

## **ARROYO DE TORREON BANK STABILIZATION PROJECT**

**Location and Directions:** Northwest quadrant of the City of Santa Fe; southwest of the intersection of Paseo de Vista, Buckman Road, Camino de Las Crucitas and west of Frank Ortiz Park. From St. Francis Drive in Santa Fe, turn west on Camino de Las Crucitas; then turn south on the road on the west side of Frank Ortiz (Dog) Park. Leave your vehicle in the lot on the west side of the Park. The project is west of that lot.

**Approximate Date of Construction:** November 2010 through May 2011

**Number of bales / tires used:** 635 tire bales

**Design information:** The project was constructed as a result of exposure of solid waste from an old landfill adjacent to the Arroyo de Torreon. The project was designed by Sullivan Design Group and constructed by Blueline Construction Inc. It consists of three phases as shown in detail in the Sullivan Design Group plan. Information below was provided by the City of Santa Fe in the project's final report.

### **Phase I (Baseline "A") Dimensions:**

Phase I, consists of a three hundred foot feeder channel, the base of the channel is six feet wide and has four foot sides with a four percent grade. The feeder channel was constructed with elevated rebar secured in place and shotcrete applied.

The second part of phase I, consists of three hundred feet of bank stabilization on both sides of the unnamed tributary. The project utilizes stacked tire bales wrapped with wire mesh with a fabric liner behind the bales to avoid erosion. There are also five foot tails of fencing to pin the bails in place. The base of the channel is five feet wide stepping to fourteen feet at the top. Tire bales were backfilled and compacted. Shotcrete was applied to the entire channel and colored to match natural landscape. Four three foot deep by three feet wide by five feet long gabion drop structures were installed. A riprap base structure was installed to avoid erosion from water flowing over the drop structure. A second riprap structure was placed on the last drop structure consisting that is one foot high by five feet wide by nine feet long, including six inches of turndown.

### **Phase III;**

Phase III, consists of a seventy-five foot free standing retaining wall with a thirteen foot tail into the embankment to reduce erosion. A one foot deep by five feet wide by seventy-five feet long riprap section was installed on the top and bottom of the retaining wall. A twelve foot by one hundred foot feeder channel was installed which includes elevated rebar with shotcrete applied to match the natural landscape.

### **Phase II:**

Phase II, consists of a two hundred twenty-five foot retaining wall on the north bank of the Arroyo de Torreon. The retaining wall is ten feet high with four one and half foot high tiers. The retaining wall was constructed utilizing stacked tire bales wrapped with wire mesh including fabric behind bales to avoid erosion five foot tail of fencing on the tire bales were used to pin

bales in place. Tire bales were backfilled and compacted with a coating of colored shotcrete applied to match natural landscape.

All three phases were covered with two feet of clean top soil, covered with a four inch layer of mulch and hydro seeded with a wild seed mix.

Cost            Unknown

Other Information:



**Before Construction  
11-20-2007**

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