



Engineering Project Case Study

Spring Park Shopping Center

Spring Park shopping center is a 17-acre retail complex in North Houston near Spring, Texas. The project had challenges to be overcome in the drainage and with the Texas Department of Transportation.



The shopping center shares a detention facility with an adjacent residential subdivision. A subdivision downstream of the project had been flooded in the past when the residential subdivision was originally developed. For this reason the drainage was already a fragile situation and the shopping center needed to insure that the discharge from the regional detention pond was in no way going to negatively impacting downstream flows. Additional study and design was required beyond the typical requirements of the Harris County Flood Control District. This is where the Atkinson Engineers team philosophy was the most valuable in working with the previous two engineering firms who had worked on the regional pond, as well as the utility district engineer and operator who managed and maintained the pond. Atkinson

Engineers was able to quickly bring the team to a consensus on what needed to be done. This work was completed and has not received any negative comments from the downstream homeowners. The storm water quality requirements were also provided for in the pond with an Atkinson Engineers custom design that meets the Harris County requirements at a much lower cost than the standard solutions being used by other engineers in the area.

The project was near Interstate 45 and the developer wanted a driveway onto the I-45 service road. Upon analysis, the tract was immediately downstream of a freeway off ramp and the average speed of the traffic was in excess of 60 miles per hour. Using the Atkinson Engineers team philosophy, every engineer in the firm was engaged in a round table discussion to devise an effective solution. The final solution was an "exit only" driveway, which was approved by the developer and TXDOT.

The project also included another two driveways to a Harris County road, as well as a site plan, parking lot paving and drainage design, storm water pollution prevention plan and applicable onsite utilities. The developer has subsequently been able to sell the entire shopping center to a large commercial and retail company and move on to other projects.



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