



Boston Children's Hospital

PEDESTRIAN CONNECTOR

Boston, Massachusetts

PROJECT SUMMARY BOOKLET

SUBMISSION TO THE BOSTON CIVIC DESIGN COMMISSION

AUGUST 25, 2015

PROJECT DESCRIPTION

The Project includes the construction of a pedestrian connector from the fourth floor (third level above the street) of the Patient and Family Parking Garage to the first level of the Main Building over Longwood Avenue and adjacent to the western edge of the Hunnewell Building, providing a weather-protected and safe passageway for patients and visitors directly to the Boston Children's Hospital's Main Lobby and passenger elevators.

This new connection is especially important for many physically challenged patients and families with young children who will be able to cross the congested Longwood Avenue intersection protected from difficult weather conditions without having to complete their crossing in the few seconds allowed by the pedestrian crossing signal phase.

Currently, patients and visitors must cross Longwood Avenue at the corner of Blackfan Street at street level. The intersection is very active with approximately 600 pedestrian crossings and 1,000 vehicle crossings per hour. This can make traversing the street difficult, especially in inclement weather and for people in wheel chairs and families guiding small children by hand and in strollers. Since there is no direct street level access to the parking in the Garage, under current conditions patients must either take a stair or an elevator from any level in the Garage to the existing lobby at grade. Due to a large number of Children's patients and visitors requiring strollers, wheelchairs and with small children in tow, substantially all users of the Garage use the Garage elevators rather than stairs.

Faced with the difficulty of crossing Longwood Avenue at street level, many people choose to use valet parking available in the BCH Autocourt rather than self-parking. This increases vehicular congestion both in the Autocourt and on Longwood Avenue, since each valet usage involves four movements through the Longwood/Blackfan intersection. Vehicles are brought to the Autocourt by the families, moved from the Autocourt to a remote parking space by a valet, retrieved by the valet and returned to the Autocourt, and then driven from the Autocourt by the families. In addition, under current conditions patient discharges occur at the Autocourt and can last 30 to 45 minutes, thus further increasing congestion at the Autocourt.

Under the proposed conditions, the pedestrian connector will create a clear and direct access between the Garage and the Main Lobby. Both a valet service and a patient discharge area will also be located within the Garage itself. This will reduce usage and congestion of the Autocourt and eliminate two of the current trips through the Longwood/Blackfan intersection currently created by use of valet service in the Autocourt. It is anticipated that up to 400 pedestrian crossings per hour occur over the pedestrian connector, reducing pedestrian and vehicular congestion at grade and greatly increasing safety both for Hospital patrons who use the walkway and for general pedestrians and vehicles on Longwood Avenue.

The pedestrian connector will also be integrated in a clear path of travel to the Main Lobby and the Hospital information areas. Once families and patients are in the Garage elevator, signage will be provided to the walkway level where people will be able to freely and safely traverse Longwood Avenue. The walkway will connect to Main and Pavilion buildings providing access to all Boston Children's Hospital departments located on the Core Campus.

KEY DATA:

MODIFICATION TO 2013 INSTITUTIONAL MASTER PLAN AMENDMENT:

An Institutional Master Plan Notification Form (IMP NF) has been submitted seeking to add the proposed pedestrian connector linking the Patient and Family Parking Garage to the Main Building over Longwood Avenue (the Project) to Children's IMP. Children's is also seeking a map amendment to designate the land area beneath Longwood Avenue over which the connector will be constructed as part of the IMP Area.

TOTAL AREA: Approximately 3,250 square feet of new construction connecting to Main and Pavilion Buildings

TOTAL HEIGHT: Overall height above grade varies from approximately 37'-0" above grade at the connection with Patient and Family Garage, approximately 32' above grade at the corner of the Hunnewell Building and approximately 40'-0" above grade at the connection to the Main and Pavilion Buildings.

CLEARANCE: Approximately 21 feet over Longwood Avenue.

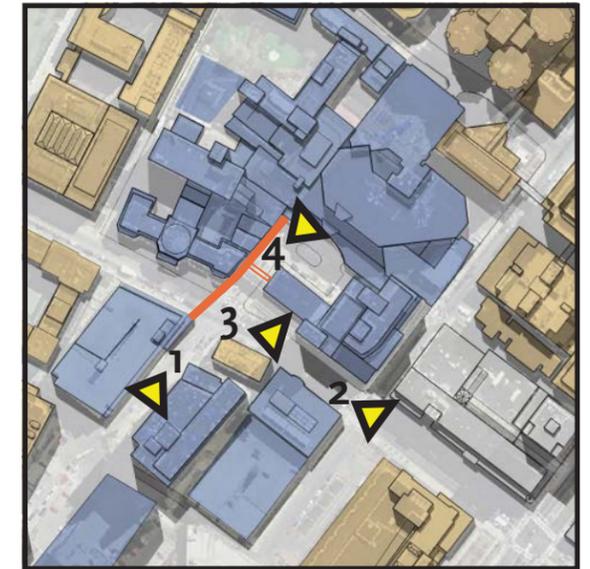
WIDTH: Approximately 12'-8"



Image 1



Image 2



Key Plan



Image 3



Image 4

I. GENERAL STATEMENT

Pedestrian bridges above streets are rarely acceptable in Boston because they take activity and vitality away from the street, create shadows, block views, reduce ambient light and privatize the public space. The area above streets is a public resource that should not be appropriated for public use. In the past, the BCDC has never approved proposals for pedestrian bridges over major streets. It is unlikely that so strong a case could be made in the future as to cause a change in this precedent.

***BCH Comment:** Although Children's is mindful that pedestrian bridges in Boston are generally disfavored, the proposed pedestrian bridge presents a unique and compelling set of circumstances. Due to the public safety aspects of the volume of ill and otherwise challenged children with special needs and impairments crossing this intersection, this intersection presents unique safety issues for patients and families which may not be able to be adequately addressed through traffic-calming measures.*

In addition, the pedestrian bridge will serve as a public resource as an element of an LMA Pedestrian-Connector Network. The desirability of an LMA Pedestrian-Connector Network, resulting in increased interaction among the LMA institutions and increased integration of resources, has been recognized by MASCO since at least the 1984 Pedestrian Connector Study; the Development Plan for PDA No. 16 approved by the BRA in 1984 similarly referenced a future pedestrian bridge across Longwood Avenue and/or Binney Street.

II. SPECIFIC GUIDELINES

A. PROGRAMMATIC FUNCTION

1. Bridges are acceptable: only when they accommodate crucial and necessary pedestrian movement that cannot be handled at grade or below grade, for example, the movement of hospital in-patients from bedrooms to operating rooms; and only when their use does not diminish the current or potential level of pedestrian activity in the public realm, including the sidewalks and pedestrian-oriented retail and other uses in the vicinity. They are not acceptable when they are intended for convenience or administrative reasons or when they would divert pedestrian traffic that would normally occur on the street.

***BCH Comment:** Children's Hospital has studied the possibility of a subsurface tunnel and has determined that a subsurface tunnel is not feasible. As discussed above, the use of the bridge will accommodate the necessary pedestrian movement of patients and families from the Patient and Family Garage to the Children's Main Building. Moreover, due to the unique nature of the LMA, the pedestrian realm is not characterized by street level retail and the presence of the bridge will not detract from robust activity at the street level. Active pedestrian traffic at this intersection will continue to occur by pedestrians accessing the Green Line D and E line stops on Longwood, by patients, family and staff of other nearby medical institutions including the Beth Israel, Brigham and Women's, Dana Farber and the Joslin Diabetes Center, by staff of Children's itself, by researchers going to the Harvard and Merck labs, and by students from LMA educational institutions including the Colleges of the Fenway, Boston Latin School and Winsor School.*

2. Bridges may be acceptable when they are used to resolve conflicts between pedestrian and vehicular movement that are unusually serious or life-threatening and cannot be resolved in any other way.

***BCH Comment:** As noted above, the intersection of Longwood and Blackfan presents unique safety issues for patients and families due to the volume of ill and otherwise challenged children with special needs and impairments crossing this intersection. Although traffic calming measures are being explored, these measures may not be adequate to resolve the safety situation.*

3. Bridges may be acceptable where they provide accessibility for physically challenged people that cannot be provided in another way.

***BCH Comment:** Due to the nature of the population visiting Children's Hospital, patients seeking to cross the intersection of Longwood and Blackfan are physically challenged in wheelchairs, on crutches etc or are adults with strollers and carriages accompanied by young children on foot. The at-grade intersection does not provide adequate and safe accessibility for this unique population.*

4. Bridges or bridge-like extensions may be acceptable when there is a quid pro quo: the removal of a bridge from a more significant location than the one proposed, and the provision of public benefits which add more activity to the street than the bridge or building extension takes away.

***BCH Comment:** The proposed pedestrian bridge would allow the removal of the existing bridge in front of the BCH Main Entry Drive (Perlmutter to Hunnewell).*

B. LOCATION

The BCDC will address the issue of bridge location only after determining that a bridge connection is, in fact, justified for programmatic and functional reasons. Then bridges may be acceptable:

1. above alleys in certain circumstances,
2. above secondary streets under extraordinary circumstances, but
3. not over wide streets, parks or streets of civic importance.

The Commission also discourages networks of bridges connecting multiple buildings.

BCH Comment: *Although the BCDC generally discourages bridge networks connecting multiple buildings, the LMA presents a unique situation of a particular geographic area which is home to MASCO's member hospitals and schools, with shared missions and the desire to integrate resources. The LMA currently has 12 approved bridges. The proposed bridge would complete the pedestrian network by providing passage across Longwood Avenue. Also, the width of Longwood Avenue at the location of the proposed bridge is not the width characteristic of a major street. At the location of the proposed pedestrian bridge, the width of Longwood narrows to only 34' curb to curb (3 lanes of traffic). This width is less than the width of Shattuck Street (37'-3"), Francis Street (40'-2"), and Fenwood Street (40'0"), each of which is the location of an existing or approved bridge within the LMA.*

C. DESIGN

Pedestrian bridges that are acceptable because of their function and location must conform to specific design criteria. To be deemed acceptable, a pedestrian bridge should:

1. be not more than one level high to minimize visual impacts;
2. be located high above the street (at least 40 feet) also to minimize visual impacts;
3. be located as far as possible from intersecting streets or an intersection;
4. be level as it crosses the street;
5. meet the building walls at right angles in section and plan, where applicable, to reinforce the street grid and existing significant (i.e., orthogonal in a standard grid) relationship of streets and buildings;
6. be composed, whether a bridge or a building extension, to be clearly expressive of these criteria while also being expressive of its own nature, and exert by its own existence a positive contribution to the public domain;
7. not interrupt significant views and vistas;
8. have no negative impacts on historic resources;
9. not appear to divide residential communities;
10. not appear to privatize public space;
11. be as narrow as possible to accommodate pedestrian passage only and not other uses, except as vital to public program functions;
12. have the minimum amount of structure below the bridge or extension;
13. not infringe upon sidewalks below or adjacent to the bridge;
14. be expressed architecturally as a bridge or span, not merely a building occupying space in the sky and, by extension, the street below, to clearly delineate the element as not being private but part of the public realm;

15. be as transparent as possible;
16. be attractively designed on the visible undersurface;
17. be well lit so as not to darken or lessen the pedestrian experience of passing below, day or night;
18. be accompanied by public realm improvements (both in programming and in physical betterments) which not only mitigate against any negative effects, but also contribute strongly to the creation of an animated, engaging public streetscape;
19. have no negative impact on the desirability, activity, safety, or convenience of the street-level pedestrian environment, and,
20. avoid the use of heavy, opaque or dark materials like masonry or tinted glass.

BCH Comment: *The bridge has been designed to conform to these design criteria to the extent feasible. In particular, the bridge is a one-level structure which is substantially level as it crosses the street at an angle consistent with the street grid and which connects to pedestrian passageways which are integrated into existing buildings. The bridge will be designed to maximize transparency to the extent permitted under the Energy Conservation Code (Children's will seek a variance for transparency beyond that permitted under the Energy Conservation Code) and will be well-lit. The areas under the enclosed walkways on Children's property, which are connected to the bridge, will be activated and will create weather-protected at-grade walkways. Although the bridge has been designed at a lower height rather than at 40 feet above the street, the lower height will maintain the visual sight lines to the iconic dome of the historic Hunnewell Building and will allow a direct connection to the first level of the Children's Main Building.*

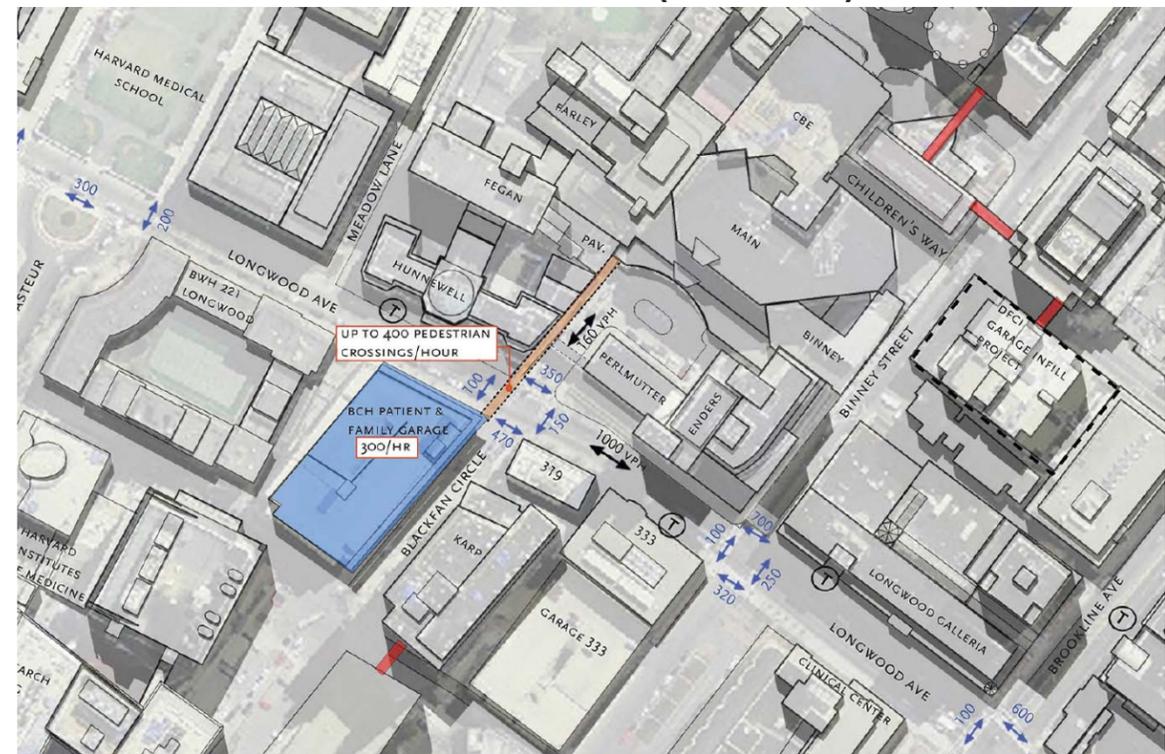
PEDESTRIAN AND VEHICLE TRAFFIC IMPACTS WITH PEDESTRIAN CONNECTOR

- THE MAJORITY OF GARAGE PARKERS WILL UTILIZE THE PEDESTRIAN CONNECTOR TO CROSS LONGWOOD AVENUE TO THE MAIN CAMPUS
- 75% REDUCTION IN PEDESTRIAN CROSSINGS FROM GARAGE TO BCH MAIN CAMPUS
- 20% REDUCTION IN BCH AUTO COURT TRAFFIC
- PEDESTRIAN CONNECTOR WILL ACCOMMODATE 400 PEDESTRIAN CROSSINGS PER HOUR
- REDUCTION IN VEHICULAR TRAFFIC THROUGH INTERSECTION

EXISTING PEDESTRIAN AND VEHICLE COUNTS (PER HOUR)



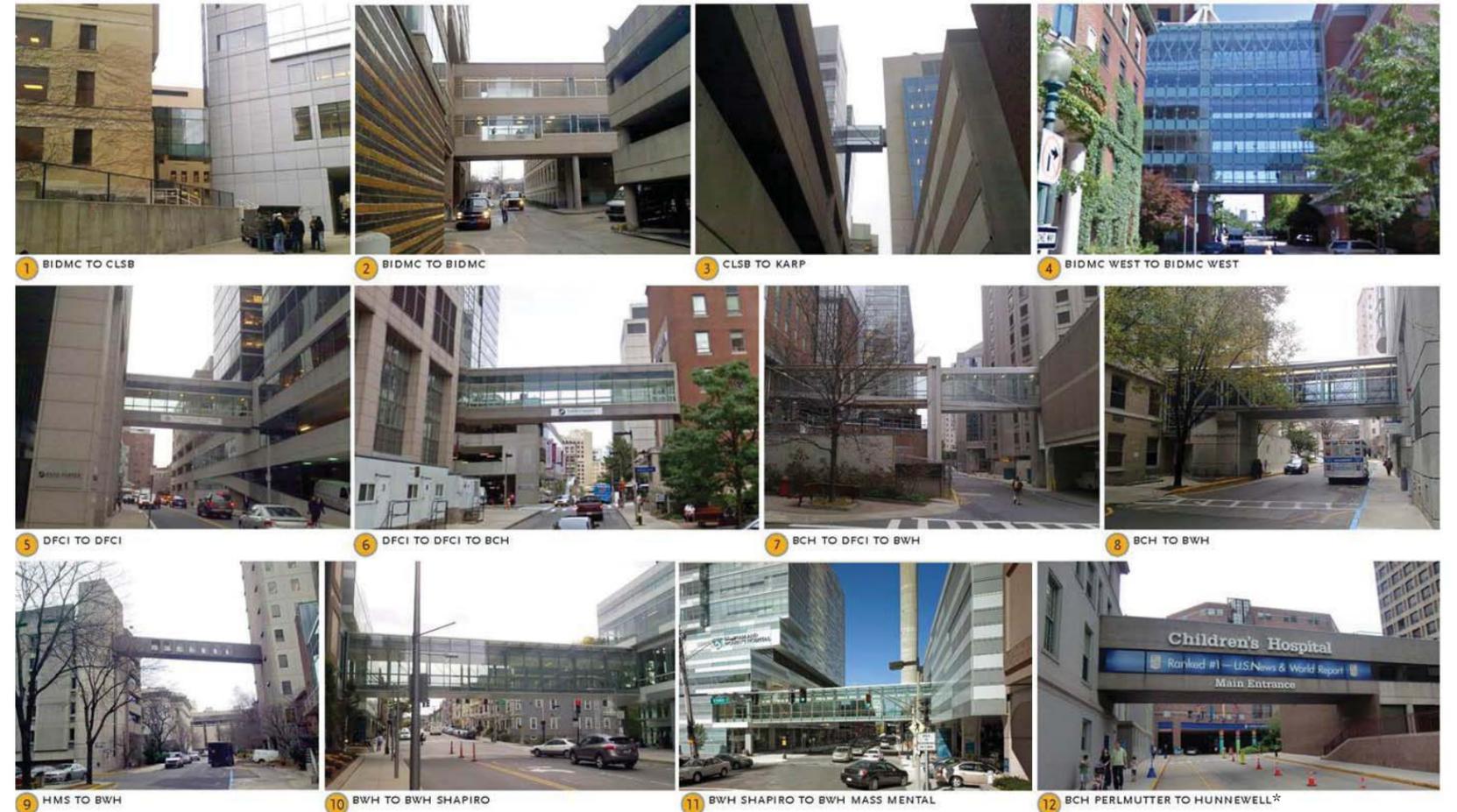
PEDESTRIAN AND VEHICLE COUNTS (PER HOUR) WITH PEDESTRIAN CONNECTOR



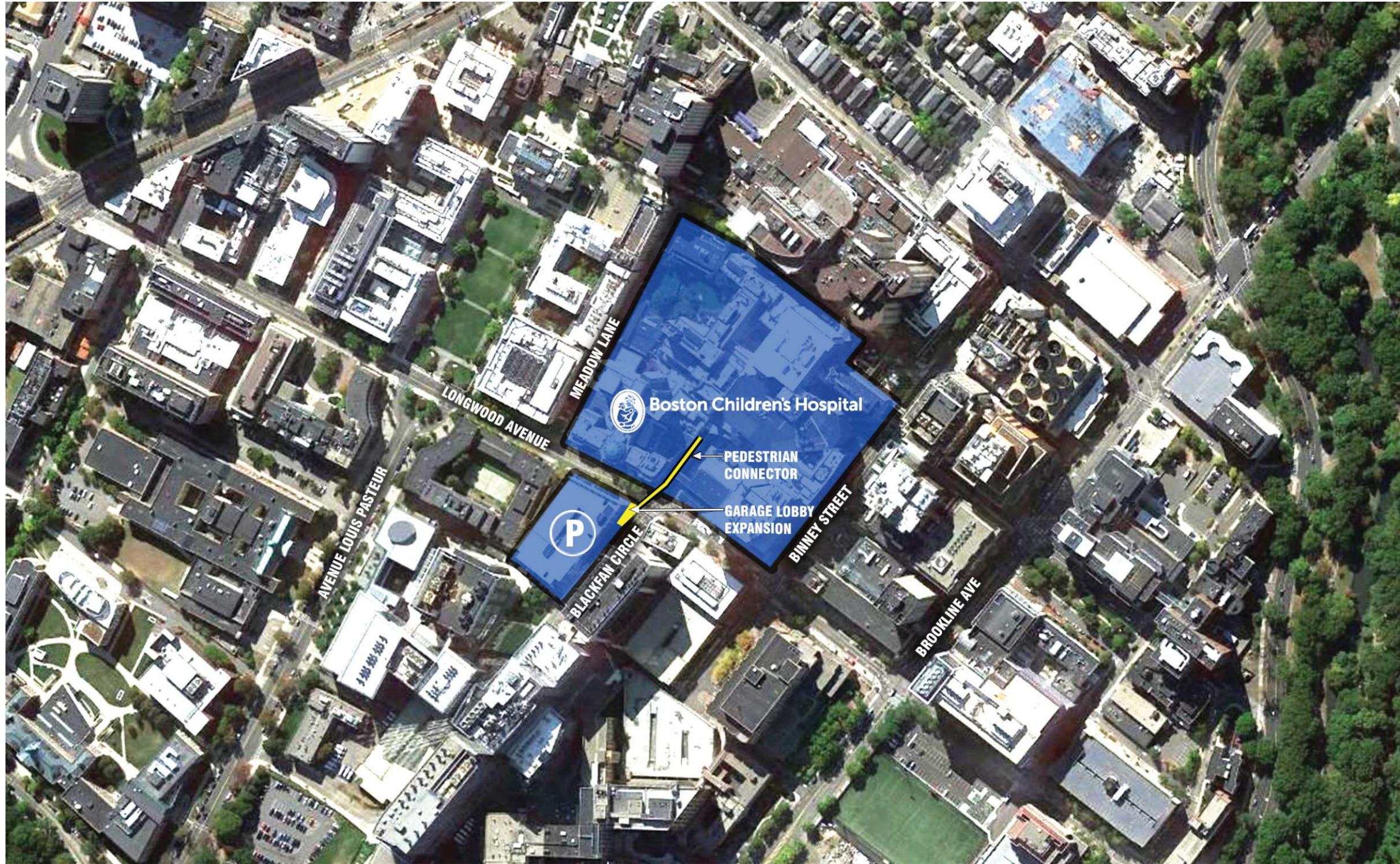
BCH PEDESTRIAN CONNECTOR - URBAN DESIGN GOALS

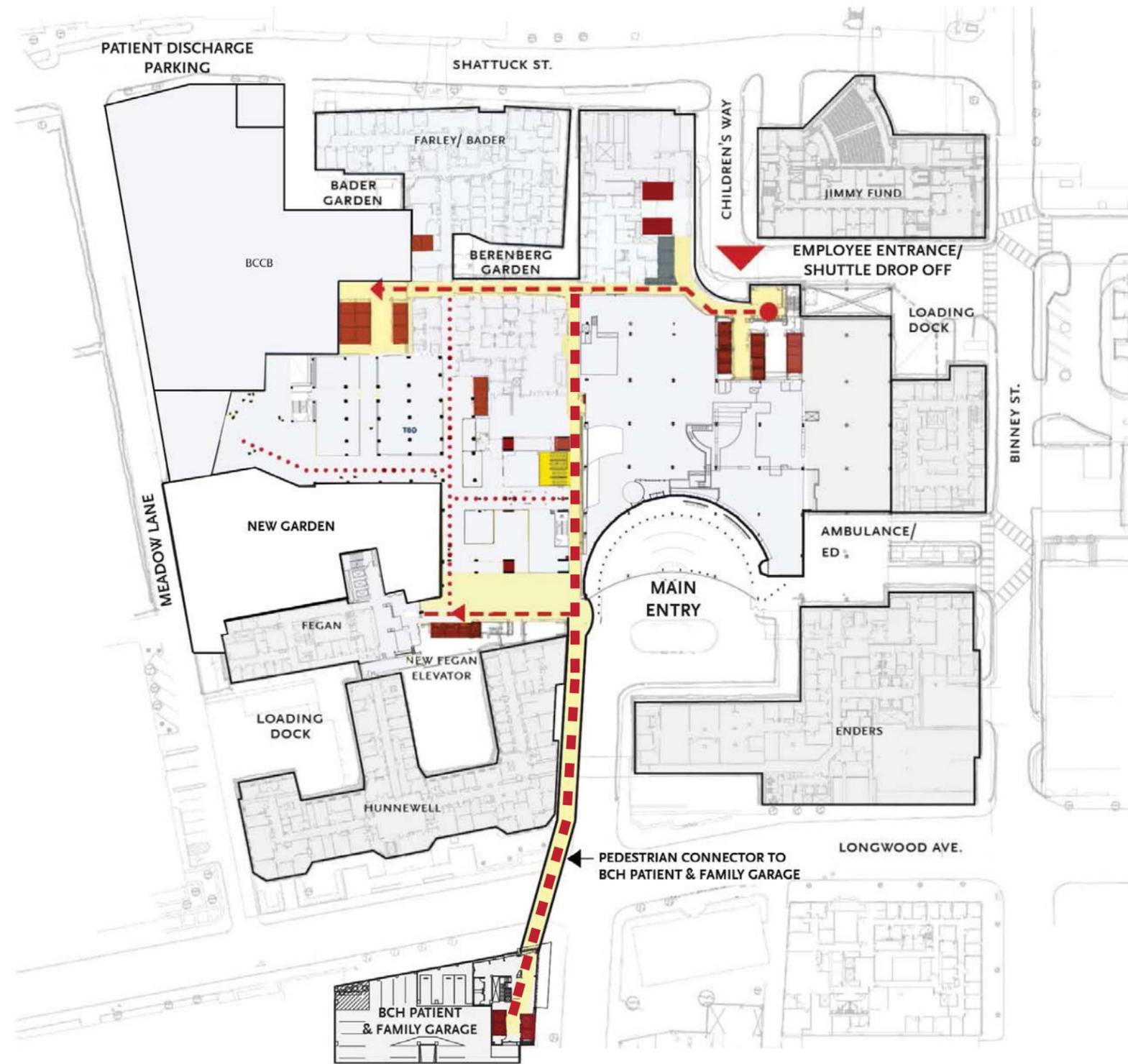
- CONSIDERATION OF BCDC BRIDGE GUIDELINES
- ONE LEVEL STRUCTURE OF TRANSPARENT DESIGN
- MINIMIZE LENGTH OF BRIDGE AND MINIMIZE STRUCTURE BELOW
- MINIMIZE INTERRUPTION OF SIGNIFICANT VIEWS AND VISTAS
- AVOID PHYSICAL INTRUSION WITH 1914 ORIGINAL HUNNEWELL BUILDING
- INTEGRATE WITH MAIN ENTRANCE REDESIGN
- STRUCTURAL FEASIBILITY
- CONSISTENCY WITH EMERGENCY VEHICLE REQUIREMENTS BELOW BRIDGE

LONGWOOD MEDICAL AND ACADEMIC AREA - EXISTING PEDESTRIAN BRIDGES



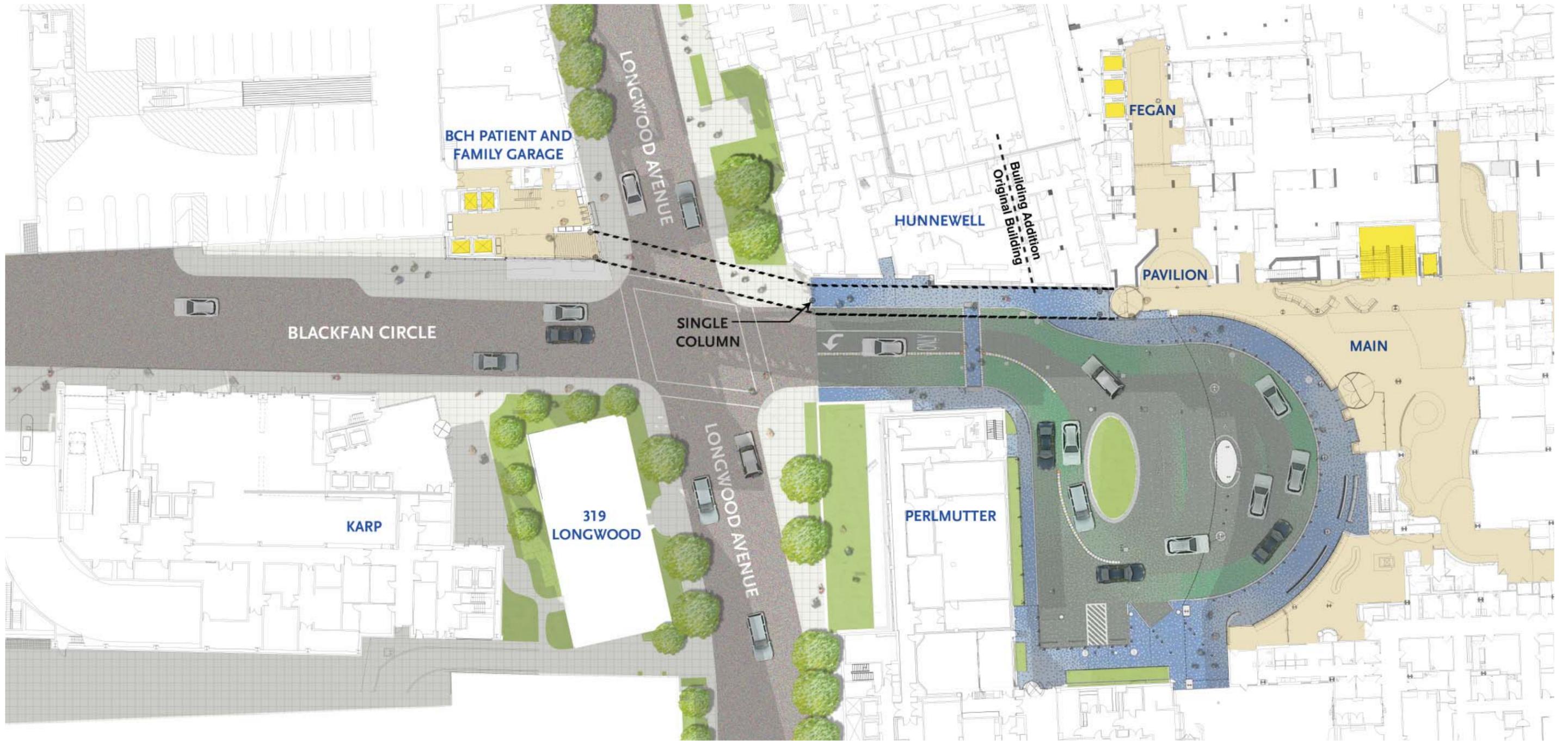
*TO BE REMOVED IN CONNECTION WITH CONSTRUCTION OF PROPOSED PEDESTRIAN CONNECTOR

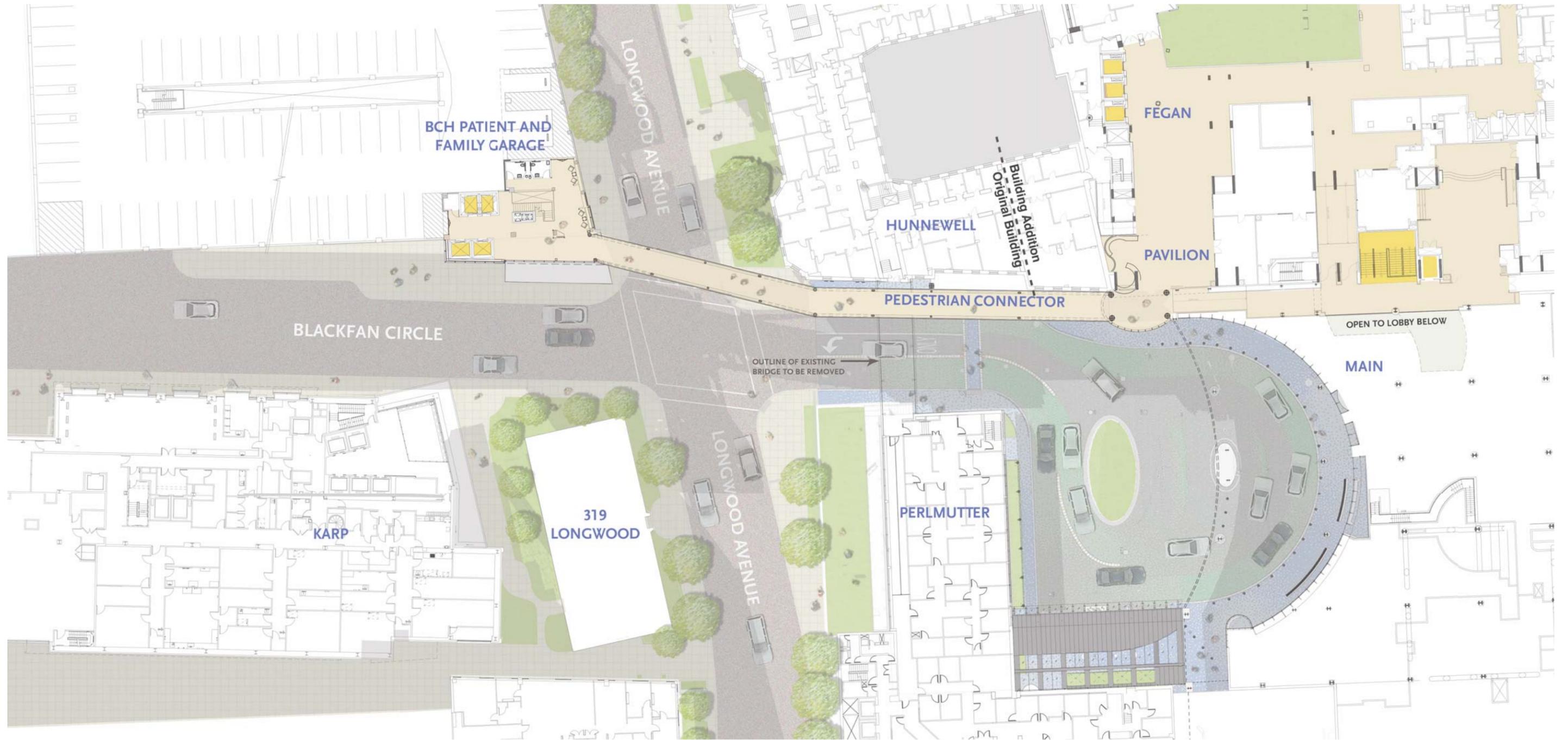


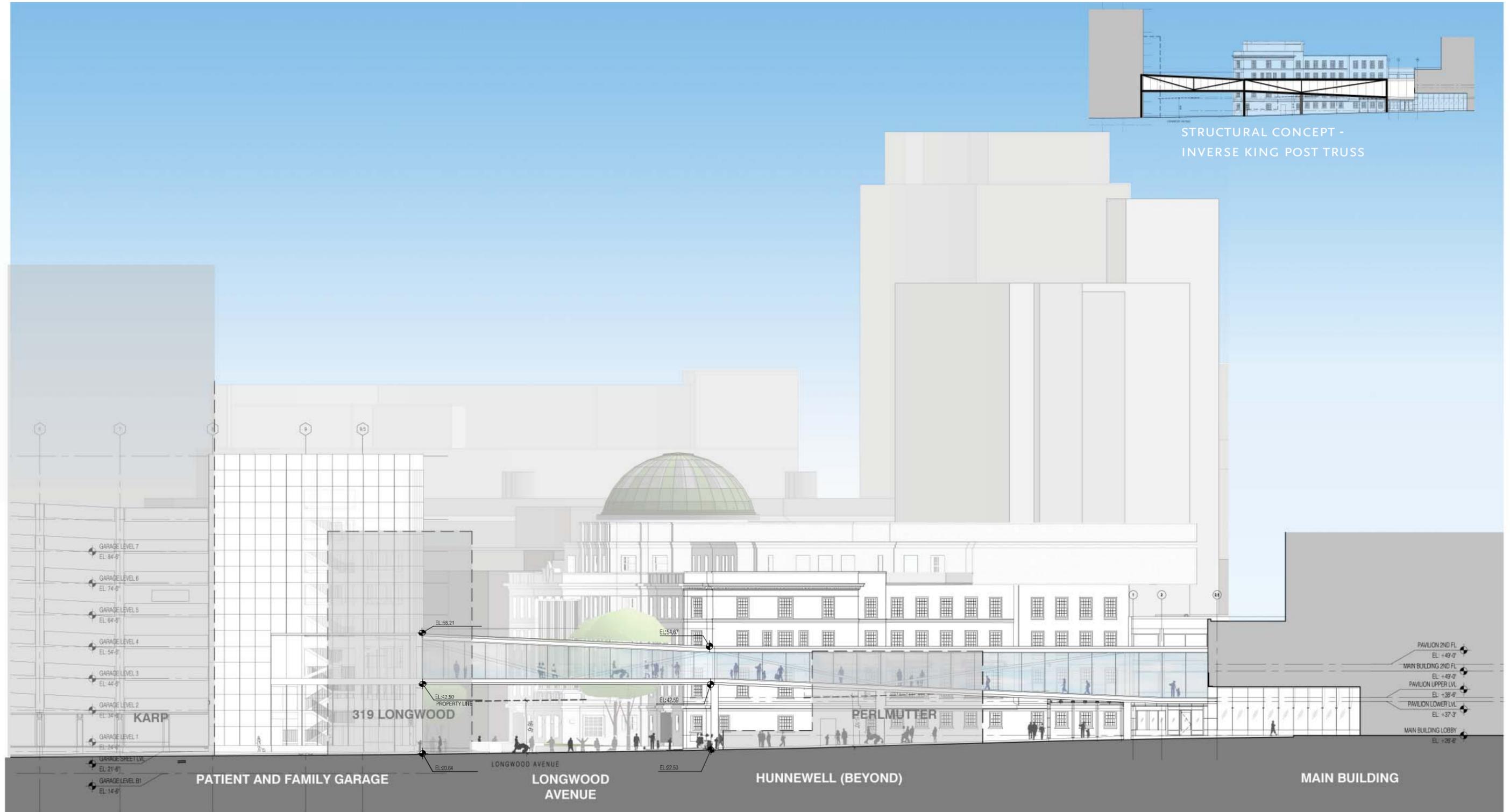


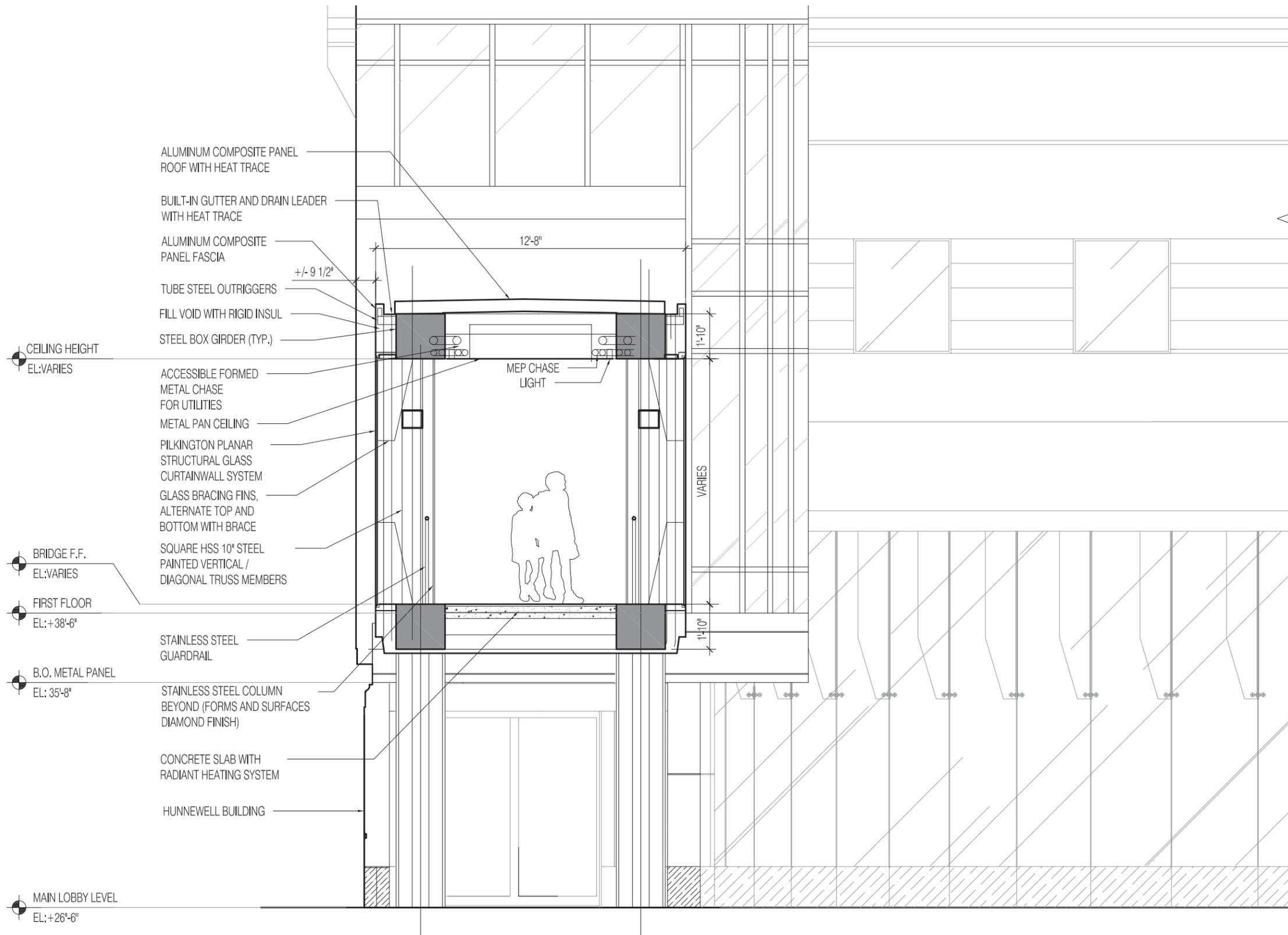
- - - PRIMARY CIRCULATION
- . . . SECONDARY CIRCULATION
- VERTICAL CIRCULATION



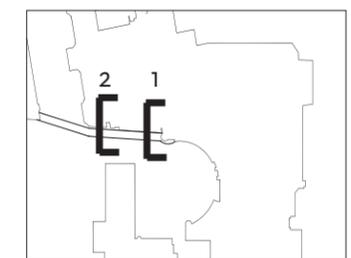


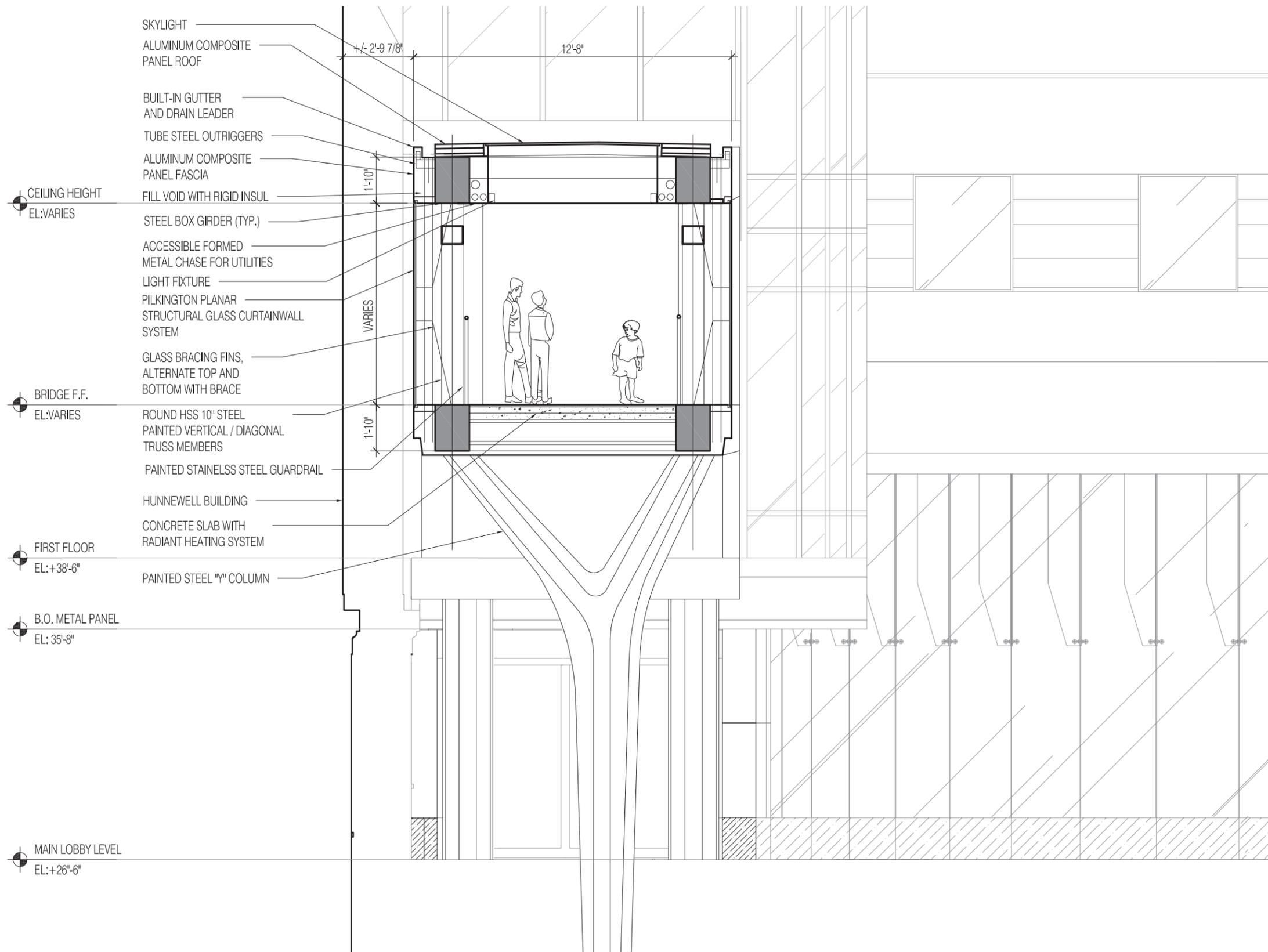




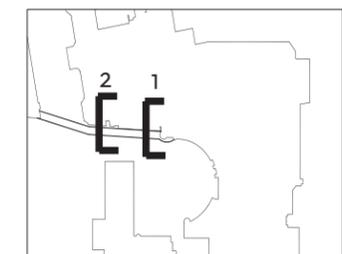


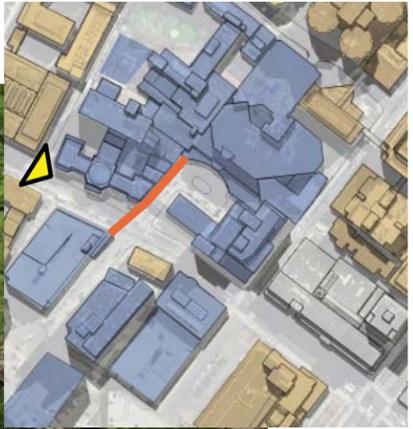
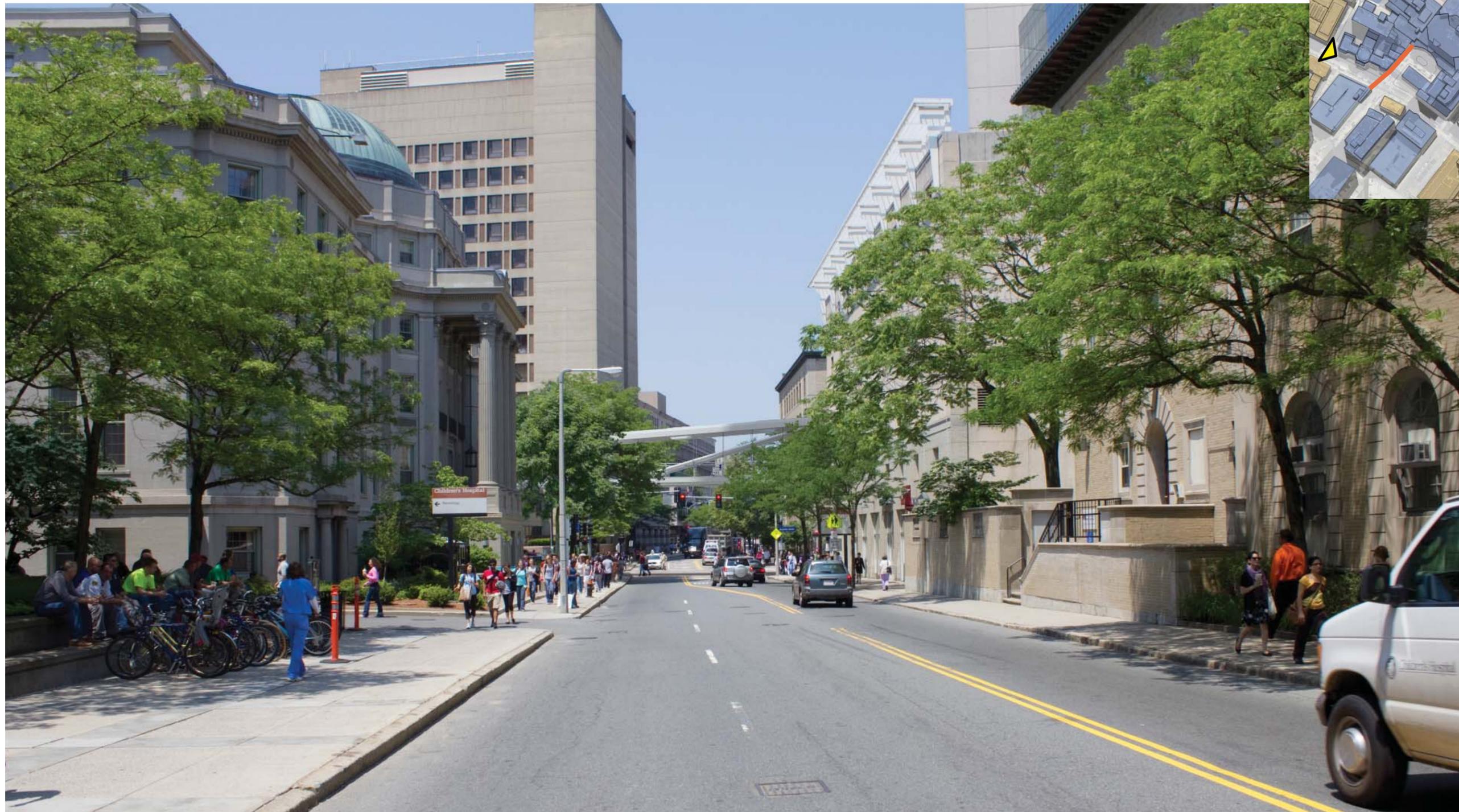
1 NORTH SECTION AT HUNNEWELL @ MAIN





2 NORTH SECTION @HUNNEWELL

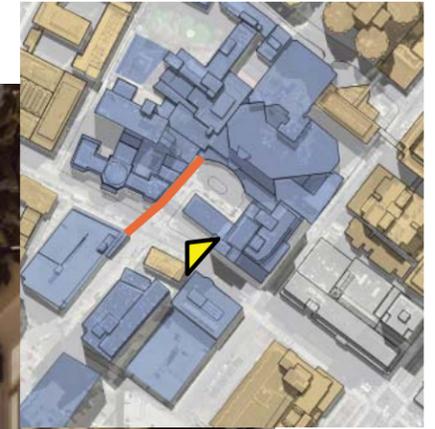












BOSTON CHILDREN'S HOSPITAL
Boston, MA

View from Longwood looking Southeast
AUGUST 25, 2015



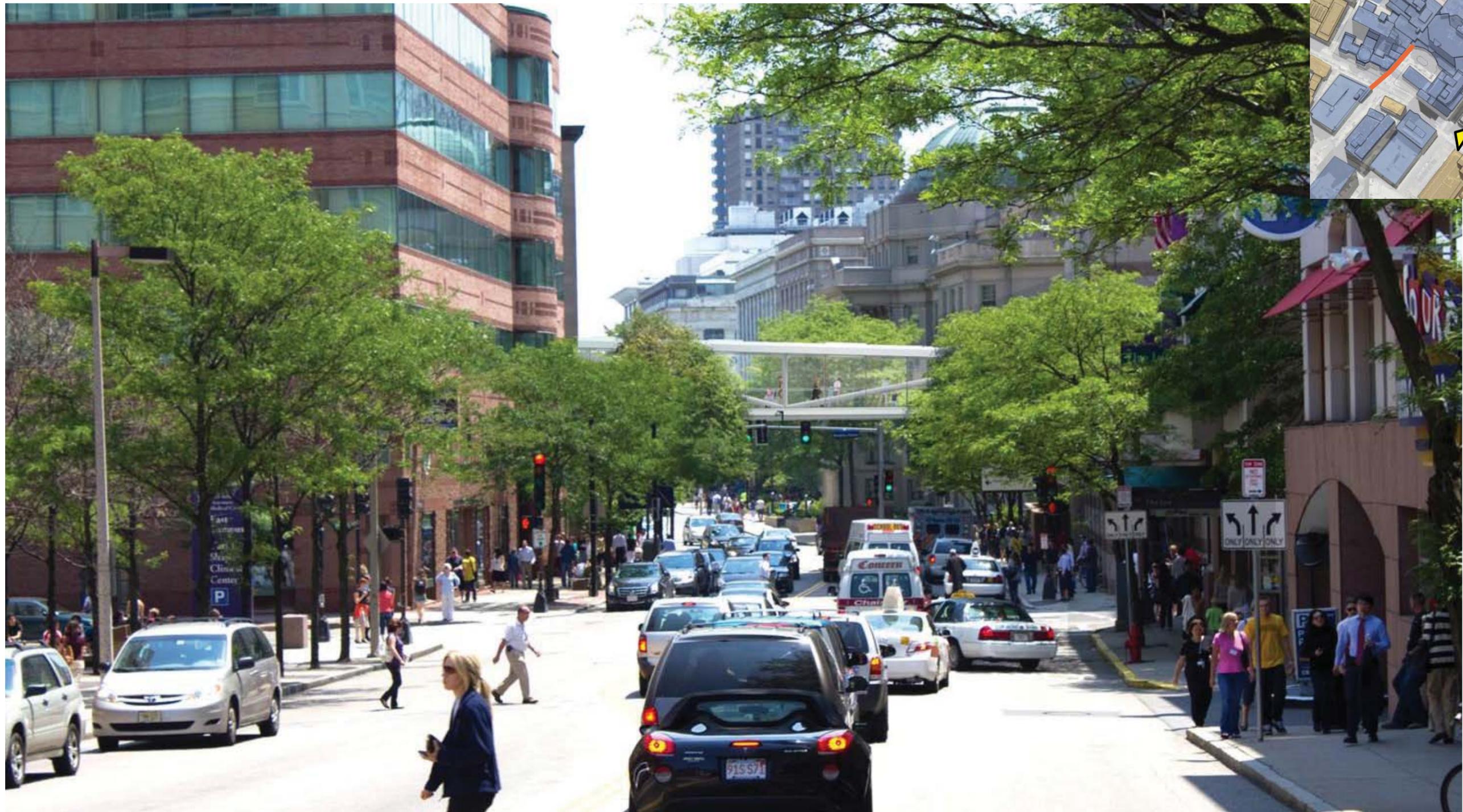
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BOSTON CHILDREN'S HOSPITAL
Boston, MA

View from Blackfan & Longwood Intersection
AUGUST 25, 2015





BOSTON CHILDREN'S HOSPITAL
Boston, MA

View from Brookline Ave
AUGUST 25, 2015



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