



**Item #14-3-7  
Action**

**Government Relations & Public Affairs Committee**

February 27, 2014

**Consultant Services to Complete the UrbanFootprint Public Health Module Improvement Project**

**Issue:** The UrbanFootprint scenario planning tool can be improved with upgraded public health metrics.

**Recommendation:** That the Committee recommend that the Board authorize the Chief Executive Officer to negotiate and execute contracts with Urban Design 4 Health, Inc. (\$107,400) and Calthorpe Associates (\$17,600) for the completion of the UrbanFootprint model public health module improvement project pending the receipt of funding from the Strategic Growth Council (SGC).

**Discussion:** The 2012 MTP/SCS has a commitment to improve the knowledge of public health impacts due to the transportation and land use changes in the region. The new scenario planning tool, UrbanFootprint, has a rudimentary public health analysis module, which while useful, could be improved. A proposal was solicited by the funders to the two consultants who developed the initial public health module with a total cost of \$300,000. At the November 2013 Board meeting, the Phase 1 contracts with the two consultants were approved. The initial funding included \$25,000 from SACOG, \$50,000 from the Southern California Association of Governments (SCAG) and \$100,000 from the Resources Legacy Fund. The remaining funding (\$125,000) from the SGC was approved at their December 2013 meeting and will be transferred to SACOG in the coming month.

Urban Design 4 Health will develop the new public health analysis methodology. Calthorpe Associates will program the analytics into UrbanFootprint, lead the pilot testing, and provide training to environmental groups who have significant interest in the project. This project's schedule was designed so the improved analysis methodology would be completed in time for SACOG to use it in the development of the 2016 MTP/SCS. The overall scope of work is attached. The tasks are also broken out by contract phases and consultants. The contracts will not be executed until the SGC funding is transferred to SACOG.

Approved by:

Mike McKeever  
Chief Executive Officer

Attachments

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Gordon Garry, Director of Research and Analysis, (916) 340-6279

## Work Plan

**Task 1. Technical Advisory Committee Activities.** The Strategic Growth Council established a Technical Advisory Committee (TAC) to review and provide input on public health methodologies related to land use and transportation. The committee includes leading researchers and analysts in public health, land use, and transportation planning. The TAC will meet throughout the project, will review all proposed methods and documentation, and act as a critical sounding board for technical, data, and policy issues. The consultants will work with SGC staff to present data and information to the TAC members, attend TAC meetings, make presentations, and write summaries of their takeaways from the meetings.

This task is fully contained in the Phase 1 contract for both consultants.

**Task 2. Methodology Review of current practice.** The consultants will deliver a brief review and evaluation of current approaches to modeling public health in scenario planning models as a means of informing the development of a refined modeling methodology. The TAC will review and provide comments on the review.

This task is fully contained in the Phase 1 contract for both consultants.

**Task 3. Develop New Analysis and Validation Methodologies.** The consultants will design the new modeling approach and a validation methodology. The new modeling approach will build on the Task 2 evaluations and capitalize on existing statewide datasets.

The validation methodology for the models designed in this task will also be developed. Appropriate validation relies on the use of an external data source that was not used during model development to compare to the model results. The TAC will review and provide comments on the methodologies.

This task is fully contained in the Phase 1 contract for both consultants.

**Task 4. Model development and Validation.** Based on the methodology developed in the previous task, the consultant will develop the refined activity-based health analysis engine. The TAC will review and provide comments on the new analysis.

This task is fully contained in the Phase 1 contract for Calthorpe Associates. For UD4H, 34% of the task is in phase 1 and the remainder is in phase 2.

**Task 5. Integrate New Model into UrbanFootprint and Pilot Testing.** The consultant will modify or rewrite (as necessary) the public health module in UrbanFootprint. Software coding, programming, base year data and schema updates will be made as required by the refined

health analysis model. The refined model will be tested with a set of the pilot tests. The TAC will review and provide comments on the pilot tests.

This task is split with the Phase 1 contract containing the Calthorpe Associates work, and the Phase 2 contract containing the UD4H work.

**Task 6. Refinements to Model Based on Pilot Testing.** Model refinements will be made based on the results of pilot testing, validation, and TAC review, and a new set of state and region model runs will be calculated and documented.

This task is fully contained in the Phase 2 contract for UD4H and for Calthorpe Associates 17% is in Phase 1 and the remainder in Phase 2.

**Task 7. Model Documentation.** The documentation will specify the methods used to develop the health model and provide detailed descriptions of all model specifications, algorithms, data sources, and validation methods. It will also include directions on the use of the refined UrbanFootprint public health analysis engine, as well as a guide to interpret model results. The TAC will have the opportunity to comment on the documentation.

This task is fully contained in the Phase 2 contract for UD4H and for Calthorpe Associates 40% is in Phase 1 and the remainder in Phase 2.

**Task 8. NGO Training and Presentations.** The consultant will develop a training class and webinar for the nonprofit community in California to review the basic components and uses of UrbanFootprint, as well as a more detailed review of the public health advancements and methods.

This task is fully contained in the Phase 1 contract for Calthorpe Associates. UD4H has no work in this task.

## Budget

Task		Total	Calthorpe Associates	UD4H, Inc.
1	Technical advisory committee	\$19,700	\$ 5,700 in Phase 1	\$ 14,000 in Phase 1
2	Methodology review	\$12,480	\$ 5,480 in Phase 1	\$ 7,000 in Phase 1
3	Develop new analysis methodology	\$26,850	\$ 6,850 in Phase 1	\$ 20,000 in Phase 1
4	Analysis and Validation*	\$118,350	\$ 8,350 in Phase 1	\$ 110,000, \$34,600 Ph. 1 \$75,400 Ph 2
5	Integration into UrbanFootprint platform and Pilot Testing of New Model	\$67,950	\$ 55,950 in Phase 1	\$ 12,000 in Phase 2
6	Refinements to model based on pilot testing	\$23,800	\$ 11,800, \$1,950 Ph 1, \$9,850 Ph 2	\$ 12000 in Phase 2
7	Model methodology documentation	\$18,850	\$ 12,850, \$5,100 Ph 1, \$ 7,750 Ph 2	\$ 6000 in Phase 2
8	NGO training and presentation	\$7,700	\$ 7,700 in Phase 1	\$ -
	Expenses	\$4,320	\$ 320 in Phase 1	\$ 4,000, \$2,000 in Ph 1, \$2,000 in Phase 2
<b>Total</b>		<b>\$300,000</b>	<b>\$115,000</b>	<b>\$185,000</b>