

**THE STATION AT RIVERSIDE**

**SPECIAL PERMIT APPLICATION**

This Narrative is provided to present information in close alignment with City’s requirements for Site Plan Review and Special Permit approval. Following a brief summary of the Project, Part I addresses the review criteria outlined under Chapter 30 Section 23(c)(2) of the City of Newton Zoning Ordinance; and Part II addresses additional criteria established by the Zoning Ordinance No. Z-108 dated April 17, 2012. The Narrative also directs the reviewer to specific locations within the accompanying *The Station at Riverside* Special Permit and Site Plan Review plan set to demonstrate how or where the review criteria are met.



**Planning and Design**



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**General Information**

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**Project Name and Location**

*‘The Station at Riverside’*  
MBTA Riverside Station  
355 Grove Street  
Newton, Massachusetts 02462

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**Applicant Information**

Developer/Applicant:	BH Normandy Riverside, LLC 99 Summer Street Boston, MA 02110
Legal Counsel:	Schlesinger and Buchbinder, LLP 1200 Walnut Street Newton, MA 02462-1267
Co-Counsel:	Goodwin Procter, LLP Exchange Place, 53 State Street Boston, MA 02109

Architects:	ADD Inc. 311 Summer Street Boston, MA 02210
	CUBE 3 Studio, LLC 360 Merrimack Street Lawrence, MA 01843
Transportation Planning, Civil Engineering and Ecological Services:	Vanasse Hangen Brustlin, Inc. 101 Walnut Street Watertown, MA 02472
Landscape Architect:	Ground, Inc. 6 Carlton Street Somerville, MA 02143
Survey:	Harry R. Feldman, Inc. 112 Shawmut Avenue, 4th floor Boston, MA 02118
Environmental Site Assessment:	Rizzo Associates, Inc. (now Tetra Tech Rizzo) One Grant Street Framingham, MA 01702
GeoTechnical:	Haley & Aldrich, Inc. 465 Medford Street Boston, MA 02129
Shadow Analysis:	ADD Inc. 311 Summer Street Boston, MA 02210
Fiscal Analysis:	RKG Associates, Inc. 634 Central Avenue Dover, NH 03820




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### **Project Applicant Information**

As one of the nation’s leading real estate private equity firms, Normandy Real Estate Partners owns and operates one of the largest diversified real estate portfolios in the Northeast/Mid-Atlantic region. For over 15 years, Normandy’s managing principals have worked together to consistently produce superior risk-adjusted returns and capital appreciation on its investments. Over this period, it has aggregated a very significant and stable investment platform, having acquired or developed over 25 million square feet of commercial space, 2,500 residential units, 1,100 hotel rooms, and numerous land development sites.




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### **Introduction**

BH Normandy, through its affiliate BH Normandy Riverside, LLC (the “Applicant”) proposes to redevelop the existing asphalt Massachusetts Bay Transportation Authority (MBTA) parking lot at the existing Riverside Station into a vibrant, transit-oriented mixed-use development of modestly-scaled office, residential, retail and community space. The Applicant and the MBTA have entered into an 87-year Land Lease Agreement that includes a two-year pre-construction period followed by an 85-year land lease. All existing uses on the site will be retained although certain elements, such as the parking areas; and temporary training facilities will be relocated.

*The Station at Riverside* (the “Project”) will be constructed on 9.4 acres of land and is envisioned as a transit-oriented development comprised of 290 residential units (approx. 331,000 sf), 225,000 sf of office use, 20,000 sf of retail space, and 8,000 sf of community space. The residential units will be located within a five-story building on Grove Street, which will also include 5,000 sf of retail space. The remaining retail space and community space will be located within a two-story building on Grove Street. A ten-story building for office use will be located adjacent to the existing Route 95 northbound collector-distributor (C-D) road.

The public realm has been carefully considered in the design to improve the current pedestrian environment with wider sidewalks, trees and flowering gardens, outdoor seating, and a new civic open space adjacent to the intermodal station. The way-finding connections to off-site DCR properties will also provide a space for residents and employees to connect directly to the outdoors. The Station at Riverside will be recognized as an asset to the community and will make important contributions to the quality of life within the City of Newton.

Redevelopment of the MBTA Riverside Station wholly integrates smart growth and sustainable design into all facets of the Project. The Station at Riverside will advance the Commonwealth’s ten Sustainable Development Principles by 1) concentrating development and providing a mix of land uses; 2) advancing social equity; 3) improving site efficiencies; 4) protecting green space and ecosystems; 5) using natural resources wisely; 6) expanding housing opportunities; 7)

providing transportation choices; 8) increasing job and business opportunities; 9) promoting clean renewable energy alternatives; and 10) planning regionally. Integral to the Project is the provision for a new, fully integrated Intermodal Commuter Facility (ICF) that will better serve the commuting public on a daily basis and provide safer, more informed passage for those that visit Boston less frequently.

Although not part of this Special Permit Application, the ICF will consist of a five level, replacement parking structure with 1,005 parking spaces. New consolidated private and MBTA bus operations, passenger pick up/drop off, bicycle storage and taxi stands will all be placed at-grade under the cover of the parking garage above. In addition, the ICF will afford the opportunity to provide improved vertical transportation (elevators) to enhance accessibility to the existing MBTA Station platform.




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### Existing Site Conditions

The Development Parcel for the Project is a 9.4-acre portion of the 22.6 acre MBTA parcel at Riverside Station. The Project Site (i.e., the area within the Development Parcel) currently includes MBTA transit-related uses consisting of approximately 960 surface commuter parking spaces, a bus terminal (including Peter Pan, Greyhound and MBTA bus lines), and some temporary trailers used periodically by the MBTA for employee training.

Please refer to Sheet S-2.0 – Area Plan for the delineation of the Development Parcel.




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### Proposed Site Conditions

As a result of comments received throughout the planning process, *The Station at Riverside* master plan has been revised numerous times to address City and neighborhood concerns related to project size, density and building heights, which in turn reduces site generated traffic. Along with these quantitative changes, the master plan has also been re-envisioned to respond to the qualitative comments received, including the desire to integrate uses within buildings, focus on place-making, and provide a street frontage consistent with the character of Grove Street. The revised plan and perspective views include an improved mix and location of land uses and overall sense of place for future residents, employees and the commuting public.

As depicted in Sheet S-2.1 – *Overall Site Plan for Development Parcel*, the Project will contain three separate buildings providing a mix of complementary uses:

- Building A is a ten-story building containing 225,000 sf of office use on the top five stories over six levels of structured parking (one-level below grade and five-levels above grade). The parking levels provides 571 spaces and two loading spaces within the structure.

- Building B is a five-story, 290' dwelling unit residential building including 5,000 sf of retail space served by two lower levels of structured parking providing 429 spaces. Additionally, 12 short term surface parking spaces are provided for residential leasing activities and the retail use.

Of the 290 residential rental units, 18 units will be studios; 157 units will have one bedroom; 103 units will have two bedrooms; and, 12 units will contain three bedrooms.

- Building C is a two-story building containing 15,000 sf of retail and 8,000 sf of community space for a total of 23,000 sf. Parking for the retail and community accommodations will be available within the new MBTA ICF parking structure.

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### Site Amenities

The 9.4 acre Project Site will include a network of open spaces connected by pedestrian paths and bike routes that link to the adjacent communities and provide a sense of place with a variety of landscape experiences. Comprising more than 40% of the rezoned area (3.9+ acres), these open spaces will contribute valuable benefits to residents and those who work here as well as to the surrounding community. The plaza to be situated near the ICF will provide an outdoor activity oasis, including a splash fountain, lush lawn, and seating areas. The redesigned frontage along Grove Street will reinforce its “scenic roadway” designation and throughout the site, pedestrian paths weave their way for access to the Charles River Basin.

The plans to improve the current pedestrian environment with wider sidewalks, trees and flowering gardens, outdoor seating, and a new community open space adjacent to the intermodal station have been made with the goal of a vibrant and diverse public realm. Native and drought-tolerant plant species will be selected to reduce initial and long-term watering requirements, and to encourage biodiversity by creating a wildlife habitat for birds and butterfly species.

The Project will include new circulation, open space and landscape, which will take the form of new internal streets, roundabouts, sidewalks, green space, gardens, and plazas. In addition, the ground floor of the ICF, although not part of this Special Permit Application, will be designed as a public open space, with decorative paving areas, benches, lighting, and signage that celebrates the transit-oriented nature of the Riverside Station development

The wayfinding connections to off-site DCR properties will also provide a way for residents and employees to connect directly to the outdoors. The Station at Riverside will be recognized as an asset to the community and will make important contributions to the quality of life within the City of Newton.

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<sup>1</sup> Note that the floor plans include one additional unit to be used as a permanent two bedroom model apartment, only.

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## Architecture

The architectural lexis of the buildings will consist of warm wood and soft gray tones mixed with white window bays, dark gray stone base, colorful retail canopies, and silver metal window frames. There is a distinct intention to provide foreground layers of landscape to each building, with trees, grass, and flowering shrubs to soften building perspectives from both on and off-site view sheds.

Parking structures are concealed with façade treatment and/or are under buildings. Nearly all parking is provided in structures to allow for the productive reuse of the site and provide open space.



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## Public Benefits

Some of the public benefits of the Project include:

- Integration of complementary mixed uses within an appropriately scaled development;
- Attractive place-making ;
- Residential street frontage consistent with the character of Grove Street;
- LEED® Silver, transit-oriented development;
- New landscaped park including rain gardens that filter stormwater runoff;
- Enhanced and accessible intermodal commuter experience, beautification of the existing MBTA station, and covered bike accommodations;
- Significant transportation improvements including a new connection to the Route 128/I-95 collector-distributor road; and
- New multi-use path from Grove Street to the Charles River Basin.

## PART I

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### Site Plan Review Criteria (Section 30-23(2))

The following sections are presented to align with the City of Newton’s Special Permit Site Plan Approval and Review Criteria and presented here in narrative form to accompany referenced figures, plans and studies, as appropriate. The italicized text is directly from the City of Newton’s Site Plan Review Criteria.



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#### On-site Vehicular and Pedestrian Movement

*Convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent streets, properties or improvements, including regulation of the number, design and location of access driveways and the location and design of handicapped parking. The sharing of access driveways by adjoining sites is to be encouraged wherever feasible.*

The public realm has been carefully considered to improve the current pedestrian environment with wider sidewalks, trees and flowering gardens, outdoor seating, and a new civic open space adjacent to the intermodal station. The way-finding connections to off-site DCR properties will also provide a space for residents and employees to connect directly to the outdoors. *The Station at Riverside* will be recognized as an asset to the community and will make important contributions to the quality of life within the City of Newton.



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#### Wastewater Disposal and Drainage Facilities

*Adequacy of the methods for disposal of sewage, refuse and other wastes and of the methods of regulating surface water drainage.*

Please refer below for a description of Wastewater Disposal.

Please refer to the Stormwater Management Report submitted under separate cover with this Special Permit Application.



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#### Solid Waste Disposal/Solid Waste Master Plan

*Adequacy of the methods for disposal of sewage, refuse and other wastes and of the methods of regulating surface water drainage.*

All solid waste will be removed from the property on a regularly maintained schedule by a Massachusetts Licensed Solid Waste Contractor. All solid waste storage areas will be maintained by full time, on-site maintenance staff. Solid waste storage areas will be located in central convenient locations and adherence to recycling programs will be mandatory.

The compactor in Buildings A is set into the building at the loading dock. The compactor in Building B is inside the building in the trash room located at the lowest parking level. Residents will place trash and recycling into designated chutes on each floor. The materials will be collected in the garage and compacted into 2-yard dumpsters that will be wheeled outside by property management on trash day for pick-up. Trash handling for Building C will be within a solid fence enclosure accessible from within the ground floor of the ICF/MBTA garage. The containers will be equipped with appropriately fitting lids and will remain covered at all non-access times to diminish rainwater capture and access from vermin. Please refer to the Site Plans and Architectural Floor Plans for the locations on-site solid waste storage.

The Project does not involve a significant amount of demolition; however, it is anticipated that a majority of the existing, asphalt, brick, and concrete will be recycled and/or reused on-site, where feasible. All construction and demolition debris will be handled, managed, and disposed of in accordance with applicable regulations, including the "Waste Bans" as applicable at local solid waste facilities in the Project Site area (effective July 1, 2006 solid waste facility management regulations at 310 CMR 19.017). In addition, solid waste/debris generated by the Project's construction activities will be managed and disposed of in accordance with DEP's Waste and Recycling Regulations and Standards (310 CMR 16.00 and 310 CMR 19.000). The Proponent is seeking to achieve LEED Certifiable for Core and Shell Materials & Resources (MR) Credit 2: Construction Waste Management, Divert 75% from Disposal.

According to the City's Environmental Affairs Division, the City has no Solid Waste Master Plan and does not require that private entities keep track of waste generated from commercial properties. It only tracks information from its own residential collection.




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## **21E Environmental Site Investigation**

Rizzo Associates, Inc. (Rizzo) prepared a report summarizing investigations and response actions following identification of a release to the environment of oil and/or hazardous material (OHM) at the MBTA facility. Rizzo evaluated disposal site boundaries, history, physical characteristics, the nature and extent of contamination through a subsurface investigation, migration pathways, and exposure potential to come to conclusions regarding the need for Immediate Response Actions, Tier Classification, and Public Involvement Notices.

Rizzo determined that reportable concentrations of Total Petroleum Hydrocarbons (TPH) existed at the site following subsurface investigations. The contaminants were previously reported to the MassDEP as a result of the 1993 investigation at the facility and therefore did not require



reporting to MassDEP. No conditions suggesting Imminent Hazards or releases or threats of releases requiring 2-hour or 72-hour notifications to the MassDEP were identified, therefore it was concluded that Immediate Response Actions were not necessary. Rizzo completed a Numerical Ranking System Scoresheet and the disposal site did not meet the Tier I Inclusionary Criteria. Therefore, Rizzo prepared a Tier Classification for a Tier II Site. In addition, Public Involvement Activities were completed for the Tier II which included notification letters submitted to the City of Newton Mayor's Office and Board of Health, in addition a legal notice of the application was published.

Rizzo prepared a Response Action Outcome (RAO) Statement for the subject site's disposal area identified by the MassDEP as RTN 3-10565. The report summarized previous investigations that resulted in the listing of the property by MassDEP as RTN 3-10565, presented the results of soil and groundwater testing performed by Rizzo, and included an MCP Method 3 Risk Characterization for the site.

Rizzo evaluated historic information, laboratory data of record, and results of risk characterization. Analytical results of soil and groundwater samples collected at the site indicated that residual contaminant concentrations observed in soil and groundwater were below the applicable MCP Method 1 cleanup standards. An MCP Method 1 Risk Characterization was conducted to determine impacts to human health, public safety and welfare, and the environment. The results of the risk characterization indicated that a condition of No Significant Risk existed for conditions evaluated at the site and an AUL was not necessary to maintain the condition of No Significant Risk. Therefore, a permanent solution was achieved for the site and the requirements of a Class B-1 RAO were met.

In October 2009, Haley & Aldrich implemented a subsurface investigation program to further evaluate subsurface conditions to support the proposed development. The subsurface investigation program included the advancement of test borings and the installation of observation wells in four of the completed borings, as well as chemical testing of soil and groundwater samples.

Based on the results of the subsurface investigation program, no reportable concentrations of contaminants in soil or groundwater were identified at the subject property. The field screening results and noted petroleum odor in soil at a depth of 9.5 ft to 13.5 ft in boring HA09-13 indicate some localized petroleum impacted soil may be present in this portion of the property; however, if encountered, the localized petroleum impacted soil can be managed during site development activities. Based on the scope of work performed for the subsurface investigation, significant contamination was not encountered.




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### **Off-Street Loading - Building Services**

*Provision for off-street loading and unloading of vehicles incidental to the servicing of the buildings and related uses on the site.*

All building will be served with adequate means for loading and unloading vehicles and trucks. All such activities will take place within the confines of the Project Site and will not affect Grove Street or other public ways.

Please refer to Sheets S-2.2 to S-2.4, as well as the architectural ground floor drawings, which depict the locations of the loading areas.




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### **Structure Screening**

*Screening of parking areas and structure(s) on the site from adjoining premises or from the street by walls, fences, plantings or other means. Location of parking between the street and existing or proposed structures shall be discouraged.*

All of the parking on the site with the exception of a small parking area in front of the residential building entry is contained within parking structures that have integrated façade screening.

The at-grade parking area in front of the residential building will be screened from the street by a row of trees and perennial groundcover. This area will be developed to be more of a parking “court” than a parking lot with higher quality paving materials and pedestrian scale lighting. Additionally the parking will be designated for short term use only.

From Grove Street the parking under the residential building will not be visible as it will be underground in this location. The parking is wrapped by building program on the two ends and partially on the side facing the internal roadway. There will be integrated façade screening of the portion of the parking that is not wrapped by program. Where possible large shade trees and smaller flowering trees and shrubs will be planted in between the parking and the roadway.

The parking for the office building has been designed to appear integrated with the building architecture through façade screening that has an architectural relationship to the cladding of the office portion of the building. Shade and flowering trees, as well as a mix of shrubs and perennials, will buffer the parking structure from the internal roadways. Large shade trees and other planting will surround the perimeter of the building on all sides.

Along Grove Street, the community and retail building is positioned such that it acts as a screen for a portion of the ICF/MBTA parking garage. The development team hopes to work together with the designers of the garage to ensure that the MBTA parking is attractively screened from Grove Street as well as from the plaza areas of the Riverside Station development.

The MBTA yards will be screened from the internal roadway of the development through a dense planting of evergreen and deciduous trees and shrubs that lines the existing MBTA fence.




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### **Topographical Changes/Building Masse**

*Avoidance of major topographical changes; tree and soil removal shall be minimized and any topographic changes shall be in keeping with the appearance of neighboring developed areas.*

The Project has been carefully designed cognizant of existing site topography to avoid the need for major significant earth movement. The site is substantially lower than the surrounding Grove Street and the Applicant has worked diligently with City officials and Project area neighbors to address building massing so as not to overwhelm and/or be out of character with the surrounding environment. Please refer to the Building Mass Computer model submitted under separate cover.




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### **Utility Service Lines**

*Location of utility service lines underground wherever possible.*

All utility service lines will be underground as depicted on the Site Plan Review Plan Set. Please refer to sheets S-5.1 to S-5.3.




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### **Historic Resources**

*Avoidance of the removal or disruption of historic resources on or off-site. Historical resources as used herein include designated historical structures or sites, historical architectural elements or archaeological sites.*

There are no historic or archaeological resources within the Project Site. The Project will not result in adverse effect to any historic resources.



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**Conservation of Natural Resources**

*Significant contribution to the efficient use and conservation of natural resources and energy for projects proposing building(s), structure(s), or additions to existing building(s) or structure(s), if those proposed buildings or structures or additions contain individually or in the aggregate of 20,000 or more square feet in gross floor area.*

There are little to no natural resources on the site to conserve because the Project is a redevelopment of an existing, paved surface parking lot. However, the Station at Riverside Project is committed to sustainability on several fronts. The buildings will meet the City's Stretch Code Requirements and will be LEED Silver Certifiable; thereby using less energy and water than traditional buildings of their type. Additionally, the Project will effectively overhaul the drainage system and incorporate best management practices to substantially improved the quality of stormwater runoff discharging from the site to the Charles River basin.

Please refer to the Sustainable Design section in Part II.

## PART II

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### **Mixed Use – 3/Transit Oriented District Review Criteria (Ordinance No. Z-108)**

The following sections are presented to closely align with the City of Newton’s Additional Review Criteria as articulated in City of Newton Ordinance No. Z-108 dated April 17, 2012. The italicized text is directly from the City of Newton’s Additional Review Criteria for Ordinance No. Z-108.



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#### **Not Inconsistent with the Comprehensive Plan**

*Not inconsistent with the Comprehensive Plan. The proposed Mixed-Use Development is not inconsistent with the City’s Comprehensive Plan in effect at the time of filing an application for a Mixed-Use Development and applicable general laws relating to zoning and land use.*

The City of Newton 2007 Comprehensive Plan states that “Riverside represents a significant development opportunity which the City can ill afford to ignore. Riverside has the capacity, access to highways, public transportation and location to attract several million square feet of high quality mixed use development. In fact, it is important to develop a dense enough project on this site to help pay to solve the access issues. The notion that a major parcel of land at the intersection of the Massachusetts Turnpike and Route 95 should remain undeveloped (and untaxed) is fiscally irresponsible and physically illogical.” The City wishes to encourage appropriate development of presently underdeveloped areas such as Riverside and the Massachusetts Turnpike air rights, when such development appears to be feasible.



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#### **Housing, Public Transportation, Parking, and Utility Infrastructure**

*The proposed Mixed-Use Development offers long-term public benefits to the city and nearby areas including:*

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#### **Improved Access and Enhancements to Public Transportation**

*Improved access and enhancements to public transportation;*

Access to the site will be provided by two driveways: One full-access, signalized driveway along Grove Street, and a second driveway providing access and egress out to the northbound ramp access or Collector-Distributor (C-D road), adjacent to the Route 128 Northbound ramp to Route 30 and the Massachusetts Turnpike. With the proposed site access plan, the Project site

provides substantially enhanced vehicular access to the major regional highways in the area such as Route 128/ Interstate 95 and the Massachusetts Turnpike/Interstate 90. With direct access off of the C-D road, the majority of the site generated traffic and MBTA traffic has the ability to enter and exit the site without traveling along Grove Street along the site frontage. The Project site also provides convenient access to public transportation opportunities such as the D Line of the MBTA Green Line and MBTA Bus Routes 500, 555, 558, and connections to regional bus and shuttle opportunities.

The Riverside MBTA Station is an integral component of the region's MBTA transit service. Not only is it the terminus point of the trolley service's Green (D) Line, but it also provides connections to multiple MBTA bus lines, inter-city bus service provided by Peter Pan and Greyhound bus lines, and multiple privately-operated shuttle bus services. The station is located within easy access from Route 128/I-95 and provides parking for 960 vehicles, making it attractive to regional commuters. The accessibility of these existing transit services will be integral to the Project by promoting equitable mode share and thereby reducing the impacts of passenger vehicles on the local roadway system. The following sections describe each of these existing local services.

One of the Applicant's goals is to maximize alternative forms of transportation and reduce the number of single occupant vehicle trips to the site. Accordingly, the Mitigation section of this narrative contains discussion of a substantial Transportation Demand Management (TDM) program proposed as part of the Project. It also summarizes the efforts the Applicant is making to connect to the existing public transportation opportunities described in this section including pedestrian/bicycle amenities. In addition, a detailed review and analysis of existing and future transit operations is provided in the Traffic Operations Analysis section of this section.

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### **Improvements to Parking, Traffic and Roadways**

#### *Improvements to parking, traffic, and roadways;*

To allow for the redevelopment of the site, a parking structure to accommodate the MBTA commuter station parking demands will be constructed as the first phase of the overall Project development. Additional structured parking will be provided for both the office and residential uses. Also under the proposed redevelopment plan, the existing track storage and maintenance facilities are to remain intact. A total of approximately 2,003 parking spaces will be provided throughout the site to support the MBTA and Project parking demands predominantly through structured parking facilities.

The Applicant has spent significant time and effort in evaluating potential improvement and access needs for the Project. Based on this evaluation, which has largely been coordinated with MassDOT, it is clear that there are opportunities available where the existing infrastructure can be improved to enhance existing operations and safety and to accommodate the Project. Two options, so-called Options A and B-2 from the traffic impact and access study, represent the

improvement alternatives that offer substantial area improvements, have minimal impacts on the environment, have substantial operational benefits, minimize future traffic on a critical section of Grove Street, and which appear feasible. Similar to what the proponent has concluded, the City of Newton's peer consultant has concluded, "*that the structural mitigation measures proposed with Options A and B-2 are generally adequate.*" The various components of these plans are described in detail below.

Access to the redeveloped facility will be improved under both plans and will include two access driveways. Under existing conditions, the facility is accessed through a single driveway located along Grove Street approximately 1,000 feet to the east of the Route 128/I-95 Ramp terminal with Grove Street. The existing driveway that currently serves the Riverside MBTA station will continue to provide access to the site. This intersection will be upgraded from an unsignalized driveway and placed under traffic signal control and reconstructed to consist of separate left and right-turn lanes exiting the site, an exclusive left-turn lane and a through lane along Grove Street eastbound, and a through lane along Grove Street westbound. The east/west lanes along Grove Street will be separated by a landscaped island in the immediate vicinity of the signalized intersection. The following sections describe the two access points in detail.

#### Site Access Mitigation

Under access alternative Options A and B-2, a new driveway will be constructed off of the existing Grove Street ramp to the C-D Road that provides access from Grove Street to Route 128 northbound, the Massachusetts Turnpike, and Route 30. Discussion of site circulation for these two alternatives is provided in this section:

- Option A (Right-In/Right-Out Access off C-D Road),
- Option B-2 (Right-In/Full Egress off C-D Road),

To accomplish the site access plan along the on-ramp and C-D road, the Proponent will seek a break in the "no-access" line along this section of state highway. As such, the Proponent has been working with representatives of MassDOT during the development of the access improvements and it is expected that this action will be possible.

It is expected that Project-related traffic will be directed to site driveways based on features which have been incorporated into the design of the Project including locations of parking structures, traffic controls, convenience, and an extensive signage program that will encourage specific movements. Under this plan, the proposed C-D Road access will become the primary access to the Project and the existing Grove Street access will become a secondary site entrance. It is also expected that a portion of the existing MBTA traffic that currently uses the Grove Street driveway will find it more convenient to use the new driveway on the C-D Road given the free-flow access that is provided through that route and access priority to the ICF garage that has been established.

Under the proposed roadway and access plans, patrons of the site oriented to Grove Street to the west, Route 128 to the north and south who use Grove Street to access the site will find it convenient to use the C-D Road access since access to this driveway will be essentially free-flow, it will allow more direct access to parking associated with the office and residential aspects of the Project, and the access to the ICF will receive priority to and from that direction. Conversely, vehicles accessing these facilities along Grove Street will have to travel through the proposed traffic signal and will have to traverse a STOP controlled intersection onsite. Given the free flow and more convenient nature of the access and egress at the C-D Road driveway, it was assumed that 75 percent of the existing MBTA traffic along Grove Street will use the new driveway. Furthermore, a signage plan leading motorists from the highway to the C-D Road entrance is proposed. Once on site, a way-finding signage plan will also be implemented to encourage motorists to exit via the C-D Road access point (refer to Figures 26 and 27 - Conceptual Signage Plan) in the attached February Traffic Impact and Access Study.

Under Options A and B-2, traffic will travel throughout the site by way of a primary roadway that connects both of the driveways described above at each terminus. To accommodate vehicular traffic entering and exiting the parking structures located in the southwestern portion of the site (adjacent to the Route 128 C-D Road), a single-lane, four-legged modern compact roundabout will be installed approximately 300 feet to the east of the Route 128 C-D Road. A three-legged unsignalized intersection will provide full access to the ICF. Movements at this intersection will be placed under STOP-sign control from the Grove Street entrance. A secondary, entrance-only driveway will provide access to the ICF along the MBTA driveway just north of Grove Street.

Access to the Riverside MBTA Station is currently provided by way of a single unsignalized driveway located along the west side of Grove Street. The driveway is currently operating at LOS F and operations are expected to deteriorate in the future under 2022 No Build and 2022 Build conditions without improvements. Operations at this location are even worse during the weekday evening peak hours when there is a Red Sox home game as patrons use the MBTA to gain access to Fenway Park. To address the capacity deficiencies at this location and to provide efficient access to both the Riverside MBTA Station and the Project site, the Applicant will implement the following improvements at this location:

- Install a new traffic signal at the intersection
- Provide the following lane geometry to increase capacity at the intersection:
  - An exclusive left-turn lane and a through lane along Grove Street eastbound;
  - A through lane along Grove Street westbound;
  - Exclusive left-turn and right-turn lanes along the Riverside MBTA Station Driveway.
  - Provide a landscaped island areas along Grove Street



Traffic signal warrant analyses were conducted in accordance with the Manual on Uniform Traffic Control Devices (MUTCD)<sup>2</sup> for this intersection. The warrant analysis indicates that under 2012 Existing conditions, traffic volumes at this intersection meet the criteria necessary to satisfy Warrant 3 (Peak-Hour Warrant). Under 2022 No-Build and 2022 Build conditions, traffic volumes are expected to increase and will further the need for a traffic control device at this intersection.

With the installation of a traffic signal and geometric improvements, this intersection was shown to improve to an overall LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour under 2022 Build with Mitigation conditions. Similar levels of operation are expected during Red Sox games as well.

#### C-D Road at Right-In/Right-Out (Option A)

Under Option A, the existing C-D road and the Route 128 Northbound On-Ramp would be reconstructed to accommodate a right-turn in/right-turn out driveway for the site. With this configuration, vehicles would enter the site by way of a free movement along the reconstructed C-D road/Route 128 Northbound on-ramp. Vehicles destined to Route 128 northbound, the Massachusetts Turnpike, and Route 30 (also to the north) would exit the site by way of an exclusive right-turn lane that eventually merges with the C-D road. Vehicles destined to the west and south would exit the site by way of the Grove Street Driveway. By allowing vehicles to have direct access to the regional highway system, the overall impact along Grove Street would be limited. VHB expects that this driveway will be the “gateway” entrance into the site accommodating the majority of the site traffic making the Grove Street Driveway secondary. In addition, all bus activity oriented to the north on the highway system can be directed to use this driveway. Overall, the provision of the C-D road driveway achieves the goal of minimizing traffic increases along Grove Street in this area. Furthermore, recent Peer Review of the Traffic Study by Fay Spofford & Thorndike (FST), hired by the City of Newton, confirmed that “*Option A access plan is acceptable*”

#### C-D Road at Right-In/Full Egress-Out (Option B-2)

Under Option B-2, the existing C-D road and the Route 128 Northbound On-Ramp would be reconstructed to accommodate a right-turn in and full-egress out (right and left turns allowed) driveway for the site. This access driveway was previously proposed in the ENF to include a grade-separated egress from the site. Based on the ongoing discussions with MassDOT, they view the implementation of grade separation as unjustified at this location given the anticipated level of Project traffic. As such, VHB revisited the concept considering an at-grade intersection between the site egress movement and the ramp instead of grade separation. In the DEIR, this at-grade intersection was proposed as a signalized location. However, given the reduction in the size of the Project since the DEIR, signal warrants likely cannot be met. It is anticipated that

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<sup>2</sup> Manual on Uniform Traffic Control Devices (MUTCD); Federal Highway Administration; Washington, D.C.; 2003.

discussions of traffic control at this intersection will continue with MassDOT and refinements to this layout may be required based on their review, but our assessment has concluded that an at-grade unsignalized intersection can work well at this location as it maintains priority for the C-D Road leading to the Route 128 NB Ramp.

Under this configuration, vehicles would enter the site by way of a free movement along the reconstructed C-D road/Route 128 Northbound on-ramp. Vehicles destined to Route 128 northbound, the Massachusetts Turnpike, and Route 30 (also to the north) would exit the site by way of an exclusive right-turn lane that eventually merges with the C-D road. Vehicles destined to the west and south would exit the site by way of an exclusive left-turn lane, which would eventually intersect with Grove Street at the Route 128 northbound ramps (providing a southbound approach to the intersection). By allowing vehicles to have direct access to the regional highway system, the overall impact along Grove Street will be limited. VHB expects that this driveway will be the “gateway” entrance into the site accommodating the majority of the site traffic making the Grove Street Driveway secondary. In addition, all bus activity oriented to the highway system can be directed to use this driveway. Overall, the provision of the C-D road driveway achieves the goal of minimizing traffic increases along Grove Street in this area. As referenced above, the currently proposed layout of this driveway is illustrated in Figure 20 - Access Alternative – Option B-2 of the Traffic Impact and Access Study, which shows a left-hand exiting movement for vehicles destined for the site. Furthermore, recent Peer Review of the Traffic Study by Fay Spofford & Thorndike (FST), hired by the City of Newton, confirmed that “*Option B-2 access plan is acceptable*”

The Applicant has had numerous discussions with MassDOT regarding the layout and traffic control at this proposed new access driveway. As MassDOT has some concerns about the need for accommodations of left turns exiting the site, given the project size and traffic reductions over the last couple years. With that in mind, further discussions will be held during the review process to refine the access plan and determine the most appropriate design strategy and provisions will be made to allow for the left turn out of the site, under Option B-2 in the future when warranted.

#### Intersection Mitigation

Some study area intersections currently operate at LOS F and will continue to operate at LOS F regardless of the development of *The Station at Riverside* project. With the addition of the Project-related traffic, operations at some of the study area intersections were shown to operate over capacity. To address these conditions, the Applicant has worked with the City of Newton and MassDOT to develop a transportation improvement mitigation program to address existing and potential capacity and safety deficiencies within the study area.

Given the location of the site adjacent to Route 128 and its current use as a major public transit hub, it is imperative that adequate infrastructure be put in place to improve on existing area deficiencies and to accommodate future access to and egress from the site. In an effort to

increase the operating capacity of the roadways and intersections adjacent to and in the vicinity of the site, the Applicant will implement a comprehensive roadway infrastructure improvement program surrounding the site. The mitigation program involves improvements along Grove Street between the Route 128 Southbound ramps and the Riverside MBTA Station Driveway, including the signalization of the latter and installation of modern roundabouts at the Route 128 ramp terminals. The Applicant will also reconstruct and reconfigure a portion of the C-D Road and the Route 128 Northbound on-ramp that is adjacent to the site. All are elements of Options A and B-2.

During the development of the conceptual improvement plan, VHB met with MassDOT and City of Newton officials on numerous occasions. Since both ramp terminals with Grove Street are state highway locations, MassDOT will hold ultimate jurisdiction regarding the improvements to be implemented. With this in mind, the Applicant has considered alternative improvement options at both ramp intersections with Grove Street. This includes the installation of traffic signal controls and the implementation of modern roundabouts. As a result of numerous meetings and technical discussions where preliminary information was exchanged regarding both options, MassDOT appears to favor the roundabout option at this time and therefore the proposed conceptual plan has included roundabouts at both ramp terminals for further consideration moving forward. In addition, the City of Newton has engaged a peer review of the traffic impact and access study and in general terms the peer consultant has agreed the roundabouts at each ramp terminal is an appropriate approach to traffic operations and safety enhancements with the proposed project in place.

#### Grove Street at Route 128 Southbound Ramps/Asheville Road

Under 2022 No Build conditions, independent of the Project, some movements at this unsignalized intersection were shown to operate at LOS F during both the weekday morning and evening peak hours. To address the capacity deficiencies at this location, the Applicant will implement the following improvements:

- Install a modern roundabout at the intersection and shift the intersection southeast to create a buffer for the neighborhood where possible
- Provide the following lane geometry to increase capacity at the intersection:
  - A single lane approaching the roundabout along Grove Street eastbound, with a single adjacent departure lane;
  - One lane along Grove Street westbound
  - A single lane entering the roundabout from Route 128 southbound and a free-flow right-turn lane for traffic heading eastbound on Grove Street, with a single adjacent departure lane.
- Based on an initial review of available information, these improvements can be implemented within the existing right-of-way at the intersection. In fact under the proposed concept plan, the reconfigured intersection would be no closer and in most instances substantially further away from residential properties located in proximity.

- To the extent that MassDOT will allow, a natural vegetative plant screen will be introduced between the relocated roadway and the neighborhood as represented on Figure 20 - *Access Alternative – Option B-2*. (in the attached Traffic Impact and Access Study).

#### Grove Street at Route 128 Northbound Ramps

Under 2022 No Build conditions, independent of the Project, some movements at this unsignalized intersection were shown to operate at LOS F during both the weekday morning and evening peak hours. To address the capacity deficiencies at this location, the Applicant will implement the following improvements:

- Install a modern roundabout at the intersection
- Provide the following lane geometry to increase capacity at the intersection:
  - One lane along the roundabout along Grove Street eastbound, with a single departure lane;
  - Two lanes approaching the roundabout along Grove Street westbound, with single departure lanes to the north and west.
  - A through lane and an exclusive right-turn lane entering the roundabout from Route 128 northbound, with no adjacent departure lanes (the approach is one-way in the northbound direction); and
  - A single lane approaching the roundabout on the north approach, with a single adjacent departure lane.

Based on an initial review of available information, these improvements can be implemented within the existing right-of-way at the intersection.

In addition to the operational benefits realized from these improvements, it should also be noted that there are important safety benefits as well. In particular, the proposed geometry includes bringing the existing northbound off ramp into the roundabout, which not only slows vehicles down as they exit from Route 128, which is currently a high-speed movement heading east along Grove Street, but it also significantly improves sight distance from the ramp and from driveways to the Woodland Grove Condominium complex and the Hotel Indigo.

With the installation of a modern roundabout, this intersection was shown to operate at an overall LOS B during the weekday morning peak hour and LOS A during the weekday evening peak hour under 2022 Build with Mitigation conditions.

#### **Roadway Mitigation**

Specific roadway improvements have been proposed as part of the transportation improvement program to further enhance the capacity of the surrounding roadway network in an effort to provide safe and efficient access to the Project site, the Riverside MBTA Station, along the Grove

Street corridor, and along the Route 128 ramp system at the Grove Street interchange. The following sections describe the proposed roadway improvements.

#### Grove Street Corridor Improvements

In conjunction with the improvements to the intersections and site access listed above, the Grove Street corridor between the intersection with the Route 128 Southbound ramps and the intersection with Riverside MBTA Station driveway will be reconstructed to accommodate additional lanes in an effort to provide more capacity and to manage any potential queuing both along Grove Street and along the Route 128 ramp system. As part of the mitigation, landscaped islands would be constructed on Grove Street in the areas of the proposed turning lanes, resulting in a similar look and feel to the roadway layout at the adjacent Riverside Center office complex. Not only does this layout contribute to the aesthetics of the corridor, but it also has traffic calming properties as well. Further to the south, the proposed roundabouts at the Route 128 Ramps will also reduce travel speeds along Grove Street and greatly enhance safety. In particular, the installation of the roundabout at the Route 128 northbound ramp will take what is now a high-speed free right-turn onto Grove Street and slide it to the west and bring it into the roundabout. This will slow down the vehicle speeds and create significantly more separation between the ramp and the existing Woodland Grove Condominium complex driveway, which will provide a substantial safety improvement.

The proposed improvements are also tied into a vast on-site pedestrian network that travels along the site frontage and connects to the existing sidewalk across the Grove Street Bridge over Route 128, and into in the Lower Falls area. Crosswalks are provided across the existing Route 128 NB on ramp as well as within the roundabouts at both Route 128 ramp terminals. Bicycle accommodation is proposed along Grove Street in areas where widening will take place.

Based on an initial review of available information, these improvements can be implemented within the existing available right-of-way or on land under the control of the Applicant. All widening would occur along the north side of the street.

#### C-D Road/ Route 128 Northbound Ramp Improvements

Access is proposed via a right-turn in/full-egress driveway off of the C-D road. As part of the construction of this access, additional improvements are proposed to reconstruct a portion of the C-D road. Access to the site will be provided by way of an exclusive ramp that intersects the west side of the C-D road.. To accomplish the site access plan along the C-D road, the Applicant will seek a break in the “no-access” line along this section of state highway. As such, the Applicant has been working with representatives of MassDOT during the development of the access improvements and it is expected that this action will be possible. This configuration would also prohibit access to Recreation Road from the Route 128 Northbound Off-Ramp at Exits 23-24-25. By restricting access to Recreation Road from Exits 23-24-25, access would be provided by way of the Route 128 Northbound exit at Grove Street, increasing the traffic volume

(only slightly) at the proposed roundabout at the intersection of Grove Street at the Route 128 Northbound ramps. Based on an initial review of available information, this alternative can be implemented within the existing available right-of-way or on the Project site.

An additional benefit to the C-D Road and Route 128 Northbound Ramp improvements is the elimination of the existing weave along the C-D Road between the Route 128 NB On-Ramp from Grove Street and the Off-Ramp to Recreation Road. This weave currently accommodates all vehicular traffic along the C-D Road destined to Recreation Road, the Mass Pike, Route 30, and Route 128 NB originating from both Route 128 and the On-Ramp from Grove Street. This weave currently accommodates approximately 2,540 vph during the weekday morning peak hour and 2,195 vph during the weekday evening peak hour and operates at LOS D during both weekday peak hours. With the improvements to the C-D Road and the Route 128 NB On-Ramp, this weave will be eliminated. The improvements will contain a weaving section that will only accommodate vehicles traveling along the Route 128 NB On-Ramp from Grove Street and vehicles exiting the site driveway destined to the north. This new weave will consist of approximately 275 vph during the weekday morning peak hour and 535 vph during the evening peak hour and will operate at LOS A during both weekday peak hours. The elimination of the weave along the C-D Road will provide for improved operations and will enhance safety by eliminating some conflicting vehicular movements.

A comprehensive Traffic Impact and Access Study (TIAS) has been completed for *The Station at Riverside* Project and have been provided to the City and MassDOT, among others. Copies of the entire TIAS, including all traffic counts, computer modeling results, figures, etc., is available upon request. In addition, the City of Newton has engaged a peer review of the traffic impact and access study the result of which is available in letter format from the City of Newton Planning Department.

#### Transportation Demand Management

The goal of the Transportation Demand Management (TDM) plan is to reduce the Project's overall traffic impact through the implementation of measures that are aimed at affecting the demand side of the transportation equation, rather than the supply side. By their very nature, TDM programs attempt to change people's behavior, and to be successful, they must rely on incentives or disincentives to make these shifts in behavior attractive to the commuter or retail customer.<sup>3</sup> TDM programs are designed to maximize the people-moving capability of the existing transportation infrastructure by increasing the number of persons in a vehicle, providing and/or encouraging the use of alternate modes of travel, or influencing the time of, or need to, travel.

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<sup>3</sup> Implementing Effective Travel Demand Management Measures: Inventory of Measures and Synthesis of Experience, prepared by Comsis Corporation and the Institute of Transportation Engineers, for the U.S. Department of Transportation, DOT-T-94-02, September, 1993, p. I-1.

The term TDM encompasses both alternatives to driving alone and the techniques or supporting strategies that encourage the use of these alternatives.<sup>4</sup> TDM alternatives to driving alone include carpools and vanpools, public and private transit, and non-motorized travel, including bicycling and walking. TDM alternatives can also influence when trips are made. For example, alternative work hours (compressed work weeks, flextime, and telecommuting) can affect what time of day trips are made, or if trips occur at all on certain days. On an area-wide basis, the provision of park and ride facilities and transit services can also provide a competitive alternative to drive-alone commuting. TDM strategies are the supporting measures that encourage the use of alternatives to driving alone. TDM strategies include financial incentives, time incentives, the provision of new or enhanced commuter services, dissemination of information, and marketing alternative services. TDM strategies include all the incentives and disincentives that increase the likelihood for people to change their existing travel behavior.

An on-site Transportation Demand Management (TDM) coordinator will encourage employers within the site to implement all possible and practical TDM measures. As not every TDM program will be suitable for every type of employer, such as telecommuting or flexible work hours, the coordinator will offer technical assistance to individual tenant employers to evaluate potential programs and to implement them when appropriate. Potential employer-based TDM measures may include the following:

- Provide flexible hours so that employees have the option of commuting outside the peak traffic periods. Similar benefits can also be realized through staggered work hours so that employee trips occur over a broader period and thereby reduce peak hour demands.
- Massachusetts' employers have the ability to finance the cost of their employees' parking, transit or vanpool expenses. These benefits are not considered taxable income for the employee, and employers may write off these costs as a transportation expense. Alternatively, employees' may use pre-tax dollars for the purchase of transit passes, pay vanpool fares, and to cover qualified parking costs.
- Consider telecommuting options.
- Hold promotional events for bikers and walkers.
- Provide incentives for bicycle and HOV commuting.
- Prioritize local hiring.
- Offer direct deposit to employees.
- Provide a guaranteed ride home program to eliminate an often-cited deterrent to carpool and vanpool participation.
- Sponsor vanpools and subsidize expenses.

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<sup>4</sup> Implementing Effective Travel Demand Management Measures: Inventory of Measures and Synthesis of Experience, prepared by Comsis Corporation and The Institute of Transportation Engineers, for the U.S. Department of Transportation, DOT-T-94-02, September, 1993, P. 1-2.

- Provide preferential carpool and vanpool parking within the parking garages and spaces near office building entrances as a convenience to participants and to promote ridesharing.
- Provide subsidies to employees who purchase monthly or multiple trip transit passes.

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### **Improvements to Pedestrian and Bicycle Facilities**

Specific improvements to the pedestrian environment in the vicinity of the Riverside MBTA Station have been proposed in conjunction with the roadway and intersection improvements recommended above. A new sidewalk will be installed along the north side of Grove Street between the Route 128 Southbound Ramps and the Grove Street Bridge over Route 128. A wide sidewalk will be constructed along the north side of the bridge and will continue along the north side of Grove Street, providing access to the Project site. A comprehensive network of paths along the site frontage will enhance bicycle circulation and the pedestrian experience in this area. A plaza/community area is proposed adjacent to the Intermodal Commuter Facility. Crosswalks will be provided at the proposed roundabouts at the Route 128 Southbound and Route 128 Northbound ramp intersections with Grove Street. Crosswalks and a pedestrian signal phase will also be provided at the intersection of Grove Street at the Riverside MBTA Driveway.

These improvements are designed to add additional traffic capacity to the area, beyond the predevelopment conditions. The improvements are important in that they are expected to improve peak hour operations as indicated in the table, but also introduce traffic control at the site access driveway and modern roundabouts at the ramp intersections with Grove Street, which will have the effect of slowing vehicle movements along this corridor. The proposed traffic calming and pedestrian enhancements will make the post-development conditions far more pedestrian friendly. Modern roundabouts are well known for improving safety and enhancing the pedestrian environment.

In the Plaza area, ample hardscape areas provide places to linger for visitors and comfortable passage for pedestrians and cyclists alike. Canopy trees will line the edges of the plaza, providing shade and seasonal interest.

In the Garden area, small native trees and ornamental perennial plantings between the pedestrian areas and the roadway area will provide a sense of separation from the road while allowing a visual connection with the street for pedestrian safety.

Travel to the site by biking or walking will be promoted by the Applicant through the provision of convenient bicycle and pedestrian amenities. Bike racks will be provided throughout the site at locations proximate to major entry points as well as building entrances for convenience and to help further encourage the use of alternative transportation. In addition, an extensive bike storage area with a capacity of 138 spaces will be provided on the first floor of the Intermodal Commuter Facility.



Due to the site's proximity to residential neighborhoods, walking to/from and within the site will be encouraged by the provision of a pedestrian-friendly site layout, which features an extensive network of sidewalks and crosswalks at key points both within the site and connecting to the existing surrounding pedestrian network. As mentioned previously, the proposed roundabouts at the Route 128 ramp terminals will also enhance the pedestrian safety in this area by slowing vehicles down on Grove Street. In addition, roundabouts are well known for improving the safety of roadway crossings, which is important in this area with adjacent residential neighborhoods and nearby schools. The on-site pedestrian network will also provide a pedestrian connection to the existing access points to the Charles River.

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### **Public Safety Improvements**

*Public safety improvements;*

The following summary of public safety improvements will be realized by Project implementation.

- Intersection improvements (signal)
- Safety benefit of building roundabouts
- Pedestrian enhancements.
- Emergency access to site is enhanced by two points of access
- Fencing around MBTA service yard
- Separation of MBTA bus movements and pedestrian flow.

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### **Affordable Housing**

*On-site affordable housing opportunities, except where otherwise allowed in subsection 30-24(f)(5), the inclusionary zoning ordinance; and*

The Project includes an affordable housing component in that the Project includes 15% or 44 dwelling units whose monthly rent is not greater than 30% of 80% of the median family income for Metropolitan Boston divided by 12, or as otherwise defined by the Newton Housing Authority. The 44 affordable units will be interspersed uniformly throughout the residential building.




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### **Improvements to Wet Infrastructure**

*Water, sewer, and storm water infrastructure improvements which increase capacity and lower impacts on the surroundings.*

The following sections provide a summary of water, sewer and storm water infrastructure availability and improvements necessary to increase capacity and lower impacts on the surroundings.




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**Water Supply**

This section discusses the proposed water supply services for the Project including estimates of water demand first conservatively assuming water use equivalent to wastewater flows calculated in accordance with 314 CMR 7.15, and then in recognition of Applicant’s commitment to water conservation. In all cases, the City’s water distribution system is believed to have sufficient capabilities to meet the normal daily peak demands of the Project.

The City of Newton is served by the MWRA water supply system and water is distributed through the City of Newton municipal water system. The existing water distribution infrastructure near the Site includes two municipal lines, an 8-inch line, and a 12-inch line both located in Grove Street, and a 48-inch MWRA transmission main that bisects the Site. Existing MBTA facilities are served from two connections to the municipal system: an 8-inch connection to the 12-inch main and a 6-inch connection to the 8-inch main. From record plans it does not appear that the water distribution system through the site is looped. Please refer to Plan Sheet S-5.1 to 5.3, which depicts the water main locations and proposed supply network throughout the Project Site.

The projected water consumption rates provided below assumes that water use is roughly equivalent to wastewater flows calculated in accordance with the DEP Wastewater Design Flow Guidelines at 314 CMR 7.15, generally as follows:

- Office Space: 75 gallons per day per 1,000 square feet
- Apartments: 110 gallons per day per bedroom
- Retail: 50 gallons per day per 1,000 square feet
- Restaurant: 35 gallons/seat

Because the DEP wastewater design flow volumes are considered to be very conservative in relation to actual flow volumes, no increase in water consumptive rates have been applied to these figures.

**Unadjusted Maximum Projected Daily Water Use**

Land Use	Unit Wastewater Rate (gpd)	Total Size of Building Program	Water Use 100% of Wastewater Rate (gpd)
Office	75/1000/sf	225,000 sf	16,875

Residential	110/bedroom	18	studio	1,980
		157	one bedroom	17,270
		104	two bedrooms	22,880
		<u>12</u>	<u>three bedrooms</u>	<u>3,960</u>
		419	bedrooms	46,090
Retail	50/1,000 sf	15,000	sf	750
Comm. Space*	75/1000 sf	8,000	sf	600
Restaurant	35/ seat	200	seats	<u>7,000</u>
<b>Total</b>				<b><u>71,315</u></b>

sf = square feet; \*Use of this space currently undefined.

The projected fire flow demand calculated in conformance with National Fire Protection Association (NFPA) methodology for each of the Project's buildings is provided in the following fire flow table.

<b>Fire Flow Demand</b>	
<b>Building</b>	<b>Fire Flow (gpm)</b>
Building A	750
Building B	1,000
Building C	750

The Applicant has met with the City of Newton, MassDEP, MWRA, MassDOT, and the MBTA to ensure that all Agencies have been apprised of the Project's water demands and are aware of the plan to relocate a portion of the MWRA's existing 48-inch water main (discussed later in greater detail) necessary to meet the planning objectives of the Project.

Water service to the Project will be supplied via two connections. One connection will be used to service the MBTA facilities and the other to service the remainder of the build program. The two existing connections servicing the MBTA facilities will be consolidated to one 8-inch connection from the 12-inch municipal line. The existing meter on the 8-inch connection will remain in service to meter flows for the MBTA facilities. A new 12" water loop through the site will be created for water distribution and fire protection.

#### Sufficient Infrastructure

Preliminary indication from the City Engineer is that there is sufficient water supply and infrastructure to serve the Project. However, it is anticipated that additional water modeling will

be conducted with the City using project-specific inputs into the City's model to ensure that the fire flow demands of the Project can be met without adversely affecting other users on the City's water system. The Applicant has conducted hydrant flow tests in the immediate project vicinity, and the data obtained from the flow tests will be used to check and calibrate the predictive capabilities of the model. Should the model show areas in the City where residual system pressure would be insufficient under the fire flow demand of the Project, the model can also be used to determine and evaluate alternative solutions to address system deficiencies, if any.

#### MWRA Water Main Relocation

The 48-inch MWRA main running through the site, referenced by the MWRA as Section 80, is a welded steel pipe constructed in the late 1950s. This water main is located within a 30-foot wide easement that runs from Grove Street at the southern corner of the Site to the western edge of the site adjacent to the Charles River and Route 128/I-95. This main serves as a supplemental water supply to the Towns of Wellesley and Needham, which each have their own water supply wells but often need to draw water from the MWRA system during high demand periods normally associated with the summer irrigation season.

In order to construct the Project and maintain the integrity of the MWRA water main, an approximately 490 foot long portion of the 48" MWRA water main will be rerouted. The MWRA water main will be relocated to the area between the Indigo Hotel and proposed Building B. The total length of the relocated 48-inch water main is approximately 630 feet.

#### Water Conservation

The Applicant has taken an "integrated planning" approach to water conservation for the Project with a goal of minimizing the impact on the local water distribution system and the MWRA water supply system. Maximizing water efficiency within buildings will reduce the burden on the municipal water supply and wastewater systems. Due to significant differences in the design, construction and on-going operation of each of the various land uses, it is imperative to evaluate the appropriateness and effectiveness of the water conservation measures per land use. For example, each rental unit will be equipped with sub-metering of utilities to promote conservation. Like homeowners, when renters know that their dry and wet utilities are individually metered it improves greatly upon their conservation efforts.

#### Office Space Water Conservation

Within the 225,000 sf of office space, the Applicant will install low flow, high-efficiency faucets (0.5 gallons per minute (gpm)) as well as low-flow water closets and urinals resulting in an estimated 30% reduction in water use and subsequent wastewater generation based on LEED® guidelines (WE Credit 3.2). This 30% reduction in water usage and wastewater generation equates to a reduction of 5,062 gpd and 1,847,810 gallons per year (gpy) from the office land use.

Residential

All residential units will be individually metered and equipped with low flow, high efficiency faucets (0.5 gpm). Based on industry standards, this improvement is expected to reduce water usage and subsequent wastewater generation by approximately 10%. This 10% overall reduction in water usage and wastewater generation equates to a reduction of 4,600 gpd and 1,679,000 gpy from the residential units alone.

Retail

The retail space will be outfitted with low flow, high efficiency faucets (0.5 gpm). Based on industry standards, this improvement is expected to reduce water usage and subsequent wastewater generation by approximately 10%. This 10% overall reduction in water usage and wastewater generation equates to a reduction of approximately 100 gpd and 36,500 gpy from the retail land use.

Restaurants

The program potentially includes one or more café style restaurants totaling up 5,000 gsf, (200-seats) which will be outfitted with low flow, high efficiency faucets (0.5 gpm). Based on industry standards, this improvement is expected to reduce water usage and subsequent wastewater generation by approximately 10%. This 10% overall reduction in water usage and wastewater generation equates to a reduction of approximately 700 gpd and 255,500 gpy from the restaurant land use.

Water Conservation Summary

The projected water demand adjusted to account for water conservation commitments are presented in the following table of Adjusted Project Water Demand with Water Conservation below.

**Adjusted Project Water Demand with Water Conservation**

<b>Land Use</b>	<b>Water Use 100% of Wastewater Rate</b>	<b>Water Conservation Reduction Factor (% of total)</b>	<b>Projected Water Use</b>
Office	16,875	30	11,800
Residential	46,090	10	41,480
Retail	750	10	625
Community	600	10	540
<u>Restaurant</u>	<u>7,000</u>	<u>10</u>	<u>6,300</u>
<b>Totals</b>	<b>71,315 gpd</b>		<b>60,745 gpd</b>

Overall, water conservation measures are expected to reduce water consumption by approximately 3,860,000 gallons of water per year compared to typical design standards.



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## Wastewater

The Project will result in an improvement to the regional wastewater system by virtue of providing wastewater inflow and infiltration (I/I) removal (mitigation) in accordance with MassDEP Policy and City of Newton requirements. The MassDEP Policy requires the Applicant to remove or cause the removal of a minimum of four gallons of I/I flow for each gallon of new wastewater generated. Additionally, the Applicant will continue to work with the City of Newton municipal officials to fulfill any supplemental requirements of the City.

Sanitary sewers on the Site convey wastewater from the existing MBTA buildings through a series of laterals that generally flow south to north under the storage yard tracks. The laterals combine on-site and discharge to a 12-inch City of Newton sewer trunk line located in the northwest corner of the Site. The municipal sewer resides in a 40-foot wide City of Newton Main Drain and Common Sewer easement that runs along the MBTA train tracks parallel to the northeast property boundary. North of the Project Site, the municipal sewer connects to the Concord Albemarle 24-inch by 36-inch brick egg arch trunk line sewer main that runs along the Charles River and eventually connects to MWRA infrastructure at Albemarle Road where it is conveyed to the Deer Island Sewage Treatment Plant in Boston Harbor.

There are no dry weather capacity deficiencies downstream of the Project site in the Concord Albemarle 24"x36" sewer main nor in the Cochituate Aqueduct. However, during wet weather conditions sources of inflow and infiltration (I/I) from within Sewer Area A substantially increase flows to the regulator chamber; and although the Quinobequin pump station is capable of a greater pumping capacity, the Cochituate Aqueduct can only accept flows from the pump station in the 10-11 MGD realm before surcharging into resident's basements. To prevent surcharges within the Cochituate Aqueduct service area, excess flow to the regulator chamber gets released by gravity into the Concord Albemarle sewer.

In compliance with the MassDEP Sewer System Extension and Connection Permit Program and its implementing regulations at 314 CMR 7.00, applicants applying for a sewer extension or connection permit shall calculate net additional wastewater flows based on generation rates contained in 314 CMR 7.15. The projected wastewater flows are the same as those presented in the preceding section on water supply and needn't be repeated here. In summary, with the previously discussed water conservation measures in place, Project wastewater flow is estimated at 71,315 gpd.

The Project involves the construction of a new sewer collection system of gravity service laterals and mains to convey wastewater generated by the new buildings and the Hotel Indigo to the Concord Albemarle 24"x36" sewer main. Building services will connect to a new sewer to be located generally within the access road through the site. The sewer will drain southerly and connect to a manhole in an existing 10-inch sewer service main located in the reconfigured Route 95/128 northbound on-ramp, which drains to the Concord Albemarle sewer main. Preliminary sizing of the building laterals indicates that flows can be accommodated in 6-inch service connections and sewer mains can be accommodated in 8-inch or 10-inch pipes. All new sewer system components will be Polyvinyl Chloride (PVC) pipe. Please refer to Utility Plans sheets S-5.1 to S-5.3, which depicts the locations of sewer lines and service connections.

#### Inflow and Infiltration

MassDEP Policy (BRP 09-01) effective on April 2, 2009 and revised on September 24, 2010 requires wastewater mitigation for projects within MWRA sewer service areas that (1) exceed one or more MEPA thresholds that trigger preparation of an Environmental Impact Report; and (2) generate new wastewater flow exceeding 15,000 gpd. Mitigation is required in the form of (I/I) removal of "clean" sources of water from the wastewater sewer system; this being ground water or surface water runoff from rain or snow melt. Inflow sources typically include sewer connections from catch basins, roof leaders, sump pumps and foundation drains. Infiltration is groundwater flow entering the sewer system through pipe or manhole defects in the collection system itself. The effects of I/I on a sewer system are dramatic during wet weather events, when sources of I/I can consume all available excess capacity within the pipe network and cause system back-up and surcharges of untreated sewage.

Current policy requires the Applicant to remove or cause the removal of a minimum of four gallons of inflow and infiltration (I/I) flow from the sewer system for each gallon of new wastewater generated. Further, I/I removal is to be implemented such that it benefits the portion of the sewer system impacted by the Project. In most instances, this requirement is met by I/I removal downstream of the Project site and upstream of the most capacity limited/critical locations within the system. For this Project, I/I removal from anywhere within Sewer Area A (upstream of the Project), as well as, a large area within Sewer Area B tributary to the Concord Albemarle sewer main would meet this requirement.

The City's Department of Public Works (DPW), through its engineering consultants Weston & Sampson and Camp Dresser McKee Engineers, has monitored and studied the sewer collection system for several years and believes the vast majority of I/I sources have been identified. The DPW and the Applicant have begun discussions to identify and prioritize projects that the Applicant will either fund or execute to meet the Project's I/I mitigation obligations.




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## Stormwater Management

The Project presents a unique opportunity to implement significant improvements to the quality and additional control of the quantity of stormwater runoff tributary to the Charles River, thereby allowing the restoration of a more natural hydrologic cycle. The Project incorporates a progressive stormwater management system utilizing a combination of Low Impact Development (LID) techniques and stormwater Best Management Practices (BMPs) integrated into the site design focus on groundwater recharge and water quality. The stormwater infrastructure will collect, treat, recharge and/or filters stormwater prior to discharging to the Charles River. The specific combination of BMP techniques utilized have an exceptional capability to address phosphorous removal, specifically to provide a 65% reduction from stormwater runoff, as required by the Total Maximum Daily Load (TMDL) criteria established by the Environmental Protection Agency (EPA) for the Upper/Middle Charles River.

Similar to the established drainage pattern for the site and surrounding areas, stormwater runoff from the Project Site is discharged to a regulated wetland resource to the west, a deep marsh system associated with the Charles River. The marsh system is regulated under the Massachusetts Wetlands Protection Act (MWPA), and therefore the Project's stormwater runoff and drainage infrastructure is required to meet the Department of Environmental Protection (DEP) Stormwater Management Standards. Additionally, the Project is located within the Charles River Watershed and its stormwater discharges are subject to two Total Maximum Daily Loads (TMDLs) enforced by the U.S. Environmental Protection Agency (EPA):

- Final Pathogen TMDL for the Charles River Watershed, CN 0156.0 (January 2007)
- DRAFT TMDL for Nutrients in the Upper/Middle Charles River, CN 272.0 (September 2009)

Overall, the Project will comply with the MassDEP Stormwater Management Regulations, the DRAFT TMDL for Nutrients (phosphorus), and the City of Newton stormwater Standards through the design and implementation of a newly constructed stormwater management network.

A detailed stormwater management report is submitted as a stand-alone, accompanying document for Special Permit and Site Plan Review.




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## Fiscal Impact

*The proposed Mixed-Use Development has a positive fiscal impact on the city after accounting for all new tax revenue and expenses related to, but not limited to, school capacity, public safety services, and public infrastructure maintenance.*



A fiscal impact report prepared by RKG Associates, Inc. accompanies this narrative as an attachment.



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### **Phasing Schedule**

The following estimated Project phasing and construction duration dates are contingent upon satisfactory completion of permitting for any particular Project phase.

Estimated Construction Duration Dates:

- Phase 1 – ICF - Replacement Parking Garage and Access Drive Improvements: April 2013 – June 2014
- Phase 2 – Consisting of the Offsite Roadway Improvements Construction: March 2014 – December 2015 and the remaining Project Build-out: June 2014 – October 2016

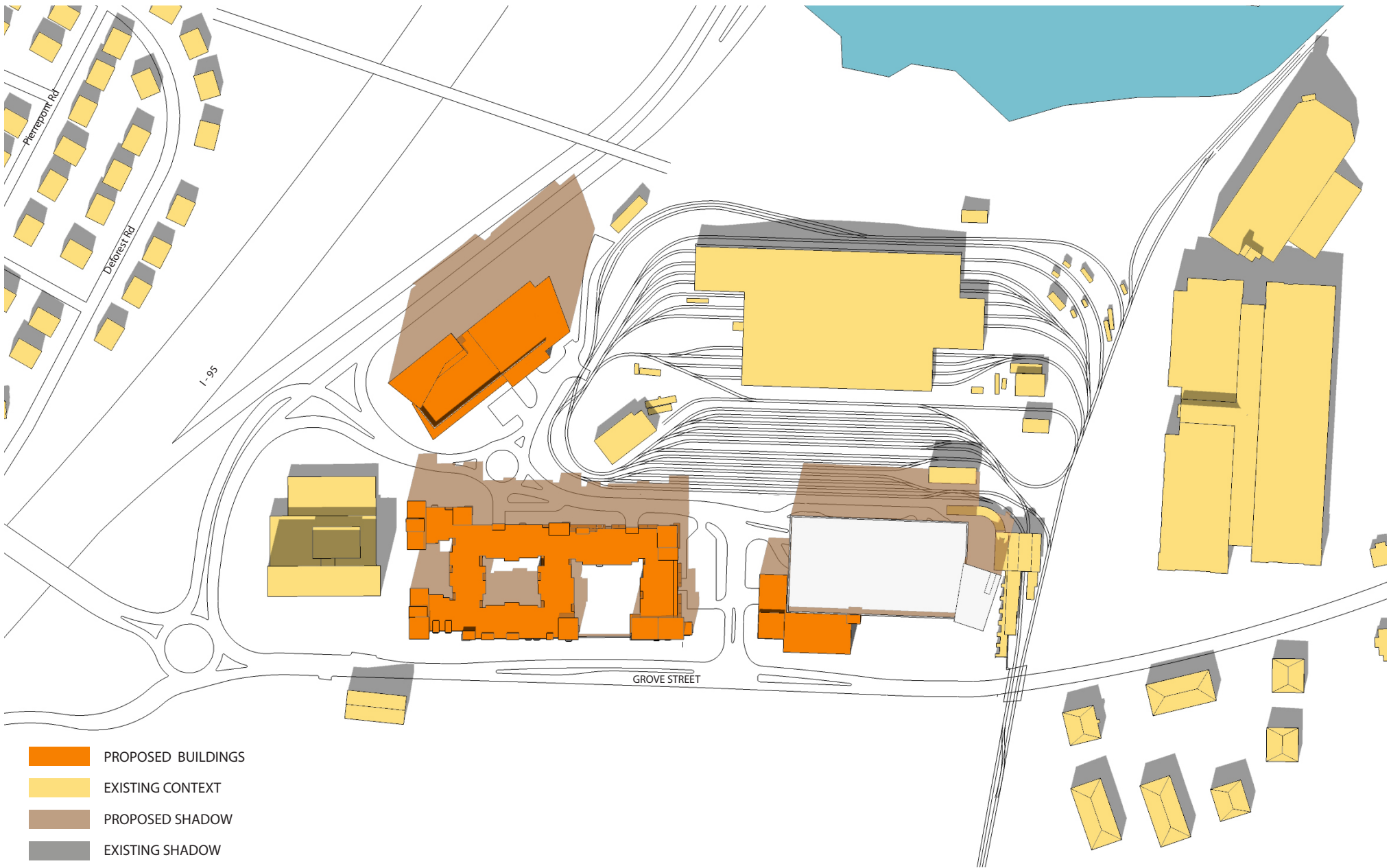
The total estimated construction cost is \$300 million.



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### **Shadow Analysis**

An analysis is herewith presented evaluating shadow conditions during three time periods (9:00 a.m., 12:00 noon, and 3:00 p.m.) during the summer solstice (June 21), autumnal equinox (September 21), and the winter solstice (December 21). Shadow studies were also conducted for 6:00 p.m. during the summer solstice and autumnal equinox. The shadow impacts from the vernal equinox and the autumnal equinox would be similar if studied at the same time periods. Therefore in this study, the vernal equinox shadow impacts are studied as if March 21 was still in Standard Time, meaning they are studied during the time periods of 10:00 a.m., 1:00 p.m., and 4:00 p.m. Shadows were analyzed using the applicable altitude and azimuth data for Newton.



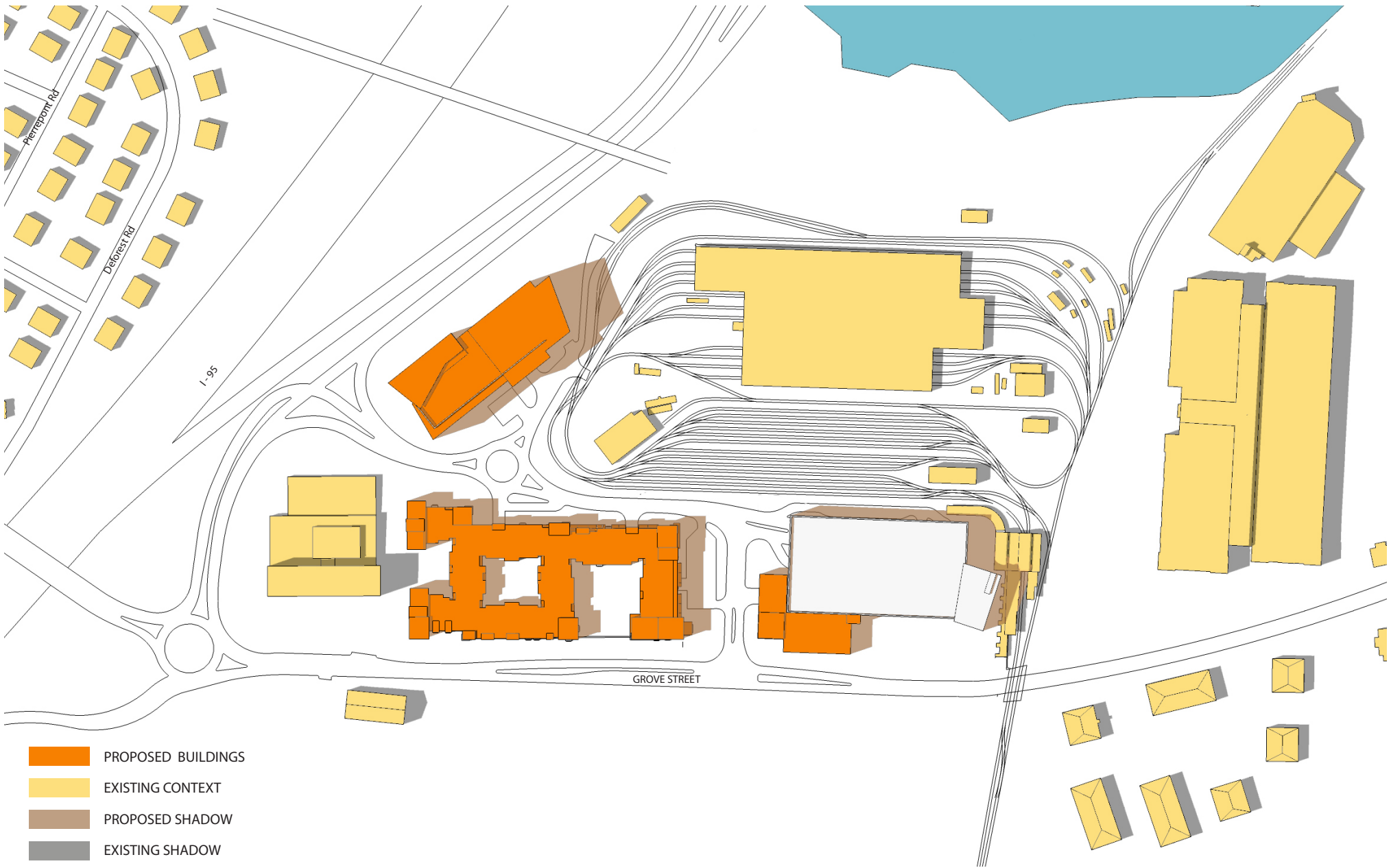
PROJECT # 09026.00



BH NORMANDY RIVERSIDE LLC

MARCH 21 10:00 am DST  
RIVERSIDE STATION

08.30.2012



- PROPOSED BUILDINGS
- EXISTING CONTEXT
- PROPOSED SHADOW
- EXISTING SHADOW

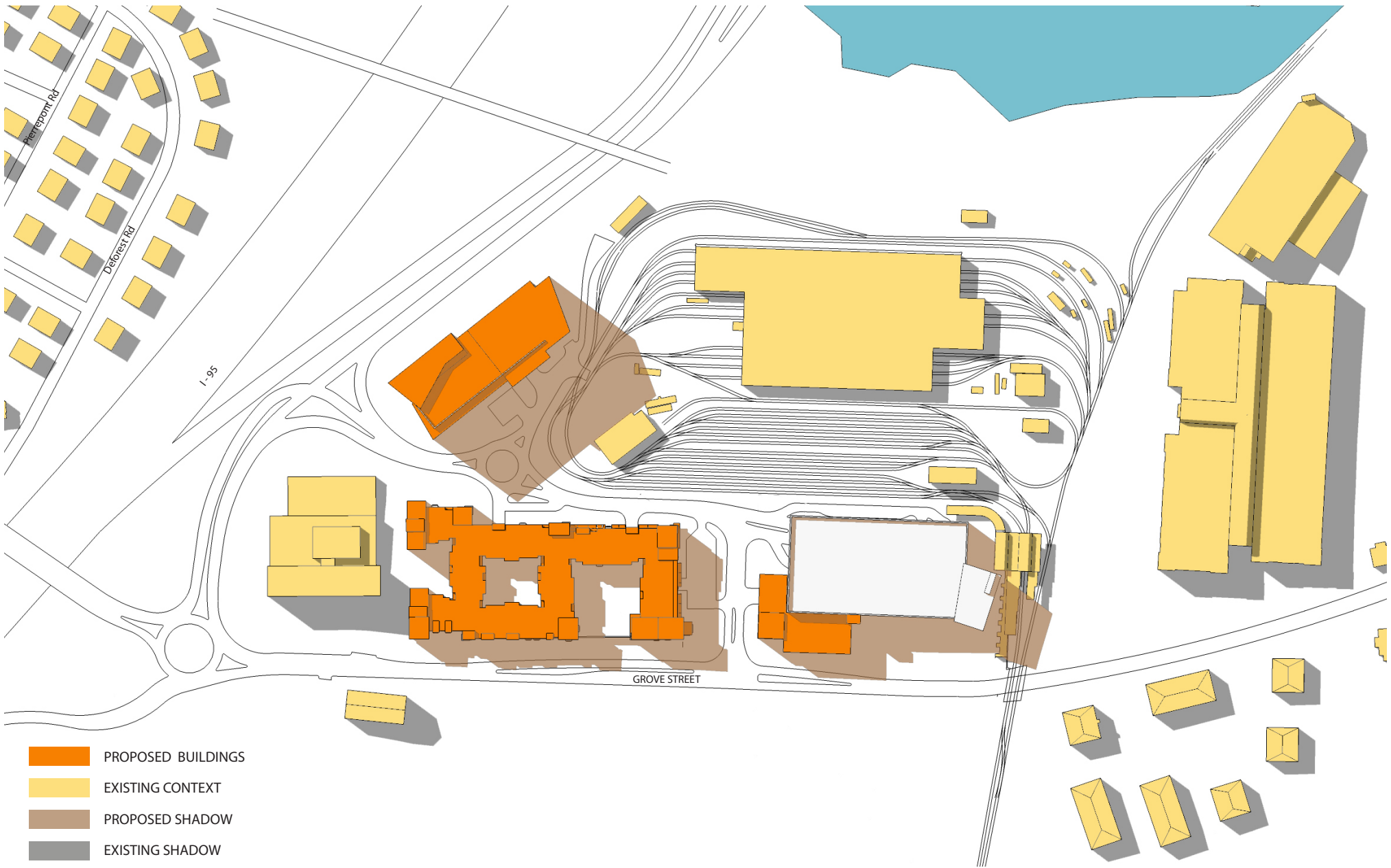
PROJECT # 09026.00



BH NORMANDY RIVERSIDE LLC

MARCH 21 1:00 pm DST  
RIVERSIDE STATION

08.30.2012



- PROPOSED BUILDINGS
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- PROPOSED SHADOW
- EXISTING SHADOW

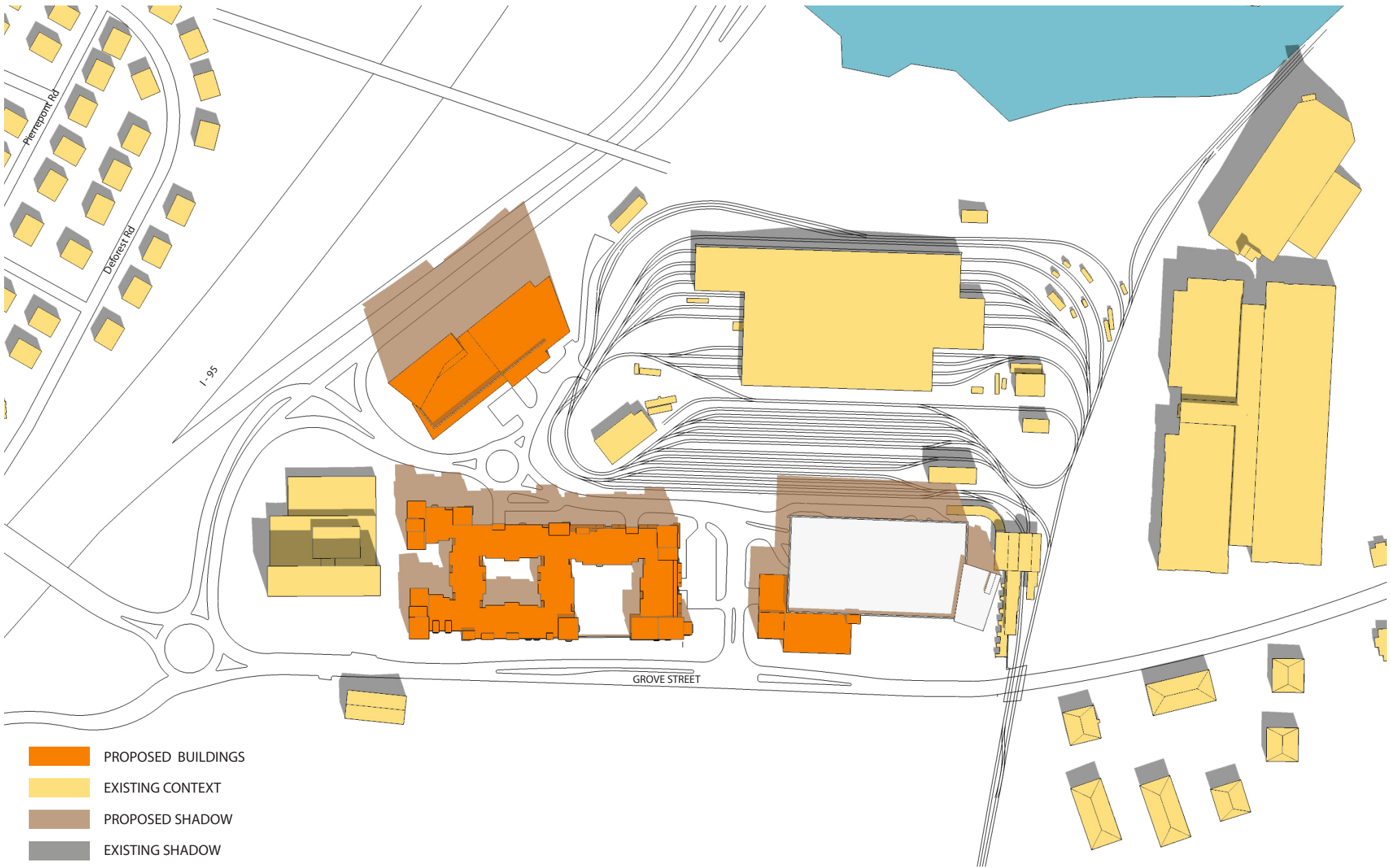
BH NORMANDY RIVERSIDE LLC

PROJECT # 09026.00

MARCH 21 4:00 pm DST  
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08.30.2012





- PROPOSED BUILDINGS
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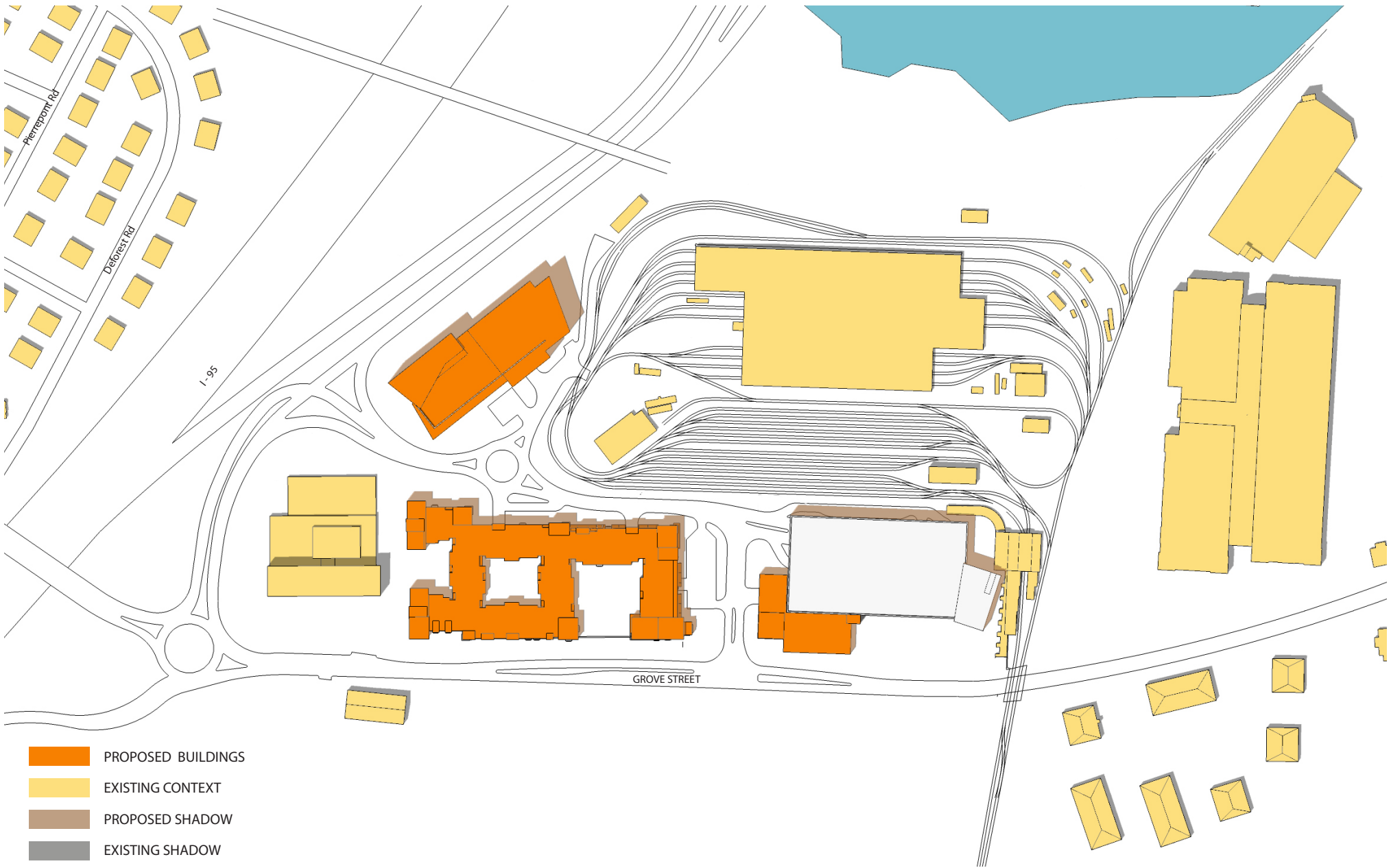
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08.30.2012

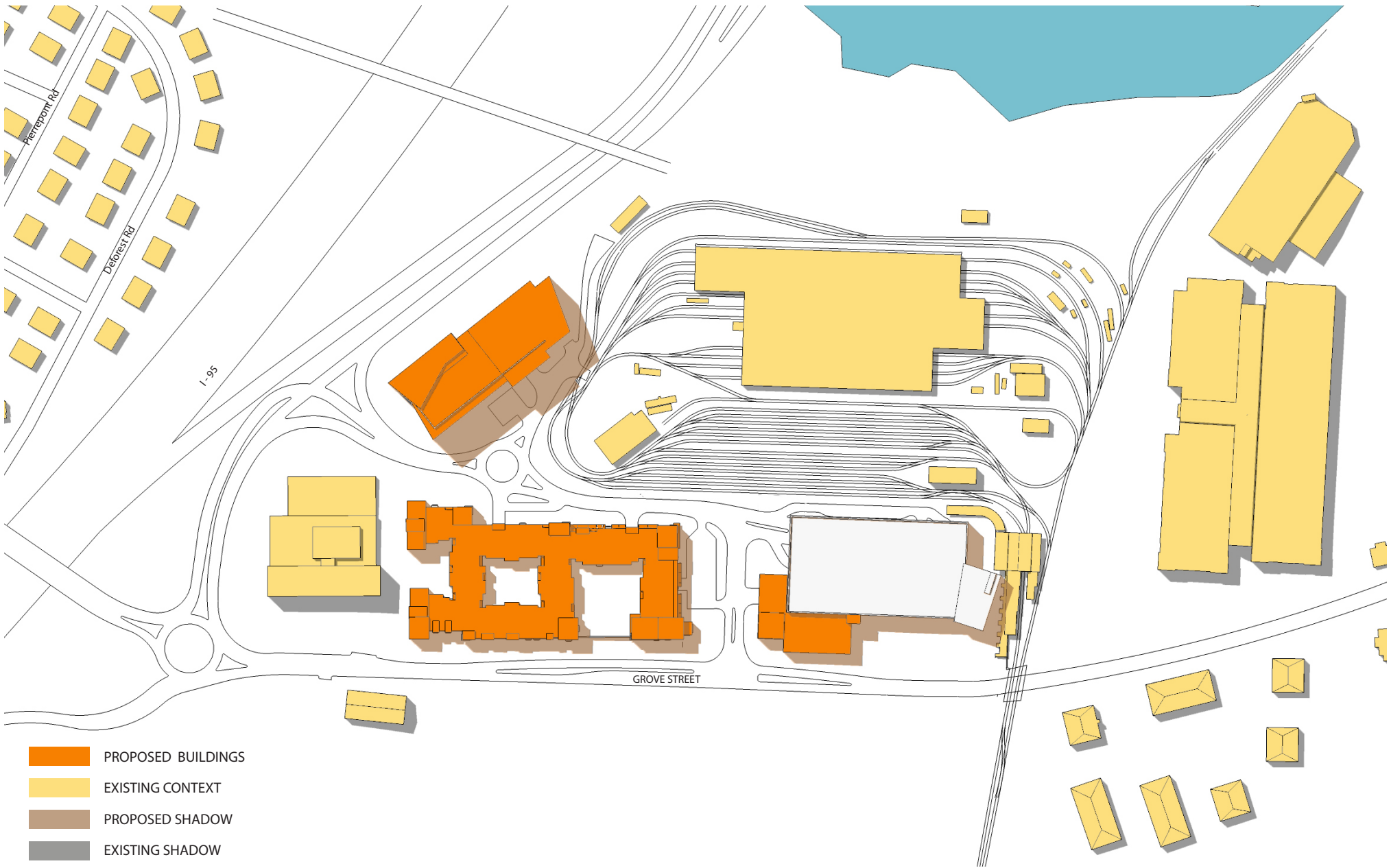


PROJECT # 09026.00

BH NORMANDY RIVERSIDE LLC

JUNE 21 12:00 pm DST  
RIVERSIDE STATION

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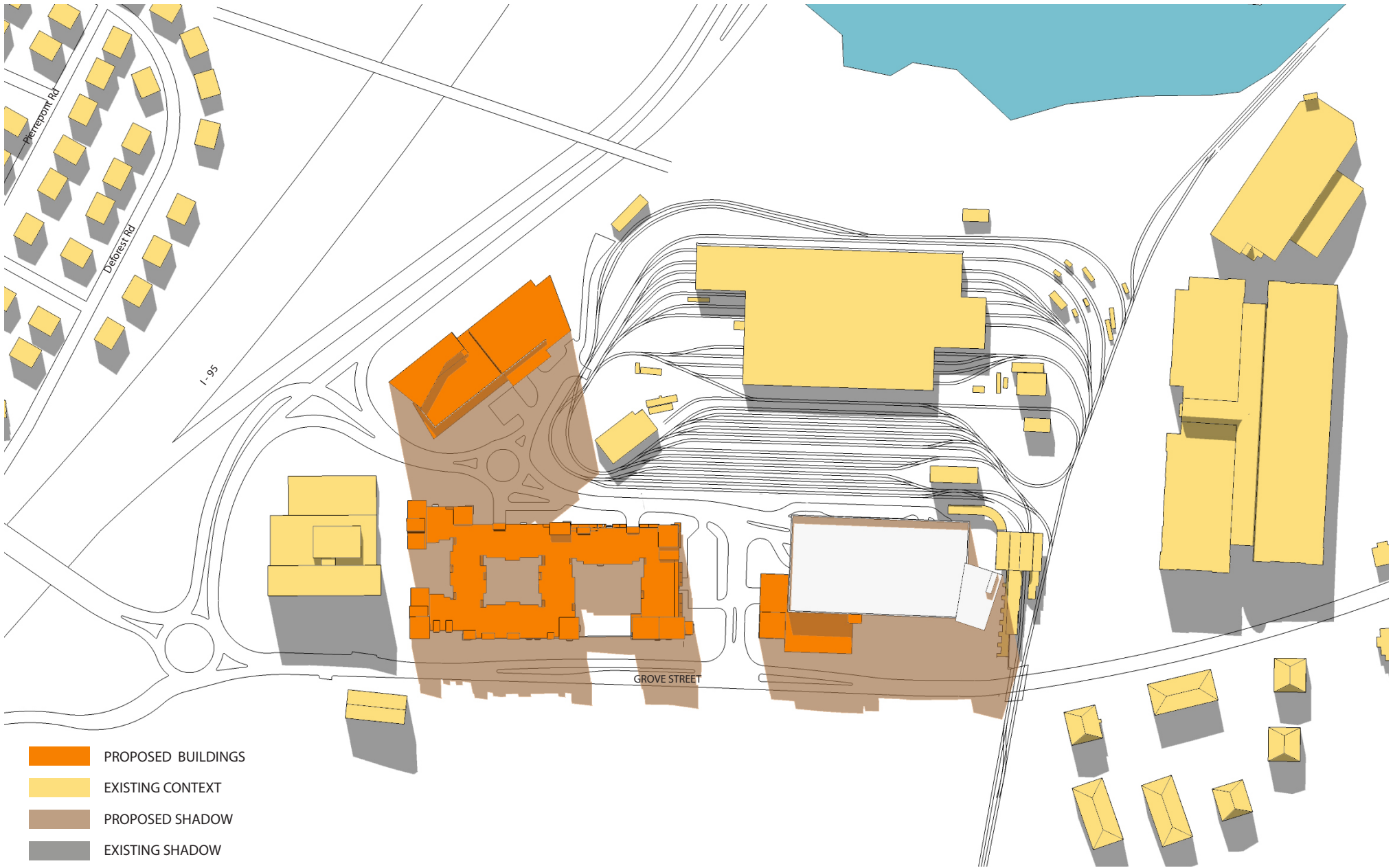
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BH NORMANDY RIVERSIDE LLC

PROJECT # 09026.00

JUNE 21 3:00 pm DST  
RIVERSIDE STATION

08.30.2012



- PROPOSED BUILDINGS
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BH NORMANDY RIVERSIDE LLC

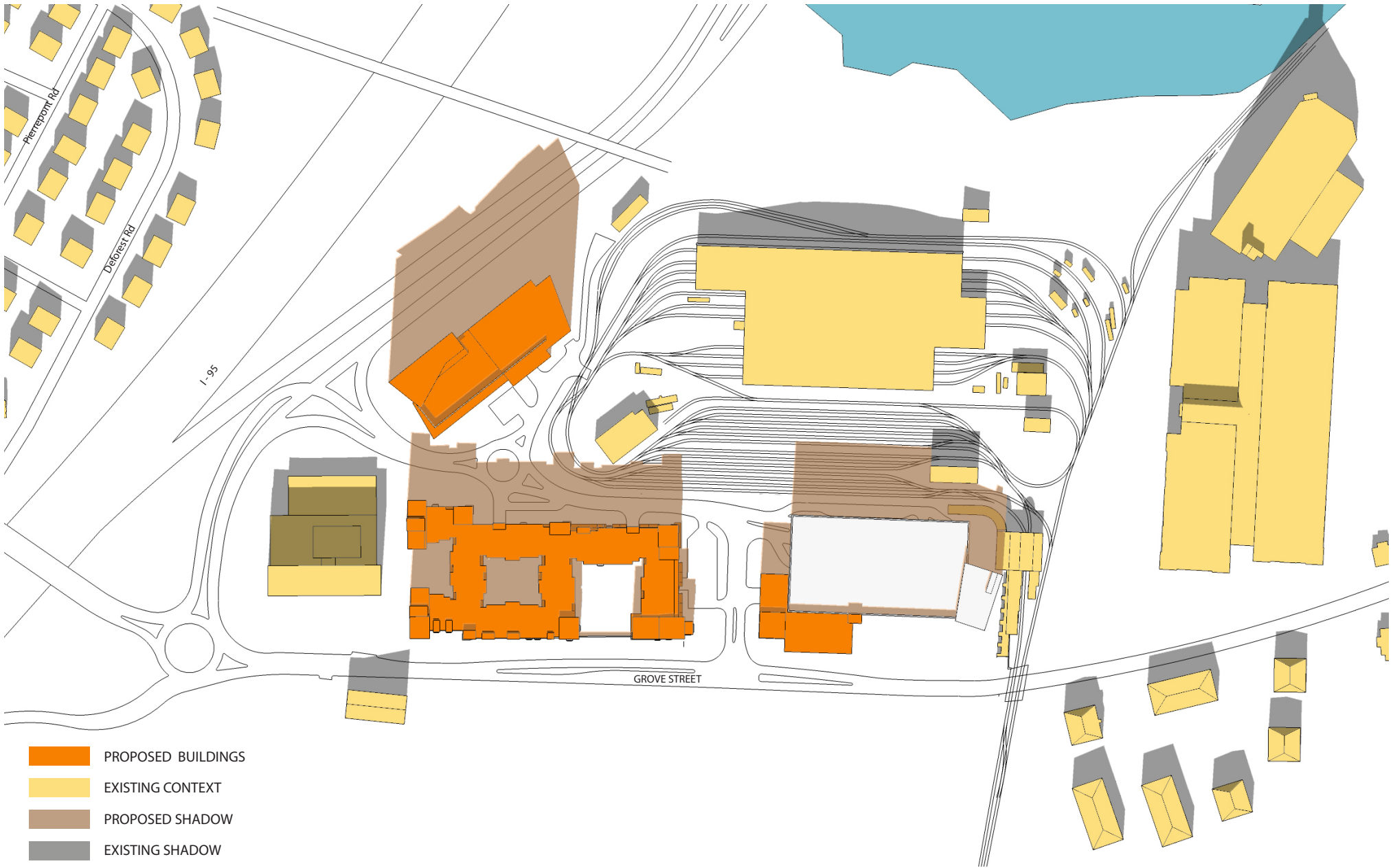
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08.30.2012







- PROPOSED BUILDINGS
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- PROPOSED SHADOW
- EXISTING SHADOW

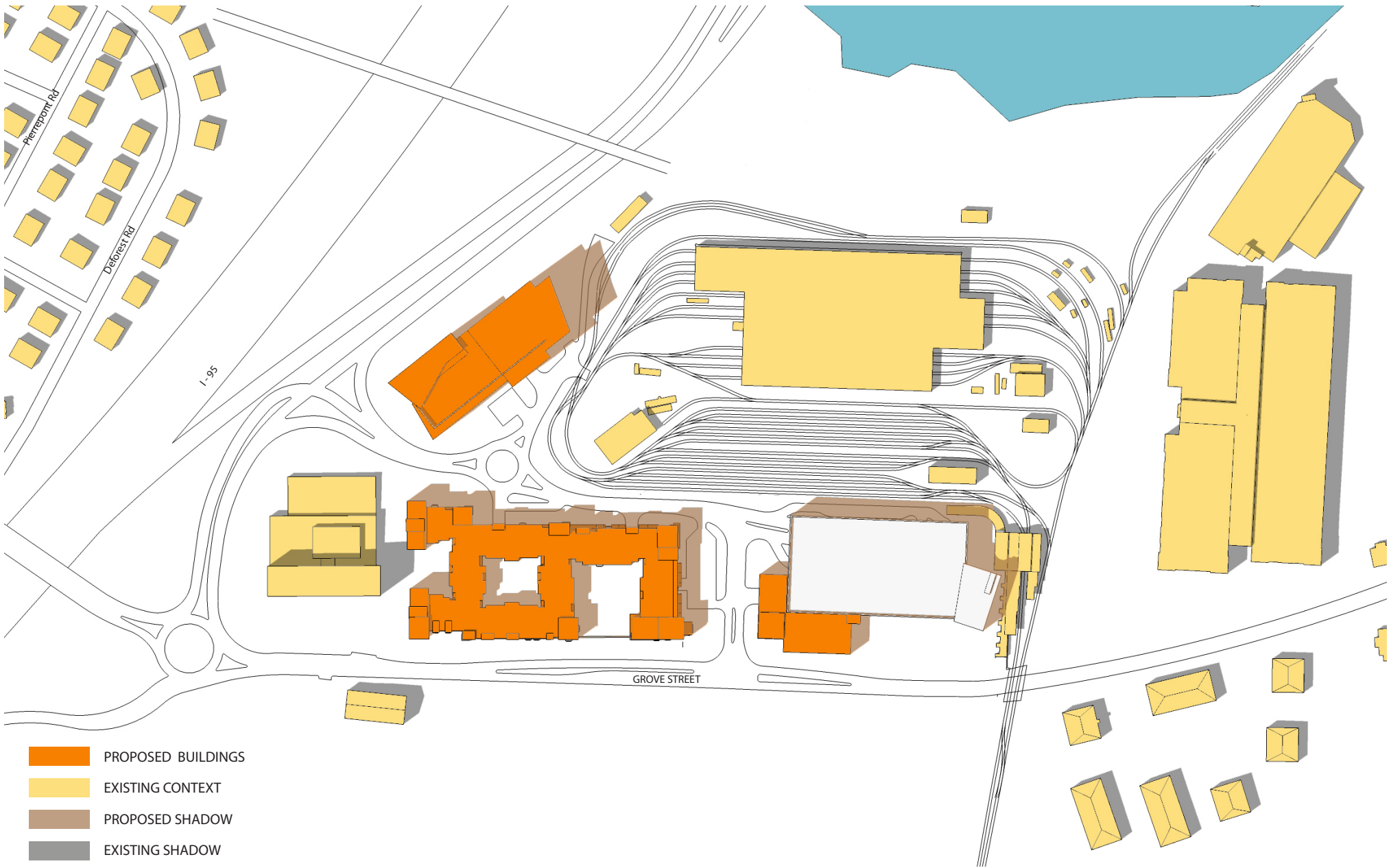
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PROJECT # 09026.00

SEPTEMBER 21 9:00 am DST  
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08.30.2012





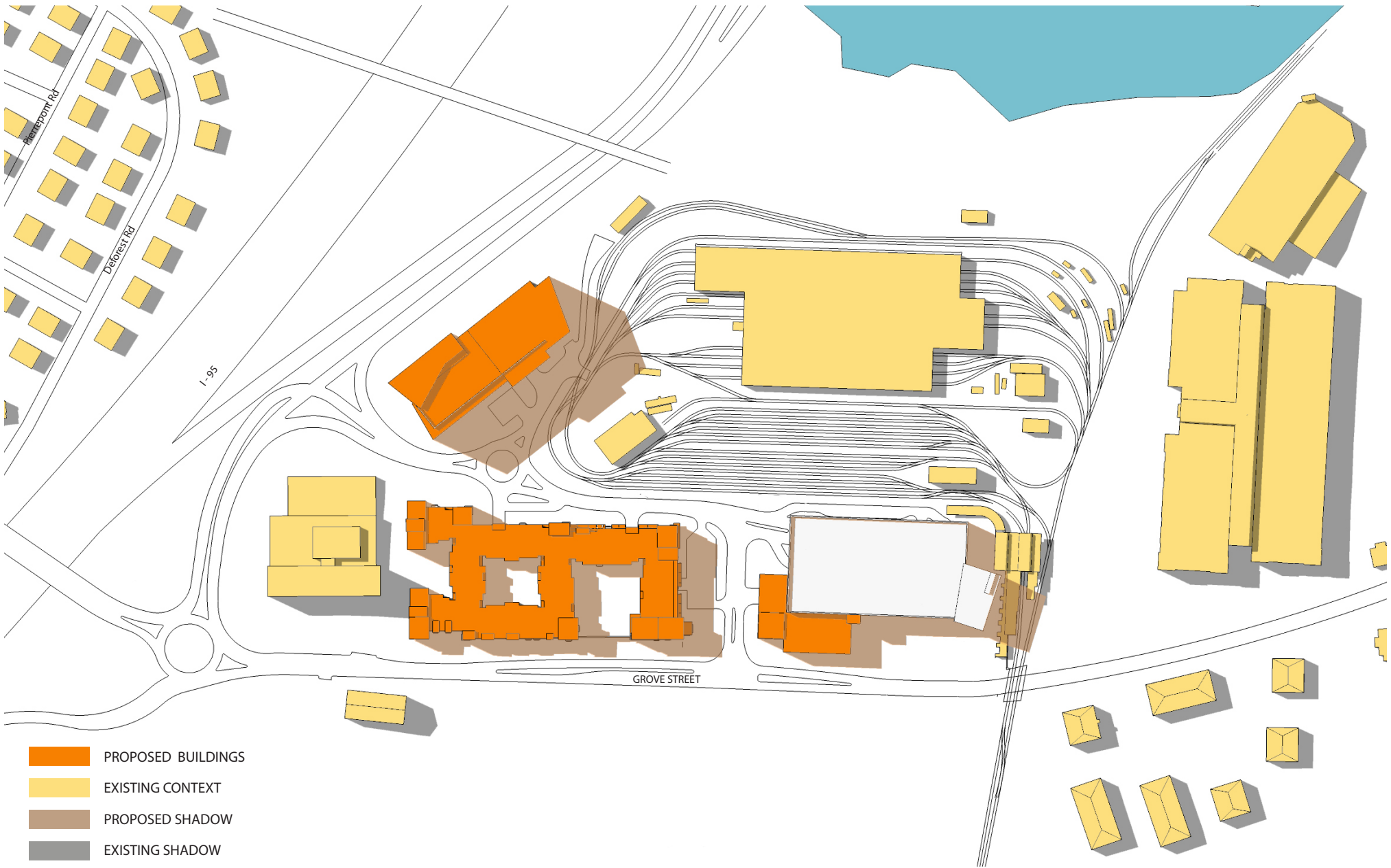
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SEPTEMBER 21 12:00 pm DST  
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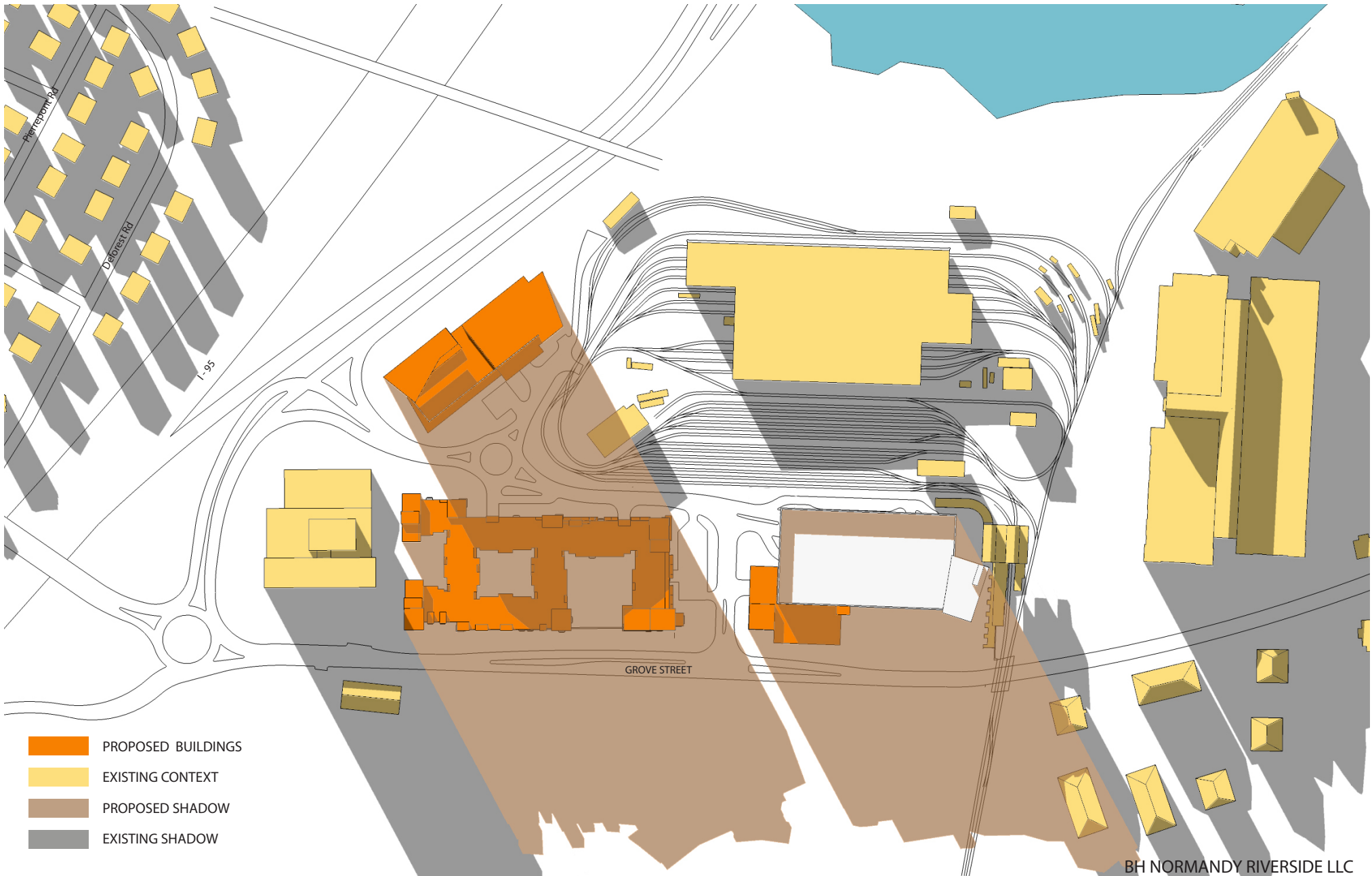
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SEPTEMBER 21 3:00 pm DST  
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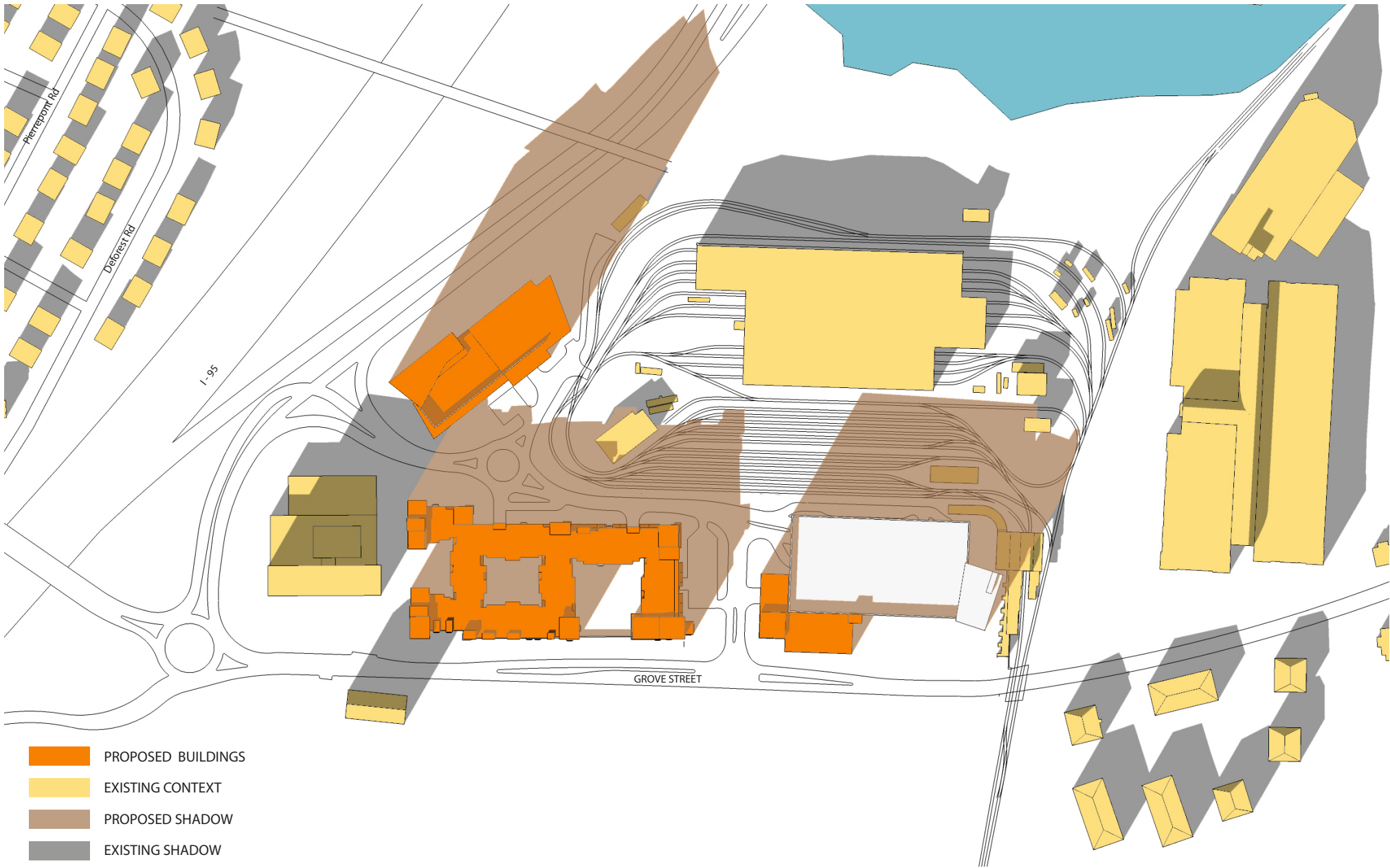
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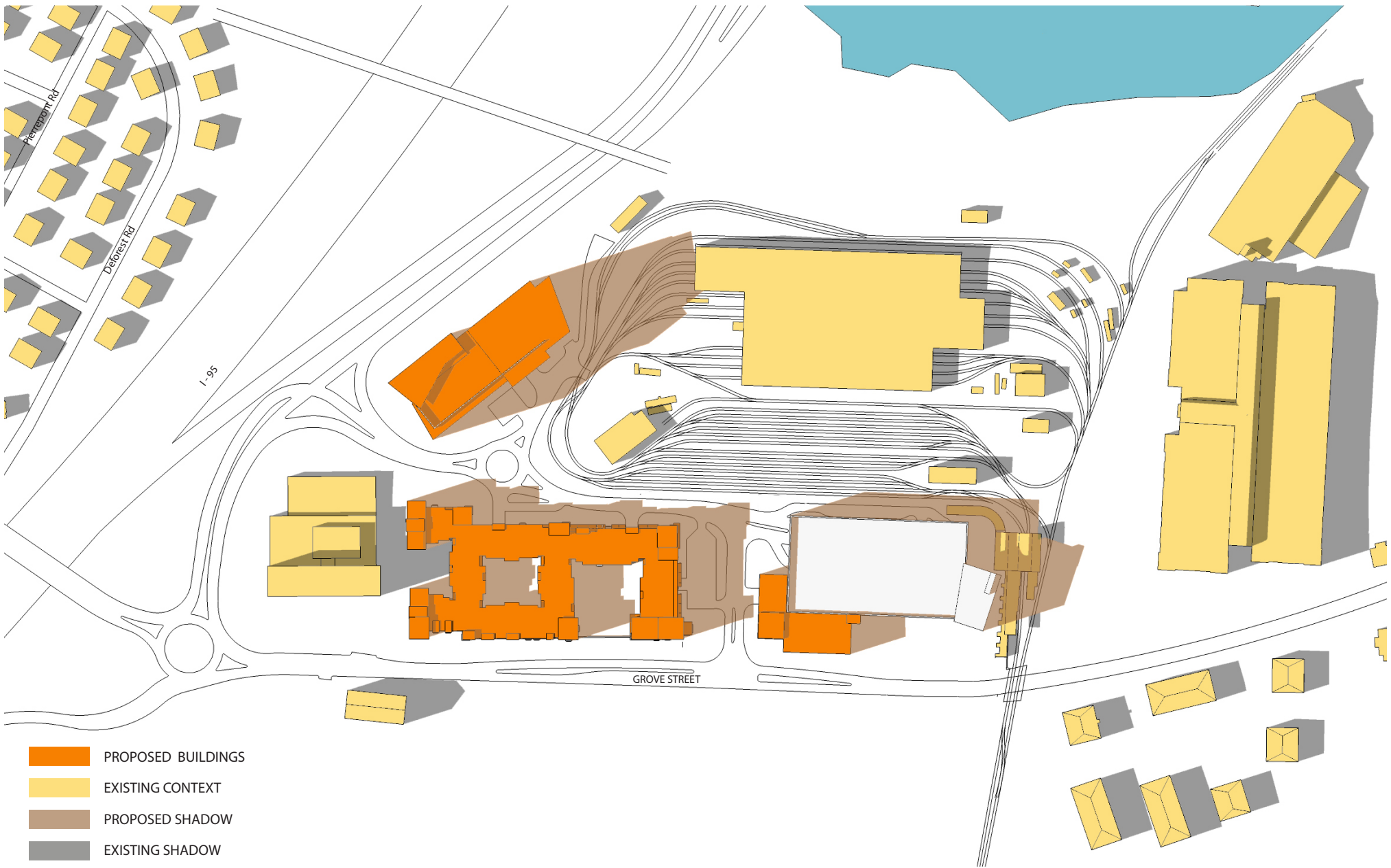
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BH NORMANDY RIVERSIDE LLC

DECEMBER 21 9:00 am EST  
RIVERSIDE STATION

08.30.2012



- PROPOSED BUILDINGS
- EXISTING CONTEXT
- PROPOSED SHADOW
- EXISTING SHADOW

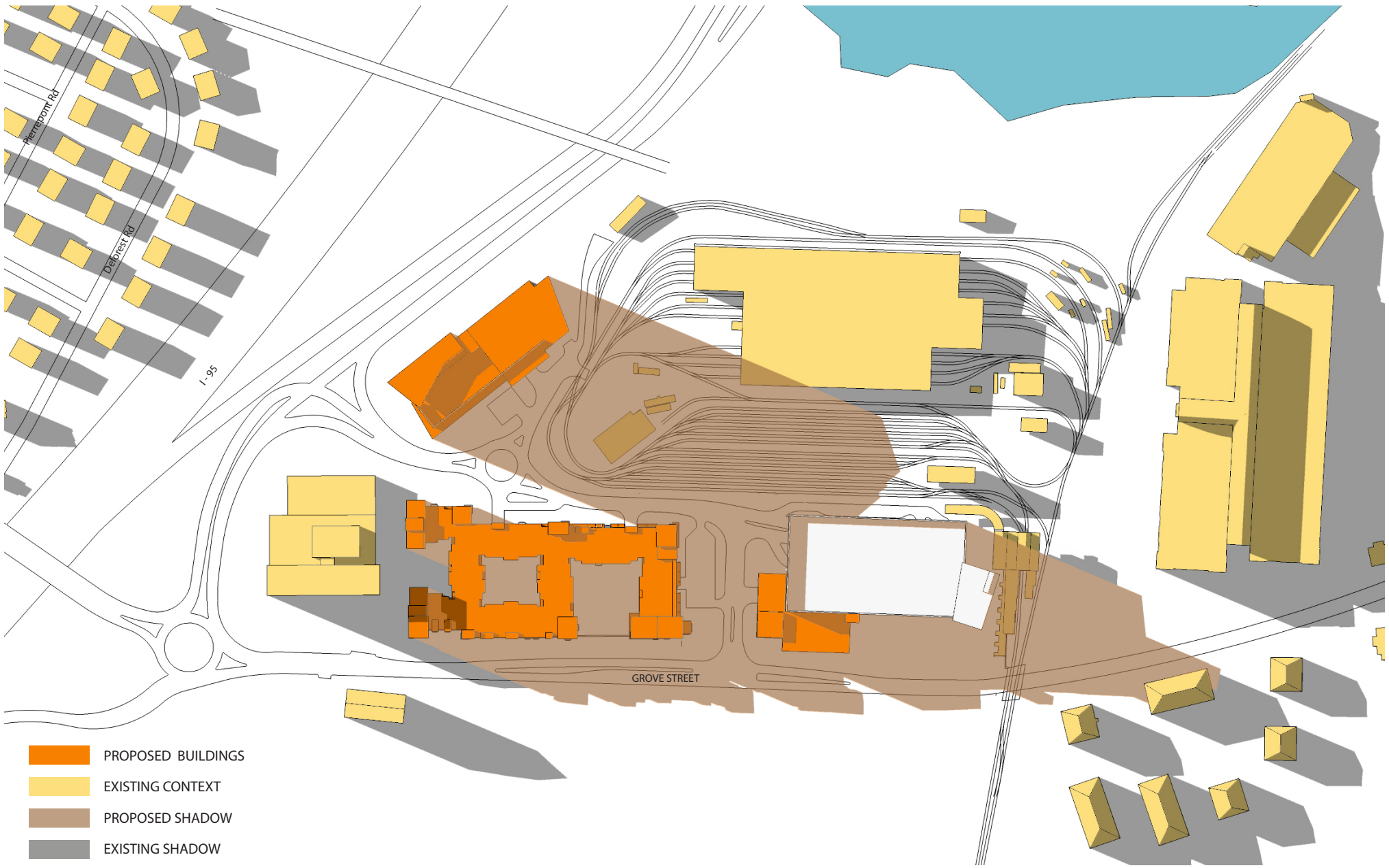
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DECEMBER 21 12:00 pm EST  
RIVERSIDE STATION

08.30.2012



- PROPOSED BUILDINGS
- EXISTING CONTEXT
- PROPOSED SHADOW
- EXISTING SHADOW

BH NORMANDY RIVERSIDE LLC

PROJECT # 09026.00

DECEMBER 21 3:00 pm EST  
RIVERSIDE STATION

08.30.2012






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### **Improved Access Nearby**

*Pedestrian and vehicular access routes and driveway widths are appropriately designed between the proposed Mixed-Use Development and abutting parcels and streets, with consideration given to streetscape continuity and an intent to avoid adverse impacts on nearby neighborhoods from such traffic and other activities generated by the Mixed-Use Development as well as to improve traffic and access in nearby neighborhoods.*

The Project Site has been designed to accommodate pedestrian and vehicular access routes and driveway widths in concert with the overall streetscape continuity that avoid adverse impacts to adjacent neighborhoods. Please refer to the Traffic Impact and Access Study which provides more detailed information in this regard.

Please also refer to the site plans which depict these Project accommodations.




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### **Enhanced Open Space**

*Appropriate setbacks, buffering, and screening are provided from nearby residential properties; the quality and access of beneficial open space and on-site recreation opportunities is appropriate for the number of residents, employees and customers of the proposed Mixed-Use Development; and meaningful bicycle and pedestrian connections to open spaces, recreational areas, trails, and natural resources, including the banks of the Charles River and adjacent public property, whether or not they are currently available for public use, are provided and take full advantage of the unique opportunities of the site and its nearby natural features for use and enjoyment by the community at large.*

Riverside Station has been carefully designed to provide publicly-accessible active and passive recreation, to contribute to vibrant street life, and to enhance access to adjacent recreational opportunities. A community plaza, tree-lined walkways, and generous green open spaces encourage pedestrian and bicycle activity and provide a diversity of landscape experiences. The open spaces are connected by a network of pathways which link to the adjacent communities and lead to the Charles River Basin. Plantings will be selected to encourage biodiversity and to create a wildlife habitat, specifically for birds and butterfly species. Three primary areas within the Project are designated as beneficial open space: the plaza area along Grove Street near the MBTA station (Area 1, hereinafter the “plaza area”); the woodland garden along the south end of Grove Street near the residential building (Area 2, hereinafter the “woodland garden”); and the area along the internal roadway of the proposed development behind the hotel (Area 3, hereinafter the “garden area”).



The plaza area will be a distinct recreational space for the community with a variety of outdoor programs. It is strategically located between the entrance to the indoor community space, small scale retail, the Intermodal Community Facility, and the direct outdoor pedestrian entry to the 'T'.

The woodland garden is envisioned as a passive linear landscape for the enjoyment of residents and the community, both on the move or seated. An 8-foot wide walkway lines Grove Street between the Hotel Indigo and the Gateway Entrance, punctuated by five small seating areas. One side of the walk (adjacent to Grove Street) is bordered by the shade of large native canopy trees, while the other side is planted with a less regular grove of flowering understory trees and multi-stem river birch. A mix of woodland perennials weave throughout, different species blooming in turns throughout the season, enhancing the scenic wooded character of Grove Street.

The garden area is envisioned as a small, primarily passive park where residents and visitors can step away from the more active pedestrian areas, have lunch, sit with a friend or even tend a vegetable garden. The open space contains two different types of seating areas: a semi circular one that is set back slightly from the pathway, and a curving seat wall that lines the path in one location.

Please refer to Sheet S-2.5 - Beneficial Open Space For Development Parcel, and the Landscape Plans which depicts these dedicated open spaces.




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### **Excellence in Place Making**

*The proposed Mixed-Use Development provides high quality architectural design and site planning so as to enhance the visual and civic quality of the site and the overall experience for residents of and visitors to both the Mixed-Use Development and its surroundings.*

Given the 9+ acre site, the goal of the Riverside development is to provide a rich variety of complementary building types and open space programs that will encourage 18-hour, and four season use, both active and passive. Commuters in cars, on bikes, and on foot will flow through the development in the morning and evening, grabbing a coffee and a newspaper. Office workers will come to the plaza at lunch and break time on weekdays, while those living at Riverside Station will plant gardens and enliven outdoor spaces on the weekends. Children from the neighboring communities of Auburndale and Newton Lower Falls will come to the splash fountain to meet and play, while their parents enjoy a picnic or a cool drink. Bikers, hikers, and cross-country skiers will be drawn to the site as a new way to access the natural resources surrounding the site. Groups of teenagers, seniors, and cultural societies will use the community space to play basketball, do yoga, and many other activities yet to be defined. The ecological benefits of the rain garden will also double as an educational opportunity for the

community, and the vegetable gardens will provide residents and visitors alike with an opportunity to simultaneously connect with nature and with the community, through the tending of an edible garden.

This constant overlap of user groups is neither accidental nor haphazard – it is the foundation for place making at Riverside Station. The strategy of overlap follows 'The Place Diagram' from the Project for Public Spaces, showing that the most successful places exist at the intersection of diverse social groups, differing activities, multi-modal movement and well designed spaces. The goal of Riverside Station is to create numerous spatial destinations that attract and engage community members in multiple ways, giving a unique identity to this place over time, and at the same time, fitting well with the surrounding context. Some of the spatial destinations and their beneficial effects are described in more detail in the descriptions of Enhanced Open Space and Public Space.




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### **Comprehensive Signage Program**

*Notwithstanding the requirements of Section 30-20, all signage for the proposed Mixed-Use Development shall be in accordance with a comprehensive signage program developed by the petitioner and approved by the Board of Aldermen, which shall control for all purposes, shall supersede any other sign requirements, and shall be complementary to the architectural quality of the Mixed-Use Development and character of the streetscape.*

Please refer to Sheet D-480, which depicts the proposed Exterior Signage plan.




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### **Pedestrian Scale**

*The proposed Mixed-Use Development provides building footprints and articulations appropriately scaled to encourage outdoor pedestrian circulation; features buildings with appropriately spaced street-level windows and entrances; includes appropriate provisions for crossing all driveway entrances and internal roadways; and allows pedestrian access appropriately placed to encourage walking to and through the Development Parcel.*

The Riverside Station site is unique given its regional and neighborhood connections. With its proximity to the regional highway system, and the MBTA commuter link to downtown Boston, the site is ideally suited for high density mixed use development. However given that the site is near several established residential neighborhoods, as well as the Charles River Basin and the Woodland Golf Course, the design demands a sensitivity to both pedestrian scale and to view corridors, so that the development does not diminish the desirable qualities of this section of Newton. To that end, the proposed mixed use development will include a network of open spaces connected by pedestrian paths and bike routes that link to the adjacent communities,

and provide a sense of place with a variety of landscape experiences. The path network around the buildings encourages safe pedestrian movement, while the scale relationship between the architecture and open areas makes human-scale spaces comfortable for pedestrians. Small native trees and ornamental perennial plantings between the pedestrian areas and the roadways will create a sense of separation from the road while allowing a visual connection with the street for pedestrian safety.

While the landscape has been designed to buffer and soften the visual impact of all the buildings, careful consideration has also been given to the design of all of the buildings to provide interesting high quality materials and pedestrian scale. The retail and community building will be designed with rich detail to assist in the definition of the streetscape along Grove Street and the plaza. It will include a precast concrete base, painted aluminum storefronts with generous glazing, colorful canopies, and appropriate signage and lighting. The residential building will be designed with clapboards, bay windows and double hung windows. Volumetric variations in the residential building along the street will provide pedestrian-scaled rhythms that enhance the walk between the Indigo Hotel and the Grove Street entry drive.

Finally, the office building will be enhanced with trellises and wood screens at the base that help connect the building to human scale and will include a gracious entrance courtyard.




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## Public Space

*The proposed Mixed-Use Development creates public spaces as pedestrian-oriented destinations that accommodate a variety of uses, promote a vibrant street life, make connections to the surrounding neighborhood, as well as to the commercial and residential components of the Mixed-Use Development, to other commercial activity, and to each other.*

The Project site is rich with mixed use public spaces and a robust circulation network for pedestrians and cyclists alike to promote ease of access. From the primary gathering spaces to the transitional circulation and smaller open spaces, the entire site is designed with a sensitive eye towards usability, accessibility, safety, and the encouragement of vibrant and varied use.

At the center of the plaza area by the MBTA pedestrian entrances, is a green space comprised of a raingarden and lawn connected by an arcing path that is flanked by sculptural seating walls. The raingarden will be filled with native plantings to attract birds and butterflies that will enhance habitat, aid in storm water management, and provide opportunities for education and enjoyment. Designed for use by both children and adults, the public lawn will provide opportunities for leisure and active play. Between the central raingarden and the community entrance is a splash fountain that is surrounded by moveable seating for parents or caregivers. In summer days this will be a focal point of children's activity. An additional raingarden lines the northern edge of the plaza, with a planting of climbing vines along the railway abutment that provides a green border.

The possibility for outdoor seating continues around the corner to the retail frontage located on the north side of the Grove Street vehicular entry to the site. Across the street, on the south side and adjacent to the retail area of the residential building, is a shaded plaza that features movable chairs and strategically placed seatwalls for casual gathering. During the day, office workers can convene here for lunch, while by night local families can enjoy an evening out and about in a lively urban setting. Overhead, a mix of canopy trees and smaller flowering trees provide seasonal variation and act to connect the two sides of the gateway. A raised planter at the edge of the plaza elevates the tree planting while suggesting a sense of enclosure and separation from the street. Bicycle parking is located proximate to building entrances for convenience and to help further the use of alternative transportation.

The garden area across from the office building is another destination landscape, envisioned as a small passive park with seating areas and gardening opportunities. Behind a curved linear seatwall is a small space for community garden plots that residents, workers or neighbors could adopt for a year and harvest what they plant. This offers an opportunity for a different connection to the natural world, and a unique social focal point that helps people meet each other, work with one another and bring a community together. Other plant species in this area will be selected with an emphasis on edible plantings and to promote a butterfly habitat.

Throughout the site, there are gathering areas with fixed benches, movable seating or strategic seatwalls in order to offer a range of social and individual experiences. There are outdoor seating and dining possibilities adjacent to the office building, seating areas along Grove Street by the residential building, outdoor seating adjacent to the retail areas and the community building entrance, and a proposed seating area overlooking the Charles River Basin. The circulation systems connecting all of the public spaces are accessible, screened yet visually porous, and integrate with the wider circulation networks around the site.




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## **Sustainable Design**

*The proposed Mixed-Use Development at least meets the energy and sustainability provisions of subsections 30-24(d)(5), 30-24(g), and 30-23(c)(2)(h).*

In 2007 the City of Newton amended Zoning Article 30-24(g) to require that any project over 20,000 sf seeking a Special Permit must significantly contribute to the efficient use and conservation of natural resources and energy. In 2009 the city extended its green building practices by adopting the Stretch Code, which has more stringent requirements than the state building code for energy conservation.

Redevelopment of the MBTA Riverside Station will wholly integrate smart growth and sustainable design into all facets of the Project. *The Station at Riverside* advances the Commonwealth's ten Sustainable Development Principles by 1) concentrating development and providing a mix of land uses; 2) advance social equity; 3) improving site efficiencies; 4) protect

green space and ecosystems; 5) using natural resources wisely; 6) expanding housing opportunities; 7) providing transportation choices; 8) increasing job and business opportunities; 9) promoting clean renewable energy alternatives; and 10) planning regionally. Integral to the Project is the provision for the new, fully integrated ICF that will better serve the commuting public on a daily basis and provide safer, more informed passage for those that visit Boston less frequently.

By its nature, The Project is sustainable and designated as “smart growth” as it consists of the redevelopment/reuse of a previously developed site with sufficient existing infrastructure to support the development, as opposed to development of a “green” site that would eliminate existing open space and requiring substantial new investment in infrastructure. The Project is committed to implementing a practicable and feasible program of sustainable measures during design, construction, and operation. The overall sustainable design goals of the Project include:

- Incorporating sustainable elements into site, building design and construction as well as operations, where feasible and practical;
- Reducing greenhouse gas (GHG) emissions through compliance with the MEPA Greenhouse Gas Emissions Policy and Protocol;
- Reducing energy consumption by at least 20% below Massachusetts State Building Code requirements in compliance with the City of Newton’s Energy Stretch Code.
- Incorporating energy and water conservation measures, including the continued use of the existing wastewater reuse system and by promoting on-site renewable energy opportunities;
- Using LEED Green Building Rating System criteria, the Project will be designed, constructed and operated as LEED Silver Certifiable;
- Recycling construction and operation waste material.

All buildings will meet the City’s Stretch Code Requirements and will be LEED Silver Certifiable; thereby, using less energy and water than traditional buildings of their type. The Project is registered with the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) certification program; the team has a minimum goal of achieving LEED Silver Certifiable. The team has actively participated in an Integrated Design Process that resulted in concrete design strategies that maximize environmental, economic, and social goals for the Project.

The Project will be constructed, operated and maintained as a facility with a focus on energy efficiency, indoor environmental quality, and occupant health and wellness. The buildings will use materials, fixtures, and systems that reduce resource use including water, energy, and raw materials. The team will cut the burden on the environment by reducing construction and demolition waste by at least 75 percent and by providing user-friendly recycling facilities in the completed buildings for future recycling.

Demolition and construction waste will be recycled and every effort will be made to use rapidly-renewable and/or high percentage recycled material. Mechanical systems will be high efficiency and glass will be high-performance, low-E double-insulated panes with high solar shading and reflectivity to lower cooling loads and energy consumption. Where appropriate, LED lighting will be used throughout the Project.

The landscape plan and stormwater management facilities incorporate several rain gardens and underground stormwater recharge to reduce and filter water runoff from the site.




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### **Adequacy of Parking/Shared Parking Analysis**

*Parking for the site is appropriate to the intensity of development, types of uses, hours of operation, availability of alternative modes of travel and encourages the use of alternatives without over-supplying parking.*

To ensure that there is not an over-supply of parking provided by a transit-oriented development the zoning regulations require that there be “a shared-parking analysis that demonstrates that the number of parking spaces to be provided is appropriate to the context, taking into consideration the mix of uses; the demand for parking spaces at different times of day, week and year; availability of alternative modes of transportation; and other site-specific influences on parking supply and demand, such as, but not limited to, Red Sox home games.” This section presents a detailed parking evaluation for the Project.

### **SHARED PARKING METHODOLOGY**

The basic premise of shared parking is that a single parking space can serve the parking needs of two or more individual land uses. This occurs routinely in urban areas where, for example, a parking space used during the day by commuters is used during the evening by restaurant patrons. Suburban mixed-use developments can provide a similar synergy of parking utilization. The Urban Land Institute has studied shared parking among mixed-use development and has developed methodology for evaluating shared parking that is documented in “Shared Parking”, Second Edition, which was published in 2005. The ULI procedure involves the following steps:

- Gather and review project data such as dwelling units, restaurant seating, and square footage of retail and office space.
- Select base parking ratios for each land use. These ratios (e.g., x parking space per dwelling unit or y parking spaces per 1,000 sf of office space) tend to represent (1) the parking required for the peak hour of the peak day of the week during the peak month of the year, and (2) locations where there are few travel mode options other than personal vehicle use. The ULI Shared Parking report and the ITE Parking Generation report provide national standards for the base rates, but the use of locally calibrated rates based on zoning requirements or data collected at comparable facilities is encouraged.

- Adjust the base parking rates for non-auto mode applicable to the site. This should be done separately for employee and customer/visitor parking. The ULI Shared Parking report provides data separately for employee and customer/visitor parking demand.
- Determine the season, day and time of peak parking demand by evaluating the monthly, daily and hourly parking demand variations for each type of land use. Time-of-day, day-of-week, and monthly factors are provided in the ULI Shared Parking report.
- Make appropriate adjustments for “internal capture” of parking demand to eliminate double counting parking demand in situations where, for example, office employees are also retail customers.

Any shared parking evaluation should also include consideration of how “sharable” are the parking spaces. There may be parking policies that reserve some parking spaces for a single land use (such as reserved parking for residents), or as a practical reality the location of available parking is too distant from many destinations within the Project site.

### **Base Parking Requirements**

The zoning requirements for standalone uses provide a good starting point for the discussion of base parking requirements before adjustments for non-auto mode splits; seasonal, day-of-week, and time-of-day parking occupancy patterns; and internal capture of parking demand. The City’s zoning requirements for the uses proposed are as follows:

- Office: 1 space/250 sf of GFA up to 20,000 sf and 1 space/333 sf of GFA in excess of 20,000 sf
- Residential: 2 Spaces/Dwelling Unit but Board of Alderman may permit fewer by special permit, but no less than 1.25
- Retail: 1 Space/300 sf of GFA, plus 1 Space/3 employees on largest shift
- Public/Community: While no parking requirements have been established for this type of use, we have assumed a parking rate of 1 Space/ 150 sf of GFA. This is likely conservative since a majority of the use of this space will be from the neighborhoods surrounding the site and people may choose to walk to this facility.

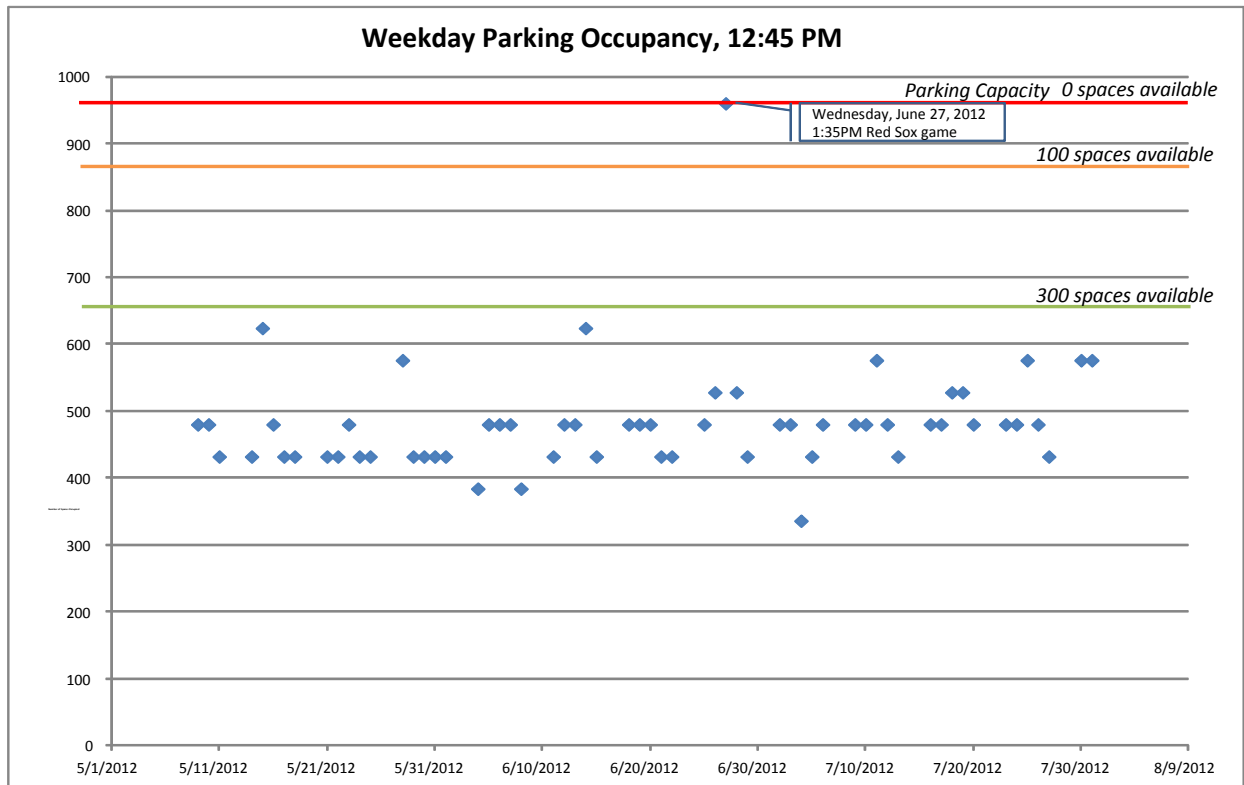
### **PROPOSED PARKING EVALUATION**

#### **Availability of MBTA parking**

Under existing conditions, the MBTA parking supply is more than adequate to accommodate typical daily parking demands. In fact, the parking supply is substantially underutilized. It is only during “game day” Red Sox events when the parking supply becomes fully utilized. With the proposed project in place, there is no reason to believe that the normal parking demands will change and therefore on typical days, there will be more parking that is needed within the IFC.

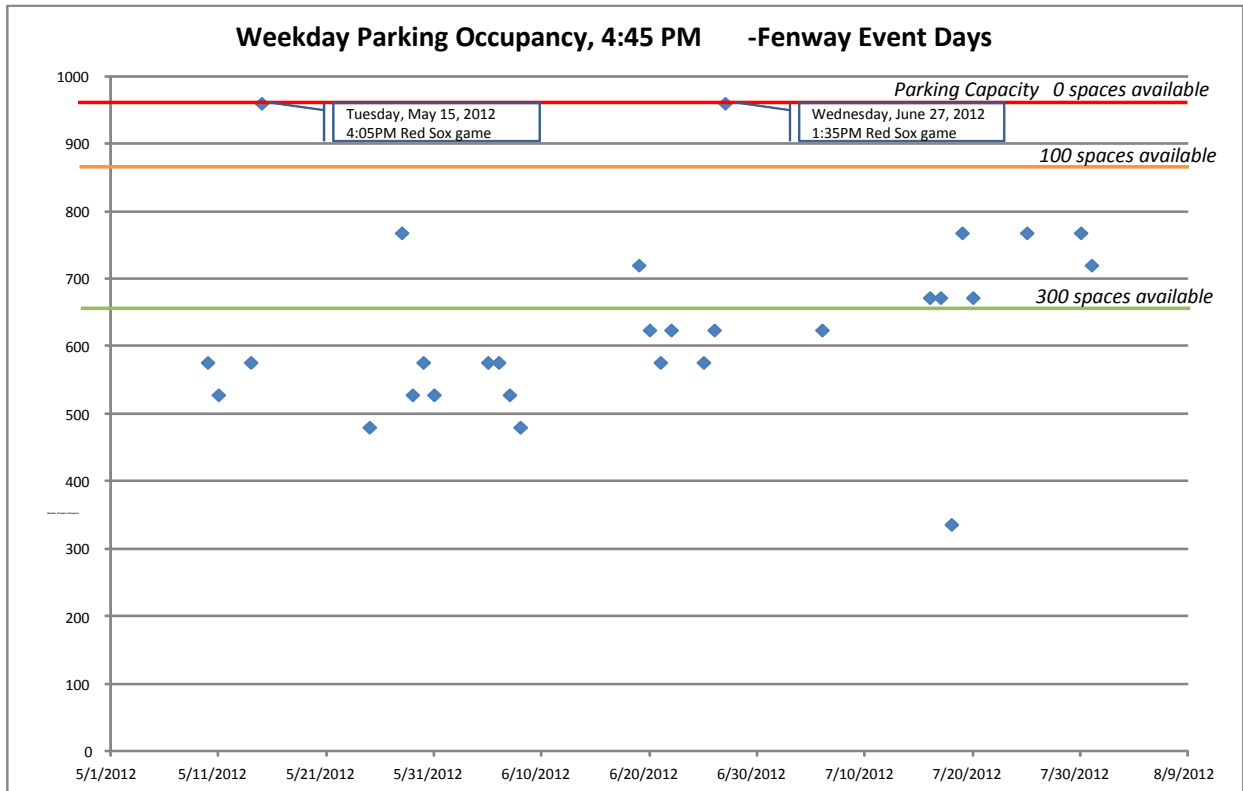
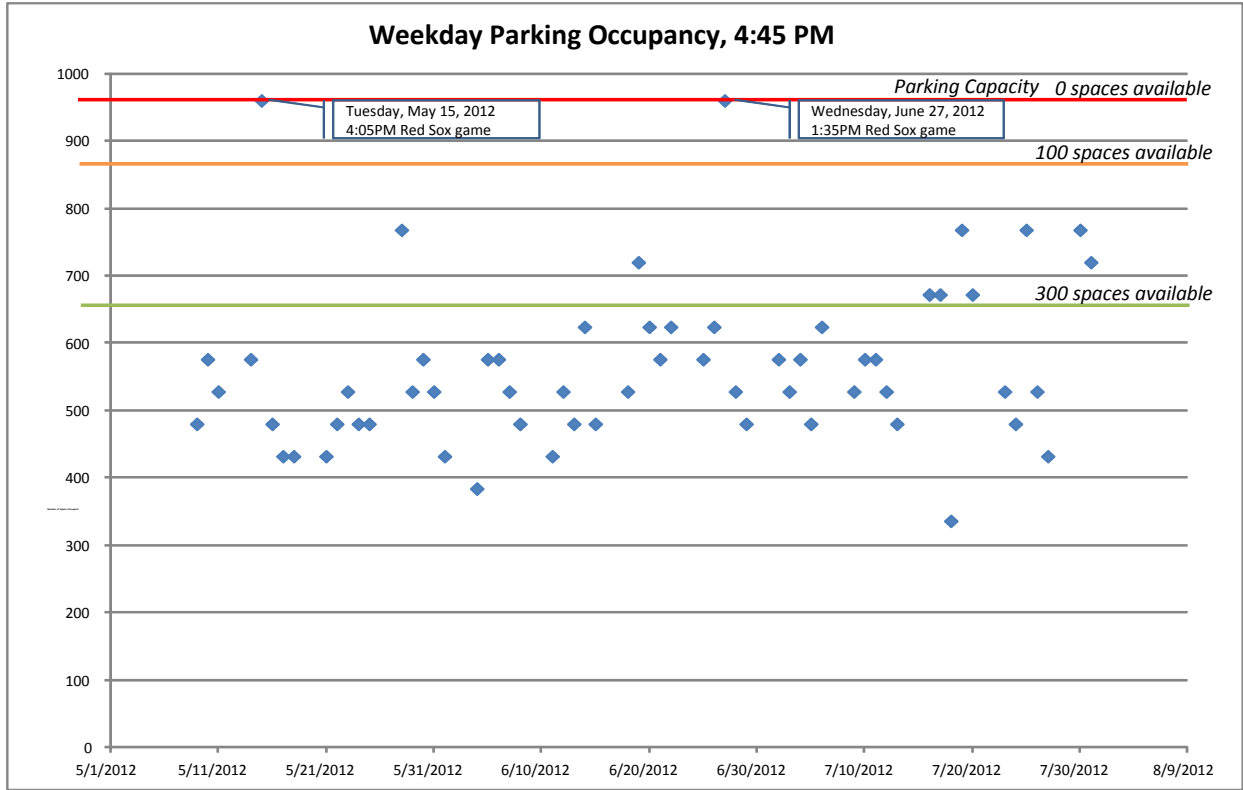
To substantiate the number of commuter parking spaces reasonably anticipated to be available

in the new ICF a monitoring camera was positioned and parking occupancy data were gathered for the period of May 8 through July 31, 2012. Images from 9:15 am, 12:45 pm and 4:45 pm on each of the 85 days were reviewed and the parking occupancy determined. The results of the parking occupancy counts are summarized graphically in the following figures:



Fenway Event Days include Red Sox game days and a soccer game "Football at Fenway"





Fenway Event Days include Red Sox game days and a soccer game "Football at Fenway"

The study found that there were always at least 300 parking spaces available in the MBTA lot on weekdays. The only exception was one weekday when there was an afternoon Red Sox game. The MBTA parking was at capacity on that day. A sample of the images recorded by the camera is shown below.



**Sample Camera Image – Wednesday May 9, 2012. 12:45pm.**

### **Project-related Parking**

The following presents an evaluation of the parking demands for each of the new buildings, as well as the effects from Red Sox parking and a full-capacity event at the Indigo Hotel. Because Building B parking is reserved for residents only, and because the remaining uses are predominately office, the parking evaluation focuses on each building separately rather than a project-wide summary analysis. The per-building discussion provides a clearer understanding of the parking issues and the findings regarding the adequacy and appropriateness of the parking supply provided.

Building A

Building A contains 225,000 sf of office space and 571 spaces of structured parking. The zoning regulations would otherwise require a minimum of 4 parking spaces per 1,000 sf for the first 20,000 sf, and 3 parking spaces per 1,000 sf thereafter. The total required parking, before transit-oriented design considerations, is therefore 696 spaces.

The building provides 571 parking spaces; or 82% of the base parking requirements of the zoning regulations. A study published in the ITE Compendium of Technical Papers titled *The Effect of Transit Service on Trips Generated by Suburban Development* concluded that “suburban office development located within 500 feet of a rail station can expect commuter trip transit mode shares of between 20 and 25 percent”. Therefore, the assumption of 18% transit use by office commuters is appropriate for this site, and ensures that there is not an over-supply of parking.

As a worst-case scenario, even if the transit share of office commuters was only 10%, the parking demand would be 626 spaces, 55 more than the 571 provided in the office garage. Overflow parking of 55 cars could easily be accommodated in the ICF, which will typically have an estimated 300 available spaces.

Building B

The residential building will have 290 units, with 60% of the units being studio or one bedroom apartments. The Project includes 15% affordable housing units. The building also includes 5,000 sf of ancillary retail space. The Project provides 441 parking spaces, of which 12 are surface spaces and 429 are in the garage.

➤ Building B: Residential Parking

The garage parking is reserved and assigned solely for residents. The 429 available spaces provides an average of 1.48 parking spaces per unit. The default parking requirement of the zoning regulations is a minimum of 2 spaces per apartment unit, the same as for single-family homes, although the zoning regulation recognizes that a lesser parking requirement may sometimes be appropriate. For those situations the zoning regulations provide a special permit process that allows parking as low as 1.25 spaces per unit.

The 1.48 parking spaces provided per unit is an adequate amount of parking for a location adjacent to a high-frequency transit service and given that some of the parking is “unbundled” from the base rent. Each unit has only 1 parking space included in the base rent and the other parking spaces are available at additional cost. The justification for the 1.48 spaces provided per residential unit is illustrated by the following table that compares the proposed parking at Riverside with parking provided at similar TOD locations.

Development	City	Transit Line	No. of Dwelling	No. of Parking	Spaces per
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			Units	Spaces	Unit
Station at Riverside	Newton	Green Line	290	429	1.48
Woodland Station	Newton	Green Line	180	230	1.28
Station Landing – Phase I	Medford	Orange Line	292	414	1.42
Station Landing – Phase II	Medford	Orange Line	168	168	1.00

To some extent, it appears that the residential parking may be over-supplied. However, even if that turns out to be true there will not likely be any negative impacts such as encouraging excess automobile traffic activity. One reason is that some of the parking spaces are tandem spaces and if only one of the two paired spaces were assigned to a resident, the empty tandem space could not be used by others. Another reason is that the parking garage will be restricted and will not provide transient parking. Other than residential parking, the only other users that might be accommodated are employees of the Building B retail space, and, in the unlikely event it was necessary and mutually agreeable to all parties, employees from Building A or Building C.

➤ ***Building B: Retail Parking***

The retail component of Building B is 5,000 sf. The type of retail uses expected throughout the site is retail that is complimentary to the existing uses. These “service style” retail facilities may include a coffee shop, convenience store, dry cleaner, bank, ATM, restaurant, etc. Such types of uses will draw heavily on the traffic (both vehicular and pedestrian) that will already be present on the site for MBTA, office, and residential uses. Therefore both traffic and parking needs associated with the retail is not expected to fit “normal” traffic generation or parking need requirements.

The standard zoning requirements for retail call for 20 parking spaces. Such a parking demand is very likely too high given that much of the retail activity would involve “internal capture” of activity from on-site residents and office employees, and MBTA commuters. Nonetheless, it is useful to understand the worst-case parking scenario should the full 20-space demand be realized. There are 12 surface parking spaces provided and the remaining eight parking spaces could be provided by either (1) assigning retail employees to parking in the Building B garage, or more likely, (2) accommodating any overflow parking needs in the adjacent ICF/MBTA garage.

**Building C**

The building program in Building C consists of 15,000 sf of retail space and 8,000 sf of community space. Parking for this building will be provided entirely in the new ICF/MBTA garage.

Having the parking for Building C uses take place in the ICF/MBTA parking garage is a particularly effective way to ensure there is an adequate supply but not an over-supply of parking provided. The parking demand for the retail use and community use is likely to peak in the evenings and on weekends, when MBTA-related parking demand is lowest.

Weekday, daytime parking demand represents the worst-case scenario for evaluating the adequacy of the parking supply. There are no generic national standards for parking demand related to “community space” but for the purposes of this analysis a conservative estimate of one car per 150 sf, the weekday, daytime parking demand for the community space would be 54 spaces.

Per the zoning regulations, the required parking for the retail space is 60 spaces (50 for patrons and 10 for employees). As a worst-case scenario, this assumes no internal capture of customer trips from on-site residents or office employees which is a very conservative assumption given the complementary nature of the retail planned.

In all, the weekday, daytime parking demand for the retail space and community space would be 120 spaces. This is 75 spaces more than the additional 45 MBTA spaces being created by the ICF phase of the Project, but is well within the estimated 300 parking spaces typically available among the MBTA surface parking today.

#### Event Activity

To ensure that the parking provided is appropriate, it is important to understand parking activity associated with events, as well as parking activity of typical daily use. Two situations are described below. The first is game day activity associated with the Boston Red Sox. The second is a full capacity event at the Indigo Hotel and restaurant.

#### ➤ Red Sox Games

The 2012 Red Sox home schedule has five (non-holiday) weekday daytime games (start times range from 2:10 pm to 4:10 pm) and 41 weekday evening games (start time typically at 7:10 pm). During most days when there are Red Sox games it can be expected that the MBTA parking is at or near capacity where as under normal non-game day condition it is well below capacity.

The primary effect of the Riverside parking demand on the Red Sox parking is limited to the five weekday day games. Worst-case, the Project would utilize a maximum of 138 of the existing MBTA spaces (55 from Building A, 8 from Building B and a net of 75 from building C), but by the time the MBTA parking typically filled for evening games (about 5:30 pm) much of the office parking demand would have lessened and there would effectively be no overflow of Project parking competing with the existing Red Sox parking. For the five day games, however, any overflow from the Project would already be parked in the MBTA spaces before Red Sox parkers arrive. But given the low probability of overflow from the Station at Riverside project occurring in the MBTA parking, and given that daytime Red Sox parkers are already constrained by MBTA daily commuter parkers, the effect of the Project parking on the days of the five daytime home games would be negligible.

#### ➤ Indigo Hotel

The Indigo Hotel has a full service restaurant and bar, as well as, function space including a publically available pool deck, which could be fully used on some nights, weekends, and holidays during the year. The parking requirement for these uses is 84 parking spaces. The parking for a full capacity event could be easily accommodated by either the parking at the MBTA or the office building parking garage. Many of the 571 office building garage parking spaces can be expected to be available at times when the Indigo restaurant is hosting a full-capacity event.

### **SUMMARY OF FINDINGS**

The parking provided for the project is consistent with the objectives of the transit-oriented-design zoning regulations established for the site. It is appropriate given the mix of uses; proximity of high-frequency transit; and differences in parking demand patterns by hour, day of week, and season; and it does not provide an over-supply of parking.

- Sufficient parking is provided for the office building assuming only an 18% transit mode share among commuters. If the transit use is only 10% then the maximum overflow of parking in the MBTA garage would be 75 cars, considerably less than the 300 spaces typically available.
- The residential building provides parking at 1.48 spaces per unit. This is higher than similar projects, but even if there is some excess parking it is not expected to have the adverse impacts of encouraging additional traffic. Any excess parking is likely to be among the less-desirable tandem parking spaces. Any excess parking might also be assigned to retail employees.
- The retail and community space may require up to 100 spaces for weekday, daytime parking. This is 55 spaces more than the additional 45 MBTA spaces being created by the garage project, but considerably less than the 300 spaces that are currently typically available in the MBTA parking lot on any given day.
- The parking for the project, being predominately for office employees, is complementary to the parking demand for most Red Sox games. The only conflict would be for the five weekday day games. The conflict is similar to that which exists now between MBTA commuter parking and the day game attendees.




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### **Pedestrian and Neighborhood Considerations**

*If the proposed Mixed-Use Development project proposes any of the measures listed below, and if such measures, singly or in combination, create a negative impact on pedestrians or*

*surrounding neighborhoods, the petitioner has proposed feasible mitigation measures to eliminate such negative impact:*

- a) *Widening or addition of roadway travel or turning lanes or conversion of on-street parking to travel lanes;*
- b) *Removal of pedestrian crossing, bicycle lanes, or roadway shoulder;*
- c) *Traffic signal additions, alterations, or roundabouts; and*

With the exception of a nine-unit condominium building located across Grove Street from the Hotel Indigo, the Project Site is isolated from Newton's residential neighborhoods. The Project Site is surrounded by the Green Line tracks and Riverside Office Park to the north, Grove Street and a condominium development and the Woodland Country Club to the east and south, Route 128/I-95 and associated ramps and roadways to the west and undeveloped, forested land and wetland resource areas adjacent to the Charles River to the northwest. The Newton Lower Falls neighborhood is located to the southwest and separated from the Project Site by I-95/Route 128. The Auburndale neighborhood is located to the northeast. The Lasell Neighborhood is located to the east of the Project area.

Please refer to the Traffic Impact and Access Study provided under separate cover, which addresses transportation improvement plans, pedestrian and bicycle accommodations.




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### **Accessible Design**

*Consideration is given to issues of accessibility, adaptability, visitability, and universal design in development of the site plan.*

Successful public spaces that provide benefits for the entire community cannot discriminate in design, or construction, based on the physical ability of the users. The design and execution of the site will ensure universal access. Outdoor spaces will be designed to have sloping walkways with grades ideally remaining under 5% and cross slopes of less 2%, along with curb cuts and tactile warning at intersections. In order to maximize comfort for visitors of all ages, some of the seating will be designed with arm- and back-rests and places provided for wheel chair and stroller access.

All buildings will conform to ADA requirements for accessibility, including but not limited to providing convenient, larger parking stalls next to building entrances, elevators, ramps where needed, accessible units in the residential building, and accessible public and private handicap accommodations in each building.

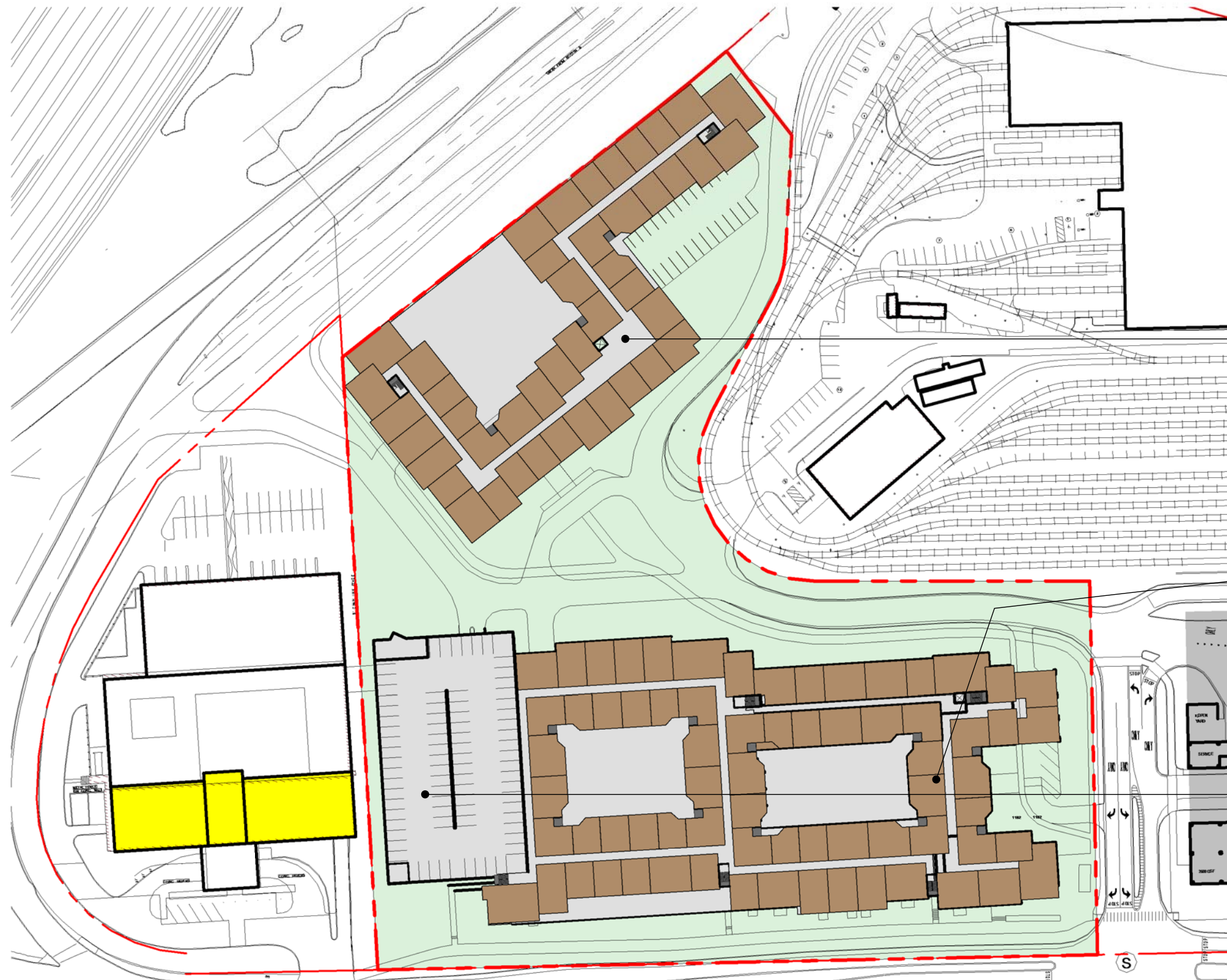


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**Site Plans Showing By-Right Zoning or Zoning Exempt Alternatives**

- Please see an All-Residential alternative on the following figure.





**GRAND TOTAL:**  
 550 UNITS - 774 BEDROOMS - 662 BATH ROOMS

355 1BR - 65%  
 166 2BR - 30%  
 29 3BR - 5%

825 PARKING SPACES (1.5 / UNIT)

**BUILDING B:**  
 264 UNITS - 360 BEDROOMS - 312 BATH ROOMS

180 1BR - 68%  
 72 2BR - 27%  
 12 3BR - 5%

135 PARKING SPACES

**BUILDING A:**  
 286 UNITS - 414 BEDROOMS - 350 BATH ROOMS

175 1BR - 61%  
 94 2BR - 33%  
 17 3BR - 6%

150 PARKING SPACES

**GARAGE P1:**  
 7 FL / 60'  
 540 SPACES

**BH NORMANDY RIVERSIDE LLC**

**RESIDENTIAL 40 B - RESIDENTIAL BUILDINGS  
 RIVERSIDE, NEWTON MA**