



August 3, 2022

Nancy Humphrey
Environmental Programs Supervisor
City of Emeryville
VIA EMAIL

Subject: Scope of Work for Tree Opportunity Inventory and Recommendations

Dear Nancy:

Thank you for inviting Place Works to submit this proposal to identify opportunities for street trees along City streets. The following scope of work includes the description of key tasks, and a cost estimate to complete the work. For this project, we have teamed with SBCA Tree Consulting, the consulting arborist for the City of Emeryville. SBCA will support the Tree Opportunity Inventory, collecting tree opportunity site information, and providing support on soil and species recommendations.

Project Understanding

The City of Emeryville has asked PlaceWorks to develop a web-based mapping tool that identifies locations with the greatest opportunity for planting new street trees. The scope is limited to trees on public streets, excluding parks and the area west of the police station on Powell Street. Opportunity areas would be accompanied by recommendations for tree species and soil treatments to help strengthen and expand the urban forest canopy in Emeryville.

Key Staff

The key following staff will lead PlaceWorks' efforts on the Tree Opportunity Inventory and Recommendations.

Isabelle Minn, ASLA, LEED AP, Principal-In-Charge. Isabelle is a California Licensed Landscape Architect with twenty years of experience in landscape architecture and planning. Her work focuses on park and open space access, the protection of natural resources, and urban greening. She has significant experience on projects with a particular emphasis on increasing park and open space access in park-poor communities. She has managed a wide range of projects from large, open space plans to urban forestry plans to site planning and design. Isabelle has overseen work on the Concord Hills Regional Park Land Use Plan and EIR for the East Bay Regional Park District, the Lake Merritt Bird Islands Habitat Enhancement Project for the City of Oakland, and the Urban Greening Plans for the City of Salinas and the County of Butte. She also oversees the firm's work as an on-call consultant for the California



Department of Parks and Recreation (CA State Parks). Isabelle also has experience in the City of Emeryville, having overseen PlaceWorks' efforts on the Highest and Best Use of the Curb project for the City.

Robert Mazur, GIS Manager, Project Manager. Rob has extensive experience creating maps and datasets for a range of planning projects. He specializes in all facets of geodatabase development, data management, web GIS, and spatial and tabular analyses for improved decision-making, information retrieval, and cartography. His experience in a wide variety of planning projects, coupled with his expertise in GIS and field data collection, make him a key asset to any team. Rob excels at quantitative and spatial analysis, including buildout calculations, walkability, community health modeling, cartography, and land use scenario modeling. He works directly with clients and staff to develop effective, efficient, and informative GIS processes. Rob is well versed in advanced and current planning practices in both the public and private sector, and has an excellent understanding of the relationship between data management and its importance in achieving service delivery standards for the work of community development and public works departments. Rob has brought his GIS skills to a number of general plan updates throughout California, and has managed a variety of mapping projects in Los Angeles County, the Bay Area, and beyond.

Spence Koehler, Associate, Designer. Spence's love of plants and design inspires his work at PlaceWorks, creating outdoor spaces for community enjoyment. He grew up surrounded by nature in the Sierra Nevada foothills, and studied design in San Francisco and Oakland. His areas of focus are parks, trails, and the urban landscape. Spence employs his spatial, aesthetic, and rendering skills, as well as a strong knowledge of native plants, materials, and construction, to develop conceptual designs, construction drawings and visuals for all phases of the design process. Spence has managed and worked on improvements for the Hopkins Corridor and the Milvia Bikeway in Berkeley, and the Richmond Wellness Trail. His work in Emeryville includes the City Hall Demonstration Gardens, Emeryville Arts Center, and the Highest and Best Use of the Curb project.

Scope of Work

The following section describes the scope of work to be completed by the PlaceWorks Team.

Task 1. Project Initiation and Project Management

PlaceWorks staff will schedule a kickoff-meeting with City staff to review the scope of work, discussing deliverables, and identifying any additional background documents needed. PlaceWorks will also participate in up to four (4) meetings with City staff to review project approach and draft deliverables during the course of the project.

Task 2. GIS Inventory and Mapping

PlaceWorks staff will work with City staff to outline the requirements of the inventory to ensure that we are gathering the key existing conditions information in the field. The results of the assessment work will allow the team to accurately analyze and map opportunity areas. The existing

database of street trees and empty tree wells available through West Coast Arborists will be imported into the PlaceWorks system.

2.1. Sidewalk and Opportunity Sites Inventory

PlaceWorks and SBCA Tree Consulting will work closely with City staff to determine the appropriate data collection parameters for the sidewalk assessment. We assume that we will assess approximately 40 miles of sidewalks and existing conditions that include, but are not limited to:

- Empty Tree Wells (Approximately 300 tree wells) – Review potential tree planning sites that have been identified by West Coast Arborist. Survey will omit the area west of the police station on Powell Street. The following will be provided for each site or site type:
 - Suitability for planning; above ground limitations; below ground limitations
 - Species recommendations; planting site preparation treatments
 - Graphic details for each treatment
 - Photo of each site
 - If applicable, reason for unsuitability
- Potential site locations that do not have tree wells, at SBCA's arborist's discretion
- Sidewalk width
- Width of back of curb to front of walk (where the sidewalk is not directly adjacent to curb)
- Driveways
- Overhead utilities and other barriers

PlaceWorks will be utilizing ArcGIS Field Maps for the data collection effort. This GIS based data collection tool will interface with the exiting West Coast Arborist database and will allow data collected for this effort to be fed directly back into that database.

2.2. Opportunity Areas Analysis

PlaceWorks will use the findings of the sidewalk inventory, and tree type and soil recommendations to select and rank the tree planting opportunity areas within the public right-of-way across the city. Where sidewalk width allows, areas will be ranked based on the availability of existing planting space, distance to overhead utilities and driveways, depth and placement of underground utilities (if present), existing soil conditions, and other yet-to-be-determined factors. Where existing sidewalk widths are too limiting to allow for tree planting, we will identify potential opportunities for bulbouts or curb extensions that may allow for tree plantings.

2.3. Opportunity Areas Mapping

Using the results of Task 2.2, PlaceWorks will create a 50-scale map book and clearly map the ranked opportunity areas. In addition to the hard copy map, PlaceWorks will develop a web-based map application. Through this user-friendly interface city staff will have the ability to filter inventory

data based on specific parameters, zoom to specific sites, and review specific information regarding each tree site, including tree species, limitations information (from the inventory), and other relevant data. This web application will also include other supplemental spatial data related to the survey including but not limited to; ranked opportunity areas, existing barriers to planting, and general base map layers.

Deliverables:

- Map book (50-scale) of opportunity areas (PDF); interactive web-based map application; ArcGIS shapefile of ranked opportunity areas and results of tree inventory.

Task 3. City Council Meeting #1

PlaceWorks will prepare and present the data collected thus far to the City Council or other body of leadership. We will also prepare a written summary of the meeting to share with the group.

Deliverables:

- Presentation slides, meeting summary (PDF)

Task 4. Tree Opportunity Identification

The map created in Task 2.3 from previously ranked data will be analyzed and used to identify opportunity areas most suitable to tree planting. PlaceWorks will produce a prioritized list or map of these sites.

Deliverable(s):

- List or map (50-scale) of tree opportunity sites (PDF).

Task 5. Tree Recommendations and Planting Guide

Based on the findings in Task 2.1 on existing conditions, the existing inventory of street trees, the City's current approved street tree list, and input from the City arborist on past species' successes and failures, the PlaceWorks Team will develop a list of recommended tree species that are well-suited to become the next generation of urban tree canopy in the opportunity areas. Based on findings from Task 2.1 on existing soil conditions, and tree well and sidewalk dimensions, PlaceWorks will also develop a set of standard soil recommendations for the City. Recommendations will be made to prepare existing soil types for tree planting, including structural soils for areas where tree rooting zones have been paved or are too limited for standard tree well preparation. While the recommendations will focus on street tree opportunity sites, it is assumed that the recommended species and planting guidance will also be appropriate for private properties in the City. We assume recommendations will be consistent with the City's WELO and Municipal Code (and identify where there may be potential inconsistencies).

The Tree Recommendations Report and Planting Guide will include the following information:

- Species name
- Size (small, medium, large)
- Minimum spacing and distance requirements (from poles, etc.)
- Water Use Classification of Landscape Species (WUCOLS) and notes regarding water use
- Required size at planting
- Soil recommendations and amount of soil volume/rootable soil per tree
- General care recommendations for initial years
- Tree well standards, including minimum width perpendicular to the curb and length

Deliverable:

- Tree Recommendations Report and Planting Guide (PDF)

Task 6. City Council Meeting #2

The PlaceWorks Team will prepare and present the data collected thus far to the City Council or other body of leadership. We will also prepare a written summary of the meeting to share with the group.

Deliverables:

- Presentation slides, meeting summary (PDF)

Optional Task – Utility Assessment

If desired, PlaceWorks is available to work with a civil engineering firm to provide a more detailed assessment of utility locations. Two potential options are available for this work:

Option 1. Ground penetrating radar. A vehicle equipped with a radar device will drive the street scanning the ground, recording the locations of detected underground utilities. Pot-holing may be necessary to confirm utility locations in areas with a high risk of conflict. This approach is the most reliable of the options, and is estimated to cost approximately \$12,000/mile of right-of-way.

Option 2. City sewer lateral video data. A vehicle drives the street recording surface gas and water vault locations to create a map of those systems. Data is also collected from City-provided sewer lateral videos and converted into a sewer system map. These layers are overlaid to create one aggregated utility map. Pot-holing may be necessary to confirm utility locations in areas with a high risk of conflict. This method is also reliable, but less so than Option 1, and is estimated to cost approximately \$4,000/mile.

Deliverables:

- Hard copy and map book (50-scale) of underground utilities in opportunity areas (PDF)

Proposed Schedule

PlaceWorks is ready to begin work upon contract approval. We anticipate that the work described in this proposal would take approximately five to seven months. Should one of the optional tasks to locate underground utilities be added to the scope of work, we anticipate the schedule would be extended by approximately six weeks.

Cost Estimate

As shown in Table 1, our estimated cost to assist with this project is \$55,384. This does not include the optional tasks described above.

Table 1. Cost Estimate

TASK	COST
1. Project Initiation	\$4,988
2. GIS Inventory and Mapping	\$33,947
3. City Council Meeting #1	\$1,928
4. Tree Opportunity Identification	\$6,538
5. Tree and Soils Recommendations	\$5,555
7. City Council Meeting #2	\$2,928
<i>Optional Task – Utility Assessment</i>	<i>\$4,000-\$12,000/mile</i>
GRAND TOTAL	\$55,884

PlaceWorks – 2022 Standard Fee Schedule

STAFF LEVEL	HOURLY BILL RATE
Principal	\$210-\$335
Associate Principal	\$195-\$250
Senior Associate/Senior Scientist II	\$170-\$235
Senior Associate/Senior Scientist I	\$160-\$195
Associate/Scientist II	\$135-\$170
Associate/Scientist I	\$125-\$160
Project Planner/Project Scientist	\$105-\$150

Table 1. Cost Estimate

TASK		COST
Planner/Assistant Scientist		\$90-\$130
Graphics Specialist		\$90-\$135
Administrator		\$145-\$200
Clerical/Word Processing/Technical Editor		\$45-\$150
Intern		\$75-\$100
Mileage reimbursement rate is the standard IRS-approved rate.		
Possible Yearly Increase of 5% on bill rates.		

Acknowledgement

This proposal shall remain valid for a period of 90 days from the time of submittal. As Principal, I am authorized to bind PlaceWorks and the project team to the contents of this proposal.

We are flexible regarding our approach, and would be happy to discuss our proposed scope and cost to ensure that the work and deliverables meet the City's needs. We look forward to working with you to bring about the successful completion of this project.

Respectfully submitted,

PlaceWorks



Isabelle Minn
Principal