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Current Projects

Dahlia Square Redevelopment

Denver
Client: Alliance
Development
Partners, Inc.

Cherokee Gates

Denver
Client: Kiewit Building

Landmark Lofts

Boulder
Client: Chanin
Development

C-470 & Alameda Interchange

Lakewood
Client: Felsberg, Holt,
& Ullevig

THE DENVER JUSTICE CENTER

Kumar & Associates (K+A) is the geotechnical engineer for the Denver Justice Center project, located to the south of West Colfax Avenue between Fox Street and Delaware Street. The project consists of 3 primary components:

- Post Office/Parking Structure (AR7 Hoover Desmond architects, S.A. Miro structural engineers, and Haselden Construction) – Construction is underway and scheduled for completion July 2007.
- Courthouse (klipp Design architects, S.A. Miro structural engineers, and Hensel Phelps Construction) – Construction scheduled July 2007 through December 2009.
- Detention Facility (OZArchitecture and Hartman Cox architects, Martin Martin structural engineers, and Hensel Phelps Construction) – Construction scheduled January 2007 through December 2009; the Denver Newspaper Agency will need to vacate the site by October 2006.

The Post Office/ Parking Structure, which is by far the smallest of the three projects, both in terms of floor area and cost, is currently under construction with foundation construction in progress. Because of the dense granular soils underlying the parking structure, and a somewhat greater tolerance for foundation settlement than many structures will allow, K+A was able to work closely with the structural designers in developing recommendations for spread footing foundations designed for an 8,000 psf allowable bearing pressure for column loads up to approximately 2,000 kips. That resulted in significant cost savings over the 40- to 50-foot deep, cased drilled piers or other deep foundation system that would have otherwise been required. K+A is currently providing construction observation and testing services for the Post Office/Parking Structure project.

K+A also added value to the project by performing additional geophysical site characterization, at no cost to the City, to justify classifying the site as Class C rather than Class D for seismic design according to the International Building Code (IBC). With the support of Zonge Geosciences, both downhole seismic testing and a refraction microtremor (ReMi) survey were performed to justify a Class C rating, resulting in significant structure cost savings. It is likely that a Class D rating, and associated higher structure costs, would have resulted from a more routine approach. The type of geophysical data collected on this project may be used by the local geotechnical community to revisit the City's amendments to the IBC related to seismic site characterization.—Submitted by Al Claybourn



Laboratory Services

Kumar & Associates' materials laboratory performs physical property testing on soil, aggregate, concrete, and asphalt on a daily basis. We are properly equipped to perform materials testing in a timely manner with the highest confidence in the results that are reported. Our asphalt testing area has been equipped with state of the art equipment that allows our personnel to rapidly perform testing enabling high volume paving projects to progress with no impact to schedules. The Troxler gyratory compactor, shown in the attached picture, has enabled our laboratory to perform Super Pave testing and mix designs with computer controlled accuracy. Hot mixed asphalt samples are placed in the molds, which are then placed in the compactor. Samples are then compacted with astoundingly repeatable results.

We are also equipped with two binder ignition ovens that have internal balances and digital computer displays, which determines the asphalt content of the mix. The ovens constantly monitor samples during testing to ensure that the asphalt binder has been incinerated. The ignition process allows each sample to have sieve analysis testing to be performed on mixed samples. The test results are then compared to the appropriate mix design to determine if the asphaltic material is within the specified range.

The testing our laboratory performs allows field personnel to report and discuss test results, ensuring that our clients are confident with the pavement surface that has been placed.—Submitted by Josh Barker



Kumar and Associates Volunteers

Kumar & Associates, Inc. has been a proud sponsor of the Memorial Walk for the Colorado SIDS Program for the past six years. During this time, employees of the company have supported the program by participating in the walk, collecting pledges, sitting on the planning committee and helping the day of the event. This one mile walk brings families and friends together to share in the memories of their lost babies. The event was started by our accounting manager, Laura Crowley, nine years ago after she lost her daughter, Terrah, to SIDS. Since then, several other employees and their families have been affected by the death of family and friends from Sudden Infant Death Syndrome. If you or anyone you know would like more information on SIDS or how to participate in the walk, please contact The Colorado SIDS Program at 303-320-7771. Kumar & Associates, Inc. believes in supporting its employees and the community by participating in several causes throughout the year such as Race For The Cure and Toys 4 Tots.

— Submitted by Laura Crowley



(Laura Crowley and her daughter Megan volunteering for The SIDS Walk.)