

# Volume II – Team Proposal



## TM Form A: Development Team Structure

*Attach to this form a narrative, no longer than five pages, that clearly and succinctly describes the Proposer's proposed Development Team structure. The narrative must include:*

- 1. The role and responsibilities of the Proposer, each Major Participant, and other named subcontractors, including their relevant qualifications to perform them*
- 2. Highlights of the relevant experience of the Proposer, each Major Participant, and other named subcontractors on the Reference Projects*
- 3. Highlights of any relevant experience of the Proposer, each Major Participant, and other named subcontractors, demonstrating their experience delivering projects as part of a team*

## Development Team Structure

Created by Elon Musk, founder of Tesla and SpaceX, The Boring Company (TBC) constructs safe, fast-to-dig, low-cost, and zero-emissions transportation tunnels. Loop is a high-capacity, underground, public transportation system in which passengers are transported in Tesla vehicles through TBC-constructed tunnels.

TBC’s founder, Elon Musk, has considerable experience overseeing and financing large transportation and infrastructure projects, including projects conducted by SpaceX and Tesla. These companies have developed extremely complex transportation vehicles that serve commercial and government customers. TBC benefits from the expertise of these established companies.

TBC is a vertically integrated infrastructure provider and will act as the single contractual point of contact for the City of San José for all phases of the Project. Subconsultants and subcontractors will be engaged by TBC as needed to deliver the Project and meet the expectations of the City.

## Company Organization

TBC employs a flat organizational management structure, much like that of SpaceX and Tesla. Each of the five teams has a Team Director who reports directly to TBC’s President. Within each team, the company focuses on streamlined decision-making and diversity of experience.

Individual employees are given a large degree of autonomy, and TBC expects fast, high-quality, and safe production from both individuals and teams. TBC has intentionally maintained a small team of key staff to ensure agility in design, production, and operation. TBC’s achievements to date are in part the result of its lean management team. This streamlined decision-making process is backed by an intensive validation and verification program to ensure quality, safety, and efficacy.

**Figure 1 – TBC Organization Chart**

SYSTEMS INTEGRATION	ENVIRONMENT, HEALTH & SAFETY	TUNNEL ENGINEERING	VEHICLE ENGINEERING	FINANCE & OPERATIONS
Oversees project development to ensure the integration of tunnel and Loop design, construction, operation, and maintenance	Ensures compliance and safe design, construction, operation, and maintenance of the tunnel and Loop infrastructure	Manages and implements tunnel design, construction, inspection, and maintenance	Designs, develops, and maintains Loop vehicles and infrastructure	Organizes finances and business operations to ensure on-time, successful project development and delivery

## TM Form B: Project Delivery Experience Reference Projects

*Instructions:*

- 1. Repeat this form for a minimum of two and a maximum of four comparable projects (or comparable elements of projects) that demonstrate experience and capability fulfilling the evaluation criteria in Section 7.4.1(a)(i), (ii), and (iii) (Development Team and Project Delivery Experience) of this RFP.*
- 2. The Reference Projects listed in this TM Form B may be the same or different Reference Projects to those listed in TM Form D to demonstrate technical experience.*
- 3. In addition to completion of the relevant details within the form in Part 1, use Part 2 to provide a narrative describing in greater detail the Reference Project listed in Part 1. The narrative description should clearly explain how the Reference Project is comparable and relevant in terms of the criteria set out in Section 7.4.1(a)(i), (ii), and (iii) (Development Team and Project Delivery Experience) of this RFP and the comparable project elements listed in the form and should identify lessons learned, innovations incorporated, challenges faced, and strategies used to address those challenges. Each Proposer is reminded that any determination of comparability between a Reference Project and the Project for evaluation purposes will be made by the City at its sole discretion.*
- 4. Each Reference Project listed in this TM Form B should have been awarded within the past 15 years with a total amount financed (or required to be financed) at financial close of at least \$40m (expressed in 2022 dollars using the Cost Index defined in this RFP).*
- 5. At least one Reference Project utilized to demonstrate the evaluation criteria in Section 7.4.1(a)(ii) (Development Team and Project Delivery Experience) of this RFP must be a project where the Proposer's controlling Equity Member made a first-loss at-risk capital contribution into the ultimate special-purpose vehicle/project company of more than 5% and retains or has retained its investment position for more than five years from the project's Substantial Completion.*
- 6. The Reference Project experience listed should be that of the Proposer or an Equity Member (experiences from Affiliates of such entities is acceptable if the Proposer clearly explains in Part 2 how such experience is relevant to the criteria in Section 7.4.1(a)(i), (ii), and (iii) (Development Team and Project Delivery Experience) of this RFP and how the experience of that Affiliate will be utilized to deliver this Project; for example, through shared or seconded personnel.*
- 7. Proposers are requested to verify that contact information for owners is correct and are advised that if the contact information provided is not current, the City may elect to exclude the experience represented in determining the Proposer's experience and qualifications.*

**Part 1: Reference Project Information: Las Vegas Convention Center Loop**

**1. Project Summary**

Project name	Las Vegas Convention Center (LVCC) Loop
Project location	Las Vegas, Nevada
Project delivery method (phased PDA or other comparable delivery method and/or design-build-finance-operate-maintain [DBFOM])	Develop-Design-Build-Operate-Maintain
Proposer or Equity Member, or Affiliate	Proposer
Percent and US\$ ownership stake in the Project’s special-purpose company (if applicable)	N/A, project owned by Las Vegas Convention and Visitors Authority
Start date of contract (distinguish between any predevelopment/preconstruction contract and the implementation/DBFOM agreement, if applicable)	May 2019
Current status and % of work complete	Completed, operation began May 2021
Substantial Completion/estimated date of Substantial Completion	Complete

**2. Owner Information**

Owner name	Las Vegas Convention and Visitors Authority
Contact person	Ed Finger, CFO
Address	3150 Paradise Road, Las Vegas, NV 89109
Phone number	702-892-2993
Email address	efinger@lvcva.com

**3. Development Team Members Involved in the Reference Project**

Equity Member, other Major Participant, or other named subcontractor	Role in Reference Project
TBC	Design-Builder-Operate-Maintain

**4. Technical Details**

Transit Technology	Loop
Project length (miles)	0.83 miles (twin tunnel)
Capacity (passengers per hour per direction [PPHPD])	Greater than 2,200
Grade % (elevated, at-grade, underground)	Underground with surface transitions between 3% and 17%
Project components (e.g., linear infrastructure, stations, transit vehicle storage, transit vehicle maintenance, over station development, etc.)	Twin tunnels, 1 subsurface station, 2 surface stations, vehicle maintenance facility

**5. Comparable Reference Project Components**

Comparable project components demonstrated by the Reference Project:

Project Component	Yes	No
Project delivery under a phased PDA or another comparable delivery method that includes:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Collaborative and iterative project definition with the project owner?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Project definition alongside environmental and other approval workstreams?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Negotiation of a fixed price or revenue risk project implementation proposal?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Management of the competitive bidding of subcontractors and outreach to DBE subcontractors post-contract award?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Achieve financial close using first-loss at-risk capital?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Project delivery under a DBFOM contractual structure?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>TM Form D Questions</b>	<b>Yes</b>	<b>No</b>
Design of transit projects, including guideway, stations, and maintenance facilities, incorporating core construction elements contemplated in the Proposer’s Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction of transit projects, including guideway, stations, and maintenance facilities, incorporating core construction elements contemplated in the Proposer’s Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Supply of vehicles and design and installation of all system elements and subsystems, incorporating power systems, vehicle control systems, and communication systems identified in the Proposer’s Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Design and installation of all system elements and subsystems, incorporating power systems, vehicle control systems, and communication systems identified in the Proposer's Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Design and construction with operations planning for a transit solution to achieve performance outcomes consistent with one or more of the performance outcomes articulated in the Technical Requirements or otherwise under the RFP.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Operation of a transit system including service planning and fleet management and provision of consistently high standards of customer service.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Maintenance of a transit system including long-term asset maintenance and renewal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Design, construction, and operation of transit projects requiring coordination and liaison with multiple stakeholders such as utility owners, employees, adjacent or intersecting contractors, other public agencies and public officials, citizens impacted by the construction, residents, and other affected parties.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

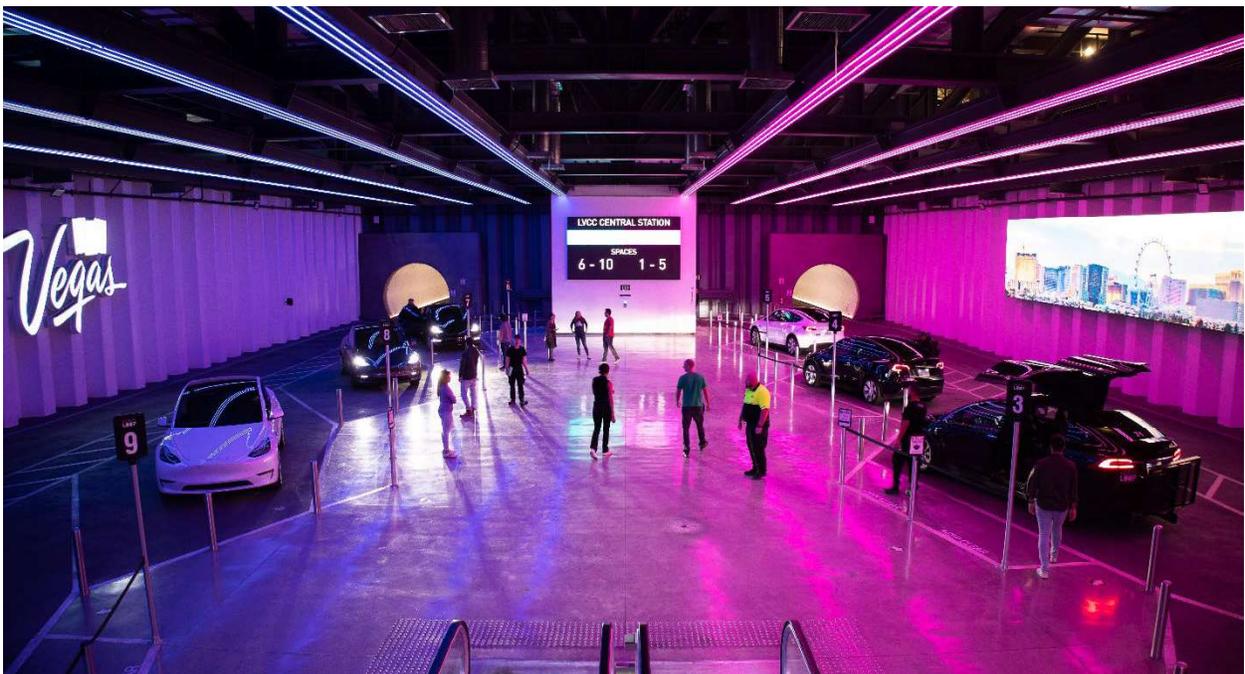
## Part 2: Reference Project Narrative: Las Vegas Convention Center Loop

TBC contracted with the Las Vegas Convention and Visitors Authority to design, construct, operate, and maintain a Loop system for the Las Vegas Convention Center (LVCC). LVCC Loop serves four stations, connecting the existing campus (North, Central, and South Halls) with the new West Hall and extending to Vegas Loop. The 0.83-mile twin tunnel system was constructed in approximately one year and has reduced the 45-minute cross-campus journey time to approximately two minutes.

Figure 2 – Tesla Model 3 Inside the LVCC Loop Tunnel



Figure 3 – Interior View of Central Station (Subsurface Station) at LVCC Loop



### SJC Loop

Norman Y. Mineta International Airport and Downtown San José Diridon Station

**Part 1: Reference Project Information: Resorts World LVCC Connector**

**1. Project Summary**

Project name	Resorts World – LVCC Connector
Project location	Las Vegas, Nevada
Project delivery method (phased PDA or other comparable delivery method and/or design-build-finance-operate-maintain [DBFOM])	DBFOM via concession/franchise agreement
Proposer or Equity Member, or Affiliate	Proposer
Percent and US\$ ownership stake in the Project’s special-purpose company (if applicable)	100%
Start date of contract (distinguish between any predevelopment/preconstruction contract and the implementation/DBFOM agreement, if applicable)	February 2021
Current status and % of work complete	Completed, operation began June 2022
Substantial Completion/estimated date of Substantial Completion	Complete
Construction cost at financial close (in 2022 dollars using the Cost Index defined in this RFP)	Unable to disclose

**2. Owner Information**

Owner name	Resorts World Las Vegas
Contact person	Gerald Gardner General Counsel & SVP of Govt. Affairs
Address	3000 Las Vegas Blvd S Las Vegas, NV 89109
Phone number	702-286 - 4818
Email address	gerald.gardner@rwlasvegas.com

**3. Development Team Members Involved in the Reference Project**

Equity Member, other Major Participant, or other named subcontractor	Role in Reference Project
TBC	DBFOM Developer

**4. Technical Details (TM Form D)**

Transit Technology	Loop
Project length (miles)	0.43
Capacity (passengers per hour per direction [PPHPD])	Greater than 400
Grade % (elevated, at-grade, underground)	Underground with surface transitions between 3% and 17%
Project components (e.g., linear infrastructure, stations, transit vehicle storage, transit vehicle maintenance, over station development, etc.)	Tunnel, ramp to surface, egress shaft, cross passage, direct connection to Resorts World Las Vegas, station retrofit in existing parking structure.

**5. Comparable Reference Project Components**

Comparable project components demonstrated by the Reference Project:

<b>Project Component</b>	<b>Yes</b>	<b>No</b>
Project delivery under a phased PDA or another comparable delivery method that includes:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Collaborative and iterative project definition with the project owner?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Project definition alongside environmental and other approval workstreams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Negotiation of a fixed price or revenue risk project implementation proposal?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Management of the competitive bidding of subcontractors and outreach to DBE subcontractors post-contract award?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Achieve financial close using first-loss at-risk capital?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Project delivery under a DBFOM contractual structure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>TM Form D Questions</b>	<b>Yes</b>	<b>No</b>
Design of transit projects, including guideway, stations, and maintenance facilities, incorporating core construction elements contemplated in the Proposer's Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction of transit projects, including guideway, stations, and maintenance facilities, incorporating core construction elements contemplated in the Proposer's Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Supply of vehicles and design and installation of all system elements and subsystems, incorporating power systems, vehicle control systems, and communication systems identified in the Proposer's Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Design and installation of all system elements and subsystems, incorporating power systems, vehicle control systems, and communication systems identified in the Proposer's Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Design and construction with operations planning for a transit solution to achieve performance outcomes consistent with one or more of the performance outcomes articulated in the Technical Requirements or otherwise under the RFP.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Operation of a transit system including service planning and fleet management and provision of consistently high standards of customer service.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Maintenance of a transit system including long-term asset maintenance and renewal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Design, construction, and operation of transit projects requiring coordination and liaison with multiple stakeholders such as utility owners, employees, adjacent or intersecting contractors, other public agencies and public officials, citizens impacted by the construction, residents, and other affected parties.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Part 2: Reference Project Narrative: Resorts World LVCC Connector

The Resorts World - LVCC Connector is a 0.43-mile Loop tunnel connecting Resorts World Las Vegas resort and casino to the LVCC West Hall. Tunneling was completed in 2022 and provides a convenient and direct connection between Resorts World and exhibition spaces at LVCC. The Resorts World - LVCC Connector is the first expansion of Vegas Loop, which will connect key destinations along the Las Vegas Strip and beyond.

Figure 4 – Resorts World – Las Vegas Convention Center (LVCC) Connector

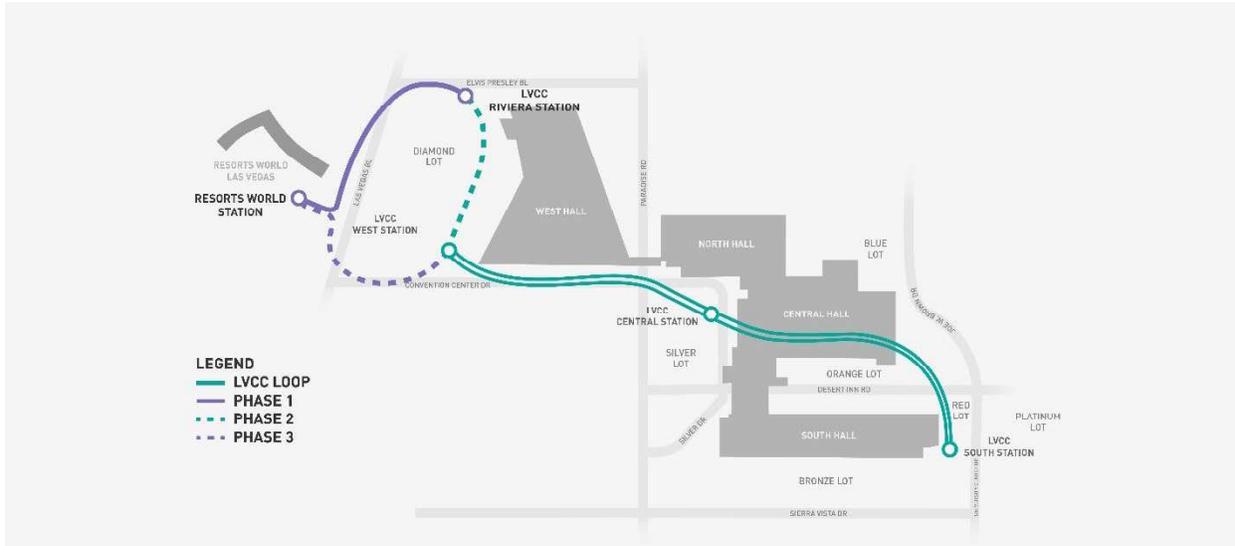
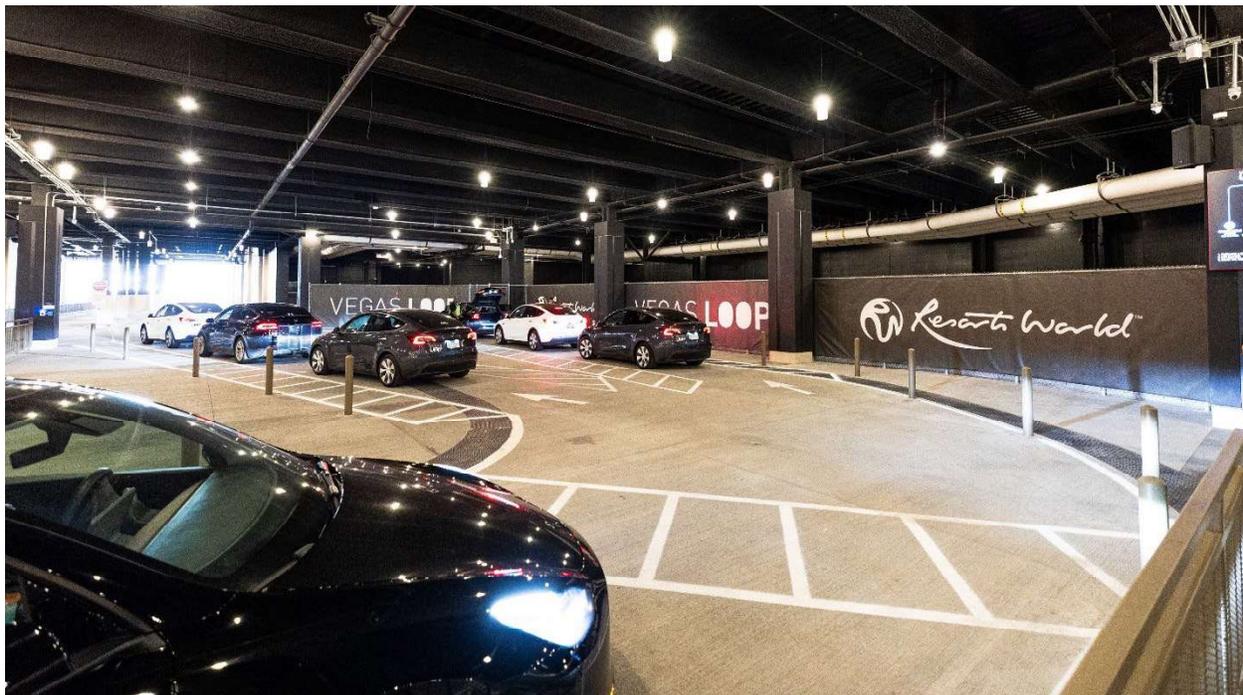


Figure 5 – Resorts World Station



### SJC Loop

Norman Y. Mineta International Airport and Downtown San José Diridon Station

**Part 1: Reference Project Information Vegas Loop**

**1. Project Summary**

Project name	Vegas Loop
Project location	Las Vegas, Nevada
Project delivery method (phased PDA or other comparable delivery method and/or design-build-finance-operate-maintain [DBFOM])	DBFOM via concession/franchise agreement
Proposer or Equity Member, or Affiliate	Proposer
Percent and US\$ ownership stake in the Project’s special-purpose company	100%
Start date of contract	10/20/2021
Current status and % of work complete	Ongoing, 10% complete
Substantial Completion/estimated date of Substantial Completion	2024 estimated
Construction cost at financial close (in 2022 dollars using the Cost Index defined in this RFP)	\$800M

**2. Owner Information**

Owner name	The Boring Company
Contact person	Michael Thompson
Address	3395 Cambridge Street, Las Vegas, CA
Phone number	310-936-5063
Email address	mike@boringcompany.com

**3. Development Team Members Involved in the Reference Project**

Equity Member, other Major Participant, or other named subcontractor	Role in Reference Project
TBC	DBFOM Developer

**4. Technical Details (TM Form D)**

Transit Technology	Loop
Project length (miles)	35 miles
Capacity (passengers per hour per direction [PPHPD])	28,800
Grade % (elevated, at-grade, underground)	Underground with surface transitions between 3% and 17%
Project components	Tunnel, ramp to surface station, surface station, underground stations, operations and maintenance

**5. Comparable Reference Project Components**

Comparable project components demonstrated by the Reference Project:

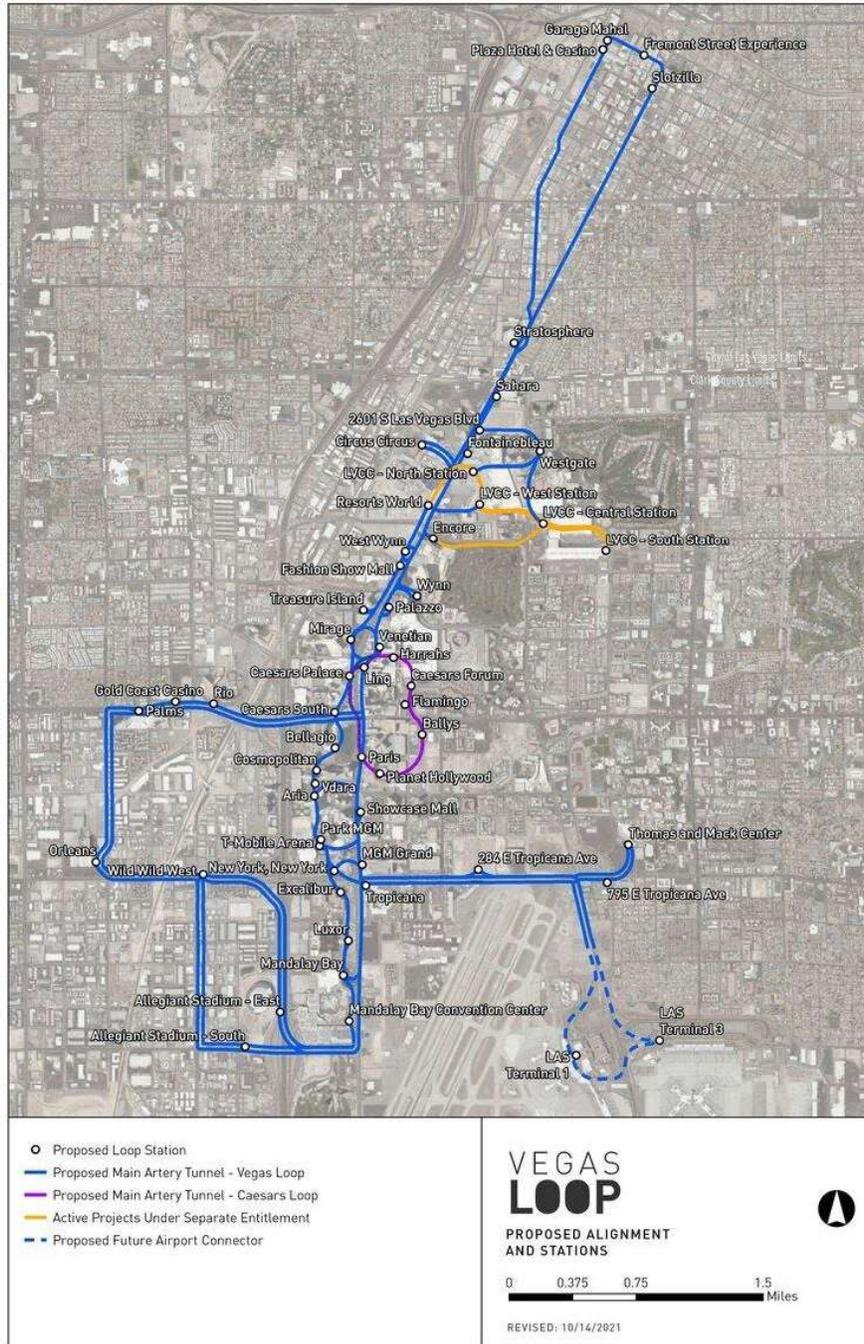
<b>Project Component</b>	<b>Yes</b>	<b>No</b>
Project delivery under a phased PDA or another comparable delivery method that includes:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Collaborative and iterative project definition with the project owner?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Project definition alongside environmental and other approval workstreams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Negotiation of a fixed price or revenue risk project implementation proposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Management of the competitive bidding of subcontractors and outreach to DBE subcontractors post-contract award?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Achieve financial close using first-loss at-risk capital?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Project delivery under a DBFOM contractual structure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>TM Form D Questions</b>	<b>Yes</b>	<b>No</b>
Design of transit projects, including guideway, stations, and maintenance facilities, incorporating core construction elements contemplated in the Proposer's Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction of transit projects, including guideway, stations, and maintenance facilities, incorporating core construction elements contemplated in the Proposer's Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Supply of vehicles and design and installation of all system elements and subsystems, incorporating power systems, vehicle control systems, and communication systems identified in the Proposer's Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Design and installation of all system elements and subsystems, incorporating power systems, vehicle control systems, and communication systems identified in the Proposer's Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Design and construction with operations planning for a transit solution to achieve performance outcomes consistent with one or more of the performance outcomes articulated in the Technical Requirements or otherwise under the RFP.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Operation of a transit system including service planning and fleet management and provision of consistently high standards of customer service.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Maintenance of a transit system including long-term asset maintenance and renewal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Design, construction, and operation of transit projects requiring coordination and liaison with multiple stakeholders such as utility owners, employees, adjacent or intersecting contractors, other public agencies and public officials, citizens impacted by the construction, residents, and other affected parties.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Part 2: Reference Project Narrative: Vegas Loop**

TBC is currently developing Vegas Loop, a 35-mile Loop system that will connect more than 50 popular destinations along the Las Vegas resorts corridor to Harry Reid International Airport, Allegiant Stadium, and Downtown Las Vegas. The project is currently in varying phases of design, permitting, and construction within the City of Las Vegas and Clark County. When complete, a Loop ride from Downtown Las Vegas to Harry Reid International Airport is expected to take seven minutes.

**Figure 6 – Proposed Systemwide Map for Vegas Loop**



**SJC Loop**

Norman Y. Mineta International Airport and Downtown San José Diridon Station

**Part 1: Reference Project Information: Hawthorne Tunnel**

**1. Project Summary**

Project name	Hawthorne Tunnel
Project location	Hawthorne, California
Project delivery method (phased PDA or other comparable delivery method and/or design-build-finance-operate-maintain [DBFOM])	DBFOM via concession/franchise agreement
Proposer or Equity Member, or Affiliate	Proposer
Percent and US\$ ownership stake in the Project’s special-purpose company	100%
Start date of contract	August 2017
Current status and % of work complete	Complete
Substantial Completion/estimated date of Substantial Completion	Complete
Construction cost at financial close (in 2022 dollars using the Cost Index defined in this RFP)	\$10 million

**2. Owner Information**

Owner name	SpaceX
Contact person	Matthew Thompson, Senior Director, Environmental Health & Safety, Facilities
Address	1 Rocket Road, Hawthorne, CA 90250
Phone number	310-970-3611
Email address	matthew.thompson@spacex.com

**3. Development Team Members Involved in the Reference Project**

Equity Member, other Major Participant, or other named subcontractor	Role in Reference Project
TBC	DBFOM Developer

**4. Technical Details (TM Form D)**

Transit Technology	Loop
Project length (miles)	1.14
Capacity (passengers per hour per direction [PPHPD])	Not rated, R&D tunnel
Grade % (elevated, at-grade, underground)	Underground

Project components	Tunnel, ramp to surface station, vehicle elevator, operations and maintenance
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**5. Comparable Reference Project Components**

Comparable project components demonstrated by the Reference Project:

<b>Project Component</b>	<b>Yes</b>	<b>No</b>
Project delivery under a phased PDA or another comparable delivery method that includes:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Collaborative and iterative project definition with the project owner?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Project definition alongside environmental and other approval workstreams?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Negotiation of a fixed price or revenue risk project implementation proposal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Management of the competitive bidding of subcontractors and outreach to DBE subcontractors post-contract award?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Achieve financial close using first-loss at-risk capital?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Project delivery under a DBFOM contractual structure?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>TM Form D Questions</b>	<b>Yes</b>	<b>No</b>
Design of transit projects, including guideway, stations, and maintenance facilities, incorporating core construction elements contemplated in the Proposer’s Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction of transit projects, including guideway, stations, and maintenance facilities, incorporating core construction elements contemplated in the Proposer’s Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Supply of vehicles and design and installation of all system elements and subsystems, incorporating power systems, vehicle control systems, and communication systems identified in the Proposer’s Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Design and installation of all system elements and subsystems, incorporating power systems, vehicle control systems, and communication systems identified in the Proposer’s Transit Solution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Design and construction with operations planning for a transit solution to achieve performance outcomes consistent with one or more of the performance outcomes articulated in the Technical Requirements or otherwise under the RFP.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Operation of a transit system including service planning and fleet management and provision of consistently high standards of customer service.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Maintenance of a transit system including long-term asset maintenance and renewal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Design, construction, and operation of transit projects requiring coordination and liaison with multiple stakeholders such as utility owners, employees, adjacent or intersecting contractors, other public agencies and public officials, citizens impacted by the construction, residents, and other affected parties.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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## Part 2: Reference Project Narrative: Hawthorne Tunnel

TBC designed, funded, and constructed a research and development Test Tunnel in Hawthorne, California. The 1.14-mile tunnel runs beneath public right-of-way (Hawthorne Airport and 120<sup>th</sup> Street) between two stations, both on TBC-owned property. TBC has reduced average tunneling costs below public industry standards through several innovations and improvements, including:

- Internalizing precast concrete segment production, large portions of TBM manufacturing, and geotechnical and concrete testing;
- Converting a diesel locomotive to an all-electric, 25-ton locomotive;
- Developing alternative methods of muck removal; and
- Streamlining environmental, planning, design, and construction permit approvals for Loop technology in an urban environment.

As a result of these cost reduction measures, the Hawthorne Tunnel cost approximately \$10 million, including internal tunnel infrastructure.

**Figure 7 – Interior of Hawthorne Tunnel in California**



## **TS Form C: Project Understanding**

*Attach to this form a narrative, no longer than 10 pages, that demonstrates the Proposer's understanding of the Project. The narrative must briefly describe:*

- 1. Risks, challenges, and opportunities of the Project*
- 2. How the Proposer's experience on other projects will be utilized to address the major elements of the Project scope that will require focus and present the greatest risk to successful delivery of the Project.*

*In each case the Proposer must reference where equivalent risks, challenges or opportunities have been experienced on Reference Projects, including drawing or diagrams for specific examples from the reference projects, and how that has informed the Proposer's understanding of and ability to manage this Project.*

## Project Understanding

TBC understands the City of San José is seeking to implement a dedicated guideway transit system to connect the Norman Y. Mineta International Airport (SJC) and Diridon Station. The Project will advance local and regional sustainability goals and create a scalable transit service that enables future linkage of major sites within the City and other major sites in the Bay Area. Utilizing Loop, TBC will integrate the Project into the fabric of downtown San José, energizing the area and encouraging transit usage as well as other mobility modes.

TBC exists to create safe, fast-to-dig, and low-cost tunnels to enable rapid point-to-point transportation and transform cities. We are excited for the opportunity to partner with the City of San José to deploy Loop in one of the nation's largest cities known for technology and innovation. The rapid passenger growth at both SJC and Diridon Station demonstrates a strong need for a fast, reliable, and low-cost transit solution that is expandable throughout the region to serve major job centers.

As with all large transit infrastructure projects, SJC Loop will experience risks and challenges in its deployment. TBC will rely on its experience working in other jurisdictions to guide project development and work collaboratively with the City of San José to mitigate these risks and rapidly deploy the Project. TBC has found that risks can be grouped into the following categories: political, financial, geotechnical, and technological. Each category is briefly discussed below.

### Political

Political alignment for the development of infrastructure is critical to obtaining the permission necessary to build and operate. The City has advanced the Project to its current stage by working with a broad stakeholder group to build support and by considering innovative delivery models and mobility technologies.

As an infrastructure developer, TBC appreciates the level of effort that the City has undertaken thus far and is prepared to work collaboratively with the City to bring the Project to life. For the Vegas Loop project, TBC has worked closely with Clark County, the City of Las Vegas, as well as dozens of local stakeholders to gain support for and advance the Project through key milestones including receiving unanimous votes in favor of the project agreements and use permits by the Clark County Commission and Las Vegas City Council. Aligning transit system design and construction plans with the goals of project stakeholders, maintaining close communication, and engaging the community has enabled rapid deployment in Las Vegas. TBC intends to follow a similar model in San José to ensure project success.

### Financial

Transit infrastructure projects are notoriously expensive to construct and operate and therefore frequently require heavy tax subsidies to be built and to continue to operate. This is especially true for dedicated guideway systems. Dedicated guideways provide the best and fastest transit experience but are often onerously expensive to construct and are therefore not economically viable. Because of Loop's

low cost to deploy and operate, SJC Loop's financials require significantly less revenue collection to offset debt service and operating costs.

TBC has been involved in projects funded by public agencies (Las Vegas Convention Center Loop) and projects that have been funded through future revenue collection (LVCC Resorts World Connector and Vegas Loop). TBC will utilize its experience in multiple project delivery methods to successfully navigate the PDA process with the City and its affiliates. As a vertically integrated developer, design-build contractor, financier, and O&M provider, TBC will implement cost control policies that have already achieved dramatically reduced per-mile costs for its transit systems to realize similar savings on SJC Loop.

TBC's ability to bring SJC Loop into operation at a low cost, combined with TBC's strong balance sheet and full equity stake in the Project create opportunities for local taxpayers to receive a world class transportation system with zero financial obligation or risk.

### **Geotechnical**

Tunnel construction has the potential to encounter buried structures and contaminants or cause settlement to nearby structures. To mitigate these risks, TBC implements an industry-standard subsurface risk assessment and mitigation procedure across its projects.

Shortly after receiving notice to proceed from the City, TBC will commence work to characterize the ground conditions, confirm the material properties of the overlying strata, and provide the data needed to prepare settlement calculations for infrastructure along the alignment such as bridges, elevated guideways, utilities, and roads. TBC will complete a records review of known sites with environmental contaminants within the study area and conduct chemical testing of soil and groundwater to assess the presence of these constituents. Similar reviews will be prepared for cultural and paleontological resources.

The results of these investigations will feed into a project-specific Settlement Monitoring Plan, Risk Mitigation Plan, Soil and Groundwater Management Plan, and Cultural Resources Monitoring Plan stipulating risk mitigation and compliance measures to be followed during construction. For example, TBC will conduct settlement monitoring of roadways and critical structures in accordance with the project-specific Settlement Monitoring Plan prior to construction up to the point of commissioning the tunnel for use. TBC will use surface monitoring point arrays as shown in

Figure 8 that are attached to the road and major structures. These arrays will measure even the slightest deflection as the TBM excavates.

**Figure 8 – Settlement Monitoring Prisms**



TBC has implemented these practices on the Hawthorne Tunnel, LVCC Loop, Resorts World-LVCC Connector, and Vegas Loop projects. These practices have led to zero incidents or insurance claims and full compliance with project performance standards and applicable regulations.

### **Technological**

Technological risks include the risks pertaining to the technology used to construct, operate, and maintain the Project.

As described below, TBC has deployed multiple commercial projects demonstrating TBC’s ability to construct tunnels at a cost of roughly \$10-15 million per mile. TBC will continue to develop tunneling technology throughout the PDA Phase, enabling the Project to reap the benefits of more advanced technology before construction starts, including increased tunneling speed, lower cost per mile, and others.

Loop utilizes a fleet of Tesla vehicles which, in addition to being interchangeable and flexible, receive over-the-air software updates. These features mitigate risks of vehicle obsolescence and points of failure within the transit system.

## TM Form D: Technical Experience:

*Instructions:*

1. *Repeat this form for a minimum of four and a maximum of six comparable Reference Projects (or comparable elements of projects) that demonstrate experience and capability fulfilling the evaluation criteria in Section 7.4.1(b) (Technical Experience) of the RFP.*
2. *The Reference Projects listed in this TM Form D may be the same or different Reference Projects to those listed in TM Form B to demonstrate project delivery experience.*
3. *The Reference Projects listed in this TM Form D should be relevant and applicable to the Transit Solution proposed by the Proposer under its Proposal.*
4. *In addition to completion of the relevant details within the form in Part 1, use Part 2 to provide a narrative describing in greater detail the Reference Project listed in Part 1. The narrative description should clearly explain how the Reference Project is comparable and relevant in terms of the criteria set out in Section 7.4.1(b) (Technical Experience) of this RFP and the Transit Solution proposed by the Proposer and should identify lessons learned, innovations incorporated, challenges faced, and strategies used to address those challenges. Each Proposer is reminded that any determination of comparability between a Reference Project and the Project for evaluation purposes will be made by the City at its sole discretion.*
5. *Each Reference Project listed in this TM Form D should have been awarded within the past 15 years with a total amount financed (or required to be financed) at financial close of at least \$40m (expressed in June 30, 2022, dollars using the Cost Index defined in this RFP).*
6. *The Reference Project experience submitted should be the experience of the Proposer, an Equity Member, or a Major Participant provided that the Reference Projects submitted include at least one Reference Project demonstrating:*
  - a. *Design and engineering experience relevant to the proposed Transit Solution or Transit Infrastructure*
  - b. *Construction experience relevant to the proposed Transit Solution or Transit Infrastructure*
  - c. *Transit vehicle, systems, and technology experience relevant to the proposed Transit Technology*
  - d. *Transit operation and maintenance experience relevant to the proposed Transit Technology*
7. *Experience from Affiliates is acceptable if the Proposer clearly explains in Part 2 how such experience is relevant to the criteria in Section 7.4.1(b) (Technical Experience) of the RFP and how the experience of that Affiliate will be utilized to deliver this Project; for example, through shared or seconded personnel.*
8. *Proposers are requested to verify that contact information for owners is correct and are advised that if the contact information provided is not current, the City may elect to exclude the experience represented in determining the Proposer's experience and qualifications.*

## Technical Capability and Experience

Since TBC is an integrated transportation developer, TBC's projects for TM Form B and TM Form D are the same. TM Form D information has been combined with TM Form B: Project Delivery Experience Reference Projects to avoid repetition.

TBC's experience as an integrated service provider delivering the Las Vegas Convention Center Loop, LVCC Resorts World Connector, and current work deploying Vegas Loop demonstrates TBC's capability to plan, design, construct, and operate a high-speed transit connection between SJC and Diridon Station. Vegas Loop is the largest underground transit project being developed in the United States and embodies potential future expansion opportunities for SJC Loop, with connections beyond SJC and Diridon Station.

Once work commences on SJC Loop, TBC will engage with the City and other stakeholders to advance additional spurs, connections, and stations to maximize the usefulness of the system for all San Joséans and visitors. Any Loop tunnel can be easily expanded to connect to other key destinations within the City of San José and beyond.

TBC's founder, Elon Musk, has considerable experience overseeing and financing large transportation and infrastructure projects, including projects conducted by SpaceX and Tesla. These companies have developed extremely complex transportation vehicles that serve commercial and government customers. TBC benefits from the expertise of these established companies and TBC's technical approach and team described herein provides the City the experience needed to deliver an expedited project that meets stakeholder and user expectations.

## **Financial Capacity and Experience**

### **Financial Statements of Equity Members**

Due to confidentiality matters, TBC is providing the attached letter of financial standing to meet the intent of the requested documentation.



October 17, 2022

TO: City of San José  
Attn: CIP Procurement Manager  
200 E. Santa Clara St.  
San José, CA 95113

Re: Capitalization and Financials

Dear Procurement Manager:

The Boring Company (TBC) is excited about the opportunity to construct and operate the SJC Loop project.

This letter serves in lieu of providing financial statements due to privacy reasons. Upon my own review of the financial statements, I can certify that they do not contain any untrue statements of fact, nor do they omit a material fact necessary for reporting accurate financial information.

Best Regards,

Arun Prakash  
Chief Financial Officer

**TM Form E: Financial Summary Certification**

Complete and submit a separate TM Form E for each of the following Development Team members. Check the appropriate box to indicate applicable Development Team member.

- 1. Each Equity Member
- 2. Lead D&C unless the Lead D&C Contractor has only been procured to provide preconstruction services during the PDA phase)

Provide the following summary of financial information for the three most recent completed fiscal years.

	Most Recent Year <sup>a</sup>	Previous Year <sup>a</sup>	Previous Year <sup>a</sup>
Equity Member or Lead D&C Contractor (if applicable)	N/A	N/A	
Fiscal year	N/A	N/A	
Role within the Proposer	N/A	N/A	
Total revenues	N/A	N/A	
Earnings from operations (EBITDA)	N/A	N/A	
Interest expense	N/A	N/A	
Net income	N/A	N/A	
Current assets	N/A	N/A	
Cash and cash equivalents	N/A	N/A	
Other current assets <sup>b</sup>	N/A	N/A	
Accounts receivable	N/A	N/A	
Total assets <sup>b</sup>	N/A	N/A	
Current liabilities	N/A	N/A	
Accounts payable	N/A	N/A	
Current portion of long-term debt	N/A	N/A	
Long-term debt	N/A	N/A	
Total debt	N/A	N/A	
Total equity <sup>c</sup>	N/A	N/A	
Gearing <sup>d</sup>	N/A	N/A	

**Notes:**

Information should be derived from audited financial statements where possible. Audited financial statements will prevail over information provided in this table.

<sup>a</sup>Amounts must be expressed in thousands (000s) of US\$. Where applicable, entities should indicate the conversion to US\$ using the exchange rate prevailing on the last day of the applicable fiscal year.

<sup>b</sup>Current assets excluding cash and cash equivalents, accounts receivable, and inventories.

<sup>c</sup>Excludes goodwill and intangibles.

<sup>d</sup>Long-term debt/total equity.

I hereby certify that the foregoing is complete, true, and correct, and that I, the undersigned, am the chief financial officer, treasurer, or equivalent officer of the entity to which this form relates. The signatory must attach evidence of his/her authority to sign on behalf of the entity.

Name: Arun Prakash	Title: Chief Financial Officer	Date: 10-12-2022
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### **Availability of First Risk Loss**

Please find attached a funding letter from The Boring Company, which is the sole equity member in the Project.



October 17, 2022

TO: City of San José  
Attn: CIP Procurement Manager  
200 E. Santa Clara St.  
San José, CA 95113

Re: Funding Letter

Dear Procurement Manager:

The Boring Company (TBC) is excited about the opportunity to construct and operate the SJC Loop project.

Best Regards,

Arun Prakash  
Chief Financial Officer

## **TM Form F: Project Finance and Investment Experience**

*Attach to this form a narrative, no longer than three pages, that clearly and succinctly describes, with reference to experience on the Reference Projects submitted under submittal 1.2 of this Volume 2, details of the Equity Members':*

- 1. Project finance and investment experience*
- 2. Ability to structure, negotiate, and successfully obtain financing for comparable asset types*
- 3. Experience in delivering and maintaining equity investments in similar revenue risk design-build-finance-operate-maintain (DBFOM)*
- 4. Familiarity with the types of financing structures and instruments potentially available*

### Relevant Experience Executing Infrastructure Project Financing

Since its inception in 2017, TBC has successfully raised over \$900,000,000 of equity capital and has generated significant revenue through construction milestone payments and operating and maintenance fees.

- In 2019, TBC raised a \$113 million Series A financing round.
- In 2018, TBC raised a \$120 million Series B financing round.
- In 2019, TBC executed the fixed-price construction contract of \$44 million for the LVCC Loop project, which finances construction costs in the form of milestone payments, and a related operations contract to finance ongoing O&M costs is also in development for the project. After scope increases, this project has generated \$49 million.
- In 2022, TBC raised a \$675 million Series C financing round.

In addition, TBC has active construction and operations contracts which allow TBC to finance multiple projects and its operations for the foreseeable future.

TBC will utilize the above sources of funding to finance not only the PDA Phases and Implementation Phase, but also the deployment of the Project throughout construction and operation. Zero public dollars will be needed for SJC Loop; the Project will be 100% privately financed by The Boring Company and the positive cash flows generated from operating the system.

TBC's project finance experience involves the effective management and deployment of company cash reserves. By leveraging the company balance sheet, TBC provided interim equity financing to the LVCC Loop project between milestone payments. TBC is now in the process of developing Vegas Loop, a 35-mile underground transportation system that is entirely privately financed. The tunnels, which are at various stages of design, construction, and operation, are being financed entirely by TBC's balance sheet cash and operational revenues.

## TM Form G: Investment Track Record

Complete and submit a TM Form G for each Equity Member, as applicable. The projects listed here must at least include those provided by an Equity Member for TM Form B but may include additional projects.

Instructions for completing each numbered column

1. For the column labeled "1," list the projects and the names of their procuring agencies in which the Equity Member, in its capacity as first-loss at-risk capital investor (actual or potential) in a project, were short-listed or otherwise invited to submit a proposal. Each project listed must have the following characteristics: (a) long-term revenue risk design-build-finance-operate-maintain (DBFOM) model; (b) total design and construction costs similar to those of the Project; and (c) a first-loss at-risk capital contribution (actual or potential) into the ultimate special-purpose vehicle/developer/project company of more than 5% of the total amount financed at financial close by the Equity Member.
2. For the column labeled "2," with respect to the projects listed in the column labeled "1," (a) list projects that have not yet required final financial proposals to be submitted, and (b) list the projects for which the Equity Member submitted compliant, final technical, and financial proposals.
3. For the column labeled "3," list each project that was included in the column labeled "1" but not included in the column labeled "2." For each such project, provide (a) the procuring agency and a contact name and phone number, and (b) a brief explanation for why the Equity Member did not submit compliant final technical and/or financial proposals, or for not remaining engaged in the procurement process for that project as a first-loss at-risk capital investor on a team that submitted a compliant final proposal (as applicable). Explanations may be attached in a separate sheet, if necessary.
4. For the column labeled "4," list the projects for which the Equity Member was a first-loss at-risk capital investor (actual) at the time of financial close. Each project listed must have the following characteristics: (a) long-term revenue risk DBFOM model; (b) have reached financial close within the past 15 years; (c) total design and construction costs similar to those of the Project; and (d) a first-loss at-risk capital contribution into the ultimate special-purpose vehicle/developer/project company of more than 5% by the Equity Member. Highlight any project in this column that reached financial close but was later terminated or cancelled and provide a detailed explanatory footnote for each one.

To preserve confidentiality, only public projects are included below. TBC is developing many other projects as the developer or with private clients.

<b>Equity Member in the Developer</b>	<b>1. Projects for which the Equity Member(s) was/were short-listed</b>	<b>2. Projects with proposal submissions or pending proposal submissions</b>	<b>3. Projects for which there were withdrawals from, or other changes in, procurement</b>	<b>4. Projects that reached financial close</b>
The Boring Company	<ul style="list-style-type: none"> <li>• Denver International Airport Loop</li> <li>• O'Hare Express System Project</li> <li>• Autonomous Transit Tunnel Connecting Ontario Airport and Metrolink at Rancho Cucamonga Station</li> </ul>	<ul style="list-style-type: none"> <li>• City of Fort Lauderdale – Las Olas Loop (PDA executed)</li> <li>• Alamo RMA – Alamo Loop (selected)</li> <li>• City of North Miami Beach Loop (pending)</li> </ul>	<ul style="list-style-type: none"> <li>• Denver International Airport Loop (project cancelled by client)</li> <li>• Autonomous Transit Tunnel Connecting Ontario Airport and Metrolink at Rancho Cucamonga Station (project did not progress to PDA phase)</li> </ul>	<ul style="list-style-type: none"> <li>• Las Vegas Convention Center Loop</li> <li>• Resorts World LVCC Connector</li> <li>• SpaceX - Hawthorne R&amp;D Tunnel</li> <li>• Vegas Loop</li> </ul>