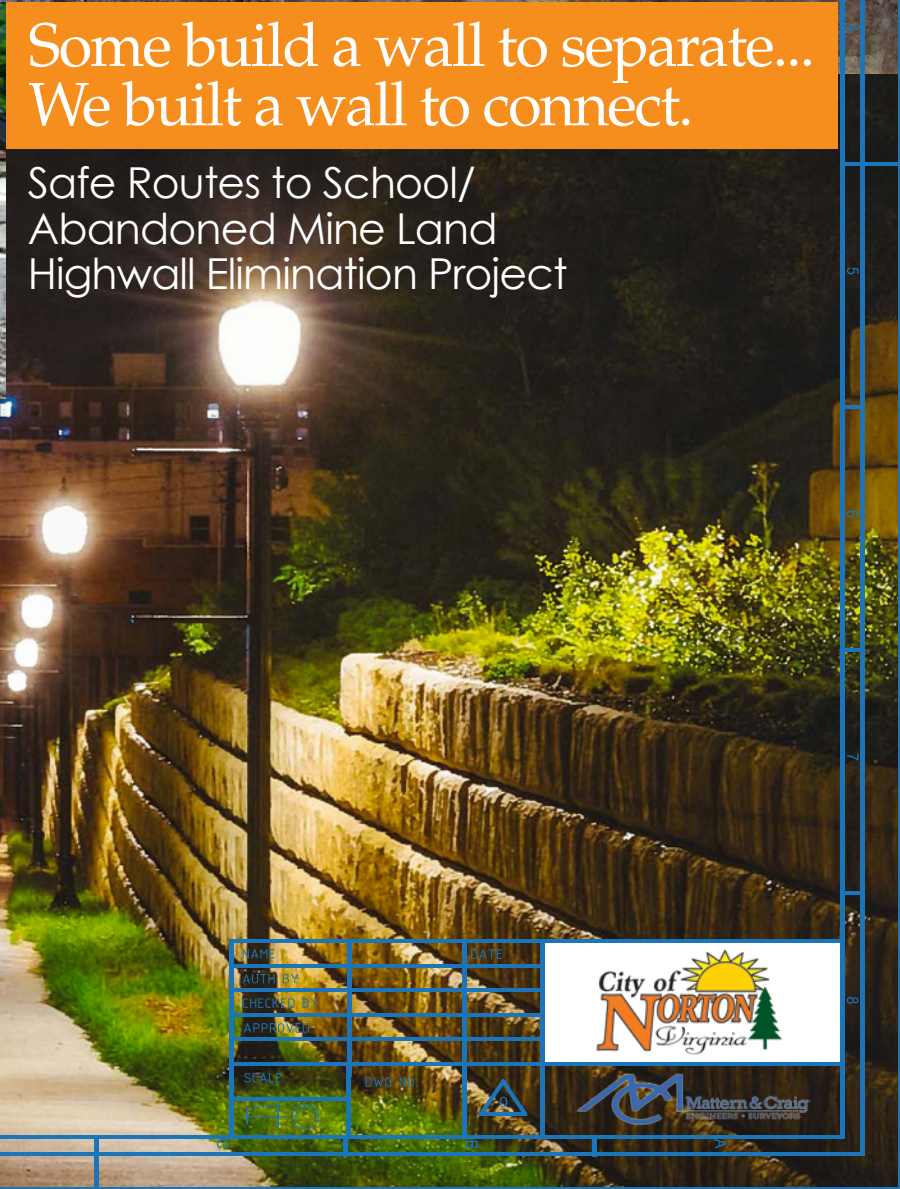


# CITY OF NORTON

Some build a wall to separate...  
We built a wall to connect.

Safe Routes to School/  
Abandoned Mine Land  
Highwall Elimination Project



NAME	DATE
AUTHOR	
CHECKED BY	
APPROVED	
SCALE	DWG NO.
EC	

**City of Norton**  
Virginia

**Mattern & Craig**  
ENGINEERS • SURVEYORS



Flag Rock Overlook



## THE CITY OF NORTON

is located on the southwest corner of Virginia, at the crossroads of U.S. 23 and U.S. 58 Alternate. Incorporated in 1894, and the only city in Wise county, Norton serves as the hub for area economic development and activities. It is proud to hold the title of smallest independent city in Virginia. With a rich and colorful history, the citizens of Norton have a can-do spirit that has allowed it to flourish into the 21st century. A glowing example of this is the Safe Routes to School/Abandoned Mine Land Highwall Elimination Project.

“

*Since 2006 there has been somebody working on the project to get us where we are today.*

Fred Ramey, City Manager





The project site – the gateway to downtown

## THE NEED & CHALLENGE

- The Abandoned Mine Land (AML) highwall area was a constant danger to vehicles and pedestrians from rockslides.
- The highwall was an aesthetically uninviting and unattractive gateway to downtown.
- A need for a truly safe route from downtown to the school and hospital was needed.
- Cost was obviously a challenge – this was overcome by grants from Virginia Department of Transportation (VDOT) and Virginia Department of Mines, Minerals and Energy (VDMME).
- Constructability was a challenge. This was met by utilizing a terraced design and a modular, segmental retaining wall that was perfectly suited for this application.

“

*If you want something bad enough,  
keep working toward it and it will happen.*

Joe Fawbush  
Vice Mayor



Falling rocks had become a life safety concern, with some rocks falling across the sidewalk and onto the roadway.



A temporary safety wall was built to prevent more rock from falling across the sidewalk and road.

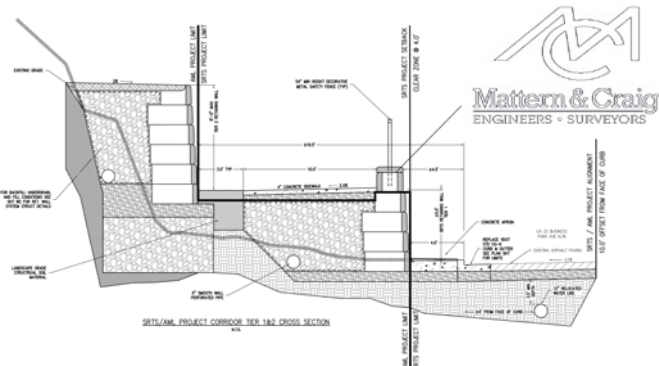


The chainlink fence that ran along the sidewalk's edge was damaged in places by vehicles, demonstrating its lack of protection for pedestrians on the sidewalk.



## AN INNOVATIVE SOLUTION

- The design team, lead by Mattern & Craig utilized a terraced wall system. This was an innovative solution as it eliminated the issues from the highwall, and created an ideal location for the construction of a sidewalk; and created a very attractive entry way to the city.
- The terraced design and the segmental retaining wall (Redi-Rock) used for this project is a very forward-thinking design that made the construction of the project more workable and better accommodated a wide-user friendly sidewalk, decorative fence, and other appurtenances.
- The wall segments (blocks) are formed off site and delivered to the site where they were set into place immediately – directly from the truck to the proper location. This eliminated the need for forming, pouring, and setting of concrete mix on-site.
- The individual block design also allows other parts of the project to progress concurrently while the wall is being constructed.

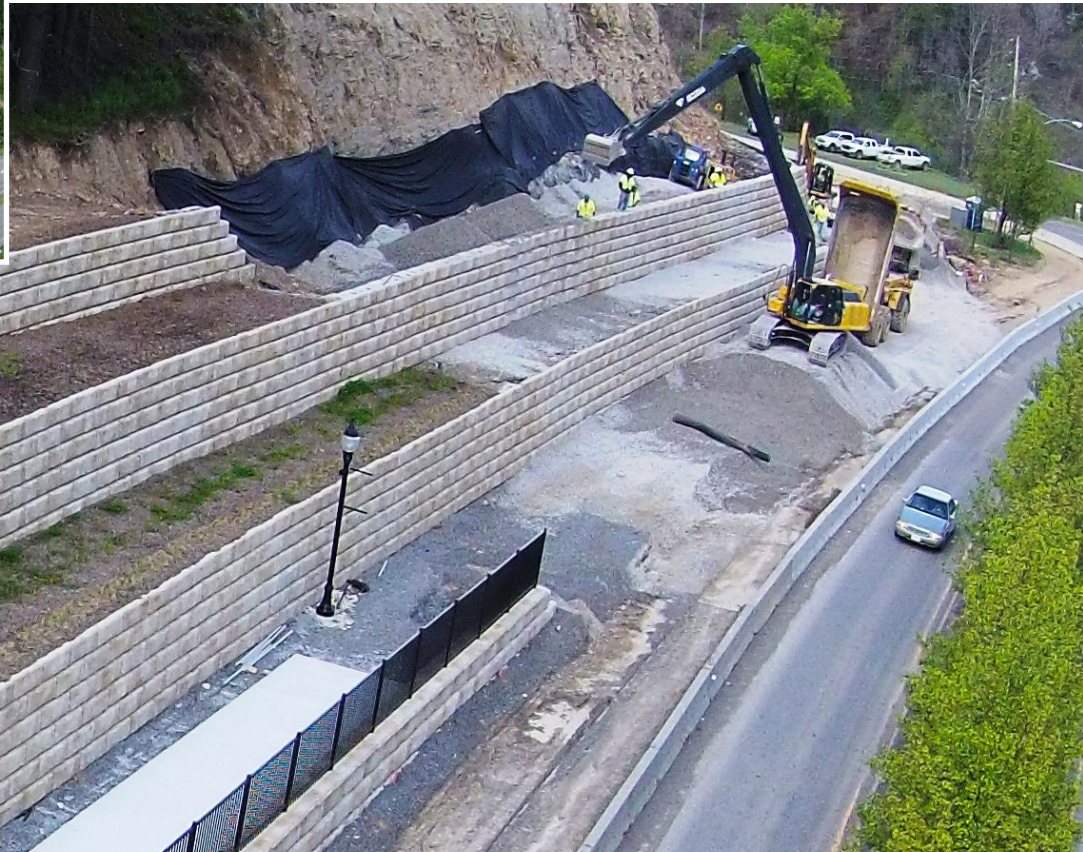


The wall system is a Redi-Rock product, that can be designed to fit the specific site and meet individual needs. This project was featured on the cover of the 2016 Redi-Rock International Calendar for the City of Norton's use of the product.





(Above) Coordinated visits to the job site allowed students to learn about the project and to help them feel like they were a part of their community's project.



## INTERESTING FACTS

- 5 Tiers
- 8,816 Individual Blocks
- Each weighing between 2,400 and 3,200 lbs.
- The length of the blocks, stacked end to end, would stretch 6.5 miles.
- The sidewalk is 3,900 linear feet long.

Courtesy of Mattern & Craig



Over 500 people, including students, teachers and parents, attended the ribbon cutting ceremony.

On October 6, 2015, the City of Norton celebrated *International Walk to School Day* by holding the ribbon cutting ceremony for the project.





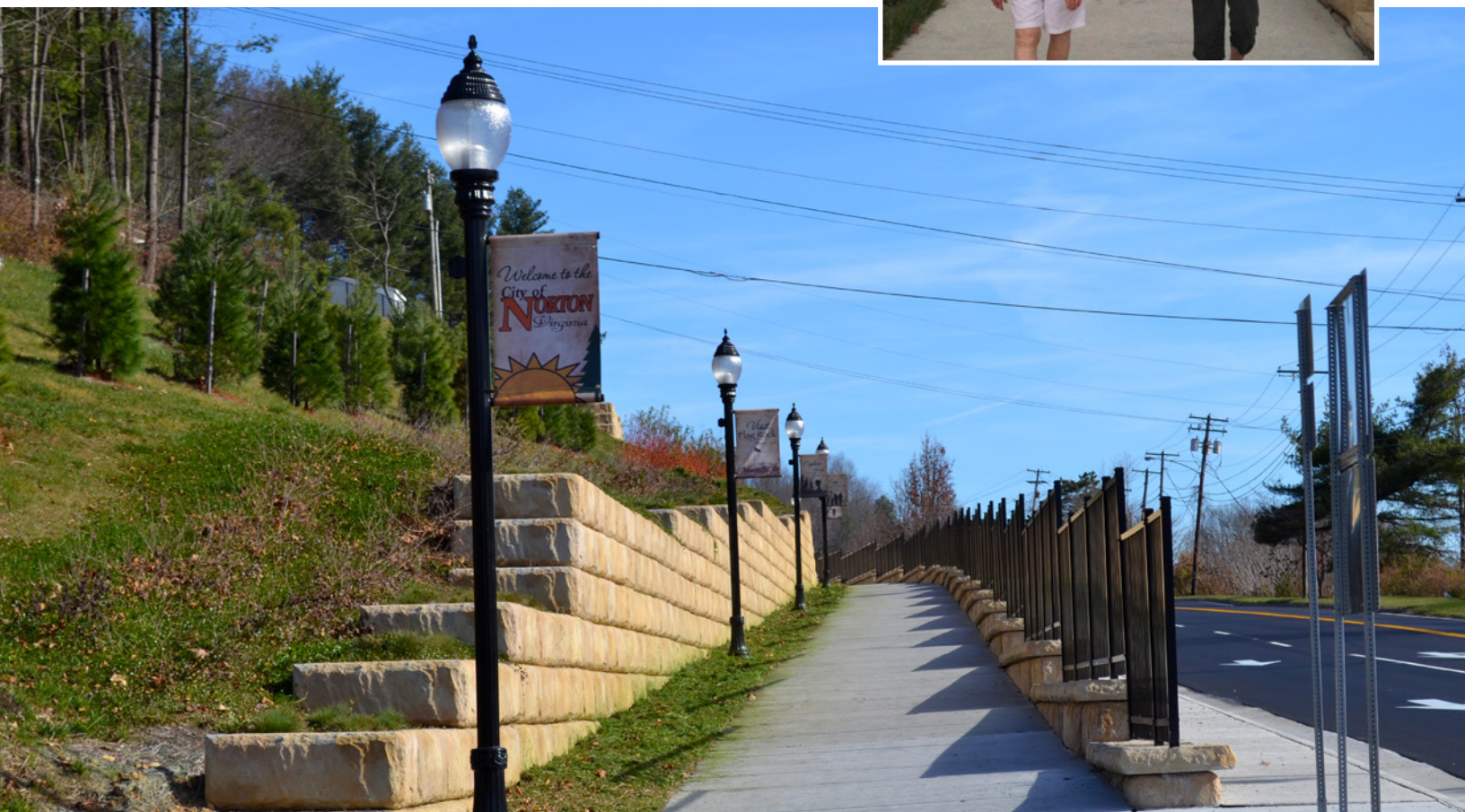
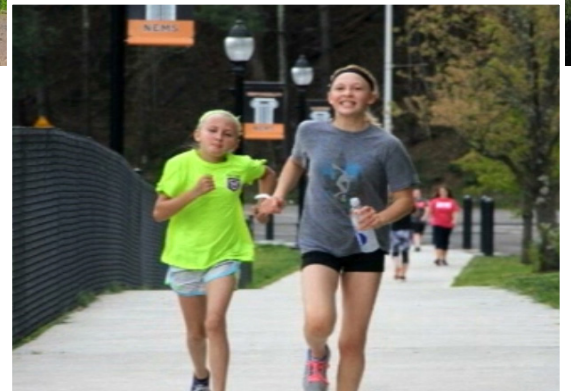
(Above) On the left side of the picture is downtown, and on the right, is Norton Elementary and Middle School.

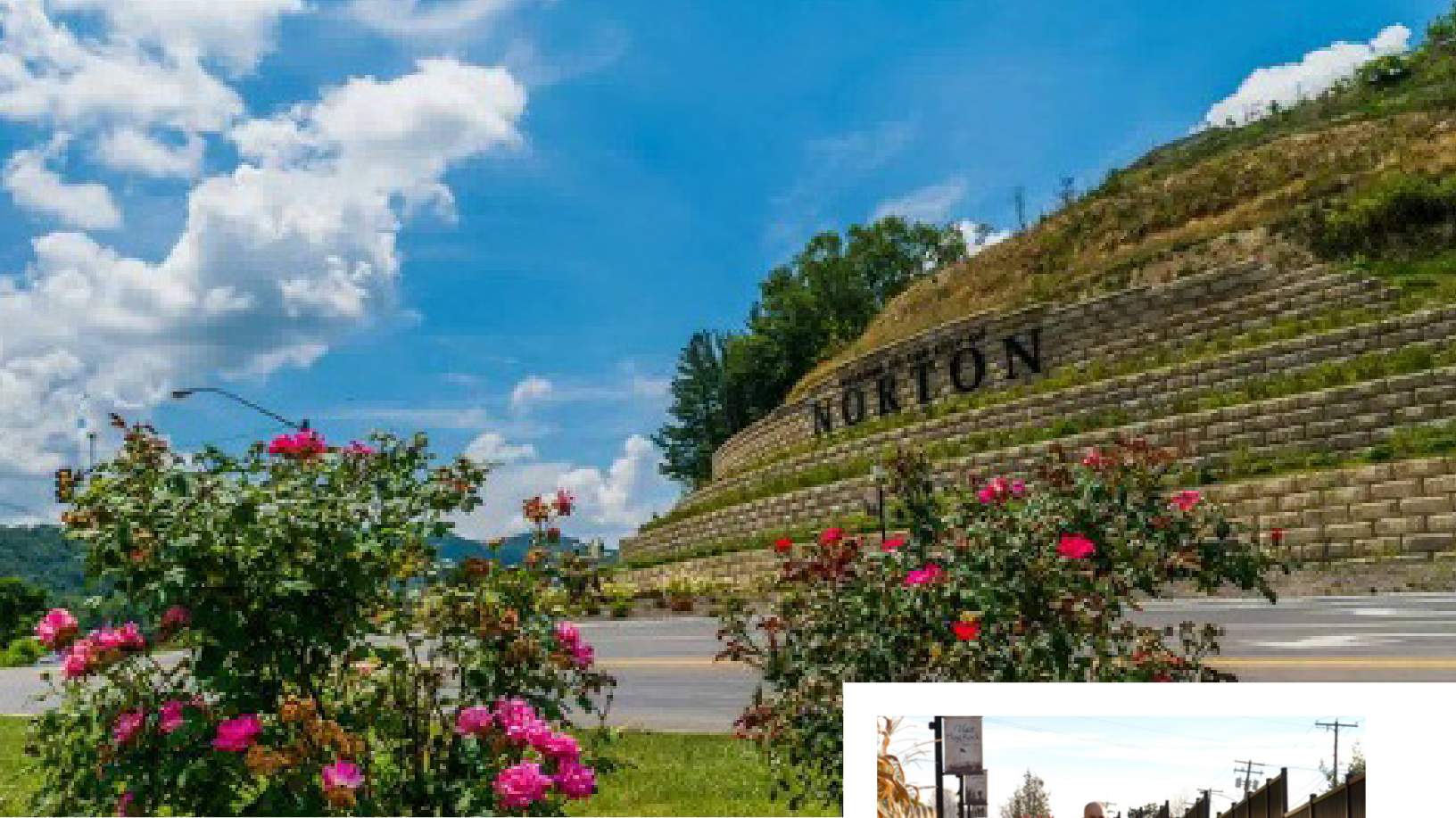
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*This project is going to have an impact on the City of Norton from an aesthetic standpoint for many years to come. However, more importantly, this project has the potential to help the citizens of Norton improve their current health and well-being.*

Dr. Keith Perrigan,  
Superintendent of Schools

The sidewalk serves as a place for citizens to walk, run or bike, day or night.

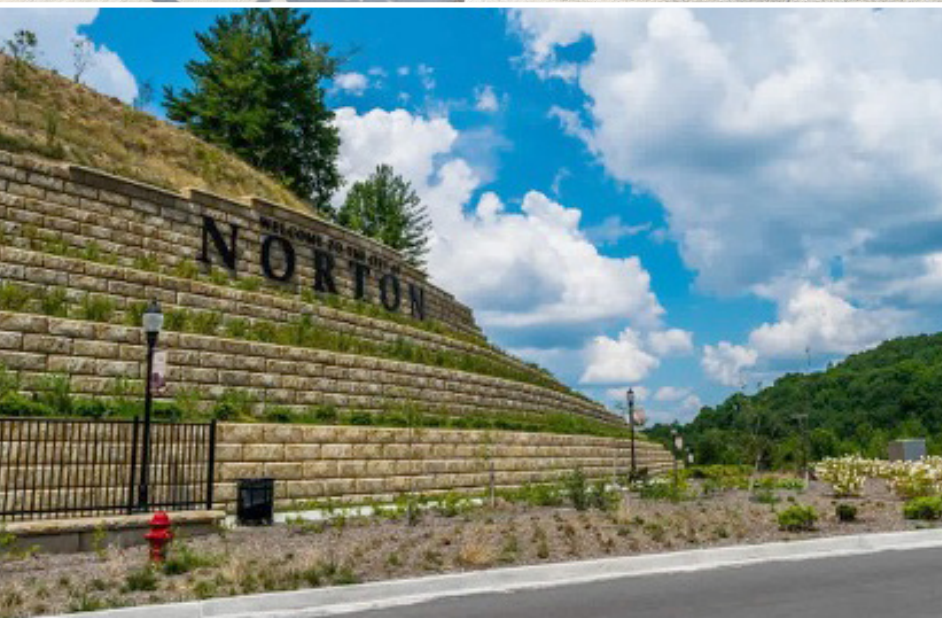




(Top and Bottom) The landscaped, tiered wall serves as an attractive gateway to the city.



Citizens participate in one of many community events on the sidewalk.



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*It's nice to see property that was formerly a mine turn into something this beneficial.*

Tarah Kesterson  
Virginia Department of  
Mines and Minerals

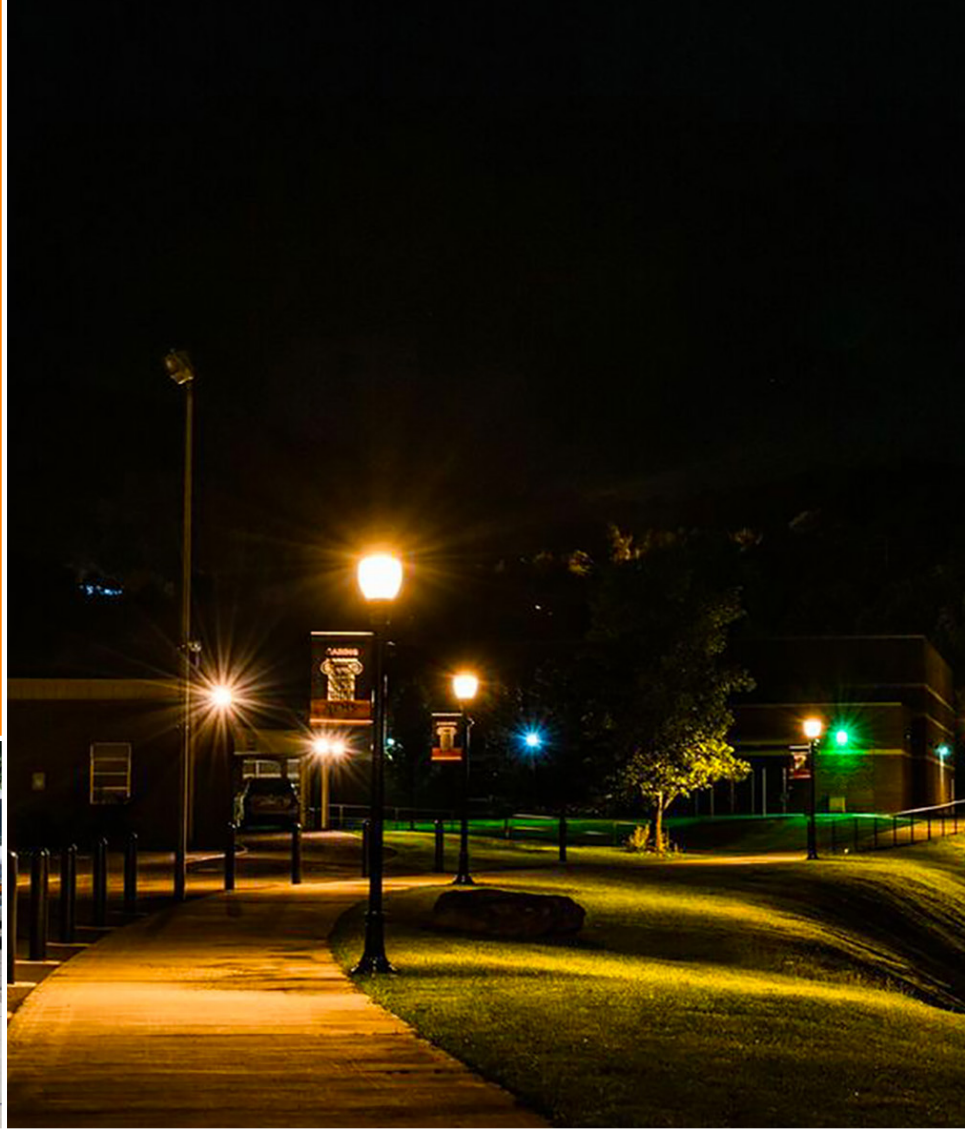


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*With the completion of the new wall at the other end of the city and the adjoining sidewalks many of our students truly have a safe route to walk to school.*

Dr. Keith Perrigan,  
Superintendent of Schools

A photo of the sidewalk where it leads to Norton Elementary and Middle School.



The landscaped terraced entrance to the city at night.



## RECOGNITION

Virginia Department of Transportation  
Virginia Department of Mines, Minerals and Energy  
Mattern & Craig  
Norton City Schools  
Norton Redevelopment and Housing Authority  
Thomas Construction Company  
Bell Concrete



*Some build a wall to separate..  
We built a wall to connect.*

The City of Norton

The project has been nominated for the Office of Surface Mining National Awards Program and Featured in the Virginia Tech's "Save Our Towns" Series.

