

Project Summary



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Community Center Drive

AB Ashlar Blend moves in BIG! Basalite Concrete Products, out of Denver Colorado, has completed the largest square foot Allan Block Ashlar project to date. The eight-wall project is located north of Denver along Interstate - 25, a major thoroughfare in the Denver metro area. The 16,000 sq ft. (1,485 m²) of retaining wall makes this project a giant AB Ashlar Blend billboard. This project of bridge abutments and terraces is not only the largest AB Ashlar Blend project thus far it's also the first Ashlar pattern that uses a three-degree wall batter.



PROJECT NAME & LOCATION

Community Center Drive, North Glenn, CO

PRODUCT

AB Ashlar Blend

PROJECT SIZE

16,000 ft² (1,485 m²)

LOCAL ENGINEER

Suzanne Wohlgemuth

GENERAL CONTRACTOR & WALL BUILDER

HBG Flatirons, Inc. & Slaton Brothers, Inc.

ALLAN BLOCK MANUFACTURER

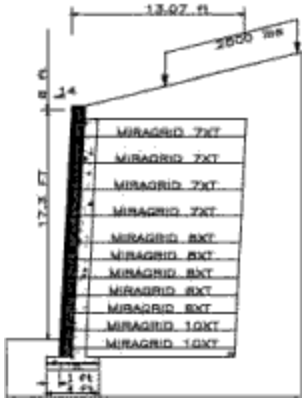
Basalite, Denver, CO

PLAN

The Community Center Drive project began with one goal; using the Allan Block Ashlar Blend pattern. However, the Colorado Department of Transportation's (CDOT) specifications required the retaining walls installed to have a near vertical batter. In order to install the Ashlar wall and still conform to CDOT's specifications, Basalite needed to reconfigure their block molds from a six-degree system to a three-degree system for this project. HBG Flatirons, Inc., the general contractors for this eight-wall project were able to bring in Slaton Brothers Inc, the largest DOT retaining wall installers in Colorado, to construct the walls. With these two experienced contractors on the job, the project was sure to be a success.

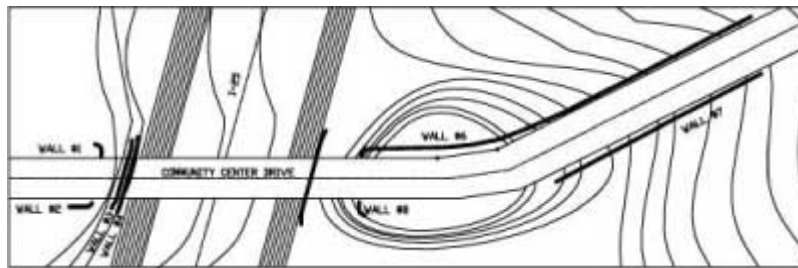


DESIGN



With three walls being used for bridge abutments to support Community Center Drive at its overpass of Interstate 25 and the remaining walls being terraced to run along the side the roadway, this project had a lot of design challenges. The main design challenge faced was finding a way to incorporate the Ashlar Blend while still meeting the CDOT specifications. According to the specifications, the allowable Long Term Design Strength (LTDS) required was 15.7% of the ultimate tensile strength of the grid reinforcement. Under the requirements, the allowable LTDS for Miragrid 5XT dropped significantly from the manufacturers value of 1733 lb/ft (25kN/m) to 675 lb/ft (9.8kN/m).

This decrease in strength forced the wall design to incorporate longer grid lengths, closer grid spacing, and the addition of stronger grid types, including Miragrid 7XT, 8XT and 10XT. Once these design challenges were met, building these walls began.



BUILD

Building the walls also brought on challenges. Since the walls were required to have a near vertical batter, the molds had to be altered so that a three-degree block could be made. Altering a block mold and manufacturing new blocks takes up valuable time. To save some time and get the project started, Slaton Brothers began the job by altering the existing stock of six-degree block to the required three degree by hand. While very labor intensive, Slaton Brothers were able to get a jump-start on the project while their three-degree blocks were being manufactured. Once the newly manufactured blocks were ready, the project rolled into high gear. Although this project faced many designing and building challenges, the experience of the contractors and the versatility of Allan Block made it a complete success.

