

City of Alameda Outreach, Planning, and Design for the Clement Avenue Safety Improvements

Task 1 – Project Initiation and Project Management

The scope outlined below will cover Project Initiation and Project Management. The subtasks described below will allow CDM Smith to 1) measure contract conformance, 2) manage risks, changes, and quality, 3) lead the consulting team, 4) communicate with the City of Alameda (City), and 5) successfully deliver the requirements of this Scope of Work.

Task 1.1 – Project Initiation and Kick-off Meeting

CDM Smith's Project Manager will work with the City's Project Manager and obtain necessary background information such as AutoCAD base maps, traffic studies, as-built drawings of existing traffic signals and signal timing, location of storm water drainage inlets, collision data, pavement condition and other resource documents. CDM Smith will identify additional information needs that can be discussed at the Kick-Off Meeting.

The City and CDM Smith will hold a kick-off meeting to:

- Introduce project team members and clarify roles and responsibilities.
- Confirm the project's overall vision, goals, and critical success factors.
- Identify the risk factors that must be managed for successful achievement of the vision, goals, and objectives. Develop an action plan specific to each factor that when implemented will facilitate success.
- Review the Scope of Work, Schedule, and Budget.
- Define administration and project management expectations (communications protocols, monthly reporting, invoicing, frequency of status meetings).
- Refine the strategy for community outreach and institutional coordination.
- Discuss additional information needs.

Assumption(s):

1. Kick-off meeting will last up to two (2) hours and will be held at Alameda City Hall.
2. Kick-off meeting attendance will include up to four (4) CDM Smith team members.

Deliverable(s):

1. List of Additional Information Needs
2. Draft Kick-off Meeting agenda (DOCX)

3. Final Kick-off Meeting agenda (PDF)
4. Kick-off Meeting sign-in sheet
5. Kick-off Meeting materials
6. Draft Kick-off meeting summary (DOCX)
7. Final Kick-off meeting summary (PDF)

Task 1.2 – Project Management

Task 1.2.1 – Project Management Plan (PMP)

CDM Smith will update and maintain a PMP that will include a project risk register, project schedule, and issues log. The risk register will initially be populated with the risks and actions needed to mitigate the risks that are identified at the Kick-off Meeting. The project schedule will reflect the workflow that culminates in deliverable submittals. It will include project meetings and reflect City review timeframes. The PMP will be updated monthly and reviewed at monthly coordination meetings.

Assumption(s):

1. The PMP, including risk register, project schedule, and issues log, will be updated monthly.

Deliverable(s):

1. Project Management Plan (updated monthly)
 - a. Risk Register (XLSX)
 - b. Project Schedule
 - c. Issues Log (XLSX)

Task 1.2.2 – Monthly Progress Reports and Invoices

Each month, CDM Smith will submit a progress report and invoice in a format that is agreed upon by the City. Charges, including Subconsultant charges, will be tracked at the task level.

The progress reports will include a summary of start, finish, and percent complete for deliverable tasks performed during the billing period, percent complete of overall project elements, and a list of the anticipated deliverable tasks for the next month. Meetings attended will be cited. The progress reports will also identify any problems, issues, concerns or potential scope, schedule, and budget impacts with potential solutions for resolving them.

Deliverable(s):

1. Monthly Progress Reports and Invoices (PDF, 18)

Task 1.2.3 – Subconsultant Management

CDM Smith will manage team resources to achieve project goals in a consistent, coordinated, and orderly manner. This task includes the work necessary to

provide the leadership that the team will need to understand project interfaces, deadlines, budget constraints, and other issues.

CDM Smith will prepare the Subconsultant's contract agreements and will manage Subconsultants so that the CDM Smith Team effectively implements the work plan and coordinates work activities. CDM Smith will review Subconsultants' work; but that review is included as part of the specific task for which the work is developed.

CDM Smith will review the Subconsultants' monthly progress reports and invoices. These reviews will provide insight into Subconsultants' performance. Corrective actions will be implemented, if necessary.

Task 1.2.4 – Document Control

CDM Smith will prepare an electronic filing system for this project and maintain project documents on a project-specific Workroom (SharePoint) site. CDM Smith will maintain a log of requested and provided project data filed on the Workroom. CDM Smith will post draft and final submittal deliverable documents to the Workroom. Posting to the Workroom will constitute a submittal of the deliverable. A register of the deliverables that itemizes deliverable description, associated task, firm responsible, number of copies, and date submitted will be developed. The register will be updated following each submittal and kept on the Workroom.

Deliverable(s):

1. Project specific Workroom (SharePoint site)
2. Register of Deliverables (XLSX)
3. Data Request Log (XLSX)

Task 1.2.5 – Quality Management

The major purpose of a quality program is to validate that the checked and reviewed deliverable documents comply with applicable regulatory and design criteria, codes, and standards in a consistent and uniform manner using industry standards and applicable requirements. Quality assurance (QA) and quality control (QC) program requirements will be included in a Quality Management Plan. QA provides a framework for consistent work practices, and QC prescribes procedures to ensure quality work practices are executed.

CDM Smith will prepare a project-specific Quality Management Plan (QMP) covering the QA and QC for this project. The QMP will include a list of the deliverables subject to quality control and prescribe the appropriate QC process for that deliverable is subject to quality control and audit.

CDM Smith's Quality Manager will review the QMP with task leaders prior to completion of their work. The Quality Manager will confirm that the QC procedures defined in the QMP have been conducted prior to the release of deliverables to the City.

QC processes will be integrated as activities, with durations, in the project schedule. Implementing the QC process will be integrated into the workflow for each deliverable. The cost for implementing the QC process is included in the task that prescribes the deliverable. It is not included in this task.

Assumption(s):

1. The QMP will be revised based on one round of comments from The City.
2. QC processes will be integrated into the project schedule.

Deliverable(s):

1. Draft Quality Management Plan (DOCX)
2. Final Quality Management Plan (PDF)
3. Quality Control Log (XLSX)

Task 1.2.6 – Management Team Meetings

CDM Smith will plan and facilitate up to ten (10), one-hour, management team meetings. The Management Team Meetings will be held via conference call every other month starting in February 2019. The purpose of the meetings is to discuss and update the PMP, schedule, risk register, and issues log. Attendees will include the Project Manager from CDM Smith and the Project Manager from the City.

Assumption(s):

1. Management Team Meetings will be attended by the CDM Smith Project Manager.
2. Management Team Meetings will be up to one (1) hour in length.
3. Management Team Meetings will be schedule by CDM Smith and help via Skype.

Deliverable(s):

1. Management Team Meeting agendas (PDF, 10)
2. Draft Management Team Meeting notes (DOCX, 10)
3. Final Management Team Meeting notes (PDF, 10)

Task 1.2.7 – Coordination Meetings

Starting in February 2019, CDM Smith will plan and facilitate up to eighteen (18), one-hour, monthly meetings which will be held to coordinate work and resolve project issues. City staff and CDM Smith Project Manager and task leads will attend as appropriate for the topics of the meeting. Meetings will be held via conference call.

Assumption(s):

1. Coordination Meetings will be attended by the CDM Smith Project Manager and task leads as needed, up to four (4) attendees.

2. Coordination Meetings will be up to one (1) hour in length.
3. Coordination Meetings will be schedule by CDM Smith and help via Skype.

Deliverable(s):

1. Coordination Meeting agendas (PDF, 10)
2. Coordination Meeting notes (DOCX, 10)
3. Coordination Meeting notes (PDF, 10)

Task 2 – Existing Conditions

Task 2.1 – Existing Conditions Identification

CDM Smith will identify existing conditions by conducting the following tasks.

Task 2.1.1 – Review of Background Information

CDM Smith will review background information that is provided by the City which will include information from the previous concept effort.

CDM Smith will also review existing improvement concepts that have been generated for the project area during the Feasibility Study including:

- Preferred Concept (bicycle lanes)
- Two-way bikeway and limited parking on the north side
- Other potential preliminary concepts during the Feasibility Study phase

Task 2.1.2 – Data Collection

CDM Smith will collect available existing available data from the City, in accordance with the Complete Streets Checklist, for use in documenting existing conditions and for use in future planning analyses. Data may include bicycle, pedestrian, motorist and parking counts including truck type data, Line 19 bus boarding, collisions, speeding, signal timing and utility data, public right of way, pavement quality, drainage and expected sea level rise, health of trees, lighting levels, and relevant record drawings.

Task 2.1.3 – Site Visit

CDM Smith will organize a site visit with City staff and will note field conditions observed during the site visit. The site visit will occur shortly after the project Kick-off meeting.

Task 2.1.4 – Topographic Survey and Base Map

CDM Smith will develop base map drawings for the project area in AutoCAD .DWG format. The survey area will be 5-10 feet behind the back of sidewalk, as access allows, and 25 feet from the curb returns down the side streets. The survey will include existing improvements, sidewalks, curb, gutters, surface utilities,

buildings, utility poles, fence type and height, retaining walls, entrances and their finished floor elevations, storm drain and sewer manholes with inverts, driveway cuts and driveway approaches to garages, garages and elevations of their floors, down spots and curb drains, catch basins, large curb drains at corners, trees, hedges, lane markings, signs and sufficient number of spot elevations to generate 0.50-foot contours.

Property lines will be shown based on the assessor's maps and will not be indicative of a boundary survey. Street rights of way will be based on record maps and the City rights of way maps. Survey control points will be established offsite for future construction.

Coordinates, distances, and bearings will be based on California Coordinate System Zone III US Survey Feet. The horizontal datum will be 1983 (Epoch 2007). The vertical datum will be North American Vertical Datum (NAVD) 1988.

Deliverable(s):

1. Topographic Base Map (DWG)

Task 2.1.5 – Existing Conditions Memorandum

CDM Smith will update the Existing Conditions section of the Final Concept Report from the previous concept effort that details the project need and goals, street conditions, land uses, bicyclist, pedestrian, bus and parking usage, truck access, speeding, collisions and constraints, and identifies opportunities, risks and risk mitigation.

CDM Smith will update the Existing Conditions Memorandum to reflect Technical Advisory Committee (TAC) and community outreach participant input (Tasks 3.2, 3.3, 4.3, and 4.4).

Deliverable(s):

1. Draft Existing Conditions Memorandum update (DOCX)
2. Final Existing Conditions Meeting agendas update (PDF)

Task 2.1.6 – Utility Coordination and Exploration

CDM Smith will designate a Utility Coordinator who will be the primary contact with utility owners and will oversee the research and conflict identification and resolution processes performed by the project engineers in coordination with the City's designated utility project manager. CDM Smith will prepare meeting notes to document discussions with utility owners. The Utility Coordinator will attend up to six (6) meetings with utility companies.

CDM Smith will keep records of informal correspondence with utility companies, including email and phone conversations.

CDM Smith will request utility maps from utility owners to supplement base mapping. Upon receipt of additional utility maps, CDM Smith will incorporate new information on utility CADD base maps and update the utility base file corresponding to the current project limits.

CDM Smith will positively identify utilities via potholing at up to ten (10) locations. CDM Smith will contact a utility locating service such as USA to locate on the surface utilities in areas designated for potholing. CDM Smith will drill and/or excavate to expose utility. CDM Smith will survey elevation and location of utility and document with survey notes. Paint used to mark utilities will not be removed. A potholing report documenting the methods used to pothole, the locations potholed, and the results of the potholing investigation in terms of horizontal and vertical locations of utilities potholed will be prepared.

CDM Smith will prepare and maintain a spreadsheet to document and track the status of utilities within the project right-of-way. CDM Smith will work closely with all affected utility owners to establish protection, relocation schedules, and specifications prior to project construction.

CDM Smith will prepare utility disposition plans schematically depicting proposed relocations of utility facilities. CDM Smith will work with project engineering and utility owners to identify appropriate locations for relocated utility facilities; work with utility owners' new service departments to arrange for identified new service locations and schedules; and work with affected utility owners to establish preliminary protection and relocation schedules and requirements.

CDM Smith will prepare and send the following formal written correspondence to each affected utility owner as applicable:

- Utility verification request
- Notice to owner of potential conflict and request for determination of liability
- Request to pothole
- Notice to owner of relocation

CDM Smith will prepare up to six (6) final utility agreements for issuance to utility owners and including in the utility certification project milestone. The list includes the following:

- Alameda Municipal Power
- AT&T
- Comcast
- EBMUD
- Kinder Morgan

- PG&E
- Verizon

The City will coordinate utility company activities for any adjustments required to be included in the final design plans.

Assumption(s):

1. Utility coordination will occur with up to six (6) utility owners.
2. The Utility Coordinator will attend up to six (6) meetings with utility owners.
3. Positive location of utilities by potholing will occur at up to ten (10) locations.

Deliverable(s):

1. Utility Company Meeting agendas (PDF, 6)
2. Draft Utility Company Meeting notes (DOCX, 6)
3. Final Utility Company Meeting note (PDF, 6)
4. Existing utilities base file (DWG)
5. Potholing report (PDF)
6. Utility Tracking Log (XLSX)
7. Utility Verification Request (PDF, 6)
8. Notice to Owner of Potential Conflict (PDF, 6)
9. Request to Pothole (PDF, 6)
10. Notice to Owner of Relocation (PDF, 6)
11. Draft Utility Agreement (DOCX, 6)
12. Final Utility Agreement (PDF, 6)

Task 3 – Options Analysis

Task 3.1 – Options Development

Using the information from Tasks 1 and 2, CDM Smith will further develop options for the corridor. CDM Smith is will contribute innovative ideas for consideration and will use best practices guides and the Complete Streets Checklist to ensure a comprehensive multimodal coverage. Designs will be developed utilizing the following design standards:

- City of Alameda Bicycle Facility Design Standards (2013)
- Caltrans Highway Design Manual (HDM)
- Caltrans Standard Plans
- California Manual on Uniform Traffic Control Devices
- NACTO Urban Street Design Guide

- NACTO Urban Bikeway Design Guide
- NACTO Urban Street Stormwater Guide

CDM Smith will provide exhibits showing cross sections and conceptual layouts for up to three build options for further review by City staff, the TAC and community members. The options will address the project goals, and will focus on reducing vehicle speeds, incorporating bike facilities, improving intersection geometry and safety for all modes including trucks, and providing safe access to schools and park areas. In addition, crosswalk and intersection art, or other types of public artwork, may be of interest to community members and will be considered as an option for the project.

Assumption(s):

1. Conceptual Layouts for three (3) build options will be prepared.
2. Conceptual Layouts will be developed based on the base map completed under Task 2.1.
3. Conceptual Layouts will comply with the BART CAD Standards Manual.
4. Conceptual Layouts will be shown at a scale of 1" = 20' on ANSI D paper (eleven pages per option).
5. Conceptual Layouts will be plotted as half-size (11"x17") PDFs.
6. A total of nine (9) typical cross sections will be prepared for all options.
7. Conceptual layouts will be revised based on one round of consolidated non-conflicting comments from the City.

Deliverable(s):

1. Draft Conceptual (up to 4 conceptual options) at 1" = 20' scale on ANSI D paper and up to twelve (12) typical cross sections (half-size PDF)
2. Final Conceptual (up to 4 conceptual options) at 1" = 20' scale on ANSI D paper and up to twelve (12) typical cross sections (half-size PDF)

Task 3.2 – Technical Advisory Committee (TAC) Meeting #1

City and Alameda Unified School District (AUSD) staff as well as the San Francisco Bay Trail staff will meet to re-introduce the project, discuss the existing conditions and goals/priorities and preliminary alternatives developed in Task 3.1. This scope assumes that City will determine appropriate membership of the TAC and convene the TAC for meeting #1, including meeting location and logistics. CDM Smith will provide the technical material including a draft Existing Conditions memorandum (produced in Task 2.1.5) and a preliminary assessment of the advantages and disadvantages associated with each option to facilitate the TAC evaluation process. The meeting materials will present the performance of each option in addressing project

constraints and achieving project goals. CDM Smith will facilitate the TAC meeting and provide meeting notes, including action items.

Deliverable(s):

1. Draft Advantages/Disadvantages Table (XLSX)
2. Final Advantages/Disadvantages Table (PDF)
3. Draft Performance Matrix (PDF)
4. Final Performance Matrix (PDF)
5. Draft TAC Meeting #1 agenda (DOCX)
6. Final TAC Meeting #1 agenda (PDF)
7. Draft TAC Meeting #1 notes (DOCX)
8. Final TAC Meeting #1 notes (PDF)

Task 3.3 - Community Outreach, Round 1

The City and CDM Smith will hold Community Workshop #1 to explain the project history, needs/goals, existing conditions, constraints, outreach process, and preliminary options for the corridor. This workshop could be held in a traditional meeting format or could be held as a walking tour of corridor segments that are most representative of the challenges and constraints of the project. In addition, the City will lead a survey effort using online tools to seek community input, and CDM Smith will assist the City in developing questions and preparing graphics for use in the survey. City staff will compile findings and incorporate into the community response record for the first round of community outreach.

Community members will be invited to comment and make suggestions on the following:

- Project goals and priorities.
- Constraints, opportunities and risks/concerns.
- Preliminary alternatives for the corridor with advantages and disadvantages.
- Share any other comments.

During this time, community members can provide comments by survey conducted by the City, telephone, email, letter or in person. This information will be compiled by the City and captured in the Community Response Record.

CDM Smith will assist the City to develop outreach materials, including graphics and drawings, and PowerPoint slides. Outreach materials will include up to five (5) graphics and drawings. Visualizations such as photo simulations or InfraWorks 3D model visualizations are not included in this effort and are included in Task 8 as optional services.

Assumption(s):

1. Round 1 of community outreach will consist of one event, either a traditional meeting or a walking tour.
2. The community outreach event will be up to two (2) hours in length.
3. Up to five (5) CDM Smith team members will attend the community outreach event.
4. The City will lead the online survey.
5. The City will compile comments from the survey, telephone, email, letter, or in person.

Deliverable(s):

1. Outreach graphics/drawings (PDF, 5)

Task 3.4 – Transportation Commission – Information Item

CDM Smith will support the City capturing all the project findings to date as an information item in the form of a staff report and PowerPoint presentation to the Transportation Commission.

Assumption(s):

1. Information provided by CDM Smith will include information and data collected as part of other tasks. No additional analysis will take place for this task.

Deliverable(s):

1. Information to support the City's preparation of a Staff Report and PowerPoint

Task 4 – Options Refinement

Based on the input from the first round of TAC and community outreach, the City will choose up to two shortlisted concepts to advance into preliminary engineering. CDM Smith will explore and advance the shortlisted concepts into viable and functional solutions preliminary engineered at a 15 percent design level. Designs will be developed utilizing the following design standards:

- City of Alameda Bicycle Facility Design Standards (2013)
- Caltrans Highway Design Manual (HDM)
- Caltrans Standard Plans
- California Manual on Uniform Traffic Control Devices
- NACTO Urban Street Design Guide
- NACTO Urban Bikeway Design Guide
- NACTO Urban Street Stormwater Guide

After selection of a Locally Preferred Alternative (LPA) by the City of Alameda, CDM Smith will advance the design of the LPA to the 30 percent design level.

Task 4.1 – Traffic Analysis

CDM Smith will perform a traffic analysis to determine if any proposed project elements result in unacceptable operations to the signalized intersection of Clement Avenue and Park Street. A Synchro analysis will be conducted for an Existing, No-Build and up to three Build configurations for Clement Avenue and Park Street for both the AM and PM peak hours. If needed, and based on discussions with the City, Synchro analysis may also be conducted for the intersections of Park Street and Blanding Avenue and Park Street and Buena Vista Avenue to verify to optimize the signal timing at Clement Avenue and Park Street to allow platooning along Park Street. It is assumed that the existing counts for all the three potential analysis locations will be provided by the City. For future (opening) year no build and build analysis, a growth rate will be assumed based on discussions with the City. It is assumed that no travel demand modeling or subsequent post-processing is needed for future year traffic analysis.

Assumption(s):

1. Existing traffic counts will be provided by the City.
2. Up to six (6) intersection configurations will be evaluated in Synchro, three (3) for the existing condition at Central/Park, Park/Blanding, and Park/Buena Vista in the AM and PM peaks and three (3) Build configurations at Central Avenue and Park Street for both the AM and PM peaks, resulting in twelve (12) total Synchro evaluations.
3. No travel demand modeling or subsequent post-processing is needed for future year traffic analysis.

Task 4.2 – Transportation Management Plan

CDM Smith will prepare a Transportation Management Plan (TMP) in accordance with Caltrans' *Transportation Management Plan Guidelines*. The TMP will outline strategies to minimize traffic disruption and congestion during construction. Caltrans TMP Guidelines include operational and demand management strategies in six broad categories. CDM Smith will analyze the various TMP strategies in each of the six categories and will identify whether each strategy will be suitable and what emphasis (high or low) should be assigned to each selected strategy. Once the list of appropriate elements is established, an approximate cost will be developed for each selected strategy. The final step is to compare TMP costs to the expected delay costs requiring mitigation to check for reasonableness and adjust the plan accordingly. It is assumed that one revision to the TMP will be prepared to incorporate comments. The TMP will also make specific provisions for pedestrian and bicycle traffic. It is assumed that no additional traffic counts will be required for the TMP. Supplemental traffic counts that may be required to analyze detours is not included in this scope of work. The work does not include specific parking analysis for temporary loss of parking due to construction.

Assumption(s):

1. Traffic counts for the TMP will be provided by the City.
2. No additional traffic counts will be required.
3. The TMP will be revised based on one round of consolidated non-conflicting comments from The City.

Deliverable(s):

1. Draft Transportation Management Plan (DOCX)
2. Final Transportation Management Plan (PDF)

Task 4.3 – Hydrology and Hydraulic Analysis

The purpose of this task is to support the integration of the proposed safety improvements with existing drainage infrastructure. This will likely include replacement and upgrades to roadway drainage and flood control facilities and the addition of water quality features and green stormwater infrastructure.

CDM Smith will perform a hydrologic and hydraulic (H&H) design analysis using approved computer modeling software to evaluate stormwater runoff patterns and quantify design flow rates and volumes. CDM Smith will evaluate the drainage design needs of the project and select an appropriate (H&H) approach. It is anticipated that the Rational Method or TR-55 will be sufficient to determine peak flows for sizing most drainage components, but the U.S. Army Corps of Engineers (USACE) HEC-HMS or the U.S. Environmental Protection Agency Stormwater Management Model SWMM 5 will be used as necessary for more complex storage and routing analyses. Information developed during the existing conditions analysis, such as topography, stormwater catchment areas and characteristics, precipitation statistics, groundwater hydrology, existing infrastructure, etc. will be used to determine ideal locations and sizes for stormwater management improvements.

CDM Smith will identify the required design criteria to calculate peak flows for drainage structure design and any needed water quality design flows and volumes. CDM Smith will determine the need to incorporate stormwater treatment requirements and provide appropriate recommendations at the preliminary design stage. CDM Smith will provide drainage analysis for existing and proposed conditions and document the results in the Design Report.

Assumption(s):

1. The drainage design will be conducted in accordance with the most recent versions of the Caltrans Highway Design Manual and the Project Planning and Design Guide. Additional guidance, as appropriate, may also be obtained in the Alameda County Flood Control & Water Conservation District Hydrology and Hydraulics Manual.
2. The Drainage Report will be revised based on one round of consolidated non-conflicting comments from The City.

Deliverable(s):

1. Draft Drainage Report (DOCX)
2. Final Drainage Report (PDF)

Task 4.4 – 15 Percent Plans

Title Sheet, Sheet Index and General Notes, Abbreviations and Legend, and Key Map

CDM Smith will prepare a Title Sheet containing project information, a Vicinity Map, and a Location Map.

CDM Smith will prepare an Index of Sheets containing the sheet number, drawing number, and sheet description for all sheets. CDM Smith will prepare general notes for the project.

CDM Smith will prepare a list of abbreviations and a legend containing all symbols and linetypes used in the plans.

CDM Smith will prepare a Key Map to show the limits of each plan sheet within the overall project area.

Survey Control, Monumentation, and Centerline Alignments

CDM Smith will prepare plans showing centerline bearings, alignment data, survey control points, and monument.

Typical Sections

CDM Smith will develop typical sections to capture all the scenarios along the corridor. The pavement section design will be based on recommendations from the Materials Report.

Existing Conditions

CDM Smith will prepare plans showing the existing conditions of the Clement Avenue corridor.

Plan and Profile

CDM Smith will prepare preliminary plan and profile sheets showing profile grades and geometric data.

Utility Plan

CDM Smith will prepare existing utility plans showing the location and type of all known utilities based on the Task 2.1.6 Utility Coordination.

Assumption(s):

1. Preliminary Engineering (15%) Plans for two (2) options will be prepared.
2. Preliminary Engineering (15%) Plans will be developed based on the base map completed under Task 2.1.
3. Preliminary Engineering (15%) Plans will comply with the Bay Area Rapid Transit District (BART) CAD Standards Manual.
4. For each option, Preliminary Engineering (15%) Plans will consist of:

- a. Title Sheet (1)
- b. Sheet Index and General Notes (1)
- c. Abbreviations and Legend (1)
- d. Key Map (1, 1" = 100')
- e. Survey Control, Monumentation, and Centerline Alignment (2, 1" = 100')
- f. Typical Sections (3)
- g. Existing Conditions (6, 1" = 20')
- h. Plan and Profile (16, 1" = 20')
- i. Utility Plan (6, 1" = 20')

Deliverable(s):

1. 15 Percent plan set (half-size PDF, 2)

Task 4.5 – Rough Order of Magnitude Cost Estimates

CDM Smith will calculate preliminary construction quantities for cost estimating purposes based on the 15 percent design plans. Items of work in this task include: demolition; roadway concrete and asphalt concrete pavement; curb and gutter; sidewalk; driveways; drainage structures; and traffic signals and pedestrian beacons. Unit costs will be obtained from the Caltrans Cost Data Book, recent bid information, and in conjunction with City staff. Allowances will be included for any items not completely defined and measurable for construction cost.

CDM Smith will prepare a rough order of magnitude Engineer’s Opinion of Probable Construction Costs for two (2) options.

Assumption(s):

1. In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the project, CDM Smith will have no control over cost or price of labor and materials, unknown or latent conditions of existing equipment or structures that might affect operation or maintenance costs, competitive bidding procedures and market conditions, time or quality of performance by operating personnel or third parties, and other economic and operational factors that might materially affect the ultimate project cost or schedule. CDM Smith, therefore, will not warranty that the actual project costs, financial aspects, economic feasibility, or schedules will not vary from CDM Smith’s opinions, analyses, projections, or estimates.
2. Budget-level cost estimates will include appropriate contingency factors to account for project uncertainties that cannot be explicitly accounted for at the project’s various engineering stages. Risks that have been identified will be listed along with potential cost and schedule impacts.
3. The effort to prepare quantities for the estimate unit cost items and lump sums will be provided under the respective design discipline task using the City’s standard measurements.

4. All “soft costs” to be included within the cost estimate, such as City procured items and City self-performed work will be provided to CDM Smith two weeks before the estimate due date.
5. Quantities will be developed from engineered drawings to the maximum extent feasible.

Deliverable(s):

1. Rough Order of Magnitude Engineer’s Opinion of Probable Construction Costs (PDF, 2)

Task 4.6 – Preferred Project Alternatives PowerPoint

CDM Smith will produce a *Preferred Project Alternatives PowerPoint* consisting of the following design elements for the two shortlisted concepts:

- Option descriptions including plan views, cross sections and renderings
- Evaluation of option benefits and attributes based on the project goals
- Operational analysis, including the signalized intersections, the marina area and the impact of future land uses
- Potential phasing strategy to develop the project in a short- and long-term based on available funding
- Environmental clearance requirements
- Order-of-magnitude planning level cost estimates
- Schedule
- Permitting considerations

Assumption(s):

1. The Preferred Project Alternatives PowerPoint will be revised based on one round of consolidated non-conflicting comments from The City.

Deliverable(s):

1. Draft Preferred Project Alternatives PowerPoint (PPTX)
2. Final Preferred Project Alternatives PowerPoint (PPTX)

Task 4.7 – TAC Meeting #2

The TAC members will review the Preferred Project Alternatives PowerPoint prior to Community Workshop #2. The meeting will focus on the project goals to ensure that all are adequately met.

Assumption(s):

1. No graphics or presentation materials will be developed as part of this task.

Deliverable(s):

1. Draft TAC Meeting #2 agenda (DOCX)
2. Final TAC Meeting #2 agenda (PDF)
3. Draft TAC Meeting #2 notes (DOCX)
4. Final TAC Meeting #2 notes (PDF)

Task 4.8 – Community Outreach, Round 2

The City and CDM Smith will hold Community Workshop #2 to review the Preferred Project Alternatives. In addition, the City will lead a survey effort using online tools to seek community input, and CDM Smith will assist the City in developing questions and preparing graphics for use in the survey. City staff will compile findings and incorporate into the community response record for the second round of community outreach.

CDM Smith will assist the City to develop outreach materials, including graphics and drawings, and PowerPoint slides. Outreach materials will include up to five (5) graphics and drawings. Visualizations such as photo simulations or InfraWorks 3D model visualizations are not included in this effort and are included in Task 8 as optional services.

Assumption(s):

1. Round 2 of community outreach will consist of one event, a traditional meeting.
2. The community outreach event will be up to two (2) hours in length.
3. Up to five (5) CDM Smith team members will attend the community outreach event.
4. The City will lead the online survey.
5. The City will compile comments from the survey, telephone, email, letter, or in person.

Deliverable(s):

1. Outreach graphics/drawings (PDF, 5)

Task 4.9 – Transportation Commission and the City Council – Request Approval

CDM Smith will update the final recommendations in the PowerPoint to reflect TAC and community outreach. The City will request approval of the preferred alternative concept including the environmental clearance.

Assumption(s):

1. The Preferred Project Alternatives PowerPoint will be revised based on one round of consolidated non-conflicting comments from The City.

Deliverable(s):

1. Draft Revised Preferred Project Alternatives PowerPoint (PPTX)
2. Final Revised Preferred Project Alternatives PowerPoint (PPTX)

Task 4.10 – 30 Percent Plans

Title Sheet, Sheet Index and General Notes, Key Map, and Abbreviations and Legend

CDM Smith will update the Title Sheet, Sheet Index and General Notes, Key Map, and Abbreviations and Legend.

Survey Control, Monumentation, and Centerline Alignment

CDM Smith will update the survey control, monumentation, and centerline alignments.

Right-of-Way

CDM Smith will produce Right-of-Way Plans that show the existing property lines. CDM Smith will define the extent of permanent easement and temporary construction easement acquisition necessary for project construction.

The Right-of-Way Plan will show the right-of-way centerlines, section lines, quarter section lines, City limits, existing right-of-way parcel lines, proposed right-of-way lines, and proposed easement lines.

It is anticipated that no fee acquisition right-of-way is needed for the project.

Demolition

CDM Smith will prepare demolition plans that existing features and elements to be demolished or removed. CDM Smith will identify removal and salvage items and determine the disposition thereof.

Typical Sections

CDM Smith will update the typical sections. Pavement structural sections will be designed to match the existing Clement Avenue structural section based on as-built drawings and field verification (if possible) while doing utility locates. A Geotechnical Report will not be completed.

Existing Conditions

CDM Smith will update the existing conditions plans with any new information obtained since the 30 percent submittal.

Plan and Profile

CDM Smith will revise and update the plan and profile sheets showing profile grades and geometric data.

Utility Plan

CDM Smith will update the existing utility plans.

Assumption(s):

1. Preliminary Engineering (30%) Plans for one (1) option will be prepared.
2. Preliminary Engineering (30%) Plans will be developed based on the base map completed under Task 2.1.

3. Preliminary Engineering (30%) Plans will comply with the Bay Area Rapid Transit District (BART) CAD Standards Manual.
4. For each option, Preliminary Engineering (30%) Plans will consist of:
 - a. Title Sheet (1)
 - b. Sheet Index and General Notes (1)
 - c. Abbreviations and Legend (1)
 - d. Key Map (1, 1" = 100')
 - e. Survey Control, Monumentation, and Centerline Alignment (2, 1" = 100')
 - f. Right-of-Way Plan (4, 1" = 40')
 - g. Demolition Plan (4, 1" = 40')
 - h. Typical Sections (3)
 - i. Existing Conditions (6, 1" = 20')
 - j. Plan and Profile (16, 1" = 20')
 - k. Typical Details (2)
 - l. Utility Plan (6, 1" = 20')

Deliverable(s):

1. 30 Percent plan set (half-size PDF, 2)

Task 5 – Environmental Clearance

Due to federal funding, the project is required to comply with and be evaluated under NEPA and CEQA regulations.

Caltrans staff have indicated technical memorandums in support of the environmental documentation will be needed for Traffic, Air Quality, Hazardous Waste, Water Quality, Section 4(f), Visual, Community Impacts, Equipment Staging, and Cultural Resources. Those studies are briefly discussed below. Additional memorandums that we anticipate may be requested by the Caltrans Local Assistance Office are included in Task 8 as optional services.

Technical memoranda prepared in this task will be included in the environmental document as an attachment and will be reviewed by the City concurrent with the review of the environmental document.

Task 5.1 – Air Quality (Caltrans required)

No further work will be needed on this task. This project has been declared exempt by the Metropolitan Transportation Commission.

Assumption(s):

1. No technical memorandum will be requested

Task 5.2 – Community Impacts (Caltrans required)

CDM Smith will create a community impacts technical memorandum detailing parking changes, the selection process for bike facilities best suited for the project, public workshops, and a community outreach plan and results of the outreach efforts. The

memorandum will identify utilities, emergency services, and public facilities that will be potentially impacted by the proposed project. Preliminary research indicates there are low income and minority populations (environmental justice) within the project areas and this will also be covered under a specific discussion in the technical memorandum.

Assumption(s):

1. The Community Impacts technical memorandum will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. Draft Community Impacts technical memorandum (DOCX)
2. Final Community Impacts technical memorandum (PDF)

Task 5.3 – Hazardous Materials (Caltrans required)

CDM Smith will prepare a limited environmental site assessment (ESA) report evaluating the historical and present uses of the project corridor for evidence of sites that currently or have historically handled, stored, transported, released, or disposed of hazardous or regulated materials, as these types of sites are potential sources of hazardous material contamination. This review will primarily be a desktop review of Hazardous Materials/Regulated Site database results from EDR®, historical aerial photographs, fire insurance maps, and topographic maps. CDM Smith will also review Geotracker and Envirostor databases for information missing from the EDR reports. The search area would encompass a corridor consisting of ¼-mile to either side of the project corridor.

In addition, CDM Smith will conduct a site walk to see if there are any visible hazardous waste concerns in the project corridor that were not identified in the desktop survey. The site walk will also be used to confirm the condition of sites identified in the desktop survey. Following inspection, a photographic log will be filled out to document the ground survey and findings will be included in the ESA report.

A summary of the ESA report that addresses Section VII. Hazards and Hazardous Materials of the CEQA Appendix G Environmental Checklist Form will be prepared identifying unavoidable adverse impacts and cumulative impacts related to hazardous materials and soil contamination. The summary shall also note issues, risks, and assumptions that might affect the alternatives, cost, schedule, or viability of the Project.

CDM Smith will assist in the development of mitigation measures to reduce impacts associated with hazardous materials and soil contamination if appropriate. Preliminary assessment of the project corridor indicates the presence of at least four open hazardous remediation cases either adjacent or very close to the project, as well as railroad tracks and railroad ties that will require removal and disposal as part of development of the project corridor.

Assumption(s):

1. No subsurface explorations will be performed for this hazardous waste review.

2. No interviews with local owners will be performed for this hazardous waste review.
3. The limited ESA will not include: procurement and review of EDR Building Permit Reports, Environmental Lien and AUL Search Reports, EDR Vapor Encroachment Assessment Report, and EDR Property Tax Map Report.
4. Agency consultation may be needed to fully document hazardous waste sites in the project footprint.
5. The total area to be inspected for the site walk will be no more than 1.2 miles and on either side of the existing roadway and that the field visit can be completed in a day.
6. The ESA will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. Draft Environmental Site Assessment (DOCX)
2. Final Environmental Site Assessment (PDF)

Task 5.4 – Visual Resources (Caltrans required)

No further work will be needed on this task. A visual assessment memorandum has been provided to Caltrans.

Assumption(s):

1. No revisions to the technical memorandum will be requested.

Task 5.5 – Transportation (Caltrans required)

CDM Smith will prepare a technical memorandum covering the impacts of traffic control during construction including any planned detours, consistency with Alameda City bike plans, and the impacts of planned bike signals. Activities in other tasks will provide the data and analysis to complete the memorandum.

Assumption(s):

1. The Transportation technical memorandum will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. Draft Transportation technical memorandum (DOCX)
2. Final Transportation technical memorandum (PDF)

Task 5.6 – Water Quality (Caltrans required)

The City of Alameda is required to implement its Clean Water Program as a condition of the National Pollutant Discharge Elimination System (NPDES) permit for the City's storm drain system. As a co-permittee in the Alameda County Clean Water Program, the City of Alameda implements the Municipal Regional Stormwater Permit (MRP) issued by the San Francisco Bay Regional Water Quality Control Board. This permit requires the City to prevent the discharge of non-stormwater (materials other than rain water) from entering

the municipal storm drain system and San Francisco Bay including the Oakland Inner Harbor.

Because of amount of soil disturbance, compliance with the California Construction General Permit (CGP) is anticipated to be required. This requires the development of water pollution control drawings during the design phase to show the incorporation of temporary construction BMPs.

The implementation requirements of the San Francisco Bay mercury and polychlorinated biphenyl (PCB) total maximum daily loads (TMDLs), and the statewide trash TMDL will also need to be considered in the project design. This will require incorporation of control measures to prevent or minimize erosion and discharge of sediment and fine sediment and trash capture systems.

A water quality technical memorandum will be prepared to summarize the stormwater quality issues of the project and describe the associated best management practices to be implemented during construction and post-construction. Regulatory and permitting requirements will also be documented in the memorandum.

Assumption(s):

1. The proposed project will disturb more than one acre of soil and will be a Risk Level 1 project (Low Risk) as defined in the CGP.
2. The construction contractor will be responsible for the development and implementation of the stormwater pollution prevention plan (SWPPP), based on information provided in the design documents.
3. As a roadway reconstruction project that does not add one or more new lanes, this project is exempt from the requirements of Section C.3 of the Municipal Regional Stormwater Permit (MRP) – Numerically Sized Treatment Requirements.
4. Stormwater runoff pollutant source controls and site design measures are anticipated to be included in the project design.
5. The Water Quality Technical Memorandum will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. Draft Water Quality Technical Memorandum (DOCX)
2. Final Water Quality Technical Memorandum (PDF)

Task 5.7 – Equipment Staging (Caltrans required)

A brief technical memorandum will be prepared to document where staging and laydown areas will be designated for project use.

Assumption(s):

1. The Equipment Staging technical memorandum will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. Draft Equipment Staging technical memorandum (DOCX)
2. Final Equipment Staging technical memorandum (PDF)

Task 5.8 – Section 4(f) (Caltrans required)

Our preliminary review of the project corridor identified two potential Section 4(f) properties related to the proposed project footprint near McKinley Park and the Grand Street Boat Ramp. Permanent impacts to these resources are not anticipated, but they may be affected by temporary closures (triggering the need for a 4(f) analysis and a likely *de minimis* finding). Coordination will be conducted with the official(s) with jurisdiction to obtain their concurrence that a *de minimis* finding is appropriate. Caltrans guidance in the SER on 4(f) determinations will be followed. The Cross Alameda Trail and the SF Bay Trail do not currently extend along Clement Avenue and are consequently not anticipated to trigger a 4(f) evaluation.

Assumption(s):

1. There are a maximum of two (2) potential Section 4(f) properties related to the proposed project footprint.
2. Section 4(f) technical memorandum will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. *De minimis* concurrence letters (PDF, 2)
2. Draft Section 4(f) technical memorandum (DOCX)
3. Final Section 4(f) technical memorandum (PDF)

Task 5.9 – Cultural Resources/ Compliance with Section 106 of the NHPA (Caltrans required)

The project area is situated on ancient sand dune formations and is highly sensitive for buried archaeological remains. Section 106 of the National Historic Preservation Act compliance will require completion of an Archaeological Survey Report, a Historic Resources Evaluation Report (to evaluate and record the rail line segments), and a Historic Properties Survey Report. An area of potential effect (APE) will also be developed. If project elements are proposed that would reach native soils, an Extended Phase 1 investigation may be required to complete identification efforts.

Assumption(s):

1. A record search, Native American consultation, historical society outreach letters, and survey and summary results will be included in required documentation per the Caltrans SER Vol II. No new archaeological sites will require recordation and no existing sites will require updates. Any additional work beyond what is scoped will require a contract amendment.

2. One architectural history recordation (DPR 523 form) will be required for the rail segments. Additional recordation are not covered.
3. The project will not have any direct or indirect effect on known or potential historic architectural / built environment resources located outside the street right of way.
4. Additional Section 106 compliance documents may be required if there are resources in the APE that are eligible for listing in the National Register of Historic Places. These may include a Finding of Effect and Memorandum of Agreement. Preparation of these subsequent documents can be provided under separate scope of work.
5. The Cultural Resources technical memorandum will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. Draft Cultural Resources technical memorandum (DOCX)
2. Final Cultural Resources technical memorandum (PDF)

Task 5.10 – Environmental Document

CDM Smith will begin this task by defining a detailed project description and purpose and need statement for City and Caltrans review and approval. The proposed project components appear to qualify for a NEPA Categorical Exclusion and a CEQA Categorical Exemption assuming there are no other factors that would exclude this use of this finding. This scope assumes a CE/CE determination.

Assumption(s):

1. The CE/CE determination assumes there are no unusual circumstances and no applicable statutory exceptions that would be considered exclusions to the ability to utilize a CE determination.
2. It is assumed that the environmental document and supporting memorandums will undergo two (2) rounds of review by the City and by Caltrans.
3. The Project Description will be revised based on one round of consolidated non-conflicting comments from the City.
4. The Purpose and Need will be revised based on one round of consolidated non-conflicting comments from the City.
5. The CE/CE will be revised based on two rounds of consolidated non-conflicting comments from the City.
6. The CE/CE will be revised based on two rounds of consolidated non-conflicting comments from Caltrans.
7. The second round of City review and the first round of Caltrans review will occur concurrently.

Deliverable(s):

1. Draft Project Description (DOCX)
2. Final Project Description (DOCX)
3. Draft Purpose and Need (DOCX)

4. Final Purpose and Need (DOCX)
5. CE/CE for City Review (DOCX)
6. Draft CE/CE for City and Caltrans Review (DOCX)
7. Draft Final CE/CE for Caltrans Review (DOCX)
8. Final CE/CE (PDF)

Task 6 – Final Plans, Specifications, and Cost Estimates (PS&E)

This task involves obtaining approval for the final design and construction bid documents.

Task 6.1 – Develop 60 Percent PS&E

Based on the input from the Transportation Commission and the City Council, CDM Smith will develop 60 percent design plans of the preferred alternative, including cost estimates and schedule. These plans will include traffic signal modifications, if recommended. CDM Smith will incorporate consolidated and non-conflicting comments from the City on the draft 30 percent submittal and provide written responses as to how those comments will be addressed in the 60 percent design.

The 60 percent plans will be distributed to the appropriate City departments for review and comment.

Title Sheet, Sheet Index and General Notes, Key Map, and Abbreviations and Legend

CDM Smith will update the Title Sheet, Sheet Index and General Notes, Key Map, and Abbreviations and Legend.

Survey Control, Monumentation, and Centerline Alignment

CDM Smith will update the survey control, monumentation, and centerline alignments.

Right-of-Way

CDM Smith will update right-of-way plans.

Demolition

CDM Smith will update the demolition plans.

Typical Sections

CDM Smith will update the typical sections. Pavement structural sections will be designed to match the existing Clement Avenue structural section based on as-built drawings and field verification (if possible) while doing utility locates. A Geotechnical Report will not be completed.

Existing Conditions

CDM Smith will update the existing conditions plans with any new information obtained since the 30 percent submittal.

Plan and Profile

CDM Smith will revise and update the plan and profile sheets showing profile grades and geometric data.

Intersection Details

CDM Smith will prepare intersection detail plans showing geometric data, including station/offsets, elevations, and curve data for proposed intersection improvement.

Curb Ramp Details

CDM Smith will prepare curb ramp details showing station/offsets, elevation, and ramp grades complying with the requirements of the United States Access Board's Public Rights-of-Way Accessibility Guidelines (PROWAG) and accepted construction tolerances.

Drainage Plan, Profiles, and Details

CDM Smith will prepare a drainage design including pipe sizing and inlet type selection for modifications to existing drainage systems and for new facilities. It is assumed that no off-site drainage facilities are affected and no off-site drainage design for increased conveyance capacity or stormwater treatment will be performed.

CDM Smith will prepare drainage plans depicting drainage system horizontal and vertical layout and pipe type and sizing. These plans will include surveyed existing and new stormwater management systems. This work will include the preparation of drainage plans, profiles, and details as required. On-site flows will be captured and conveyed to primary drainage facilities. Drainage plans for the project will be consistent with statewide NPDES permit and requirements. Treatment BMPs will be identified and designed to address any required water quality issues. Drainage systems will be numbered and depicted in accordance with Caltrans conventions. The plans will include details for drainage modifications and new drainage facilities. These details are intended to provide a basis for cost estimates and will not include final design level construction details.

Green Stormwater Infrastructure

As a roadway reconstruction project that does not add one or more new lanes, this project is exempt from the requirements of Section C.3 of the Municipal Regional Stormwater Permit (MRP). Numerically sized treatment facilities will not be required under the MRP; however, several TMDL programs are in place and may require the incorporation of BMPs to control fine sediment and trash discharges. Green stormwater infrastructure such as bioretention cells, vegetated swales, tree box filters, etc. can be effective in controlling these types of pollutants and will be considered in the design. Other BMP types, such as soil erosion controls and trash screen inlet inserts will also be evaluated and incorporated if determined to be appropriate. Site design measures to conserve natural spaces and limit the amount of impervious surface will also be considered and incorporated as appropriate.

Utility Plan

CDM Smith will update the existing utility plans.

CDM Smith will identify high risk utilities and utilities that may be in conflict with the proposed project construction. CDM Smith will prepare relocation drawings for up to five (5) utility systems (not including traffic signals or storm drains which are accounted for elsewhere).

CDM Smith will prepare plans to show utility protections and relocations, both by the City's contractor and by others. CDM Smith will work with utility owners to identify appropriate locations for relocated utility facilities and establish preliminary protection and relocation schedules and requirements. CDM Smith will adhere to all utility company standards and requirements and make necessary utility plan revisions as become necessary during final plan design and approvals.

It is assumed the relocation of water, gas, electric, petroleum, telephone, and other communication facilities will be designed and carried out by their respective owners.

Stage Construction and Traffic Handling

CDM Smith will prepare traffic control plans with an outline for construction staging for areas of new pavement and hardscape construction. Construction staging will depict how construction of the project can be phased while accommodating existing vehicular, bicycle and pedestrian traffic, identifying necessary dimensions for work zones and work zone protections. CDM Smith will develop a concept for maintaining traffic flow through and around the work zones coordinated with the construction staging. Maintenance of traffic plans will depict schematically how many lanes of travel are open in each direction for each stage of construction, corresponding pavement delineation, and necessary signage in construction zones identifying travel routes and times for specific zones of construction activity. Maintenance of traffic will conform to the requirements of the California Manual on Uniform Traffic Control Devices (CA MUTCD).

Signing and Striping

CDM Smith will prepare preliminary plans depicting proposed pavement delineation and pavement markings, including curb colors for color-specified parking, lane lines, bikeway marking, and pedestrian crosswalk markings. The limits of pavement delineation are assumed to match the roadway improvement limits. Proposed roadway signing plans will be developed at this time.

Traffic Signal and RRFB Plans

CDM Smith will prepare 60 percent design plans for the traffic signal modification at the intersection of Clement Avenue and Park Street and for the proposed RRFB improvements for up to two locations on Clement Avenue. The plans will include but not be limited to the location of poles, signal heads, vehicle detection, pull boxes, conduit, signal phasing, and signal cabling.

Street Lighting

CDM Smith will prepare 60 percent design plans for the street lighting improvements as well as prepare photometric plans at marked crosswalk locations along the Clement Avenue study corridor.

Water Pollution Control

CDM Smith will begin identification of temporary construction site best management practices (BMPs) and compile the required information to support the development of the project Stormwater Pollution Prevention Plan (SWPPP) and water pollution control drawings in accordance with the CGP. CDM Smith will update temporary construction site BMPs and quantities as required. It is assumed that the Construction Contractor will be responsible for the development and implementation of the SWPPP, based on information provided in the design documents.

Landscape and Urban Design

CDM Smith will prepare landscaping plans with any street trees or landscaping, changes to the existing trees within the corridor that may be impacted, or require protection, and coordinate with the City. The plans will include hardscape elements, plant palette, legend, notes, trees located, and planting areas defined. CDM Smith will identify hardscape elements of medians, pedestrian crossing refuges and sidewalks at curb bulb including recommendations for types, colors, finishes and materials of hardscape areas, and furnishing items. No irrigation design is included. CDM Smith will perform a tree assessment.

CDM Smith will finalize the evaluation of options for tree preservation.

Engineer's Opinion of Probable Construction Costs

CDM Smith will update the Engineer's Opinion of Probable Construction Costs at 60 percent using the design plans as a basis for the quantity takeoff. Unit costs will be updated from recent bid information and in conjunction with City staff. Allowances will be included for any items not completely defined and measurable for construction cost.

Specifications

CDM Smith will identify all work items necessary for construction of the project. CDM Smith will assemble data and prepare drafts of (1) necessary modifications to the Caltrans Standard Special Provisions, (2) any necessary additional technical specifications, and (3) the "boilerplate" provided by the City.

Assumption(s):

1. 60 Percent Plans will be developed based on the base map completed under Task 2.1.
2. 60 Percent Plans will comply with the BART CAD Standards Manual.
3. 60 Percent Plans will consist of:
 - a. Title Sheet (1)
 - b. Sheet Index and General Notes (1)
 - c. Abbreviations (1)
 - d. Legend (1)
 - e. Key Map (1, 1" = 100')
 - f. Survey Control, Monumentation, and Centerline Alignment (2, 1" = 100')
 - g. Right-of-Way Plan (4, 1" = 40')
 - h. Demolition Plan (4, 1" = 40')
 - i. Typical Sections (3)

- j. Existing Conditions (6, 1" = 20')
 - k. Plan and Profiles (16, 1" = 20')
 - l. Intersection Details (14, 1" = 10')
 - m. Curb Ramp Details (14, 1" = 5')
 - n. Typical Details (2)
 - o. Drainage Plan (4, 1" = 40')
 - p. Drainage Profiles (4, 1" = 10')
 - q. Drainage Details (2)
 - r. Green Stormwater Infrastructure (3)
 - s. Utility Plan (6, 1" = 20')
 - t. Stage Construction and Traffic Handling (15, 1" = 50')
 - u. Signing and Striping (6, 1" = 40')
 - v. Traffic Signal and RRFB Plans (12)
 - w. Street Lighting Plans (11)
 - x. Water Pollution Control (5, 1" = 40')
 - y. Landscaping and Urban Design (6, 1" = 40')
4. The City will perform all right-of-way activities necessary to acquire the fee, permanent easements, and temporary construction easements.
 5. In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the project, CDM Smith will have no control over cost or price of labor and materials, unknown or latent conditions of existing equipment or structures that might affect operation or maintenance costs, competitive bidding procedures and market conditions, time or quality of performance by operating personnel or third parties, and other economic and operational factors that might materially affect the ultimate project cost or schedule. CDM Smith, therefore, will not warranty that the actual project costs, financial aspects, economic feasibility, or schedules will not vary from CDM Smith's opinions, analyses, projections, or estimates.
 6. Budget-level cost estimates will include appropriate contingency factors to account for project uncertainties that cannot be explicitly accounted for at the project's various engineering stages. Risks that have been identified will be listed along with potential cost and schedule impacts.
 7. The effort to prepare quantities for the estimate unit cost items and lump sums will be provided under the respective design discipline task using the City's standard measurements.
 8. All "soft costs" to be included within the cost estimate, such as City procured items and City self-preformed work will be provided to CDM Smith two weeks before the estimate due date.
 9. Quantities will be developed from engineered drawings to the maximum extent feasible.
 10. Quantities will be developed and broken out on block by block basis.
 11. The City will provide one round of consolidated and non-conflicting comments.
 12. The relocation of water, gas, electric, petroleum, telephone, and other communication facilities will be designed and carried out by their respective owners.

Deliverable(s):

1. 60 Percent Plans (half-size PDF)
2. 60 Percent Engineer's Opinion of Probable Construction Costs (PDF)
3. 60 Percent Specifications (PDF)
4. Responses to City comments on the 30 Percent plans (XLSX)

Task 6.2 – Develop 100 Percent PS&E

Based on comments to the 60 percent design plans, CDM Smith will prepare the 100 Percent PS&E. The 100 Percent PS&E package will be distributed to the appropriate City departments for review and comment.

Title Sheet, Sheet Index and General Notes, Key Map, and Abbreviations and Legend

CDM Smith will update the Title Sheet, Sheet Index and General Notes, Key Map, and Abbreviations and Legend.

Survey Control, Monumentation, and Centerline Alignment

CDM Smith will update the survey control, monumentation, and centerline alignments.

Right-of-Way

Right-of-way requirements will be updated for each impacted parcel within the project limits. CDM Smith will update Right-of-Way Plans that display fee permanent easements, and temporary construction easements per federal guidelines, including, but not limited to, ownership blocks on each Right-of-Way Plan sheet. Property lines will be shown on the Right-of-Way Plan.

For all fee property purchases, CDM Smith will update legal description for the parcel boundary after proposed partial purchase.

CDM Smith will define and update the extent of permanent easement and temporary construction easement acquisition necessary for project construction. CDM Smith will update this information both in tabular form and on the Right-of-Way Plan.

The Right-of-Way Plan will show the right-of-way centerlines, section lines, quarter section lines, City limits, existing right-of-way parcel lines, proposed right-of-way lines, and proposed easement lines. Survey control, monumentation, and alignment information will also be shown on these sheets, including the information in northings and eastings as well as Engineering Stationing, offsets, and alignment. Points along the existing right-of-way, proposed right-of-way, and points along the easement lines will be defined in Engineering Stationing, offsets, and alignment.

Monumentation requirements will be addressed on the Right-of-Way Plan. It will have an ownership block showing acquisitions and access modifications, including the Project Parcel Number, Owner (Taxpayer), King County Parcel Number, Parcel Address, Ownership Total (SF), Fee (SF), Permanent Easement (SF), Compensable Temporary Construction Easement (SF), Mutual Benefit Temporary Construction Easement (SF), Total Temporary Construction Easement (SF), and Remainder (SF) for properties from

which the City needs fee, permanent easements, and temporary construction easements. Building outlines, parking stalls and other items will also be shown on this plan.

Demolition

CDM Smith will update the demolition plans.

Typical Sections

CDM Smith will update the typical sections.

Existing Conditions

CDM Smith will update the existing conditions plans with any new information obtained since the 60 percent submittal.

Plan and Profile

CDM Smith will revise and update the plan and profile sheets showing profile grades and geometric data.

Intersection Details

CDM Smith will update intersection detail plans showing geometric data, including station/offsets, elevations, and curve data for proposed intersection improvement.

Curb Ramp Details

CDM Smith will update curb ramp details complying with the requirements of the United States Access Board's Public Rights-of-Way Accessibility Guidelines (PROWAG) and accepted construction tolerances.

Drainage Plan, Profiles, and Details

CDM Smith will update the drainage plans. The plans will include updated details for drainage modifications and new drainage facilities.

Green Stormwater Infrastructure

CDM Smith will update the green stormwater infrastructure plans.

Utility Plan

CDM Smith will update the existing utility plans.

CDM Smith will identify high risk utilities and utilities that may be in conflict with the proposed project construction. CDM Smith will prepare relocation drawings for up to 5 utility systems (not including traffic signals or storm drains which are accounted for elsewhere).

CDM Smith will update plans to show utility protections and relocations, both by the City's contractor and by others. CDM Smith will adhere to all utility company standards and requirements and make necessary utility plan revisions as become necessary during final plan design and approvals.

It is assumed the relocation of water, gas, electric, petroleum, telephone, and other communication facilities will be designed and carried out by their respective owners.

Stage Construction and Traffic Handling

CDM Smith will update the traffic control plans with an outline for construction staging for areas of new pavement and hardscape construction. Maintenance of traffic will conform to the requirements of the California Manual on Uniform Traffic Control Devices (CA MUTCD).

Signing and Striping

CDM Smith will update the proposed pavement delineation and pavement markings, including curb colors for color-specified parking, lane lines, bikeway marking, and pedestrian crosswalk markings. The limits of pavement delineation are assumed to match the roadway improvement limits. Proposed roadway signing plans will be developed at this time.

Traffic Signal and RRFB Plans

CDM Smith will update the percent design plans for the traffic signal modification at the intersection of Clement Avenue and Park Street and for the proposed RRFB improvements for up to two locations on Clement Avenue.

Street Lighting

CDM Smith will update the design plans for the street lighting improvements as well as prepare photometric plans at marked crosswalk locations along the Clement Avenue study corridor.

Water Pollution Control

CDM Smith will update the water pollution control drawings and SWPPP information for the project.

Landscape and Urban Design

CDM Smith will update plans with any additional street trees, changes to the existing trees within the corridor that may be impacted, or require protection, and coordinate with the City.

Engineer's Opinion of Probable Construction Costs

CDM Smith will update the Engineer's Opinion of Probable Construction Costs at 100 percent using the design plans as a basis for the quantity takeoff. Unit costs will be updated from recent bid information and in conjunction with City staff. Allowances will be included for any items not completely defined and measurable for construction cost.

Specifications

CDM Smith update the (1) necessary modifications to the Caltrans Standard Special Provisions, (2) necessary additional technical specifications, and (3) the "boilerplate" provided by the City.

Assumption(s):

1. 100 Percent Plans will be developed based on the base map completed under Task 2.1.
2. 100 Percent Plans will comply with the BART CAD Standards Manual.
3. 100 Percent Plans will consist of:
 - a. Title Sheet (1)
 - b. Sheet Index and General Notes (1)
 - c. Abbreviations (1)
 - d. Legend (1)
 - e. Key Map (1, 1" = 100')
 - f. Survey Control, Monumentation, and Centerline Alignment (2, 1" = 100')
 - g. Demolition Plan (4, 1" = 40')
 - h. Right-of-Way Plan (4, 1" = 40')
 - i. Typical Sections (3)
 - j. Existing Conditions (6, 1" = 20')
 - k. Plan and Profiles (16, 1" = 20')
 - l. Intersection Details (14, 1" = 10')
 - m. Curb Ramp Details (14, 1" = 5')
 - n. Typical Details (2)
 - o. Drainage Plan (4, 1" = 40')
 - p. Drainage Profiles (4, 1" = 10')
 - q. Drainage Details (2)
 - r. Green Stormwater Infrastructure (3)
 - s. Utility Plan (6, 1" = 20')
 - t. Stage Construction and Traffic Handling (15, 1" = 50')
 - u. Signing and Striping (6, 1" = 40')
 - v. Traffic Signal and RRFB Plans (12)
 - w. Street Lighting Plans (11)
 - x. Water Pollution Control (5, 1" = 40')
 - y. Landscape and Urban Design (6, 1" = 40')
4. The City will perform all right-of-way activities necessary to acquire the fee, permanent easements, and temporary construction easements.
5. In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the project, CDM Smith will have no control over cost or price of labor and materials, unknown or latent conditions of existing equipment or structures that might affect operation or maintenance costs, competitive bidding procedures and market conditions, time or quality of performance by operating personnel or third parties, and other economic and operational factors that might materially affect the ultimate project cost or schedule. CDM Smith, therefore, will not warranty that the actual project costs, financial aspects, economic feasibility, or schedules will not vary from CDM Smith's opinions, analyses, projections, or estimates.

6. The effort to prepare quantities for the estimate unit cost items and lump sums will be provided under the respective design discipline task using the City’s standard measurements.
7. All “soft costs” to be included within the cost estimate, such as City procured items and City self-performed work will be provided to CDM Smith two weeks before the estimate due date.
8. Quantities will be developed from engineered drawings to the maximum extent feasible.
9. Quantities will be developed and broken out on block by block basis.
10. The City will provide one round of consolidated and non-conflicting comments.

Deliverable(s):

1. 100 Percent Plans (half-size PDF)
2. 100 Percent Engineer’s Opinion of Probable Construction Costs (PDF)
3. 100 Percent Specifications (PDF)
4. Responses to City comments on the 60 Percent plans (XLSX)

Task 6.3 – Develop Issue for Bid (IFB) PS&E

Based on comments from City staff from the 100 Percent plan check, CDM Smith will revise the PS&E and produce and Issue for Bid (IFB) package for construction bidding.

Assumption(s):

1. IFB Plans will be developed based on the base map completed under Task 2.1.
2. IFB Plans will comply with the BART CAD Standards Manual.
3. IFB Plans will consist of:
 - a. Title Sheet (1)
 - b. Sheet Index and General Notes (1)
 - c. Abbreviations (1)
 - d. Legend (1)
 - e. Key Map (1, 1” = 100’)
 - f. Survey Control, Monumentation, and Centerline Alignment (2, 1” = 100’)
 - g. Demolition Plan (4, 1” = 40’)
 - h. Right-of-Way Plan (4, 1” = 40’)
 - i. Typical Sections (3)
 - j. Existing Conditions (6, 1” = 20’)
 - k. Plan and Profiles (16, 1” = 20’)
 - l. Intersection Details (14, 1” = 10’)
 - m. Curb Ramp Details (14, 1” = 5’)
 - n. Typical Details (2)
 - o. Drainage Plan (4, 1” = 40’)
 - p. Drainage Profiles (4, 1” = 10’)
 - q. Drainage Details (2)
 - r. Green Stormwater Infrastructure (3)
 - s. Utility Plan (6, 1” = 20’)

- t. Stage Construction and Traffic Handling (15, 1" = 50')
- u. Signing and Striping (6, 1" = 40')
- v. Traffic Signal and RRFB Plans (12)
- w. Street Lighting Plans (11)
- x. Water Pollution Control (5, 1" = 40')
- y. Landscape and Urban Design (5, 1" = 40')

Deliverable(s):

1. IFB Plans (full-size PDF)
2. IFB Percent Engineer's Opinion of Probable Construction Costs (PDF)
3. IFB Percent Specifications (PDF)
4. Responses to City comments on the 100 Percent plans (XLSX)

Task 6.4 – Permitting

CDM Smith will coordinate permitting activities for the Clement Avenue Safety Improvements Project. During preliminary engineering CDM Smith will investigate and determine the permitting requirements; during the 60 percent design phase CDM Smith will confirm the permitting requirements; and during the 100 percent design phase CDM Smith will confirm compliance with permit requirements. It is anticipated that both National Pollutant Discharge System (NPDES) and Caltrans Construction General Permit (CGP) will be required.

Task 6.5 – Environmental Review

CDM Smith will work with The City to review any project changes during the PS&E phase to ensure environmental compliance.

Task 7 - Construction Bid Support

Task 7.1 – Construction Bid Support

CDM Smith will provide bidding support to the City during the construction contract procurement process. Services will include responding to bidders' questions and providing information and clarification regarding the project design and technical specifications. Design addenda will be produced if necessary to clarify design issues. The development of addenda to address unforeseen or new conditions outside the control of CDM Smith, is not included.

Following the bidding process, changes to the design resulting from bidding questions/clarifications and addenda will be incorporated into the design to produce a conformed set of final construction documents. The final construction documents will be reviewed and sealed by a registered civil engineer and will provide necessary plans, specifications, and quantity estimates, for use by the selected contractor for construction of the project.

Activities may include:

- Providing input to City staff to answer up to twenty (20) questions from potential bidders during the advertisement period
- Preparing revised documents associated with Addenda packages
- Preparing up to two (2) Addenda to the final bid package, as required to be Issued for Bid to City staff.
- Attend a pre-bid meeting and assist the City with responses to prospective bidder questions during the bid process.
- Attend a pre-construction meeting, if the City determines one is needed.

Assumption(s):

1. Bidding period will be eight (8) weeks for less.
2. The City will produce the necessary hard copies and manage distribution to potential contractors for bidding purposes.
3. The City is responsible for all bidding services required for procurement of a project construction contractor. Bidding support such as advertisement, bid tabulation and review, award recommendations, etc., is not included in this scope of work.
4. Bidder questions during the advertisement permit for the construction contract will be addressed and documented.
5. Design addenda, due to unforeseen or changed conditions identified during the bidding process, are not included in this scope of work.

Deliverable(s):

1. Input to answer up to twenty (20) bid questions
2. Addenda to the final bid package (PDF, 2)
3. Conformed Plans (full-size signed hardcopy sealed and signed by a professional engineer licensed in the State of California)
4. Conformed Plans (full-size PDF)
5. Conformed Engineer's Opinion of Probable Construction Costs (PDF)
6. Conformed Specifications (PDF)

Task 8 – Optional Services

The following tasks are optional services that can be provided by CDM Smith upon request.

Task 8.1 – Visualizations

CDM Smith can provide visualization to support in the community outreach process.

Task 8.1.2 – InfraWorks 3D Model and Visualizations

CDM Smith will prepare an InfraWorks 3D model showing proposed improvements for the length of the corridor for up to two (2) concepts. CDM Smith will revise the model once for each concept based on comments from the City. Once produced, CDM Smith will generate still images and one fly-through for each concept.

Assumption(s):

1. CDM Smith will revise the model for each concept once based on City comments.

Deliverable(s):

1. InfraWorks 3D model (2)
2. Still images of the 3D models
3. Fly-through video (2)

Task 8.1.3 – Photosimulations

CDM Smith will prepare photosimulations showing proposed improvements at a single location for up to two (2) concepts.

Assumption(s):

1. CDM Smith and the City will coordinate before photosimulations are produced, the photosimulations will not be revised based on comments from the City.

Deliverable(s):

1. Final photosimulations (2)

Task 8.2 – Land Use (expected)

We expect Caltrans will request a brief land use memorandum. The land use technical memorandum will cover existing and future land use, consistency with State, regional, and local plans, and parks and recreation. To create efficiencies, our team will draw upon and augment previous studies conducted for the project including the Clement Avenue Complete Streets Corridor Concept (2015), Alameda Marina Final EIR (2018), and Cross Alameda Trail Feasibility Study (2005). The proposed project appears to be in conformance with the City of Alameda General Plan (1991), Northern Waterfront General Plan Amendment (2008), Bicycle Master Plan (1999/2010), Pedestrian Plan (2009), Local Action Plan for Climate Change (2008), Countywide Bicycle and Pedestrian Plans (2012), and Alameda County Priority Development Area Investment and Growth Strategy (2017). It is expected that additional research will support the project conformance with other plans and no conflicts are anticipated.

Assumption(s):

1. The Land Use technical memorandum will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. Draft Land Use technical memorandum (DOCX)
2. Final Land Use technical memorandum (PDF)

Task 8.3 – Noise and Vibration (expected)

A separate noise technical memorandum may be requested by Caltrans. This memorandum will evaluate applicable state and local ordinances. Sensitive receivers will be identified and will be analyzed against the noise associated with each phase of construction using the Federal Highway’s Traffic Noise Model (TNM) version 2.5. Construction noise will be modeled based on the Roadway Construction Noise Model (RCNM) version 1.1. The memorandum will include recommended measures to avoid or minimize noise and vibration impact.

Assumption(s):

1. A list of expected construction equipment will be provided by the City for each phase of construction.
2. If Caltrans requires a Noise Study Report, this work will require a scope and budget amendment.
3. The Noise and Vibration technical memorandum will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. Draft Noise and Vibration technical memorandum (DOCX)
2. Final Noise and Vibration technical memorandum (PDF)

Task 8.4 – Endangered Species Act (ESA) Natural Environmental Study (NES) Minimal Impact (MI) (expected)

No impacts are anticipated to threatened or endangered species (or their critical habitat) within the project corridor. However, Caltrans may require a NES MI (Natural Environmental Study Minimal Impact) to document the existing natural environmental and support any no effect determinations.

Assumption(s):

1. The NES MI will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. Draft NES MI (DOCX)
2. Final NES MI (PDF)

Task 8.5 – Paleontology (expected)

A Paleontological Identification Report (PIR) may be requested to evaluate the likelihood of paleontological resources within the project corridor. The report will define the paleontological sensitivity within the project footprint and recommend any potential mitigation measures (such as monitoring during construction) as appropriate.

Assumption(s):

1. The Paleontological Identification Report will be revised based on one round of consolidated non-conflicting comments from the City and Caltrans.

Deliverable(s):

1. Draft Paleontological Identification Report (DOCX)
2. Final Paleontological Identification Report (PDF)

Task 8.6 – Environmental Documentation (CE / IS/MND)

Task 8.6 includes additional effort required to produce a NEPA Categorical Exclusion and a CEQA Initial Study Mitigated Negative Declaration.

Assumption(s):

1. An estimate for additional anticipated budget is provided should the background database searches (such as a Cortese list search) or the results of public outreach indicate the need for a higher level of environmental documentation per CEQA. This would be the case if additional studies indicate the presence of open hazardous waste sites in the project footprint. In that situation, we anticipate a CE/Initial Study Mitigated Negative Declaration may be required for the project's environmental compliance component.
2. The CE / IS/MND will be revised based on two rounds of consolidated non-conflicting comments from the City.
3. The CE / IS/MND will be revised based on two rounds of consolidated non-conflicting comments from Caltrans.
4. The second round of City review and the first round of Caltrans review will occur concurrently.

Deliverable(s):

1. Draft Project Description (DOCX)
2. Final Project Description (PDF)
3. Draft Purpose and Need (DOCX)
4. Final Purpose and Need (PDF)
5. CE / IS/MND for City Review (DOCX)
6. Draft CE / IS/MND for City and Caltrans Review (DOCX)
7. Draft Final CE / IS/MND for Caltrans Review (DOCX)
1. Final CE / IS/MND (PDF)