



County Engineers Association of Maryland
Small Project of the Year

Mulligans Hill Lane Retaining Wall Replacement

September 2015



Whitman, Requardt & Associates, LLP

1915 100 YEARS 2015

Mulligans Hill Lane Retaining Wall



START



FINISH



Emergency Response



Emergency Response



Emergency Response

- Sand Bags
- Tree Removal
- Building Inspections

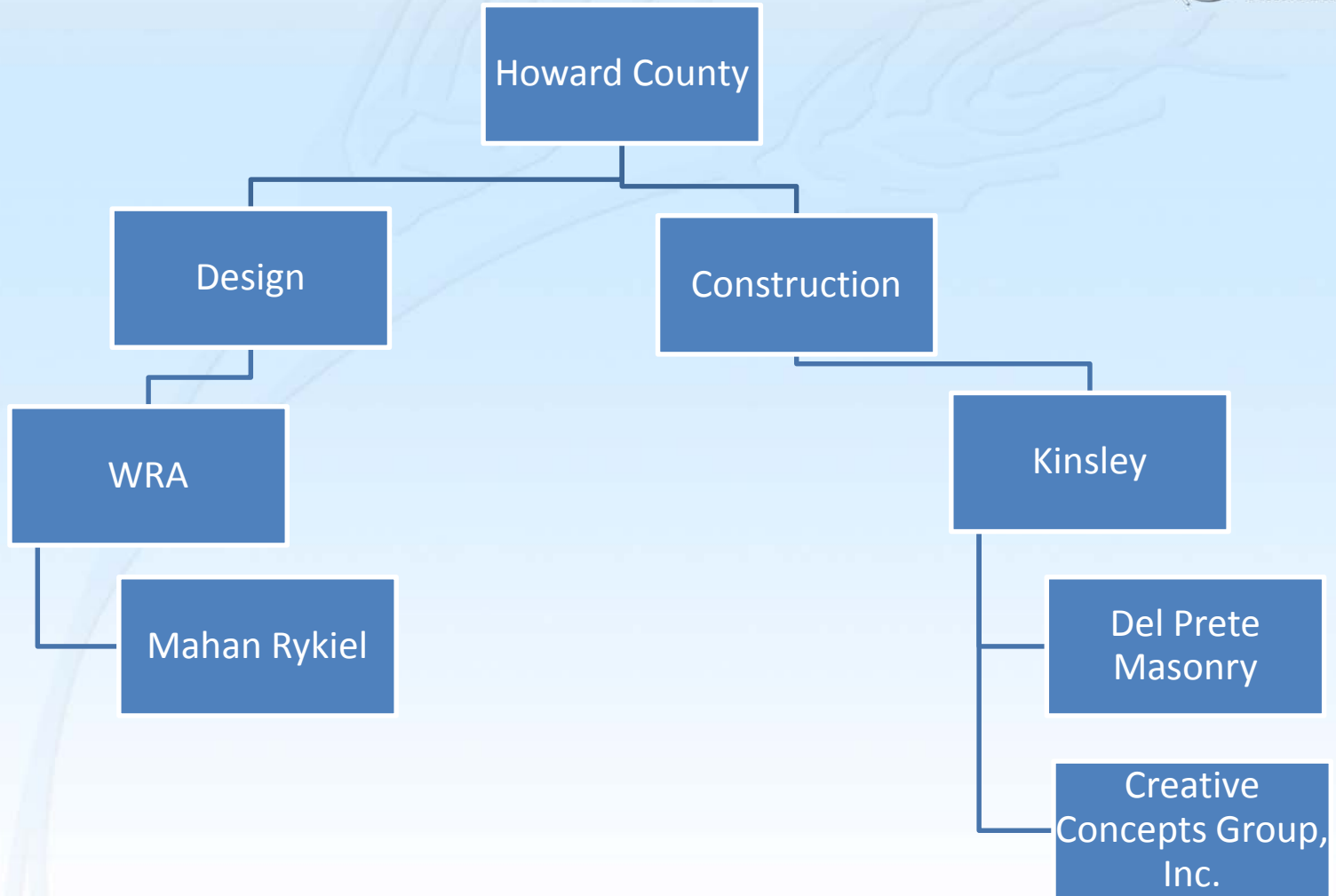


Stakeholders



- St. Paul's Church Archdiocese
- Ellicott City Shopping District
- Ellicott City Historic Commission
- Mulligan Hill Lane Residents
- Ghost Town Tattoo Parlor
- FEMA
- MEMA

Key Players



I Want What I Had

- 25 Foot Tall
- 95 Feet Long
- On the Property Line



Project Constraints



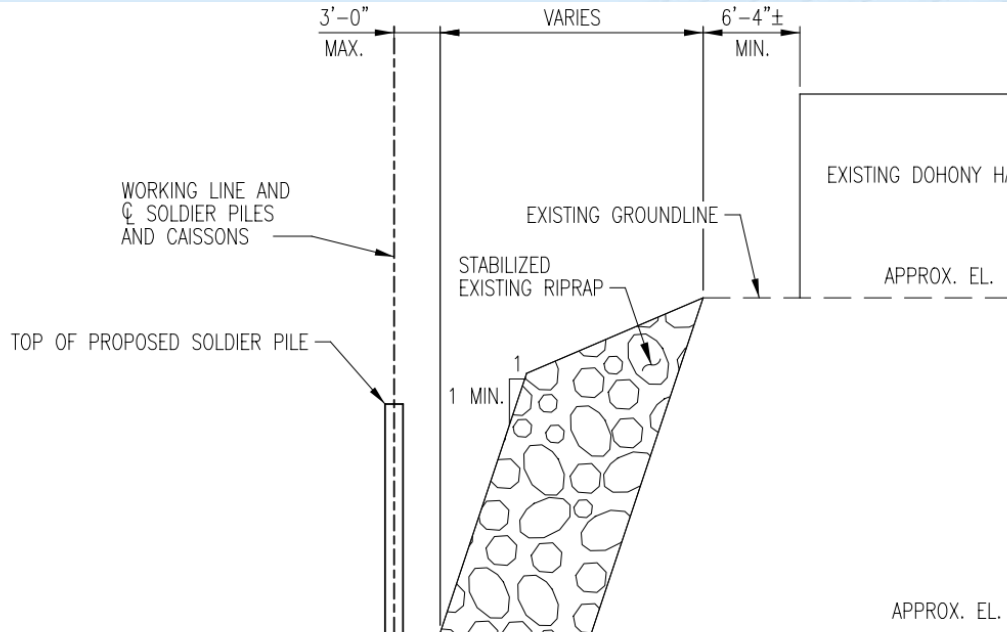
- Design
 - Building Kitchen to Remain in Service
 - No Permanent Easement Under Building
 - Reestablish Parking
 - Reestablish Historic Aesthetics
 - Don't Let the Church Fall Down!!

Design Concept

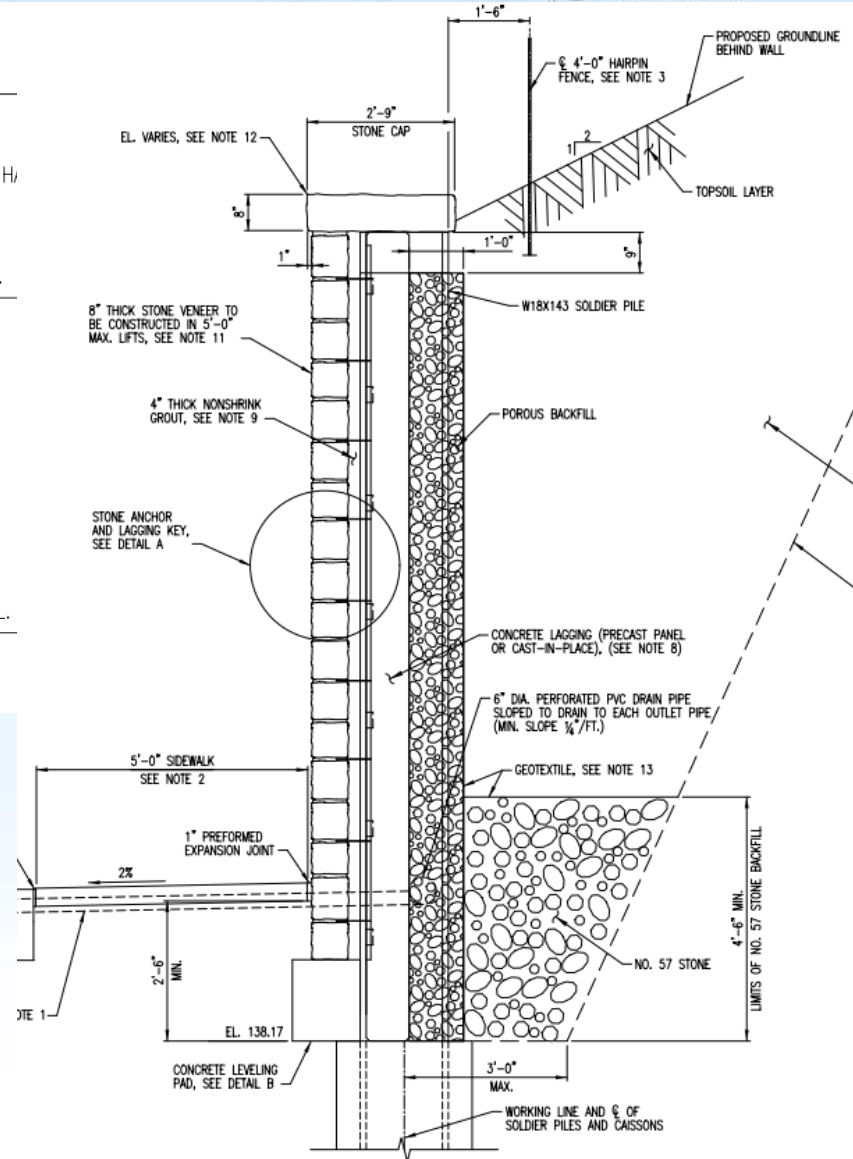


- Gravity Buttress Stabilization
 - (Grouting and Soil Nails)
- Permanent Wall
 - (Soldier Pile and Lagging Wall)
- Historic Look
 - (Stone Veneer)
- Parking lot Reestablishment
 - (Parallel Parking)

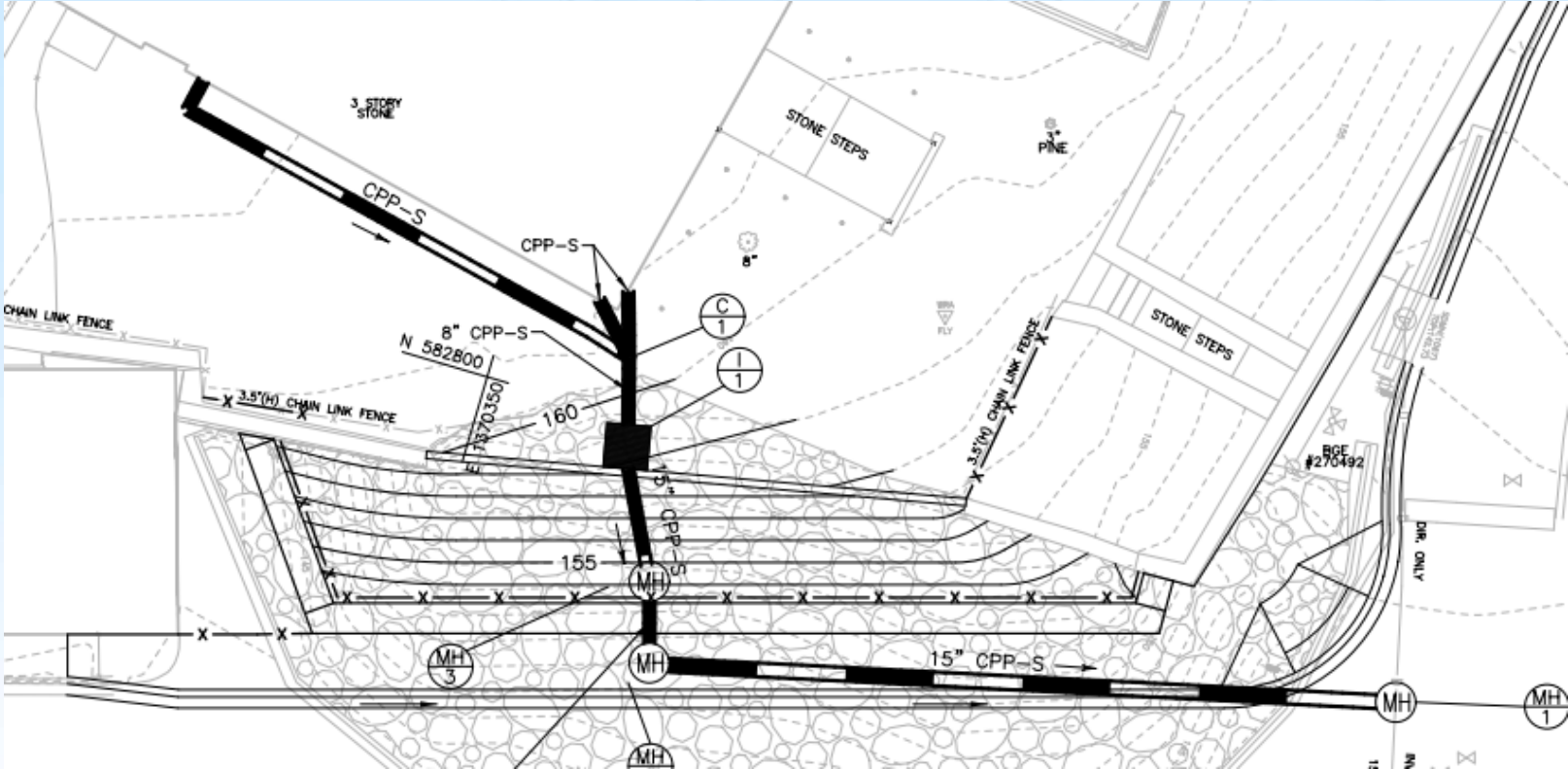
Design Concept



TYPICAL SECTION 2 - STABILIZED CONDITION

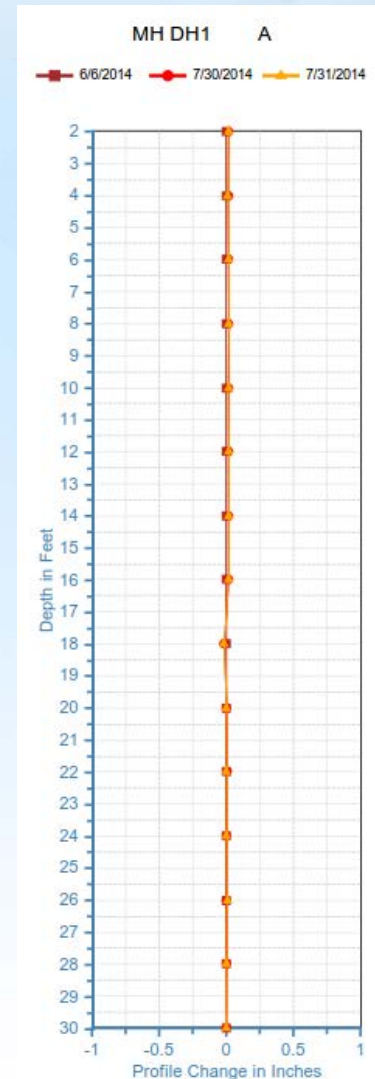
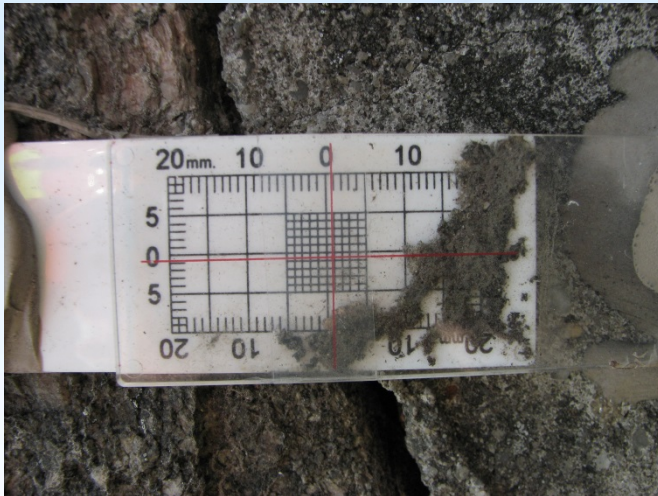


Design Concept



Building Monitoring

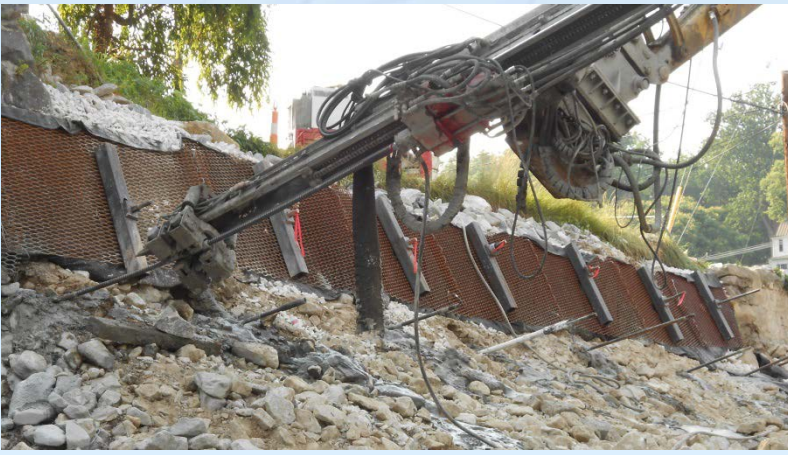
- Inclinometers
- Crack Gages
- Survey Monitoring Points



Rubble Buttress



Buttress Stabilization



Buttress Stabilization



Soldier Pile Installation



Lagging Installation



Stone Veneer



Final Grading



Finished Product

