AECOM Contract Scope of Work
December 7, 2020

The following Climate Action and Adaptation Plan (CAAP) Scope of Work tasks are identified in the Contract between City of Davis and AECOM.

TASK 0: PROJECT MANAGEMENT

Subtask 0.1 Project Kick Off

AECOM will attend a project kick off meeting in person with key City staff to discuss and confirm scope, budget, deliverables and time frame. This meeting will also be used to confirm desired protocols regarding communication between the City and AECOM project manager.

Following this meeting, and in consultation with subconsultants Energeia-USA and Fehr & Peers AECOM will create a detailed timeline with milestones and dates that the City can expect draft and final deliverables with clear review periods for City staff identified.

Subtask 0.2 Monthly Progress Meetings

The AECOM project manager will attend monthly progress meetings with the City team, with the project director and other team members participating on an as needed basis according to the agenda. The meetings will be held by phone or a web-based meeting platform, unless in-person meetings would be helpful given the meeting content to discuss and/or advisable given current conditions.

Subtask 0.3 Project Management

AECOM has implemented a Quality Management System (QMS) as part of the ISO 9001 certification program. AECOM's QMS procedures are followed for all four major phases on every project: proposal, project planning, project execution, and project closure. All deliverables under this contract will follow QMS procedures to produce quality results, focus on client satisfaction, reduce risk and liabilities, and strive for continual improvement. This process has also proven to improve efficiency, resulting in time and cost savings.

Regular communication, particularly around issues of schedule or budget, is always essential. AECOM's project management assistant team will support budget/financial analysis, cost forecasting, reporting, project scheduling, and deliverable tracking. The Quality Assurance/Quality Management system described above will ensure that resources are managed effectively.

Subtask 0 Deliverables:

- Kick off meeting minutes
- Monthly progress call minutes

Subtask 0 Assumptions:

- All deliverables (PowerPoints, memos etc.) for ALL tasks will be provided as one draft, and then updated to a final from one set of consolidated comments from City staff.

TASK 1: CITY, STAKEHOLDER AND COMMUNITY ENGAGEMENT

City staff will take the lead both in developing the stakeholder and community engagement plan and implementing it. AECOM's role will be limited to providing PowerPoint templates as described below, game applications (existing materials only such as the Game of Extremes developed by AECOM for USDN if in person meetings can be held in 2021) and other strategic guidance on methods.

> NOTE: City staff and partners will take the lead on any tasks that form part of the community participation efforts.

Subtask 1.1 Commission and Council Presentations

City staff will lead this task. AECOM will provide presentation materials for four (4) commission or city council meetings only.

Subtask 1.1 Deliverables:

- · Meeting materials for four (4) Commission or City Council meetings

Subtask 1.1 Assumptions:

- · City staff will be responsible for presenting at all Commission and Council meetings

Subtask 1.2 CAAP Technical/Scientific Advisory Committee

City staff and partners will lead on this task both in developing the final list of participants and facilitating the meetings. The CAAP Technical Advisory Committee (TAC) will be comprised of industry-recognized leaders including experts from UC Davis. AECOM will co-develop agendas and develop objectives and outcomes for meetings; it is assumed that minimal presentation material will be needed, as the meeting will be more discussion than presentation.

Subtask 1.2 Deliverables:

- · Review staff provided list of potential members to receive invitation to participate
- · Input to development of agendas and objectives for up to four (4) meetings

Subtask 1.2 Assumptions

- · The City will be responsible for meeting logistics such as booking meeting venues and sending meeting invitations
- · AECOM will not attend any meetings.

Subtask 1.3 Pop-up Engagements and Ambassador Program

City staff and partners will take the lead on this task.

AECOM will work with the City project team to define the types of information to be conveyed through the pop-ups, which could include informational materials, opportunities to fill out paper or electronic surveys, and/or comment on boards organized by topic.

To increase the likelihood that residents will engage with these pop-ups, AECOM recommends creating an ambassador program, which could recruit university students and/or neighborhood

representatives to staff the pop-up events. AECOM will develop materials for and host up to one on-line ambassador training session (approximately one-hour) that includes the City project team, so that City staff can then facilitate additional trainings on an as-needed basis.

Subtask 1.3 Deliverables:

- One set of Pop-up engagement materials, such as posters/ boards, fliers, etc.
- Facilitation guide/training materials for ambassadors

Subtask 1.3 Assumptions

- City staff will coordinate with event managers to obtain permission to hold pop-ups at existing events as needed
- AECOM will develop materials for and lead up to one training of ambassadors
- City staff will communicate with ambassadors during pop-up event period
- All pop-up attendance would be attended by City staff

Subtask 1.4 Online Workshops

City staff and partners will take the lead on this task.

Following project kickoff, AECOM will work with the City project team to define the objectives, format, and agenda for up to four (4) workshops which would likely be pre-recorded for use anytime. AECOM will develop the supporting materials for each workshop. The four workshops could include (subject to revision following project kickoff):

- **Workshop #1 - Introduction and Visioning**: Participants could be asked to provide their perspective and ideas on the CAAP and its goals and how potential actions should be evaluated and share with attendees the results of the GHG inventory work and the climate impacts assessment.
- **Workshops #2-3 - Workshops by Topic Area**: The second set of four workshops will be grouped by topic area, such as mobility & energy/buildings (Group 1) and waste, water & natural resources (Group 2). The specific grouping will be identified as the CAAP evolves, but AECOM suggests that both mitigation and adaptation would be discussed at each meeting so the CAAP goals remain integrated.
- **Workshop #4 - Feedback on Priority Actions**: The last workshop in the series will present and get feedback on the final priority actions to be selected for inclusion in the CAAP.

Where possible, opportunities to provide input similar to what was solicited at the in-person events should also be provided online (see Task 1.6 for use of online surveys).

Subtask 1.4 Deliverables:

- Meeting materials for up to four (4) virtual (likely prerecorded) stakeholder on-line workshops as described above

Subtask 1.4 Assumptions:

- City will be responsible for meeting logistics such as organizing the on-line format sending meeting invitations/advertisements; AECOM will support City in developing workshop agendas

- City staff will co-facilitate/develop workshop content

- City has a Facebook account that can be leveraged for livestreaming workshops if appropriate

Subtask 1.5 'Meeting in a Box'

- It is assumed that this option is unlikely given COVID. Instead the City will publicize widely any online materials and the virtual meetings.

Subtask 1.6 Online Surveys

AECOM will co-develop up to two surveys during the CAAP development process using Survey Monkey with multiple-choice responses, but no written responses. Options for survey content include an initial survey at the beginning of the CAAP process focused on obtaining feedback on potential co-benefits that will be used to assess potential actions. To build broad support for the CAAP, the co-benefits should be reflective of the community's concerns and priorities. A second survey later in the process could be used to solicit feedback on the top actions that the City considers the most important for getting community buy-in for successful implementation as well as seek input on the potential carbon offset program. AECOM will review and analyze survey results (multiple choice questions only) and present results to the City project team through web-based meetings (one meeting per survey).

Subtask 1.6 Deliverables:

- Development and analysis of up to two (2) questionnaires with multiple choice responses

- Two (2) web-based meetings with City project team to review questionnaire results (one per questionnaire)

Subtask 1.6 Assumptions

- AECOM will prepare content for and provide links to the online questionnaires using a tool such as Survey Monkey. AECOM has its own account which can be leveraged if appropriate.

- If the City wishes to use written responses in the survey, City staff will code those responses.

- The City will be responsible for publicizing the surveys using social media channels, mailing lists, etc.

TASK 2: GHG REDUCTION TARGETS AND MEASURES

Subtask 2.1 – Defining Carbon Neutrality and Setting Interim Targets

AECOM will prepare a memorandum that discusses alternative definitions of community-scale carbon neutrality (bearing in mind State definitions) and provide a recommended approach for the City to utilize. The memorandum will address considerations related to the use of offsets and the

'net neutral' definition (this also relates to the GHG offset program task). It will also identify sources of emissions that will likely be technically infeasible to eliminate and the likely need for some level of 'allowable emissions' to be reflected in the goal. The memorandum will provide a brief description of other carbon neutrality efforts in communities in North America and Europe. The memo will also provide some commentary and options around appropriate interim targets that will be refined as the strategy development progresses.

Subtask 2.1 Deliverables:

· Defining Carbon Neutrality memorandum

Subtask 2.2: GHG Inventory Assessment and Forecasts

Subtask 2.2.1 – Assess Implementation Progress of 2010 CAAP and Set Inventory Forecasts for 2030 and 2040

An important early task will be to assess the progress made through actions in the 2010 CAAP, including implementation status and progress metrics. The City will play a major role in this task, providing updates on the actions in the 2010 CAAP and others that have come on-line since 2010 (such as the new reach energy codes). An important input to this task will be the updated Regional GHG Inventory being completed separate to this project. The inventory will provide a top-down view of where reductions have been achieved, and analysis will be needed to align those reductions with actions the City has carried out or that have resulted from others' actions (e.g., changes in the electricity emissions factor).

Estimating future emissions levels is critical to understanding the extent of local actions needed to achieve the City's 2040 carbon neutrality target. AECOM will develop emissions forecasts that reflect implementation of applicable federal, State, and local actions that will be implemented with a high-degree of certainty to help understand the scale of additional action that will be required. AECOM is engaged with SACOG in discussions of how to provide local jurisdictions with future-year vehicle miles traveled (VMT) data in different formats that can directly be used for climate action plans. AECOM will facilitate a continuation of this conversation to benefit work with the City on this CAAP. AECOM will review the emissions forecast assumptions from the 2010 CAAP to understand how the City has previously analyzed future emissions. AECOM will identify the previously used growth indicators and confirm with the City that a similar approach to emissions forecasting should be used. In instances where AECOM believes the previous growth indicators could be revised to better reflect the local context, AECOM will discuss options with the City and determine the final list of indicators to be used in the emissions forecast. Based on the 2012 GHG Inventory, AECOM understands the City has previously included several important local actions within the emissions forecasts; AECOM will work with City's project team to understand the full list of City actions that should be included.

AECOM will develop a data needs list based on the final growth indicators and the federal, State, and local policies to be reflected in the forecasts. AECOM will work with the City to collect necessary information.

Task 2.2.2 – GHG Inventory and Forecasts – VMT

Fehr & Peers will work with AECOM to update baseline total VMT estimates and prepare up to two future-year VMT forecasts. The future-year VMT forecasts will rely on land use and transportation network inputs to be provided by City staff (e.g., changes to

residential land uses identified in the City's on-going Housing Element update). The VMT estimates will represent average weekday VMT generated by the City of Davis. The specific methodology would rely on the origin-destination (OD) trip method, which accounts for all the VMT associated with trips that have at least one trip end in the City of Davis. Trips that share trip ends across two jurisdictions (i.e., a trip from the City of Davis to unincorporated Yolo County) are discounted by 50% recognizing that each jurisdiction is only responsible for half of the VMT. VMT estimates will be prepared using one of two travel demand models:

The recently updated UC Davis/City of Davis travel demand model (i.e., the "local" model)

The latest approved SACOG travel demand model (i.e., SACSIM) developed for the recently adopted 2020 SACOG Metropolitan Regional Transportation Plan and Sustainable Communities Strategy (MTP/SCS)

Use of the local model would allow for additional granularity for trips beginning/ending in the City of Davis, while use of SACSIM would ensure consistency with the MTP/SCS. The preferred modeling approach will be discussed and identified in consultation with the AECOM team, including City staff.

Task 2.2.3 Origin-Destination Data Analysis

Fehr & Peers will purchase mobile device origin-destination data from a "big data" vendor (e.g., Streetlight Data) to help the AECOM team, including City staff better understand observed travel patterns to, from, and within the City. Use of origin-destination data from big data sources can inform the development of land use/ transportation VMT and GHG reduction strategies, such as local and/or intercity transit service enhancements that can focus on higher-demand origin and destination points. Prior to purchasing data, Fehr & Peers will work with the AECOM team, including City staff, to determine the desired data vendor, data type, geographic boundaries, analysis time periods, etc.

Task 2.2 Deliverables:
- Summary of emissions growth indicators for review with City staff
- Draft and final list of local, State, and federal actions to include in emissions forecasts
- Data needs list of emissions growth indicators and local/State/federal action assumptions
- Summary table of growth factors
- Updated baseline VMT estimates and 2 future year VMT forecasts for City-generated average weekday VMT
- VMT analysis methodology and results memo
- Origin-Destination data analysis memo

Task 2.2 Assumptions:
- City staff will provide technical information on growth assumptions and help update implementation/forecast assumptions for local actions included in forecasts
- City staff will provide city-specific growth factors identified in data needs list

Subtask 2.3 - Emission Reduction Strategies Development

AECOM will identify technological and behavioral actions that could be used to achieve the community's long-term climate neutrality goal. These will build on the CAAP actions, achievements, and other actions put in place since, and leverage AECOM's understanding from current local, national, and international experience as well as stakeholder and public input to develop a suite of emission reduction options focused on the largest emissions sectors of building and transportation. They will need to be a mix of education, incentives, programs, and mandates that will need the full participation of the City residents, businesses, partner organizations, and City staff to be successful. AECOM subconsultant Energeia will apply its deep specialist knowledge of technology cost outlooks, customer behavior, and Davis' specific built environment, including its current building and vehicle inventories, etc. to help identify the optimal portfolio of actions to minimize the cost of achieving the targeted objectives. This will include a consideration of how technology costs – particularly solar photovoltaic (PV), battery storage, and electrification of water heating, space heating and transportation – will fall over time, and how Davis can best ensure optimal levels of new technology adoption are achieved.

Energeia will provide solutions to overcoming the key barriers to the efficient adoption of rooftop solar PV, electrified transportation, and electrification of water and space heating. For example, a key barrier to the rapid uptake of electric transportation is public charging infrastructure and tariffs, and Energeia will provide specialist information to help Davis remove this barrier at the lowest possible cost.

AECOM will conduct interviews with local and national experts (including from City Commissions and UC Davis, with a focus on researchers AECOM has been interacting with affiliated with the ITS) to collect their opinions about the feasibility of implementing specific strategies in the local and regional context. With input from the City and the Commissions, AECOM will identify and contact (by phone/web conference) the regional experts. City staff can attend the interviews, if desired. AECOM will provide summary notes of the interview results.

Many CAAP strategies will likely provide additional benefits beyond GHG reduction. For example, the actions such as those that promote local energy supply, sharing and storage could allow for increased energy resilience, limiting operational disruption during a major event and resulting in avoided costs (i.e., benefits) to the City. Other investments, in efficient water use might decrease the City's risk in the case of a drought and reduce reliance on water that is imported. A broad range of other action co-benefits could be considered, such local air quality, preservation of habitat, reduced cost of living, or reduced socio-economic disparities. AECOM will qualitatively evaluate these additional benefits and their distribution (e.g., private property owners, disadvantaged communities) and include or highlight these results in the analysis.

AECOM will select the key co-benefits to be evaluated through community, stakeholder, and City staff input, including through the engagement activities described in Task 1. This evaluation of co-benefit information is important as it can support action prioritization later in the project;

benefit allocation also supports an understanding of funding and financing methods for the CAAP actions.

AECOM will use the Climate action for URBan sustainability (CURB) tool to estimate GHG reduction potential from a suite of local strategies. AECOM will collect city-specific context data, with assistance from City staff, and upload the City's most recent GHG inventory and emissions forecast assumptions into the tool to support analysis of potential CAAP actions.

Implementation assumptions will be developed for 2030 and 2040, with input from Energeia-USA leveraging their expertise and understanding of building and vehicle electrification technology. AECOM will estimate how each strategy will be adopted/deployed (e.g., near-zero carbon electricity could be achieved 100% by 2030 depending on the success of Valley Clean Energy program, but electric vehicle adoption rates would be assumed to increase closer to 2040 as the technologies become progressively cheaper). AECOM will also consider here the role that the GHG offset program might play to close the gap on reducing any emissions that could not be removed through other means in order to achieve the desired carbon neutrality goal.

AECOM will facilitate an action prioritization process with City staff and other stakeholders based on a shortlist of the proposed CAAP actions. AECOM will provide training to the City on how to use an action prioritization tool, facilitate discussions with stakeholders to select the co-benefit and feasibility criteria for action evaluation, assist in the action evaluation process, and facilitate a post-analysis discussion to select a prioritized set of actions based on the analysis results. As the project progresses, AECOM will discuss with the City project team the desire to integrate portions of this task into the Task 1 stakeholder engagement activities to incorporate community priorities in action evaluation and increase community buy-in for the final set of prioritized actions.

Fehr & Peers will assist AECOM in this task, providing support for reduction measures related to land use and transportation. Fehr & Peers will review existing transportation demand management (TDM) and GHG reduction strategies outlined in the City's existing CAAP, as well as additional TDM strategies that would be particularly suited to Davis. As appropriate, the AECOM team will incorporate recent research for the California Air Resources Board (CARB) associated with Zero-Carbon Buildings: A Feasibility Study, which produced an update to the VMT reduction strategies currently listed in CAPCOA's Quantifying Greenhouse Gas Mitigation Strategies (2010).

Subtask 2.3 Deliverables:
- List of potential prioritized emission strategies per sub-sector/activity, summaries, co-benefits and implementation assumptions

Subtask 2.3 Assumptions:
- Up to 25 strategies
- 'Maximum implementation' assumptions are to reflect the level of implementation that is technically feasible. For example, near-zero carbon electricity could be implemented 100%, whereas solar water heaters only, at a maximum, reduce 60% to 70% of total water heating energy (either natural gas or electricity) due to technological constraints of solar water heating systems
- The City will assist in identifying its level of authority for action implementation

TASK 3: CLIMATE CHANGE VULNERABILITY ASSESSMENT AND ADAPTATION STRATEGIES

This task consists of reviewing and summarizing local climate projections based on existing data, assessing the vulnerability of transportation and community assets, including vulnerable populations, to each climate stressor, developing an initial menu of relevant adaptation strategies, and then working with the City and community to prioritize which strategies should be included in the final CAAP. Each sub-task will address:

· Rising temperatures and extreme heat

· Drought

· Wildfire (including impacts from wildfires outside the City limits)

· Precipitation and severe storms

Subtask 3.1 Review of Local Climate Projections

AECOM will develop consistent summaries for each climate hazard, describing current conditions, and projected changes (by mid- and end-of-century). Potential resources to address each climate hazard are summarized below. For all climate hazard categories, additional published research and literature will be incorporated into the summaries as available. Given the coarse spatial resolution of downscaled General Circulation Model (GCM) outputs available through Cal-Adapt compared to Davis' size, it is unlikely there will be substantial variability across the City in projected changes to temperature or precipitation patterns. AECOM recognizes that vulnerability to these stressors may still vary based on urban heat island, topography, and social vulnerability – this will be analyzed in Subtask 3.2.

Task 3.1 Deliverables:
· Memorandum summarizing local projections for each climate hazard noted above for two time periods (mid- and end-of-century) and two scenarios (RCP 4.5 and RCP 8.5)

Task 3.1 Assumptions:
· The AECOM team will rely on readily available resources, such as published literature and data and projections available from Cal-Adapt

Subtask 3.2 Vulnerability Assessment

The AECOM team will collect and inventory data on key assets to be included in the vulnerability assessment. Example asset types include:

· Local roads and highways

· Public transit, bike, and pedestrian routes

· Community facilities, such as schools and senior centers

· Critical assets for public health, such as hospitals, clinics, and emergency response services (e.g., police, fire)

· Critical infrastructure, such as pump stations and electrical substations

- Disadvantaged communities and vulnerable populations

- Public health-related vulnerabilities

The City and relevant working group members will be consulted to ensure that all relevant asset types are included. It is anticipated that GIS data on most physical assets will be readily available and AECOM will not develop any new GIS resources. AECOM will use a social vulnerability index based on a composite series of characteristics to identify disadvantaged communities. As there are many available social vulnerability indices, each with advantages and disadvantages, such as the CDC's Social Vulnerability Index (federal), CalEPA's CalEnviroScreen (statewide) and SACOG's Environmental Justice Areas (regional), AECOM will prepare a summary of options and the City can choose an index that most closely aligns with CAAP goals and objectives.

Vulnerability of an asset to a given climate hazard is a function of exposure (whether the asset is located in an area that will be impacted), sensitivity (degree to which an asset may be affected if exposed), and adaptive capacity (the ability to adjust to mitigate potential damage). Exposure to flooding will vary across the city – the northwestern portion of the city is currently in the FEMA 100-year flood zone and if the intensity of precipitation events is projected to increase, the extent of the 100-year flood zone will likely expand and the frequency of flooding within the zone will increase. AECOM will identify assets (including vulnerable populations) that are within the 100-year and 500-year flood zones.

While climate change-induced temperature changes will likely not vary across the city, exposure to extreme heat may vary across the city due to the urban heat island effect. AECOM is aware that the SMAQMD-led Urban Head Island Reduction Plan (originally scheduled to be completed in February 2020) includes the development of a local urban heat island effect dataset. If this data is publicly available and at a higher resolution than what is currently available through CalEPA, AECOM will use this dataset instead.

It is unlikely there will be variability across the city in exposure to drought or wildfires. According to CalFire, none of Davis is currently within a Fire Hazard Zone and Cal-Adapt wildfire projections do not project substantive increases in burned area with the city limits. Therefore, AECOM anticipates that exposure to negative impacts will be experienced uniformly across Davis due to poor air quality from wildfires outside of the city.

To assess sensitivity of physical assets, AECOM will develop a matrix for each asset type documenting its sensitivity to each climate hazard. Qualitative sensitivity ratings will be developed for each asset type. The sensitivity of human populations varies depending on a series of socioeconomic characteristics, which will be included in the social vulnerability index. While these characteristics will likely already be included in the social vulnerability index used to identify disadvantaged communities, members of each vulnerable population (e.g., the elderly, people with respiratory diseases) will have different sensitivities to each climate hazard. Some vulnerable individuals (for example, seniors with limited mobility), may reside in a census tract or block that does not score highly on an index of social vulnerability. Therefore, AECOM will develop a separate sensitivity matrix for human populations with a qualitative rating and narrative explanation of sensitivity of each type of vulnerable population to each climate hazard.

AECOM will exclude adaptive capacity from the vulnerability assessment and instead consider it during adaptation strategy development (Subtask 3.3). Since adaptability is asset specific, it is difficult to evaluate at a broad scale and often requires asset- or site-specific evaluations.

Task 3.2 Deliverables:
- Brief memorandum summarizing advantages and disadvantages of various social vulnerability indices
- Memorandum summarizing the vulnerability of each asset type to each climate hazard

Task 3.2 Assumptions:
- The City will provide GIS and other data on all asset types

Subtask 3.3 Adaptation Strategy Development

Using CAAP goals and objectives identified through public engagement (or stakeholders) as a guide, AECOM will develop an initial list of policy-based, program-based, and project-based adaptation strategies to address the vulnerabilities identified in Subtask 3.2. AECOM will draw on extensive understanding of best practices in adaptation strategies compiled from previous project work, strategies identified through regional efforts including the Yolo Resilience Toolkit and SMAQMD Urban Heat Island Reduction Plan, and additional strategies recommended by stakeholders and community members. Where possible, strategies that also help the City achieve other goals (e.g., within the Downtown Plan, the Urban Forestry Master plan, etc.) will be prioritized.

The list of potential strategies will then be evaluated for their effectiveness to reduce potential climate change impacts as well as their implementation feasibility, and then prioritized. AECOM believes that it is most efficient to prioritize strategies from a longer list before fleshing out details of the strategies. Building off experience developing C40's Climate Action Prioritization Tool, AECOM will develop a menu of potential benefit and feasibility criteria, which will then be tailored based on local context and community/stakeholder input. Potential strategies will be rated against each of the chosen criteria using a qualitative ordinal ranking scale.

Table 2: Sample Criteria for Evaluation and Prioritizing Adaption Strategies

Category	Evaluation Criteria
Financial	Capital cost ranges Operational cost ranges
Environmental	GHG reduction Air quality benefits
Social	Public health Recreation Jobs Equity
Governance	City authority and organizational structure Regulatory barriers

Note that since a goal of this CAAP is for mitigation and adaptation approaches to be integrated, AECOM recommends that the evaluation of both action types be conducted simultaneously using the same criteria. In addition, there may strategies that serve both – such as providing amenities and shade at bus shelters will help adapt the bus system to increased temperatures and encourage more residents to take the bus which reduces single occupancy car use. The result of this process will be a prioritized list of strategies with co-benefits and feasibility considerations clearly articulated for inclusion in the CAAP.

Subtask 3.3 Deliverables:
- · Initial list of adaptation strategies with basic information to inform evaluation
- · List of potential evaluation criteria for consideration by City staff/stakeholders
- · Memorandum describing the prioritized adaptation strategies for inclusion in the Plan

Subtask 3.3 Assumptions:
- · City and community will provide feedback on potential adaptation strategies and potential evaluation criteria

Subtask 3.4 Financing and Funding Options
The AECOM Team will develop a short menu of funding and financing options that could be pursued by the City to support planning and implementation of a short list of the prioritized interventions. AECOM will develop a memorandum that describes key considerations for funding and financing identified interventions, including a summary matrix to allow for reference and prioritization by the City of identified investment pathways. This task will leverage AECOM's work on Paying for Climate Adaptation in California: A Primer for Practitioners, which discusses the basics of common funding and financing tools for infrastructure, their application to

adaptation infrastructure specifically, and recent developments of newer innovative funding and financing tools.

The AECOM team will support the city in comparing GHG Offset Programs by providing an overview of offsets including basic details of existing programs as well as to define the goals and needs the City has for such a program. AECOM will prepare a focused and concise offset programs comparison memo detailing the existing programs which would most closely support the goals and needs of the City. The memo will include any known lessons learned from these programs as well as initial options toward establishing a program for the City.

Subtask 3.4 Deliverables:
- Memo describing prioritized funding and financing options
- Memo detailing existing offset programs and initial options for Davis offset program.

Subtask 3.4 Assumptions:
- City staff will provide information on existing and planned funding and financing commitments, especially as they relate to investments in climate action and adaptation, as well as other financial information (e.g., capital improvement plans, department budgets) that could affect financial feasibility and action prioritization considerations

TASK 4: IMPLEMENTATION AND MONITORING PROCEDURES
This task will be carried out as three sequential subtasks: 1) the development of implementation roadmaps for prioritized actions, 2) the selection of monitoring metrics for each prioritized action as well as overall CAAP goals, and 3) development of an easily-updated web dashboard for public tracking of progress.

Subtask 4.1 Implementation Roadmaps
AECOM will collaborate with the City to develop a common implementation roadmap template that can be fleshed out for a limited number of the priority actions (immediate term) by City staff. The template will likely include attributes such as time frame, lead implementor/supporting partners, operational considerations, regulatory requirements, high-level cost estimate ranges or available funding sources, and metrics to track progress (see next task).

Subtask 4.1 Deliverables:
- Implementation roadmap template for prioritized actions

Subtask 4.1 Assumptions:
- AECOM will complete one action implementation roadmap template in collaboration with appropriate City departments
- All remaining implementation roadmap templates will be completed for prioritized actions by City staff

Subtask 4.2 Selection of Performance Metrics

After the development of prioritized action implementation roadmaps, AECOM will support the selection of performance metrics for monitoring each of the prioritized actions, as well as metrics that track progress towards overall CAAP goals.

AECOM will make recommendations on performance indicators–both output and outcome based – that the City should consider tracking to understand progress towards GHG reduction and how effective the adaptation portion of the plan is proving to reduce vulnerability. For mitigation, indicators could include increase in miles of improved bicycle infrastructure (output) and increase in bicycle mode share (outcome). For adaptation, indicators could include the number of green infrastructure measures installed (output), and reduction in instances of urban flooding (outcome); or increase in number of cooling centers available (output), and reduction in number of elderly submitted to hospital with heat related illnesses (outcome). This will allow the City to course correct over time as the climate, economy, and demographics of Davis change.

In addition, the metrics will allow the City to track how the action is progressing through implementation (from a checklist of steps based off the implementation roadmaps). The quantitative metrics selected will be feasible for the City to track, measure, or estimate.

Subtask 4.2 Deliverables:
- · Implementation check-list and quantitative metrics for prioritized actions
- · Overall performance metrics matched to overall CAAP goals

Subtask 4.2 Assumptions:
- · The City will identify what metrics are currently tracked, and what mechanisms are available for improved data collection.
- · A City staff member (i.e. Sustainability Coordinator) who will ultimately assist with measurement and tracking will play an active role in this task.

Subtask 4.3 Implementation and Monitoring Dashboard

Following the identification of metrics, AECOM will develop a user-friendly dashboard architecture to track implementation progress for the City. AECOM will make use of available tools and resources to inform the design of the dashboard, including the CURB tool and ClearPath. AECOM will review potential dashboard components with the City project team to finalize the dashboard architecture. Components may include charts or graphs that illustrate trends in action performance indicators over time, such as GHG emission reductions or changes in energy consumption, and a comparison against the Plan's action implementation assumptions.

Once the architecture of the dashboard is finalized, AECOM will work with subcontractor Brand New Box to develop a simple public-facing web-based user interface leveraging the Engage Web Framework that will have a user-friendly content management system to allow City staff to easily update the dashboard with new data over time. The interface will be designed in collaboration with the City, using the City's back-end IS criteria. The Engage Web Framework harnesses the latest web technologies and communicates with the public in an easy, user-friendly manner.

Subtask 4.3 Deliverables:
- · Web-based public-facing dashboard including a back-end content management

> system for easy updating

Subtask 4.3 Assumptions:

As necessary, City Information Systems (IS) is able to host and maintain a web based application leveraging a supportable technology stack. The technology stack is based off of Microsoft infrastructure. Any web-based application must support reverse proxy and SSL encryption when accessed from the Internet. Database components must leverage Microsoft SQL Server with City IS security configurations. The web application must be configurable and able to change the look and feel to match the public web site. Mobile rendering of the site should support both iOS and Android platforms. Reference of another client with the Dashboard should be given for review.

Technology Stack

- Supported Operating Systems
    - Windows Server 2016 and above
- Web Server
    - Microsoft IIS 10
- Database Server
    - Microsoft SQL Server 2016 and above
- Browsers
    - Microsoft Edge
    - Google Chrome – desktop and mobile
    - Safari – desktop and mobile
    - Firefox
- GIS data requirements
    - Provide clearly defined requirements for
        - § GIS filetypes: .shp,.fgdb,.kml,.csv
        - § Spatial projection
        - § Project area
        - § Data schema (field type and names)
- Development of the Engage Web Framework will cost no more than $8,000, included in the contract; this budget assumes a simple website design and anything more complicated will require further discussion and budget

TASK 5: DRAFT CAAP, PUBLIC REVIEW/COMMENT AND FINAL CAAP

This task will be largely performed by city staff.

Subtask 5.1 Administrative Draft Plan

Based on deliverables produced in previous tasks, AECOM will provide a template for an Administrative Draft Plan in Word format for City staff. City staff will develop the Administrative Draft Plan. AECOM will also create a template for recording comments that will be provided to Administrative Draft Plan reviewers to streamline the feedback process but will not be responsible for collating or responding to the comments.

Subtask 5.2 Public Review Draft Plan

The Public Review Draft Plan developed by the City will be made available to the public through the City website along with supporting material that will communicate the content to the public at a high level. AECOM will also discuss with the City options for cost-effective, easy to use platforms to collect public input on the Public Review Draft Plan. AECOM recommends use of

the Wix web-based platform for this task, which is free to use with minimal set up to launch. The City will be responsible for setting up the Wix website if they chose to use it.

AECOM's graphic team members will develop a report template with a style and color palette that aligns with other City documents or preferences to be used in development of the Final Plan. AECOM will develop a graphic document template in InDesign and review with the City project team. AECOM will incorporate one set of comments to develop the final document template.

Subtask 5.3 Final Plan
Comments received on the Public Review Draft Plan will be incorporated into the Final Plan by the City.

Subtask 5.3 Deliverables
Templates for:
· Administrative Draft/Public Review Template– Word, PDF

· InDesign graphic document template, draft and final

Subtask 5.3 Assumptions:
· City will consolidate and resolve conflicting City comments on one draft of each plan

· City will address public comments, wherever possible, and work with AECOM to address remaining public comments that require additional technical analysis or input

· City staff will take the lead on writing and graphics, with templates as appropriate from AECOM

· Wix public commenting platform will be free to use