



## APWA MINNESOTA CHAPTER PUBLIC WORKS PROJECT OF THE YEAR NOMINATION FORM

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**Submission Deadline: October 1, 2022**

All nomination and supporting data are to be submitted as a PDF to Sarah at [sarah.lloyd@bolton-menk.com](mailto:sarah.lloyd@bolton-menk.com) with a maximum page size of 5 pages, including photos.

**Project Nominated:** Hennepin Avenue Downtown Reconstruction

Managing Agency: \_\_\_\_\_  
Contact Person: \_\_\_\_\_  
Agency Address: \_\_\_\_\_  
Agency Phone Number: \_\_\_\_\_  
Email: \_\_\_\_\_

Project Design Firm: \_\_\_\_\_  
Project Construction Administration Firm: \_\_\_\_\_  
Project General Contractor: \_\_\_\_\_

Name of Person Making Nomination: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Email: \_\_\_\_\_

### Criteria for Nomination

- Project must be substantially completed by October 31, 2021 or October 31, 2022.
- Includes use of innovative construction management techniques and completion of the project on schedule.
- Maintained excellent safety performance and safety program throughout construction.
- Evidence of strong community relations during all project phases.
- Consideration given to the environment. Sustainable design techniques involved.
- Unusual accomplishments given adverse conditions.
- Provides future value to the public works profession and perception by the public.
- Additional considerations such as value engineering, innovative project financing, multi-agency coordination and participation.

**Reasons for Nomination:** Describe the project with the aspects and features of the project that fulfilled any of the applicable criteria listed. (Include description on a separate page.)

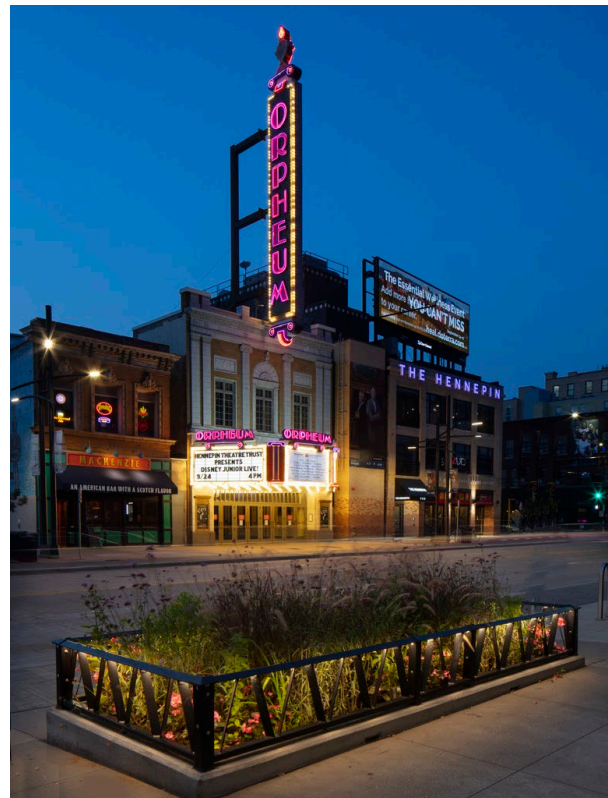
## PROJECT DESCRIPTION

The **Hennepin Avenue Downtown Reconstruction** project extends from Washington Avenue to 12<sup>th</sup> Street in the heart of the central business district. The project was initiated by the City of Minneapolis to repair and replace the street and utility infrastructure that has reached the end of its useful life. The corridor has more than 40,000 users per day walking, biking, riding transit, and driving, and the reconstruction sought to rebalance the street consistent with the city’s Complete Streets Policy. Hennepin Avenue was last reconstructed more than 30 years ago and the sewers under the streets were built in 1882; both the street and the underground utilities needed to be replaced to meet current and future needs of the city.

The infrastructure needs also provided an opportunity to revitalize the streetscape and support the activities of the businesses and arts organizations in the Hennepin Avenue Theater District. The project area is home to five theaters, a public high school, and iconic artwork such as the Bob Dylan mural. The corridor is visited by more than 250,000 theater patrons per year and many thousands who come downtown to attend events at Target Center, Target Field, and First Avenue.

The Kimley-Horn design team developed a concept for the corridor through an extensive public participation process. The guiding principles of the project were to create a place that has:

- Wide sidewalks and improved safety of pedestrian crossings
- Off-street protected bike lanes that are comfortable for people of all ages and abilities
- Green space and streetscape amenities
- Enhanced transit stops (bus rapid transit ready)
- Maintained vehicle mobility



*The Hennepin Historic Theater District is in the heart of the Hennepin Avenue Downtown project.*

### Design Challenges

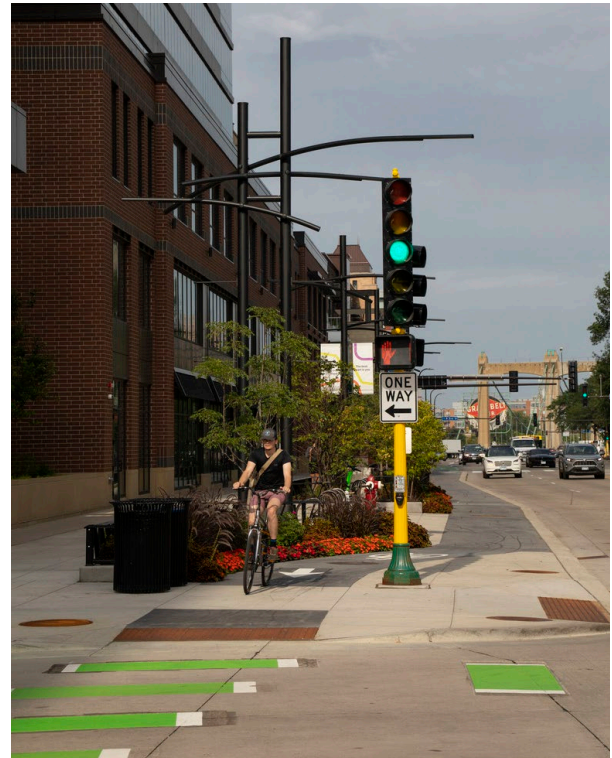
While the Hennepin Avenue corridor has 100 feet of right-of-way on most blocks, there are a lot of competing interests for this space. In addition to being a major transportation corridor through downtown Minneapolis, it is also a special street as home to the city’s theater district and numerous historic properties. It was important that the street not look like a typical city street—the design needed to convey the feeling of being “special” while still achieving the project’s transportation goals.

Hennepin Avenue is also planned to be part of the future E Line arterial bus rapid transit (BRT) line. At the eight future BRT stations along the corridor, the street design needed to safely move people on sidewalks, bikeways, and in the bus stops which are all immediately adjacent to each other.

## Design Solutions

The project design narrowed the street from 60 feet to 48 feet to provide more space and improve safety for people walking and biking along and across the corridor. One important component of the project design was the addition of a sidewalk-level protected bikeway, replacing the in-street bicycle facility that was shared with buses and general traffic. The protected bikeway is separated from vehicle traffic and is more comfortable for bicyclists of all ages and abilities. The bikeway is designed with trees, ground-level planters, lighting, and other street furnishings that provide physical separation from the sidewalk. At the bus stops where the sidewalk, bikeway, and transit station are all adjacent to each other, linear guide strips and railings were designed to delineate and allow for safe movement of people walking, biking, and accessing the transit station.

The design of the streetscape was the most important consideration for some stakeholders. Making the street green and safe were identified as high priorities, but there was also a need to accommodate large event crowds and provide space for activation. Through the streetscape visioning process, lighting was identified as the number-one priority for the corridor. The custom light poles that were designed take their influence from theater sets and the three arms on the light pole allow the bikeway, sidewalk, and street to have focused lighting that benefits public safety by lighting surfaces, rather than space. Planting of larger trees was also used to create green impact on the project right away, and planters provide an attractive look to the street during the day and when there aren't activations or events. All of these features needed to be designed in an elegant and durable project that included climate-appropriate, sustainable, and cost-effective urban design.



*The protected bikeway design was integrated with the streetscape design on Hennepin Avenue.*

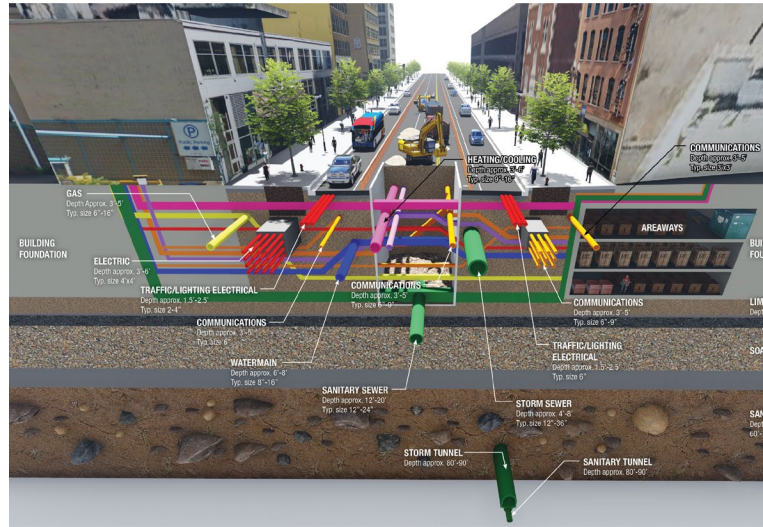
## REASONS FOR NOMINATION/CRITERIA FOR NOMINATION

### Innovative Construction Management

Building a major thoroughfare in a bustling downtown requires significant planning and coordination. This required thoughtful management from SEH as the lead for construction management. To keep this major project on track, the team's construction management approach included the following key points:

- Utility coordination
- Construction phasing
- Pedestrian and vehicle traffic management
- Schedule management

Utility coordination was especially challenging for the project—there were eight public and private utility contractors for the project. SEH developed a comprehensive map approach to coordinating and relocating utilities. The purpose of the weekly utility meetings was to determine available working spaces for crews and to ensure all utility work was being coordinated effectively and efficiently. In 2019 and into 2021, there was a significant utility relocation and improvement effort by private utility companies as well as the replacement of the aging (built in 1882) sanitary sewer trunk main.



*The Hennepin Avenue Downtown utility coordination was a critical component of the construction management.*

### Safety During Construction

Ti-Zack obtained an excellent safety record on this project, with zero lost-time injuries and more than 60,000 labor hours. This commitment to safety was key to the day-to-day success of the Hennepin Avenue Downtown reconstruction by performing the following:

- On-site consultation by Minnesota OSHA
- Comprehensive review of the Ti-Zack Concrete Inc. Safety Policy
- Cooperative effort of all 10+ prime subcontractors along with second- and third-tier subcontractors
- Creating approximately 2.5 miles of temporary walkways out of steel ramps, and temporary asphalt/concrete during the duration of the project
- Using approximately 12,000 LF of pedestrian barricades during construction
- Constantly making changes and updates to accommodate the construction progress and the traveling public

During the Hennepin Avenue Downtown Reconstruction, the city experienced one of the most significant events in the modern history of the city and the region. The death of George Floyd, and the ensuing civil unrest, and the global pandemic posed multiple new challenges as described in the “Accomplishments in Adverse Conditions” section of this narrative.

### Community Outreach

Kimley-Horn facilitated more than 200 meetings with property owners and the public during the course of the design phase. These meetings covered topics such as project design, construction phasing, public safety, assessments, streetscape design, driveway accesses, and right-of-way acquisition. Having Kimley-Horn’s project manager as well as city leadership available and accessible to stakeholders was an important part of the engagement strategy.

During construction, SEH provided weekly construction updates and held more than 100 weekly construction meetings for stakeholders. These meetings were open to all project stakeholders, businesses, property managers and property owners, and they included current construction activities, the three-week construction schedule, and coordination with property/business owners on any work that might impact their building.

### Sustainable Design

From design through construction, opportunities for greening and environmental awareness were top priorities on this project. As part of the team’s commitment to sustainable practices, the following green and placemaking elements were included in the project:

- The existing asphalt surfaces along the corridor were recycled and reused as temporary walking or driving surfaces during construction.
- All the trees that were removed from the project were delivered to the University of Minnesota to be ground up and reused as mulch on a variety of other projects.
- Used locally sourced materials from a concrete/asphalt recycler located 3.8 miles from the job site.
- Used local and regional nurseries to supply trees, perennials and shrubs.
- Irrigation system with all plantings and soils with soil moisture sensing equipment and programmable system to reduce overwatering of plant material
- Prepared and implemented a Storm Water Pollution Prevention Plan (SWPPP) for the project.
- Used energy-efficient LED lights throughout the project for dedicated pedestrian lighting, bikeway lighting, and street lighting.

### Accomplishments in Adverse Conditions

#### *Civil Unrest*

Following the death of George Floyd, there were safety concerns for the workers and staff in and near the construction project. The city held daily morning briefings for Public Works projects. Protest activities were discussed for awareness each day and directives were given to each project as needed such as what items were to be removed from sites during the pause or shut down.

On site, the construction team implemented a daily housekeeping routine to make sure no tools, loose debris, rubble, or construction materials were left accessible on site. This was done to prevent items from the construction site being used as weapons or as tools for vandalism.

#### *COVID-19 Pandemic*

As the COVID-19 pandemic arrived, the project had just begun its first phase of street construction. To keep construction moving and on schedule, the city, SEH, and all contractors developed multi-page COVID-19 policies and action plans to keep worker safe and on site working. The policies were put in place and enforced during weekly meetings. Additionally, hand washing stations were fabricated for the workers on site to abide by those policies.



*Example of a hand washing station used during Hennepin Avenue Downtown construction.*

## Value to the Public Works Profession

The protected bikeway design at intersections used a “bend-out” design to keep pedestrian crossings as short as possible (reducing exposure to vehicles), allowed for sidewalk-level crossing of the bikeway which prioritizes the pedestrians, improved sight lines between bicycles and turning vehicles, and provided greater space for pedestrian queuing between the bikeway and the street. This design was new to Minneapolis and was developed based on research and refined through workshops with the Minneapolis Pedestrian Advisory Committee, Bicycle Advisory Committee, and Committee on People with Disabilities. The bend-out design has established design precedent for several other Minneapolis projects and has since been incorporated as the city standard in the Minneapolis Street Design Guide.



*The design of Hennepin Avenue Downtown included innovative design treatments including tactile guide strips, railings, and colored pavement at the transit stations.*

The design solution implemented at the transit stations included directional tactile guide strips between the sidewalk and bikeway at the BRT stations to safely delineate the spaces for walking and biking. The tactile guide strips help people with no or low vision to safely navigate the sidewalk and cross to the transit stations. This is the first known installation of this type of tactile guide strips in Minnesota and is being used to inform the design of other projects.

## Multi-Agency Coordination

A Stakeholder Advisory Committee was formed for the project, which consisted of City of Minneapolis, Metro Transit, Minneapolis Downtown Council, Hennepin Theatre Trust, Building Owners and Managers Association, and the Downtown Minneapolis Neighborhood Association. The members of this group are key players in downtown and had different and sometimes conflicting points of view on the design and construction of the project. Kimley-Horn facilitated monthly meetings of this group throughout the two-year design phase to resolve design issues and build agency and community support for the project.

Kimley-Horn and SEH also coordinated the Hennepin Avenue Downtown project with other downtown construction projects including 8<sup>th</sup> Street Reconstruction, 4<sup>th</sup> Street Reconstruction, METRO C Line construction, the RBC Gateway development project, and the redevelopment of 240 Hennepin Avenue/17 Washington Avenue. Attention to detail and straightforward communication kept the project on track and moving forward even while many external factors were in flux.