CASE STUDY

Kare Youth League Sports Park

Irwindale, California

Storage Provided:	27,355 CF
Area Used:	11,474 SF
Model:	Recharger® V8HD
Number of Units:	280
Installed:	December 2015
Engineer:	Coory Engineering Orange, CA
Contractor:	OHNO Construction Fontana, CA

Recently, ground was broken in Irwindale, CA for the first phase of construction of Kare Park, an approximately 14-acre athletic facility. This park is the longtime dream of Kare Youth League, an organization serving boys and girls in the San Gabriel Valley since 1931. Kare Park will be located in the triangular intersection between the 605 Freeway, Arrow Highway and the Santa Fe Dam and will be the home of the League's after school program for boys and girls, kindergarten through high school. The program features year-round sports including football, volleyball, cheer and dance, basketball, baseball, softball, soccer and track.

The land on which Kare Park is being built is leased from the U.S. Army Corps of Engineers, and it presents significant challenges for the construction process and storm water management. The sandy soil is full of "cobbles" — which are small boulders that make for difficult excavating and complicated installation of storm water management devices.

The project team knew this unique soil characteristic would make for a complicated storm water installation when they turned to Cultec for assistance. Called 'devil dirt' by most soil engineers, soil laden with cobbles presents significant excavation challenges. The natural soil was sandy gravel with cobble and occasional boulders, making it difficult to work-around. Many labor hours went into digging out the existing soil in preparation to fill it with more workable groundcover. This required multiple, 30-ton excavators and many high track bulldozers. This soil issue quickly began to drive up costs of labor and equipment rental. Since Kare Park is a public project, the team was working with a limited budget. Project engineers knew that they would need to find a stormwater solution that was both cost-effective and met the regulation standards set forth by the EPA and their National Pollutant Discharge Elimination System (NPDES) permit, which states that you cannot take water off-

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site without it going through a filtration or infiltration system.

"Los Angeles County is one of the strictest counties when it comes to stormwater compliance, so it was very important that we chose a quality stormwater management system" said Doug Grove, lead landscape architect for Kare Park. "Based on the site constraints and previous experience we knew that we would need a system in which the chambers are underground, to leave as much room for the athletic fields as possible".

The civil engineer and landscape architect for the project recommended the CULTEC system, having had great success with the system in the past. Upon review, both the city engineer and the county engineer approved of the CULTEC system for the project site. The County of Los Angeles also required that a geotechnical engineer continuously inspect the site during installation, ensuring the stability of the soil and to ensure that all code regulations were met. All parties blessed the design of the stormwater management system, and the project moved forward.

Project engineers specified the Recharger® V8HD Stormwater Chamber, which measures 32" high, 60" wide, has an installed length of 7.5 feet long and a bare chamber capacity of 8.7 cubic feet per linear foot. The CULTEC system, made up of just 280 pieces, easily met the storage requirement of 25,961 cubic feet; in fact, the system provided nearly 28,000 cubic feet of storage installed within approximately 11,474 square feet. The chambers were installed beneath a baseball and small soccer field, beneath approximately 10 feet of cover. The depth of this installation would ensure that the wear and tear of the fields would not affect the long life of the CULTEC system.

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Though the potential for installation issues was high due to the volatile soil, the CULTEC chambers went in without a hitch. Randy Jevas represented CULTEC on-site at Kare Park during the entire installation to assist with any questions or comments from the contractor and his team.

"The CULTEC rep observed our inspection and took time lapsed video of the project installation to ensure things were running smoothly," said Duff Tokarz, Superintendent at Ohno Construction Company. "Keeping the gravel and soil perfectly flat could have been challenging, but it was easy to do with the CULTEC system. At the end of the project, the technician said it was one of the nicest installations he had ever seen."

CULTEC's stormwater chambers made a potentially difficult installation run smoothly — and stayed within the budget guidelines set for by the city. In addition, CULTEC discounted the project by 25%; the company is passionate about supporting organizations that seek to improve the lives of children and young adults, and Kare Park reflects that value. The Kare Park project's expected completion date is early spring 2017, with daily use beginning later in early fall.

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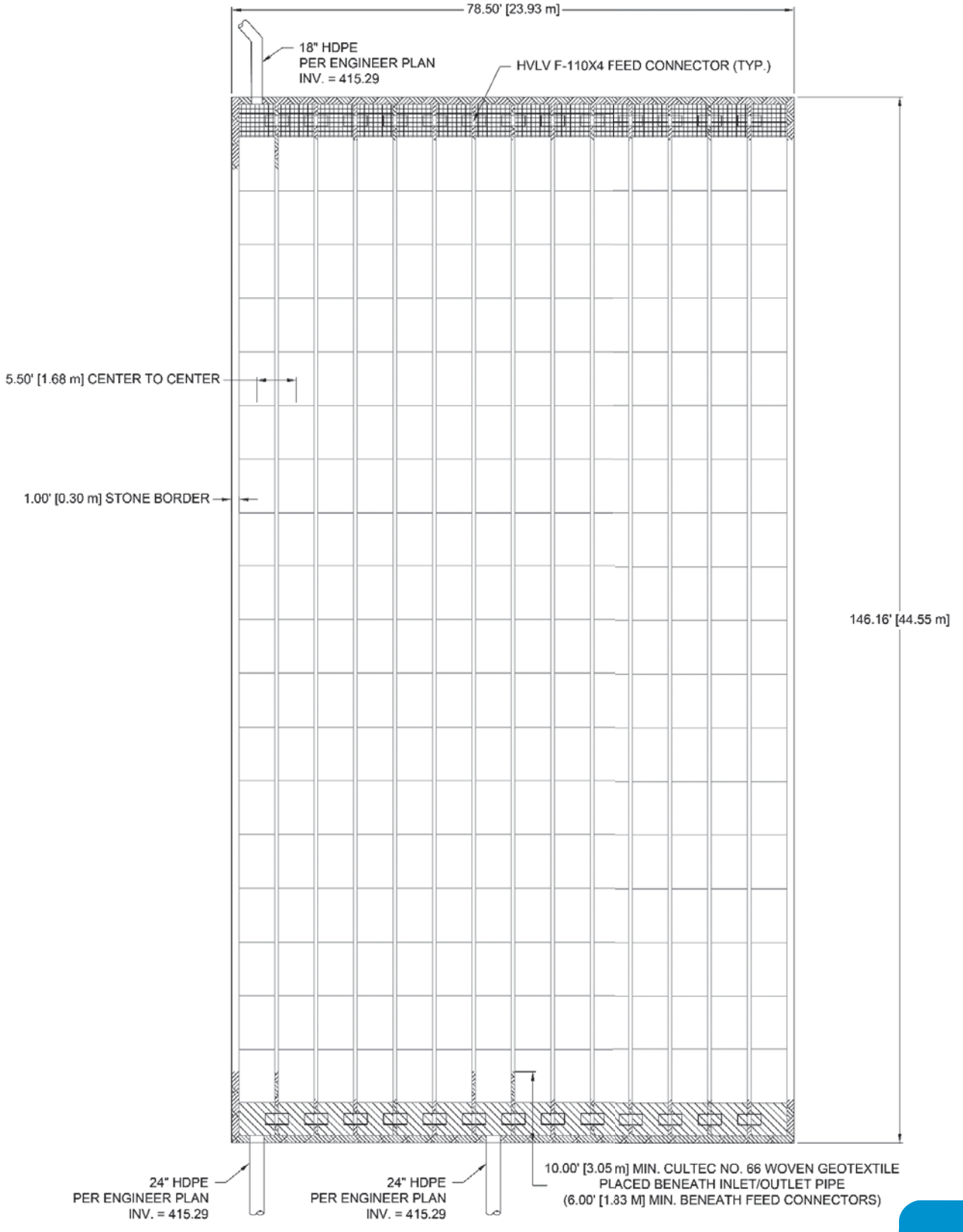

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