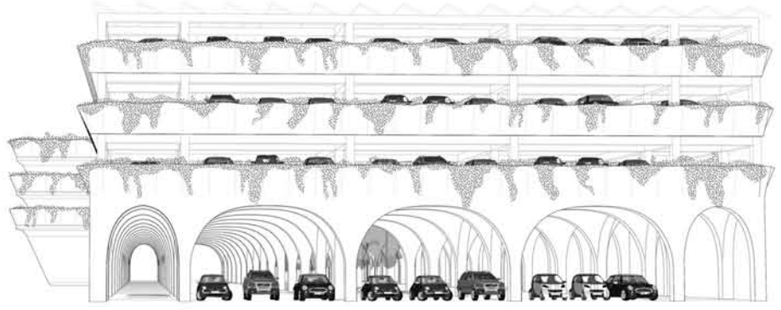
The open ground level is a covered extension of the public plaza. During the week it functions as a parking garage, and on weekends it becomes a community amenity.



The new mid-block plaza includes an efficient and attractive “kiss-and-ride” drop-off that is protected by bollards and flush with the adjacent pedestrian zone.







What is the value of building the garages?

The cost of developing parking garages is fairly high; however, the value, investment, and revenue that they create make them attractive alternatives to sprawling asphalt parking lots. For example, the Town of Morristown (NJ) constructed a $10,000,000 downtown parking garage in 2000 that catalyzed more than $60,000,000 in new residential and commercial development in the immediate vicinity over the next five years. This parking garage, and a second downtown garage that was completed in 2008, allowed Morristown to prosper while similar communities were battered by the nationwide economic recession.

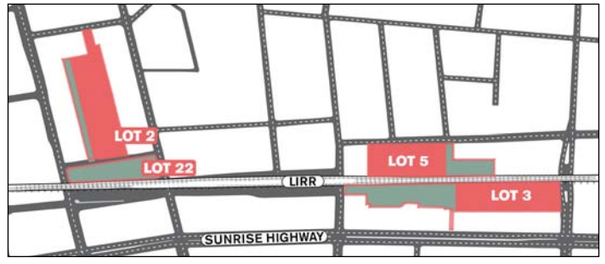
How will the garage be financed?

Financing strategies for the parking garages will differ from one site to the next but in general, garages can be financed through a combination of sources including but not limited to: state and local grants; parking revenues generated from the project itself; ground and /or air rights leases, and diverting a portion of the newly generated tax revenues (sometimes referred to as a PILOT, or payment in lieu of taxes) to help amortize the garages. In many cases local municipal entities (villages, towns, or counties) will act as developers of the parking projects because of access to available grants, special funding programs, and tax exempt financing.

Development Options

The available sites in Rockville Centre are typical of many Long Island downtowns: they are infill sites, which are less efficient for parking garage construction than large open sites.

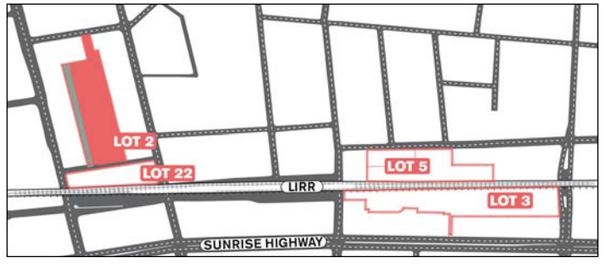
Full Build-out



	Net New Parking Spaces	Net New Open Space (SF)	Plus Program
LOT 2	156	15,000	Residential, Commercial
LOT 22	-132	62,000	N/A
LOT 3	15	57,300	Recreation, Event
LOT 5	375	27,500	Municipal, Commercial
TOTAL	**414**	**161,800**	

Since the available sites for parking garages are highly constrained by the lot dimensions and the heights of surrounding buildings, a three-garage, full build-out scheme was tested. Scattered parking garage entrances/exits distribute peak demand to several streets rather than a single choke point, important in the walkable village center. The **full build-out scheme** anticipates a phased approach. Site availability and the potential complications of acquiring properties adjacent to Lot 5 will inform the specific choice about the first-phase project. In addition, the choice should be based on the relative value of additional parking spaces versus other benefits, such as new open space.

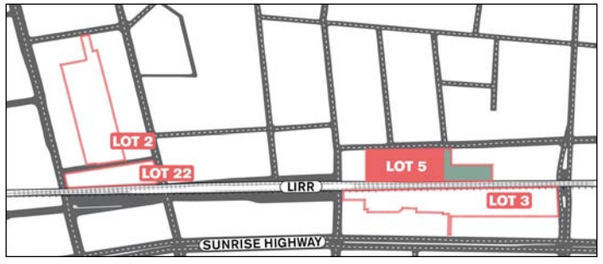
Phased Build-out Option A



	Net New Parking Spaces	Net New Open Space (SF)	Plus Program
LOT 2	156	15,000	Residential, Commercial
LOT 22	0	0	N/A
LOT 3	0	0	N/A
LOT 5	0	0	N/A
TOTAL	**156**	**15,000**	

Option A yields the least number of spaces (156 spaces), but includes 80 rental apartments and ground-level shops.

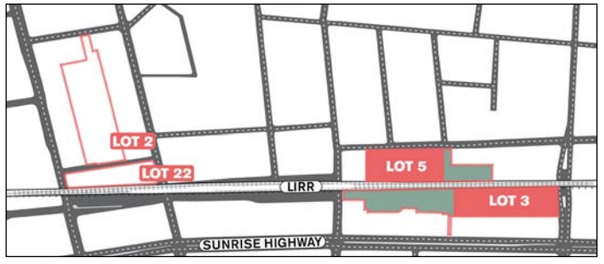
Phased Build-out Option B



	Net New Parking Spaces	Net New Open Space (SF)	Plus Program
LOT 2	0	0	N/A
LOT 22	0	0	N/A
LOT 3	0	0	N/A
LOT 5	375	27,500	Municipal, Commercial
TOTAL	**375**	**27,500**	

Option B yields the most net spaces for the least cost (375 spaces). However, to create an efficiently-dimensioned parcel, Option B requires aquiring the medical office building on Maple Street and incorporating the Police Station on the ground floor of the garage.

Phased Build-out Option C

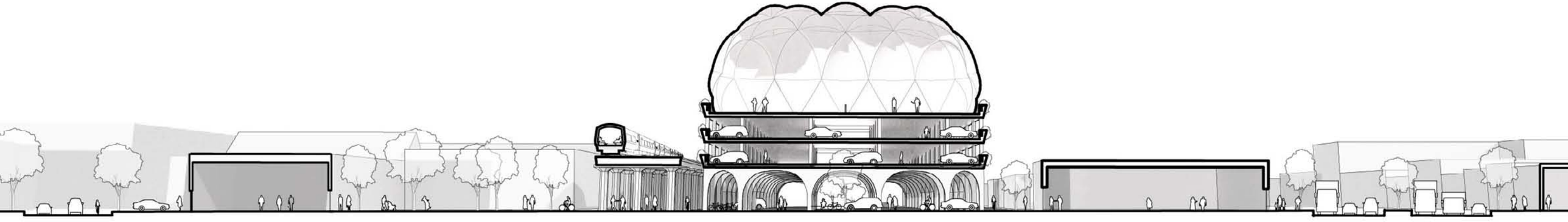


	Net New Parking Spaces	Net New Open Space (SF)	Plus Program
LOT 2	0	0	N/A
LOT 22	0	0	N/A
LOT 3	15	57,300	Recreation, Event
LOT 5	375	27,500	Municipal, Commercial
TOTAL	**390**	**84,800**	

Option C, which includes the construction of garages on both Lot 5 and Lot 3, yields slightly more spaces (390 spaces) and also includes a significant open space and enclosed tennis courts.

The village of Rockville Centre and the LIRR will need to discuss the pros and cons of the different phasing scenarios before decided which phasing option to pursue.

The ground floor of the garage links to the vibrant public life of the Village.



Maple Avenue

Existing Commercial Building

Public Plaza

LIRR Tracks

Enhanced Pedestrian and Bike Trail

Parking Structure, Public Market

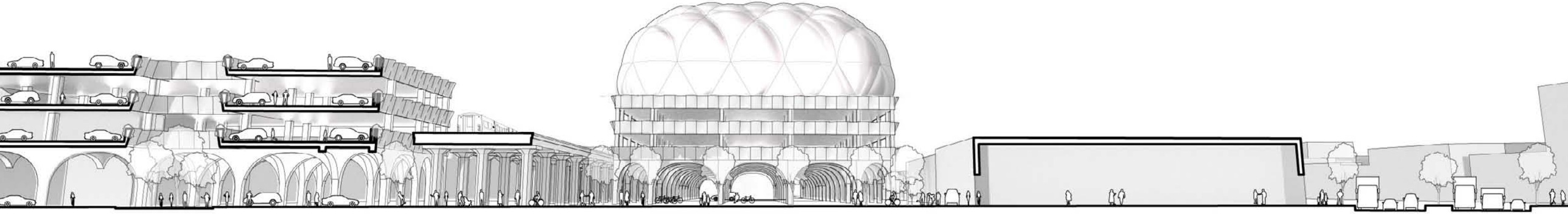
Shared street that opens onto a new Public Plaza

Existing Commercial Building

Wider Sidewalks

Sunrise Highway

The new garages are arranged to define an active new plaza.



Parking Structure,
Connection to LIRR Platform

LIRR Tracks
Enhanced Pedestrian and Bike Trail

Shared street that opens onto a new Public Plaza

"Kiss-and-rise" Drop-off Zone

Existing Commercial Building

Wider Sidewalks

Sunrise Highway

The robust pedestrian colonnade connects the garages to the pedestrian and open space network.

The flexible parking garage prototype extends the public realm and adds vitality to Rockville Centre.