



**CITY OF GLENDALE, CALIFORNIA
REPORT TO THE CITY COUNCIL**

AGENDA ITEM

Report: Life Cycle Analysis and Triple Bottom Line Analysis of artificial turf and natural turf.

1. Resolution of Appropriation to appropriate \$45,000 from General Fund Undesignated Fund Balance to Park Services Administration Account.

COUNCIL ACTION

Item Type: Consent Calendar

Approved for September 21, 2021 **calendar**

ADMINISTRATIVE ACTION

Submitted by:

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Prepared by:

Koko Panossian, Deputy Director of Community Services & Parks

Reviewed by:

Michele Flynn, Director of Finance

Michael J. Garcia, City Attorney

David Jones, Sustainability Officer

Approved by:

Roubik R. Golanian, P.E., City Manager

RECOMMENDATION

Staff respectfully recommends that the City Council adopt a Resolution of Appropriation to appropriate \$45,000 from General Fund Undesignated Fund Balance to Park Services Administration Account.

BACKGROUND/ANALYSIS

In our ongoing effort to implement sustainable solutions for park operations, the Community Services & Parks Department (CSP), along with the City's Sustainability Office, request City Council consideration to conduct a Life Cycle Analysis (LCA) and Triple Bottom Line Assessment (3BL) of artificial and natural turf.

CSP is working on five artificial turf soccer/multipurpose field projects approved by Council at the following locations:

1. Fremont Park
2. Pacific Park
3. Sports Complex
4. Wilson Middle School
5. Cerritos Elementary School

CSP staff presented an in-depth comparison/analysis report of natural turf and artificial turf projects to the Parks, Recreation & Community Services Commission on April 19, 2021. The Commission recommended delaying the artificial turf projects and considering natural turf as an alternative until more information of the environmental impacts of artificial turf would be available for consideration. In consulting with the Sustainability Office, staff determined the best approach to gather said information would be to conduct a Life Cycle Analysis and present the findings to the Commission, followed by Council.

Staff reached out to three consulting firms and requested proposals for consideration. Of the proposals received, staff proposes to proceed with Citadel EHS (Citadel). Citadel is a market-leading, employee-owned Environmental, Health, and Safety (EHS) consulting firm that understands how the 'built environment' is developed, operated, occupied, and, eventually, deconstructed. Citadel is dedicated to protecting the employees that build and occupy those structures and the environment in which they sit. They provide unique, integrative approaches to EHS challenges for the entire life cycle of a project — from concept to completion, design to development. The City has had positive experience working with Citadel on previous projects in the past. Their practice areas include ESG/Sustainability Practice with a focus on analysis that will serve this project, Industrial Hygiene, Building Science, Environmental Engineering and Sciences. Citadel will partner with Stok and Arup to bring together industry leaders from both teams for materials analysis. Facilitated by Citadel, Stok provides in-depth leadership in carbon analysis for materials, and Arup provides in-depth material life cycle impacts.

Upon presentation of the scope of work, the proposed analysis includes a diverse assessment of factors to inform decision-making including environmental, community and usability impacts in the form of a combined Life Cycle and Triple Bottom Line Analysis.

Project assumptions include:

- Facilitation of stakeholder charrette, data gathering, analysis, and summary report
- Analysis of 3 City parks/fields, and up to 3 configurations of artificial turf options for life cycle analysis
- Regarding options for comparison – a 10-year lifespan will be the primary comparison, and juxtaposed with the listed product warranty and anticipated usability
- Quantitative metrics using industry-recommended units, and comparison of life-cycle and triple bottom line considerations will be based on issue prioritization facilitated by the Citadel/ARUP/Stok team.

Scope of Work and Deliverables

The LCA will analyze artificial and natural turf products from “cradle to grave” and include a study of raw materials, manufacturing, transportation, use, and end of life of the products. Citadel will also include a Triple Bottom Line (3BL) analysis that takes into account people, planet, and profit. This approach will highlight the:

- Social variables dealing with community, education, equity, social resources, health, well-being, and quality of life.
- Environmental variables relating to natural resources, water and air quality, energy conservation and land use.
- Economic variables dealing with the bottom line and cash flow.

Deliverables will include:

- Goal-setting and planning discussions for project kickoff to result in a summary document of project goals, stakeholders, schedule, and resources.
- Facilitation of kick-off charrette (invitation to all key stakeholders, information gathering, and metrics prioritization),
- In-depth analyses, including, but not limited to:
 - Life cycle carbon analysis aligned with ISO 14040 for product life cycle assessments
 - Field usability (measured in annual days of use)
 - Material health considerations
 - Water use
 - Effects on runoff
 - Material maintenance issues

- Comparison of relative ongoing costs for artificial turf vs. natural turf
- Summary of findings and final report.

Project Timeline

The LCA study is anticipated to be completed within six months after the Notice to Proceed is issued. Staff will work with Citadel to achieve the following:

1. Project Kickoff (2-3 weeks)
 - a. Identify stakeholders and project goals
 - b. Collate previous resources
2. Charrette (3-4 weeks)
 - a. Data gathering from key stakeholders
 - b. Create prioritization matrix for all 3BL / LCA indicators
3. Analysis (4-6 weeks)
 - a. Work with consulting team to analyze the data
 - b. Work with city to provide additional operating information (as needed)
4. Draft Report (4-6 weeks)
 - a. Present draft report for review
 - b. Refine analysis and draft recommendations
5. Final Report and Presentation (4-6 weeks)
 - a. Present final report to Parks, Recreation and Community Services and Sustainability Commission
 - b. Present final report to City Council

FISCAL IMPACT

The proposed cost of conducting the LCA study by Citadel EHS is \$35,400, plus potential reimbursable expenses if travel is necessitated for Commission/Council meetings, for a total not to exceed \$45,000. As such, CSP requests the following:

Appropriate \$45,000 from the General Fund Undesignated Fund Balance to Park Services Administration Account 43110-1010-CSP-3008-P5150-T0000-F0000-0000.

ALTERNATIVES

Alternative 1: The City Council may adopt a Resolution of Appropriation to appropriate \$45,000 from General Fund Undesignated Fund Balance to Park Services Administration Account.

Alternative 2: The City Council may consider any other alternative not proposed by staff.

CAMPAIGN DISCLOSURE

In accordance with the City Campaign Finance Ordinance No. 5744, the following are the names and business addresses of the members of the board of directors, the chairperson,

CEO, COO, CFO, Subcontractors and any person or entity with more than 10% interest in the company proposed for contract in this Agenda Item Report:

Ownership Interest in more than 10% in CITADEL EHS:

Full Name	Title	Business Address	City	State	Zip
Loren Witkin	Chairperson/Chief Executive Officer/President/Board of Directors	1725 Victory Blvd.	Glendale	CA	91201
Jeff Mistarz	Chief Financial Officer	1725 Victory Blvd.	Glendale	CA	91201
Glenn Fishler	Board of Directors	1725 Victory Blvd.	Glendale	CA	91201
Brad Mishlove	Board of Directors	1725 Victory Blvd.	Glendale	CA	91201
Citadel Environmental Services Inc Employee Stock Ownership Trust	ESOP Ownership Trust	1725 Victory Blvd.	Glendale	CA	91201

EXHIBITS

Exhibit 1: Proposal from Citadel EHS, dated August 30, 2021