San Francisco County Transportation Authority

1455 Market Street, 22nd Floor
San Francisco, California 94103
415.522.4800 FAX 415.522.4829
info@sfcta.org www.sfcta.org

Memorandum

Date: 01.07.16 **RE:** Finance Committee
January 12, 2016

To: Finance Committee: Commissioners Avalos (Chair), Mar (Vice Chair), Campos, Cohen, Kim and Wiener (Ex Officio)

From: Maria Lombardo – Chief Deputy Director

Through: Tilly Chang – Executive Director

Subject: **ACTION** – Recommend Award of a Three-Year Consultant Contract to Arup, in an Amount Not to Exceed $1,150,000, for Planning and Engineering Services for the San Francisco Long Range Transportation Planning Program, and Authorizing the Executive Director to Negotiate Contract Payment Terms and Non-Material Contract Terms and Conditions

Summary

The Transportation Authority, in partnership with the San Francisco Planning Department (Planning) and the San Francisco Municipal Transportation Agency (SFMTA), is seeking consultant services to support the San Francisco Long Range Transportation Planning Program (Program), which will define the desired and achievable transportation future for San Francisco. The effort will produce a roadmap to arrive at that future, including policies, planning, project development, and funding strategies. The key outputs for the Program include a land use and vision document, a major update to the current countywide transportation plan (the San Francisco Transportation Plan – SFTP) in support of Plan Bay Area (the Regional Transportation Plan/Sustainable Communities Strategy) update, a long-term transit study, a freeway and street traffic management study, and an update to the Transportation Element of the San Francisco General Plan. The close coordination of those outputs will make the whole of this effort greater than the sum of its parts. On October 22, 2015, the Transportation Authority issued a Request for Proposals (RFP) for planning and engineering services for the project. By the December 9, 2015 deadline, we received two proposals. A review panel comprised of Transportation Authority, Planning, and SFMTA staff reviewed the proposals and interviewed both firms on January 6. Based on the competitive selection process defined in the evaluation criteria of the RFP, the panel recommended award of a consultant contract to the top-ranked firm, Arup.

BACKGROUND

The Transportation Authority, in partnership with the San Francisco Planning Department (Planning) and the San Francisco Municipal Transportation Agency (SFMTA), is seeking consultant services to support the San Francisco Long Range Transportation Planning Program (LRTPP, or Program). The Program is funded by $800,000 in dedicated funds from the City and County of San Francisco (City) through its Fiscal Year (FY) 2015/16 and 2016/17 budgets, as well as $350,000 in Federal Highway Administration Surface Transportation Program (STP) funds. The Program is a long range, comprehensive multiagency effort to define the desired and achievable transportation future for San Francisco. The effort will produce a roadmap to arrive at that future, including policies, planning, project development, and funding strategies. The key outputs for the Program include a land use and vision document, a major update to the current countywide transportation plan (the San Francisco Transportation Plan – SFTP) in support

of the Plan Bay Area (Regional Transportation Plan/Sustainable Communities Strategy) update, a long-term transit study, a freeway and street traffic management study, and an update to the Transportation Element of the San Francisco General Plan. The close coordination of those outputs across the involved agencies will make the whole of this effort greater than the sum of its parts. Attachment 1 contains the detailed scope of services for the subject consultant contract. The enclosed presentation provides a more user-friendly overview of the Program, its component parts, and proposed schedule.

DISCUSSION

The purpose of this memorandum is to summarize the procurement process and recommend the award of a three-year contract for planning and engineering services for the Program to Arup. The overall Program budget is approximately $3.8 million, with the participating agencies offering in-kind staffing through their operating budgets. Our schedule anticipates completion of the vision document by early 2017, with completion of Freeway and Street Traffic Management Study and Transit Modal Concept Study by the end of 2017. The update of the SFTP is anticipated in mid-2018, with an update to the Transportation Element to follow (schedule to be determined).

Procurement Process: We issued a Request for Proposals (RFP) for planning and engineering services on October 22, 2015. We held a pre-proposal conference on October 27, 2015, which provided opportunities for small businesses and larger firms to meet and form partnerships. 27 firms attended the conference.

We will receive federal financing assistance to fund a portion of this contract, and will adhere to federal procurement regulations. For this contract, we established a Disadvantaged Business Enterprise (DBE) goal of 13%, accepting certifications by the California Unified Certification Program. We took steps to encourage participation from DBEs, including advertising in six local newspapers: Nichi Bei Weekly, Small Business Exchange, San Francisco Bay View, San Francisco Chronicle, San Francisco Examiner, and The Western Edition. We also advertised in Planetizen, an urban planning news website, and distributed the RFP to certified small, disadvantaged and local businesses.

By the due date of December 9, 2015, we received two proposals. The review panel, consisting of Transportation Authority, Planning, and SFMTA staff, evaluated the proposals based on qualifications and other criteria identified in the RFP, including the proposers' understanding of project objectives, technical and management approach, and capabilities and experience. The panel interviewed both teams on January 6, 2016. Based on the competitive selection process, the panel recommended the award of a consultant contract to the top-ranked firm of Arup. The recommended team distinguished itself on the basis of: 1) strong project management; 2) clear understanding of transportation challenges; and 3) appropriate and thorough staffing..

Both teams' proposals met or exceeded the 13% DBE goal. The Arup team has pledged a total DBE utilization of 35% through the women-owned firms of Daniller Consulting and Eisen|Letunic, and Asian Subcontinent-owned TJKM. Daniller Consulting is also a San Francisco-based firm.

ALTERNATIVES

1. Recommend award of a three-year consultant contract to Arup, in an amount not to exceed $1,150,000, for planning and engineering services for the Program, and authorizing the Executive Director to negotiate contract payment terms and non-material contract terms and conditions, as requested.
2. Recommend award of a three-year consultant contract to Arup, in an amount not to exceed

$1,150,000, for planning and engineering services for the Program, and authorizing the Executive Director to negotiate contract payment terms and non-material contract terms and conditions, with modifications.

3. Defer action, pending additional information or further staff analysis.

CAC POSITION

Due to the year-end holidays, the Citizens Advisory Committee did not meet in late December and therefore did not take a position on this item. However, the CAC was briefed on the overall scope and schedule for the Program at its December 2 special meeting and was informed of the subject procurement.

FINANCIAL IMPACTS

Budget for services identified in this contract will be provided by funds from the City through its FY 2015/16 and 2016/17 budgets, Federal Highway Administration's STP funds awarded to the Transportation Authority, and Prop K funds to fulfill the local match requirements to the STP funds. Award of this contract will be contingent upon an executed funding agreement with the City. The first year's activity of the proposed contract will be included in the Transportation Authority's mid-year budget amendment. Sufficient funds will be included in future fiscal year budgets to cover the remaining cost of the contract.

RECOMMENDATION

Recommend award of a three-year consultant contract to Arup, in an amount not to exceed $1,150,000, for planning and engineering services for the Program, and authorizing the Executive Director to negotiate contract payment terms and non-material contract terms and conditions.

Attachment:

1. San Francisco Long Range Transportation Planning Program Scope of Services

Enclosure:

1. San Francisco Long Range Transportation Planning Program (slide deck)

Attachment 1
San Francisco Long Range Transportation Planning Program
Scope of Services

Specific tasks include: 1) work program and project management, 2) outreach and communications, 3) vision, 4) freeway and on-street traffic management study, 5) transit modal concept study, and 6) update to the SFTP. Details are provided below.

Task A. Program Management (Approximately 10% of budget)

The Program will require ongoing program management to ensure coordinated, timely, and thorough deliverables along with cost control. The Project Team as referenced in this document is the multi-agency TWG defined in the introduction above.

Task A1. Work Program

The Consultant shall work with agency staff to develop a revised work program, including a refined scope, schedule and budget. The work program shall be considered a living and breathing document which will be maintained by the Consultant as part of Task A3.

Timeframe: 1 month, beginning in February 2016

Deliverables:

- Draft and Final Work Program

Task A2. Meetings

The Consultant shall lead weekly meetings with the Program Manager and the contract lead at the Transportation Authority. These meetings may also include other members of the TWG to discuss the overall program and any interdependent tasks. The Consultant shall be responsible for creating and distributing the agenda for these meetings, sending out notes and action items from the meeting. The program management meetings are separate and in addition to any task management meetings which should be accounted for within those tasks. The meetings described here pertain to contract administration, overall project budget, scope, and timeline.

Timeframe: Duration of Project
Deliverables:

- Agendas, minutes, and action items from weekly meetings

Task A3. On-going Program Management

The Consultant will maintain the contract scope, schedule, and budget, as needed. Consultant shall also work closely with the Program Manager to ensure coordination between various efforts and tasks within the Program. Consultant is responsible for communicating any budgetary or scheduling issues to the project team as soon as they are identified. Similarly, the Consultant shall communicate if a task request is outside of the original work plan scope completed as part of Task A1.

Timeframe: Duration of project
Deliverables:

- Current scope, schedule, and budget
- Monthly status reports included with invoices

- Invoices meeting Transportation Authority requirements as well as any additional information required by the Program Manager or the Contract Manager

Task B. Outreach and Communications (Approximately 20% of budget)

Carefully coordinated communications will create a unified message and understanding from varied agency, public, and elected stakeholders. While subtasks of the Program may include individual work products, necessitating input from different stakeholders at different times, all messaging shall be carefully coordinated and will be provided in multiple formats and languages in order to obtain larger and more representative input.

Task B1. Outreach and Communications Plan

The multi-agency Project Team shall create an Outreach and Communications Plan to lay out the goals, activities, roles, and responsibilities for outreach and communication for the Program. The document will include: 1) a summary of team roles and responsibilities, 2) outreach goals, 3) protocols for maintaining outreach and communication related project files, 4) describe a wide range of communication channels that will be used, 5) present a high-level schedule of outreach activities and 6) conclude by identifying key stakeholders and issues known as the effort is initiated. This will be a living document maintained over the course of the effort. This document will be completed before the end of procurement and will be ready for Consultant use upon selection of a top ranked firm. The Consultant shall help refine the Outreach and Communications Plan as the program advances.

Timeframe: Refinements to be made throughout project as necessary

Deliverables:

- Refinements to communications plan provided by Project Team (note: Consultant is not responsible for the creation of draft or final communications plan)

Task B2. Round 1 Public Outreach and Engagement: Goals and Values for the Future Transportation System; Existing and Future Conditions

While not yet completed, a general framework for some of the outreach activities has been identified (to be further developed in Task B1). The Consultant will assist in conducting outreach and engagement to: 1) get public input regarding values and goals for the transportation system, 2) inform the public about existing and future conditions, focused on major trends and current forecasts, both at a citywide and corridor-level and 3) to understand people's challenges getting to, from, and around the city to access daily needs and services. The Outreach and Communications Plan, to be developed by agency staff, will develop the framework for the objectives of each round of public outreach and engagement. The first round of public outreach will also include discussions with regional transit providers, Metropolitan Transportation Commission (MTC), and affected adjacent cities (e.g. Oakland, Brisbane, Daly City) as appropriate.

The first round of engagement is anticipated to include:

1) Public project kick off workshop/meeting
2) Targeted outreach, such as: random sample survey, focus groups, stakeholder interviews, or other methods to get at high-level public goals/values for the transportation system and existing challenges
3) Website and social media: launch Program website and develop and launch social media strategy

Consultant shall be responsible for creation of materials for meetings, development of survey instrument, securing locations and providing any equipment necessary for meetings. Consultant shall also be responsible for summarizing input from meetings. Consultant shall also be responsible for content required for website and any social media updates as needed to support Round 1 outreach.

Timeframe: 2 months, as part of Tasks C2 and C3, March – April 2016

Deliverables:

- Public materials in multiple languages such as survey, interactive web tool, or other materials based on public participation plan, to be determined (TBD)
- Summary of public feedback and/or survey results
- Public website and social media strategy and updates

Task B3. Round 2 Public Outreach and Engagement: Transportation Vision Concepts

Per Outreach and Communications Plan (to be developed in task B1), conduct public outreach and engagement with the intention of informing the public of transportation needs and challenges in the next 50 years and seeking input from the public regarding how to meet the transportation needs of the future, including discussions of high-level priorities and tradeoffs. The outreach will utilize information generated during Task C4, network development, and will inform development of the final Transportation Vision (Vision).

The second round of outreach will focus on seeking feedback on unconstrained transportation vision scenarios and priorities, with the intention that these will inform further modeling and prioritization in the mode-specific studies that follow the Vision, including the Transit Modal Concept Study, the Freeway and Street Management Strategy, the SFTP 2050, and/or the Transportation Element.

Consultant shall be responsible for creation of materials for meetings, development of survey instrument, securing locations and providing any equipment necessary for meetings. Consultant shall also be responsible for summarizing input from meetings. Consultant shall also be responsible for content required for website and any social media updates as needed to support Round 1 outreach.

Timeframe: 2 months, as part of Task C4, October-November 2016

Deliverables:

- Public materials in multiple languages such as survey, interactive web tool, or other materials based on public participation plan, TBD
- Summary of public feedback and/or survey results
- Public website and social media strategy and updates

Task B4. Communications and Outreach for Transit Modal Concept Study, Freeway and Street Traffic Management Strategy, and SFTP 2050

Following completion of the Vision, the Project Team will initiate the Freeway and Street Traffic Management Strategy (see Task D), the Transit Modal Concept Study (TMCS, see Task E), and the SFTP 2050 (see Task F), which will include public engagement specific to those studies. Consultant shall develop an outreach and engagement strategy specifically for the three studies, based on lessons learned during the Vision development. The outreach and engagement strategy around these three components shall build off of the overall program Outreach and Communications Plan, but include more focused strategies to ensure robust public and stakeholder engagement specifically around transit, freeway, and on-street

strategies for the major corridors identified in the Vision in addition to the more constrained funding tradeoffs between different modes as identified in SFTP 2050.

Timeframe: Linked to Tasks D, E and F; see schedule for those tasks
Deliverables:

- Public materials in multiple languages such as survey, interactive web tool, or other materials based on public participation plan, TBD
- Summary of public feedback and/or survey results
- Public website and social media strategy and updates

Task B5. Additional Outreach Activities (10-20% of communications budget)

The Project Team anticipates the need for additional outreach will arise throughout the course of the project. Additional outreach may be requested on a task order basis.

Timeframe: Ongoing
Deliverables: TBD

Task C. Transportation Vision (Approximately 15% of budget)

The Vision will create the guiding framework for crafting the update to the Transportation Element of the San Francisco General Plan and inform the full update of SFTP in advance of the 2021 RTP. It will also inform the modal studies and other ongoing planning efforts that will serve as components of the 2050 SFTP. It is anticipated that the Vision will be a living framework that is revisited from time-to-time to address changes in transportation needs. The Vision will describe an aspirational transportation system for 50 years in the future, and backcast to imagine the policies and investments necessary to get us to that future over time.

The long-term efforts will explore the following questions:

- How much might the city grow (housing and jobs) in the next 50 years? Where will this growth happen and where might it happen given different transportation investments? What are alternative land use scenarios that would best support transportation infrastructure and vice versa?
- How will geographic travel patterns change in the future and what will be the magnitude of these flows?
- What transportation trends that would change the nature of urban travel might we imagine in 50 years? (e.g., changes in demographics and the implication for commuter travel patterns, innovations in technology, trends in shared mobility, attitude changes around mode preference, home-working, changes in spatial and temporal commute patterns, etc.)
- How will we serve the future population (including existing and future demand) to maintain mobility and economic competitiveness? What are the mobility goals for the transportation sector?
- What are the environmental sustainability goals for the transportation sector? How can we minimize environmental impacts from the transportation sector, including greenhouse gas emissions and air quality?

- What are the quality of life and safety goals for the transportation system? How can we minimize conflicts between modes? How/where can transportation investments or changes improve the urban environment physically and socially?
- What is our vision (or alternate visions) for the city's transportation system in 50 years that meets the goals above? How will people travel to, from, and around the city?
- What big investments are necessary to get to this vision? What are the big moves in terms of new/expanded/enhanced transportation infrastructure? What corridors/screenlines would need additional investments in transportation capacity? What "back of house" investments (e.g. maintenance and storage facilities) will be needed to support this growth?
- How can we optimize our surface transportation networks/allocation of roadway space to help us achieve this vision? How do we resolve tradeoffs between modes?
- What are the big moves in terms of managing transportation demand to help us achieve this vision? What policies will get us there?
- What are the consequences of doing nothing or not implementing the actions that should stem from the vision?
- What strategies should be employed to resolve transportation challenges at a regional scale?
- How can the transportation system serve the geographic and social equity goals of the City?
- How does transportation serve a larger economic strategy?

The Vision would create a master multi-modal vision for the 50-year build-out of the transportation system to meet anticipated needs and goals. This vision will inform and lay the foundation for all long-range transportation planning efforts, including specifically the SFTP 2050, the TMCS, the Freeway and Street Traffic Management Strategy, and the Transportation Element update, as well as other ongoing planning and policy efforts, as appropriate.

Task C1. Land Use Scenarios

The multi-agency Project Team (not the Consultant) shall create three (3) screened land use scenarios for use as part of Task C, and will be completed in advance of Consultant Notice to Proceed. These scenarios shall be for the horizon year 2065 and will include variations on total Association of Bay Area Governments (ABAG) housing and employment projections as well as geography for where growth may occur. A detailed scope of the Land Use tasks can be found in Appendix B.

Task C2. Vision Statement and Goals Framework

Task C2 will develop a written vision statement, high-level transportation goals and objectives, and an evaluation framework for the transportation system. The goals would be high-level policy and value statements about the future transportation system. Objectives would be second-order policy and value statements about same. The evaluation framework would describe the metrics for evaluation without setting specific targets, and would measure the performance of the proposed network in achieving the vision. This framework would help inform the Transportation Needs Assessment (Task C3). Specific targets would be developed in Task C4.

Task C2a. Staff Working Session #1: Define Goals, Objectives, and Metrics for Transportation

System

Informed by goals, objectives, and metrics compiled by plans created by other cities, region, or state and past San Francisco efforts (to be compiled by agency staff), hold facilitated working session to develop TWG recommendation regarding goals, objectives, and metrics for the future multi-modal transportation system. The multi-agency Directors' Steering Committee will endorse draft goals framework in advance of public outreach. This would not be a final, fully-developed goals framework, but would be a draft framework, developed enough to be able to elicit meaningful feedback from the public in Task B2. Weighting of goals and objectives would be developed at working session.

Timeframe: March 2016

Deliverables:

- Materials for working session, including agenda, synthesis of other goals and metrics, and any facilitation materials
- Notes from meeting
- Draft vision statement and goals framework (including objectives and metrics with supporting graphics showing exemplary system-level performance, e.g. transit crowding, Vehicle Miles Traveled heat maps, transportation accessibility maps overlaid with communities of concern, etc.)

Task C2b. Develop Final Vision Statement, Goals, Objectives, and Metrics

Based on the results of Task C2a, public outreach, and engagement, develop final vision statement, goals, objectives, metrics, and associated weighting, for future transportation system. This document would be made publicly available (such as on the project website). Weighting of goals and objectives would be further refined based on feedback from the multi-agency Directors' Steering Committee and results of public outreach and engagement.

Timeframe: August 2016, following Round 1 outreach.

Deliverable:

- Final vision statement, goals, objectives, and metrics document.

Task C3. Transportation Needs Assessment

In order to understand the challenges facing San Francisco's transportation system, the Project Team will undertake a comprehensive needs assessment. The assessment will analyze key origin-destination patterns and travel markets to, from, and within San Francisco, looking at existing capacity and operations as well as future demand scenarios and trends. This task will also identify targets to meet the goals finalized in Task C2. In doing so, the team will be able to describe the gap between the existing/planned transportation improvements versus the future vision to be generated in Task C4.

Task C3a. System Analysis and Corridor Identification – Existing Conditions

Using SFTP 2013 existing conditions assessment, new SF-CHAMP model outputs, or other existing conditions data sources, the Consultant shall identify the top 10-15 travel patterns and markets based on origin-destination pairs and describe as neighborhood-level travel corridors (multiple parallel routes that act as a unified travel system) in San Francisco (including regional and pass-through trips) based on demand or other system performance characteristics (e.g., transit crowding). Based on Consultant and Project Team recommendation, Consultant may look at demand during various times of day as well as week versus weekend to understand specific demand. The size of the corridors will depend on the travel

patterns that emerge. The corridors in sum should include all parts of the city, and some areas may be included in multiple corridors, depending on origins and destinations. Proposers are welcome to submit other methods of analysis other than systemwide and corridor.

The Project Team shall provide data outputs for analysis and interpretation by the Consultant.

Timeframe: 2 months, February – March 2016

Deliverable:

- Technical memorandum summarizing analysis, assumptions, and policy decisions to define final list of corridors; the technical memo shall also include maps and graphics depicting the findings

Task C3b. Existing Conditions Analysis

Looking across modes and using various data sources, the Consultant shall characterize the strengths, challenges, and opportunities for each of the travel corridors identified in Task C3a and systems as a whole. The Consultant shall work with the Project Team to recommend a manageable and meaningful subset of data and metrics to describe existing conditions; the analysis shall leverage existing data sources to the greatest extent possible. Potential data sources include:

- Transit operations
    - Muni
        - Automated Passenger Counter & Automated Vehicle Locator – Provides on/off counts of transit passenger by stop for motor coach and trolley coach routes; also provides travel speed and reliability data
        - Muni Equity Strategy baseline data – Summarizes transit performance in Communities of Concern versus overall Muni catchment area
        - Muni Metro Faregates – Provides entry and exit volumes for Muni Metro Stations
        - CMP analysis comparing Muni travel speeds with autos in similar corridors
    - Ridership studies for various transit agencies/projects (e.g. Transbay Transit Center/Downtown Extension, Bay Area Rapid Transit (BART), etc.)
    - Core Capacity Transit Study and Rail Capacity Strategy identified bottlenecks and operational challenges
- Annual Bicycle Count Report – Annual bicycle count data at approximately 50 locations in 2013 and 2014; additional location also collected in 2014
- Automatic Bicycle Counters – In-ground loop detectors at specific locations in the bicycle network
- Pedestrian Volume Model – GIS based pedestrian volume estimation model for each street/block in San Francisco
- Pedestrian safety data (WalkFirst)
- SF-CHAMP mode share and travel data
    - Deep Dive on Top Auto Trip markets, stratified by internal and regional trips

    - Analyze by trip distance, time of day
- SFTP 2013 Existing and Future Conditions Report and supporting data
- Waterfront Transportation Assessment data and analysis
- Performance Measurement Systems traffic count data on freeways
- Level of service traffic performance and vehicle counts from CMP updates
- Economic indicators related to transportation
- Environmental Impact Reports/Transportation Studies for various major area plans, large developments and transportation projects (including transit capacity and delay, traffic volumes, traffic congestion, pedestrian and bike conditions)
- Data from transportation network companies and Muni Shuttle Partners (e.g. stops, routes, ridership, origin–destination) as available
- SF Environment (City employee) and Transportation Management Association member travel behavior surveys
- Census and other data on home/work locations of San Francisco residents and workers and travel behavior (e.g. mode choice, auto ownership)
- Regional data on regional commute patterns (in/out of San Francisco) from MTC, California Department of Transportation (Caltrans), Bay Area Toll Authority
- Bike share data (origin–destination)

Outputs and analysis shall be consistent with goals and metrics identified in Task C2 to understand the state of the transportation system as a whole, and on a screenline and corridor-by-corridor basis. A series of interagency working sessions will help ensure a full inventory and vetting/ground-truthing of analysis.

Timeframe: 2 months following completion of Task C3a, April – May 2016

Deliverables:

- Cleaned data files and charts demonstrating existing conditions trends
- Draft and final existing conditions report

Task C3c. Future Land Use and Transportation Trends

The Consultant shall work with the TWG to develop a limited number (no more than 2) of future land use and baseline transportation network scenarios for model evaluation. Scenarios will likely be based off of the last SFTP preferred scenario as well as a more constrained baseline transportation network. Land use scenarios will be based on more standard land use scenarios (e.g. an extrapolation of the approved 2040 ABAG jobs/housing projections and SF Planning allocation to year 2065) with adjustments made based on SF Planning's recent market analysis and observations. The future trends analysis will assess any changes (and changes in magnitude) of strengths, challenges, and opportunities versus existing conditions. Outputs will be used to support an interagency working sessions to brainstorm and characterize high level issues and challenges we anticipate over the next 50 years (e.g. demographic profiles and technology assumptions, Transbay capacity, limited access to Mission Bay/east side, South of Market circulation, etc.).

The Project Team will lead the specific modeling of the scenarios, based on the scenario concepts developed by the Consultant and TWG. The Project Team shall provide inputs to and run SF-CHAMP model, and provide outputs to Consultant for analysis.

Timeframe: 1 month after Task C3b, June 2016

Deliverable:

- Draft and final future conditions addendum to existing conditions report

Task C3d. Target Creation/Identification

Using the goals and evaluation framework, and informed by results of existing and future conditions report and outreach feedback, develop draft qualitative and quantitative targets for the future transportation system, both on a corridor basis as well as citywide. Targets are set so as to meet the identified goals and objectives for the transportation system as a whole, and may be set on a top-down basis (i.e., set the citywide targets and then determine each corridor's target) or through a bottom-up process (i.e., determine the need to resolve challenges for each corridor and then sum to determine citywide targets). Review draft targets with agency directors and present for discussion with the public as part of the second round of outreach.

Timeframe: 2 months following Task C3c and/or B2, September – October 2016

Deliverable:

- Amended goals and evaluation framework memo, including targets

Task C3e. Needs Assessment Memo

Informed by deliverables in Tasks C3a through C3d, create interagency/public facing report documenting transportation needs in 2065 and how the scenarios compare to the goals, objectives and targets. This report would be published after the first round of public outreach.

Agency Lead: SF Planning

Timeframe: 2 months, following Task C3d, October – November 2016

Deliverable:

- Draft and Final Needs Assessment memo

Task C4. Transportation Corridor-Level Network Development

Task C4 will create transportation corridor concepts to guide development of the city's future transportation system, and suggest a vision for the transportation system that would achieve the system and corridor targets. The network development will also include development of policies and operational strategies that will be needed to support the Vision. The Vision will recognize how investments in transportation will shape the future of the city by affecting where the city will grow and how the transportation system needs to be reconciled with past and potential future land use decisions. This task is not anticipated to lead to specific transit modes, alignments, or operators, but rather concepts for transportation system improvements on a corridor level that address the needs, goals, and targets. However, this task will preliminarily identify those corridors that may potentially be more effectively served by regional transit operators as opposed to local service (i.e., SFMTA).

Task C4a. Internal Staff Working Session(s) #2: Initial 50-year Vision Concepts

Building off of work in Tasks C1, C2, and C3, Consultant shall facilitate one to two internal staff working sessions to map out multi-modal concept networks for improvements to the transportation system. For each land use scenario, the working session(s) will result in a customized network to best leverage the characteristics of the land use. The working session(s) would begin by exploring new concepts and ideas, and then testing them across land use scenarios and transportation network scenarios to see which ones fit best together, or which may be influenced by one another (e.g. a certain set of transportation investments could drive a particular land use pattern). Each transportation package should be configured to address the system issues summarized in the Needs Assessment Memo. From this initial brainstorm, the Consultant would narrow potential options down to one preferred network concept per land use scenario. The working sessions may not lead to specific transit modes, alignments, or operators, but rather concepts for transportation system improvements on a corridor level that address the needs, goals, and targets.

Timeframe: 2 months following Task C3, November – December 2016

Deliverables:

- Materials for working session(s); memo describing network development and assumptions, potentially including synthesis maps of three transportation networks – matched to land use scenarios
- Direction to create up to three SF-CHAMP model input files
- Memo describing key policies and operational strategies necessary to support the Vision and Transportation Networks; this memo will identify additional policy and operational strategies for further analysis as part of either the Freeway and Street Traffic Management Strategy (Task D) or TMCS (Task E), or other ongoing agency work, as appropriate

Task C4b. Land Use and Transportation Network Assessment

Taking the concepts developed in Task C4a., Consultant shall run SF-CHAMP incorporating land use scenario traffic analysis zone (TAZ) assumptions and transportation network scenarios (up to three model runs). Evaluate how each scenario performs in relation to goals and metrics set in Task C2 and C3. Sensitivity tests could be run through SF-CHAMP or other tools to understand the impact of changes in system-wide trends or improvements (e.g., reduction in car ownership, new technologies, implementation of cordon pricing, etc.). The concepts would be described not as specific modes, alignments, or operators, but rather they would be modeled as a certain modal capacity (e.g. low, medium, high) and other corridor-based assumptions. For concepts that involve removal of freeway segments, minimal analysis will be undertaken to guide the work of the freeway strategy (Task D4). However, analysis within this Task C4b is not intended to provide the basis for a decision on the feasibility of these types of projects.

The Project Team will create SF-CHAMP model input files to match intended scenarios. The Consultant shall be responsible for execution of model, output production, and analysis of results.

Timeframe: 2 months for model runs, 1 month for analysis/write-up following Task C4a, January – February 2017

Deliverables:

- Model outputs/performance metric results for each land use/transportation concept
- Memo summarizing technical analysis and results

Task C4c. Internal Staff Working Session #3: Refined 50-Year Transportation Vision Concepts

Based on Staff Working Session(s) #2, feedback from the multi-agency Directors' Steering Committee, technical modeling results, and public outreach and engagement, hold additional staff/agency Director working session to refine ideas for refined concepts. There may still be a desire to have more than one final concept (e.g. high and low growth, or some other variations). The working session may not lead to specific modes, alignments, or operators, but rather a preferred high-level concept for transportation system improvements that meet goals and targets. In addition, some notion of the potential for regional transit operators (i.e., beyond SFMTA) to build and operate a specific corridor will be identified and analyzed. The goal is to create a fiscally unconstrained 50-year transportation vision that would meet the goals and targets set in task C3.

Timeframe: 2 to 4 weeks, following Task C4b, March 2017

Deliverables:

- Materials for working session(s)
- Memo and map summarizing Refined/Preferred 50-Year Transportation Vision

Task C4d. Final Transportation Vision 2065 Preferred Concept

Based on the technical analysis, and public outreach and engagement, develop Final 50-Year Transportation Vision. This will be in the form of a briefing book, including maps, as well as other publicly accessible form. The preferred vision will inform the TMCS, the Freeway and Street Traffic Management Strategy, and other modal planning work for the SFTP and Transportation Element updates. It will be a public document, with associated public messaging and communications, and will include technical appendices as needed.

Timeframe: 4 weeks following Task C4c, April 2017

Deliverables:

- Briefing book, report and final map/vision document
- Web and communication materials, technical appendices

Task D. Freeway and Street Traffic Management Strategy (Approximately 10% of budget)

The Freeway and Street Traffic Management Strategy (Strategy) will identify a preferred long-range scenario, combining physical and operational concepts, for the network of freeways and associated major arterials within San Francisco. The strategy will coordinate closely with Tasks C and E, review and incorporate previous and ongoing studies, consider potential changes to regional and local travel patterns, and apply national and international best practices in freeway development and management to arrive at the optimal long range freeway footprint and freeway and street operational condition. Task D will evaluate the relationship between any freeway strategies with the major arterials network and identify operational and policy tradeoffs and considerations.

The end result of this strategy will be a screened, preliminarily phased list of potential projects and operational strategies and polices for further planning, refinement, and consideration for inclusion in the SFTP 2050. Tasks D1-D4 will be completed as part of the Vision to inform Transportation Network Development and policy considerations (Task C4). Tasks D5-D6 will build off of the Vision and include more detailed alternatives analysis and technical analysis to support project and policy recommendations feeding in to the SFTP 2050. It is anticipated that this work will be closely integrated with the on-going interagency Transportation Demand Management (TDM) Strategy under development; specific strategies

that are developed as part of this Strategy will be discussed by the TDM working group and appropriate lead agencies will be assigned.

Task D1. Regional & San Francisco Freeway and Streets Network Overview

San Francisco's freeway and major arterial street network will be inventoried, described, and summarized in high-level detail. Dominant traffic flows, both for passengers and goods, for the current and future years through the horizon year, will be described. High level performance statistics for freeways and arterials in San Francisco will be derived from existing and predicted future data, with a primary goal of identifying which freeway and arterial facilities will be over or underutilized in future years.

Timeframe: 6 weeks as part of Task C3, April – May 2016

Deliverable:

- San Francisco Freeway and Street Network Conditions Technical Memorandum

Task D2. San Francisco Trends Overview (to be completed iteratively with other Task C)

This task includes an assessment of the context in which the freeway and arterial street network will be performing, and to which changes it must respond to, during the horizon year of the this visioning exercise. Anticipated changes in land use and other transportation facilities, both locally and regionally, will be primarily informed by findings in Task C3. Opportunities to improve the safety, reliability and efficiency of the freeway network, building on needs and opportunities identified in Task C to create a more balanced and/or resilient transportation system will be a particular point of focus.

Timeframe: 4 weeks as part of Task C3, June 2016

Deliverable:

- San Francisco Freeway and Street Network Contextual Trends Technical Memorandum

Task D3. Freeway and Street Network Goals & Objectives

Developed in tandem with the overall goals and metrics of Task C and building on those established in the Transportation Authority's Freeway Corridor Management Study Phase 1 report and the Better Streets Plan, specific goals and metrics will be developed for use in developing and evaluating freeway and arterial network physical and operational alternatives. Because of the recognized negative externalities of single occupancy vehicle travel and the local (e.g., Transit First) and State (e.g., Assembly Bill 32, Senate Bill 375, etc.) policy context that does not support freeway expansion, metrics will be developed to prioritize person-trips, not vehicle trips. Additionally, the freeway network's unique role in goods and freight movement and delivery must be considered. Potential metrics goals include:

- Reduction in vehicle miles traveled
- Reduction in congestion on other freeway segments
- Decrease in traffic levels and conditions on surface streets, particularly those not identified as regional routes
- Increase in person throughput
- No or positive impact on economic activity and competitiveness
- Ability to adapt to ongoing technological advances in vehicles and ride-sharing
- Safety for all modes and livability of parallel arterial streets
- Facility lifecycle and replacement/maintenance/operating cost

The metrics developed in this task must take particular care to identify, if applicable, the tradeoffs between overall study goals in Task C3 and the carrying capacity of freeways and arterials, including the roadway network's ability to support economic activity in San Francisco and the region.

Timeframe: 4 weeks in parallel with Task C3, September 2017

Meetings: As needed to complete/get feedback on deliverables

Deliverable:

- Freeway and Street Network Goals & Objectives Technical Memorandum, including identification of evaluation metrics associated with each Goal/Objective

Task D4. Long-Range Freeway and Street Traffic Management Alternatives Development

Beginning with existing and in-progress plans and long-range alternatives impacting the freeway and street network developed in Task C, a range of alternatives for modifications to the freeway and street network on both a local and regional scale will be developed. Modifications include both physical and operational and policy strategies. Goals and objectives developed in Task D3 will be used as a guideline in the creation of any new concepts, however, should not be a limiting factor in creating a wide range of projects. Alternatives will generally fall into two categories, examples of which are listed below:

1. Physical Alternatives
    - Freeway Improvements or access changes, including realignments, re-design or removals of ramps
    - Freeway Removals (including related requisite changes to surface streets and arterials)
    - High Occupancy Vehicle (HOV) Lanes (Freeway or Surface)
    - High Occupancy Toll (HOT) Lanes (Freeway or Surface)
    - Exclusive HOV/HOT Facilities
    - Interchange Improvements, including HOV/HOT ramps
    - Bridge Access Improvements
2. Operational Alternatives
    - Intelligent/Adaptive Management Systems
    - Freeway Service Patrol
    - Other Arterial Operational Improvements
    - Technology enhanced operational improvements (e.g., autonomous vehicles)
3. Long-term TDM policies
    - Pricing and Incentives
    - Occupancy restrictions
    - Time of day restrictions
    - Activity-based restrictions

Changes to the freeway or arterial network that result in a reduction of capacity should be paired with other alternatives (of any mode) developed in this or related Vision tasks or strategies that address this capacity reduction, either through accommodation, mode shift/increased vehicle occupancy, or demand management. The result will include an understanding of travel behavior changes needed (e.g., reduction in number of autos) to support potential projects. The alternatives list will be reviewed and refined in two rounds in coordination with the Project Team.

Timeframe: 6 weeks, in parallel with Task C4, November – December 2017

Deliverables:

- Stakeholder Charrette for alternative development/refinement
- Long-Range Freeway and Street Traffic Management Alternatives Technical Memorandum

Task D5. Freeway and Street Traffic Management Strategy Matrix

The Freeway and Street Traffic Management Strategy Matrix will be developed as a high-level analysis to identify concepts, projects, and programs that have the potential to address the countywide transportation goals established in Task C and Task D3. This effort will serve as a screening evaluation and an iteration starting point for the analysis supporting the multimodal Vision (Task C) and the SFTP 2050 update, rather than as a ranking process. Concepts, projects, or programs that are either substantially similar or dependent in design and operation may be grouped or combined for the purpose of this screening evaluation. The evaluation will be qualitative/rough order of magnitude in nature (e.g., high, medium, low, no, or negative benefit, by metrics defined in Task D3) due to the limited time frame for completion of this effort and incomplete, high-level project details. Project scores for each metric will be reviewed and refined in two rounds with the Project Team. Concepts with high or medium evaluation scores will move forward to Task D6.

Timeframe: 3 months following Task C4c, March – June 2017

Deliverable:

- Freeway and Street Traffic Management Strategy Matrix and Technical Memorandum

Task D6. Implementation Strategy

Concepts, projects, and programs evaluated at a high or medium level will be categorized into short-, medium-, and long-range timeframes through an iterative process with stakeholders based on factors developed collaboratively with the study team. Potential factors include timing of project need, project readiness, phasing and availability of prerequisite projects, and estimated cost. Collectively, the results of this analysis will develop an ultimate 2050 freeway network and major arterials vision, including the short-, medium-, and long-term steps that could be taken to arrive at this vision. Identify policy and operational tradeoffs and considerations.

Timeframe: 4 weeks, July 2017

Deliverables:

- Freeway Vision Implementation Strategy Technical Memorandum
- Freeway Vision Draft and Final Report

Task E: Transit Modal Concept Study (Approximately 30% of budget)

Building off of transit's role in San Francisco's transportation system as identified the Vision, the Consultant, in coordination with the Project Team, shall identify, develop, assess, and prioritize transit projects to meet the 2050 goals for the transit network. The TMCS will narrow the focus from the general corridors as identified in Vision to specific modal concepts prioritized for implementation by 2050. The concepts developed in the following subtasks will be informed by the regional operator alignments and associated operating plans as discussed in the Core Capacity Transit Study as well as Caltrain modernization and ferry planning. The focus of these subtasks is to leverage and optimize these regional connections and identify opportunities to enhance the city's transportation system.

The development of the TMCS is a critical component of the Program and will focus primarily on the SFMTA transit system to inform both the update to the Transportation Element of the General Plan and

the SFTP 2050. Building off the Vision document in Task C, the TMCS will also identify regional transit opportunities with further planning and analysis to be conducted as part of SFTP 2050 in coordination with regional transit operators. Outputs of this effort will address the potential change to the administrative code requiring a subway planning process. The following subtasks will reference the following interagency teams that will work with the consultant team to develop and approve the deliverables defined below.

- **TMCS Steering Committee:** SFMTA Leadership (Transit, Sustainable Streets, Accessible Services, Finance & Information Technology, Safety, Capital Programs & Construction); will review draft deliverables and participate in the development process as stipulated below.
- **TMCS Development Team:** Consultant team and City staff. Specifically, 4 SFMTA staff (2 Planning, 1 Transit Operations Planning, 1 Transit Services), 1 SF Planning staff, 1 Transportation Authority staff. TMCS Development Team will lead the development of the TMCS and coordinate with subject matter experts as needed.
- **Consultant Team:** TBD; active part of TMCS Development Team; specific tasks and roles to be determined based on consultant knowledge and consultant and staff availability.
- **TMCS Stakeholders:** see Outreach and Communications Plan.

Summary of Inputs:

- Land Use and Transportation Vision, including: travel demand and transit market analysis; land use and development assumptions; needs assessment and an in-depth overview of existing services; analysis of recent Muni Forward capital and service enhancements (pilot projects and permanent); overarching goals and objectives for the system; performance criteria by which future projects will be assessed
- Existing/ongoing planning efforts such as the Rail Capacity Strategy, the Regional Core Capacity Transit Study, SFMTA Capital Plan, BART Metro, Caltrain Modernization, etc.
- Historical and current operating cost data by mode
- Community input on corridors and their needs (process TBD)
- Any existing and additional engineering concept studies developed through the Program

Task E1: Identification of TMCS Travel Corridors

The Vision will identify corridors and establish objectives for each of them thus creating a framework by which the Project Team will measure transit service performance. Additional goals and metrics may be developed as part of the TMCS. In a kick-off charrette with the TMCS Development Team and other City subject matter experts, a preliminary list of the TMCS Alignments will be identified for each of the 5-10 TMCS Corridors. After the preliminary list is formed, the Project Team will use the evaluation criteria identified in the Vision process to determine what alignment would "move the needle" on the established measures. When possible, quantitative metrics will be developed to differentiate potential TMCS Alignments including leveraging data and model output from Task C. Otherwise, qualitative metrics will be developed by the Project Team. This analysis will also include a review of basic construction feasibility of each alignment and alignment and land use compatibility using spatial analysis. Land use compatibility characteristics will include, but are not limited to:

- Existing and future population and employment density
- Proximity and service to Communities of Concern and progress toward addressing service disparities/equity gaps

- Proximity and service to Priority Development Areas
- Major trip generators (major institutions, cultural or recreational sites, neighborhood commercial and major retail centers, etc.)
- Existing and planned transit service and infrastructure as well as any planned improvements identified in other modal studies (e.g., Bicycle Strategy, etc.).

After the information for each of the preliminary TMCS Alignments has been compiled and reviewed, the TMCS Development Team will recommend 1-2 TMCS Alignments for each of the Vision Corridors, subject to the TMSC Steering Committee approval. TMCS Alignments that were originally identified in the preliminary list but removed from consideration will be documented. The remaining TMCS Alignments will further analyzed for modal compatibility and performance.

Timeframe: 1.5-2 months, following substantial completion of Task C, January – February 2017

Deliverables:

- Technical memo identifying the 10-15 recommended TMCS Alignments for transit service enhancement and expansion (1-2 for each of the 5-10 TMCS Corridors)
- Documentation of which TMCS alignments were removed from consideration and why

Task E2: Modal Concept Evaluation

In this task, the Project Team will develop Modal Concepts for the TMCS Alignments that best meet the objectives and reflect the necessary capacity levels described in the Vision. Development of additional objectives or criteria may be necessary to properly evaluate Modal Concepts. The second charrette the TMCS development process will reconvene the Project Team and subject matter experts to start matching up potential transit modes (i.e. modern streetcar, bus service, subway, etc.) for the TMCS Alignments identified in the prior task.

After this session, the Project Team will further refine modal/alignment combinations into Modal Concepts. These Modal Concepts may be evaluated against the following: (in no particular order):

- Corridor transit demand
- Topographic barriers, basic soil and rock unit information, liquefaction potential, tunneling considerations, terminal/turnaround constraints, and infrastructure resiliency
- Transit system integration and performance
- Non-motorized network integration
- Potential environmental impacts
- Operational efficiency
- Supports Vision policies
- Geographic and social equity
- Right-of-Way/X-Section constraints (Conceptual typical x-sections)
- Constructability/Cost (Conceptual engineering at complex/unique locations) and construction disturbance

For each area of evaluation considered, the Modal Concepts will be scored in a qualitative manner to inform the discussion and comparisons between the Modal Concepts.

Also at this stage the Project Team will engage the community to discuss and inform the selection of the Modal Concepts that would best achieve the City's objectives as developed in the Vision. Community engagement may include, but is not limited to a discussion with the community (stakeholders and locations TBD) on how the TMCS Alignments were identified and what transit modes they may be interested in (after discussing the options).

After each of the Modal Concepts have been evaluated and scored, the Project Team will recommend 1-3 Modal Concepts for each of the TMCS Alignments that would best achieve the Program's objectives for the corridor and the system as a whole, as established in the Vision. These recommendations will be subject to the TMSC Steering Committee approval.

This evaluation will result in recommendations for each TMCS Alignment that will address the infrastructure, policy, and operational needs to maintain and improve transit capacity, reliability, and connectivity consistent with the Vision. Any short or mid-range projects that are identified will be documented, considered for phasing, and potentially evaluated for effectiveness in comparison with projects in other corridors. However, subsequent tasks will focus on feasibility and evaluation of long-term projects for horizon year 2050.

Timeframe: 2.5-3 months, following completion of Task E1, March – May 2017

Deliverables:

- Technical memo identifying the 5-10 mode concepts for further refinement into projects, including evaluation matrix for comparison of modal concepts and associated conceptual x-sections
- Documentation on why the ROW and/or mode options were removed from consideration

Task E3: Develop TMCS Project Descriptions & Benefits

Modal Concepts identified in Task E2 will undergo basic project development. This will go beyond the general discussion of alignment and mode as done in the prior subtasks, to include: a general description of project limits, elements and features of the project (e.g. grade separated rail, surface Bus Rapid Transit with dedicated lane, etc.), an operational concept plan (e.g. stop spacing, headway, peak vehicle requirements, etc.), possible stop/station locations, passenger experience (access, waiting, and on-vehicle, street and neighborhood aesthetics), etc.. Specific strategies for multimodal coordination and project integration will be incorporated into the project descriptions as well. Where there is an opportunity for a project to be built and operated by a regional transit provider, (i.e., agencies other than SFMTA), the TMCS will identify the potential to be further analyzed in SFTP 2050 (Task F).

Phasing of Modal Concepts will also be considered and described, with consideration for timing of Modal Concepts that support anticipated land use development. This phased approach will focus on constructing a Modal Concept in more than one segment, and not incremental investments in the corridor prior to construction of the Modal Concept.

These project descriptions will directly inform the development of individual project benefits. Project benefits will be derived from Task C4 and additional quantitative and qualitative evaluation of projects against transit specific benefits identified under Tasks E1 and E2. These will be direct inputs into the Decision Lens tool that will ultimately provide a framework for discussing and prioritizing the Modal Concepts in Task E6. Where appropriate, TMCS Projects that leverage existing infrastructure or other

TMCS Projects to potentially produce benefits in excess of the individual TMCS Project could be evaluated as a package.

Timeframe: 2-2.5 months, following completion of Task E2, June – August 2017

Deliverables:

- Technical memo(s) detailing capacity improvement concept project descriptions, elements, operational concepts, phasing, and multimodal integration (including regional transit integration opportunities); project performance toward Vision goals and metrics, as well as transit specific benefits, will also be documented.

Task E4: Storage & Maintenance Facilities Needs

The Project Team will evaluate the available capacity in existing SFMTA transit maintenance and storage facilities against the storage and maintenance needs of the modal concepts based on the initial project descriptions. Existing facility storage capacities identified in the SFMTA Real Estate Vision for the 21st Century and accompanying addendum will provide the existing facilities storage capacities. Facilities with excess capacity will be identified, as well as modal concepts with vehicle needs that could be accommodated by these existing facilities.

Modal concepts with peak vehicle requirements in excess of available storage capacity will undergo a qualitative evaluation to identify other modal concepts that may support storage and maintenance at a new-shared storage and maintenance facility. Opportunities for a shared storage facility will be identified based on geography, operations, and total vehicles stored. Modal concepts with no or limited opportunities for centralized storage and maintenance in combination with other modal concepts will be identified.

Timeframe: 1-1.5 months, following completion of Task E3, September – October 2017

Deliverables:

- Technical memo(s) detailing modal concept storage and maintenance needs and opportunities for centralized storage and maintenance between modal concepts

Task E5: TMCS Preliminary Cost Estimation

The project descriptions developed under Task E3 and associated storage and maintenance requirements developed under E4 will be used to develop preliminary cost estimates for each Modal Concept. Cost estimates will primarily rely on unit based estimates from Federal Transit Administration database, cost estimates from ongoing and past San Francisco projects, and other available sources, with adjustments for local construction conditions. Unique or costly components of individual projects would utilize conceptual engineering completed under E2 to inform these cost estimates. Preliminary cost estimates will be providing a range of potential capital costs, and not a specific or targeted project cost. In addition to the project-specific capital costs, the Project Team will document incremental operating and maintenance costs to provide service.

Timeframe: 2-2.5 months, following completion of Task E4, October – December 2017

Deliverables:

- Technical memo(s) detailing preliminary planning-level cost estimation

Task E6: TMCS Project Prioritization and Implementation Strategy

The Modal Concept benefits from Task E3 and costs from Task E5 will use the weighted values developed in the Vision (and confirmed by the Stakeholder Group) and Decision Lens software to prioritize Modal Concepts on a benefit-cost basis. The Decision Lens software allows for prioritization of projects using both qualitative and quantitative criteria with objective and subjective ratings/scores that results in an indexed prioritization of all projects. Cost estimates are then applied to reach a benefit-cost prioritization. This initial prioritization will provide a key input for Implementation Strategy development.

Within this subtask, the Project Team will engage the community (stakeholders and locations TBD) in discussions may include, but is not limited to: a discussion on which mode concepts should be advanced through project development; the relative benefits and costs associated with the projects; and discussion/confirmation of the values and priorities established in the Vision.

The TMCS Implementation Strategy will leverage the benefit-cost Modal Concept prioritization described above, corridor demand, geographic distribution, equity, project coordination and synergy, system operations and timing of anticipated land use development to refine the benefit-cost prioritization. Consideration for projects phasing developed under Task E3 as well as funding will also be considered qualitatively in the implementation strategy, and some Modal Concepts may not be included in the implementation strategy within the 2050 time horizon based on funding and phasing considerations identified by and informed through the SFTP 2050 process. The Implementation Strategy may also consider grouping projects into packages to realize synergistic benefits of discreet combinations of projects.

This prioritized list of projects is a key input into the SFTP, the RTP, the SFMTA Capital Plan, and other regional, county, and agency planning documents as needed.

Timeframe: 1-1.5 months, following completion of Task E5, January – February 2018

Deliverables:

- An Implementation Strategy based on established prioritization, timeline and known funding opportunities
- Technical memo documenting evaluation methodology, recommended priorities, and recommendations for potentially phasing capacity improvements over time

Task E7: Transit Modal Concept Study Report

The TMCS will include its own draft and final report, incorporating the deliverables from all previous tasks. As with each step of this process, there will be community engagement and comment periods from all stakeholders. The TMCS will navigate the approvals process for the SFMTA and be sent as an information item to the other policy boards as needed.

Timeframe: 1-1.5 months following completion of Task E6, March – April 2017

Meetings: As needed to complete/get feedback on deliverables

Deliverable:

- Draft and Final TMCS Report

Task F. SFTP 2050 Update (Approximately 15% of budget)

The SFTP 2050 will use the Vision as the framework for developing a multimodal, comprehensive countywide plan that achieves the goals of the Vision. The ultimate goal of the SFTP 2050 is to do the

multimodal comprehensive countywide planning in order to achieve the goals of the San Francisco vision with an earlier horizon year than the Land Use and Transportation Vision horizon year (2050 vs. 2065) and within more constrained funding scenarios consistent with Congestion Management Agency practices as an input into the next RTP update. The Full SFTP will identify also identify near term actions and phasing to work towards that vision.

Outputs of the Full SFTP will summarize modal planning/visioning efforts described in Tasks E and F, project evaluation, policy memoranda to inform local and regional priorities, and investment scenarios.

Task F1. Regional Transit Integration

Corridors identified with potential regional transit operation in Tasks C and E3, such as those being analyzed in the Regional Core Capacity Transit Study, will be further developed under this task.

Using SF-CHAMP or other quantitative and qualitative tools, the Consultant will analyze benefits and costs across multiple operators based on the metrics identified in Tasks C and E. Similar to Task E3, this task will identify packages of projects that can leverage each other or existing infrastructure. Consultant may lead engineering to determine high level feasibility and costs.

As part of this task, the Project Team, with support from the Consultant, will coordinate with staff from regional transit agencies while staff will lead coordination with other counties and jurisdictions. The end result from this task will be a complete preferred and financially constrained transit network for SFMTA and regional operators in Year 2050 along with any preferred phasing approach.

Timeframe: 16 weeks partially in parallel with Task E3, August – December 2017

Deliverables:

- Conceptual engineering for projects in corridors identified and prioritized for regional transit capacity expansion
- Cost estimates for projects in corridors identified for regional transit capacity expansion
- Evaluation memorandum for projects in corridors identified for regional transit capacity expansion
- Phasing and construction approach for projects in corridors identified for regional transit capacity expansion
- Preferred, financially constrained, San Francisco multi operator transit network for 2050
- San Francisco multi-operator transit strategy report

Task F2. Project Performance Evaluation

Leveraging technical analysis from Tasks C, D, E, and F1, Consultant shall complete performance evaluation of all projects meeting a certain threshold (threshold TBD) considered for inclusion in the SFTP based on evaluation framework created in Task C. Benefits will be determined through quantitative (e.g., modeling) and qualitative methods with costs used to determine relative effectiveness. Outputs should inform investment scenario work as part of Task F3.

Timeframe: 16 weeks, partially overlapping with Tasks D, E, and F1, November 2017 – February 2018

Deliverables:

- Project performance evaluation matrices for all projects meeting the threshold for project evaluation (threshold TBD)
- Project performance evaluation memorandum documenting methods and results

Task F3. 2050 Investment Scenarios

Based on the outputs of the modal strategies described in Tasks D & E, the Project Team will create up to three different investment scenarios and evaluate them using the SF-CHAMP model and outputs from other evaluation processes completed in Task F2 for their effectiveness in meeting goals defined in Task C within financial constraints defined by Project Team through the RTP process. The investment scenarios should demonstrate tradeoffs of focusing on different policy priorities (e.g., state of good repair versus expansion) as well as the appropriateness of prioritizing modal investments. A final round of outreach will be necessary to gain stakeholder input on investment priorities across modes. All decisions will incorporate feedback through outreach performed as part of Task B.

Transportation Authority will provide inputs to SF-CHAMP based in coordination with Project Team. Consultant will lead analysis of outputs of model and may lead the execution of model runs

Timeframe: 10 weeks, partially in parallel with Tasks D, E, and F1, February – April 2018

Deliverables:

- Up to three SF CHAMP model runs and outputs
- Evaluation memo for investment scenario and candidate projects
- Maps showing preferred multimodal networks

Task F4. SFTP 2050 Update Document

The Project Team will develop an updated Countywide Transportation Plan document to be adopted by the Transportation Authority Board, and to serve as a primary basis for San Francisco's input to the 2021 RTP. Transportation Authority staff will lead writing of plan; Consultant will provide focused text and graphics based on previous tasks in scope to support plan creation and finalization. The final plan will incorporate policy recommendations including:

- Investment recommendations from Task F3
- Final transportation system performance metrics that are achieved with the constrained plan and Vision
- Outreach results
- Equity analyses
- Strategic initiatives, e.g. school, late night, shared mobility/innovative technology, TDM, or project delivery updates from SFTP light or new policy white papers/initiatives
- Advocacy strategy

Final report and supporting technical appendices

Timeframe: 8 weeks upon completion of Task F3, May – June 2018

Deliverable:

- Draft and Final SFTP 2050 Update

Task G. Optional Tasks

Task G1. Pedestrian Access and Capacity Analysis

Based on the pedestrian network's role as identified in the Vision, and any specific pedestrian issues that are identified through the Vision process, the Project Team may request consultant assistance in pedestrian access and capacity planning and analysis. Such tasks may include, but are not limited to, identification of key pedestrian corridors, analysis of specific needs and challenges related to pedestrian access and safety, or development of new pedestrian initiatives. Any work done under this task will be closely coordinated with ongoing pedestrian planning and initiatives underway in the city.

Work shall be directed through a contract amendment by the Project Team.

Task G2. Bicycle Network Analysis

Based on the bicycle network's role as identified in the Vision, and any specific bicycle issues that are identified through the Vision process, the Project Team may request consultant assistance in bicycle planning and analysis. Such tasks may include, but are not limited to, identification of key bicycle corridors, analysis of specific needs and challenges related to bicycle network, bicycle facilities, or development of new bicycle initiatives. Any work done under this task will be closely coordinated with ongoing bicycle planning and initiatives underway in the city.

Work shall be directed through a contract amendment by the Project Team.

Task G3. TDM

Based on TDM's role as identified in the Vision, and any specific TDM needs or opportunities that are identified through the Vision process, the Project Team may request consultant assistance in TDM planning and analysis. Such tasks may include, but are not limited to, identification of long-term TDM strategies, analysis of specific TDM strategies and the impacts they might have, development of key policies to support TDM, and development of long-term implementation plans for TDM programs/strategies. Any work done under this task will be closely coordinated with ongoing TDM planning and initiatives underway in the city.

Work shall be directed through a contract amendment by the Project Team.