# Harvard Square Tunnel Transformation

Proposal for the City of Cambridge

NOVEMBER 2024



### Our agenda for today

Background on the MBTA tunnel
Our vision for the future & timeline
Comparable projects
Rationale: benefits & opportunities
Next step: funding an engineering & code study

#### Context & background on the MBTA tunnel

Beneath the heart of Harvard Square lies an extraordinary, stranded asset with significant untapped potential for the City of Cambridge

In 1912, the Boston Elevated Railway opened the original Harvard Square Station. Railcars were stored and maintained in the nearby Bennett Street Carhouse and Eliot Railyard. A bus tunnel connected these facilities to the station.

By the 1970's and 1980's, the Eliot Railyard and the Bennett Street Carhouse were decommissioned and demolished which ultimately made way for the construction of Harvard's Kennedy School and The Charles Hotel, leaving the bus tunnel disused.

Today, the **tunnel remains empty**, partially occupied by the MBTA, which owns the approximately **13,000 sq ft** site, and uses a small portion of the space for storage of equipment and supplies.

Given its size and desirable location, the unused MBTA tunnel is brimming with potential to unlock significant value for the community, local business owners, and the City of Cambridge. The City should take the lead to drive alignment between the project's key stakeholders, including the MBTA, and the State of Massachusetts.



#### Our vision for the future & timeline

# Given the project's potential, the City of Cambridge should support an engineering & code study on unlocking this community asset

The unused portion of the Harvard Square MBTA tunnel presents an unparalleled opportunity to animate and energize Harvard Square, turning the underutilized asset into a source of value for the community.

Given the uniqueness of the space, **the tunnel is well suited to become a community asset**—hosting live music, speaker series, art exhibitions, and other events. The proposed venue will become an anchor of the Harvard Square community, drawing visitors to the city, and strengthening Harvard Square's position as a community hub.

This project will create economic and cultural value for Cambridge, as well as differentiate the city from our other urban districts. As a key beneficiary of this project, the City of Cambridge should take swift action to **commission an engineering and code study** to assess the tunnel's viability for assembly use. This study is a critical first step for moving the project forward, while also helping to gain buy-in and drive alignment across the project's numerous stakeholders (e.g., MBTA, City of Cambridge, community, etc.).



Renderings courtesy of Bruner/Cott Architects and HSBA

#### Our vision for the future & timeline

### **Innovation takes time:** If the City of Cambridge begins drafting an RFP today, construction on the proposed tunnel could begin in ~2.5 to 3.5 years

**Timeline:** 29 to 41 months

#### City drafts RFP for engineering & City evaluates & selects vendor MBTA issues 2<sup>nd</sup> RFP for construction code study (3 months) (4-6 months) (4-6 months) • City of Cambridge drafts RFP for • State issues 2<sup>nd</sup> RFP in collaboration with City of City shortlists vendors for presentations engineering & code study Selects winning vendor based on the Cambridge RFP reviewed and approved by MBTA RFP includes any commitments from City for evaluation process Goal to determine how the tunnel Awards contract to selected vendor streetscape adjustments per study findings could be adapted for assembly uses Negotiates contract terms with vendor • State directs RFP towards venue operators Steps 1-4: Conducted by City of Cambridge with Steps 5-6: Conducted by MBTA in Begins approval from MBTA collaboration with City of Cambridge complete) City releases RFP for bidding Vendor conducts study & City assesses MBTA evaluates & selects vendor (4-6 months) findings (10-14 months) (4-6 months) City publicly lists RFP and establish deadline Chosen vendor conducts study of tunnel State shortlists vendors for for vendor submissions City provides project oversight presentations • Gathers guestions and responds to inquiries Coordinate with appropriate State Selects winning vendor via competitive Reviews and evaluates proposals based on departments to ensure access (e.g., MBTA) evaluation process City evaluates findings to determine how to Awards contract to selected vendor decision criteria (e.g., experience, move forward with transformation RFP Negotiates terms with chosen vendor qualifications, etc.)

Construction (+2-3 years to

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## A Closer Look: Artist renderings illustrate the venue's potential as a flexible, multi-use, community space



Renderings courtesy of Bruner/Cott Architects and Harvard Square Business Association

Recognizing the potential beneath their streets, governments and developers around the world have repurposed unused underground infrastructure



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Converting the unused MBTA tunnel into a state-of-the-art venue will maximize the project's effectiveness across multiple dimensions



The state-of-the-art venue will become a symbol of the community, bolstering Harvard Square's overall appeal



- **Community appeal:** One-of-a-kind venue will further set Cambridge apart from other cities, creating draw and intrigue; project will adapt to satisfy visitors' changing tastes by offering a wide variety of immersive, creative experiences
- **Connectivity & well-being:** Amid America's crisis of loneliness, venue will act as a community hub, fostering social connections and reducing isolation among residents by providing a space where they can gather, socialize, and connect with one another
- **Resilience:** Project will re-vamp and repurpose an unused, dormant asset, creating a multi-use, flexible space, ensuring Harvard Square remains a top-tier destination for visitors in the 21<sup>st</sup> century
- **Promotion of talent:** Venue will showcase local and global talent and emerging artists, providing them with a platform to perform and gain recognition; by promoting creative expression, the project will inspire younger generations and boost community pride
- Sustainability: Project will also present a model for sustainable construction by integrating renewables to make the venue energy independent, while optimizing resources to decrease the building's ongoing energy requirements

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Construction of a new venue will stimulate the local economy, increasing tourism and commerce, while also generating revenue for the City



- Visitors & tourism: State-of-the-art venue will attract tourists and visitors from around the region and globe; increased tourism will drive up foot traffic, increase MBTA ridership, and boost commercial activity
- Local spending: With an increase in tourism and visitors to Harvard Square, we estimate there will be a \$36.2M increase<sup>1</sup> in local spending on accommodations such as hotels, transport, dining, retail, and cultural attractions
- **Commercial activity:** Venue will stimulate entrepreneurial activities in the community, driving an increase in new businesses to meet additional demand for services; increased commercial appeal will also lift office occupancy rates
- Job opportunities: In addition to construction work, the venue will hire staff for management, security, servers, and maintenance; added demand from increased tourism will also promote hiring at other businesses (e.g., restaurants, stores, etc.)
- Durability: Venue will strengthen Harvard Square's durability, creating additional revenue from sales, property, and other business taxes and fees; moreover, project will maintain Harvard Square's identity as a destination and lively, cultural hub

## **Our approach:** Estimating venue will generate ~\$36.2M of additional spending in the surrounding Cambridge community

### Additional spend per attendee \$100.50

A recent study conducted by Oxford Economics estimated the economic impact live events provide for local businesses and surrounding communities.

This study found for every \$1.00 an attendee pays for a ticket, they will spend an additional \$3.35 in the local economy on off-site purchases like transport, lodging, retail, dining, and recreation.

If we assume the venue will have an average ticket price of \$30.00<sup>1</sup>, these findings imply that our local economy will benefit from \$100.50 in additional spending per attendee.

\$3.35 x \$30.00 = **\$100.50 spend per** attendee

#### Estimated attendees per year \$360.0K

Given the space available in the tunnel today (~13,000 sq ft), we estimate the venue's capacity will be ~1,500 people, making it the largest capacity venue in Cambridge.

Using comparable venues as a benchmark, we estimate that the venue will operate an average of 6 events per week over 50 weeks per year. We therefor estimate it will host a minimum of 300 ticketed events per year.

Assuming a sell-through rate of 80%<sup>2</sup> and multiplying this value across the 300 events implies that the venue will draw in 360,000 attendees per year.

1,500 x 300 x 80% = **360K attendees** 

### Total additional spend per year ~\$36.2M

Multiplying per attendee spend by the estimated annual attendance provides the total boost in annual spending that the surrounding community will benefit from.

<u>Note:</u> This value is the expected increase in annual spending in the surrounding community. This value does not account for other economic benefits resulting from spending on tickets or venue operations.

\$100.50 x 360.0K = ~**\$36.2M spend per year** 

1. Average ticket price at The Sinclair was ~\$30 between 11/1/23 - 11/30/23 2. Conservative estimate; avg. industry sell-through rate was 81.3% according to 2023 Pollstar industry report Source: HSBA Research; "The Concerts and Live Entertainment Industry: Economic & Fiscal Impacts", Oxford Economics (2021); Pollstar Pro Concert Industry Report 2023 10

## Unlike alternatives, the venue will be well-differentiated from existing offerings, fulfilling an unmet need for large-scale public events



- **One-of-a-kind opportunity:** There is no other space like this in the City of Cambridge—or likely anywhere in the State—and building a comparable space from scratch will be prohibitively expensive (i.e., securing land, constructing below grade, etc.)
- Innovative concept: The venue will offer a distinctive, unconventional ambiance, blending an unparalleled atmosphere with cutting-edge entertainment
- Large capacity: The City of Cambridge lacks a dedicated, large-scale entertainment venue, while neighboring Boston has recently opened several including Roadrunner (March 2022) and MGM Music Hall at Fenway (August 2022)
- **Diverse programming:** The proposed venue will be configured for mixed-use and capable of hosting a variety of events, ranging from intimate acoustic sessions to grand orchestral concerts and artistic exhibition events
- Continuous evolution: Over the last 4 centuries, Harvard Square has continuously evolved while maintaining its distinct mix of vibrancy and charm; the proposed project will ensure Harvard Square remains a model for other districts

A comprehensive engineering and code study is required to determine if and how the tunnel can be adapted for assembly use

### Key considerations for engineering & code study



#### Purpose

Assess the condition of the MBTA tunnel; identify project's **overall viability** and any potential challenges Scope Includes structural and environmental impact assessments, as well as an

estimate of **capacity** and **cost** 



#### Cost

**Estimated** to be **~\$1M**; however, cost could fluctuate depending on the outcome of the competitive RFP process

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#### Timing

Once the RFP is awarded, the engineering & code study will take between **10-14 months** to complete

#### Next steps:

- Develop an agreement with the MBTA to cooperate with the engineering & code study
- Prepare and issue an RFP to study how tunnel can be adapted (details of RFP outlined in Reed Hildebrand's proposal)
- Gather responses and complete a competitive vendor selection process
- Award the contract to study the repurposing of the tunnel

This authentic urban district has been a destination since 1630. A bold vision is required to ensure the Harvard Square of tomorrow remains a beloved hub for a diverse cross-section of humanity.

# Appendix

Comparable projects





Washington, D.C.

Asset type: Metro tunnels

 Key uses:

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 Art exhibitions

 Image: Comparison of the second secon

#### Useful links:

Dupont Underground webpage reference: <u>link</u> Smithsonian article on project: <u>link</u> Creative re-use of Washington, D.C.'s abandoned underground station has transformed it into a vibrant community hub



<u>Clockwise, from top left</u>: before renovations, renovated Dupont Underground, live performance, entrance to exhibition



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Washington, D.C.

#### Asset type:

Metro tunnels



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Project highlights

- Abandoned trolley car station repurposed into 15,000 sq ft art exhibition and performance space
- Project began in 2003; lease secured in 2015 and first opened to the public in 2016
- Land is leased from the District of Columbia and operated by Dupont Underground

#### **Historical context**

In 1949, Washington, D.C. constructed an underground trolley station to help alleviate congestion in the Dupont Circle neighborhood.

In 1962, only 12 years after the underground station was opened, the entire trolley system was shutdown due to declining ridership.

The station remained unused for the better part of the next 50 years, serving briefly as a fallout shelter in the 1970's and briefly as a food court in the mid-90's.

The ill-fated food-court shut down within a year, leaving the 75,000 sq ft space vacant for the next 20 years.

#### **Project overview**

In 2003, a group of entrepreneurs and artists led by architect, Julian Hunt formed a non-profit with the goal of transforming the abandoned station.

In 2015, the group secured a lease from city, and began work to repurpose 15,000 sq ft on the east and west platforms of the underground.

In 2016, the Dupont Underground officially opened to the public as a subterranean venue, hosting art exhibitions, immersive art installations, live performances, and events.

Today, the Dupont Underground stands as a testament to the reuse of urban spaces, breathing new life into a historic site while preserving its heritage.

## Coming out of the COVID-19 pandemic, the United States is facing a worsening youth mental health crisis driven, in part, by increased social isolation



The impact of the youth mental health crisis will be especially prevalent in communities with large student populations, like the City of Cambridge

Source: CDC; SAMHSA Behavioral Health Equity Report 2021; National Alliance on Mental Illness; Archives on General Psychiatry; American Academy of Child and Adolescent Psychiatry; CDC, "Youth Risk Behavior Surveillance Data Summary & Trends report: 2011-2021"; Harvard Graduate School of Education, "Loneliness in America" (2022) 17



The CDC recommends communities and organizations improve their "built environment" to reduce social isolation and loneliness

## CDC recommended approaches to promote social connectivity

- Psychological therapies
- Community-based exercise and physical activity
- Technology and phone-based programs
- School connectedness
- Built environment
- Intergenerational programs
- Animal-based interventions
- Health education, skill development, support groups, and peer support

#### **Description:**

The built environment is one of the key social determinants of health and refers to human-made surroundings that influence people's behaviors and drive community health

#### Examples:

- Changes to the environment that support community gatherings
- Design features that increase mobility and facilitate community participation
- Improvements to accessibility of green spaces

Communities and retailers must adapt to ongoing shift from in-store retail to e-commerce

### E-commerce share of US quarterly retail sales & quarterly growth (2016 - 2024, %)



- In 2020, e-commerce penetration reached an alltime highs as COVID-19 lockdowns drove nonessential store closures from March - July
- In 2021 E-commerce took its first step back after record sales and share growth during the pandemic
- As of Q2 2024, e-commerce sales were 16.0%, below COVID-driven peak but trending up again after brief decline

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