



▶ CASE STUDY: HEAVY LOADING

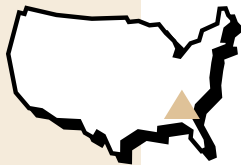
Keystone Walls Hold Up Fifty Ton Trucks

Florida Rock Industries required a large loading platform for their rock quarry in Tyrone, Georgia. The raised platform would allow large dump trucks filled with stone to unload into a crushing machine. Constructing the platform required a structural retaining wall capable of bearing truck weights in excess of fifty tons (48,360 kg). The prime contractor, Glen & Wright, Inc., turned to Islander Builders and Keystone Retaining Walls for a strong, economical retaining wall solution.

Islander Builders, together with engineer, Michael Ballard, P.E., developed an overall wall system design capable of supporting the heavy truck loads. They submitted a design using Keystone wall units and presented it to Florida Rock Industries. After considering poured-in-place concrete, Florida Rock selected Keystone because of its overall structural integrity, ease of installation and cost savings.

The proposed wall location ran on top of a solid rock foundation. To speed construction, the contractor poured a reinforced concrete footing over the rock foundation. The concrete footing allowed for a consistent, level base to construct the wall.

The wall, constructed with Keystone Standard Units, ran 300 feet (91 meters) in length, with heights from 18 to 22 feet (5.5 to 6.7 meters). Strata 400 and 500 geogrid, with embedment lengths in excess of 14 feet (4.3 meters), reinforced the soil zone behind the wall. High-strength Keystone fiberglass pins provided unit interlock,



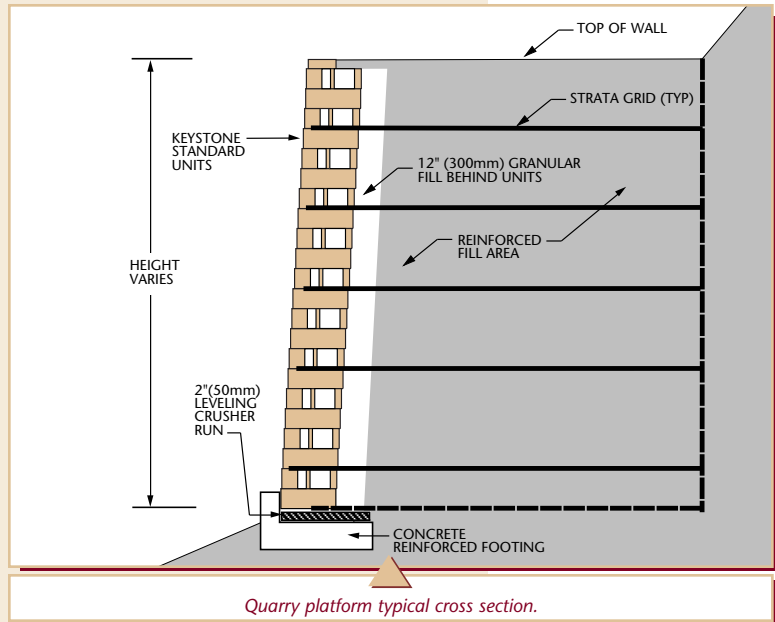
- ▶ **PROJECT:** Florida Rock Industries
- LOCATION:** Tyrone, Georgia
- PRODUCT:** Keystone Standard Units
- SQUARE FOOTAGE:** 6,600 s.f.
- CONTRACTOR:** Glen & Wright, Inc.
Birmingham, Alabama
- SPECIFIER:** W. Michael Ballard, P.E.
Atlanta, Georgia
- KEYSTONE REPRESENTATIVE:** Paver Systems
Atlanta, Georgia



Rock quarry loading platform held with the Keystone Retaining Wall System

alignment and geogrid positive mechanical connection, tying the entire wall system together. Backfill for the reinforced zone consisted of #57 stone. With the wall completed, a reinforced concrete loading platform was constructed on top of the wall leading to the crusher hopper.

The result was a successful, structurally engineered Keystone Wall System, constructed for a substantially lower cost than a poured-in-place wall. Keystone walls not only look great they perform under the heaviest loads.



Keystone wall constructed on a reinforced concrete footing.

