



Legislation Text

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Report to Carson Reclamation Authority

Thursday, November 18, 2021

Consent

SUBJECT:

CONSIDER AGREEMENT FOR CONTRACT SERVICES BETWEEN THE CARSON RECLAMATION AUTHORITY AND LEIGHTON CONSULTING, INC. FOR GEOTECHNICAL SERVICES ON THE FORMER CAL-COMPACT LANDFILL

I. SUMMARY

This contract with geotechnical consultant Leighton Consulting, Inc., will allow them to perform document review, subsurface explorations, laboratory testing, and engineering analyses to develop geotechnical design recommendations for a proposed warehouse project on Cells 3, 4, and 5. Because the project site is a former landfill, they will prepare a project-specific work plan and update their health and safety plan (WP/HASP) for the site for submittal to DTSC and receive approval prior to commencing their exploration program.

This work is necessary for the design of the subsurface and foundation systems, particularly the structural piles. The CRA has been requested to provide the geotechnical information for Cells 3, 4, and 5 by the proposed developer for the site. Because this work benefits the developer, they are obligated to cover the cost through the current Reimbursement Agreement.

While this is a contract between Leighton and the CRA there is no net cost to the CRA. The cost of this contract would be covered by the existing Reimbursement Agreement with Carson Goose Owner, LLC, the proposed developer of Cells 3, 4, and 5 since the work would be performed on those cells. This contract is for \$362,612.00, but the contractor has requested because they may encounter impenetrable materials or materials that will bind around the auger that may require abandonment and relocation of borings, an optional contingency of approximately 15 percent of the total fee estimate to attempt to address these extra costs that may be incurred.

II. RECOMMENDATION

1. APPROVE the Agreement for Contract Services Between the Carson Reclamation Authority and Leighton Consulting, Inc. for Geotechnical Services in the amount of \$362,612.00, plus a 15% contingency, in a form acceptable to the Authority Counsel.

2. AUTHORIZE the Chair to execute the Agreement and any associated documents.
3. AUTHORIZE the Executive Director to approve the use of a contingency for costs incurred outside the basic scope such as additional borings or waste/cuttings disposal.

III. ALTERNATIVES

IV. BACKGROUND

Staff is proposing that the Board consider a contract with Leighton Consulting, Inc., for geotechnical services related to the development of Cells 3, 4, and 5. These funds will be reimbursed by Carson Goose Owner, LLC pursuant to the Reimbursement Agreement. The project site has unique geotechnical challenges that require extensive analysis for proper foundation design and to procure grading and building permits from the City of Carson and the County of Los Angeles. Fortunately, Leighton has developed cost-effective solutions based on detailed analytical modeling that have been approved by the reviewing agencies and proofed in the field during foundation (driven pile) installation in landfill Cell 2.

Due to the presence of landfill refuse below the site, the site will be classified as Seismic Site Class F requiring an updated site-specific ground motion study and site response modelling in compliance with the current 2019 California Building Code (CBC). In addition, modeling of pile/refuse/soil interaction will be required to validate reliance on refuse and undocumented fill for lateral pile support. Without this analysis the City of Carson and County of Los Angeles will require that pile foundation design neglect any support derived from refuse and cover fill, which will make it difficult to accommodate anticipated seismic loading. Leighton has successfully modeled pile foundation in refuse and ground response of landfills to seismic loading to obtain approvals from the City of Carson and County of Los Angeles.

In addition, a detailed estimate of refuse settlement rates will be required for proper design of paved surfaces at the site. Leighton has previously developed detailed settlement models for the adjacent Cell 2 which will be updated to account for increased seismic loading per current building code (CBC, 2019).

Leighton's anticipated scope of work consists of the following:

- Review available documents with pertinent geotechnical information for site and surrounding slopes.
- Coordination with Carson Reclamation Authority (CRA), RE Solutions, Faring, Michael Baker International (MBI), and EKI.

- Coordinate submittal to DTSC of the WP/HASP with other members of the design team.
- Finalize the WP/HASP for subsurface explorations to the DTSC to obtain required permits. This assumes any permits will be provided to Leighton at no cost.
- Subsurface exploration to determine the nature and stratigraphy of the subsurface soils, landfill, and alluvium contact; and to obtain undisturbed and bulk samples for geotechnical laboratory testing.
- Geotechnical laboratory testing of soil samples for determination of the physical soil properties.
- Engineering evaluation of the geotechnical data to develop recommendations for design.
- Preparation of a geotechnical report summarizing the data collected and presenting our findings and design recommendations.

The methodology to perform the required tasks is presented in the following sections.

V. FISCAL IMPACT

The cost of this scope is \$362,612.00. The fee for the subsurface explorations shown above should be considered as a rough estimate because of the nature of the subsurface materials and possible subsurface obstructions. Some explorations may not need to achieve the average target depth of 90 feet, while other borings may be advanced beyond the target 90 feet. They may encounter impenetrable materials or materials that will bind around the auger that may require abandonment and relocation of borings. The contractor has suggested an optional contingency of approximately 15 percent of the total fee estimate to attempt to address these extra costs that may be incurred.

There is additional potential scope that would, if needed, be covered under the contingency. One set of additional tasks is for additional borings beyond the originally proposed 29 hollow-stem auger borings. The total per additional boring: \$7,979.

VI. EXHIBITS

1. Agreement with Leighton Consulting Group, Inc. (pgs. 4-28)
2. Leighton Proposal (pgs. 29-100)
- 1.

Prepared by: John S. Raymond, Executive Director