



# Pierce School Building Committee

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## Agenda

1. Announcements, Updates, and Comments
2. Project Approvals:
  - January 13, 2022 Meeting Minutes
3. MSBA Process Update:
  - February 2, 2022 Facilities Assessment Subcommittee Meeting
  - January 24, 2022 - MSBA PSR Comments Received
4. Budget Update: Feasibility Study Remaining Funds
5. CM at Risk Update
6. Pedestrian Bridge Discussion
  - Possible vote to either proceed with the design of a pedestrian bridge or not to proceed with the design of a pedestrian bridge.
7. Upcoming Meetings
  - February 8, 2022 – Building Commission Meeting @ 6:00pm



# Pierce School Building Committee

## Budget Update

John R. Pierce School - Brookline, MA

January 31, 2022

### Total Project Budget Status Report

| ProPay Code                        | Description                            | Total Project Budget | Authorized Changes | Revised Total Budget | Total Committed     | % Cmtd to Date | Actual Spent to Date | % Spent to Date | Balance To Spend    | Comments           |
|------------------------------------|--|----------------------|--------------------|----------------------|---------------------|----------------|----------------------|-----------------|---------------------|--------------------|
| <b>FEASIBILITY STUDY AGREEMENT</b> |  |                      |                    |                      |                     |                |                      |                 |                     |                    |
| 0001-0000                          | OPM Feasibility Study/Schematic Design | \$ 100,000           | \$ 245,884         | \$ 345,884           | \$ 345,884          | 100%           | \$ 262,904           | 76%             | \$ 82,980           | *FSA 1, 4, 5       |
| 0002-0000                          | A&E Feasibility Study/Schematic Design | \$ 950,000           | \$ 507,266         | \$ 1,457,266         | \$ 1,457,266        | 100%           | \$ 680,127           | 47%             | \$ 777,139          | *FSA 1, 2, 3, 5    |
| 0003-0000                          | Environmental & Site                   | \$ 150,000           |                    | \$ 150,000           | \$ 8,192            | 5%             | \$ 8,192             | 5%              | \$ 141,808          |                    |
| 0004-0000                          | Other                                  | \$ 800,000           | \$ (753,150)       | \$ 46,850            | \$ -                | 0%             | \$ -                 | 0%              | \$ 46,850           | *FSA 1, 2, 3, 4, 5 |
|                                    | <b>SUB-TOTAL</b>                       | <b>\$ 2,000,000</b>  | <b>\$ -</b>        | <b>\$ 2,000,000</b>  | <b>\$ 1,811,342</b> | <b>91%</b>     | <b>\$ 951,223</b>    | <b>48%</b>      | <b>\$ 1,048,777</b> |                    |

### Anticipated Uses:

|                            |                 |   |
|----------------------------|-----------------|---|
| Brookline Bldg Dept. Admin | \$47,636        | To Date   |
| Brookline Bldg Dept. Admin | \$52,364        | Projected   |
| Property Due Diligence     | \$15,000        | Town Counsel conducting research                            |
| Additional Site Survey     | \$15,230        | only req'd if internal block property lines not established |
| CM Precon/SD Estimate      | <u>\$60,000</u> |   |

Remaining Budget **\$188,658**

Total Anticipated **\$190,230**

Remaining Budget **-\$1,572**



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## Article 97 – if bridge lands on park land

- Municipal Conservation Commission must vote that the land is surplus to its needs (Unanimous Vote Required)
- Municipal Park Commission must vote that the land is surplus to its needs (Unanimous Vote Required)
- Select Board must also vote to remove the land from protected status (a 2/3 vote required)
- Municipality must file an Environmental Notification Form with EOEEA's MEPA Unit
- The disposition request must pass by a 2/3 vote of the Massachusetts Legislature and be signed by the Governor.  
(a 2/3 roll call vote of both Houses of the State Legislature required)
- The converted land must be replaced with land of equal monetary value and recreational or conservation utility



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## Eminent Domain

- Mar 2022 Law Department and Relocation Services Specialist to Meet with Owner of the Property Considered for Eminent Domain
- Apr 2022 School Committee Vote to Request that Select Board Vote for Eminent Domain of the Prop
- Apr 2022 Appraisals of the Property by Two Independent Appraisers to Begin
- Jun 2022 Submit Schematic Design Report including Project Cost Information to MSBA
- Aug 2022 MSBA Board Approval of a Project Scope and Budget Agreement
- Sept 2022 Town Meeting for John R. Pierce School Project
- Sept 2022 Certification of Debt Exclusion Vote Provided to MSBA by this Date
- Sept 2022 Select Board Meeting to Vote for Eminent Domain of the Property and to Issue the Notice of Intent of Property Taking
- Sept 2022 Notice of Intent of Property Taking to be Sent to Property Owner
- Oct 2022 Pro Tanto Payment
- Oct 2022 File Order of Takings
- Nov 2022 Town to Begin Relocation Services
- Nov 2022 Payment Complete
- Dec 2022 Properties Vacated
- Dec 2022 MSBA to Provide Project Funding Agreement to Town
- Dec 2022 Town to Execute and Return Project Funding Agreement to MSBA by this Date (extension required beyond Oct 15, 2022)



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- Transportation Board approval required – this process can occur concurrently to either Article 97 or Eminent Domain
  
- MSBA will require the bridge to be open to the elements
  - May be able to include an alternate during bid time to enclose bridge
  - May need to be enclosed as separate project or at the end of the project
  
- Variance process for setback requirements
  - May be able to request variance to limit setback to allow headhouse to stay out of park footprint

# Pierce School Pedestrian Bridge Study

02/03/2022

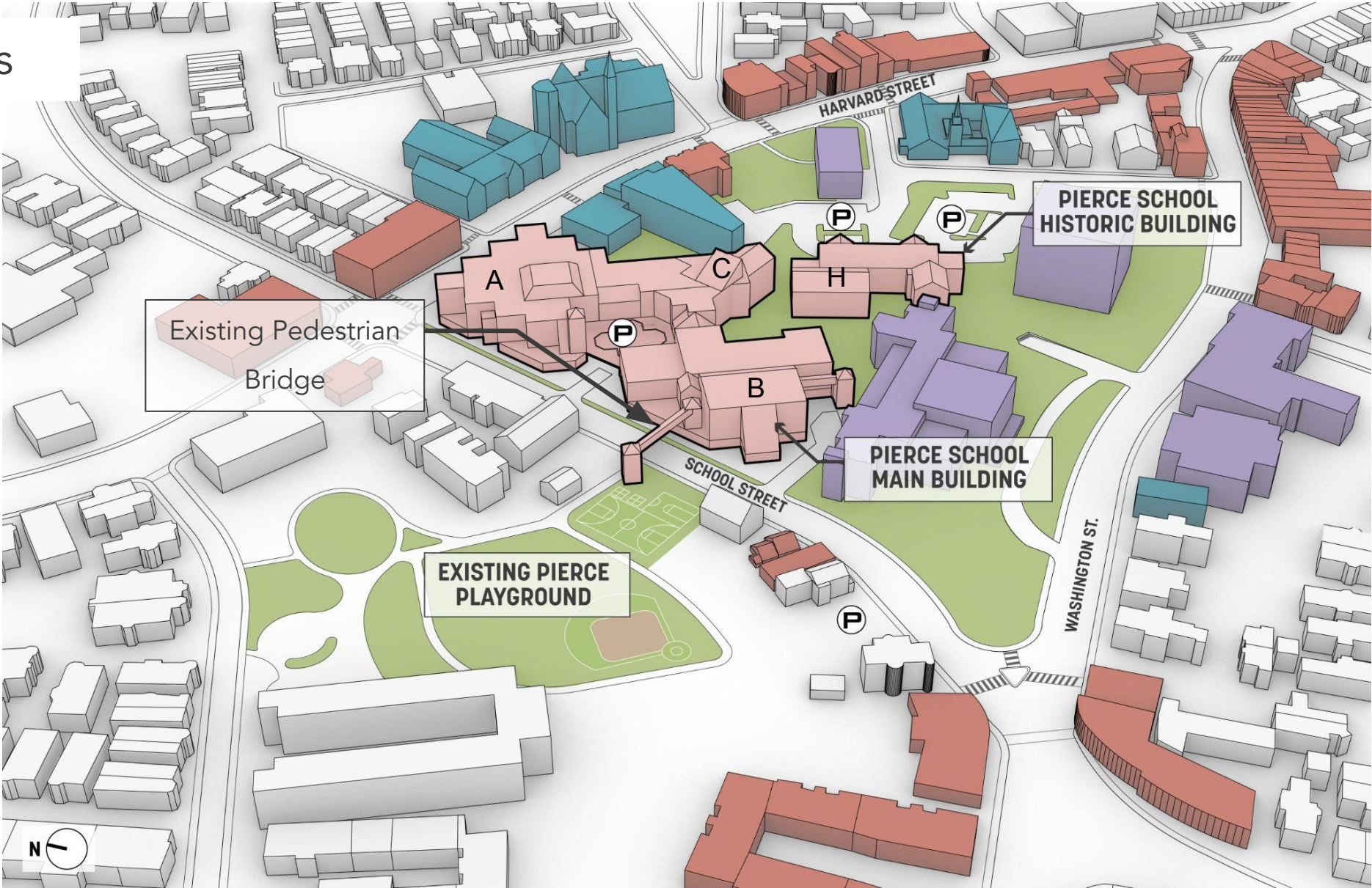


# Agenda

- Existing Pedestrian Bridge
- Future Pedestrian Bridge Studies
- Traffic Calming Measures
- Scale Comparisons
- Considerations Moving Forward

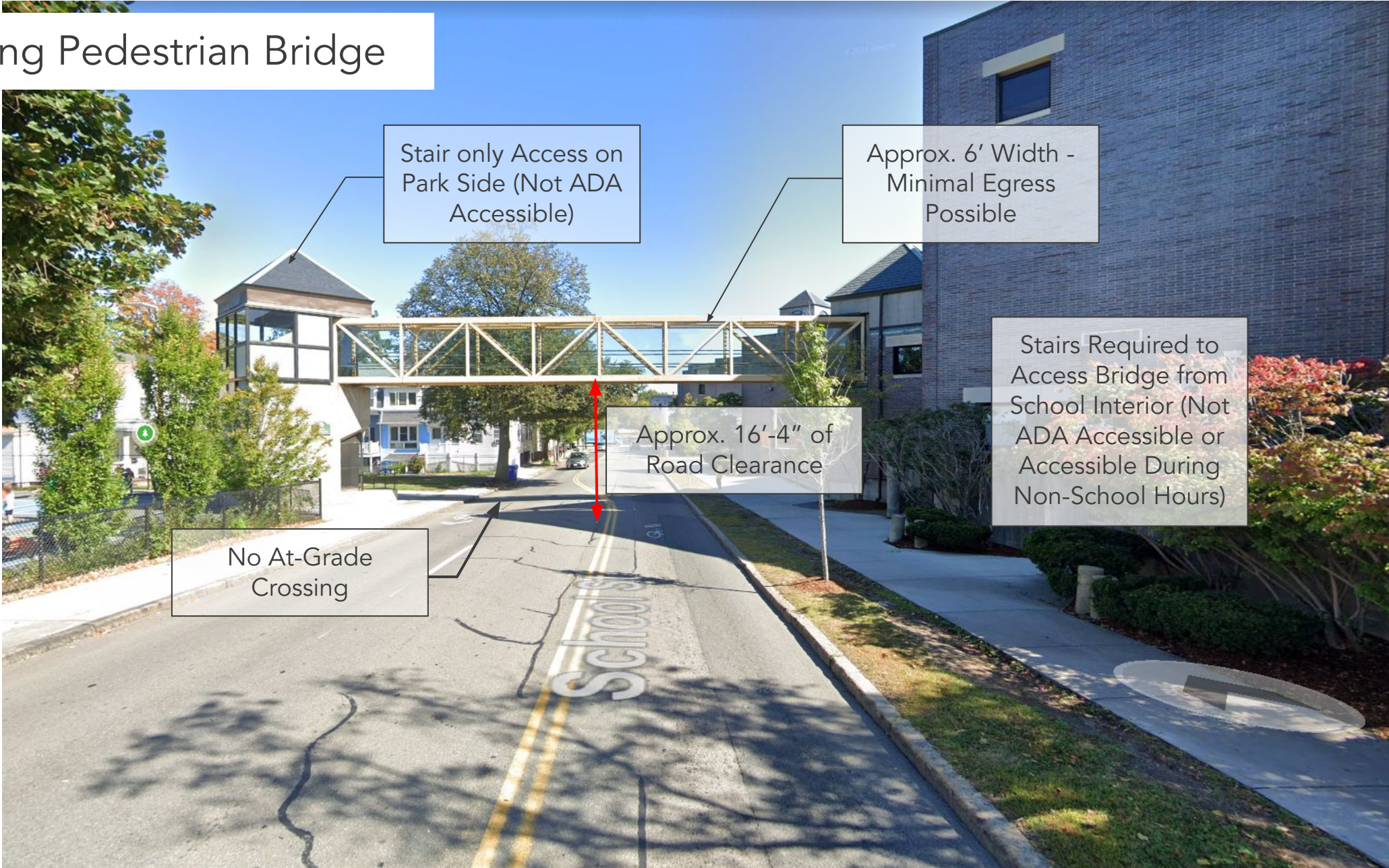


# Existing Conditions





# Existing Pedestrian Bridge



Stair only Access on Park Side (Not ADA Accessible)

Approx. 6' Width - Minimal Egress Possible

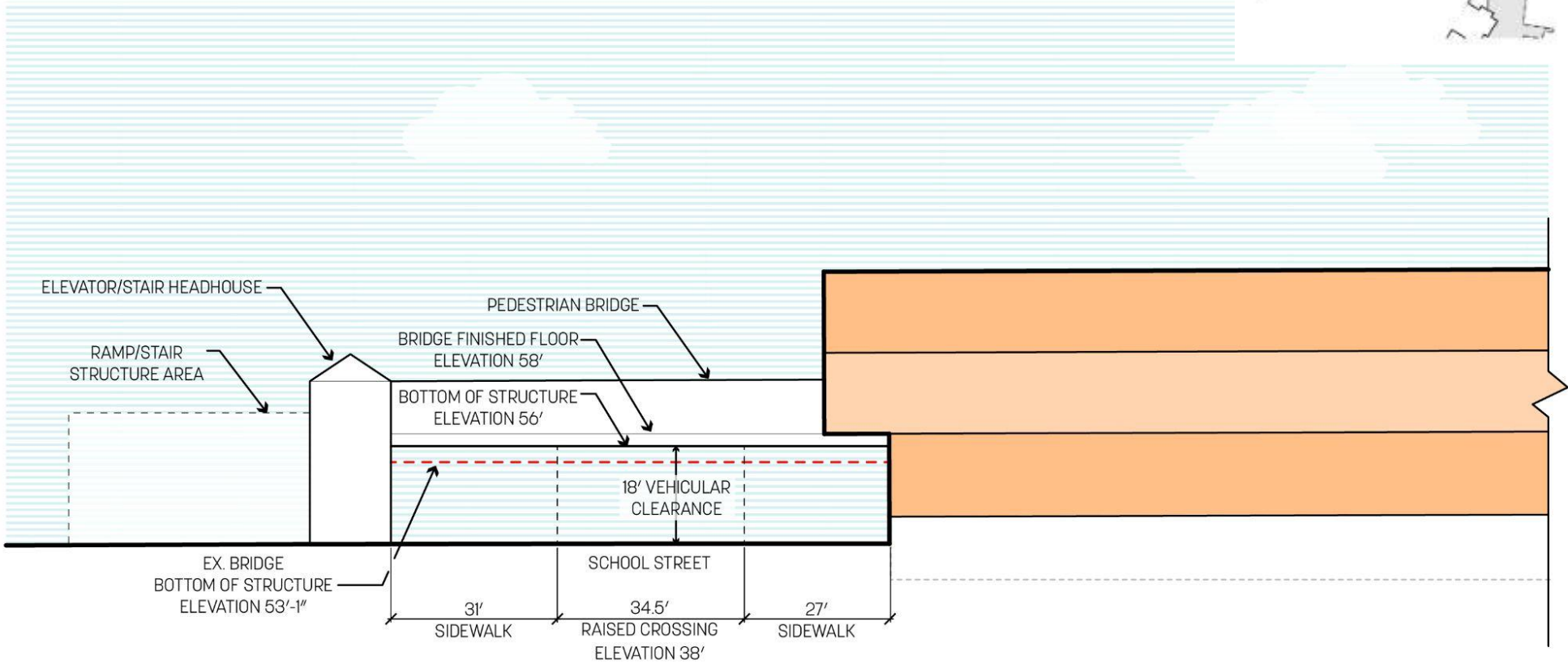
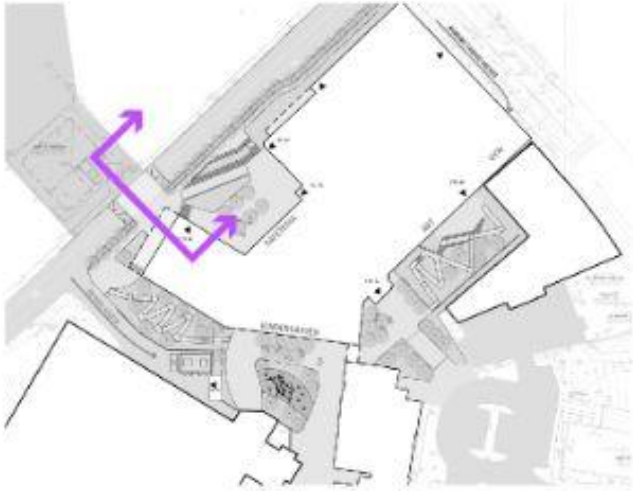
Approx. 16'-4" of Road Clearance

Stairs Required to Access Bridge from School Interior (Not ADA Accessible or Accessible During Non-School Hours)

No At-Grade Crossing



# Section to understand vertical clearances required



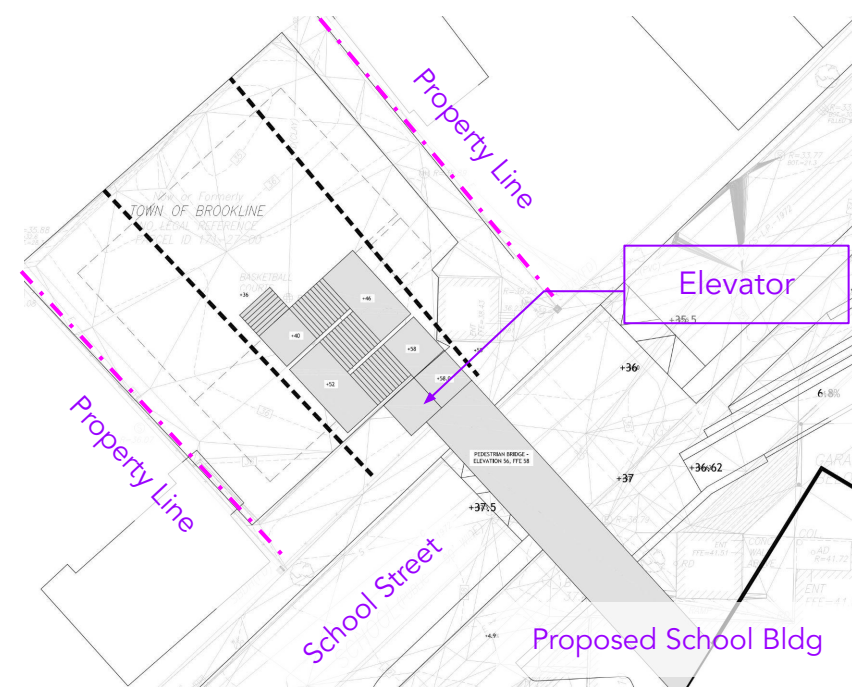


# Pedestrian Bridge Studies



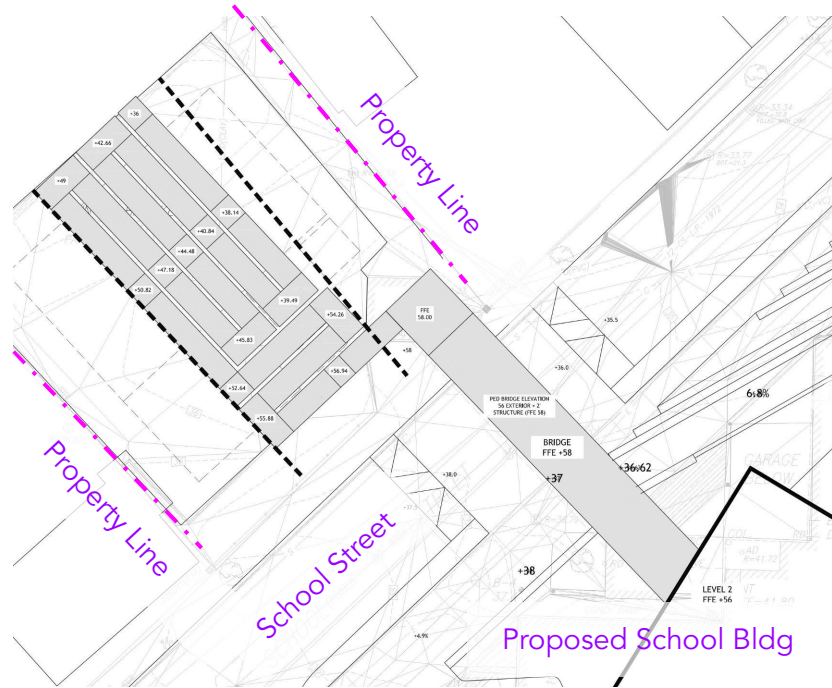
# Pedestrian Bridge Studies

\*Any development of the park land, including the stairs and ramp, may trigger Article 97 requirements.



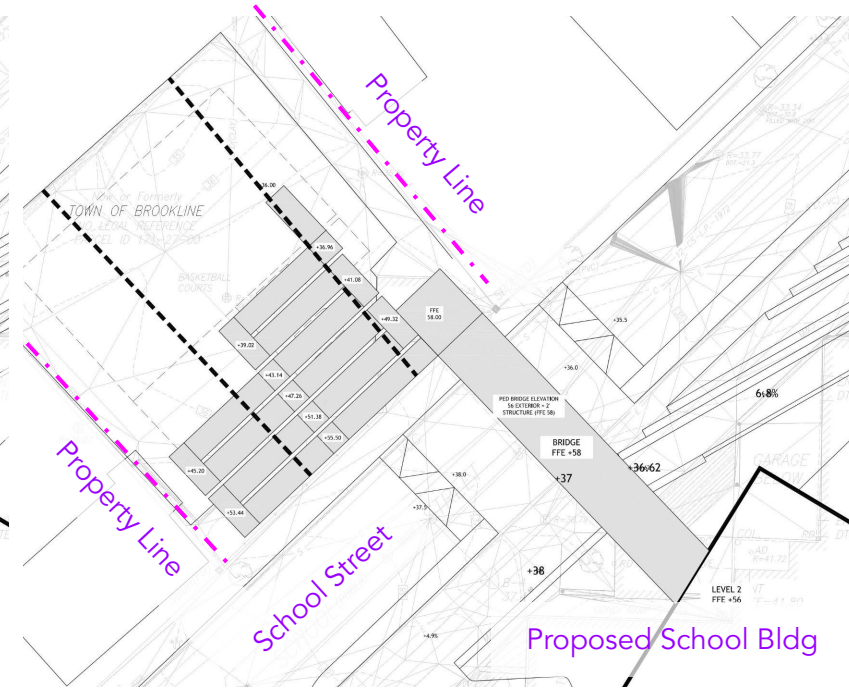
## Study 1

- Bridge 18' Clear of Road, 2' Structure (El. 58')
- Stairs & Elevator at Pierce Playground
- Relocated Basketball Court
- High Areas of Stair Allows for Covered Play Space/Landscape, or Opportunity to Decrease Stair Footprint



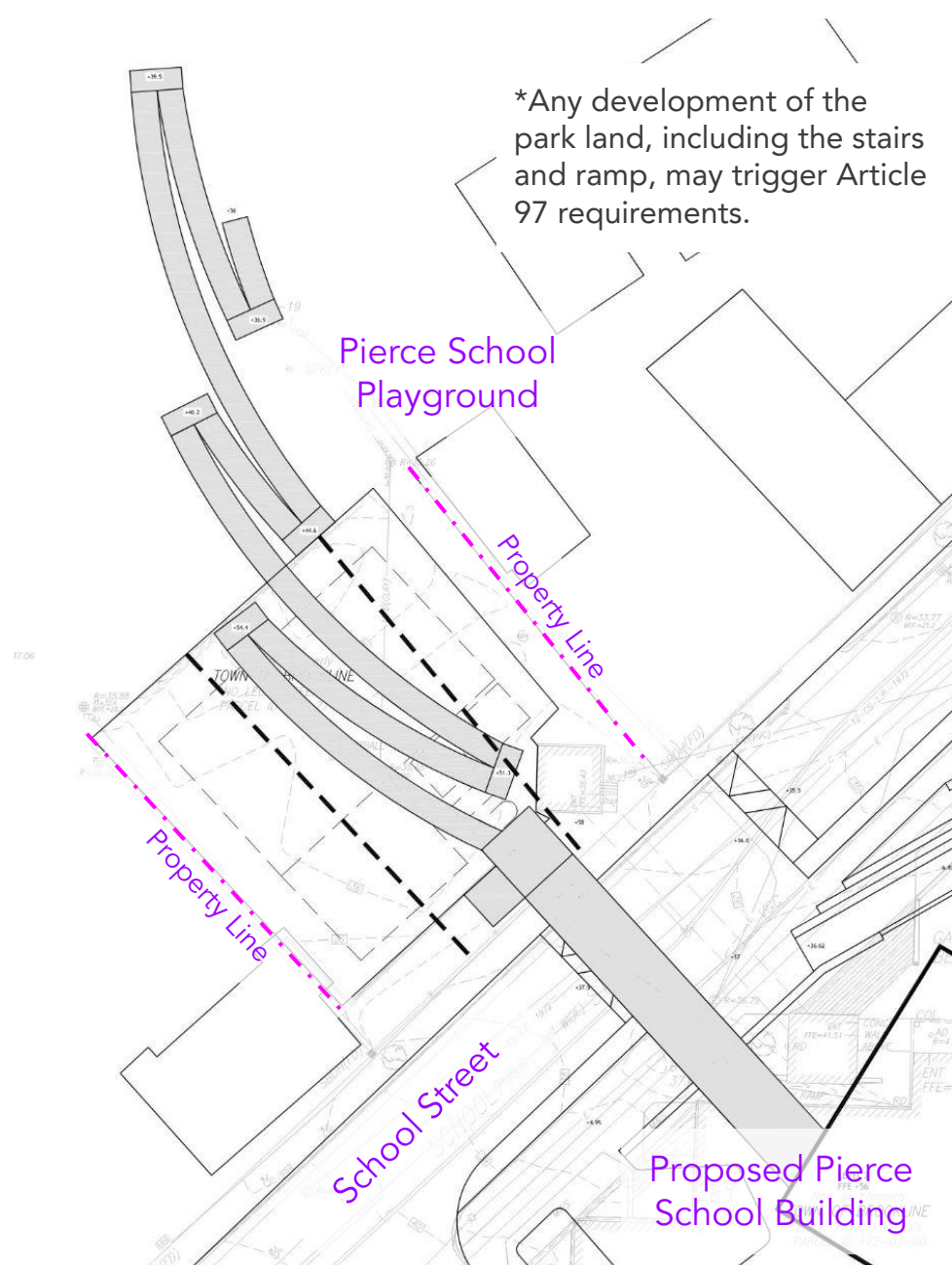
## Study 2

- Bridge 18' Clear of Road, 2' Structure (El. 58')
- Ramp Within Setbacks - approx. 326' at 6.76%
- Removal of Basketball Court, Relocated Paved Play Area
- Stair Within Headhouse
- High Areas of Ramp Allows for Covered Play Space/Landscape, or Opportunity Decrease Ramp Footprint



## Study 3

- Bridge 18' Clear of Road, 2' Structure (El. 58')
- Ramp Outside of Setbacks - approx. 265' at 8.33%
- Reconfigured Paved Play Area
- Stair Within Headhouse
- High Areas of Ramp Allows for Covered Play Space/Landscape, or Opportunity Decrease Ramp Footprint



#### Study 4

- Bridge 18' Clear of Road, 2' Structure (El. 58')
- Stairs and Ramp Start Within Headhouse & Elevator at Pierce Playground
- Approx. 460' Sloped Walkway at 4.8%
- Reconfigured Paved Play Area - Basketball Court Removed
- Baseball Field Outfield Reduced to 150' (200'-275' typical for youth baseball)
- 6'-15' Fence Required Between Walk/Field

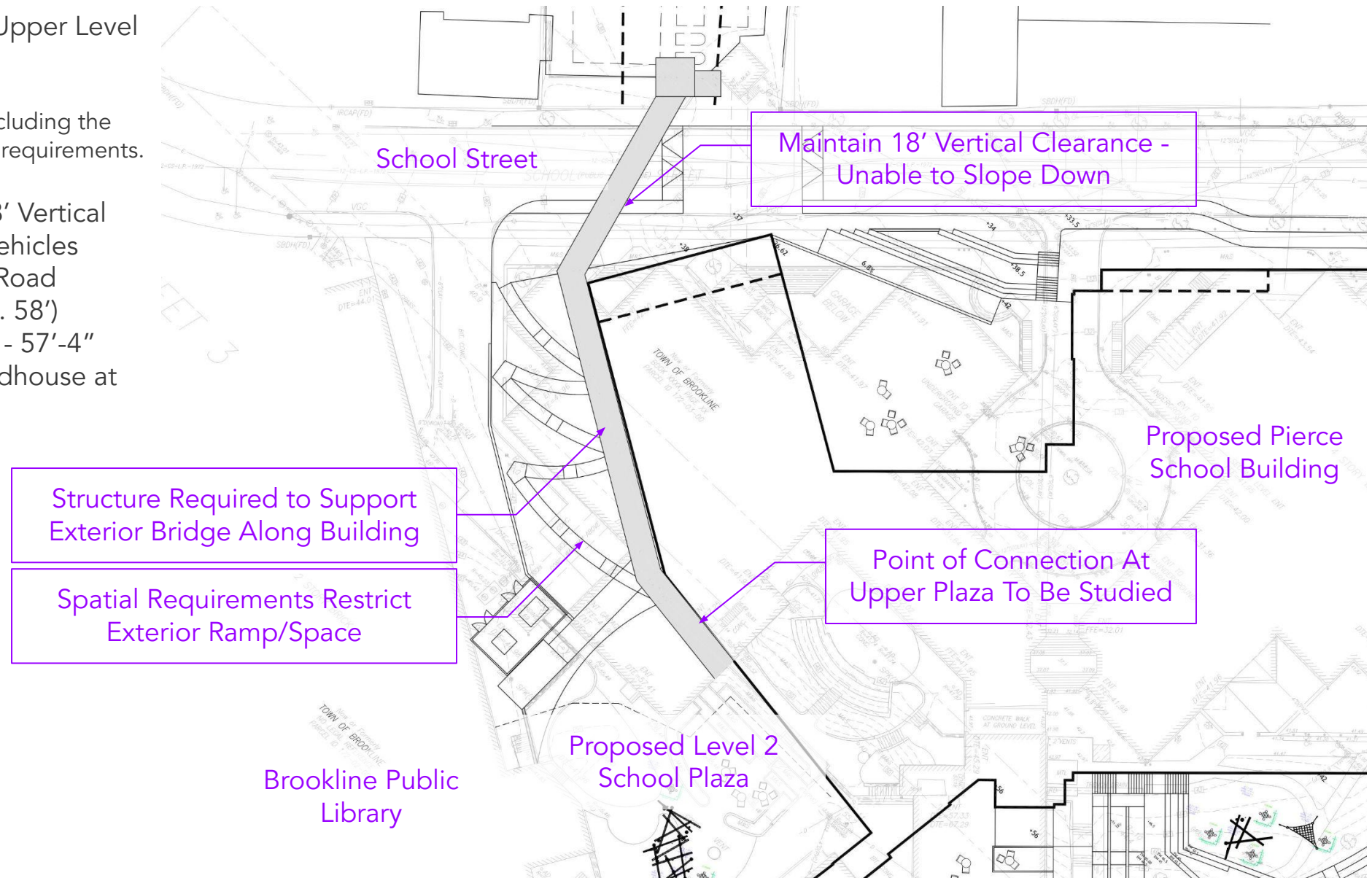




## Study 5 Pedestrian Ramp Connecting to Upper Level of School

\*Any development of the park land, including the stairs and ramp, may trigger Article 97 requirements.

- Assuming a conservative 18' Vertical Clearance for Emergency Vehicles
- Pedestrian Bridge with 18' Road Clearance & 2' Structure (El. 58')
- Proposed Level 2 Elevation - 57'-4"
- Elevator & Stair Within Headhouse at Pierce Playground





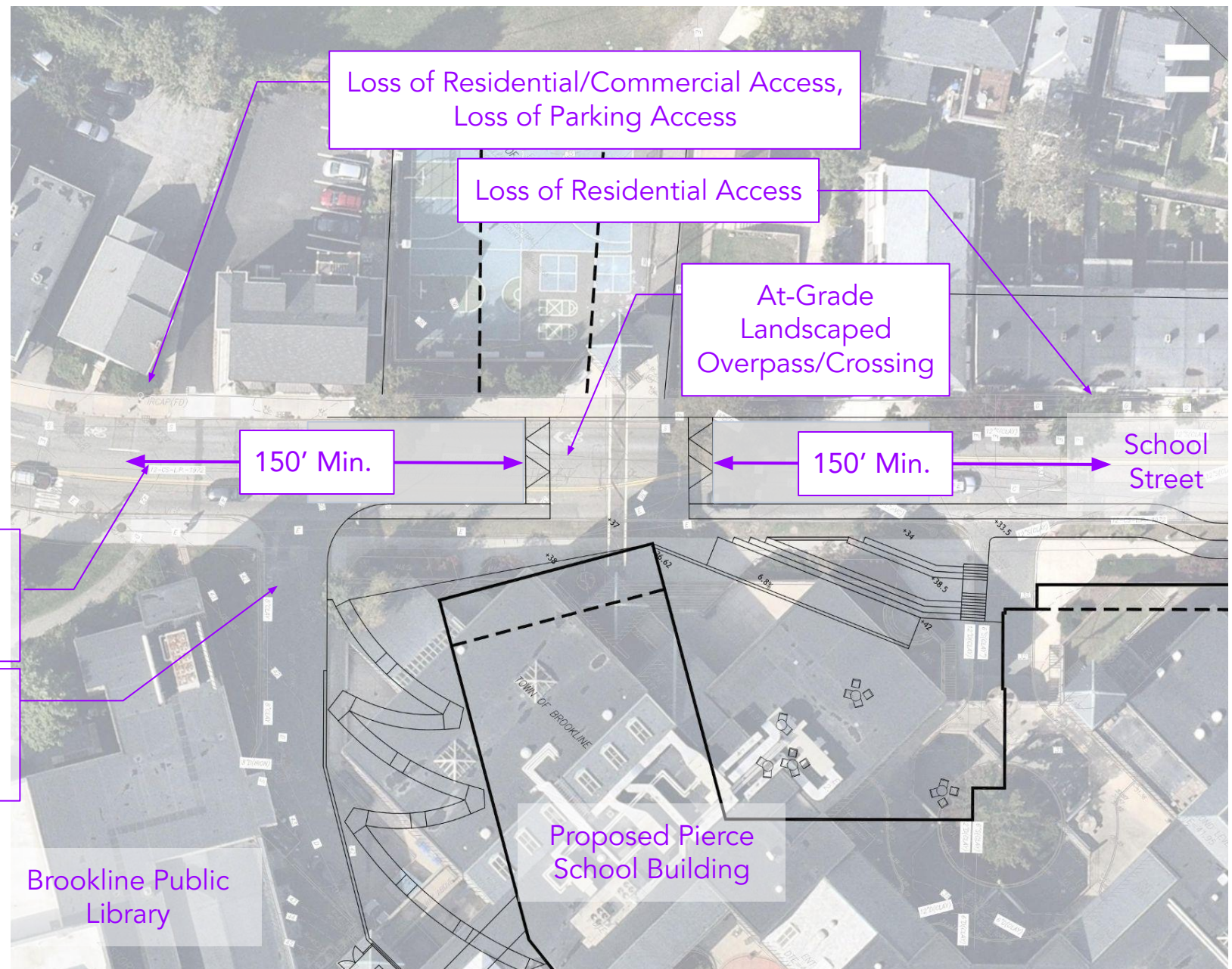
## Study 6 Vehicular Tunnel Beneath School St. Crossing

\*Any development of the park land, including the stairs and ramp, may trigger Article 97 requirements.

- Requires 20' Clearance Beneath Crossing
- Maximum 10% Road Slope
- Would Require a 20' Retaining Wall with Guardrail Along School Street
- Traffic and Safety Study Required to Assess Feasibility

Additional Survey Information Required to Assess Feasibility

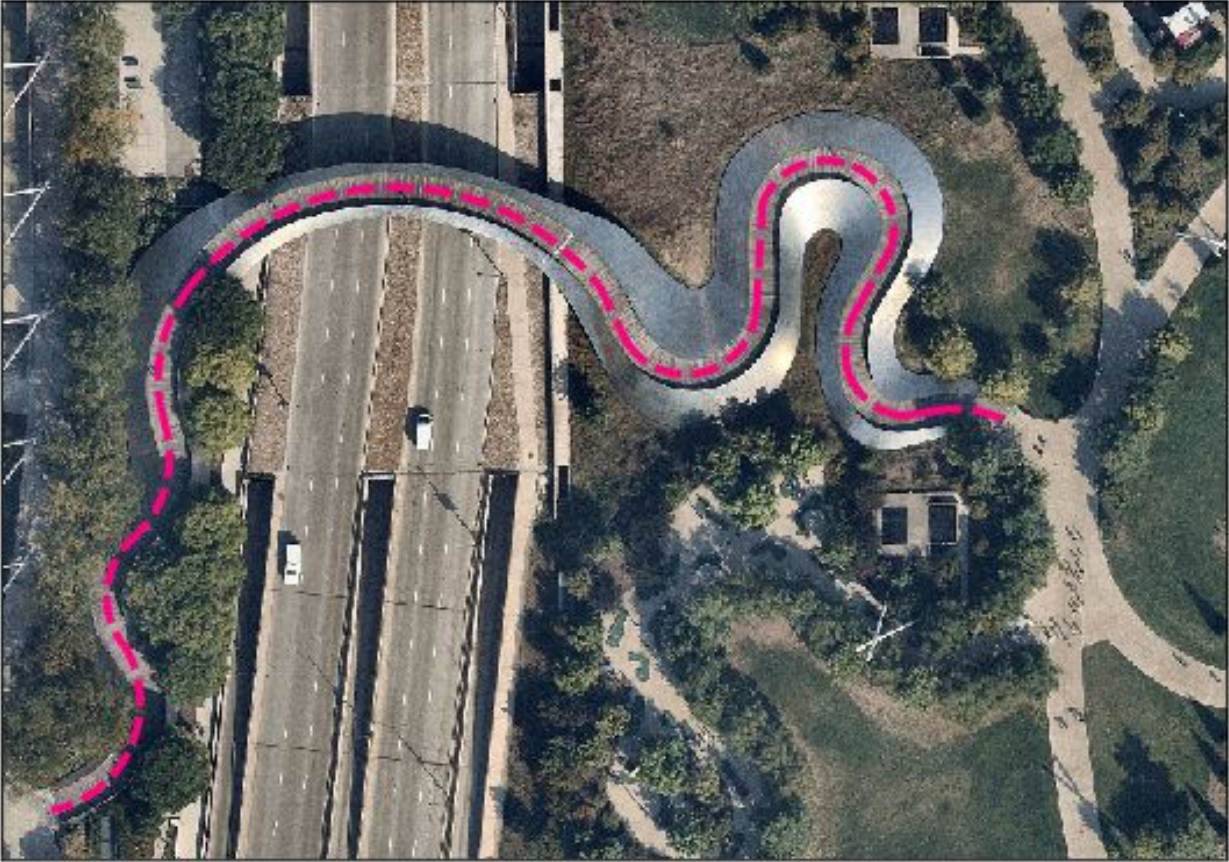
Potential Loss of Service Access to Pierce School and Library



# Scale Comparisons



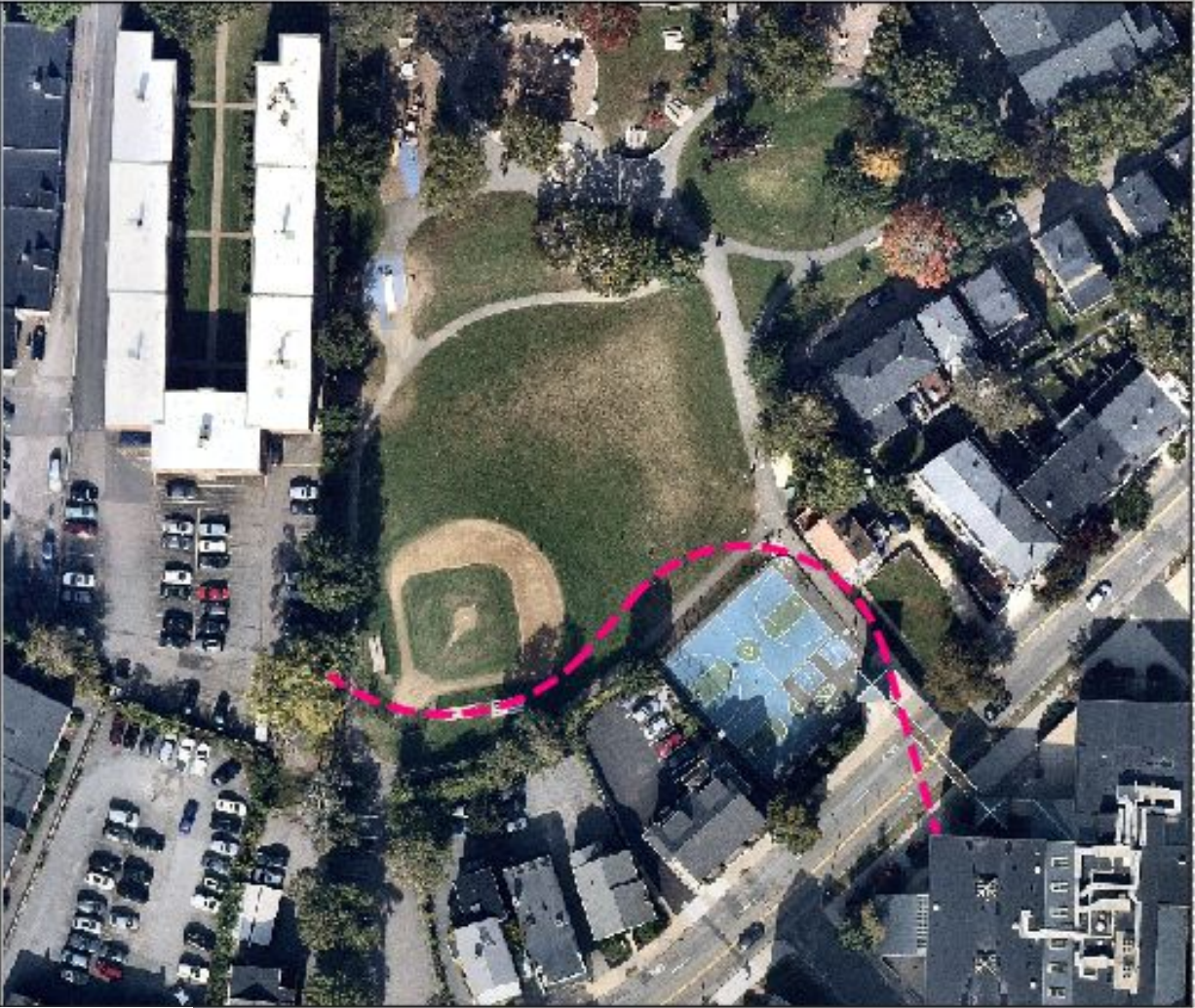
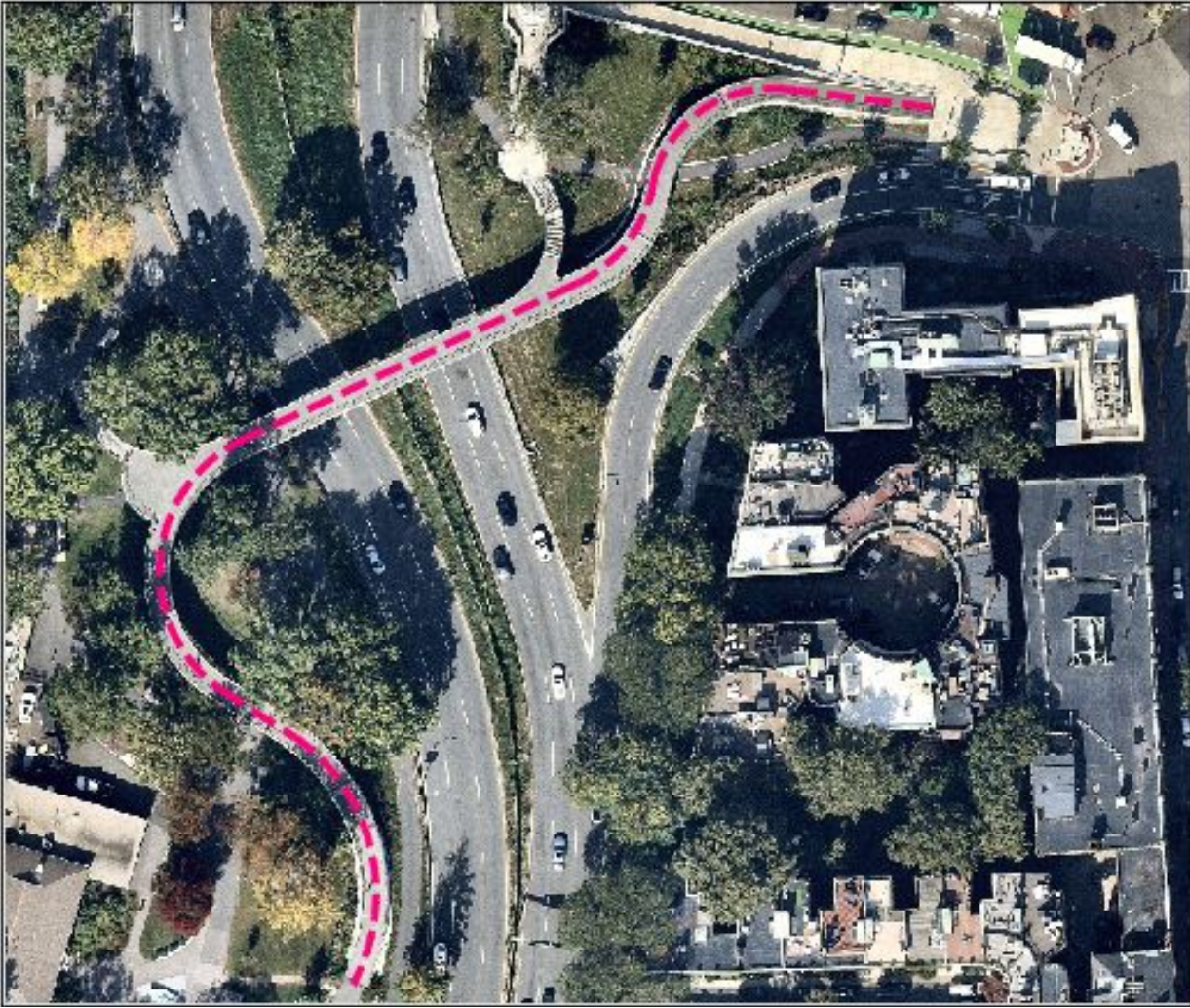
# Millenium Park | Chicago, IL



Approximately 930' Length | 14.5' Road Clearance  
Under 5% Slope  
Cost: \$14.5 million (2004) | \$21.4 million (2022)



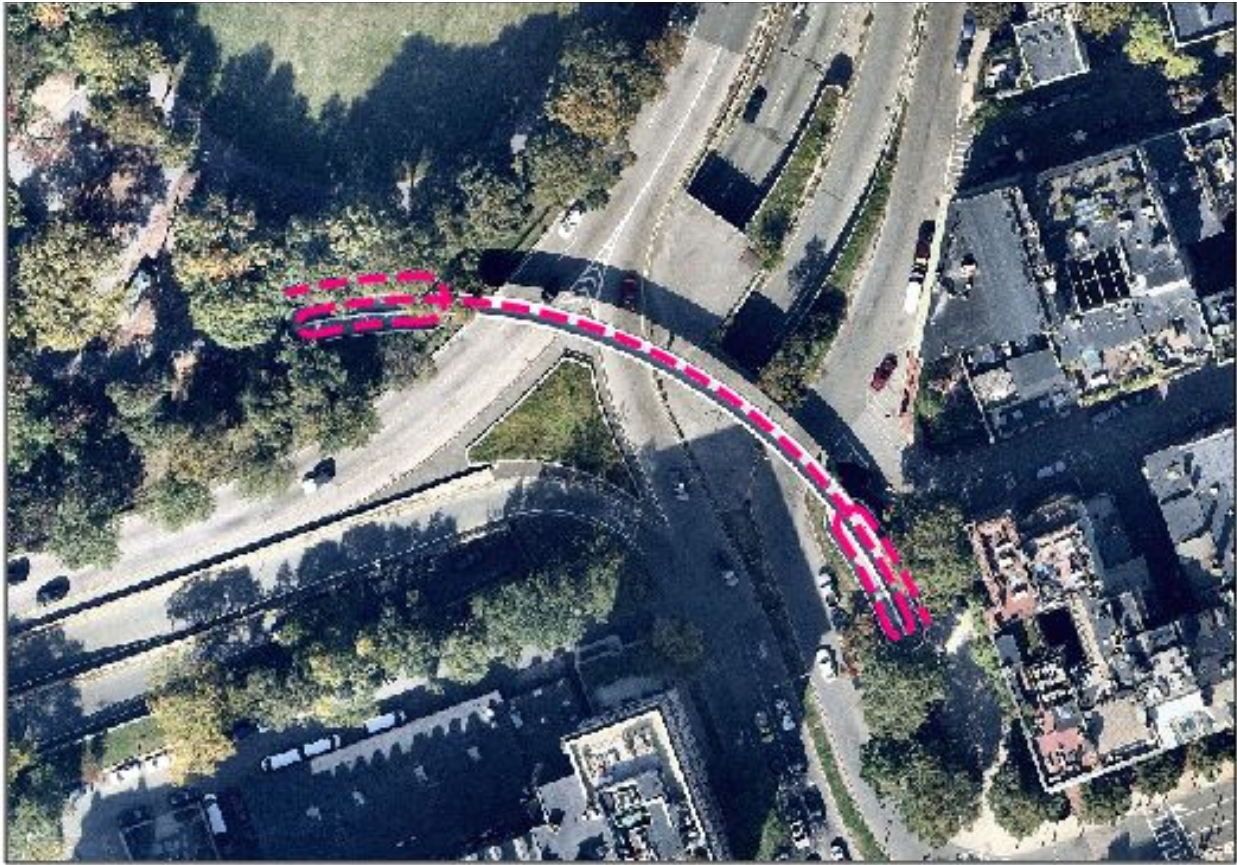
# Frances Appleton Bridge | Boston, MA



Approximately 740' Length | 10.5' Road Clearance  
Range of <math><5\%</math>-8.33% Slope | No Trucks/Buses  
Cost: \$12.5 million (2019) | \$13.7 million (2022)



# Arthur Fiedler Footbridge | Boston, MA



Approximately 675' Length | 14' Road Clearance  
Slope Unknown | No Trucks/Buses  
Built in 1953 - Cost Unknown

# Traffic Calming Measures



## Traffic Calming Measures Rectangular Rapid Flashing Beacon (RRFB)

- Push button activation compliant with ADA/AAB guidance
- Improves motorist yielding compliance 82-96% based on FHWA study
- Reduces pedestrian crashes 47% based on FHWA study
- Several installations in Brookline



RRFB at Warren Street, Chestnut Hill



RRFB at Weston Road, Wellesley



## Traffic Calming Measures Raised Crosswalks

- Crosswalk used in conjunction with vertical deflection, similar to speed hump
- Can reduce pedestrian crashes by 45% based on FHWA study
- Can be combined with RRFB installation
- Several installations in Brookline
- Bigelow Avenue (Watertown)
  - Specified by VAI, installed in 2016
  - Reduction in speeds to 21-24 mph average and 25-29 mph 85th percentile along Bigelow Avenue
  - Speeds at speed hump reduced to 15.5-16.3 average and 19.5 85th percentile



Raised Crosswalk at Walnut Street,  
Brookline



Raised Crosswalk at Pond Avenue,  
Brookline



Raised Crosswalk at Bigelow Avenue, Watertown

## Traffic Calming Measures Speed Table

- Larger area than raised crosswalk or speed hump
- Can be used at intersection or midblock crossing, with RRFB installations
- Reduction in crashes of 38% and 85th percentile speeds of 24% based on NACTO study



Speed table at Nichols/Elton Avenue, Watertown  
Specified by VAI, installed in 2016



## Traffic Calming Measures Road Diet - Narrowing/Eliminating Travel Lanes

- Reduced number of lanes required to cross by pedestrians
- Reduces vehicle travel speeds
- Reduction in pedestrian crash risk when crossing 2 and 3 lane roads compared to roads with 4+ lanes (2001 FHWA study)
- Can reduce total crashes by 29% based on 2010 FHWA report
- Narrower lanes signal to drivers to be careful in urban environments



Nonantum Road, Watertown  
23% fewer crashes  
32% fewer severe injury occurrences



Route 135, Wellesley  
55% fewer crashes  
69% fewer severe injury occurrences

## Traffic Calming Measures at Pierce School

Proposed at-grade condition at Pierce includes a combination of safety measures - narrowing the street, and implementing both a speed table and rectangular rapid flashing beacon.



# Considerations Moving Forward

## Opportunities of Pedestrian Bridge

- Pedestrian & vehicular separation
- Improves ADA accessibility over current conditions
- Direct connection from 2nd level of Pierce School to Pierce Playground and adds a point of egress from building
- Opportunities for program, public art or signage on the bridge structure

## Constraints/Challenges

- Physical impact on park program (Courts, Fields)
- Perceived inconvenience of navigating significant grade change could limit use
- High cost relative to use and redundancy with at-grade crossing
- Architectural impact on adjacent properties and experience of the neighborhood