

Grand Lakes Casino Project

Kuhlman Design Group, Grove, Oklahoma



KDG subcontracted Intuition & Logic to provide site stormwater design services on a 30-acre casino development in Oklahoma. Because the site drains directly to Grand Lakes, a 46,500-acre lake used for boating, fishing, and swimming and sailing, the piped stormwater systems were required to outfall above the normal pool elevation, and no alteration to existing grade was allowed below the high water elevation. This necessitated that the

edges of the casino parking lot could not have conventional curb and gutter systems. To prevent erosion, any water that was not collected in an enclosed system was required to exit the site as sheet flow.

Our final stormwater design collected runoff from the roof area and the parking lot in two enclosed systems. The north system collected all of the roof runoff and a portion of the parking area for 5.2 acres. The south system collected 11.1 acres of parking area runoff. Remaining parking lot areas draining to undisturbed portions of the site relied on a rock edge treatment to slow and disperse the sheet flow, prior to exiting the paved areas. When completed, the collection system will consist of 3,200 linear feet of pipe, 1,100 linear feet of trench drains, 2,900 linear feet of rock edge treatment, 6 multi-grate inlets, 10 area/curb inlets and two outfalls with riprap protection.