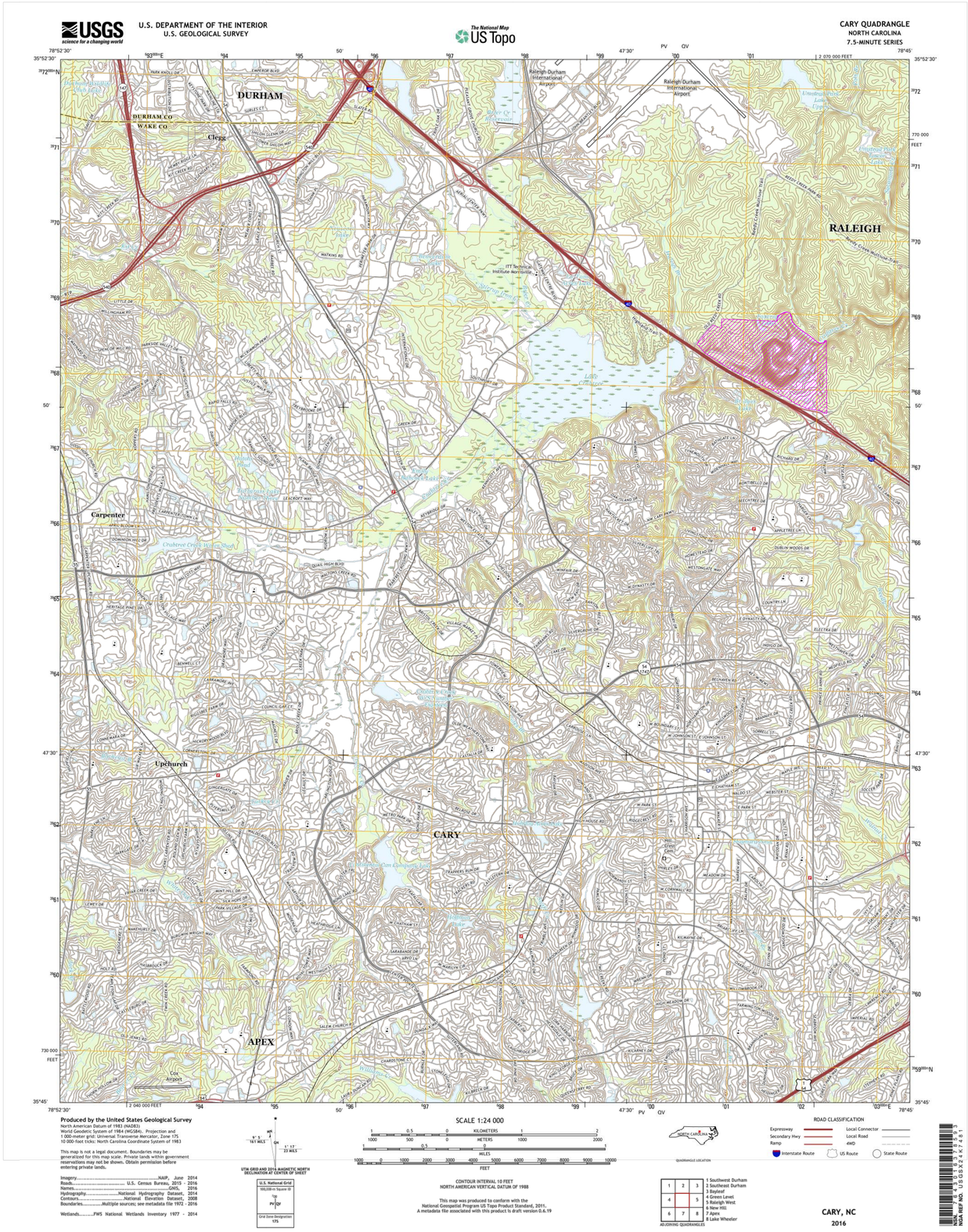



# Triangle Quarry
# Mining Permit No. 92-10
# Modification Application
# Site Plans and E&SC Plan

For the expansion of Triangle Quarry, including the addition of RDU Property mineral lease (approximately 106 acres), and modification of existing Triangle Quarry pit perimeter road

**Contents (Separated by Plan Set)**

**Wake Stone Site Plan Set**

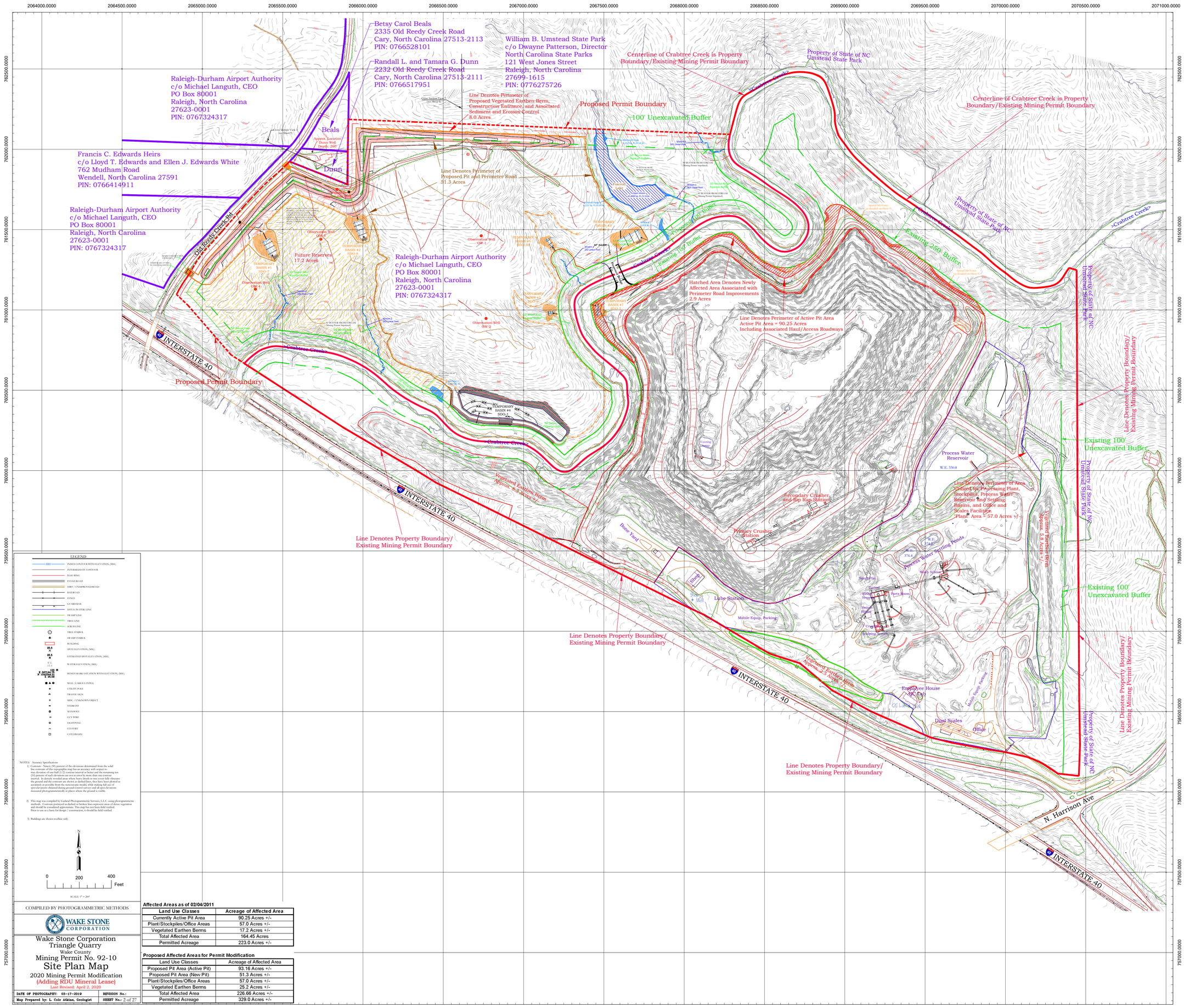
| Sheet # | Contents |
|---|---|
| 1 | Cover/Contents/USGS Vicinity Map |
| 2 | Site Plan Overview |
| 3 | Odd Fellows (Phase I Site Prep) |
| 4 | Odd Fellows (Phase II Site Prep) |
| 5 | Conceptual Mine Plan |
| 6 | Existing Triangle Pit (Conceptual Pit Depletion) |
| 7 | Existing Triangle Perimeter Road Improvements |
| 8 | Conceptual Overburden Storage |
| 9 | Details and Cross Sections |
| 10 | Conceptual Reclamation Plan |

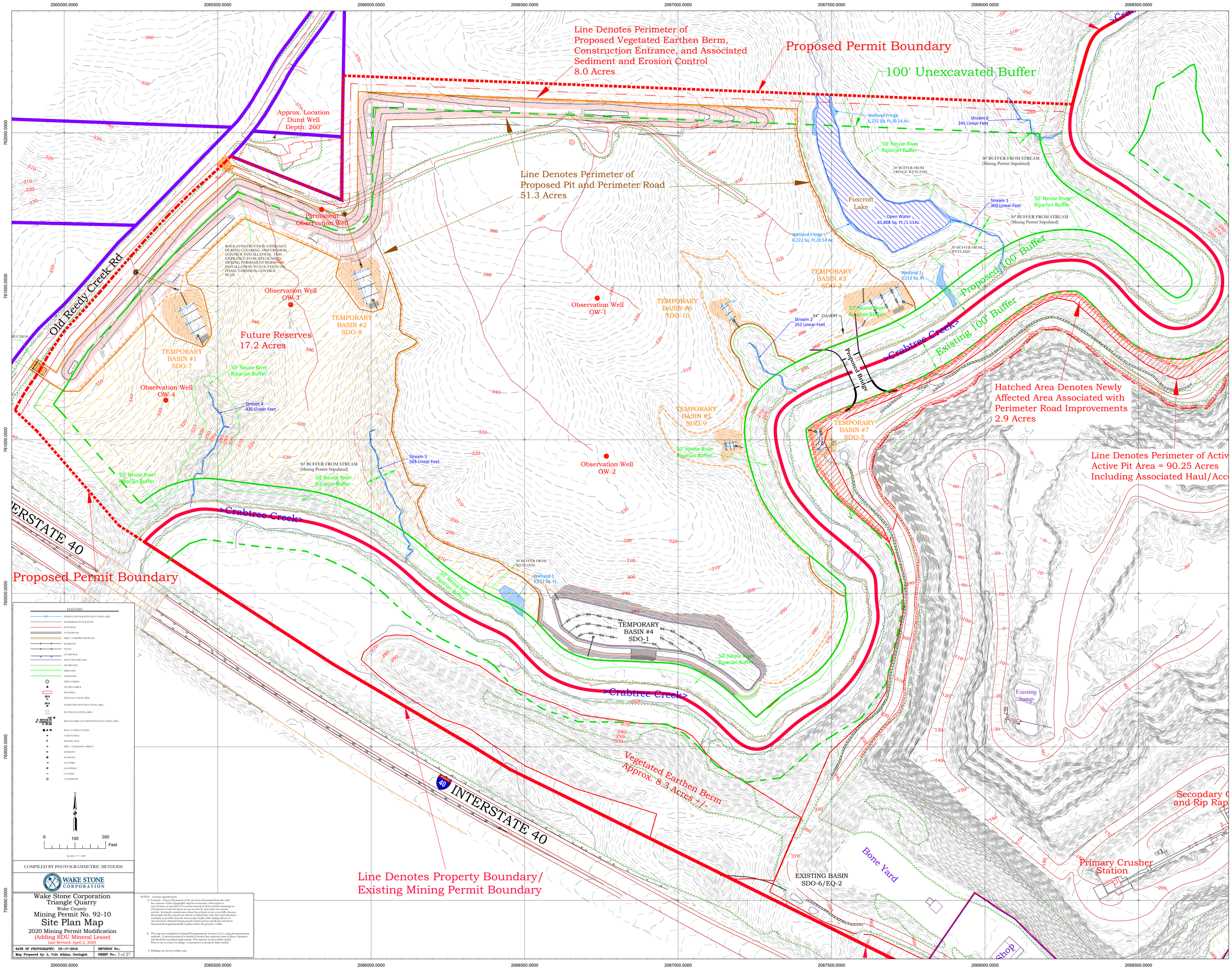
**E&SC Plan Set - Piedmont Land Design, LLP**

| Sheet # | Contents |
|---|---|
| 1 | PLD E&SC SITE 1 - Cover Sheet |
| 2 | PLD E&SC SITE 2 - Overall Erosion Control Plan Sheet 1 of 2 |
| 3 | PLD E&SC SITE 3 - Overall Erosion Control Plan Sheet 2 of 2 |
| 4 | PLD E&SC SITE 4 - New Quarry Expansion - Phase 1 Erosion Control Plan Sheet 1 of 2 |
| 5 | PLD E&SC SITE 5 - New Quarry Expansion - Phase 1 Erosion Control Plan Sheet 2 of 2 |
| 6 | PLD E&SC SITE 6 - New Quarry Expansion - Phase 2 Erosion Control Plan Sheet 1 of 2 |
| 7 | PLD E&SC SITE 7 - New Quarry Expansion - Phase 2 Erosion Control Plan Sheet 2 of 2 |
| 8 | PLD E&SC SITE 8 - Existing Quarry Road Improvements Sheet 1 of 2 |
| 9 | PLD E&SC SITE 9 - Existing Quarry Road Improvements Sheet 2 of 2 |
| 10 | PLD E&SC SITE 10 - Details |
| 11 | PLD E&SC SITE 11 - Details |

**Block Retaining Wall Plan Set - S&ME**

| Sheet # | Contents |
|---|---|
| 1 | S&ME MSE Retaining Wall Sheet 1 - Plan View |
| 2 | S&ME MSE Retaining Wall Sheet 2 - Wall No.1 Elevation View |
| 3 | S&ME MSE Retaining Wall Sheet 3 - Wall No.1 Elevation View (cont.) |
| 4 | S&ME MSE Retaining Wall Sheet 4 - Wall No.2 Elevation View |
| 5 | S&ME MSE Retaining Wall Sheet 5 - Wall No.3 and No. 4 Elevation View |
| 6 | S&ME MSE Retaining Wall Sheet 6 - MSE Details and Notes |


Betsy Carol Beals
2335 Old Reedy Creek Road
Cary, North Carolina 27513-2113
PIN: 0766528101
Randall L. and Tamara G. Dunn
2232 Old Reedy Creek Road
Cary, North Carolina 27513-2111
PIN: 0766517951
William B. Umstead State Park
c/o Dwayne Patterson, Director
North Carolina State Parks
121 West Jones Street
Raleigh, North Carolina
27699-1615
PIN: 0776275726
Raleigh-Durham Airport Authority
c/o Michael Languth, CEO
PO Box 80001
Raleigh, North Carolina
27623-0001
PIN: 0767324317
Francis C. Edwards Heirs
c/o Lloyd T. Edwards and Ellen J. Edwards White
762 Mudham Road
Wendell, North Carolina 27591
PIN: 0766414911
Centerline of Crabtree Creek is Property Boundary/Existing Mining Permit Boundary
Property of State of NC
Umstead State Park
Line Denotes Perimeter of Proposed Vegetated Earthen Berm, Construction Entrance, and Associated Sediment and Erosion Control
8.0 Acres
Proposed Permit Boundary
100' Unexcavated Buffer
Beals
Dunn
Line Denotes Perimeter of Proposed Pit and Perimeter Road
51.3 Acres
Old Reedy Creek Rd
Future Reserves
17.2 Acres
Raleigh-Durham Airport Authority
c/o Michael Languth, CEO
PO Box 80001
Raleigh, North Carolina
27623-0001
PIN: 0767324317
Crabtree Creek
Existing 100' Buffer
Existing 250' Buffer
Hatched Area Denotes Newly Affected Area Associated with Perimeter Road Improvements
2.9 Acres
Line Denotes Perimeter of Active Pit Area
Active Pit Area = 90.25 Acres
Including Associated Haul/Access Roadways
INTERSTATE 40
Proposed Permit Boundary
Line Denotes Property Boundary/
Existing Mining Permit Boundary
Existing 100' Unexcavated Buffer
Process Water Reservoir
Line Denotes Perimeter of Area Contain the Processing Plant, Stockpiles, Process Water Reservoir and Settling Basins, and Office and Scales Facilities
Plant Area = 57.0 Acres +/-
Secondary Crusher, and Top Run Stations
Primary Crusher Station
Bone Yard
Process Water Settling Ponds
Shop
Lube Station
Mobile Equip. Parking
Employee House
Dual Scales
Office
N. Harrison Ave
LEGEND
INDEX CONTOUR WITH ELEVATION, (MSL)
INTERMEDIATE CONTOUR
BASE RING
PAVED ROAD
DIRT / UNIMPROVED ROAD
RAILROAD
FENCE
GUARD RAIL
DITCH (WITH FLOW) LINE
DRAIN LINE
TREE LINE
SCRUB LINE
TREE SYMBOL
DRAIN SYMBOL
BUILDING
SPOT ELEVATION, (MSL)
ESTIMATED SPOT ELEVATION, (MSL)
WATER ELEVATION, (MSL)
BENCH MARK LOCATION WITH ELEVATION, (MSL)
WELL (VARIOUS TYPES)
UTILITY POLE
TRAFFIC SIGN
MISC. / UNKNOWN OBJECT
HYDRANT
MANHOLE
GUY WIRE
LIGHTPOLE
CULVERT
CATCHBASIN
NOTES: Accuracy Specifications
1) Contours - Ninety (90) percent of the elevations determined from the solid line contours of this topographic map has an accuracy with respect to true elevation of one-half (1/2) contour interval or better and the remaining ten (10) percent of such elevations are not in error by more than one contour interval. In densely wooded areas where heavy brush or tree cover fully obscures the ground, the contours are generally omitted. Every effort is made to record as accurately as possible from the stereoscopic model, while making full use of spot elevations obtained during ground control surveys and all spot elevations measured photogrammetrically in places where the ground is visible.
2) This map was compiled by Garland Photogrammetric Services, L.L.C. using photogrammetric methods. Contours portrayed as dashed or broken lines represent areas of dense vegetation and should be considered approximate. This map has not been field verified. Prior to use as a basis for design / construction, it should be field verified.
3) Buildings are shown roofline only.
N
0
200
400
Feet
SCALE: 1" = 200'
COMPILED BY PHOTOGRAMMETRIC METHODS
WAKE STONE CORPORATION
Wake Stone Corporation
Triangle Quarry
Wake County
Mining Permit No. 92-10
Site Plan Map
2020 Mining Permit Modification
(Adding RDU Mineral Lease)
Last Revised: April 2, 2020
DATE OF PHOTOGRAPHY: 03-17-2010
REVISION No.:
Map Prepared by: L. Cole Atkins, Geologist
SHEET No. 2 of 27
Affected Areas as of 02/04/2011
Land Use Classes | Acreage of Affected Area
Currently Active Pit Area | 90.25 Acres +/-
Plant/Stockpiles/Office Areas | 57.0 Acres +/-
Vegetated Earthen Berms | 17.2 Acres +/-
Total Affected Area | 164.45 Acres
Permitted Acreage | 223.0 Acres +/-
Proposed Affected Areas for Permit Modification
Land Use Classes | Acreage of Affected Area
Proposed Pit Area (Active Pit) | 93.16 Acres +/-
Proposed Pit Area (New Pit) | 51.3 Acres +/-
Plant/Stockpiles/Office Areas | 57.0 Acres +/-
Vegetated Earthen Berms | 25.2 Acres +/-
Total Affected Area | 226.66 Acres +/-
Permitted Acreage | 329.0 Acres +/-


Line Denotes Perimeter of Proposed Vegetated Earthen Berm, Construction Entrance, and Associated Sediment and Erosion Control 8.0 Acres
Proposed Permit Boundary
100' Unexcavated Buffer
Approx. Location Dunn Well Depth: 260'
Line Denotes Perimeter of Proposed Pit and Perimeter Road 51.3 Acres
Permanent Observation Well
Old Reedy Creek Rd
Observation Well OW-3
Future Reserves 17.2 Acres
TEMPORARY BASIN #2 SDO-8
TEMPORARY BASIN #1 SDO-7
Observation Well OW-4
Observation Well OW-1
TEMPORARY BASIN #6 SDO-10
TEMPORARY BASIN #3 SDO-2
Observation Well OW-2
TEMPORARY BASIN #5 SDO-9
TEMPORARY BASIN #7 SDO-5
TEMPORARY BASIN #4 SDO-1
EXISTING BASIN SDO-6/EQ-2
Foxcroft Lake
Open Water 65,808 Sq. Ft./1.51Ac.
Wetland Fringe 6,222 Sq. Ft./0.14 Ac.
Stream 6 245 Linear Feet
Stream 1 303 Linear Feet
Stream 2 252 Linear Feet
Stream 4 435 Linear Feet
Stream 5 503 Linear Feet
Wetland 1 5,972 Sq. Ft.
Wetland 2 2,213 Sq. ft.
50' Neuse River Riparian Buffer
50' BUFFER FROM STREAM (Mining Permit Stipulated)
50' BUFFER FROM FRINGE WETLAND
50' BUFFER FROM WETLAND
24" CULVERT
Proposed Bridge
Crabtree Creek
Proposed 100' Buffer
Existing 100' Buffer
Hatched Area Denotes Newly Affected Area Associated with Perimeter Road Improvements 2.9 Acres
Line Denotes Perimeter of Activ
Active Pit Area = 90.25 Acres
Including Associated Haul/Acc
INTERSTATE 40
Proposed Permit Boundary
Vegetated Earthen Berm Approx. 8.3 Acres +/-
Line Denotes Property Boundary/ Existing Mining Permit Boundary
Bone Yard
Existing Sump
Secondary C
and Rip Rap
Primary Crusher Station
Shop
LEGEND
INDEX CONTOUR WITH ELEVATION, (MSL)
INTERMEDIATE CONTOUR
BASE RING
PAVED ROAD
DIRT / UNIMPROVED ROAD
RAILROAD
FENCE
GUARD RAIL
DITCH (WATER) LINE
SWAMP LINE
TREE LINE
SCRUB LINE
TREE SYMBOL
SWAMP SYMBOL
BUILDING
SPOT ELEVATION, (MSL)
ESTIMATED SPOT ELEVATION, (MSL)
WATER ELEVATION, (MSL)
BENCH MARK LOCATION WITH ELEVATION, (MSL)
WELL (VARIOUS TYPES)
UTILITY POLE
TRAFFIC SIGN
MISC. / UNKNOWN OBJECT
HYDRANT
MANHOLE
GUY WIRE
LIGHTPOLE
CULVERT
CATCHBASIN
N
0 100 200 Feet
SCALE: 1" = 100'
COMPILED BY PHOTOGRAMMETRIC METHODS
WAKE STONE CORPORATION
Wake Stone Corporation
Triangle Quarry
Wake County
Mining Permit No. 92-10
Site Plan Map
2020 Mining Permit Modification
(Adding RDU Mineral Lease)
Last Revised: April 2, 2020
DATE OF PHOTOGRAPHY: 03-17-2019
REVISION No.:
Map Prepared by: L. Cole Atkins, Geologist
SHEET No.: 3 of 27
NOTES: Accuracy Specifications:
1) Contours - Ninety (90) percent of the elevations determined from the solid line contours of this topographic map has an accuracy with respect to true elevation of one-half (1/2) contour interval or better and the remaining ten (10) percent of such elevations are not in error by more than one contour interval. In densely wooded areas where heavy brush or tree cover fully obscures the ground, the ground elevations shown are believed to be as accurate and as accurately as possible from the stereoscopic model, while making full use of spot elevations obtained during ground control surveys and all spot elevations measured photogrammetrically in places where the ground is visible.
2) This map was compiled by Garland Photogrammetric Services, L.L.C. using photogrammetric methods. Contours portrayed as dashed or broken lines represent areas of dense vegetation and should be considered approximate. This map has not been field verified. Prior to use as a basis for design / construction, it should be field verified.
3) Buildings are shown roofline only.

Proposed Permit Boundary

100' Unexcavated Buffer

Approx. Location
Dunn Well
Depth: 260'

Permanent
Observation Well

Old Reedy Creek Rd

ROCK CONSTRUCTION ENTRANCE DURING CLEARING AND EROSION CONTROL INSTALLATION. THIS ENTRANCE TO BE RELOCATED DURING PERMANENT BERMING INSTALLATION TO LOCATION ON PHASE 2 EROSION CONTROL PLAN.

Observation Well
OW-3

Future Reserves
17.2 Acres

TEMPORARY
BASIN #2
SDO-8

TEMPORARY
BASIN #1
SDO-7

Observation Well
OW-4

Observation Well
OW-1

Wetland Fringe
6,222 Sq. Ft./0.14 Ac.

Stream 6
245 Linear Feet

50' Neuse River
Riparian Buffer

50' BUFFER FROM STREAM
(Mining Permit Stipulated)

50' BUFFER FROM
FRINGE WETLAND

Foxcroft
Lake

Open Water
65,808 Sq. Ft./1.51Ac.

Stream 1
303 Linear Feet

50' Neuse River
Riparian Buffer

50' BUFFER FROM STREAM
(Mining Permit Stipulated)

Wetland Fringe
6,222 Sq. Ft./0.14 Ac.

50' BUFFER FROM
WETLAND

Wetland 2
2,213 Sq. Ft.

TEMPORARY
BASIN #3
SDO-2

Proposed 100' Buffer

Start Phase 2
Diversion Ditch 1A

50' Neuse River
Riparian Buffer

24" CULVERT

Stream 2
252 Linear Feet

Crabtree Creek

Existing 100' Buffer

Proposed Bridge

Start Phase 2
Diversion Ditch 1B

TEMPORARY
BASIN #7
SDO-5

50' Neuse River
Riparian Buffer

Stream 4
435 Linear Feet

WESTERN DIVERSION DITCH
(DIVERSION DITCH 2)

Stream 5
503 Linear Feet

50' BUFFER FROM STREAM
(Mining Permit Stipulated)

50' Neuse River
Riparian Buffer

50' Neuse River
Riparian Buffer

Early stages of pit development may include sinking a ramp down along the inside of the new RDU pit perimeter road. As this excavation advances to the south, all accumulated stormwater and groundwater will be pumped to the existing Triangle Quarry pit, and managed under current NCG02 guidelines.

INTERSTATE 40

Crabtree Creek

50' BUFFER FROM
WETLAND

Wetland 1
3,877 Sq. Ft.

50' Neuse River
Riparian Buffer

TEMPORARY
BASIN #4
SDO-1

50' Neuse River
Riparian Buffer

Crabtree Creek

Existing
Sump

Secondary C
and Rip Rap

Bone Yard

Primary Crusher
Station

EXISTING BASIN
SDO-6/EQ-2

Shop

Proposed Permit Boundary

INTERSTATE 40

Line Denotes Property Boundary/
Existing Mining Permit Boundary

LEGEND

- INDEX CONTOUR WITH ELEVATION, (MSL)
- INTERMEDIATE CONTOUR
- BASE RING
- PAVED ROAD
- DIRT / UNIMPROVED ROAD
- RAILROAD
- FENCE
- GUARD RAIL
- DITCH (WATER) LINE
- DRAIN LINE
- TREE LINE
- SCREEN LINE
- TREE SYMBOL
- DRAIN SYMBOL
- BUILDING
- SPOT ELEVATION, (MSL)
- ESTIMATED SPOT ELEVATION, (MSL)
- WATER ELEVATION, (MSL)
- BENCH MARK LOCATION WITH ELEVATION, (MSL)
- WELL (VARIOUS TYPES)
- UTILITY POLE
- TRAFFIC SIGN
- MISC. / UNKNOWN OBJECT
- HYDRANT
- MANHOLE
- GUY WIRE
- LIGHTPOLE
- CULVERT
- CATCHBASIN

N

0 100 200 Feet

SCALE: 1" = 100'

COMPILED BY PHOTOGRAMMETRIC METHODS

WAKE STONE CORPORATION

Wake Stone Corporation
Triangle Quarry
Wake County
Mining Permit No. 92-10
Site Plan Map
2020 Mining Permit Modification
(Adding RDU Mineral Lease)
Last Revised: April 2, 2020

| | |
|---|---|
| DATE OF PHOTOGRAPHY: 03-17-2019 | REVISION No.: |
| Map Prepared by: L. Cole Atkins, Geologist | SHEET No.: 4 of 27 |

NOTES: Accuracy Specifications

1) Contours - Nonvy 70 percent of the elevations determined from the solid line contours of the topographic map has an accuracy with respect to true elevation of one-half (1/2) contour interval or better and the remaining ten (10) percent of the elevations determined from the solid line contours have an accuracy of one-half (1/2) contour interval or better except in densely wooded areas where heavy brush or tree cover fully obscures the ground and the contours are shown as dashed lines, they have been plotted as accurately as possible from the stereoscopic model, while making full use of spot elevations obtained during ground control surveys and all spot elevations measured photogrammetrically in places where the ground is visible.

2) This map was compiled by Garland Photogrammetric Services, L.L.C. using photogrammetric methods. Contours portrayed as dashed or broken lines represent areas of dense vegetation and should be considered approximate. This map has not been field verified. Prior to use as a basis for design / construction, it should be field verified.

3) Buildings are shown roofline only.

Proposed Permit Boundary

100' Unexcavated Buffer

Cross Section View 2 (see Sheet 9)

Cross Section View 1 (see Sheet 9)

Approx. Location Dunn Well Depth: 260'

Permanent Observation Well

Old Reedy Creek Rd

ROCK CONSTRUCTION ENTRANCE DURING CLEARING AND EROSION CONTROL INSTALLATION. THIS ENTRANCE TO BE RELOCATED DURING PERMANENT BERM AND INSTALLATION TO LOCATION ON PHASE 2 EROSION CONTROL PLAN.

Observation Well OW-3

Future Reserves 17.2 Acres

TEMPORARY BASIN #2 SDO-8

TEMPORARY BASIN #1 SDO-7

Observation Well OW-4

50' Neuse River Riparian Buffer

Stream 4 435 Linear Feet

50' BUFFER FROM STREAM (Mining Permit Stipulated)

Conceptual Pit Development

As the new pit development progresses to the south, Temporary Sediment Basins 4, 5, and 6 will be removed and incorporated into overburden cut slope for the new mine pit. At that point, all disturbed areas will drain to the new pit, and all accumulated stormwater and groundwater will be stored as needed or pumped to the preexisting pit for treatment and use, or discharged at the existing approved discharge location under NCG02. The earthen embankment and perimeter road will remain to provide flood protection from Crabtree Creek and to provide perimeter access for the newly established mine pit.

Wetland Fringe 6,222 Sq. Ft./0.14 Ac.

Stream 6 245 Linear Feet

50' Neuse River Riparian Buffer

50' BUFFER FROM FRINGE WETLAND

50' BUFFER FROM STREAM (Mining Permit Stipulated)

Foxcroft Lake

Open Water 65,808 Sq. Ft./1.51Ac.

Stream 1 303 Linear Feet

50' Neuse River Riparian Buffer

50' BUFFER FROM STREAM (Mining Permit Stipulated)

50' BUFFER FROM WETLAND

Wetland 2 2,213 Sq. ft.

Proposed 100' Buffer

50' Neuse River Riparian Buffer

Stream 2 252 Linear Feet

24" CULVERT

Crabtree Creek

Existing 100' Buffer

Proposed Bridge

TEMPORARY BASIN #7 SDO-5

Crabtree Creek

INTERSTATE 40

Proposed Permit Boundary

Crabtree Creek

Existing Sump

Bone Yard

EXISTING BASIN SDO-6/EQ-2

Secondary C and Rip Rap

Primary Crusher Station

Shop

Line Denotes Property Boundary/ Existing Mining Permit Boundary

LEGEND

- 680 INDEX CONTOUR WITH ELEVATION, (MSL)
- INTERMEDIATE CONTOUR
- BASE RING
- PAVED ROAD
- DIRT / UNIMPROVED ROAD
- RAILROAD
- FENCE
- GUARD RAIL
- DITCH (WATER) LINE
- SWAMP LINE
- TREE LINE
- SCRUB LINE
- TREE SYMBOL
- SWAMP SYMBOL
- BUILDING
- 25.5 SPOT ELEVATION, (MSL)
- 25.5 ESTIMATED SPOT ELEVATION, (MSL)
- W.E. 15.6 WATER ELEVATION, (MSL)
- BENCH MARK LOCATION WITH ELEVATION, (MSL)
- WELL (VARIOUS TYPES)
- UTILITY POLE
- TRAFFIC SIGN
- MISC. / UNKNOWN OBJECT
- HYDRANT
- MANHOLE
- GUY WIRE
- LIGHTPOLE
- CULVERT
- CATCHBASIN

N

0 100 200 Feet

SCALE: 1" = 100'

COMPILED BY PHOTOGRAMMETRIC METHODS

WAKE STONE CORPORATION

Wake Stone Corporation
Triangle Quarry
Wake County
Mining Permit No. 92-10
Site Plan Map
2020 Mining Permit Modification
(Adding RDU Mineral Lease)
Last Revised: April 2, 2020

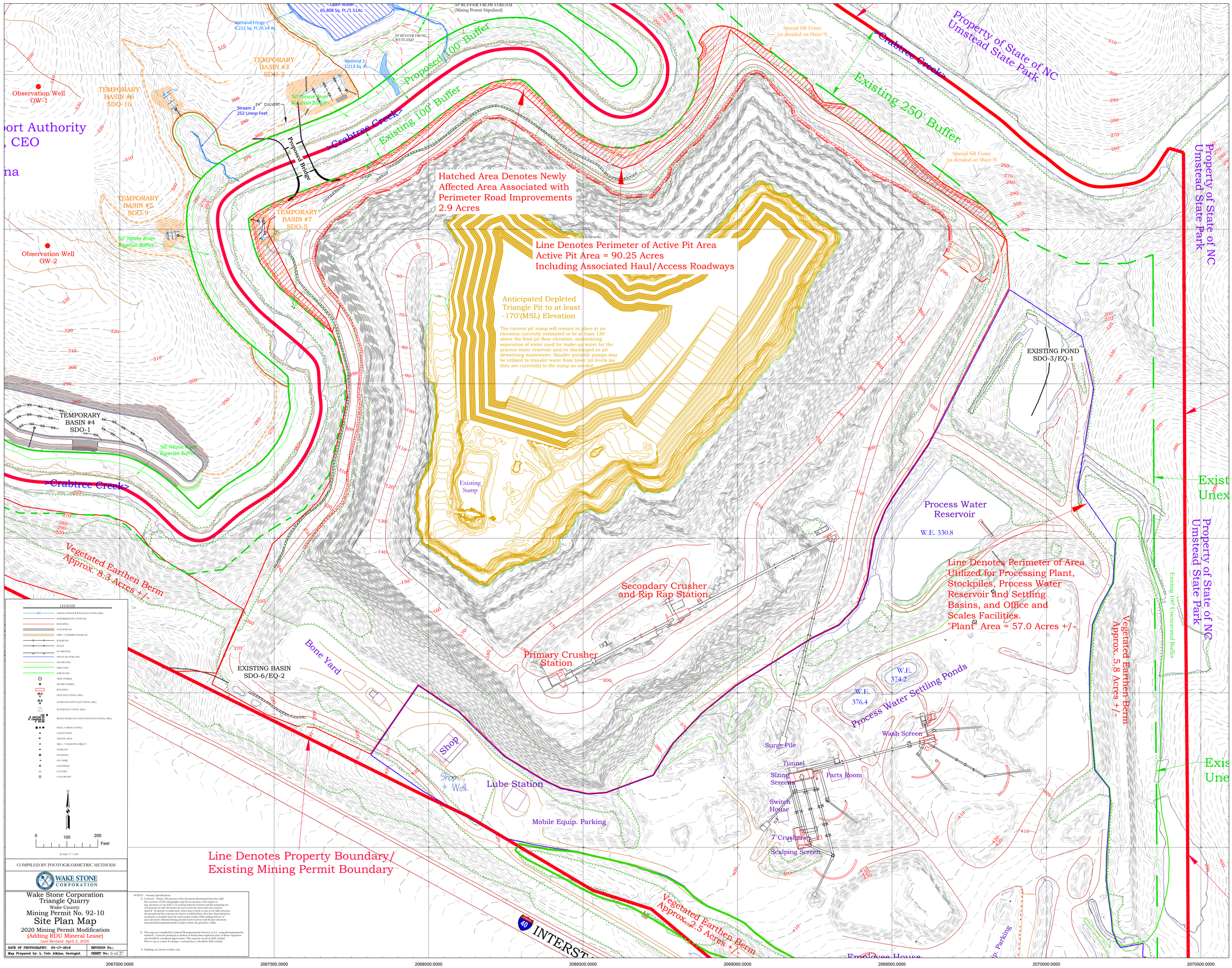
| | |
|---|---|
| DATE OF PHOTOGRAPHY: 03-17-2019 | REVISION No.: |
| Map Prepared by: L. Cole Atkins, Geologist | SHEET No.: 5 of 27 |

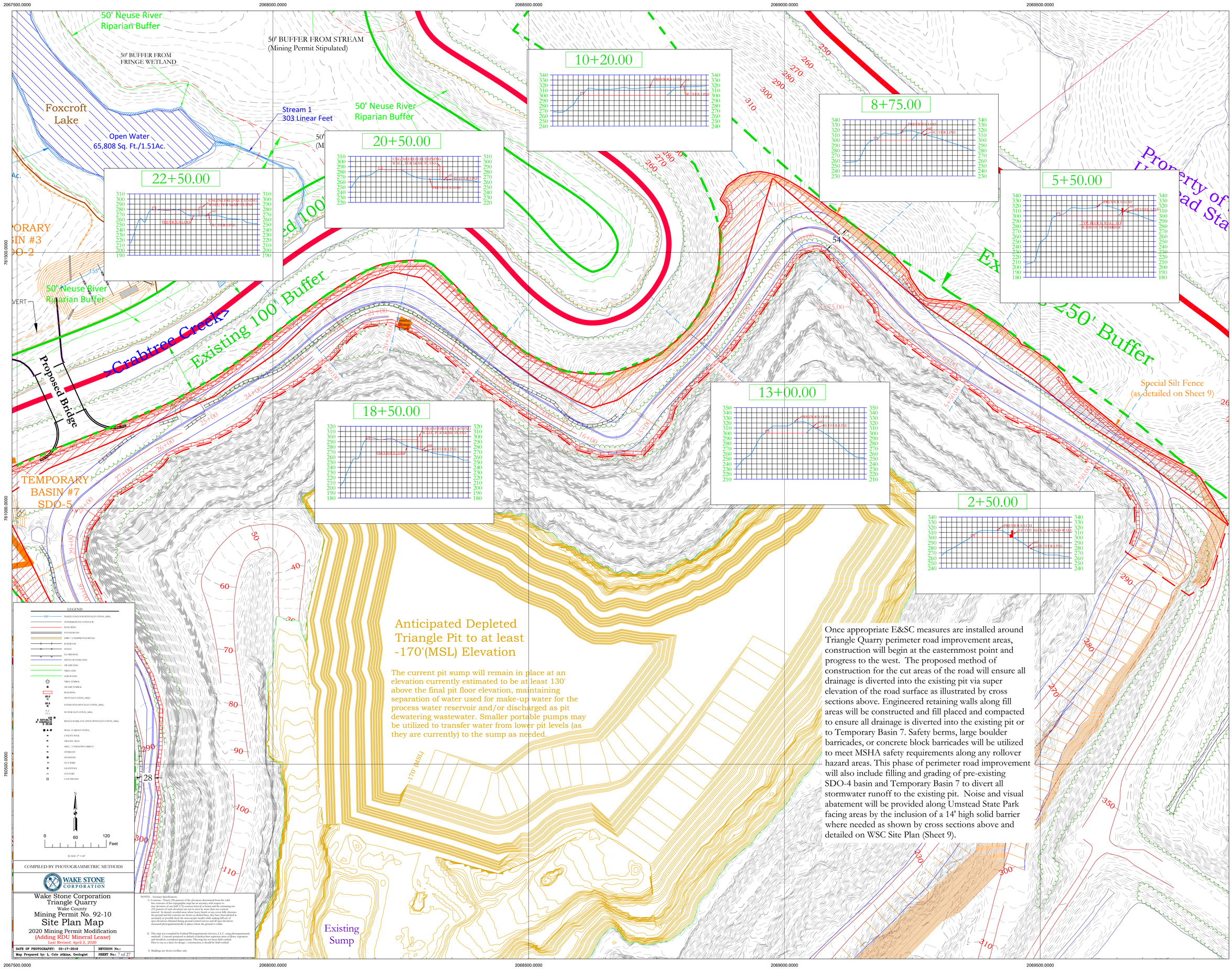
NOTES: Accuracy Specifications

1) Contours - Ninety (90) percent of the elevations determined from the solid contours shown on the photogrammetric map shall be accurate within one-half (1/2) contour interval or better and the remaining ten (10) percent of such elevations are not in error by more than one contour interval. In densely wooded areas where heavy brush or tree cover fully obscures the ground and the contours are shown as dashed lines, they have been plotted as photogrammetrically as possible and supplemented by a limited number of spot elevations obtained during ground control surveys and all spot elevations measured photogrammetrically as places where the ground is visible.

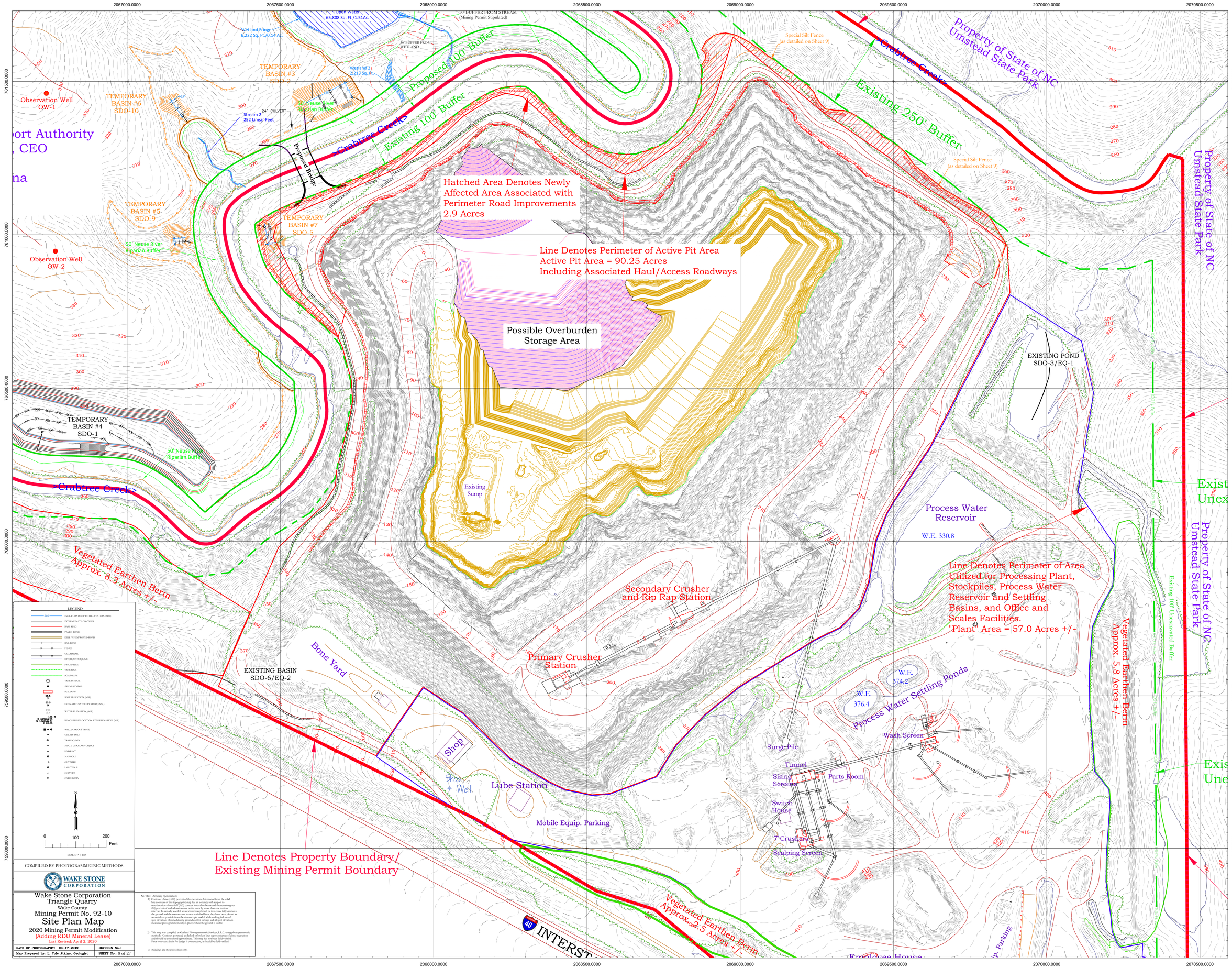
2) This map was compiled by Cardinal Photogrammetric Services, L.L.C. using photogrammetric methods. Contours portrayed in dashed or broken lines represent areas of dense vegetation and should be considered approximate. This map has not been field verified. Prior to use as a basis for design / construction, it should be field verified.

3) Buildings are shown roofline only.


Open Water
65,808 Sq. Ft./1.51Ac.
50' BUFFER FROM STREAM
(Mining Permit Stipulated)
Wetland Fringe
6,222 Sq. Ft./0.14 Ac.
50' BUFFER FROM WETLAND
Wetland 2
2,213 Sq. Ft.
TEMPORARY BASIN #3 SDO-2
Observation Well OW-1
TEMPORARY BASIN #6 SDO-10
Stream 2
252 Linear Feet
24" CULVERT
50' Neuse River Riparian Buffer
Proposed 100' Buffer
Existing 100' Buffer
Crabtree Creek
Proposed Bridge
Hatched Area Denotes Newly Affected Area Associated with Perimeter Road Improvements 2.9 Acres
Line Denotes Perimeter of Active Pit Area
Active Pit Area = 90.25 Acres
Including Associated Haul/Access Roadways
Anticipated Depleted Triangle Pit to at least -170'(MSL) Elevation
The current pit sump will remain in place at an elevation currently estimated to be at least 130' above the final pit floor elevation, maintaining separation of water used for make-up water for the process water reservoir and/or discharged as pit dewatering wastewater. Smaller portable pumps may be utilized to transfer water from lower pit levels (as they are currently) to the sump as needed.
Existing Sump
Special Silt Fence
(as detailed on Sheet 9)
Existing 250' Buffer
Property of State of NC
Umstead State Park
TEMPORARY BASIN #5 SDO-9
TEMPORARY BASIN #7 SDO-5
Observation Well OW-2
TEMPORARY BASIN #4 SDO-1
EXISTING POND SDO-3/EQ-1
Vegetated Earthen Berm
Approx. 8.3 Acres +/-
Process Water Reservoir
W.E. 330.8
Line Denotes Perimeter of Area Utilized for Processing Plant, Stockpiles, Process Water Reservoir and Settling Basins, and Office and Scales Facilities.
"Plant" Area = 57.0 Acres +/-
Secondary Crusher and Rip Rap Station
Primary Crusher Station
Bone Yard
EXISTING BASIN SDO-6/EQ-2
Shop
Lube Station
Mobile Equip. Parking
W.E. 374.2
W.E. 376.4
Process Water Settling Ponds
Wash Screen
Surge Pile
Tunnel
Sizing Screens
Parts Room
Switch House
7' Crusher
Scalping Screen
Vegetated Earthen Berm
Approx. 5.8 Acres +/-
Existing 100' Unexcavated Buffer
Line Denotes Property Boundary/
Existing Mining Permit Boundary
Vegetated Earthen Berm
Approx. 2.5 Acres +/-
INTERSTATE 40
Employee House
LEGEND
INDEX CONTOUR WITH ELEVATION, (MSL)
INTERMEDIATE CONTOUR
BASE RING
PAVED ROAD
DIRT / UNIMPROVED ROAD
RAILROAD
FENCE
GUARD RAIL
DITCH (WITH FLOW LINE)
DRAIN LINE
TREE LINE
SCRUB LINE
TREE SYMBOL
DRAIN SYMBOL
BUILDING
SPOT ELEVATION, (MSL)
ESTIMATED SPOT ELEVATION, (MSL)
WATER ELEVATION, (MSL)
BENCH MARK LOCATION WITH ELEVATION, (MSL)
WELL (VARIOUS TYPES)
UTILITY POLE
TRAFFIC SIGN
MISC. / UNKNOWN OBJECT
HYDRANT
MANHOLE
GUY WIRE
LIGHTPOLE
CULVERT
CATCHBASIN
N
0 100 200 Feet
SCALE: 1" = 100'
COMPILED BY PHOTOGRAMMETRIC METHODS
WAKE STONE CORPORATION
Wake Stone Corporation
Triangle Quarry
Wake County
Mining Permit No. 92-10
Site Plan Map
2020 Mining Permit Modification
(Adding RDU Mineral Lease)
Last Revised: April 2, 2020
DATE OF PHOTOGRAPHY: 03-17-2019
REVISION No.: 1
Map Prepared by: L. Cole Atkins, Geologist
SHEET No.: 6 of 27
NOTES: Accuracy Specifications:
1) Contours - Ninety (90) percent of the elevations determined from the solid line contours of the topographic map has an accuracy with respect to true elevations of one-half (1/2) contour interval or better and the remaining ten (10) percent of such elevations are not in error by more than one contour interval. The dashed line contours are less accurate than solid line contours, because the ground and the contours are shown as dashed lines, they have been plotted as accurately as possible from the stereoscopic model, while making full use of spot elevations obtained during ground control surveys and all spot elevations measured photogrammetrically in places where the ground is visible.
2) This map was compiled by Garland Photogrammetric Services, L.L.C. using photogrammetric methods. Contours portrayed as dashed or broken lines represent areas of dense vegetation and should be considered approximate. This map has not been field verified. Prior to use as a basis for design / construction, it should be field verified.
3) Buildings are shown roofline only.

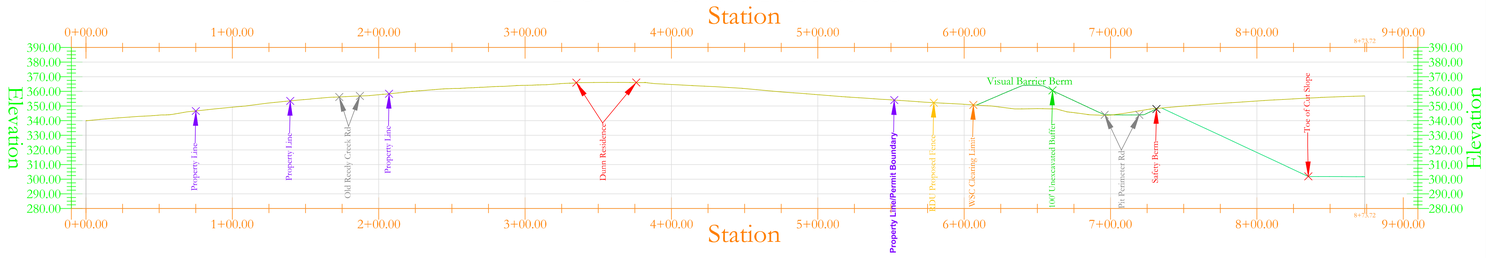



Once appropriate E&SC measures are installed around Triangle Quarry perimeter road improvement areas, construction will begin at the easternmost point and progress to the west. The proposed method of construction for the cut areas of the road will ensure all drainage is diverted into the existing pit via super elevation of the road surface as illustrated by cross sections above. Engineered retaining walls along fill areas will be constructed and fill placed and compacted to ensure all drainage is diverted into the existing pit or to Temporary Basin 7. Safety berms, large boulder barricades, or concrete block barricades will be utilized to meet MSHA safety requirements along any rollover hazard areas. This phase of perimeter road improvement will also include filling and grading of pre-existing SDO-4 basin and Temporary Basin 7 to divert all stormwater runoff to the existing pit. Noise and visual abatement will be provided along Umstead State Park facing areas by the inclusion of a 14' high solid barrier where needed as shown by cross sections above and detailed on WSC Site Plan (Sheet 9).

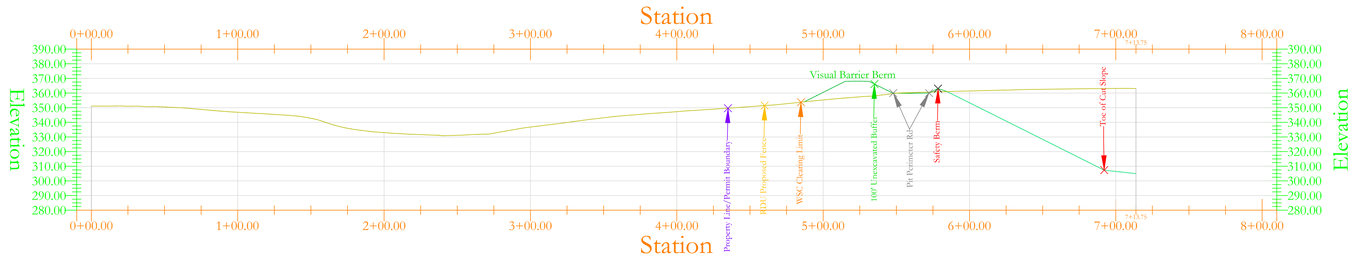

Open Water
65,808 Sq. Ft./1.51Ac.
50' BUFFER FROM STREAM
(Mining Permit Stipulated)
Wetland Fringe
6,222 Sq. Ft./0.14 Ac.
50' BUFFER FROM WETLAND
Wetland 2
2,213 Sq. ft.
TEMPORARY BASIN #3 SDO-2
Proposed 100' Buffer
Observation Well OW-1
TEMPORARY BASIN #6 SDO-10
Stream 2
252 Linear Feet
24" CULVERT
50' Neuse River Riparian Buffer
Crabtree Creek
Existing 100' Buffer
Proposed Bridge
Special Silt Fence (as detailed on Sheet 9)
Existing 250' Buffer
Property of State of NC Umstead State Park
TEMPORARY BASIN #5 SDO-9
TEMPORARY BASIN #7 SDO-5
Hatched Area Denotes Newly Affected Area Associated with Perimeter Road Improvements 2.9 Acres
Observation Well OW-2
Line Denotes Perimeter of Active Pit Area
Active Pit Area = 90.25 Acres
Including Associated Haul/Access Roadways
Possible Overburden Storage Area
EXISTING POND SDO-3/EQ-1
TEMPORARY BASIN #4 SDO-1
Existing Sump
Process Water Reservoir
W.E. 330.8
Vegetated Earthen Berm Approx. 8.3 Acres +/-
Line Denotes Perimeter of Area Utilized for Processing Plant, Stockpiles, Process Water Reservoir and Settling Basins, and Office and Scales Facilities.
"Plant" Area = 57.0 Acres +/-
Secondary Crusher and Rip Rap Station
Primary Crusher Station
Bone Yard
EXISTING BASIN SDO-6/EQ-2
W.E. 374.2
W.E. 376.4
Process Water Settling Ponds
Wash Screen
Surge Pile
Tunnel
Sizing Screens
Parts Room
Switch House
7' Crushers
Scalping Screen
Shop
Shop + Well
Lube Station
Mobile Equip. Parking
Line Denotes Property Boundary/ Existing Mining Permit Boundary
Vegetated Earthen Berm Approx. 2.5 Acres +/-
Vegetated Earthen Berm Approx. 5.8 Acres +/-
Existing 100' Uncavated Buffer
Employee House
LEGEND
COMPILED BY PHOTOGRAMMETRIC METHODS
WAKE STONE CORPORATION
Wake Stone Corporation
Triangle Quarry
Wake County
Mining Permit No. 92-10
Site Plan Map
2020 Mining Permit Modification
(Adding RDU Mineral Lease)
Last Revised: April 2, 2020
DATE OF PHOTOGRAPHY: 03-17-2019
REVISION No.:
Map Prepared by: L. Cole Atkins, Geologist
SHEET No.: 8 of 27
NOTES: Accuracy Specifications
1) Contours - Ninety (90) percent of the elevations determined from the solid line contours of this topographic map has an accuracy with respect to adjacent elevations of one-half (1/2) contour interval or better. Remaining ten (10) percent of such elevations are not in error by more than one contour interval. In densely wooded areas where heavy brush or tree cover fully obscures the ground and the contours are shown as dashed lines, they have been plotted as accurately as possible from the stereoscope model, while making full use of spot elevations obtained during ground control surveys and all spot elevations measured photogrammetrically at places where the ground is visible.
2) This map was compiled by Garland Photogrammetric Services, L.L.C. using photogrammetric methods. Contours portrayed as dashed or broken lines represent areas of dense vegetation and should be considered approximate. This map has not been field verified. Prior to use as a basis for design / construction, it should be field verified.
3) Buildings are shown roofline only.
INTERSTATE 40

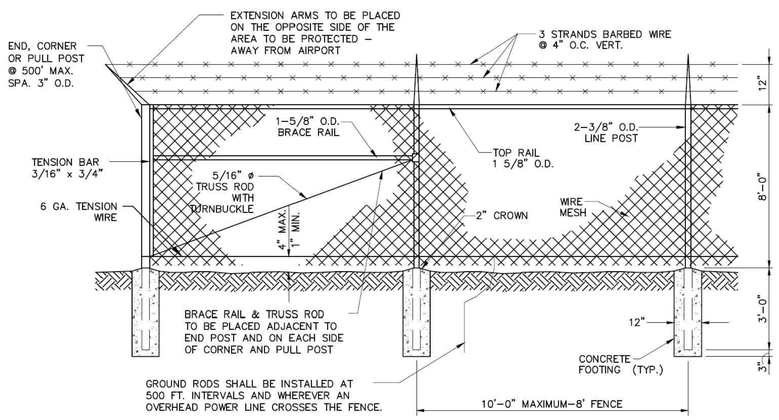
## Profile View of Cross Sections for RDU Expansion (as shown on Sheets 2 and 5)

Profile View of Cross Section 1

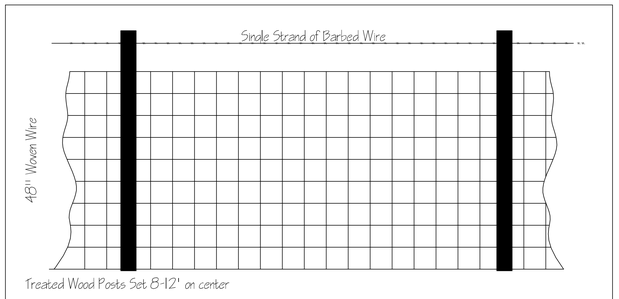



Profile View of Cross Section 2

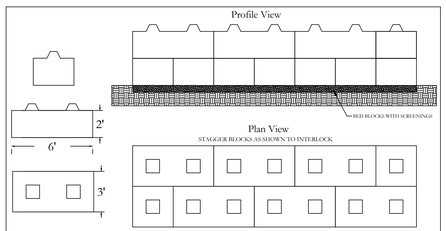



Typical RDU Security Fence
(not to scale)

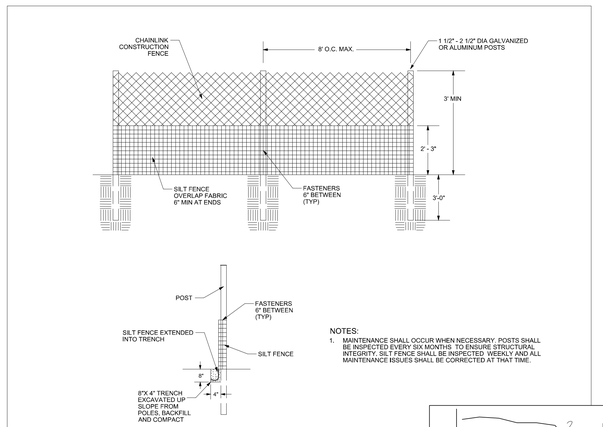



Typical Woven Wire Fence Detail
Currently in place Along I-40 R/ W

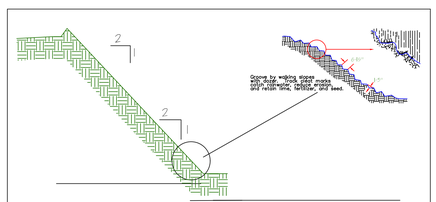



Typical Block Barrier/ Sound Wall (not to scale)

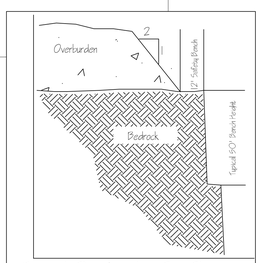
Views of Typical Concrete Block Highwall Barricade
(Note 10' Grade Rod for Scale in lower photo)




SPECIAL "SUPER" SILT FENCE




Typical Fill Slope Details (not to scale)




Typical Overburden Cut Slope and Pit Bench Details
(not to scale)

COMPILED BY PHOTOGRAMMETRIC METHODS

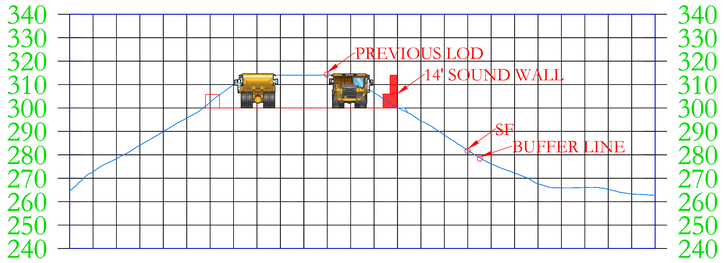
WAKE STONE CORPORATION

Wake Stone Corporation
Triangle Quarry
Wake County
Mining Permit No. 92-10
**Site Plan Map**
2020 Mining Permit Modification
(Adding RDU Mineral Lease)
Last Revised: April 2, 2020

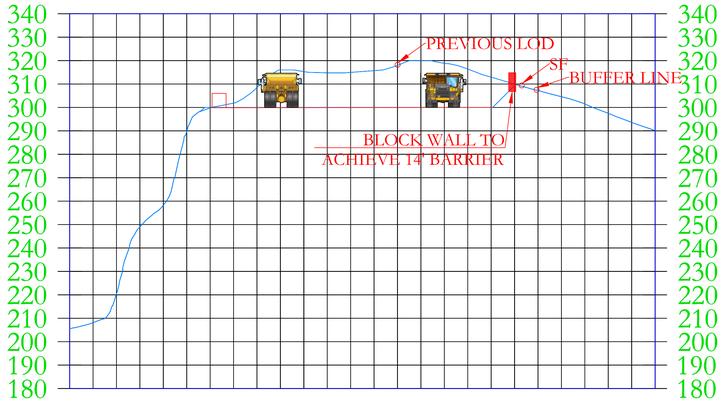
| | |
|---|---|
| DATE OF PHOTOGRAPHY: 03-17-2019 | REVISION No.: |
| Map Prepared by: L. Cole Atkins, Geologist | SHEET No.: 9 of 27 |

# Cross Sections of Existing Pit Perimeter Road Improvements Adjacent to Umstead State Park (as shown on Sheet 6)

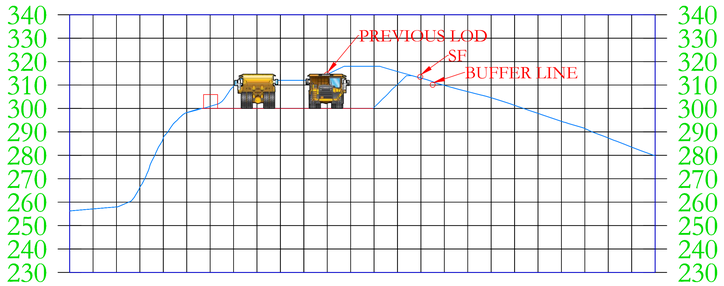
## 2+50.00

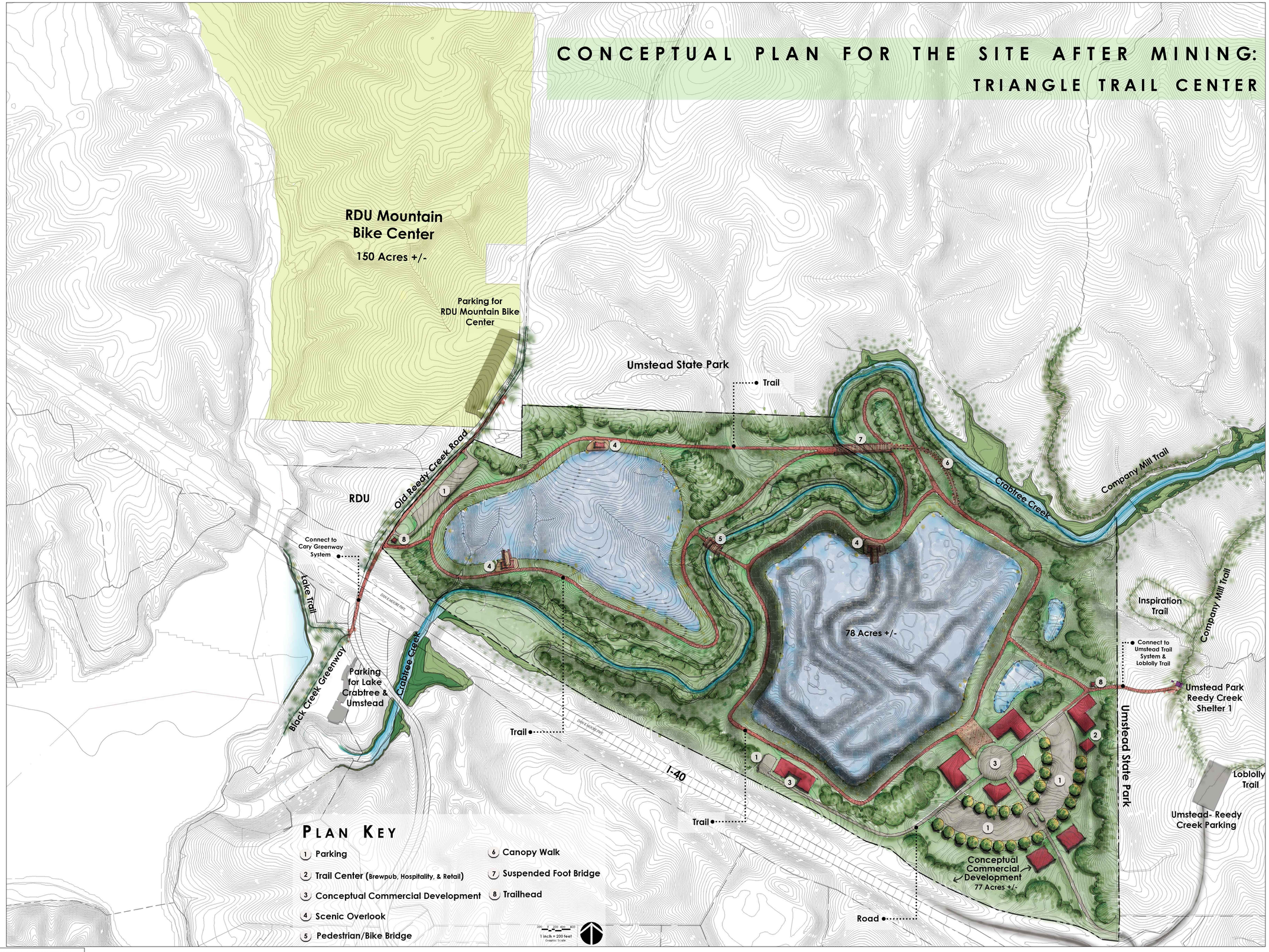



## 5+50.00




## 8+75.00






COMPILED BY PHOTOGRAMMETRIC METHODS

WAKE STONE CORPORATION

Wake Stone Corporation
Triangle Quarry
Wake County
Mining Permit No. 92-10
Site Plan Map
2020 Mining Permit Modification
(Adding RDU Mineral Lease)
Last Revised: April 2, 2020

| | |
|---|---|
| DATE OF PHOTOGRAPHY: 03-17-2010 | REVISION No.: |
| Map Prepared by: L. Cole Atkins, Geologist | SHEET No.: 10 of 27 |

# Conceptual Reclamation Plan