

Scope of Services

The TJKM Team will carry out all of the tasks required for this project as described on the following pages.

Task 1 Project Management

Project Coordination

The TJKM Team will assure that the City's Project Manager is kept well-informed about the project throughout the project duration. We propose the following approach:

- Hold weekly conference calls with City Project Manager and monthly face-to-face meetings with City of Mountain View staff technical review committee to review project status and discuss key issues. During these calls, we will discuss various project deliverables including stakeholder meeting agendas and minutes, community outreach events, proposed alternatives, preferred alternative, draft plan, and final plan documents.
- Participate in additional calls and meet with City staff, as needed at key stages during the planning effort to review key ideas, products, deliverables, project status and overall project direction, and budget.
- Manage all aspects of the project to maintain project schedule and budget, maintain continuous liaison with the City and other stakeholders.
- Prepare and submit monthly progress status updates to the City. The reports will include progress of work, status of public involvement, updated project schedule, information/decisions required to maintain schedule and complete deliverables, any challenges encountered that may affect schedule; budget or work products, and anticipated work products for the following month.
- Prepare and implement a project coordination plan for involving Caltrans, VTA, the Santa Clara Valley Water District, California Fish and Wildlife Department, BCDC, PG&E, NASA/Ames and other agencies that may provide design input, suggestions, or restrictions for implementation of the improvements.

Project Kick-Off Meeting

The TJKM Team will schedule and attend a project kick-off meeting with the City Staff as soon as possible following the Notice to Proceed. The purpose of the meeting will be to review and finalize the scope of work, schedule and other relevant aspects including:

- Project goals and objectives
- Refine the Scope of Work and identify critical milestones
- Opportunities and constraints
- Information needs
- Critical data/issues that may influence the study
- Finalize project schedule, including approach to public outreach

Task 1 Deliverables

- ✓ Meeting summaries with discussion points and action items
- ✓ Final scope of work and schedule

Task 2 Data Collection and Analysis

Immediately after receiving the Notice-to-Proceed, the TJKM Team will perform site investigations and review all available documentation. We will conduct field investigations to verify project constraints and utility locations. This task will consist of compiling and reviewing existing data pertinent to the Project and performing site investigations necessary to verify the projects limits, criteria and scope. TJKM Team activities will include the following during this task:

Site Visit/Evaluate Existing Conditions

The TJKM Team will visit the Project sites to identify existing conditions, evaluate opportunities and identify constraints. We will compile both a photographic log and field notes of the investigation. After completing the field review, TJKM Team will compile base maps using the City and County's GIS information and aerial photogrammetry provided by the City. We will incorporate potable water, recycled water, storm drain, and sewer information into the base drawing. We will assemble the drawings in AutoCAD Civil 3D format for use in final design.

Review Record Data, Studies, and Relevant Project Information

The TJKM Team will obtain and review available data and information necessary for evaluation the feasibility of improvements of the Project. This information may be obtained from the City, VTA, Caltrans, SCVWD, NASA/ Ames, utility companies, or other organizations. We will compile available project information, right of way record maps, utility occupation drawings, block maps, and third party utility as-built information of record to supplement the base drawings and begin the utility verification process. Data to be reviewed and analyzed includes but is not limited to the following:

- North Bayshore Precise Plan, development proposals, and related traffic studies;
- Previous report(s) or documents related to the proposed project area;
- As-built plans from City, Caltrans, SCVWD, and other agencies;
- City, Caltrans, SCVWD, PG&E, and other related design policies and standards; and
- Utility Maps, policies and procedures.

Survey Services

It is assumed by TJKM Team that the City will provide ARC-GIS aerial topo or photo for the purposes of preparing preliminary design. Additionally, the TJKM Team has established an allowance for Aerial Topo/Survey Services in direct costs to supplement the information received by the City.

The TJKM Team will map existing right of way from record maps and prepare base mapping in CAD to supplement the Project information. We will assist the City in identifying potential right of way conflicts and right of way needs.

Utility Research and Coordination

The TJKM Team will perform utility research to map the existing utilities and develop relocation plans for conflicting utilities. All the gathered utility information will be compiled and used to supplement the project information and provide a complete existing base. The goal is to develop a map that identifies utility impacts resulting from project improvements. We will provide written notice to utility owners to obtain maps and as-built information if available. As part of the utility coordination effort, we will:

- Review as-built utility information for the Project area;
- Request utility mapping from all affected utility owners;

- Update base mapping with existing utility information;
- Identify potential utility conflicts;
- Submit utility maps to impacted utility owners for verification of potential conflicts; and
- Coordinate the above work with the Project team.
- TJKM Team has provided an allowance for potholing under direct costs. A separate scope and fee from a potholing contractor as needed for potholing of utilities will be provided for this work.

To confirm project improvements, the TJKM Team will provide an exhibit summarizing the proposed improvements for each project location to include layout for the new bridges/grade separations. Upon completion of Task 2, the City will have a good idea of the utility and right of way impacts associated with each Project alternative.

Obtain Permits as Required for Research/Investigations

The TJKM Team will assist the City in obtaining excavation and/or encroachment permits for purposes of conducting investigative field work for the Project from various property owners listed as follows:

- **City of Mountain View Excavation Permit** – TJKM Team will obtain a City of Mountain View excavation permit from Public Works Land Development for potholing and geotechnical exploration work.
- **Caltrans Encroachment Permit** – TJKM Team will obtain a Caltrans Encroachment Permit (double permit) to facilitate investigative work for the Charleston Road underpass below Highway 101.
- **VTA Restricted Access Permit (RAP)** – TJKM Team will obtain a RAP for access/work/equipment having the potential of working/falling within 10 feet of the Light Rail Tracks/System, over/under other VTA rail. Depending on the nature of the work, a CAP maybe otherwise required.
- **Santa Clara Valley Water District (SCVWD) Permit**– TJKM Team will obtain a SCVWD permit for access/work/equipment within SCVWD right of way and the Stevens Creek Channel.
- **NASA/Ames Permit**– TJKM Team will obtain an entry permit from NASA/ Ames for access/work/equipment within NASA/ Ames right of way/federal airspace for work at the new transit bridge across Stevens Creek Channel at Charleston Road.

Task 2 Deliverables

- ✓ *Right of Way Base Map*
- ✓ *Utility Base Map*
- ✓ *City of Mountain View Permit Application*
- ✓ *Caltrans Encroachment Permit Application (double permit)*
- ✓ *VTA Restricted Access Permit Application*
- ✓ *SCVWD Permit Application*
- ✓ *NASA/AMES Permit Application*

Task 3 Establish Baseline Conditions and Scenarios

Under this task, the TJKM Team will establish baseline conditions and scenarios for the project. We propose to conduct this task in two sub-tasks as follows:

Task 3A – Baseline Conditions

Under this task, the TJKM Team will develop base assumptions and travel projections that are consistent with the full development of the North Bayshore Precise Plan. Specific tasks that will be included under this task include but are not limited to:

- Confirm the boundaries of the study area for analysis, including NASA area.
- Adapt or expand the recently developed North Bayshore VISSIM model to adequately cover the study area. The VISSIM model will be calibrated and validated based on the data collected under this project. The calibration and validation of the model will be conducted to replicate existing conditions (travel time, queues and throughput) within the study area. The calibrated and validated model will be used to evaluate the scenarios in preceding tasks.
- The TJKM Team will compile existing traffic counts from the Precise Plan and recent development proposals. Based on the review of the compilation of the existing traffic counts, any additional data needs will be identified and upon approval from City staff, the TJKM Team will collect any additional data. Using the City of Mountain View and VTA/CCAG Travel Demand Model baseline vehicle trip assignments in the study area, travel demands will be projected. The travel demand model will be enhanced to incorporate the TAZ's, infrastructure improvements and other relevant information. TJKM Team will implement the Dynamic Traffic Assignment module on the travel demand model to account for realistic assignment of travel demands within the study area based on the existing capacities of the infrastructure. Baseline vehicle trip assignments will be adjusted to incorporate the infrastructure projects in development within the study area and City of Mountain View.

Task 3B - Develop Scenarios

Under this task, the TJKM Team will develop scenarios to be evaluated. These scenarios will be developed iteratively to ensure that useful information to decision makers is provided. TJKM Team understands that one or more representative scenarios may be used in parallel planning efforts, such as the Automated Guideway Transit Phase 2 Study.

- The TJKM Team will develop person and vehicle trip assignments for up to six scenarios. One of the six scenarios will reflect an interim stage of development in North Bayshore area. The person and vehicle trip assignments will be developed building on the basic parameters of the North Bayshore Precise Plan. The TJKM Team will develop scenarios in consultation with City staff, stakeholders and property owners, that will include but are not limited to:
 - TDM strategies
 - Alternative SOV targets
 - Transit strategies
 - Parking strategies
 - Distribution and characteristics of housing and employment

To accommodate the projected growth in the North Bayshore area without compromising mobility and safety, the TJKM team will identify potential TDM strategies that can encourage the use of non-auto travel modes and reduce vehicle trips to employer sites.

TJKM Team will develop assumptions that provide the City with estimates of potential mode share benefits from a variety of strategies that will include both existing strategies (trip caps, employer and TMA-sponsored TDM programs for the area) and new, innovative strategies that

may include pricing strategies (parking, congestion pricing, mode-specific gate fees), transit and ride share subsidies, incentive programs for non-drivers, system optimization for transit and bicycle infrastructure, residential-focused programs (e.g., mobility concierge, individualized marketing campaigns, school trip support), and others.

The overarching goal is to have the maximum number of commuters utilize non-auto travel modes. Although, it is a given that a certain percentage of employees will still need to drive due to work schedule challenges, lack of feasible alternatives, personal needs or other reasons. Therefore, our solutions landscape will cover ideas for all – those who can choose non-auto modes as well as those who must drive. Such strategies and solutions will be devised with the following key goals:

- Reduce number of total trips (all modes) to/from employer sites; proactively track and manage trip caps
- Shift commute trips to non-auto travel modes
- Manage reduced number of auto trips more efficiently

TJKM Team will develop potential strategies based on examples of cutting edge practices and will focus on extending those concepts. Each strategy will be matched to a set of relevant travel markets, based in part on the VTA/City of Mountain View Travel Demand Model, to better understand how different the opportunity to convert various trip types (considering geography, trip purpose, and demographics) to non-single occupant vehicle modes. TJKM Team will consider all trip purposes (work, school, etc.).

TJKM Team will:

- Work with the City to define the goals of this effort
- Develop a draft list of strategies and concepts to test and vet with the City and other groups as needed
- Develop a trip assignment model that utilizes the VTA/ City of Mountain View origin-destination trip tables, including elasticity parameters for each agreed on set of strategies
- Test the trip assignment model with existing data and currently in-use strategies to help calibrate
- Identify a set of scenarios for testing that range from existing strategies already deployed to more progressive strategies.

Task 3 Deliverables

- ✓ *Draft and Final Technical Memorandum summarizing the work completed under this task*

Task 4 Feasibility Gateway Improvements

Under this task, the TJKM Team will evaluate the feasibility for potential gateway improvements addressing the concepts, capacity, cost, and other issues related to feasibility.

TJKM Team proposes to conduct this task in two phases:

- Phase 1 – Conduct a high level analysis based on the data collected, preliminary investigations and consultation with key agencies and stakeholders to evaluate the feasibility of Stevens Creek Transit Bridge and Charleston Road Underpass. If it is determined that the improvements are not feasible, other improvements including operational improvements will be identified under this phase. Alternatives will be

developed and screened based on a set of evaluation criteria to be developed in consultation with City staff.

- **Phase 2** – Develop concepts for feasible options and further evaluate the concepts.

We will incorporate improvements that have been considered and identify new improvements to enhance the gateway capacity. The key highlights of this task include, but are not limited to:

- Up to three alignment alternatives for the Stevens Creek Transit Bridge and Charleston Road Underpass will be developed, if determined feasible in the Phase 1 analysis. For each alternative a typical section, plan and elevation will be developed. Abutment and bent locations will be identified. Preliminary summary of constructability, phasing and comparative cost of alternatives will be developed.
- Opportunities to address bicycle and pedestrian connectivity via the proposed improvements, leveraging the analysis done for the Mountain View Bike Plan, the Google Bike Vision Plan and other recent work completed by TJKM Team and others will be identified and evaluated.
- We will leverage the bicycling demand modeling work that has been developed through TJKM Team multiple engagements, including work on the Stanford Bicycle Commuter Access Study and the Caltrans District 4 Bike Plan to estimate the potential impact of proposed improvements on bike mode share for commuting purposes.

Conduct Preliminary Investigations: The TJKM Team will conduct preliminary investigations in order to develop concepts for each improvement. Preliminary investigations conducted by TJKM Team will include the following:

- Visit Project locations to identify opportunities and constraints
- Evaluate key factors related to Project feasibility including geometries, stormwater/drainage impacts, utility relocations, and right of way impacts

Develop Concepts: TJKM Team will prepare up to 3 alternative concepts for each improvement within the study area. The concepts will be consistent with applicable standards and will include the following:

- Develop geometries
- Provisions for priority traffic lanes (transit only, HOV, and Reversible traffic lanes)
- Provisions for bicycle and pedestrian access
- Show right of way including existing easements with potential impacts
- Show existing utilities with potential conflicts

The TJKM Team will evaluate each concept for improvement feasibility, including but not limited to constructability, phasing, cost, and environmental impacts. We will also develop preliminary assessments of project benefits.

Task 4 Deliverables

- ✓ *Concepts for each Improvement (three alternatives)*

Task 5 Analysis of Scenarios

The TJKM Team, under this task, will evaluate the performance of the scenarios using the travel demand forecast and improvements identified and developed in Tasks 3 and 4 respectively. Evaluation will be conducted to address the ability of each improvement to accommodate the future transportation demands from future developments of the North Bayshore Precise Plan.

We will evaluate the improvements and scenarios in terms the following criteria (and other measures to be determined):

- **Comprehensive** – Are all elements of a Multimodal Improvement Plan included? Where are the gaps in the system? Are additional improvements needed?
- **Alignment** – Do the actions align across planning area boundaries?
- **Efficiency** – Are there any actions that are double counted under different efforts? Could actions be implemented more efficiently if they are undertaken together?
- **Cohesion** – Do the actions tie together portions of the City in a cohesive manner? In particular, how do multimodal transportation facilities knit together the City across facilities such as El Camino Real, Central Expressway, US 101, State Route 237 and 85?
- **Design** – How can elements of the plans be designed in a more unified manner?
- **Standards** – Are there elements that need to be incorporated into design standards?
- **Cooperation** – How does the City need to collaborate with other agencies such as Caltrans, VTA, Santa Clara County Roads & Airports, Caltrain, California PUC, and neighboring jurisdictions to enhance multimodal outcomes?

Specific tasks that will be conducted under this task include:

- Establishing performance metrics that will include measures such as person and vehicle capacity, travel time, queue lengths and mode shift.
- VISSIM simulation runs will be conducted (up to 10 runs) using the work completed under Tasks 3 and 4. The validated and calibrated model developed under Task 3 will be used under this task. VISSIM simulation model will be developed in a manner that video files of the simulation can be created for review and presentation purposes. The video files will have capabilities to play back the video and at the same time can be pan, tilt and zoomed. Infrastructure and travel demand strategies will be embedded in the individual scenarios. The scenarios will be developed in consensus with City of Mountain View staff. TJKM Team will also develop 3D simulations for four focused locations. The focused locations will be determined in consultation with City staff. The results of the simulation runs will be evaluated against the performance metrics. One of the simulation runs will evaluate an interim level of development. The interim level of development to be evaluated in consensus with City of Mountain View staff.

Task 5 Deliverables

- ✓ *Draft and Final Technical Memorandum summarizing the evaluation of the scenarios*

Task 6 Recommended North Bayshore Transportation Strategy

Based on the work completed under Tasks 3, 4, and 5, the TJKM Team will develop a Transportation Strategy for the North Bayshore Area in the City of Mountain View. The strategy will include feasible physical improvements to improve gateway capacity and operations, strategies to achieve mode share targets and possible adjustments to the vehicle trip cap and SOV targets. The strategy will identify priority actions, possible phasing of development tied to completion of physical improvements and progress on mode shift targets and potential future actions that may be needed. The TJKM Team will conduct triggering analysis to determine the phasing of developments.

Task 6 Deliverables

- ✓ *Draft and Final Technical Memorandum summarizing the strategies recommended for the North Bayshore Area*

Task 7 Draft and Final Report

Based on the work completed under earlier tasks, the TJKM Team will prepare a draft and final North Bayshore Circulation Feasibility Study Report. The Draft Report will be developed and submitted for City review. The Draft Report will be developed taking into account innovative formatting, mapping and other user-friendly interfaces so that the plan is easy to use. It will identify improvements, operational programs and strategies by mode. The Draft Report will be revised based on the comments and inputs received from the City and other stakeholders. The Final Report will be submitted to the City for approval and adoption.

Task 7 Deliverables

- ✓ *Draft and Final Study Report*

Task 8 Public Outreach and Meetings

The TJKM Team recognizes the importance of public outreach on this project based on our extensive experience working in City of Mountain View and intends to engage the community in numerous ways outlined below. All outreach meetings and events will have at least one bilingual staff member available to assist those who may choose to communicate in Spanish. Meeting flyers and other key handouts will be made available in both English and Spanish. At the onset of the project, the TJKM Team will prepare a Public Outreach Plan (POP) and submit to City staff for review. The POP will be revised based on the feedback received from City staff and finalized for implementation on the project.

Project Webpage

The TJKM Team will create an interactive project website to engage the community to submit ideas, concerns, priorities, desired facility and streetscape elements. This webpage will offer complete project information including:

- Project Overview and Schedule
- Current Project Status
- Upcoming Meetings and Events
- Key Deliverables and Reports for public review and feedback
- Surveys, other ways to participate, etc.
- Contact information of the City's Project Manager

The website will be linked to City-hosted pages. The TJKM Team will work with the City staff to acquire a custom web address and will host and manage the site for the duration of the project. The webpages will be kept fresh and relevant, offering a reliable source of information for those who may not be able to actively participate during normal business hours.

Community Open House Meetings

The TJKM Team will hold two Community Open House meetings on days and locations recommended by the City staff. For each meeting, the TJKM Team will provide all presentation materials, handouts, visuals, etc. We will also have bilingual staff available to assist at both meetings. Additional detail for each meeting is discussed below.

Meeting #1: The primary objective of this meeting is to inform Mountain View community about the project objectives, schedule and other relevant information, and receive feedback. Therefore, the meeting will be held within a few weeks of the project initiation. During this meeting, information obtained to date will be presented with the primary objective of gathering input on community concerns. This feedback will help with verification of community concerns and framing of the issues so that alternatives can be developed with community feedback in mind. Key components of this community workshop will include the following:

- Outreach kick-off presentations on project objectives, tasks and schedule
- Various means to get engaged in the process and provide feedback
- Information on existing conditions affecting transportation in and around the study area such as traffic data, crash history, walking and bicycling related challenges, circulation and safety concerns, etc.
- Community design tables to provide a forum for community members to work with the project team to verify issues and priorities, brainstorm ideas and suggest potential improvements

Meeting #2: The primary focus of the second meeting is to provide project updates, share draft project recommendations and receive community feedback. Key components of the meeting will include the following:

- Presentation of various improvement alternatives developed on the basis of engineering analysis as well as feedback from the City staff, stakeholders and Mountain View community
- Discussion of each alternative with pros and cons
- Community feedback on all alternatives and potential refinements that will be utilized for developing a Draft North Bayshore Circulation Feasibility Study

The TJKM Team will provide summaries of both meetings and post them on the Project Website for the benefit of those who could not attend one or both meetings. A high-level summary will also be included in the Draft and Final Report.

Council and Stakeholder Meetings

The TJKM Team have assumed attendance at six stakeholder meetings which includes City Council, Bicycle/Pedestrian Advisory Committee, Council Transportation Committee, TMA and other meetings held by City committees. We will prepare materials and participate in presentation for these meetings.

Task 8 Deliverables

- ✓ *Project Webpage*
- ✓ *Agenda, meeting handouts, presentation and meeting summaries*
- ✓ *Community surveys in English and Spanish*