

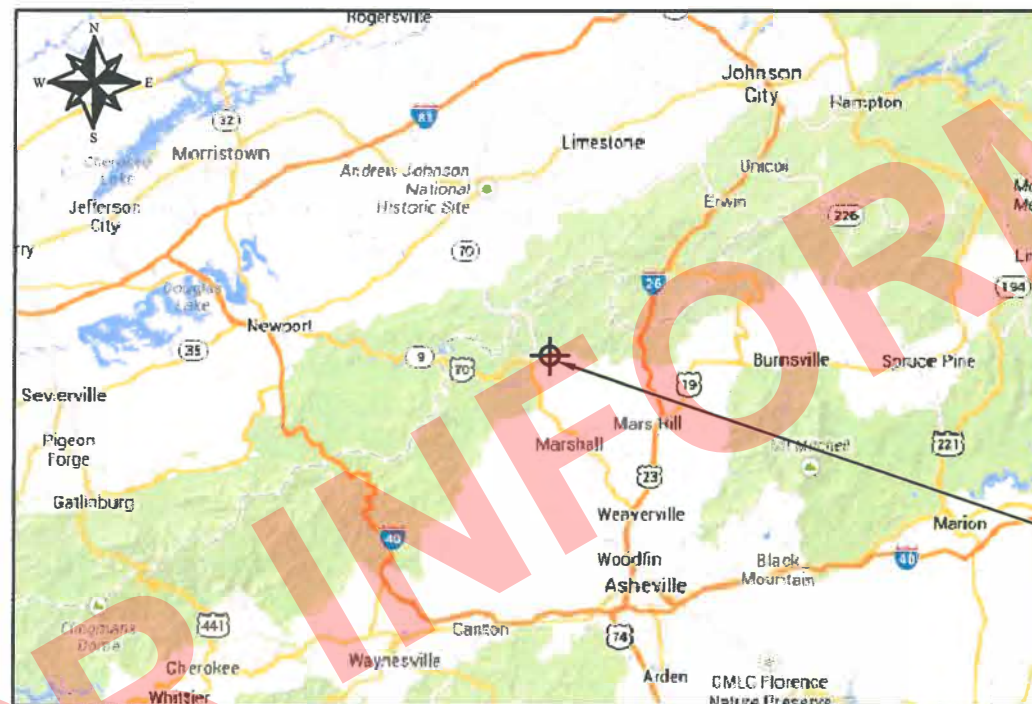
Slope Stabilization Details

Guntertown Road Slide #1

Madison County, North Carolina

NCDOT District 13

Vicinity Map



Approximate Project Location
 GPS: N35.925289, W82.726461
 Slope Stabilization Area (Approx. 120 LF)

Sheet Index

1. Cover Sheet
2. General Notes
3. Typical Cross-Sections
4. Elevation Views
5. Self-Drilling SuperNail® Detail
6. Shotcrete Detail
7. Micropile Cap Detail



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Sheet Revision		
Date:		By:

Cover Sheet		
Project:	Guntertown Road Slide #1	
Location:	Madison County-North Carolina	
Date:	August 30, 2013	
Drawn By:	VD	Checked By: NRB

Project No./Code:	
Scale:	
Sheet No.:	1



GeoStabilization International
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Construction Sequence/Work Schedule:

- NCDOT or its contractor will clear, excavate, haul off excavated material, provide traffic control and #57 stone for GCS @ Wall Backfill.
- GSI will provide and install the specified soil nails and surface treatment per the construction documents.

Size and Spacing of Nails:

- GSI will mark the locations of the proposed soil nails with survey marking paint.
- The Soil Nails will be injected with grout. The grout will be a Type I,II,or III Portland Cement. The water/cement ratio will be 0.40 to 0.60. No additional aggregate or admixtures will be added to the grout.

Facing and Drainage System:

- Drain strips will be provided and installed between the soil nails every 4-feet along the face of the excavation. The drain strips shall be placed with the geotextile side against the ground. Drain strips will be continuous and any splices shall be made with a one-foot minimum overlap such that the flow of water is not impeded. Drain strips shall extend beyond the face of the shotcrete at the downhill face.

Reinforcing Steel Placement:

- Welded wire fabric will be placed along the face of the excavation with a separation of approximately 2 inches between the wire fabric and the soil.
- No. 4 Rebar will be tied to the wire fabric. Vertical bars will extend for approximately 24 inches and the horizontal bars will be continuous (with overlap splices) in the shotcrete.

Bearing Plate Placement:

- 8" x 8" x 3/8" Steel Bearing Plates will be placed over the nails and attached either with a hex nut or by welding to the nail to secure the wire mesh and rebar during shotcrete placement. If the soil nails extend beyond the hex nuts or welded plates, they will be trimmed using a gas powered demolition saw.

Shotcrete Application:

- Shotcrete will be placed from the lower part of the area upwards to prevent accumulation of rebound. The nozzle will be oriented a proper distance from and approximately perpendicular to the working face so that rebound will be minimal and compaction will be maximized. Care will be taken while encasing reinforcing steel and mesh to keep the front face of the reinforcement clean during placement operations, so that shotcrete builds up from behind, to encase the reinforcement and prevent voids or pockets from forming.

GSI Employee Certifications:

- ACI Shotcrete Nozzlemen Certification
- 10-hour Occupational Safety and Health Training Course in Construction Safety & Health
- American Red Cross Standard First Aid Training
- American Red Cross Bloodborne Pathogens Training: PDT
- Erosion Control Supervisor Training

House Keeping:

- The site will be organized and clear of any trash or debris. All trash will be placed in a proper container and removed at the end of each work day.

Safety:

- All safety plans for lifting, hearing, dust control, PPE etc. are in place and will be followed accordingly. PPE will include safety vest, steel toed shoes, hard hat, safety glasses, ear plugs, and gloves.

Shotcrete Mix Design:

Shotcrete shall comply with the requirements of ACI 506.2, "Specifications for Materials, Proportioning and Application of Shotcrete", except as otherwise specified. Shotcreting consists of applying one or more layers of concrete conveyed through a hose pneumatically projected at a high velocity against a prepared surface.

The wet-mix process consists of thoroughly mixing all the ingredients, introducing the mixture into the delivery equipment and delivering it, by positive displacement, to the nozzle. Air jets the wet-mix shotcrete from the nozzle at high velocity onto the surface.

Material	Weight per Cubic Yard
3/8" Rock	650 lbs
Sand	1800 lbs
Cement	750 lbs
Water	300 lbs
Fly Ash	150 lbs
Air Entrainment	6% (1.6 cubic feet)

0.40 to 0.50 water/cement ratio

Grout Mix Design:

Water/Cement Ratio= 0.5

(Batch Weight Per Cubic Yard)

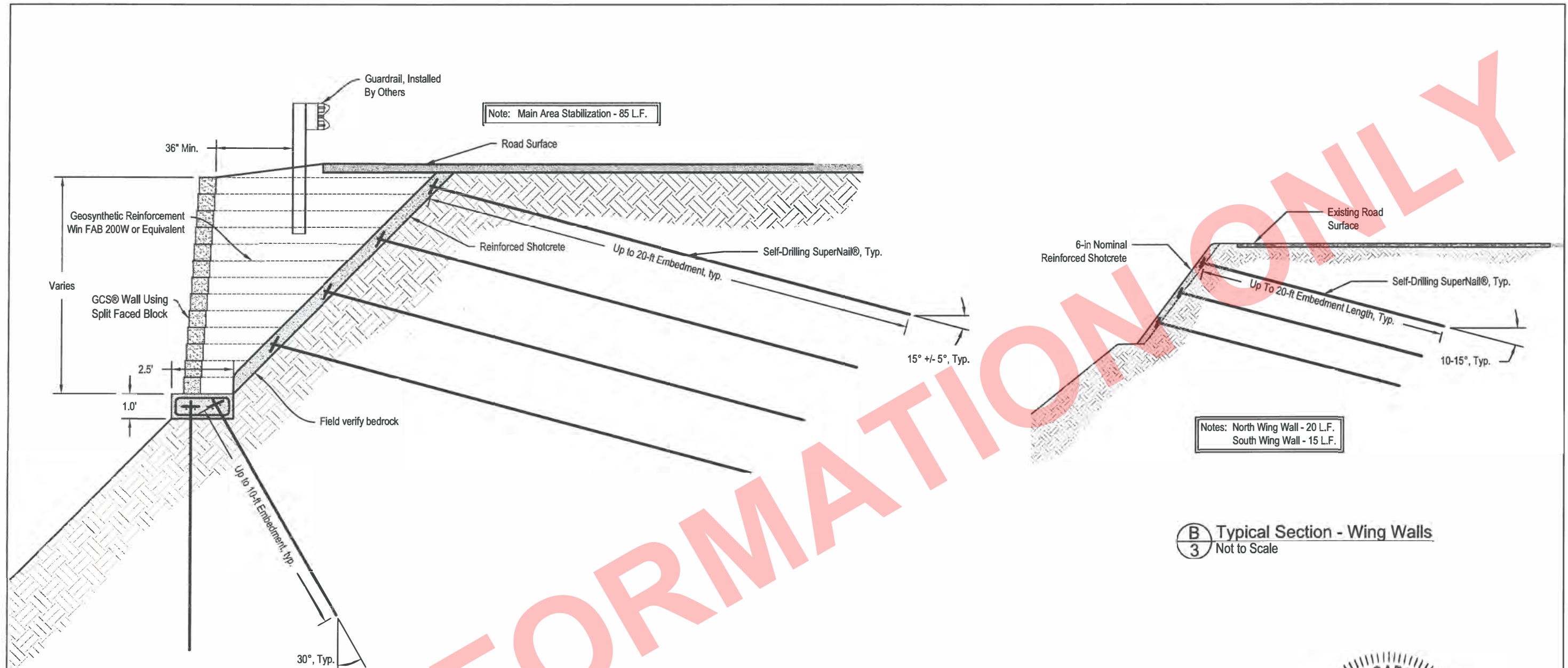
Material	Weight	Volume	
Cement	2061 lbs	10.5 Cubic Feet	21.9 bags (94#)
Water	1030.5 lbs	16.5 Cubic Feet	123.5 gallons
Total		1 Cubic Yard	

(Per 94# Bag of Cement)

Material	Weight	Volume	
Cement	94 lbs	0.48 Cubic Feet	1 bag (94#)
Water	47 lbs	0.75 Cubic Feet	5.6 gallons
Total Volume		1.23 Cubic Feet	




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	Date:	By:				Scale:		
			Sheet No.: 2					
	Project: Guntertown Road Slide #1		Location: Madison County-North Carolina					
Date: August 30, 2013	Drawn By: VD	Checked By: NRB						

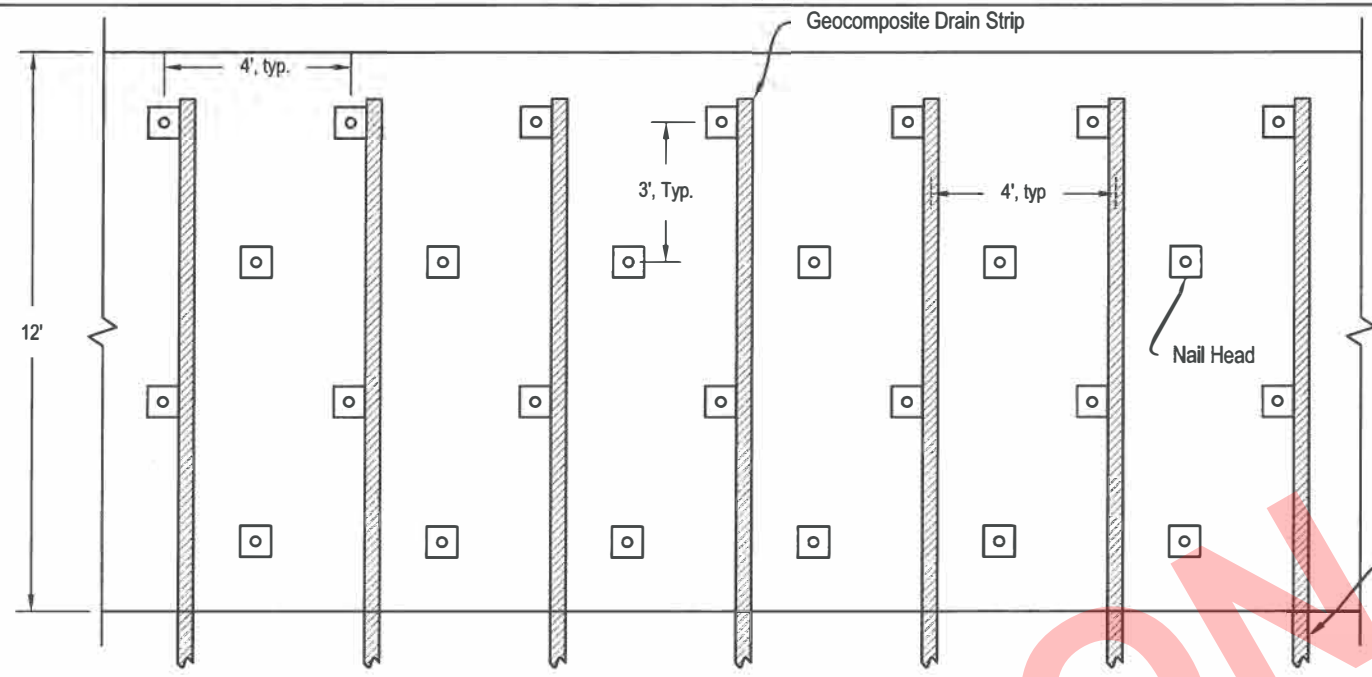


A Typical Section - Main Repair Area
3 Not to Scale

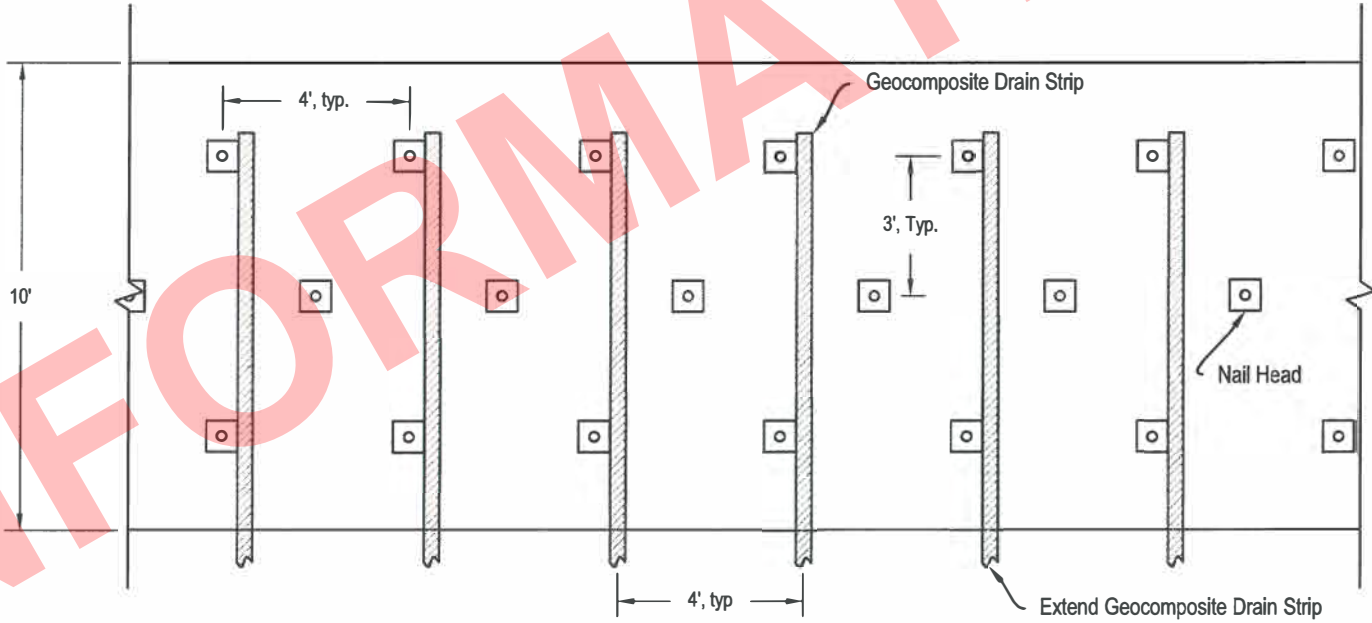
B Typical Section - Wing Walls
3 Not to Scale



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	Date: 9/6/13	By: VD	Project: Guntertown Road Slide #1		Location: Madison County North Carolina	Scale: As Shown		
	- Added 2 rows of soil nails w/shotcrete to main repair area typical section.		Date: August 30, 2013	Drawn By: VD	Checked By: NRB	Sheet No.: 3		
	- Made micropile cap rectangular at slope.							



A Elevation View - Main Repair Area
4 Not to Scale



B Elevation View - Wing Walls
4 Not to Scale

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Albert Charles Ruckman
 7/6/13

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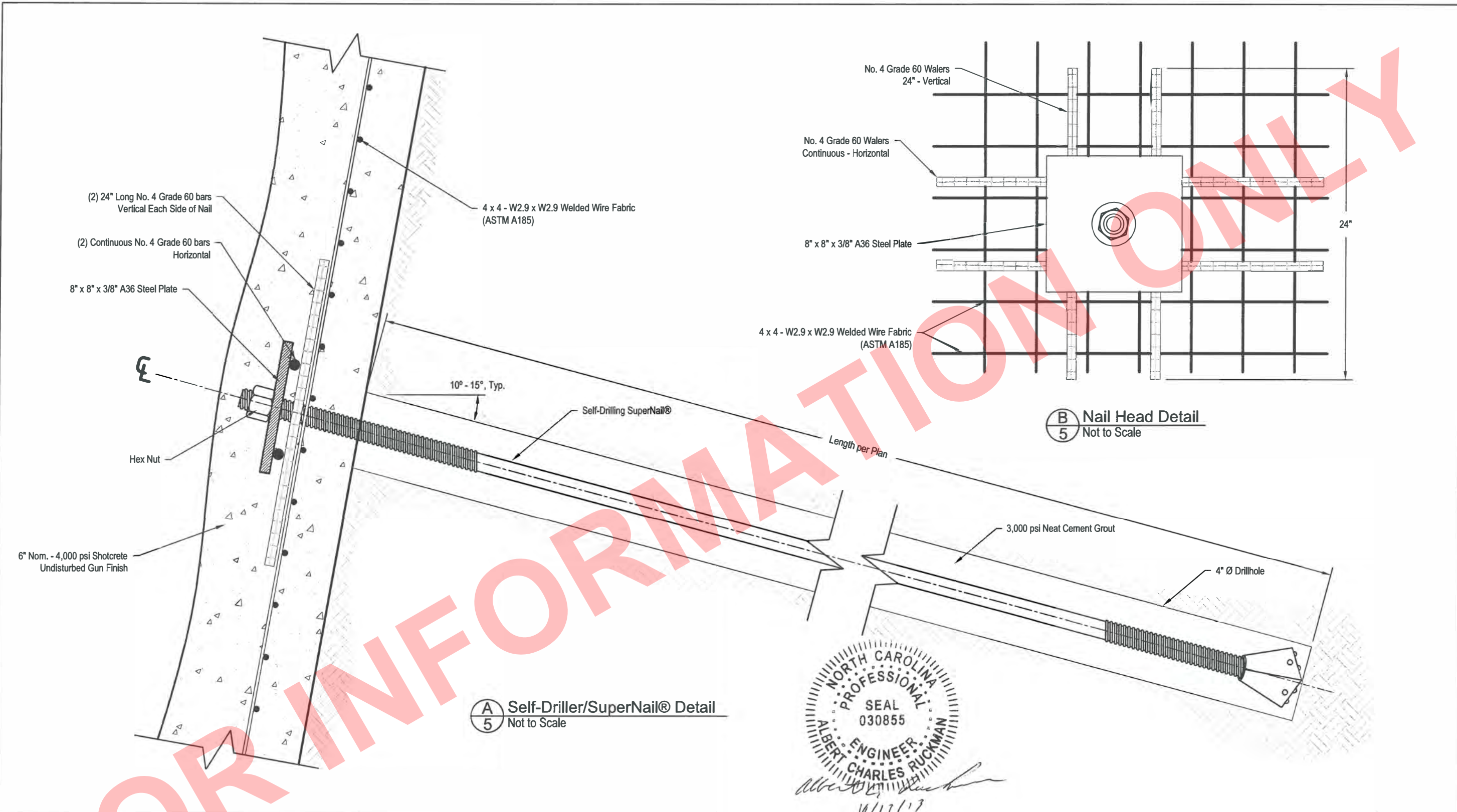
Sheet Revision		
Date:	By:	By:
9/6/13	- Added 2 rows of soil nails w/shotcrete to main repair area typical section.	VD

Elevation Views			
Project: Guntertown Road Slide #1		Location: Madison County North Carolina	
Date: August 30, 2013	Drawn By: VD	Checked By: NRB	

Project No./Code: 13-180NC
Scale: As Shown
Sheet No.: 4



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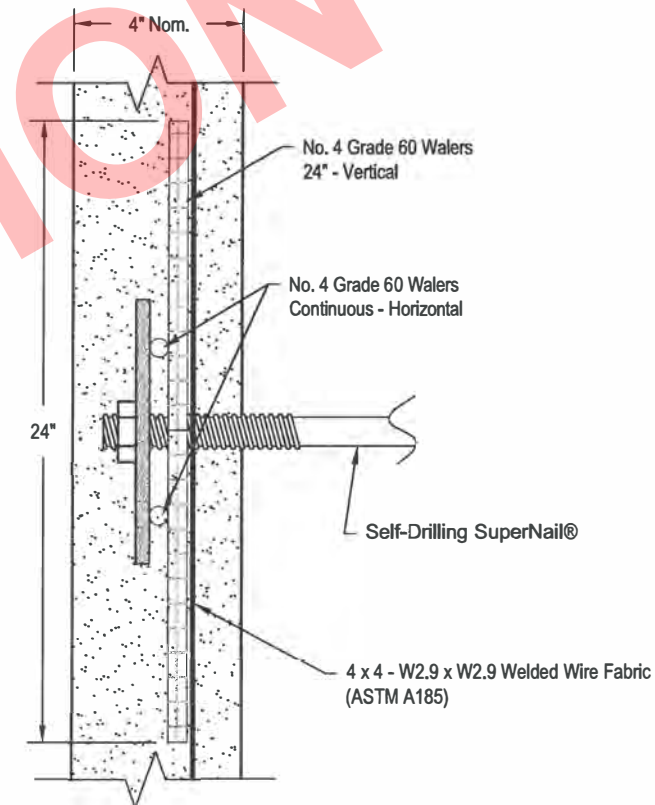
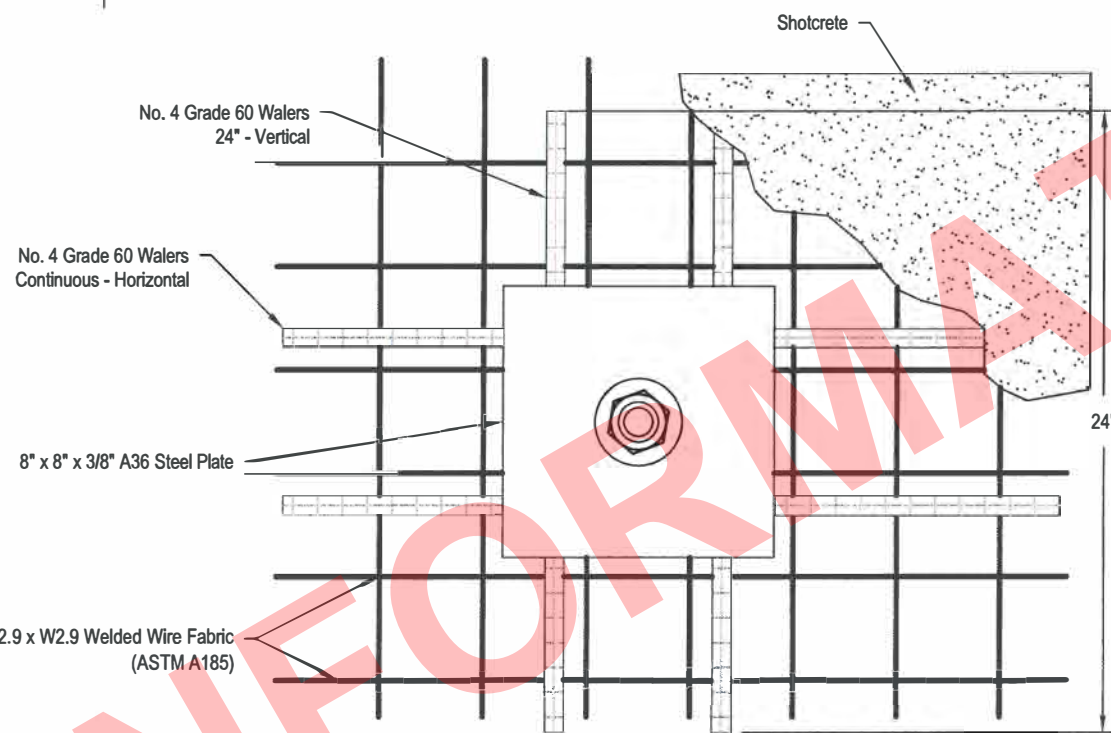
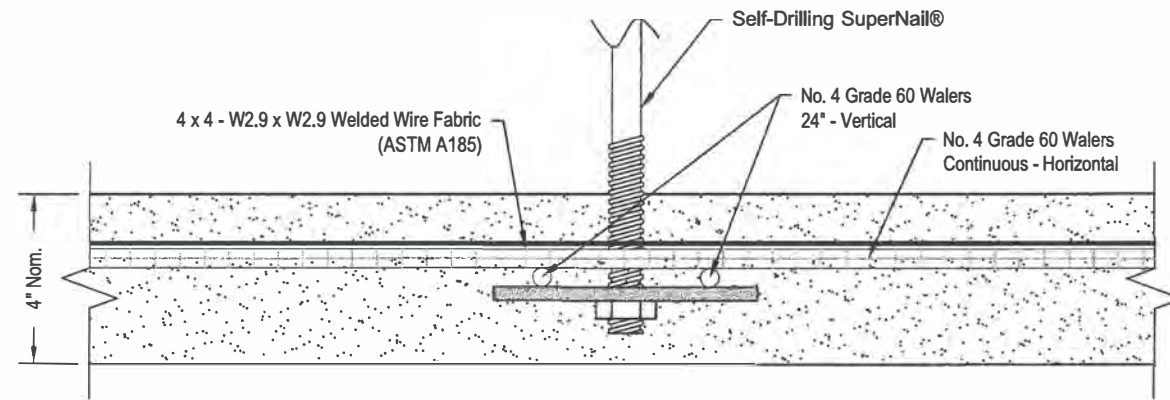
Sheet Revision	
Date:	By:

Self-Drilling SuperNail® Detail		
Project:	Location:	
Guntertown Road Slide #1	Madison County-North Carolina	
Date:	Drawn By:	Checked By:
August 30, 2013	VD	NRB

Project No./Code:
Scale:
As Shown
Sheet No. :
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A Shotcrete Detail
6 Not to Scale

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Albert Charles Ruckman
 10/17/13

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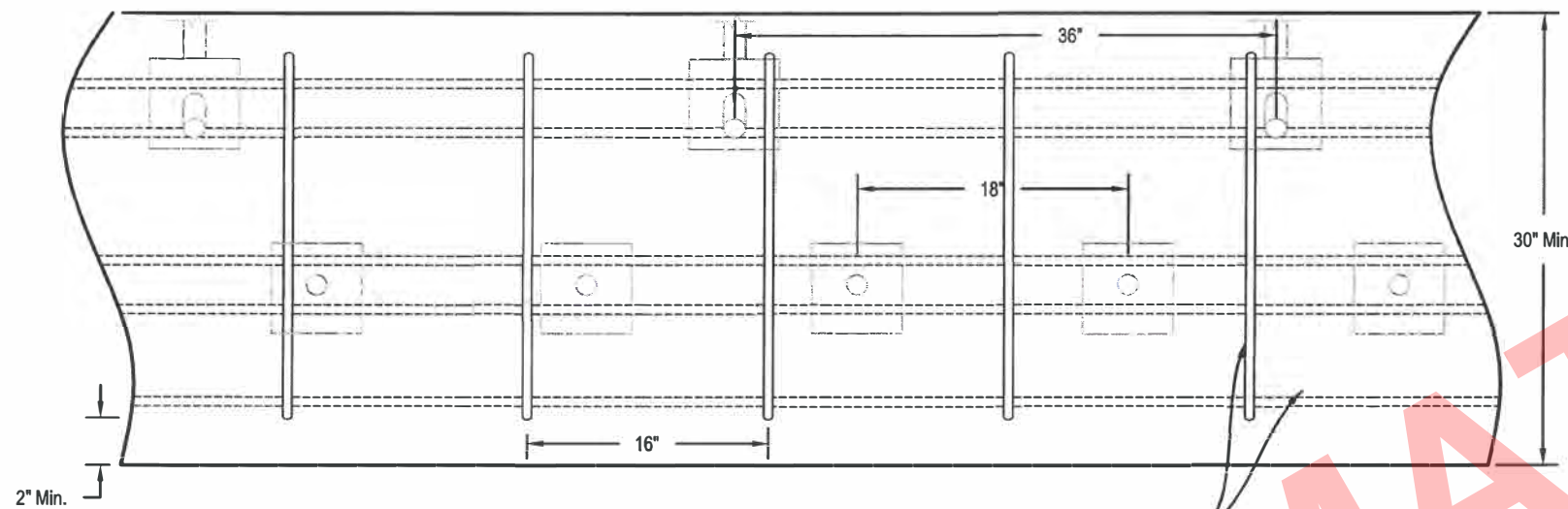
Sheet Revision		
Date:		By:

Shotcrete Detail			
Project: Guntertown Road Slide #1		Location: Madison County-North Carolina	
Date: August 30, 2013	Drawn By: VD	Checked By: NRB	

Project No./Code:
Scale: As Shown
Sheet No.: 6

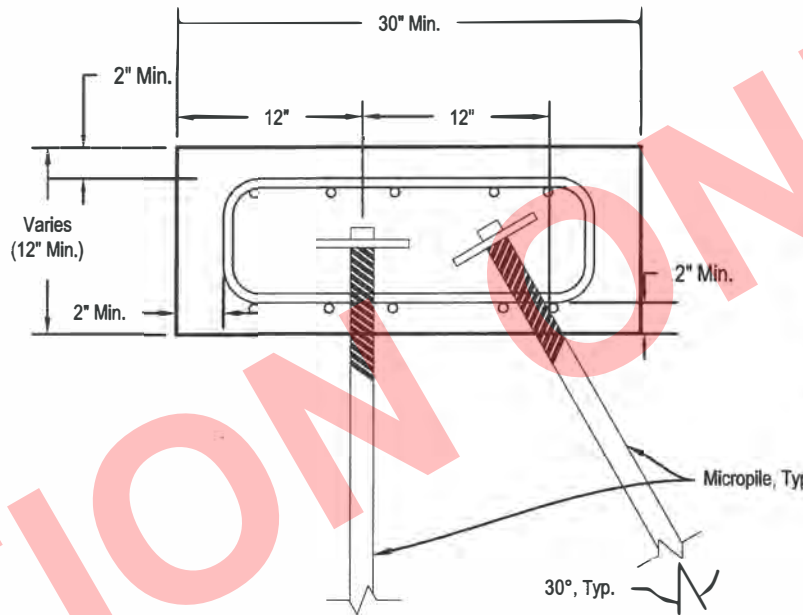


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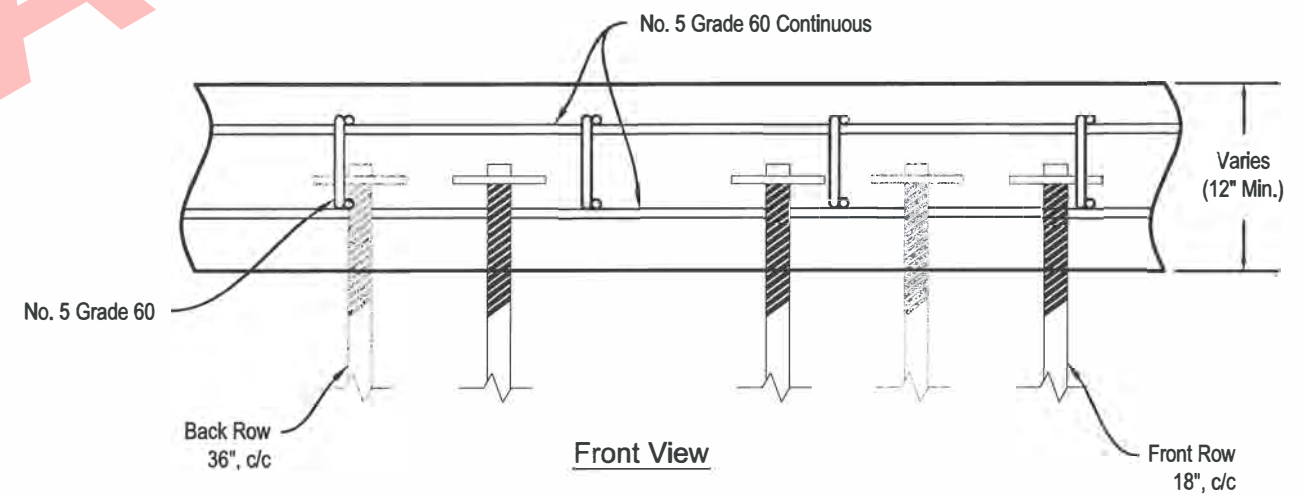


Top View

No. 5 Grade 60
Top and Bottom Continuous, typ.



End View



Front View



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Sheet Revision	
Date:	By:
9/6/13	- Made micropile cap rectangular at slope. VD

Micropile Cap Detail	
Project:	Location:
Guntertown Road Slide #1	Madison County North Carolina
Date:	Drawn By:
August 30, 2013	VD
	Checked By:
	NRB

Project No./Code:
13-180NC
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Sheet No.:
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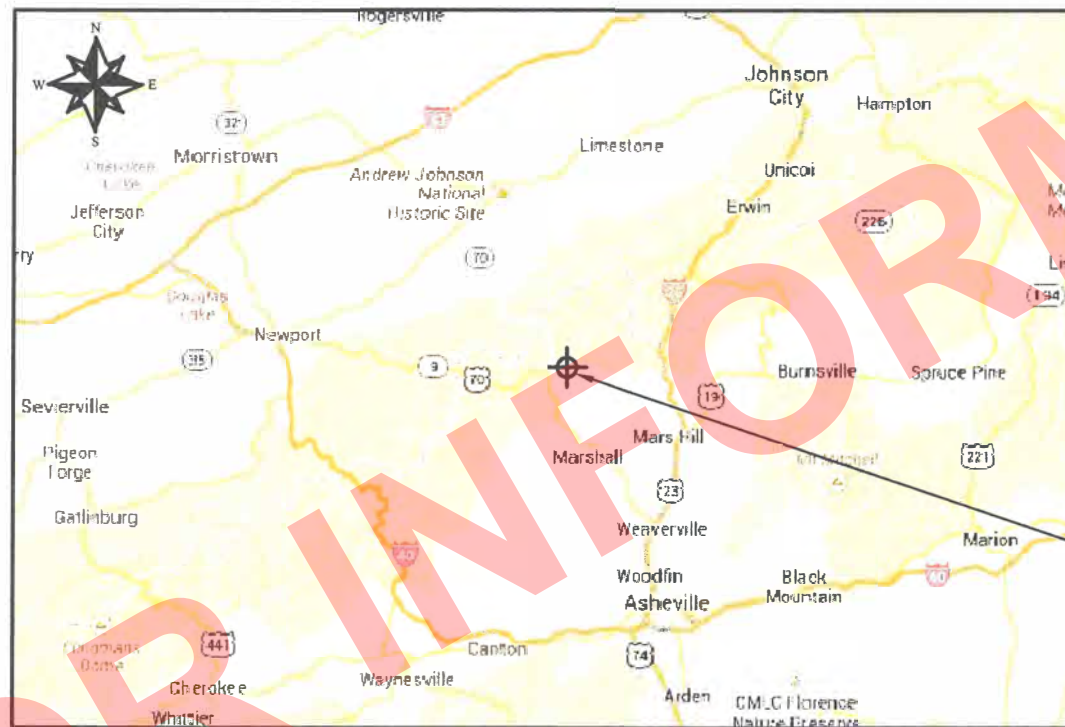
Slope Stabilization Details

Guntertown Road Slide #2

Madison County, North Carolina

NCDOT District 13

Vicinity Map



Approximate Project Location
 GPS: N35.925125, W82.72647
 Slope Stabilization Area (Approx. 65 LF)

Sheet Index

1. Cover Sheet
2. General Notes
3. Typical Cross-Section & Elevation
4. Self-Drilling SuperNail® Detail
5. Shotcrete Detail



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Sheet Revision	
Date:	By:

Cover Sheet		
Project:	Guntertown Road Slide #2	
Location:	Madison County North Carolina	
Date:	September 1, 2013	Drawn By: VD
		Checked By: NRB

Project No./Code:	13-181NC
Scale:	
Sheet No.:	1



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Construction Sequence/Work Schedule:

- NCDOT or its contractor will clear, excavate, haul off excavated material and provide traffic control.
- GSI will provide and install the specified soil nails and surface treatment per the construction documents.

Size and Spacing of Nails:

- GSI will mark the locations of the proposed soil nails with survey marking paint.
- The Soil Nails will be injected with grout. The grout will be a Type I,II,or III Portland Cement. The water/cement ratio will be 0.40 to 0.60. No additional aggregate or admixtures will be added to the grout.

Facing and Drainage System:

- Drain strips will be provided and installed between the soil nails every 8-feet along the face of the existing gabion wall. The drain strips shall be placed with the geotextile side against the ground. Drain strips will be continuous and any splices shall be made with a one-foot minimum overlap such that the flow of water is not impeded. Drain strips shall extend beyond the face of the shotcrete at the downhill face.

Reinforcing Steel Placement:

- Welded wire fabric will be placed along the face of the excavation with a separation of approximately 2 inches between the wire fabric and the gabion baskets..
- No. 4 Rebar will be tied to the wire fabric. Vertical bars will extend for approximately 24 inches and the horizontal bars will be continuous (with overlap splices) in the shotcrete.

Bearing Plate Placement:

- 10" x 10" x 1/2" Steel Bearing Plates will be placed over the nails and attached either with a hex nut to the nail to secure the wire fabric and rebar during shotcrete placement. If the soil nails extend beyond the hex nuts, they will be trimmed using a gas powered demolition saw.

Shotcrete Application:

- Shotcrete will be placed from the lower part of the area upwards to prevent accumulation of rebound. The nozzle will be oriented a proper distance from and approximately perpendicular to the working face so that rebound will be minimal and compaction will be maximized. Care will be taken while encasing reinforcing steel and wire fabric to keep the front face of the reinforcement clean during placement operations, so that shotcrete builds up from behind, to encase the reinforcement and prevent voids or pockets from forming.

GSI Employee Certifications:

- ACI Shotcrete Nozzlemen Certification
- 10-hour Occupational Safety and Health Training Course in Construction Safety & Health
- American Red Cross Standard First Aid Training
- American Red Cross Bloodborne Pathogens Training: PDT
- Erosion Control Supervisor Training

House Keeping:

- The site will be organized and clear of any trash or debris. All trash will be placed in a proper container and removed at the end of each work day.

Safety:

- All safety plans for lifting, hearing, dust control, PPE etc. are in place and will be followed accordingly. PPE will include safety vest, steel toed shoes, hard hat, safety glasses, ear plugs, and gloves.

Shotcrete Mix Design:

Shotcrete shall comply with the requirements of ACI 506.2, "Specifications for Materials, Proportioning and Application of Shotcrete", except as otherwise specified. Shotcreting consists of applying one or more layers of concrete conveyed through a hose pneumatically projected at a high velocity against a prepared surface.

The wet-mix process consists of thoroughly mixing all the ingredients, introducing the mixture into the delivery equipment and delivering it, by positive displacement, to the nozzle. Air jets the wet-mix shotcrete from the nozzle at high velocity onto the surface.

Material	Weight per Cubic Yard
3/8" Rock	650 lbs
Sand	1800 lbs
Cement	750 lbs
Water	300 lbs
Fly Ash	150 lbs
Air Entrainment	6% (1.6 cubic feet)

0.40 to 0.50 water/cement ratio

Grout Mix Design:

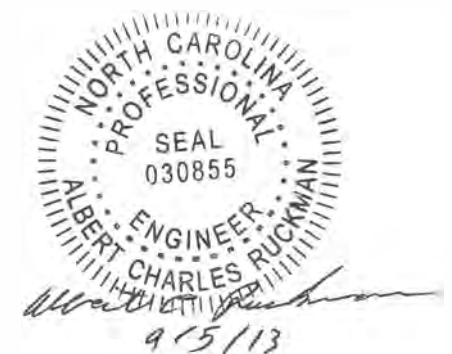
Water/Cement Ratio= 0.4 to 0.6


(Batch Weight Per Cubic Yard)

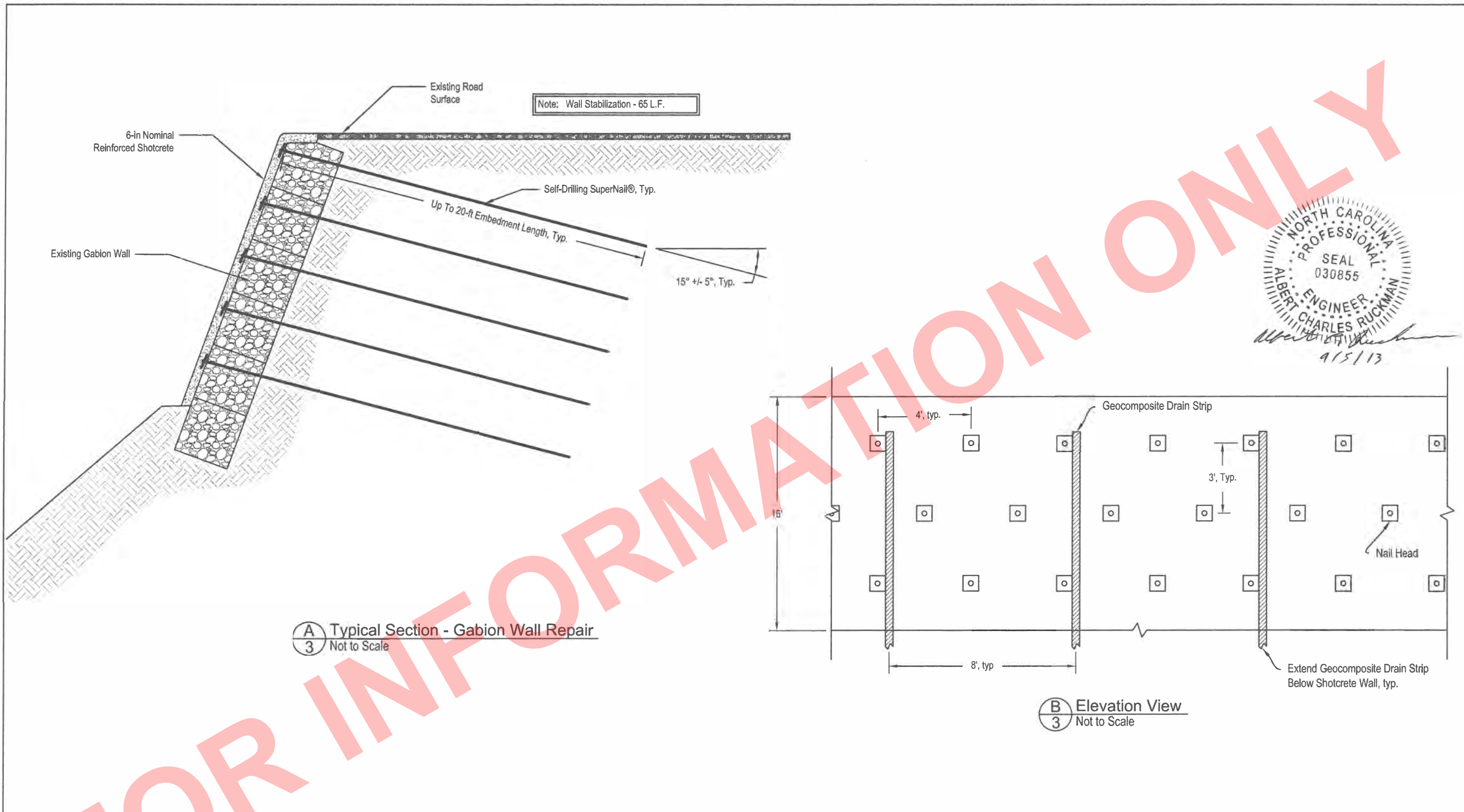
Material	Weight	Volume	
Cement	2061 lbs	10.5 Cubic Feet	21.9 bags (94#)
Water	1030.5 lbs	16.5 Cubic Feet	123.5 gallons
Total		1 Cubic Yard	

(Per 94# Bag of Cement)

Material	Weight	Volume	
Cement	94 lbs	0.48 Cubic Feet	1 bag (94#)
Water	47 lbs	0.75 Cubic Feet	5.6 gallons
Total Volume		1.23 Cubic Feet	



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	Date:	By:				Project: Guntertown Road Slide #2		
			Date: September 1, 2013	Drawn By: VD	Checked By: NRB	Sheet No.: 2		



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 ALBERT CHARLES RUCKMAN
Albert Charles Ruckman
 9/5/13

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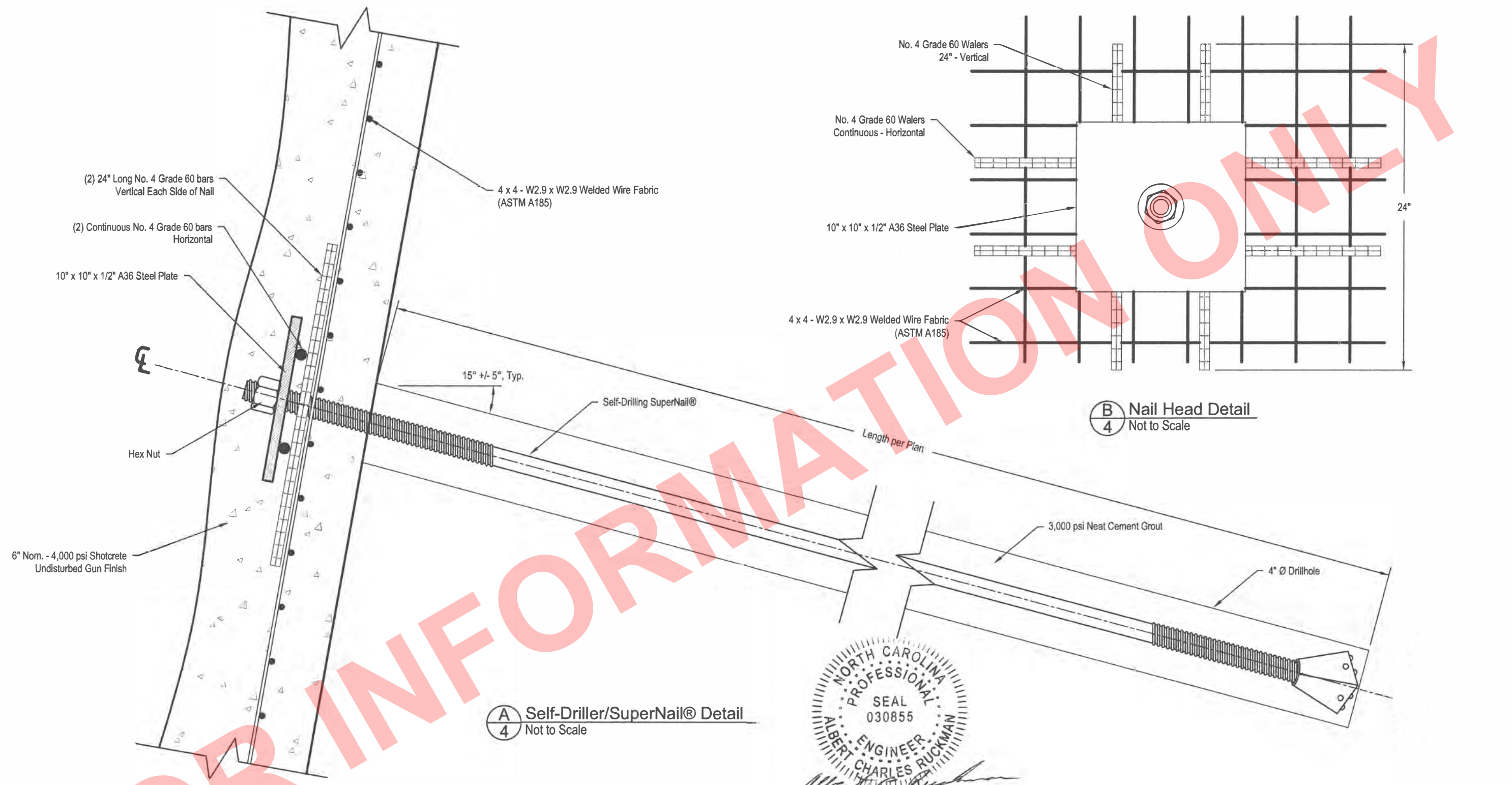
Sheet Revision	
Date:	By:

Typical Cross-Section & Elevation		
Project:	Location:	
Guntertown Road Slide #2	Madison County North Carolina	
Date:	Drawn By:	Checked By:
September 1, 2013	VD	NRB

Project No./Code:
13-181NC
Scale:
As Shown
Sheet No.:
3

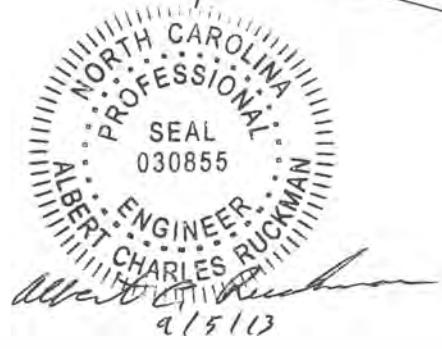


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A Self-Driller/SuperNail® Detail
4 Not to Scale

B Nail Head Detail
4 Not to Scale



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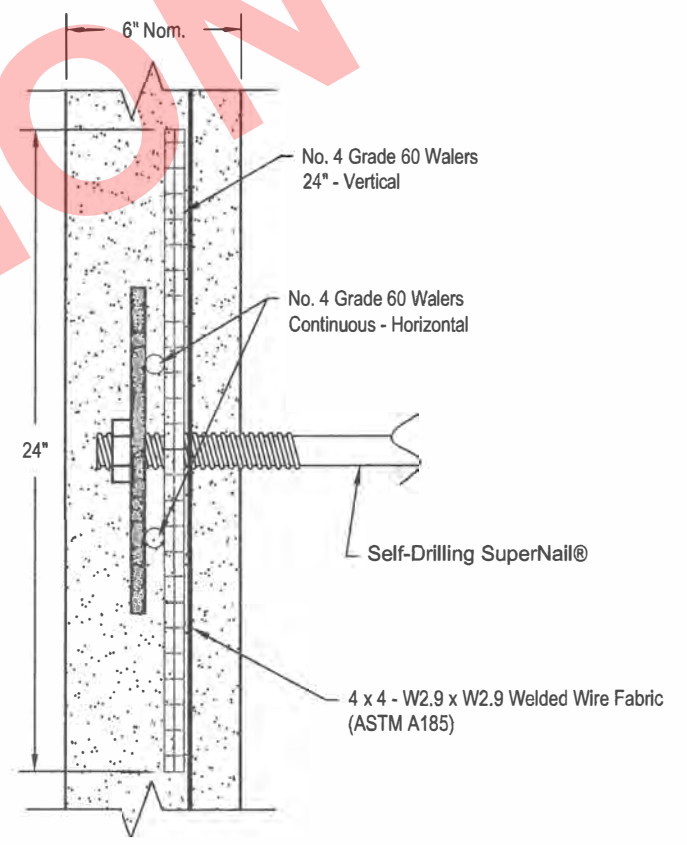
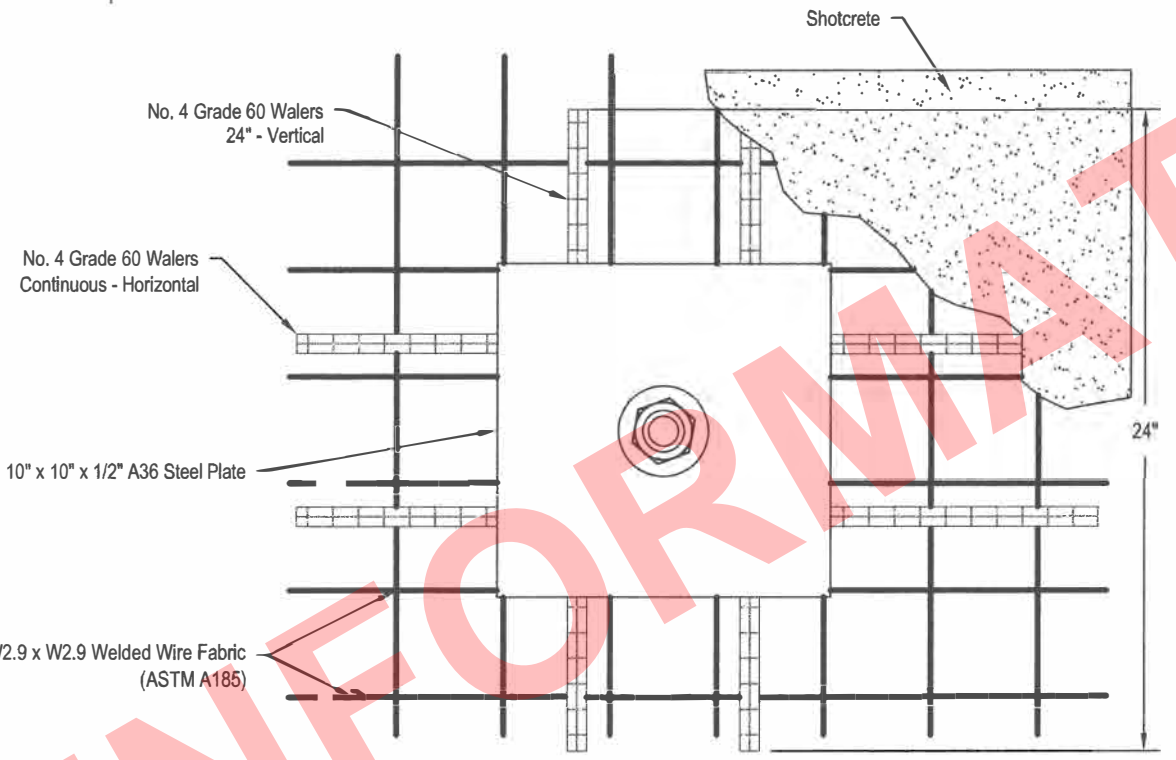
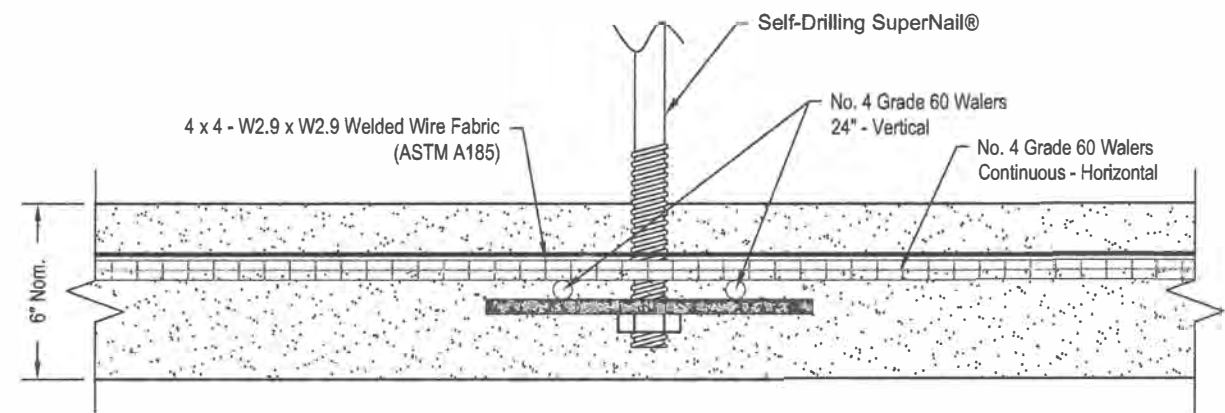
Sheet Revision	
Date	By:

Self-Drilling SuperNail® Detail	
Project:	Location:
Guntertown Road Slide #2	Madison County North Carolina
Date:	Drawn By: Checked By:
September 1, 2013	VD NRB

Project No./Code:	13-181NC
Scale:	As Shown
Sheet No. :	4



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A Shotcrete Detail
5 Not to Scale

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CHARLES RUCKMAN
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9/5/13

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Sheet Revision	
Date:	By:

Shotcrete Detail	
Project: Guntertown Road Slide #2	Location: Madison County North Carolina
Date: September 1, 2013	Drawn By: VD
	Checked By: NRB

Project No./Code: 13-181NC
Scale: As Shown
Sheet No.: 5



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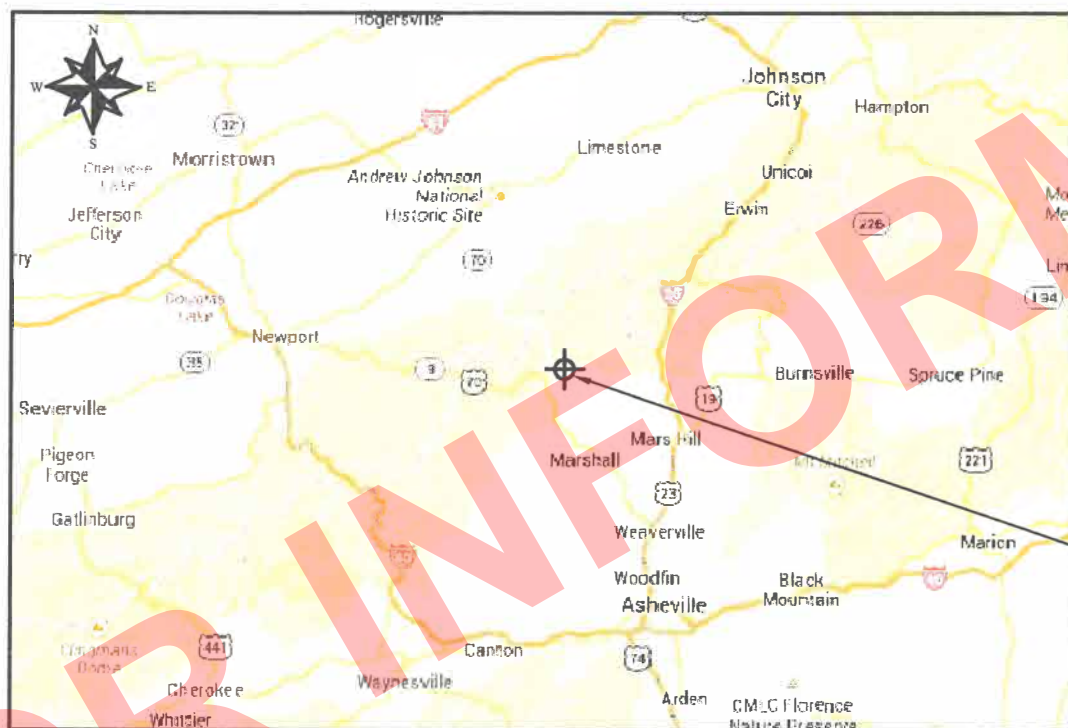
Slope Stabilization Details

Guntertown Road Slide #3

Madison County, North Carolina

NCDOT District 13

Vicinity Map



Approximate Project Location
 GPS: N35.925039, W82.726498
 Slope Stabilization Area (Approx. 60 LF)

Sheet Index

1. Cover Sheet
2. General Notes
3. Typical Cross-Section & Elevation
4. Self-Drilling SuperNail® Detail
5. Shotcrete Detail



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Sheet Revision		
Date:		By:

Cover Sheet		
Project: Guntertown Road Slide #3	Location: Madison County North Carolina	
Date: September 1, 2013	Drawn By: JDP	Checked By: NRB

Project No./Code: 13-182NC
Scale:
Sheet No.: 1



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Facing and Drainage System:

- Drain strips will be provided and installed between the soil nails every 4-feet along the face of the excavation. The drain strips shall be placed with the geotextile side against the ground. Drain strips will be continuous and any splices shall be made with a one-foot minimum overlap such that the flow of water is not impeded. Drain strips shall extend beyond the face of the shotcrete at the downhill face.

Reinforcing Steel Placement:

- Welded wire fabric will be placed along the face of the excavation with a separation of approximately 2 inches between the wire fabric and the soil.
- No. 4 Rebar will be tied to the wire fabric. Vertical bars will extend for approximately 24 inches and the horizontal bars will be continuous (with overlap splices) in the shotcrete.

Bearing Plate Placement:

- 8" x 8" x 3/8" Steel Bearing Plates will be placed over the nails and attached either with a hex nut or by welding to the nail to secure the wire fabric and rebar during shotcrete placement. If the soil nails extend beyond the hex nuts or welded plates, they will be trimmed using a gas powered demolition saw.

Shotcrete Application:

- Shotcrete will be placed from the lower part of the area upwards to prevent accumulation of rebound. The nozzle will be oriented a proper distance from and approximately perpendicular to the working face so that rebound will be minimal and compaction will be maximized. Care will be taken while encasing reinforcing steel and fabric to keep the front face of the reinforcement clean during placement operations, so that shotcrete builds up from behind, to encase the reinforcement and prevent voids or pockets from forming.

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Safety:

- All safety plans for lifting, hearing, dust control, PPE etc. are in place and will be followed accordingly. PPE will include safety vest, steel toed shoes, hard hat, safety glasses, and gloves.

Shotcrete Mix Design:

Shotcrete shall comply with the requirements of ACI 506.2, "Specifications for Materials, Proportioning and Application of Shotcrete", except as otherwise specified. Shotcreting consists of applying one or more layers of concrete conveyed through a hose pneumatically projected at a high velocity against a prepared surface.

The wet-mix process consists of thoroughly mixing all the ingredients, introducing the mixture into the delivery equipment and delivering it, by positive displacement, to the nozzle. Air jets the wet-mix shotcrete from the nozzle at high velocity onto the surface.

Material	Weight per Cubic Yard
3/8" Rock	650 lbs
Sand	1800 lbs
Cement	750 lbs
Water	300 lbs
Fly Ash	150 lbs
Air Entrainment	6% (1.6 cubic feet)

0.40 to 0.50 water/cement ratio

Grout Mix Design:

Water/Cement Ratio= 0.4 to 0.6

(Batch Weight Per Cubic Yard)

Material	Weight	Volume	
Cement	2061 lbs	10.5 Cubic Feet	21.9 bags (94#)
Water	1030.5 lbs	16.5 Cubic Feet	123.5 gallons
Total		1 Cubic Yard	

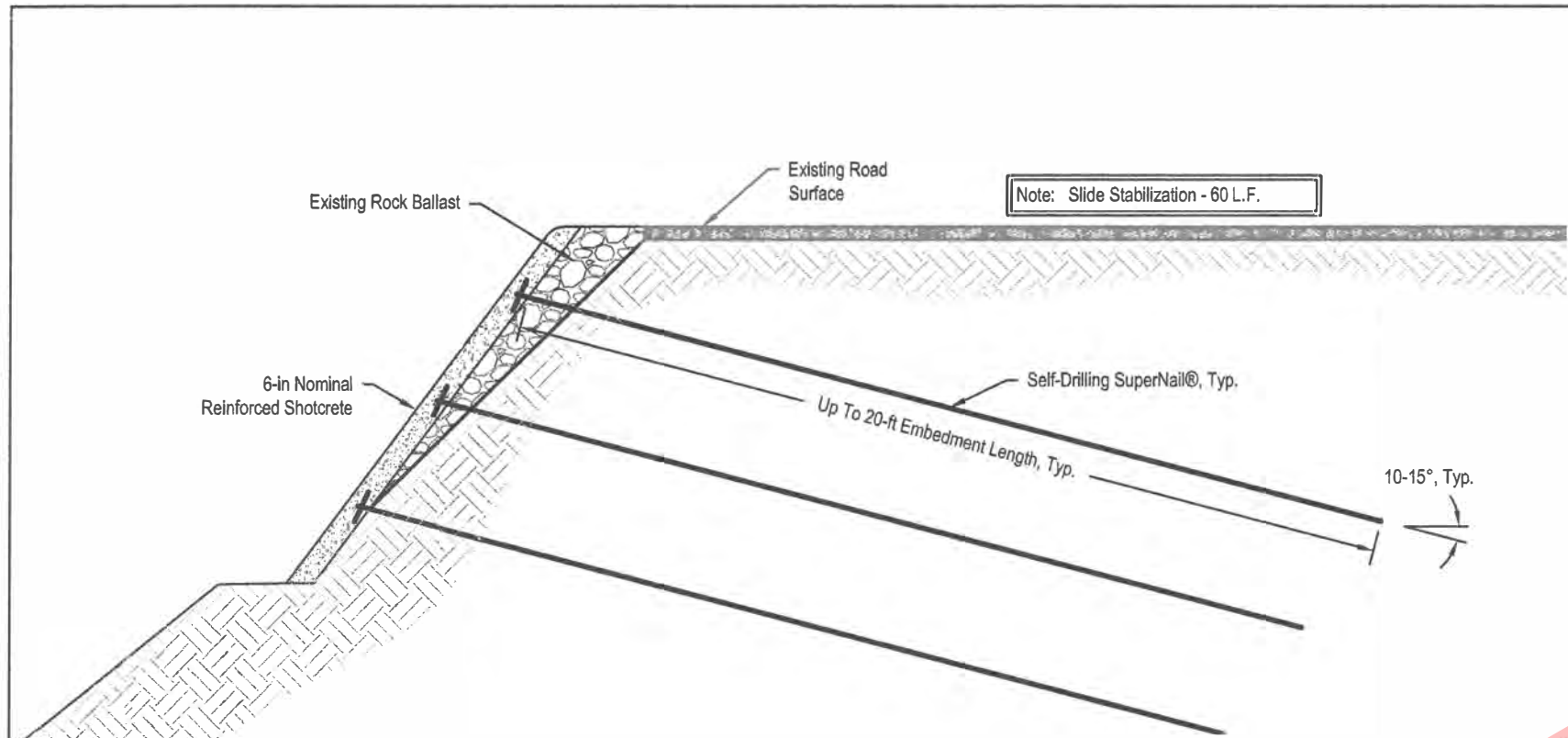
(Per 94# Bag of Cement)

Material	Weight	Volume	
Cement	94 lbs	0.48 Cubic Feet	1 bag (94#)
Water	47 lbs	0.75 Cubic Feet	5.6 gallons
Total Volume		1.23 Cubic Feet	

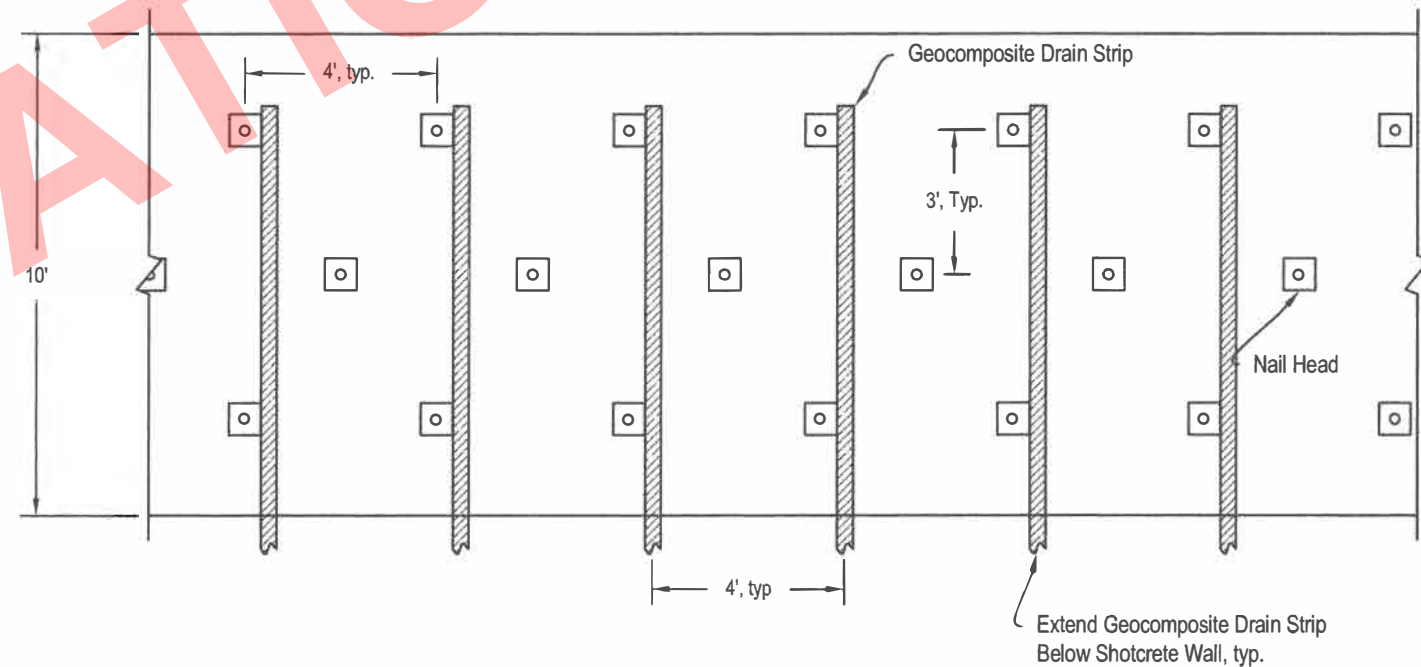


Albert Charles Ruckman
9/5/13

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	Date:		By:		Scale: 		
	Project: Guntertown Road Slide #3		Location: Madison County North Carolina		Sheet No.: 2		
	Date: September 1, 2013		Drawn By: JDP	Checked By: NRB			



A Typical Section - Slide Repair
3 Not to Scale



B Elevation View
3 Not to Scale

FOR INFORMATION ONLY

ALBERT CHARLES BUCKMAN
 ENGINEER
 NORTH CAROLINA
 PROFESSIONAL SEAL
 030355
Albert Charles Buckman
 9/5/13

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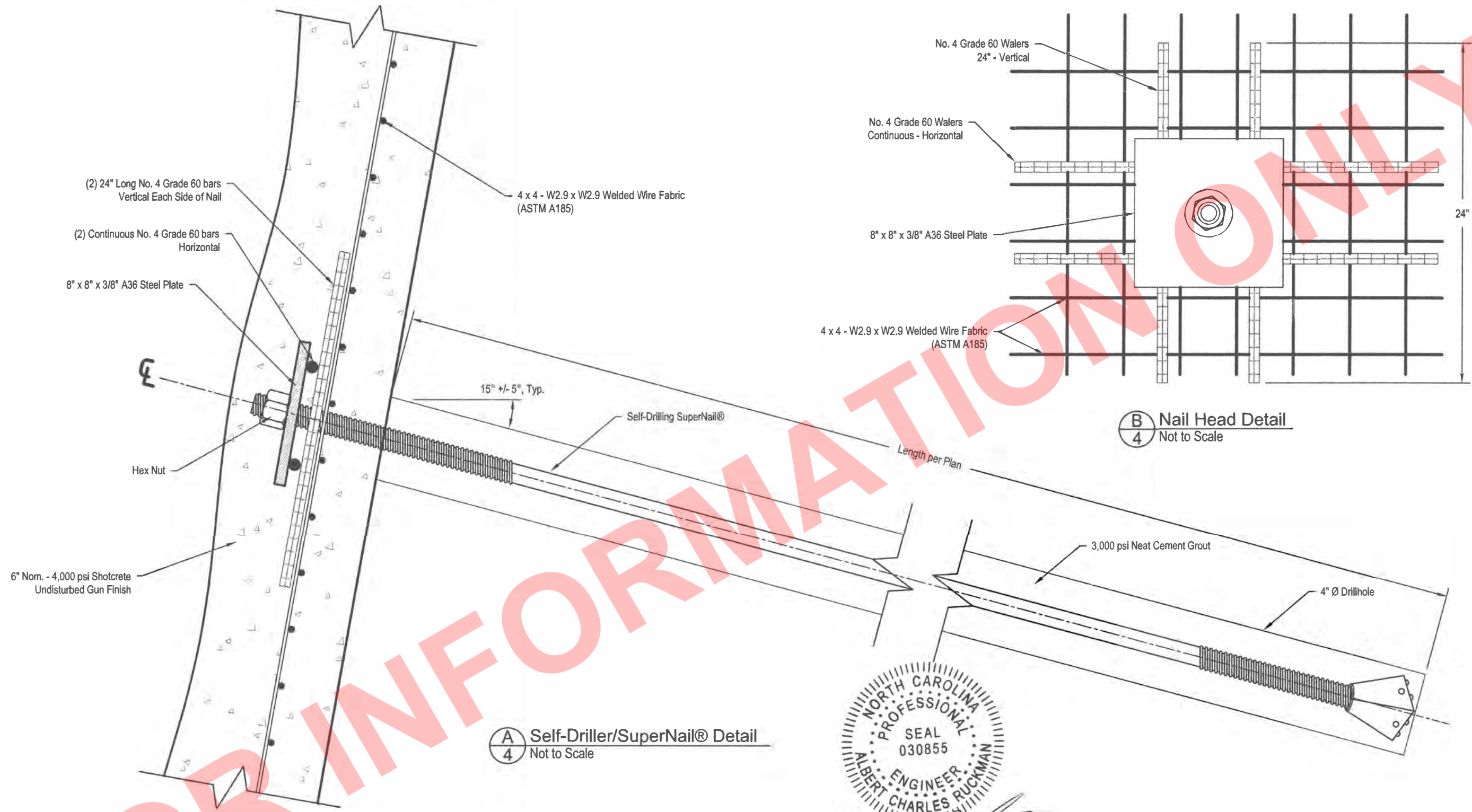
Sheet Revision	
Date:	By:

Typical Cross-Section & Elevation		
Project: Guntertown Road Slide #3	Location: Madison County North Carolina	
Date: September 1, 2013	Drawn By: JDP	Checked By: NRB

Project No./Code: 13-182NC
Scale: As Shown
Sheet No.: 3



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A Self-Driller/SuperNail® Detail
4 Not to Scale

B Nail Head Detail
4 Not to Scale



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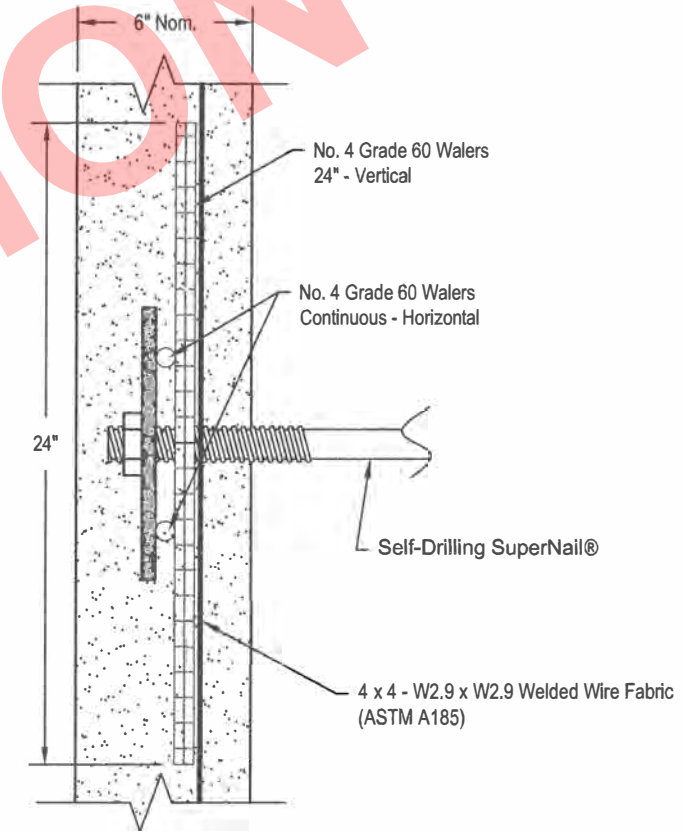
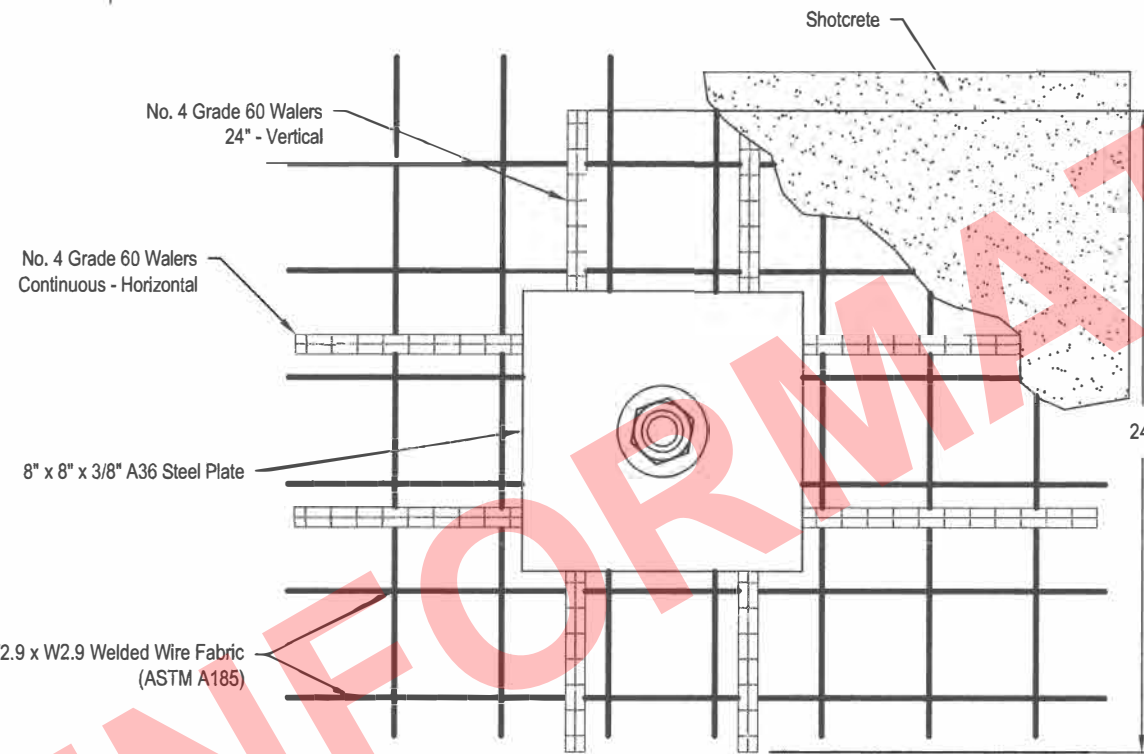
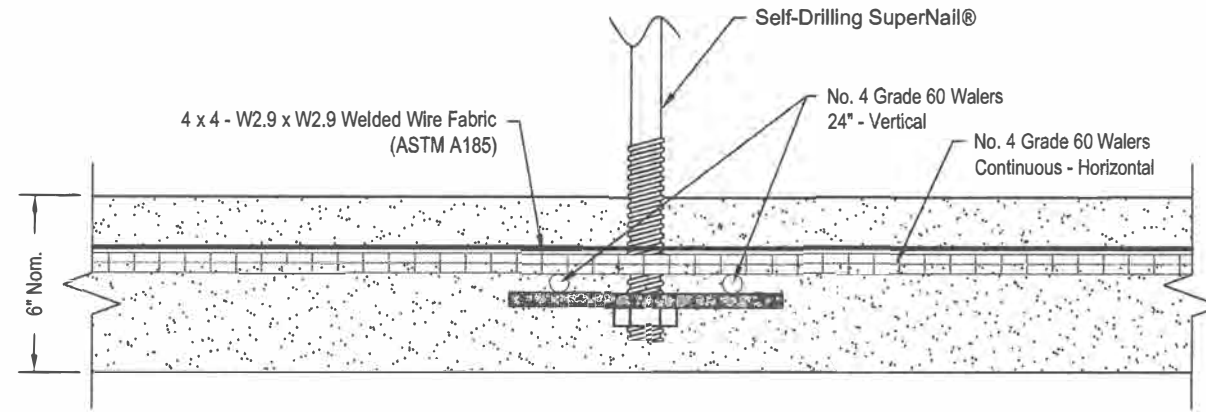
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Date:	By:

Self-Drilling SuperNail® Detail		
Project:	Guntertown Road Slide #3	
Location:	Madison County North Carolina	
Date:	September 1, 2013	
Drawn By:	JDP	Checked By: NRB

Project No./Code:	13-182NC
Scale:	As Shown
Sheet No.:	4



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A Shotcrete Detail
5 Not to Scale

NORTH CAROLINA
 PROFESSIONAL
 SEAL
 030855
 ENGINEER
 ALBERT CHARLES RUCKMAN
Albert Charles Ruckman
 9/5/13

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Date:	By:

Shotcrete Detail		
Project:	Guntertown Road Slide #3	
Location:	Madison County North Carolina	
Date:	September 1, 2013	
Drawn By:	JDP	Checked By: NRB

Project No./Code:	13-182NC
Scale:	As Shown
Sheet No.:	5



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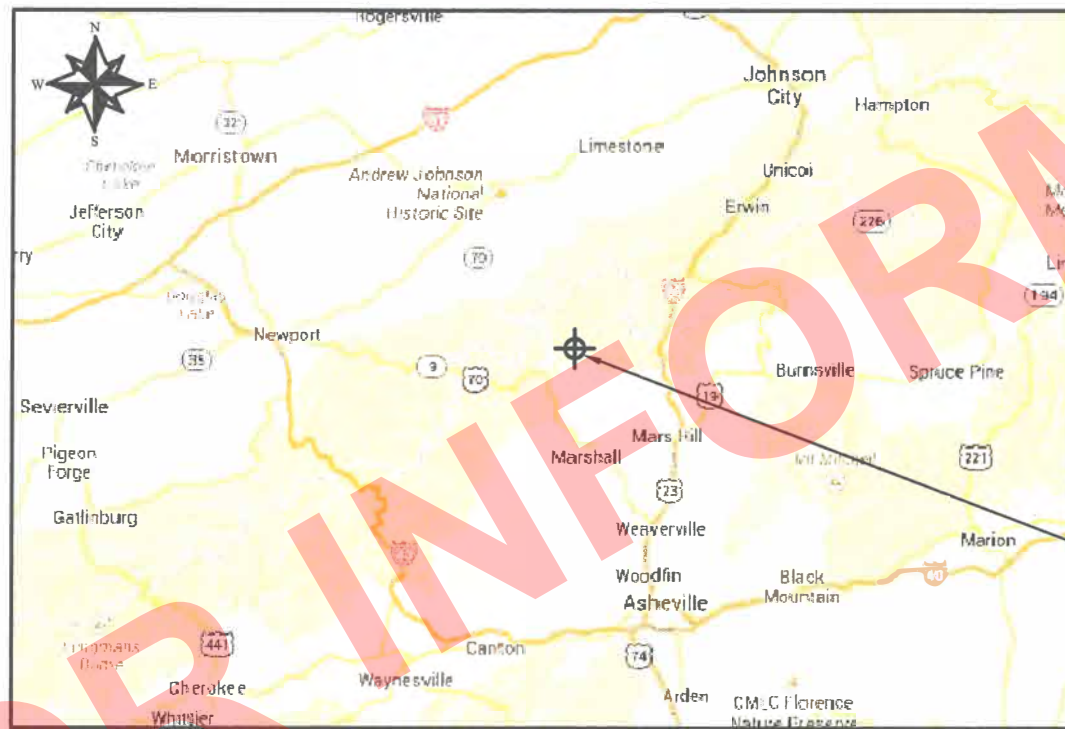
Slope Stabilization Details

Chapel Hill Road

Madison County, North Carolina

NCDOT District 13

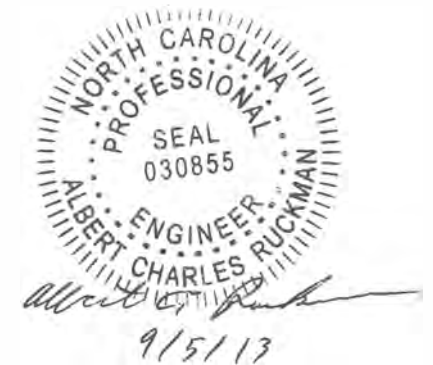
Vicinity Map



Approximate Project Location
 GPS: N35.943398, W82.708549
 Slope Stabilization Area (Approx. 107 LF)

Sheet Index

1. Cover Sheet
2. General Notes
3. Typical Cross-Sections & Elevation Detail (GCS® Wall)
4. Self-Drilling SuperNail® Detail
5. Shotcrete & Micropile Detail
6. Micropile Cap Detail



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Sheet Revision	
Date:	By:

Cover Sheet		
Project:	Chapel Hill Road	
Location:	Madison County North Carolina	
Date:	September 1, 2013	
Drawn By:	JDP	Checked By: NRB

Project No./Code:	13-183NC
Scale:	
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Construction Sequence/Work Schedule:

- NCDOT or its contractor will clear, excavate, haul off excavated material, provide traffic control, and #57 stone for GCS @ Wall Backfill.
- GSI will provide and install the specified soil nails and surface treatment per the construction documents.

Size and Spacing of Nails:

- GSI will mark the locations of the proposed soil nails with survey marking paint.
- The Soil Nails will be injected with grout. The grout will be a Type I,II,or III Portland Cement. The water/cement ratio will be 0.40 to 0.60. No additional aggregate or admixtures will be added to the grout.

Facing and Drainage System:

- Drain strips will be provided and installed between the soil nails every 4-feet along the face of the excavation. The drain strips shall be placed with the geotextile side against the ground. Drain strips will be continuous and any splices shall be made with a one-foot minimum overlap such that the flow of water is not impeded. Drain strips shall extend beyond the face of the shotcrete at the downhill face.

Reinforcing Steel Placement:

- Welded wire fabric will be placed along the face of the excavation with a separation of approximately 2 inches between the wire fabric and the soil.
- No. 4 Rebar will be tied to the wire fabric. Vertical bars will extend for approximately 24 inches and the horizontal bars will be continuous (with overlap splices) in the shotcrete.

Bearing Plate Placement:

- 8" x 8" x 3/8" Steel Bearing Plates will be placed over the nails and attached either with a hex nut or by welding to the nail to secure the wire fabric and rebar during shotcrete placement. If the soil nails extend beyond the hex nuts or welded plates, they will be trimmed using a gas powered demolition saw.

Shotcrete Application:

- Shotcrete will be placed from the lower part of the area upwards to prevent accumulation of rebound. The nozzle will be oriented a proper distance from and approximately perpendicular to the working face so that rebound will be minimal and compaction will be maximized. Care will be taken while encasing reinforcing steel and fabric to keep the front face of the reinforcement clean during placement operations, so that shotcrete builds up from behind, to encase the reinforcement and prevent voids or pockets from forming.

GSI Employee Certifications:

- ACI Shotcrete Nozzlemen Certification
- 10-hour Occupational Safety and Health Training Course in Construction Safety & Health
- American Red Cross Standard First Aid Training
- American Red Cross Bloodborne Pathogens Training: PDT
- Erosion Control Supervisor Training

House Keeping:

- The site will be organized and clear of any trash or debris. All trash will be placed in a proper container and removed at the end of each work day.

Safety:

- All safety plans for lifting, hearing, dust control, PPE etc. are in place and will be followed accordingly. PPE will include safety vest, steel toed shoes, hard hat, safety glasses, and gloves.

Shotcrete Mix Design:

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(Batch Weight Per Cubic Yard)

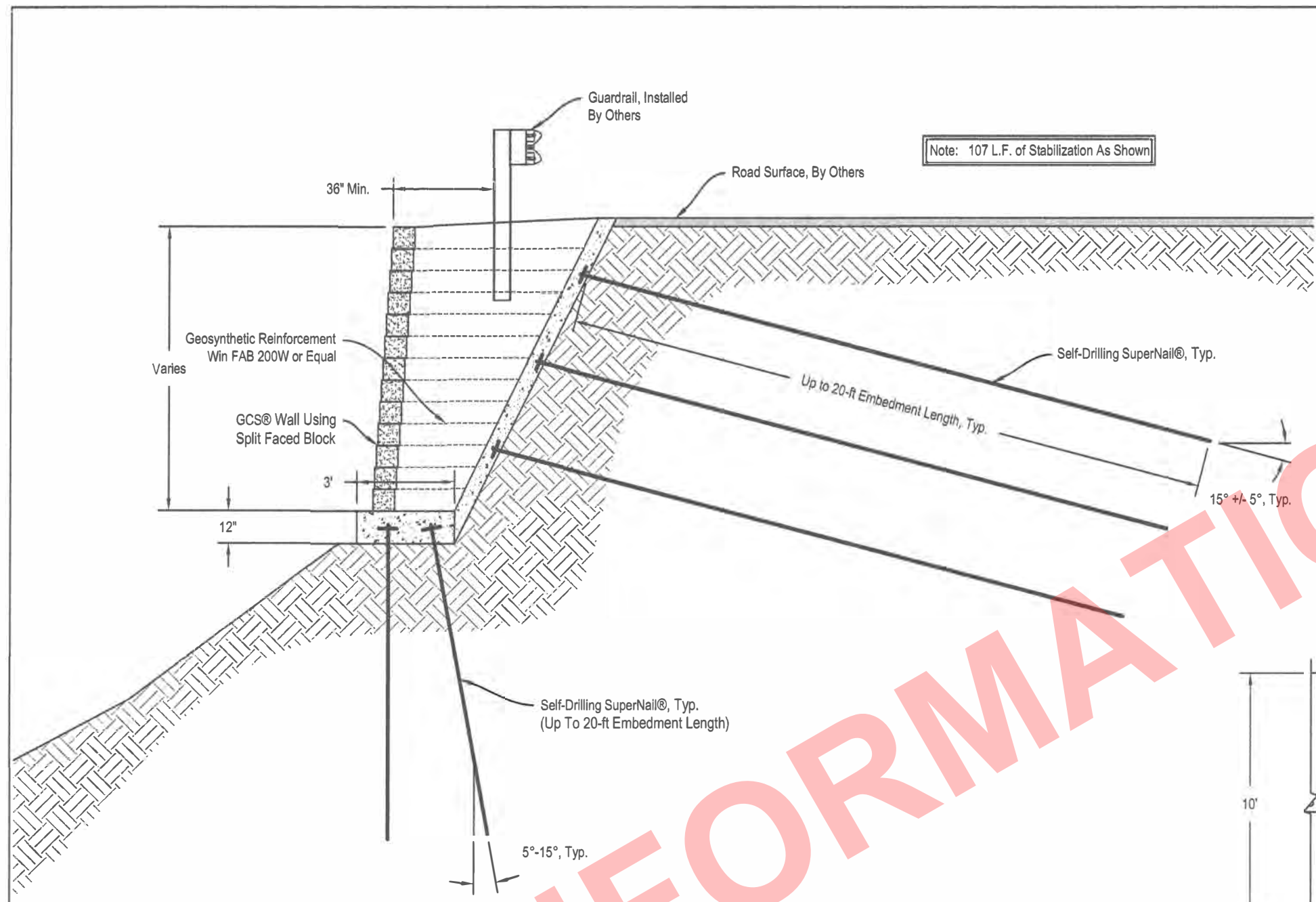
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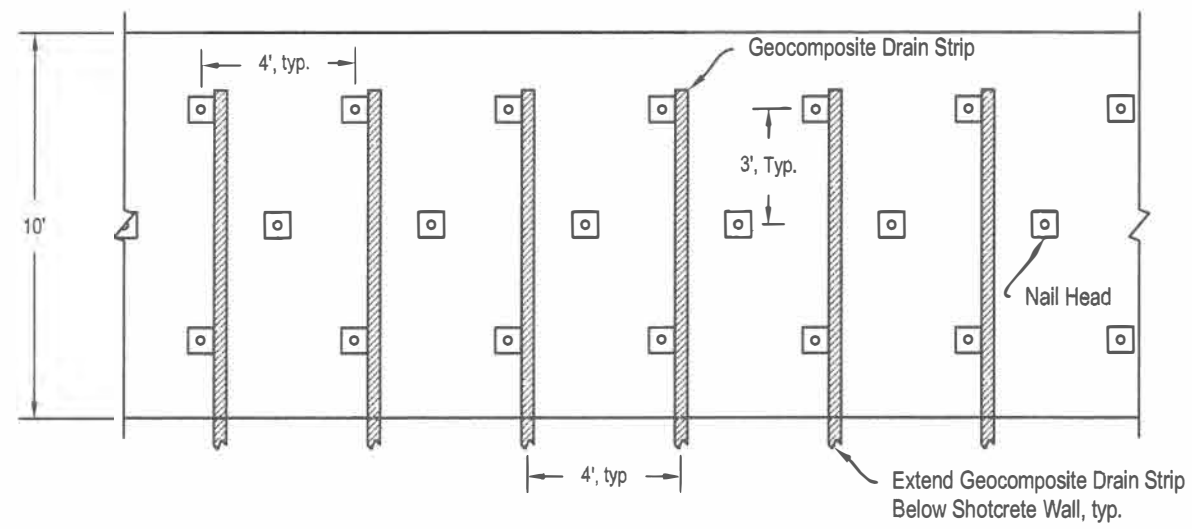
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	Date:	By:			Scale:		
				2			
	Project: Chapel Hill Road		Location: Madison County North Carolina				
Date: September 1, 2013		Drawn By: JDP	Checked By: NRB				



Note: 107 L.F. of Stabilization As Shown



A Typical Section - Main Repair Area
3 Not to Scale

B Elevation Detail
3 Not to Scale

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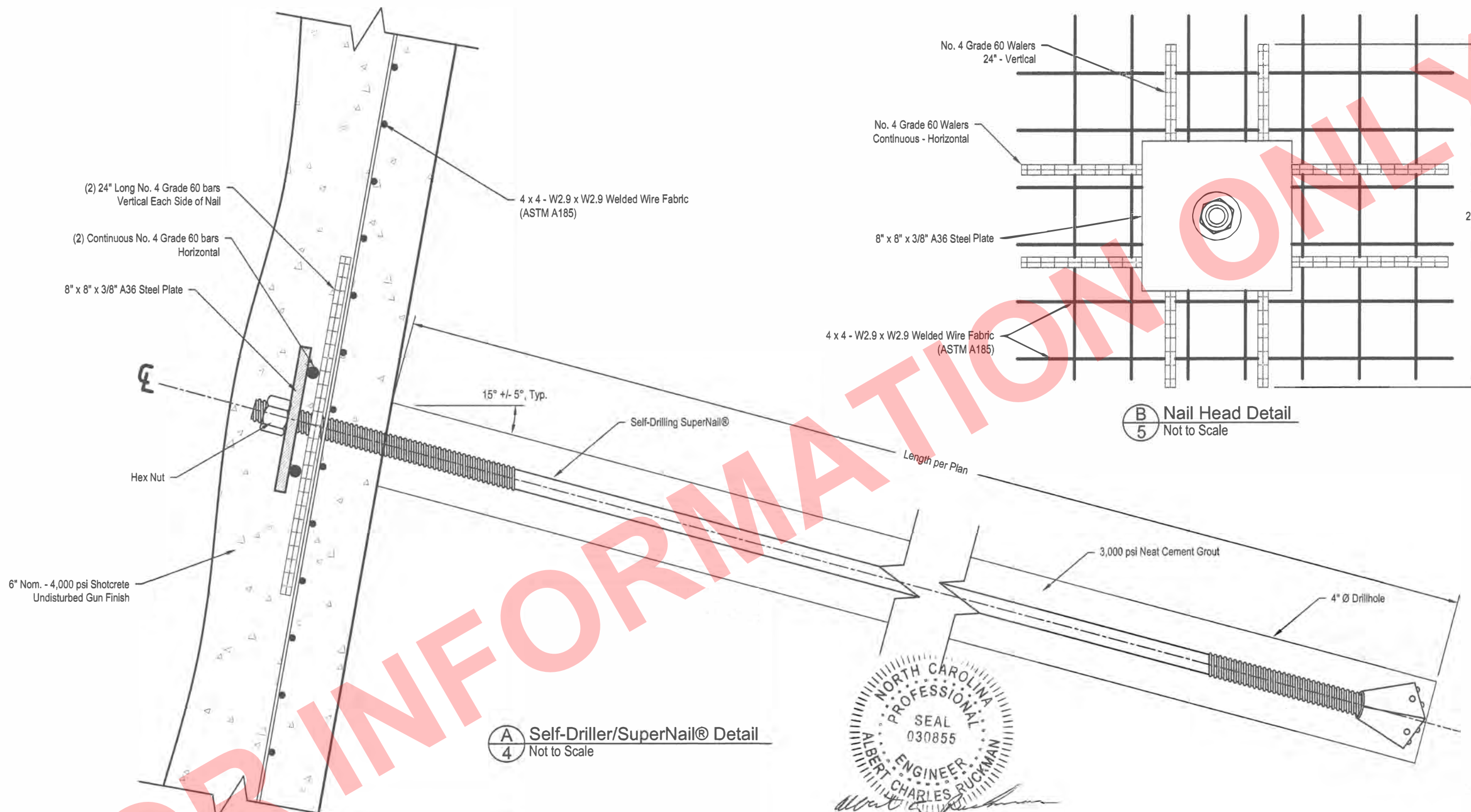
Sheet Revision	
Date:	By:

Typical Cross-Section & Elevation Detail (GCS® Wall)		
Project:	Chapel Hill Road	
Location:	Madison County North Carolina	
Date:	September 1, 2013	
Drawn By:	JDP	Checked By: NRB

Project No./Code:	13-183NC
Scale:	As Shown
Sheet No.:	3



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A Self-Driller/SuperNail® Detail
4 Not to Scale

B Nail Head Detail
5 Not to Scale

NORTH CAROLINA
PROFESSIONAL
SEAL
030855
ENGINEER
ALBERT CHARLES RUCKMAN
Albert Charles Ruckman
9/5/13

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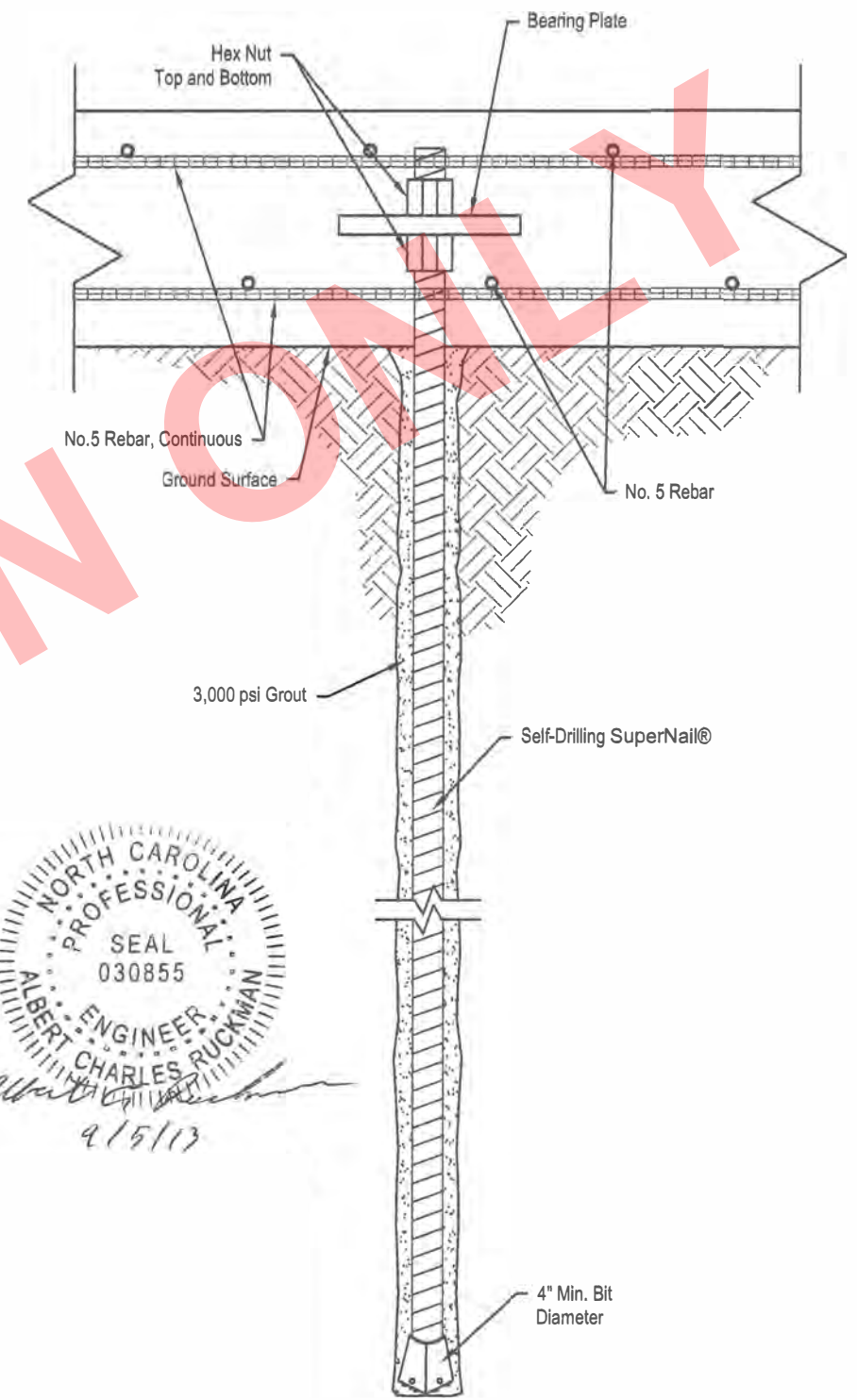
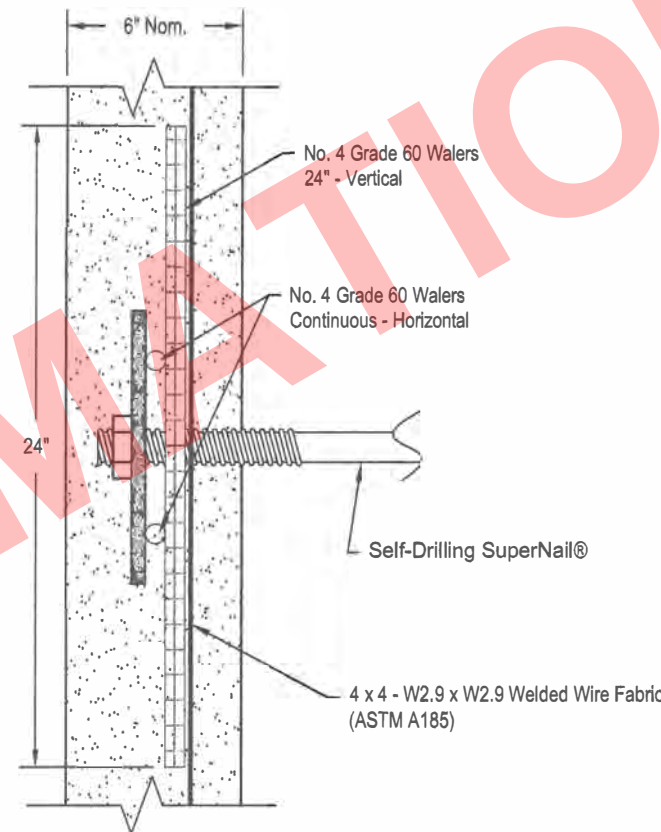
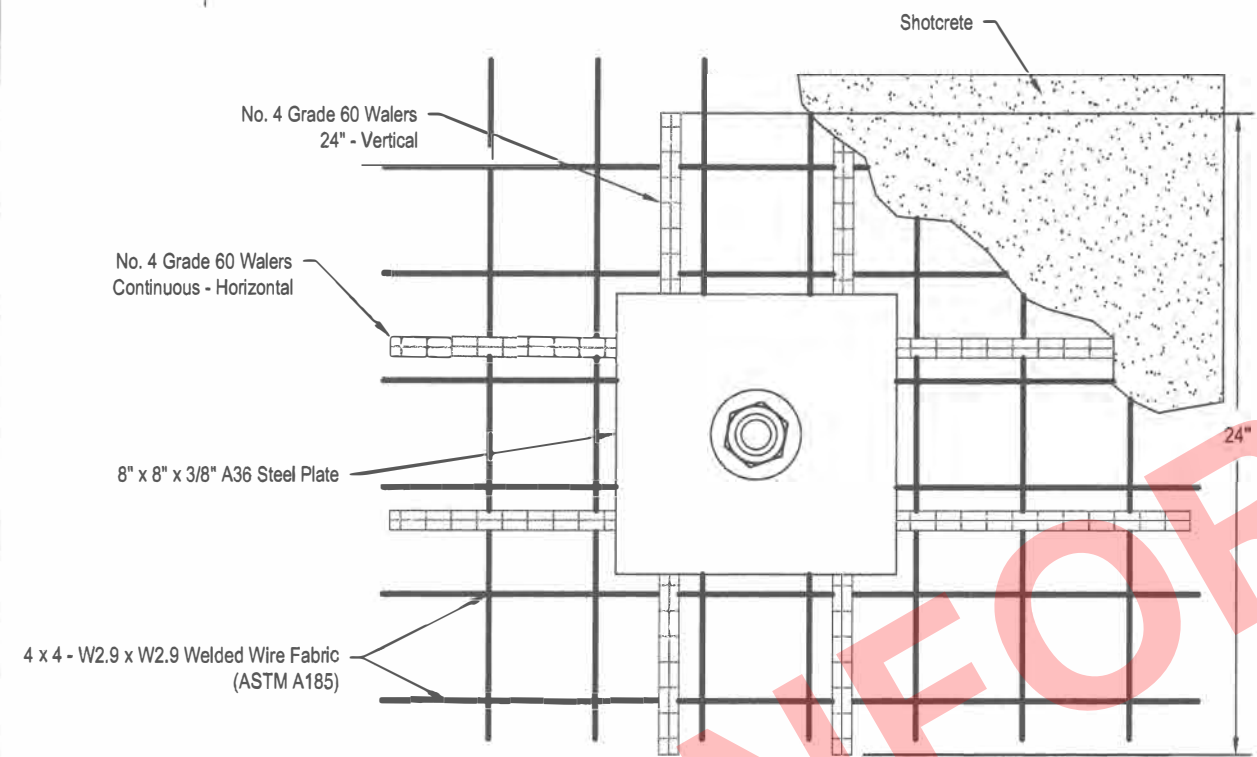
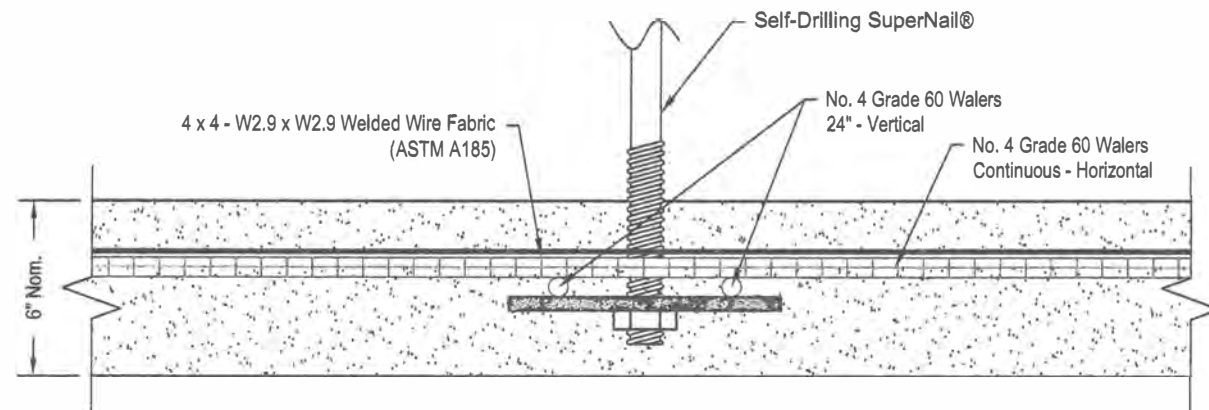
Sheet Revision	
Date:	By:

Self-Drilling SuperNail® Detail		
Project:	Chapel Hill Road	
Location:	Madison County North Carolina	
Date:	September 1, 2013	
Drawn By:	JDP	Checked By: NRB

Project No./Code:	13-183NC
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A Shotcrete Detail
5 Not to Scale

B Micropile Detail
5 Not to Scale

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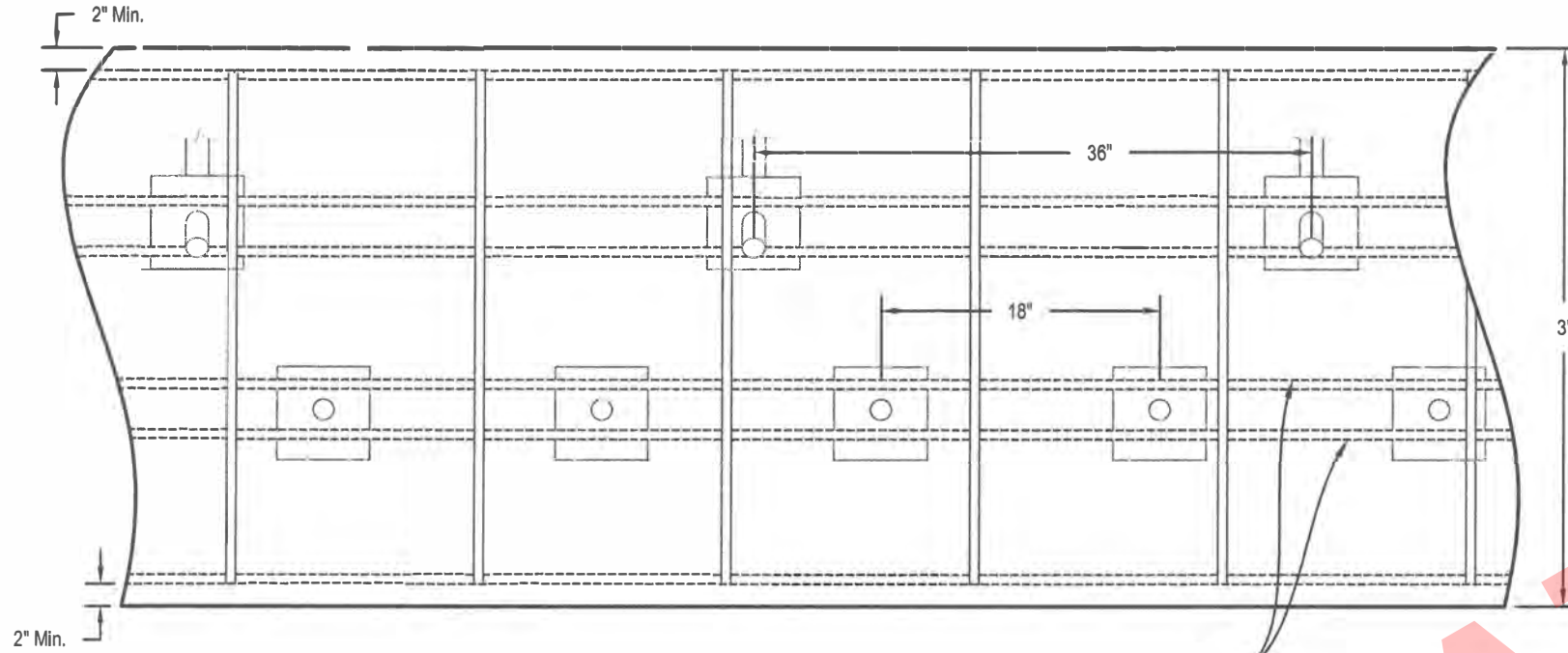
Sheet Revision	
Date:	By:

Shotcrete & Micropile Detail			
Project:		Location:	
Chapel Hill Road		Madison County North Carolina	
Date:	Drawn By:	Checked By:	
September 1, 2013	JDP	NRB	

Project No./Code:	13-183NC
Scale:	As Shown
Sheet No.:	5

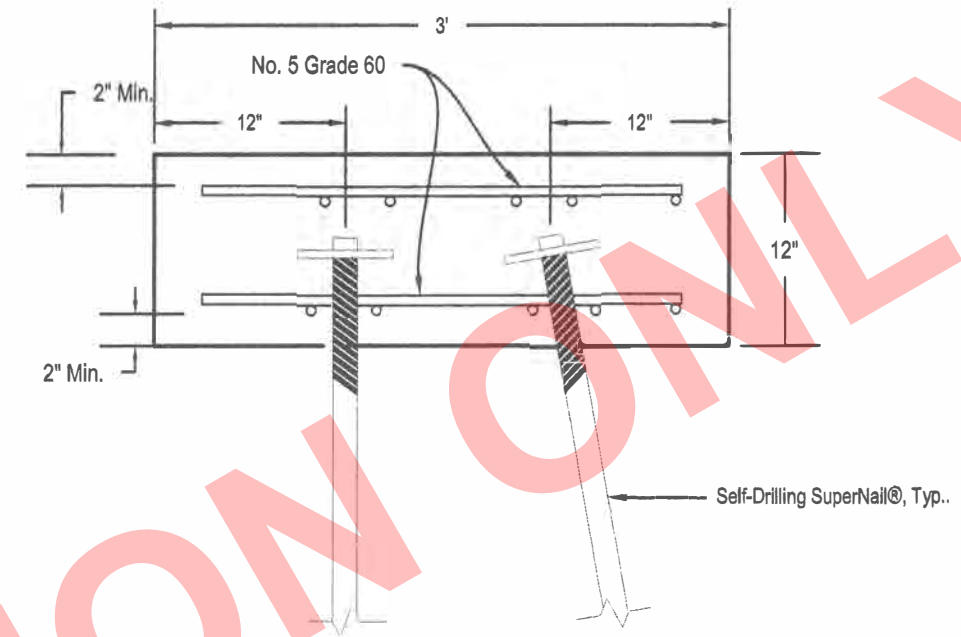


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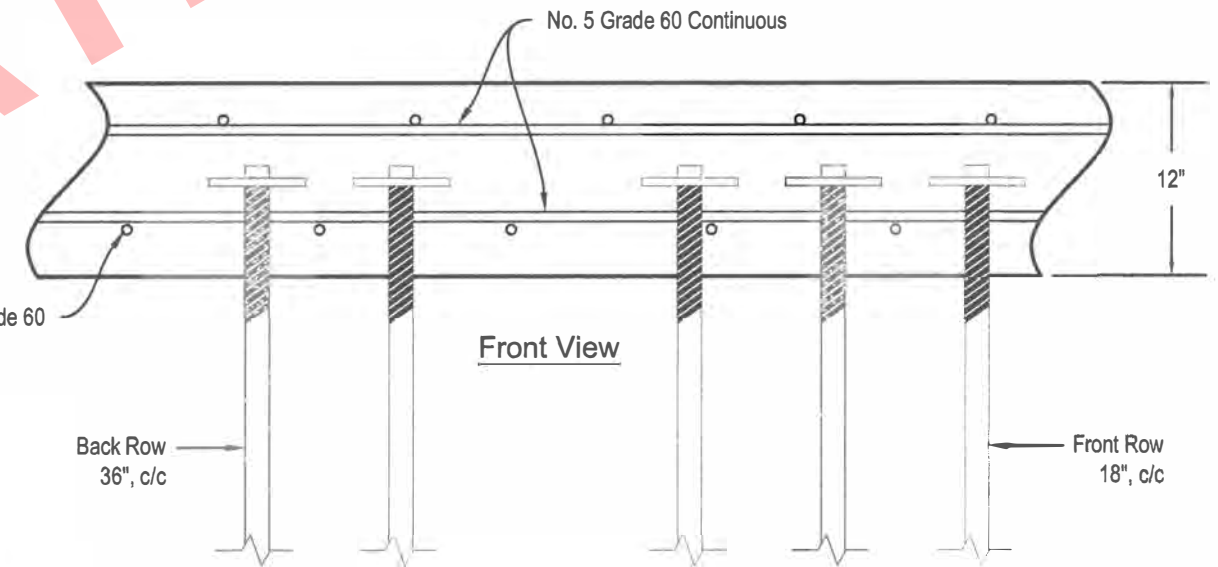


Top View

No. 5 Grade 60
Top and Bottom Continuous, typ.



End View



Front View



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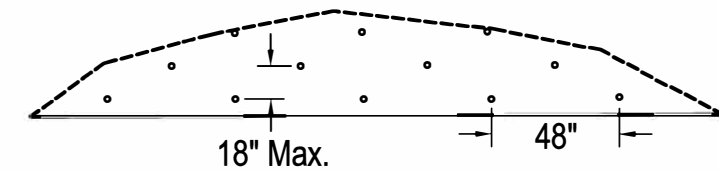
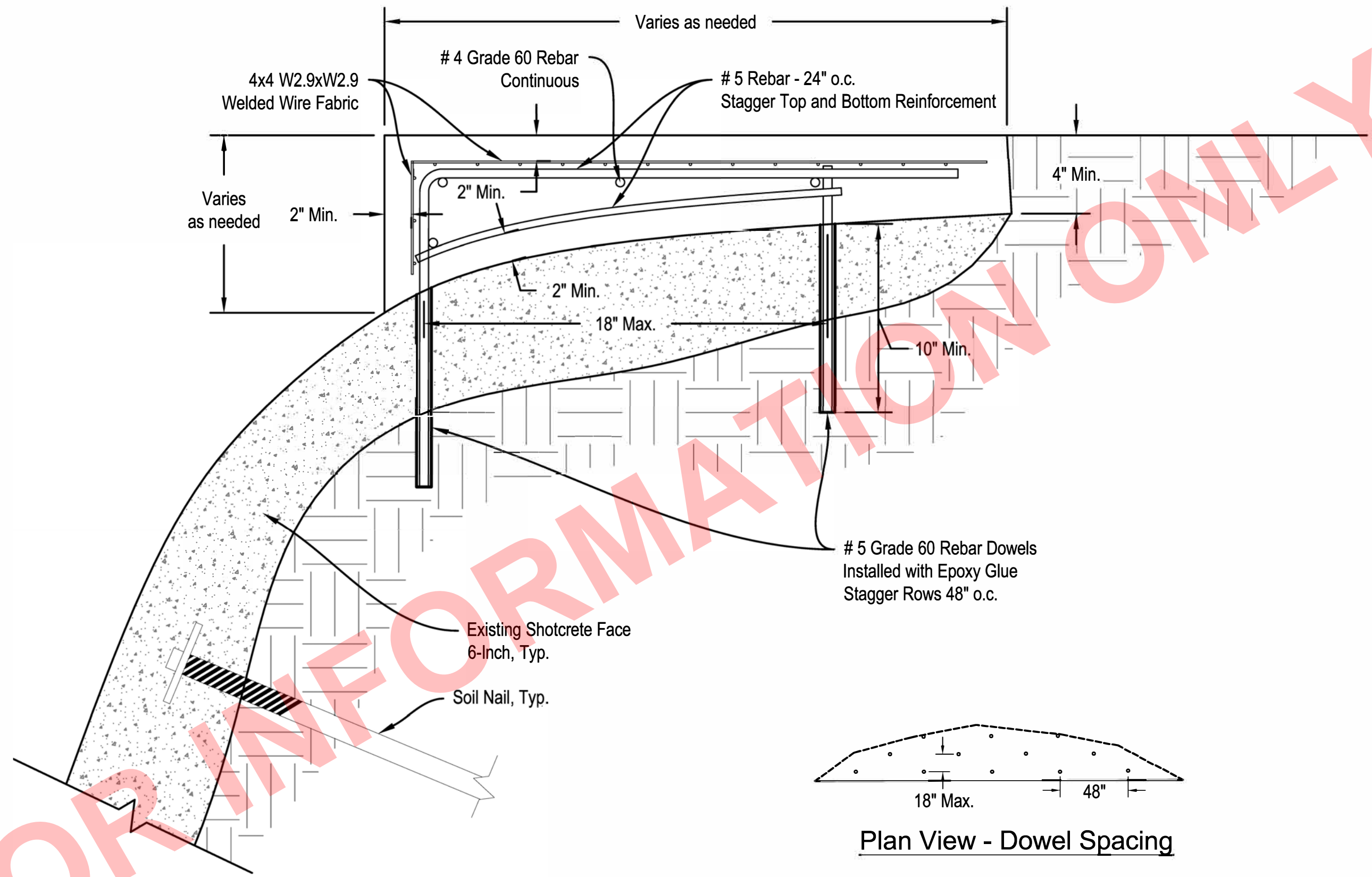
Sheet Revision	
Date:	By:

Micropile Cap Detail			
Project:		Location:	
Chapel Hill Road		Madison County North Carolina	
Date:	Drawn By:	Checked By:	
September 1, 2013	JDP	NRB	

Project No./Code:	13-183NC
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Plan View - Dowel Spacing

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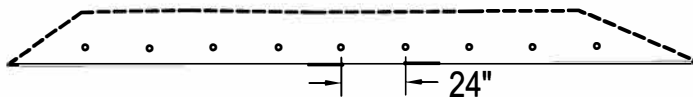
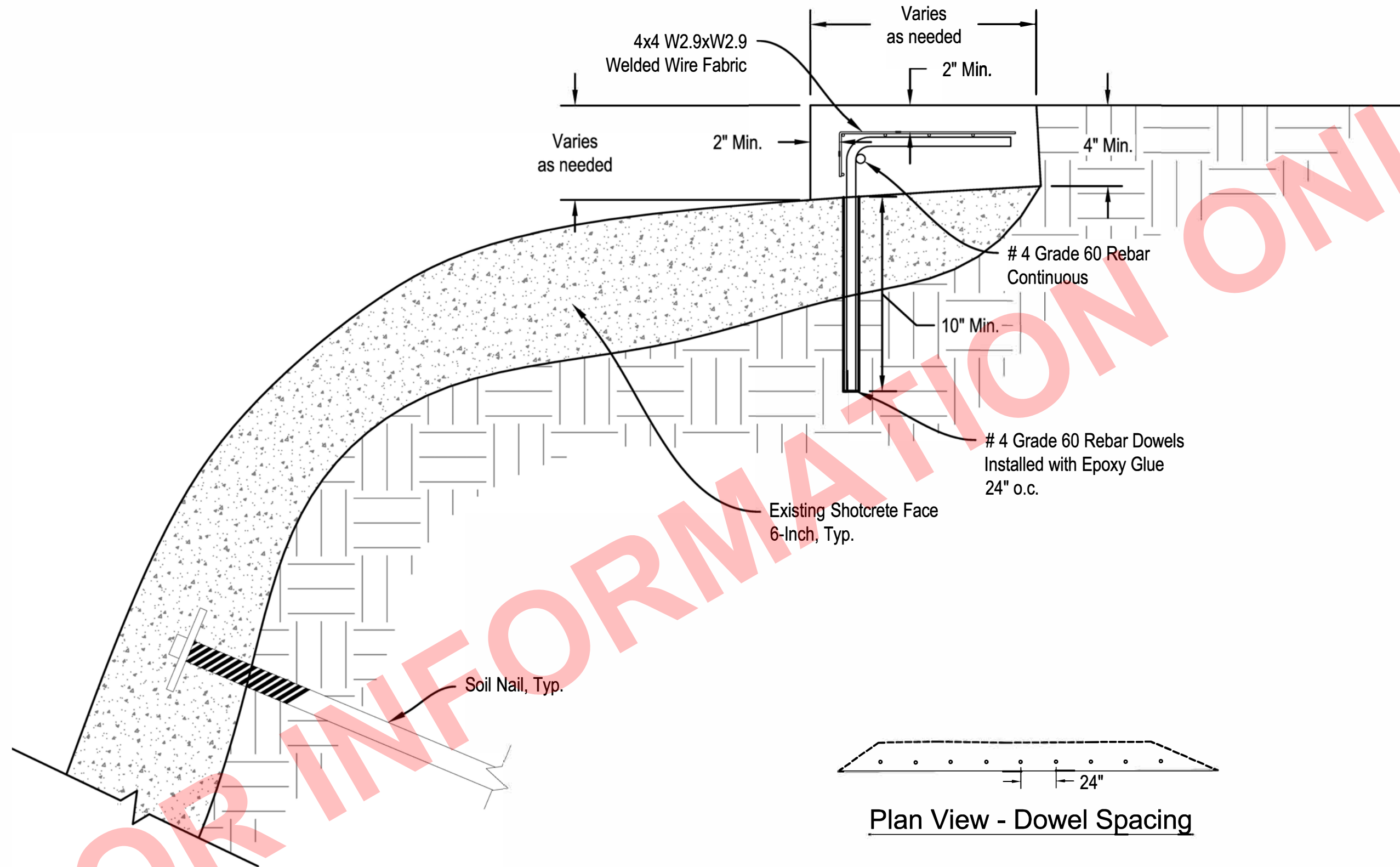
Sheet Revision	
Date:	By:

Shoulder Build-up Detail Slide 2			
Project: Guntertown Road Slides		Location: Madison County North Carolina	
Date: October 8, 2013	Drawn By: VD	Checked By: NRB	

Project No./Code:
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Plan View - Dowel Spacing

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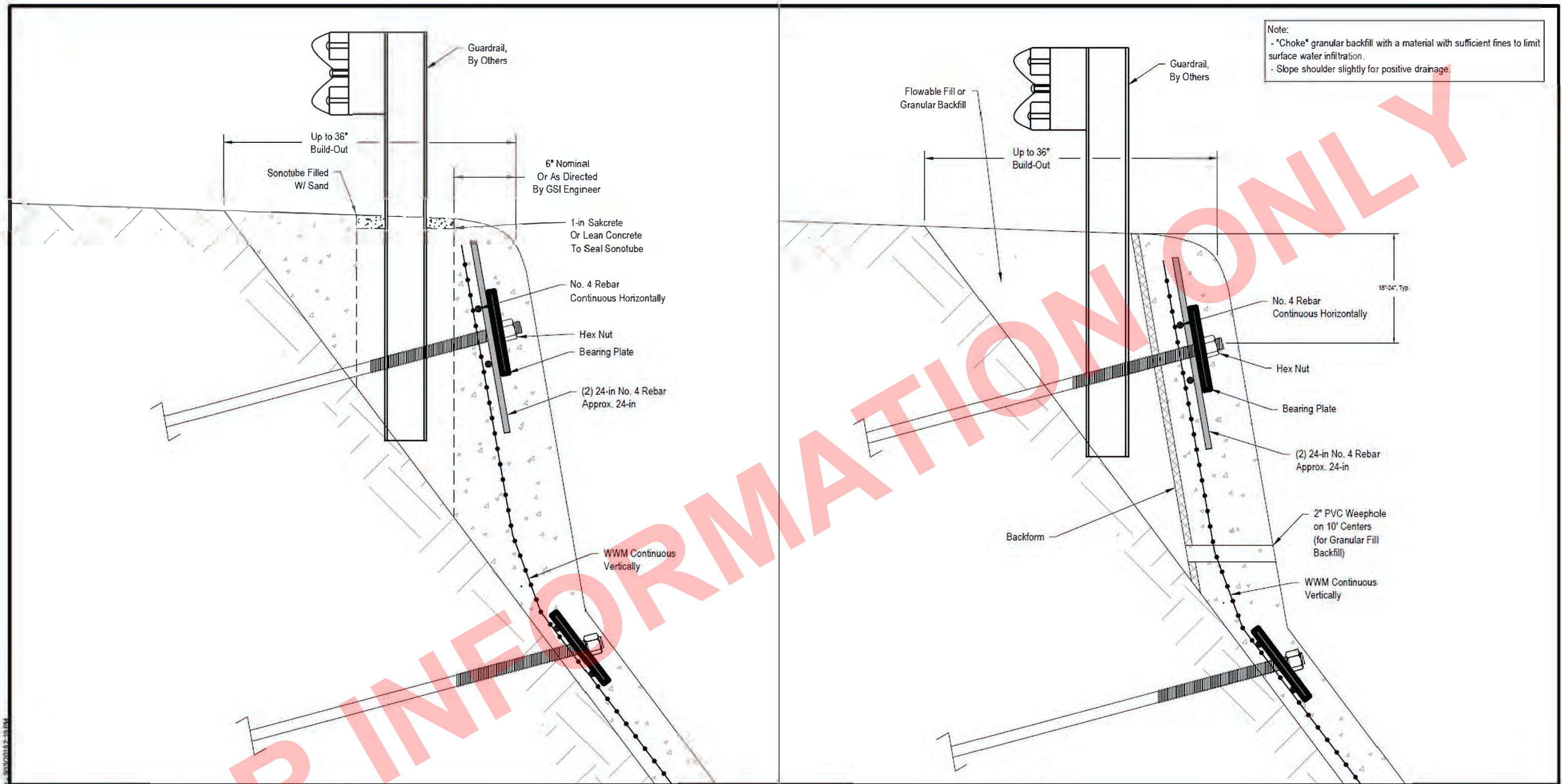
Sheet Revision	
Date:	By:

Shoulder Build-up Detail Slide 3	
Project: Guntertown Road Slides	Location: Madison County North Carolina
Date: October 8, 2013	Drawn By: VD Checked By: NRB

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Note:
 - "Choke" granular backfill with a material with sufficient fines to limit surface water infiltration.
 - Slope shoulder slightly for positive drainage.

SHEET REVISIONS		
DATE	DESCRIPTION	NO

PROJECT NAME: _____

SHEET TITLE:
SHOTCRETE SHOULDER BUILDOUT DETAIL

DRAWN BY: DM CHECKED BY: _____ DATE: _____ PROJECT NUMBER: _____ SHEET: _____

Phone: 855.579.0536 | Fax: 970.245.7737
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