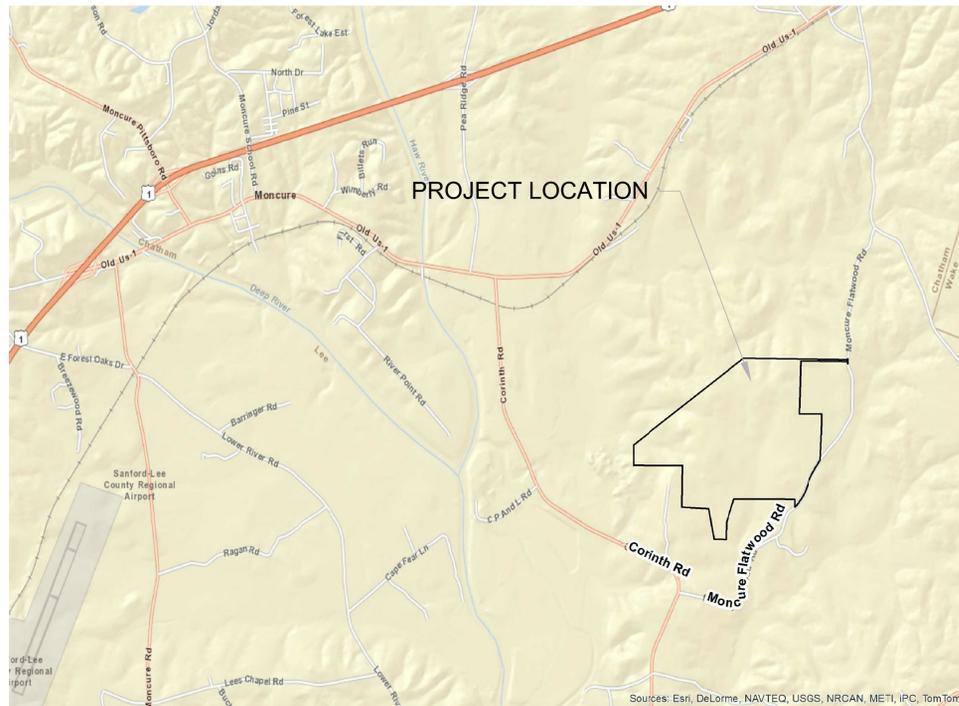


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Owner/Permittee: Green Meadow, LLC  
 Operator: Charah, Inc.  
 Engineer of Record: HDR Engineering, Inc. of the Carolinas



HDR Engineering, Inc. of the Carolinas  
 440 S. Church St.  
 Suite 1000  
 Charlotte, NC 28202-2075  
 704.338.6700  
 N.C.B.E.L.S. F-0116



Permit Drawings For

# Brickhaven No. 2 Mine Tract "A" Mine Permit Transfer/Modification

Permit No. 19-25

Civil

Project No.  
 000000000237673

Moncure, North Carolina  
 November 2014

Submitted to NCDENR Division of Mining

## INDEX OF DRAWINGS

### GENERAL

- 03G-01 COVER
- 03G-02 TRACT "A" MINE MAP

### SITE WORK

- 03C-01 MINE EXCAVATION
- 03C-02 RECLAMATION PLAN
- 03C-03 SITE CROSS SECTIONS
- 03C-04 DETAILS

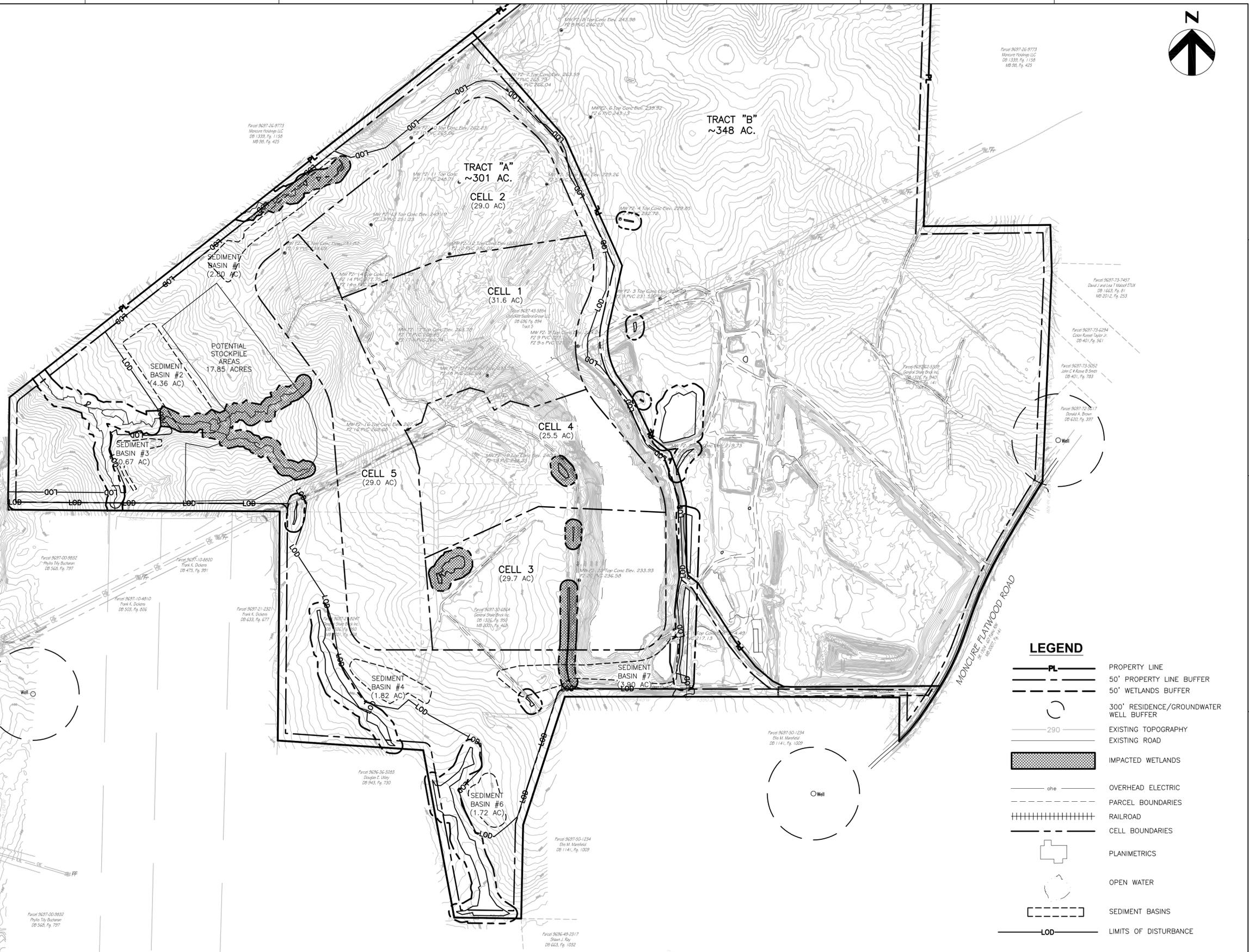
### EROSION AND SEDIMENT CONTROL

- 02C-01 EROSION AND SEDIMENTATION CONTROL PLAN - PHASE 1 OVERALL
- 02C-02 EROSION AND SEDIMENTATION CONTROL PHASE 1 PLAN 1
- 02C-03 EROSION AND SEDIMENTATION CONTROL PHASE 1 PLAN 2
- 02C-04 EROSION AND SEDIMENTATION CONTROL PHASE 1 PLAN 3
- 02C-05 EROSION AND SEDIMENTATION CONTROL PHASE 1 PLAN 4
- 02C-06 EROSION AND SEDIMENTATION CONTROL PHASE 1 PLAN 5
- 02C-07 EROSION AND SEDIMENTATION CONTROL PLAN - PHASE 2 OVERALL
- 02C-08 EROSION AND SEDIMENTATION CONTROL PHASE 2 PLAN 1
- 02C-09 EROSION AND SEDIMENTATION CONTROL PHASE 2 PLAN 2
- 02C-10 EROSION AND SEDIMENTATION CONTROL PHASE 2 PLAN 3
- 02C-11 EROSION AND SEDIMENTATION CONTROL PHASE 2 PLAN 4
- 02C-12 EROSION AND SEDIMENTATION CONTROL PHASE 2 PLAN 5
- 02C-13 EROSION AND SEDIMENTATION CONTROL DETAILS (1 OF 3)
- 02C-14 EROSION AND SEDIMENTATION CONTROL DETAILS (2 OF 3)
- 02C-15 EROSION AND SEDIMENTATION CONTROL DETAILS (3 OF 3)



SCOPE:  
THE PURPOSE OF THESE DRAWINGS IS TO TRANSFER THE OWNERSHIP OF THE MINE AND UPDATE BOTH THE EXCAVATION PLAN AND RECLAMATION PLAN.

- NOTES:
- TOPOGRAPHIC SURVEY AND EXTENT OF WETLANDS SURVEY PROVIDED BY LAWRENCE ASSOCIATES DATED SEPTEMBER 5, 2014.
  - PROPERTY BOUNDARY PROVIDED BY LAWRENCE ASSOCIATES DATED SEPTEMBER 5, 2014.
  - GROUNDWATER WELL LOCATIONS PROVIDED BY LAWRENCE ASSOCIATES DATED SEPTEMBER 5, 2014.
  - FLOODPLAIN LOCATION IS FROM LAWRENCE ASSOCIATES AS IDENTIFIED ON FLOOD INSURANCE RATE MAP FOR CHATHAM COUNTY NORTH CAROLINA, COMMUNITY PANEL NUMBER 3710969700J, DATED 2/2/2007. LAWRENCE ASSOCIATES CERTIFIES THAT A PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
  - WETLANDS DELINEATED BY CLEARWATER ENVIRONMENTAL.
  - THE WETLANDS AND STREAMS THAT ARE IMPACTED BY THIS PROJECT WILL BE PERMITTED THROUGH NC DIVISION OF WATER QUALITY AND MITIGATED AS REQUIRED PRIOR TO LAND DISTURBANCE. ESTIMATED IMPACTED INCLUDE:
    - 2,662 LINEAR FEET OF STREAMS
    - 18,666.24 SQ. FT. (0.45 ACRES) OF WETLANDS
  - ACCORDING TO LAWRENCE ASSOCIATES SURVEY, CHATHAM COUNTY PROVIDED THE ADDRESSES FOR DRINKING WATER WELL LOCATIONS AND WATER SERVICES ADJOINING PARCELS WITHIN 500 FEET OF THE PROPERTY LINE. CHATHAM COUNTY PUBLIC WORKS PROVIDED PARCELS SERVED BY COUNTY WATER.
  - THE PRIMARY SITE ENTRANCE IS FROM MONCURE FLATWOOD ROAD. A FUTURE HAUL ROAD IS PLANNED ALONG THE WESTERN-MOST PROPERTY LINE.
  - SOIL STOCKPILE TO BE DESIGNED AND PERMITTED AS NEEDED FOR OPERATIONS.



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of the Carolinas

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704.338.6700  
N.C.B.E.L.S. License Number F-0116

ISSUE	DATE	DESCRIPTION
A	11/2014	ISSUED FOR APPROVAL

PROJECT MANAGER	M.D. PLUMMER, P.E.
DESIGNED BY	P. WESTMORELAND, P.E.
DRAWN BY	J. GAUL
CHECKED BY	J.C. READLING, P.E.
PROJECT NUMBER	453925-237673-018

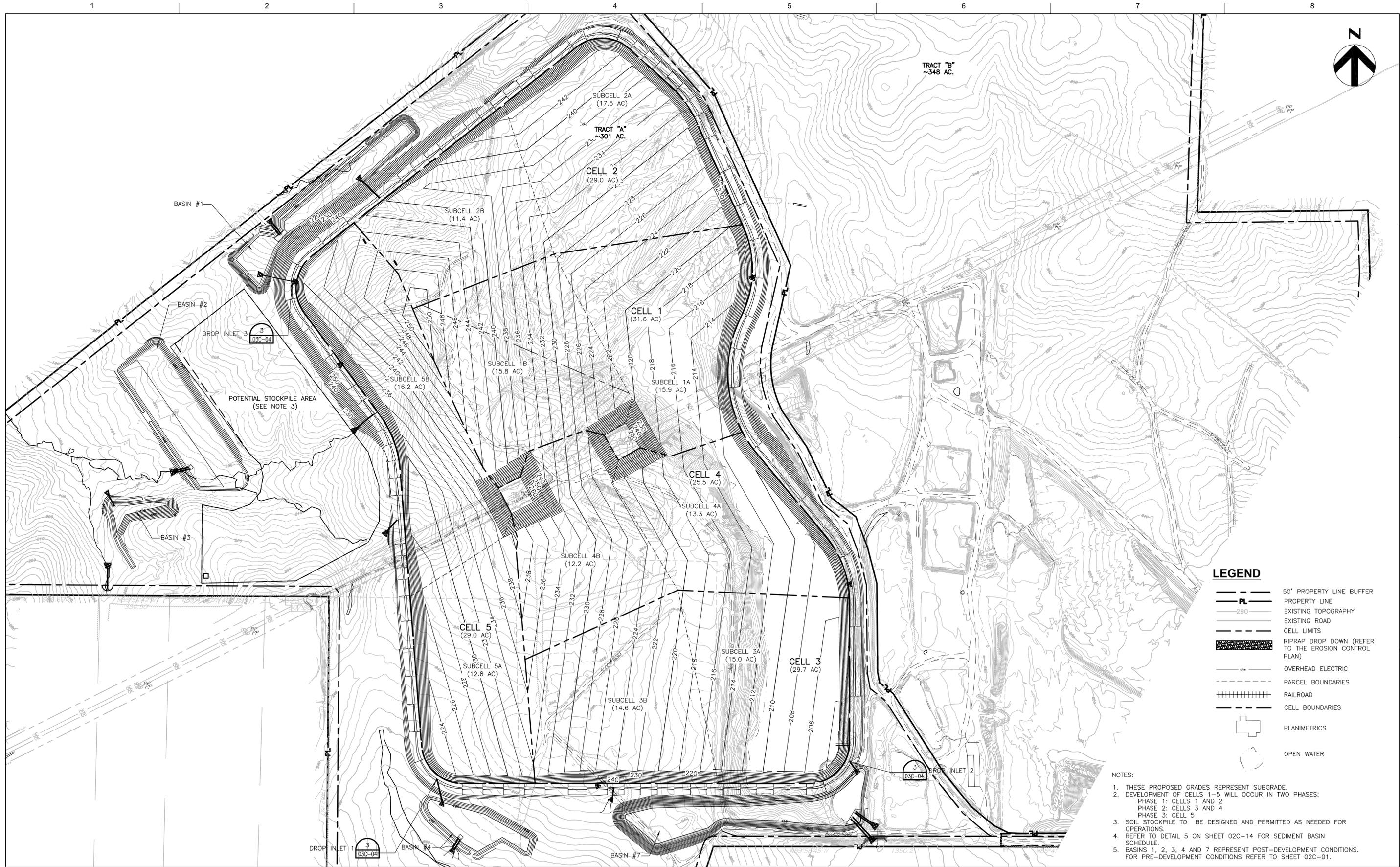


BRICKHAVEN No. 2 MINE TRACT "A"  
MINE PERMIT TRANSFER/MODIFICATION  
MONCURE, NC



FILENAME | 03G-02.dwg  
SCALE | 1"=300'

SHEET  
**03G-02**



- LEGEND**
- 50' PROPERTY LINE BUFFER
  - PROPERTY LINE
  - EXISTING TOPOGRAPHY
  - EXISTING ROAD
  - CELL LIMITS
  - RIPRAP DROP DOWN (REFER TO THE EROSION CONTROL PLAN)
  - OVERHEAD ELECTRIC
  - PARCEL BOUNDARIES
  - RAILROAD
  - CELL BOUNDARIES
  - PLANIMETRICS
  - OPEN WATER

- NOTES:**
1. THESE PROPOSED GRADES REPRESENT SUBGRADE.
  2. DEVELOPMENT OF CELLS 1-5 WILL OCCUR IN TWO PHASES:  
 PHASE 1: CELLS 1 AND 2  
 PHASE 2: CELLS 3 AND 4  
 PHASE 3: CELL 5
  3. SOIL STOCKPILE TO BE DESIGNED AND PERMITTED AS NEEDED FOR OPERATIONS.
  4. REFER TO DETAIL 5 ON SHEET 02C-14 FOR SEDIMENT BASIN SCHEDULE.
  5. BASINS 1, 2, 3, 4 AND 7 REPRESENT POST-DEVELOPMENT CONDITIONS. FOR PRE-DEVELOPMENT CONDITIONS REFER TO SHEET 02C-01.



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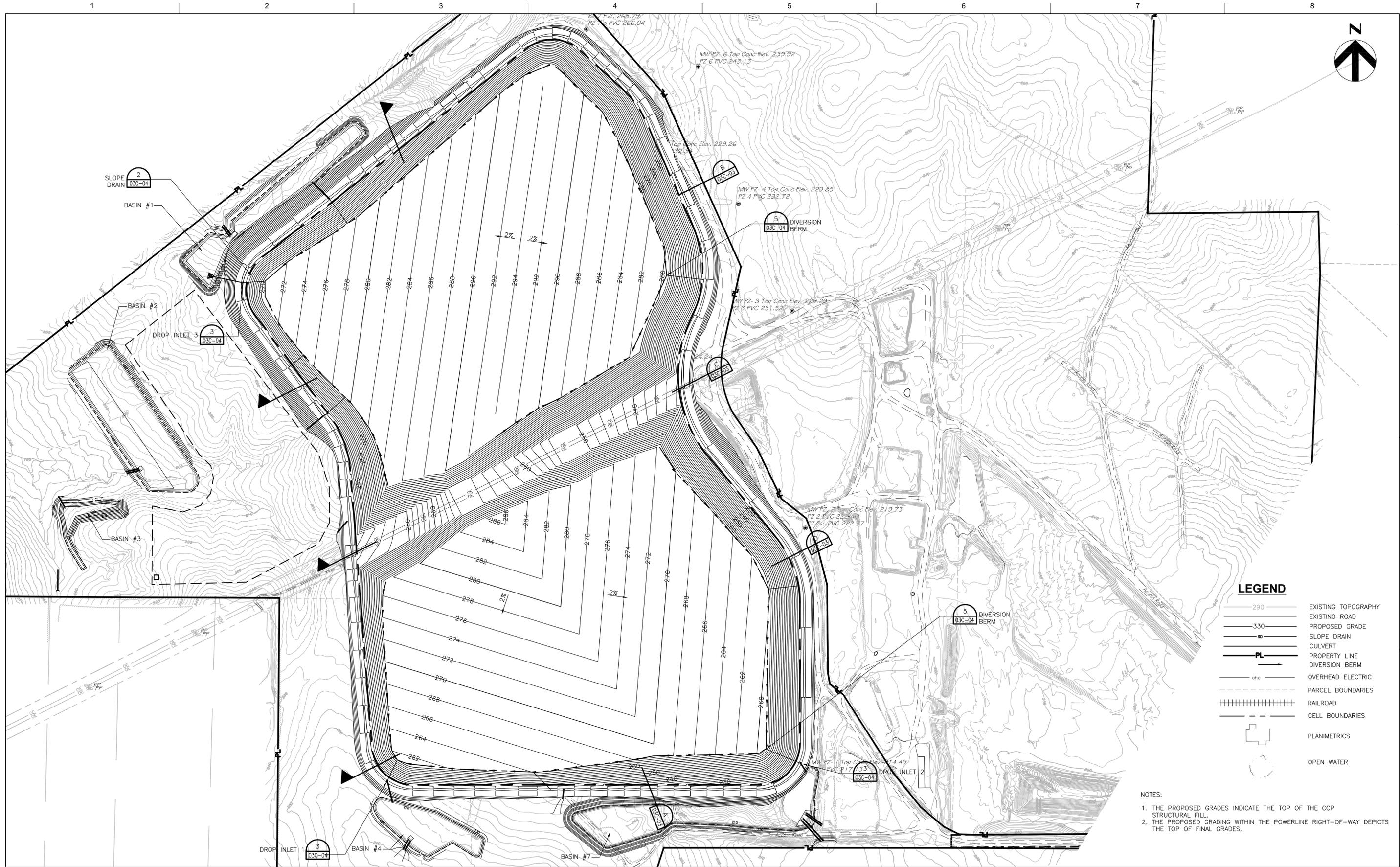
**MINE EXCAVATION**

0 1" 2"

FILENAME | 03C-01.dwg  
SCALE | 1"=200'

SHEET  
**03C-01**

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**LEGEND**

- 290 EXISTING TOPOGRAPHY
- EXISTING ROAD
- 330 PROPOSED GRADE
- SLOPE DRAIN
- CULVERT
- PROPERTY LINE
- DIVERSION BERM
- OVERHEAD ELECTRIC
- PARCEL BOUNDARIES
- RAILROAD
- CELL BOUNDARIES
- PLANIMETRICS
- OPEN WATER

- NOTES:
1. THE PROPOSED GRADES INDICATE THE TOP OF THE CCP STRUCTURAL FILL.
  2. THE PROPOSED GRADING WITHIN THE POWERLINE RIGHT-OF-WAY DEPICTS THE TOP OF FINAL GRADES.



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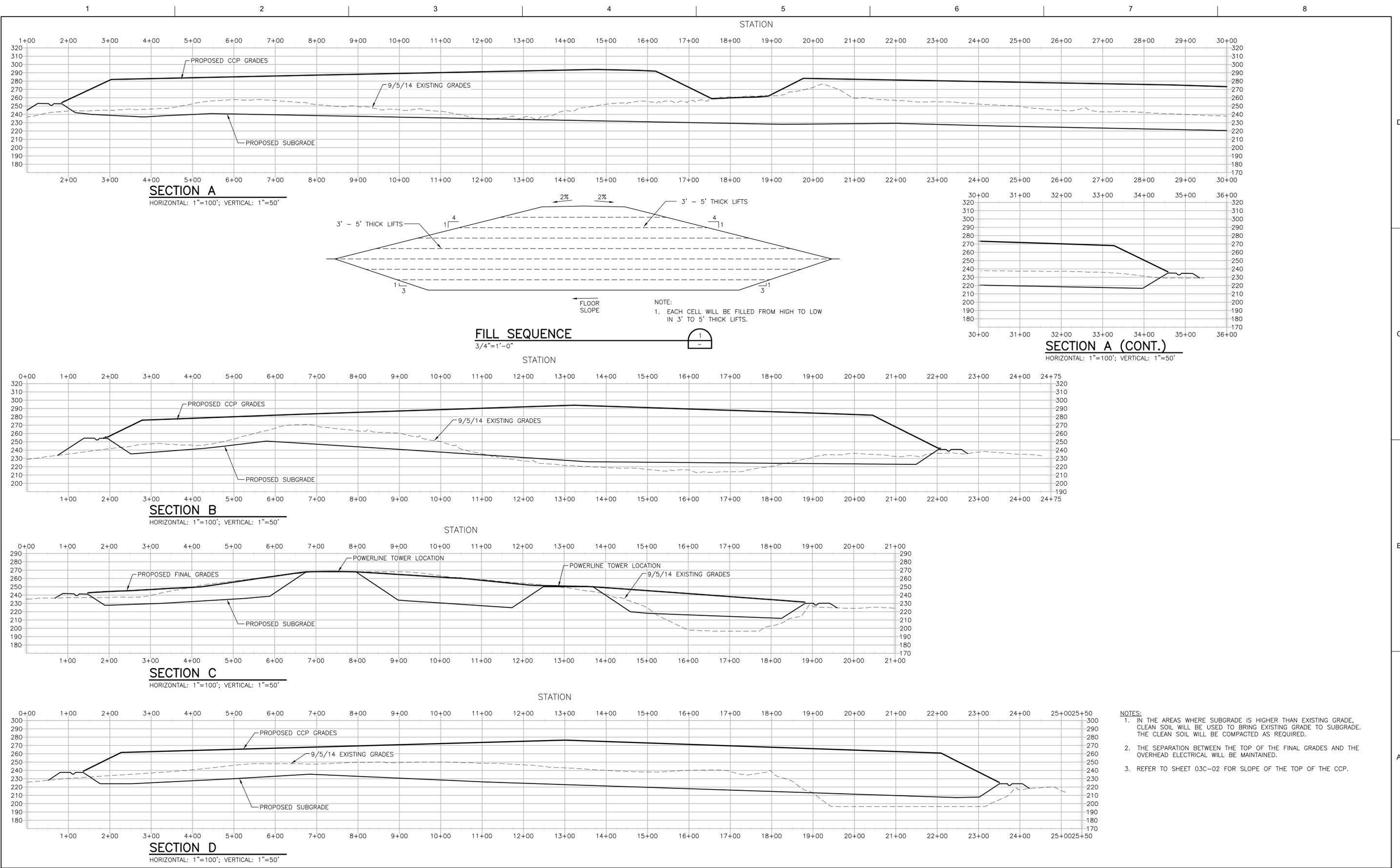
**RECLAMATION PLAN**



FILENAME 03C-02.dwg  
SCALE 1"=200'

SHEET  
**03C-02**

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- NOTES:**
1. IN THE AREAS WHERE SUBGRADE IS HIGHER THAN EXISTING GRADE, CLEAN SOIL WILL BE USED TO BRING EXISTING GRADE TO SUBGRADE. THE CLEAN SOIL WILL BE COMPACTED AS REQUIRED.
  2. THE SEPARATION BETWEEN THE TOP OF THE FINAL GRADES AND THE OVERHEAD ELECTRICAL WILL BE MAINTAINED.
  3. REFER TO SHEET 03C-02 FOR SLOPE OF THE TOP OF THE CCP.



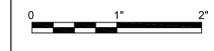
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MINE PERMIT TRANSFER/MODIFICATION  
MONCURE, NC

**SITE CROSS SECTIONS**



FILENAME 03C-03.dwg  
SCALE AS SHOWN

SHEET  
**03C-03**

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CONSTRUCTION SEQUENCE: PHASE 1

- OBTAIN AND MAINTAIN ON SITE THE LAND-DISTURBING PERMIT FROM NCDENR.
- CONTACT THE STATE INSPECTOR TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION CONFERENCE TO DISCUSS EROSION CONTROL MEASURES.
- INSTALL TREE PROTECTION FENCE, SILT FENCE, AND COMBINATION TREE PROTECTION AND SILT FENCE AS SHOWN ON PLANS, PRIOR TO ANY SITE DISTURBANCE ACTIVITIES (CLEARING, GRUBBING, GRADING, OR EXCAVATION). DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY NCDENR.
- CONTACT THE INSPECTOR FOR AN ON-SITE INSPECTION OF THE INSTALLED TREE PROTECTION FENCE. WHEN APPROVED, INSTALL REMAINING EROSION CONTROL DEVICES.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE AND OTHER MEASURES AS INDICATED ON CONSTRUCTION DOCUMENTS, CLEARING ONLY AS NECESSARY TO INSTALL THESE BEST MANAGEMENT PRACTICES (BMPs).
- INSPECT ALL EROSION CONTROL DEVICES AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/2" TO VERIFY THAT THEY ARE FUNCTIONING PROPERLY. ANY ACCUMULATED SEDIMENT SHALL BE REMOVED AND PLACED IN A DESIGNATED SPOIL DISPOSAL AREA APPROVED BY THE INSPECTOR. CONDUCT PERIODIC INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AND MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
- INSTALL SEDIMENT BASINS AND OTHER MEASURES AS INDICATED ON CONSTRUCTION DOCUMENTS AS SITE IS DEVELOPED.
- BEGIN CLEARING, GRUBBING, DEMOLITION, AND GRADING OF SITE.
- STABILIZE SITE PER EROSION CONTROL NOTES AS AREAS ARE BROUGHT TO ROUGH GRADES.
- SEE SHEET 02C-07 FOR PHASE 2 EROSION CONTROL CONSTRUCTION SEQUENCE.

1) GROUND STABILIZATION		
SITE AREA DISPOSITION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HOW ZONES)



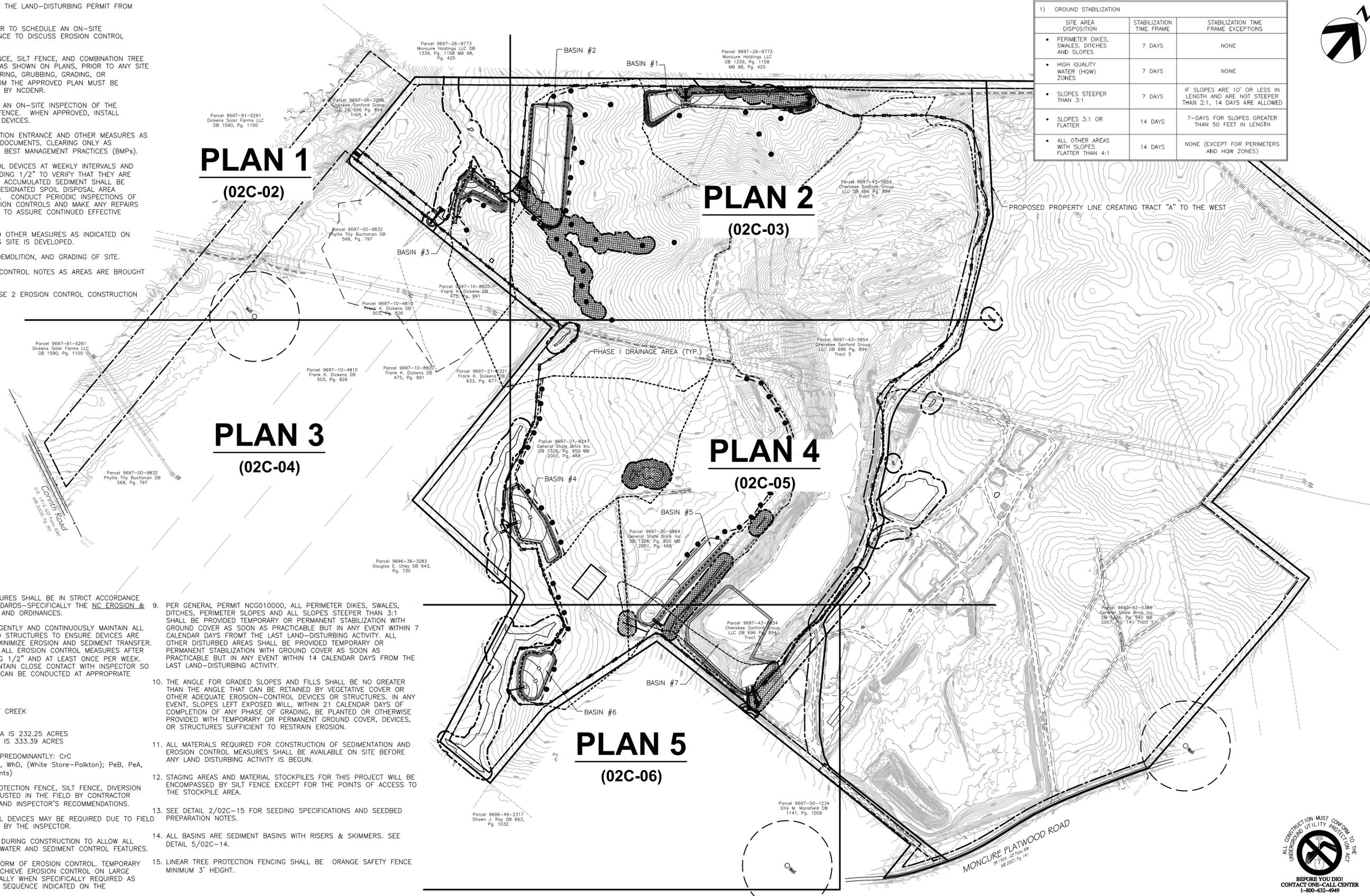
**PLAN 1**  
(02C-02)

**PLAN 2**  
(02C-03)

**PLAN 3**  
(02C-04)

**PLAN 4**  
(02C-05)

**PLAN 5**  
(02C-06)



**EROSION CONTROL NOTES**

- ALL EROSION CONTROL MEASURES SHALL BE IN STRICT ACCORDANCE WITH LOCAL AND STATE STANDARDS—SPECIFICALLY THE NC EROSION & SEDIMENT CONTROL MANUAL, AND ORDINANCES.
- THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL BMPs AND STRUCTURES TO ENSURE DEVICES ARE FUNCTIONING PROPERLY TO MINIMIZE EROSION AND SEDIMENT TRANSFER. CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AFTER EVERY RAIN EVENT EXCEEDING 1/2" AND AT LEAST ONCE PER WEEK. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE CONDUCTED AT APPROPRIATE STAGES OF CONSTRUCTION.
- SITE DATA:  
RIVER BASIN: CAPE FEAR  
VIA TRIBUTARIES TO GULF CREEK  
LATITUDE: 5.8027  
LONGITUDE: 79.0172  
THE TOTAL DENUDE AREA IS 232.25 ACRES  
THE TOTAL SITE ACREAGE IS 333.39 ACRES
- THE SOIL CLASSIFICATION IS PREDOMINANTLY: CrC (Carbonton-Brickhaven); WhC, WhD, (White Store-Polkton); PeB, PeA, PfF (Peawick); UdC (Udorthents)
- FINAL LOCATION OF TREE PROTECTION FENCE, SILT FENCE, DIVERSION DITCHES, ETC. SHALL BE ADJUSTED IN THE FIELD BY CONTRACTOR BASED ON SITE CONDITIONS AND INSPECTOR'S RECOMMENDATIONS.
- ADDITIONAL EROSION CONTROL DEVICES MAY BE REQUIRED DUE TO FIELD CONDITIONS OR AS DIRECTED BY THE INSPECTOR.
- THE SITE SHALL BE GRADED DURING CONSTRUCTION TO ALLOW ALL RUNOFF TO DRAIN TO STORMWATER AND SEDIMENT CONTROL FEATURES.
- STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDE AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE INDICATED ON THE CONSTRUCTION DOCUMENTS.
- PER GENERAL PERMIT NCG010000, ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1 SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.
- ALL MATERIALS REQUIRED FOR CONSTRUCTION OF SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE AVAILABLE ON SITE BEFORE ANY LAND DISTURBING ACTIVITY IS BEGUN.
- STAGING AREAS AND MATERIAL STOCKPILES FOR THIS PROJECT WILL BE ENCOMPASSED BY SILT FENCE EXCEPT FOR THE POINTS OF ACCESS TO THE STOCKPILE AREA.
- SEE DETAIL 2/02C-15 FOR SEEDING SPECIFICATIONS AND SEEDBED PREPARATION NOTES.
- ALL BASINS ARE SEDIMENT BASINS WITH RISERS & SKIMMERS. SEE DETAIL 5/02C-14.
- LINEAR TREE PROTECTION FENCING SHALL BE ORANGE SAFETY FENCE MINIMUM 3' HEIGHT.



ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT  
BEFORE YOU DIG!  
CONTACT ONE-CALL CENTER  
1-800-632-4949



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PROJECT MANAGER	M.D. PLUMMER, P.E.
DESIGNED BY	R. BAYSDEN, P.E.
DRAWN BY	R. BAYSDEN, P.E.
CHECKED BY	J. READLING, P.E.
PROJECT NUMBER	453925-237673-018
ISSUE DATE DESCRIPTION	A 11/2014 ISSUED FOR APPROVAL



BRICKHAVEN No. 2 MINE TRACT "A" MINE  
STRUCTURAL FILL  
MONCURE, NC



FILENAME 02C-01.dwg  
SCALE 1"=300'

SHEET  
**02C-01**

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Parcel 9697-26-9773  
Moncure Holdings LLC DB  
1339, Pg. 1158 MB 98,  
Pg. 425



Parcel 9697-91-5261  
Dickens Solar Farms LLC  
DB 1590, Pg. 1100

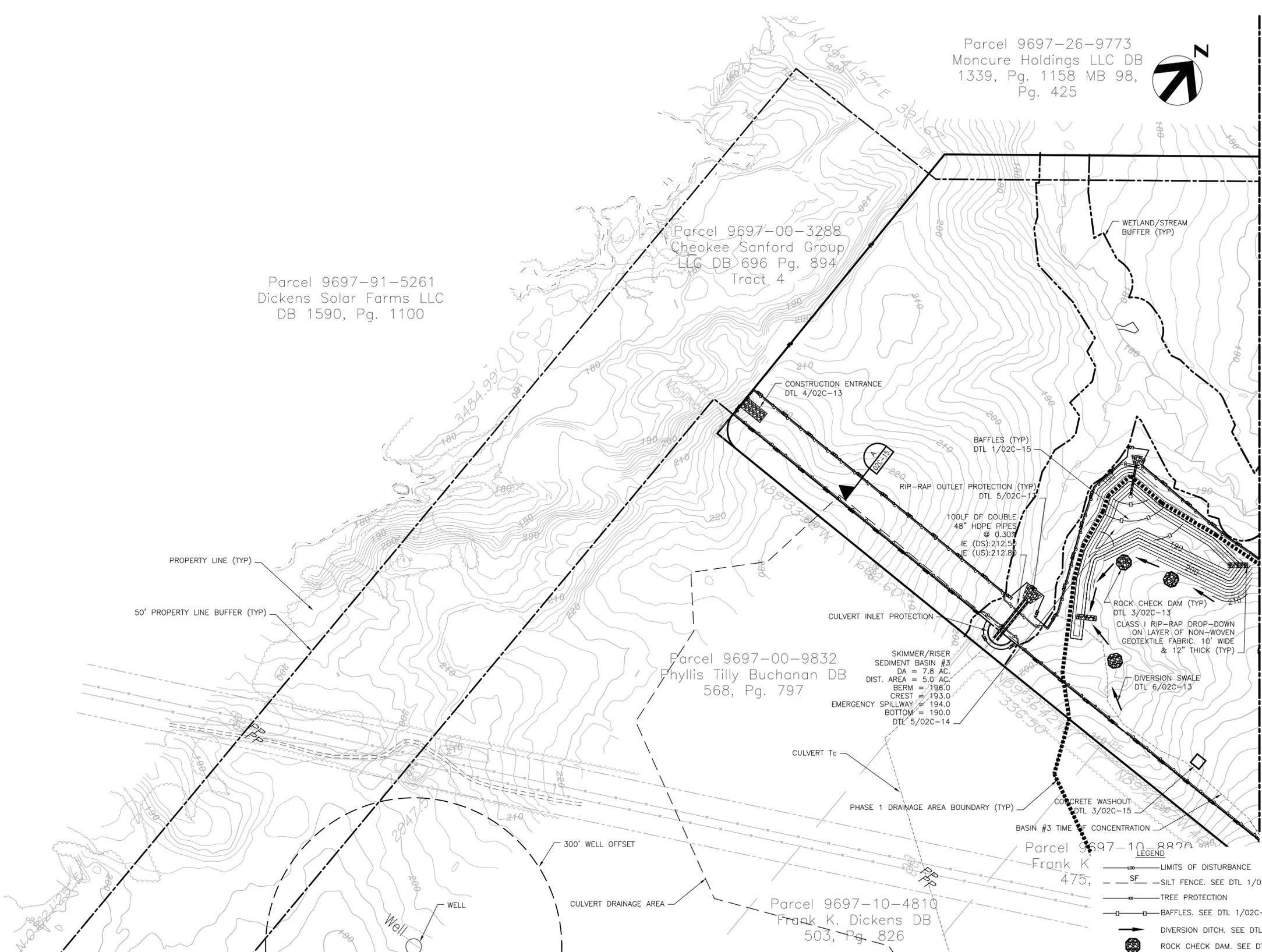
Parcel 9697-00-3288  
Cheokee Sanford Group  
LLC DB 696 Pg. 894  
Tract 4

Parcel 9697-00-9832  
Phyllis Tilly Buchanan DB  
568, Pg. 797

Parcel 9697-10-4810  
Frank K. Dickens DB  
503, Pg. 826

Parcel 9697-10-8870  
Frank K  
475,

- GENERAL NOTES:**
- SEE SHEET 02C-01 FOR EROSION CONTROL NOTES AND PHASE I CONSTRUCTION SEQUENCE.
  - SEE SHEETS 02C-07 - 02C-13 FOR PHASE 2 EROSION CONTROL.
  - ALL AREAS WITHIN LIMITS OF DISTURBANCE TO BE CLEARED.



MATCHLINE 02C-03

MATCHLINE 02C-04

- LEGEND**
- LIMITS OF DISTURBANCE
  - SF SILT FENCE. SEE DTL 1/02C-13
  - TREE PROTECTION
  - BAFFLES. SEE DTL 1/02C-15
  - DIVERSION DITCH. SEE DTL 6/02C-13
  - ROCK CHECK DAM. SEE DTL 3/02C-13
  - CLASS 1 RIP-RAP DROP-DOWN
  - WETLAND/STREAM BUFFER AREAS TO BE REMOVED



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FILENAME | 02C-02.dwg  
SCALE | 1"=100'

SHEET  
**02C-02**

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SKIMMER/RISER  
SEDIMENT BASIN #2  
DA = 54.6 AC.  
DIST. AREA = 54.6 AC.  
BERM = 200.0  
CREST = 196.0  
EMERGENCY SPILLWAY = 198.0  
BOTTOM = 193.0  
DTL 5/02C-14

SKIMMER/RISER  
SEDIMENT BASIN #1  
DA = 19.8 AC.  
DIST. AREA = 18.1 AC.  
BERM = 219.0  
CREST = 216.0  
EMERGENCY SPILLWAY = 218.0  
BOTTOM = 213.0  
DTL 5/02C-14

Parcel 9697-26-9773  
Moncure Holdings LLC  
DB 1339, Pg. 1158  
MB 98, Pg. 425

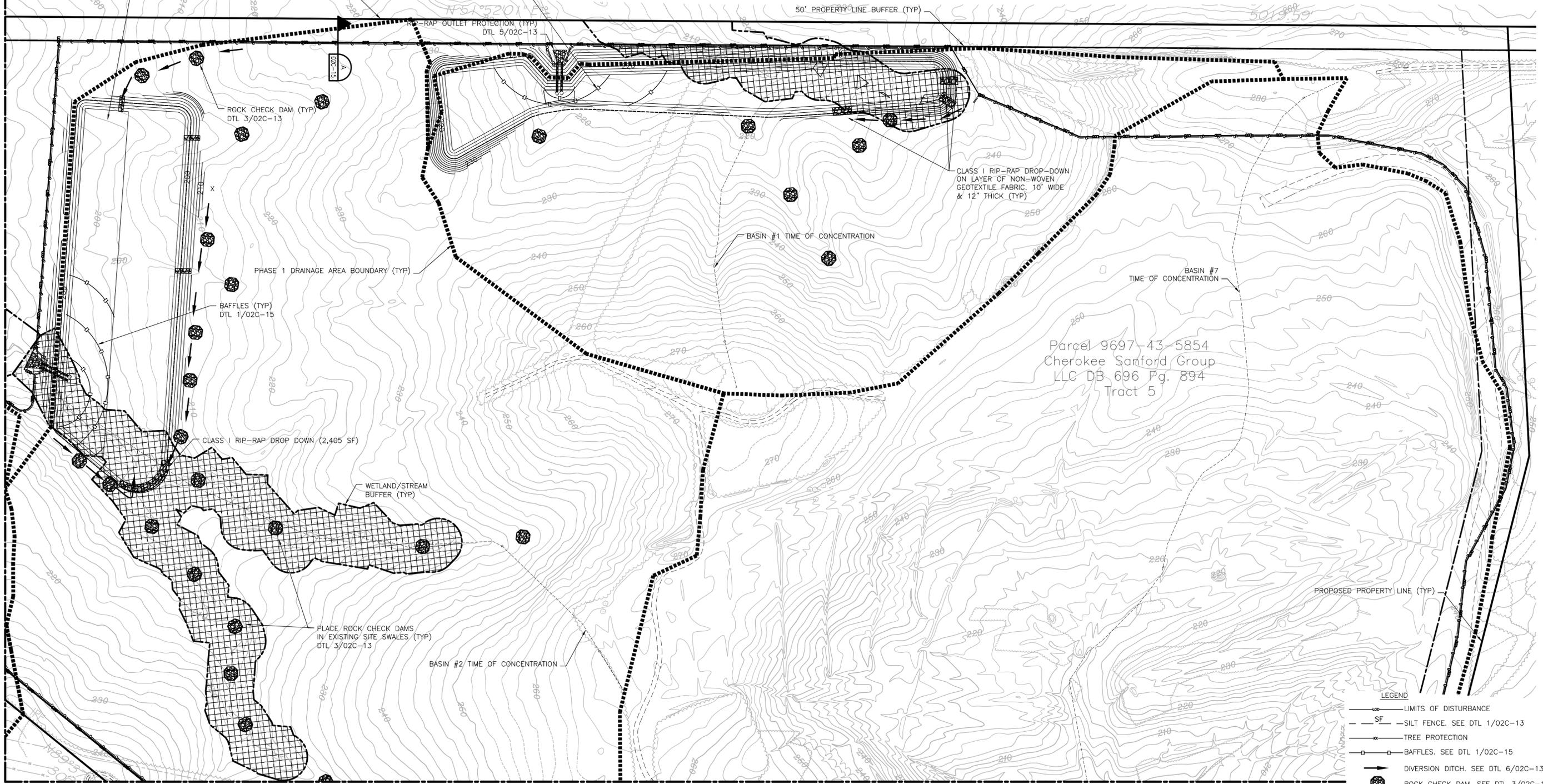
**GENERAL NOTES:**

1. SEE SHEET 02C-01 FOR EROSION CONTROL NOTES AND PHASE 1 CONSTRUCTION SEQUENCE.
2. SEE SHEETS 02C-07 - 02C-13 FOR PHASE 2 EROSION CONTROL.
3. ALL AREAS WITHIN LIMITS OF DISTURBANCE TO BE CLEARED.



MATCHLINE 02C-02

MATCHLINE 02C-05



**LEGEND**

- LIMITS OF DISTURBANCE
- SF - SILT FENCE. SEE DTL 1/02C-13
- TREE PROTECTION
- BAFFLES. SEE DTL 1/02C-15
- DIVERSION DITCH. SEE DTL 6/02C-13
- ROCK CHECK DAM. SEE DTL 3/02C-13
- CLASS I RIP-RAP DROP-DOWN
- WETLAND/STREAM BUFFER AREAS TO BE REMOVED



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FILENAME | 02C-03.dwg  
SCALE | 1"=100'

SHEET  
**02C-03**

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MATCHLINE 02C-02



Parcel 9697-91-5261  
Dickens Solar Farms LLC  
DB 1590, Pg. 1100

300' WELL OFFSET

Parcel 9697-10-4810  
Frank K. Dickens DB  
503, Pg. 826

Parcel 9697-10-8820  
Frank K. Dickens DB  
475, Pg. 991

Parcel 9697-21-2321  
Frank K. Dickens DB  
633, Pg. 677

Parcel 9697-00-9832  
Phyllis Tilly Buchanan DB  
568, Pg. 797

S.R. 1916 (60' Public RM)  
Cornth Road  
MB 2009, Pg. 90

Gas Line  
Marker

PHASE 1 DRAINAGE AREA BOUNDARY (TYP)

WETLAND/STREAM  
BUFFER (TYP)

PROPERTY LINE (TYP)

50' PROPERTY LINE BUFFER (TYP)

RIP-RAP OUTLET  
PROTECTION (TYP)  
DTL 5/02C-13

Parcel 9696-36-3283  
Douglas E. Utley DB 943,  
Pg. 730

MATCHLINE 02C-05

GENERAL NOTES:

- SEE SHEET 02C-01 FOR EROSION CONTROL NOTES AND PHASE 1 CONSTRUCTION SEQUENCE.
- SEE SHEETS 02C-07 - 02C-13 FOR PHASE 2 EROSION CONTROL.
- ALL AREAS WITHIN LIMITS OF DISTURBANCE TO BE CLEARED.



LEGEND

- LIMITS OF DISTURBANCE
- - - SF --- SILT FENCE. SEE DTL 1/02C-13
- TREE PROTECTION
- BAFFLES. SEE DTL 1/02C-15
- DIVERSION DITCH. SEE DTL 6/02C-13
- ROCK CHECK DAM. SEE DTL 3/02C-13
- CLASS I RIP-RAP DROP-DOWN
- WETLAND/STREAM BUFFER AREAS TO BE REMOVED

MATCHLINE 02C-06



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CHECKED BY	J. READLING, P.E.
ISSUE DATE	DESCRIPTION
A 11/2014	ISSUED FOR APPROVAL
PROJECT NUMBER	453925-237673-018



BRICKHAVEN No. 2 MINE TRACT "A" MINE  
STRUCTURAL FILL  
MONCURE, NC

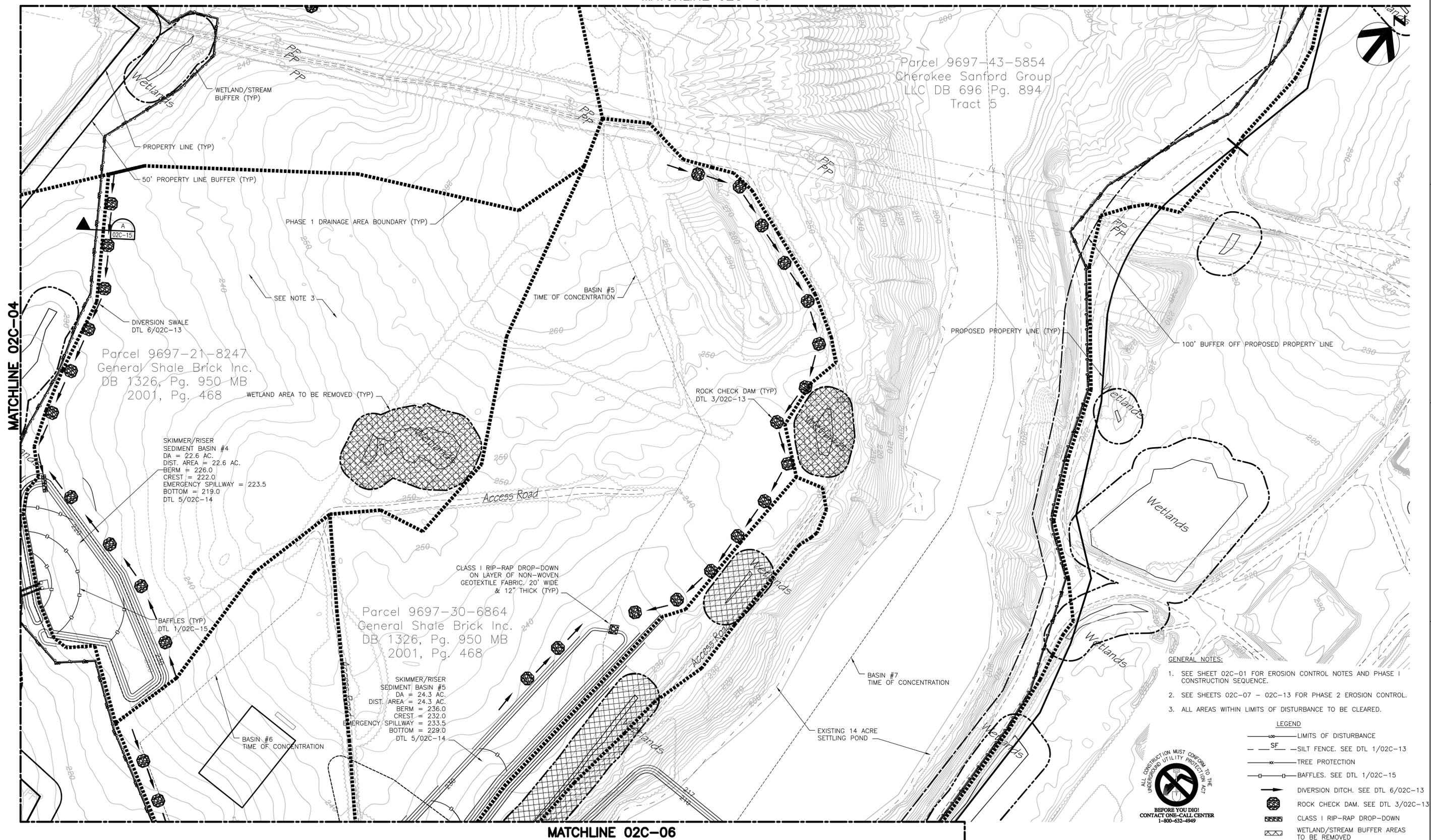


FILENAME | 02C-04.dwg  
SCALE | 1"=100'

SHEET  
02C-04

EROSION AND SEDIMENTATION  
CONTROL PLAN - PHASE 1  
PLAN 3

MATCHLINE 02C-04



Parcel 9697-43-5854  
Cherokee Sanford Group  
LLC DB 696 Pg. 894  
Tract 5

Parcel 9697-21-8247  
General Shale Brick Inc.  
DB 1326, Pg. 950 MB  
2001, Pg. 468

Parcel 9697-30-6864  
General Shale Brick Inc.  
DB 1326, Pg. 950 MB  
2001, Pg. 468

- GENERAL NOTES:
- SEE SHEET 02C-01 FOR EROSION CONTROL NOTES AND PHASE I CONSTRUCTION SEQUENCE.
  - SEE SHEETS 02C-07 - 02C-13 FOR PHASE 2 EROSION CONTROL.
  - ALL AREAS WITHIN LIMITS OF DISTURBANCE TO BE CLEARED.

- LEGEND
- LIMITS OF DISTURBANCE
  - SF- SILT FENCE. SEE DTL 1/02C-13
  - X- TREE PROTECTION
  - O-O- BAFFLES. SEE DTL 1/02C-15
  - >- DIVERSION DITCH. SEE DTL 6/02C-13
  - ROCK CHECK DAM. SEE DTL 3/02C-13
  - ▨ CLASS 1 RIP-RAP DROP-DOWN
  - ▩ WETLAND/STREAM BUFFER AREAS TO BE REMOVED



BEFORE YOU DIG!  
CONTACT ONE-CALL CENTER  
1-800-632-4949



HDR Engineering Inc.  
of the Carolinas  
440 S. Church St. Suite 1000  
Charlotte, NC 28202-2075  
704.338.6700  
N.C.B.E.L.S. License Number F-0116

PROJECT MANAGER	M.D. PLUMMER, P.E.
DESIGNED BY	R. BAYSDEN, P.E.
DRAWN BY	R. BAYSDEN, P.E.
CHECKED BY	J. READLING, P.E.
PROJECT NUMBER	453925-237673-018

ISSUE	DATE	DESCRIPTION
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BRICKHAVEN No. 2 MINE TRACT "A" MINE  
STRUCTURAL FILL  
MONCURE, NC



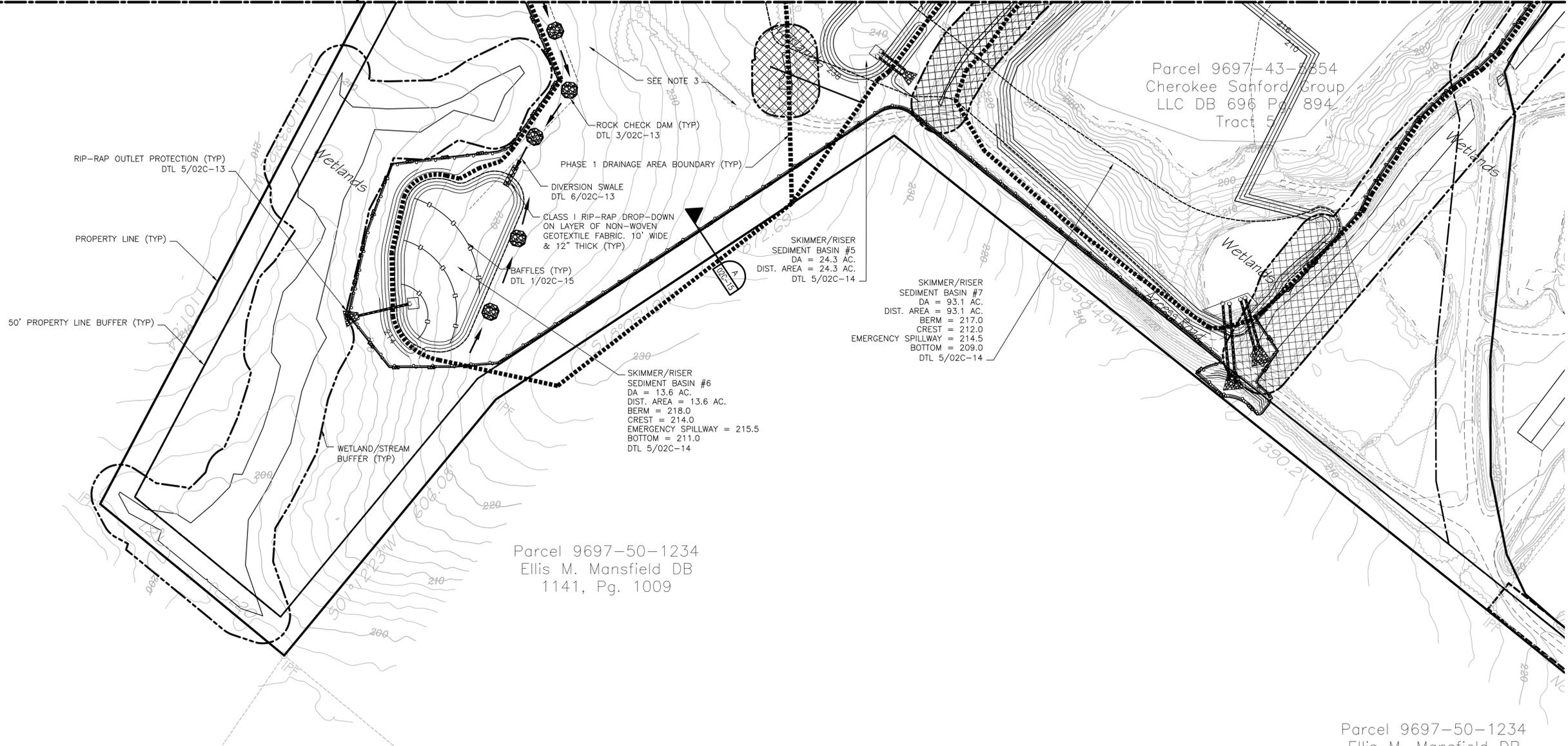
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SCALE | 1"=100'

SHEET  
02C-05

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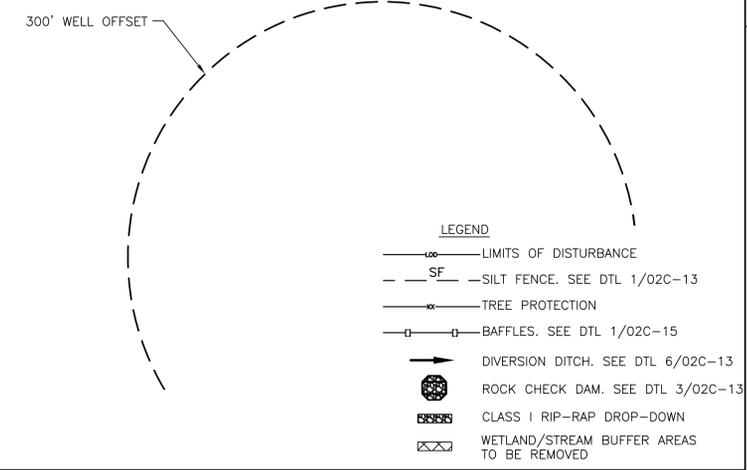
MATCHLINE 02C-04

MATCHLINE 02C-05



GENERAL NOTES:

1. SEE SHEET 02C-01 FOR EROSION CONTROL NOTES AND PHASE I CONSTRUCTION SEQUENCE.
2. SEE SHEETS 02C-07 - 02C-13 FOR PHASE 2 EROSION CONTROL.
3. ALL AREAS WITHIN LIMITS OF DISTURBANCE TO BE CLEARED.



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of the Carolinas

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CHECKED BY	J. READLING, P.E.	
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BRICKHAVEN No. 2 MINE TRACT "A" MINE  
STRUCTURAL FILL  
MONCURE, NC



FILENAME | 02C-06.dwg  
SCALE | 1"=100'

SHEET  
02C-06

EROSION AND SEDIMENTATION  
CONTROL PLAN - PHASE 1  
PLAN 5

D  
C  
B  
A

A

02C-06

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CONSTRUCTION SEQUENCE: PHASE 2

1. INSPECT ALL EROSION CONTROL DEVICES AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/2" TO VERIFY THAT THEY ARE FUNCTIONING PROPERLY. ANY ACCUMULATED SEDIMENT SHALL BE REMOVED AND PLACED IN A DESIGNATED SPOIL DISPOSAL AREA APPROVED BY THE INSPECTOR. CONDUCT PERIODIC INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AND MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
2. STABILIZE SITE PER EROSION CONTROL NOTES AS ARE BROUGHT TO ROUGH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. ER GENERAL PERMIT NCG010000, ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1 SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
3. ONCE THE STORM NETWORK IS COMPLETELY CONSTRUCTED AND ALL INLETS ARE PROPERLY PROTECTED, PHASE OUT THE TEMPORARY SEDIMENT BASINS TO COMPLETE ALL SITE IMPROVEMENTS AS APPROVED BY THE EROSION CONTROL INSPECTOR.
4. CONTACT THE NCDENR INSPECTOR FOR AN INSPECTION WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE FULLY PLANTED AND STABILIZED.
5. WHEN SITE IS APPROVED, REMOVE ALL EROSION CONTROL DEVICES AND STABILIZE THESE AND ANY RESULTING BARE AREAS.
6. COMPLETE INSTALLATION OF REMAINING PERMANENT EROSION CONTROL DEVICES.
7. CONTACT THE NCDENR INSPECTOR FOR A FINAL SITE INSPECTION WHEN VEGETATION HAS BECOME ESTABLISHED.

**PLAN 1**  
(02C-08)

**PLAN 2**  
(02C-09)

**PLAN 3**  
(02C-10)

**PLAN 4**  
(02C-11)

**PLAN 5**  
(02C-12)

GENERAL NOTES

- 1) SEE SHEET 02C-01 FOR EROSION CONTROL GENERAL NOTES AND THE PHASE 1 EROSION CONTROL SEQUENCE.
- 2) NOTE THAT SLOPE DRAINS & PROTECTION (DTL 6/02C-15) AND TEMPORARY DIVERSION BERMS (DTL 8 / 02C-13) SHALL BE UTILIZED AS FILL PROGRESSES. DETAILS IN NOTE #2 ABOVE ARE FOR FINAL APPLICATION.
- 3) PROPOSED STOCKPILE AREAS. INSTALLATION OF STOCKPILES SHALL NOT IMPEDE DESIGNED DRAINAGE AREA. ALL STOCKPILES SHALL HAVE PERIMETER SILT FENCE WITH ACCESS ON THE HIGH SIDE. STOCKPILES ARE FOR EXCAVATED MATERIAL TO BE USED FOR STRUCTURAL CAP.

1) GROUND STABILIZATION		
SITE AREA DISPOSITION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
• PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
• HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
• SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
• SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
• ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HOW ZONES)



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of the Carolinas  
  
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DRAWN BY	R. BAYSDEN, P.E.
CHECKED BY	J. READLING, P.E.
PROJECT NUMBER	453925-237673-018
ISSUE DATE	DESCRIPTION
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BRICKHAVEN No. 2 MINE TRACT "A" MINE  
STRUCTURAL FILL  
MONCURE, NC



FILENAME 02C-07.dwg  
SCALE 1"=300'

SHEET  
02C-07



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Parcel 9697-26-9773  
 Moncure Holdings LLC DB  
 1339, Pg. 1158 MB 98,  
 Pg. 425



Parcel 9697-91-5261  
 Dickens Solar Farms LLC  
 DB 1590, Pg. 1100

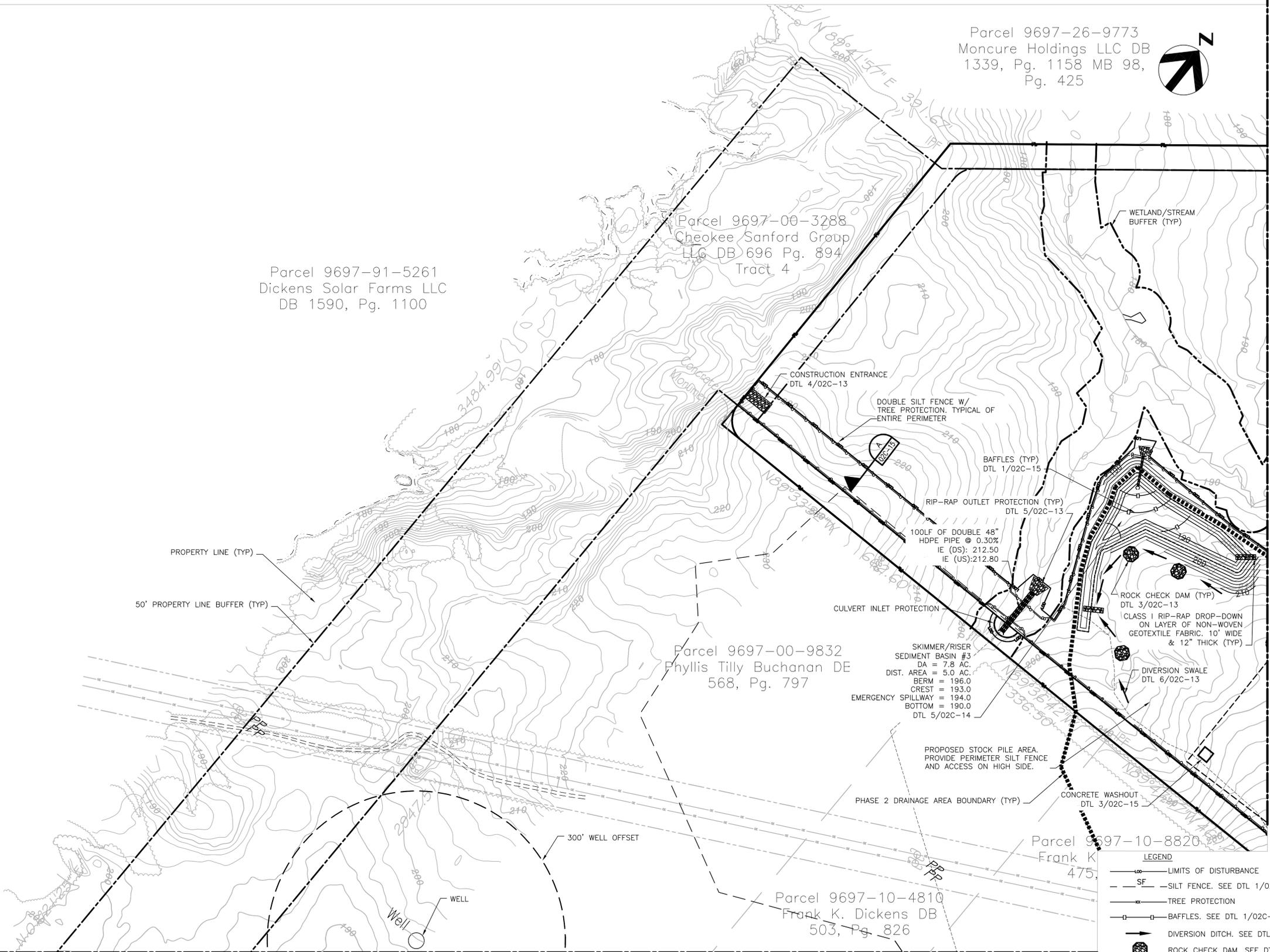
Parcel 9697-00-3288  
 Cheochee Sanford Group  
 LLC DB 696 Pg. 894  
 Tract 4

Parcel 9697-00-9832  
 Phyllis Tilly Buchanan DE  
 568, Pg. 797

Parcel 9697-10-4810  
 Frank K. Dickens DB  
 503, Pg. 826

Parcel 9697-10-8820  
 Frank K  
 475,

- GENERAL NOTES:**
- SEE SHEET 02C-07 FOR EROSION CONTROL NOTES AND PHASE 2 CONSTRUCTION SEQUENCE.
  - SEE SHEETS 02C-02 - 02C-06 FOR PHASE 1 EROSION CONTROL.



**LEGEND**

- LIMITS OF DISTURBANCE
- SF SILTS FENCE. SEE DTL 1/02C-13
- TREE PROTECTION
- BAFFLES. SEE DTL 1/02C-15
- DIVERSION DITCH. SEE DTL 6/02C-13
- ROCK CHECK DAM. SEE DTL 3/02C-13
- CLASS I RIP-RAP DROP-DOWN

MATCHLINE 02C-09

MATCHLINE 02C-10



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BRICKHAVEN No. 2 MINE TRACT "A" MINE  
 STRUCTURAL FILL  
 MONCURE, NC



FILENAME | 02C-08.dwg  
 SCALE | 1"=100'

SHEET  
**02C-08**

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**GENERAL NOTES:**

- SEE SHEET 02C-07 FOR EROSION CONTROL NOTES AND PHASE 2 CONSTRUCTION SEQUENCE.
- SEE SHEETS 02C-02 - 02C-06 FOR PHASE 1 EROSION CONTROL.

**LEGEND**

- LIMITS OF DISTURBANCE
- SF SILT FENCE. SEE DTL 1/02C-13
- TREE PROTECTION
- BAFFLES. SEE DTL 1/02C-15
- DIVERSION DITCH. SEE DTL 6/02C-13
- ROCK CHECK DAM. SEE DTL 3/02C-13
- CLASS I RIP-RAP DROP-DOWN



SKIMMER/RISER SEDIMENT BASIN #2  
 DA = 53.8 AC.  
 DIST. AREA = 53.8 AC.  
 BERM = 200.0  
 CREST = 196.0  
 EMERGENCY SPILLWAY = 198.0  
 BOTTOM = 193.0  
 DTL 5/02C-14

SKIMMER/RISER SEDIMENT BASIN #1  
 DA = 40.4 AC.  
 DIST. AREA = 38.7 AC.  
 BERM = 220.0  
 CREST = 216.0  
 EMERGENCY SPILLWAY = 218.0  
 BOTTOM = 213.0  
 DTL 5/02C-14

Parcel 9697-26-9773  
 Moncure Holdings LLC  
 DB 1339, Pg. 1158  
 MB 98, Pg. 425

Parcel 9697-43-8854  
 Cherokee Sanford Group  
 LLC DB 696 Pg. 894  
 Tract 5

MATCHLINE 02C-08

MATCHLINE 02C-11



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BRICKHAVEN No. 2 MINE TRACT "A" MINE  
 STRUCTURAL FILL  
 MONCURE, NC

**EROSION AND SEDIMENTATION CONTROL PLAN - PHASE 2 PLAN 2**



FILENAME | 02C-09.dwg  
 SCALE | 1"=100'

SHEET  
**02C-09**

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MATCHLINE 02C-08

Parcel 9697-91-5261  
Dickens Solar Farms LLC  
DB 1590, Pg. 1100

Parcel 9697-10-4810  
Frank K. Dickens DB  
503, Pg. 826

Parcel 9697-10-8820  
Frank K. Dickens DB  
475, Pg. 991

Parcel 9697-21-2321  
Frank K. Dickens DB  
633, Pg. 677

Parcel 9697-00-9832  
Phyllis Tilly Buchanan DB  
568, Pg. 797

Parcel 9696-36-3283  
Douglas E. Utley DB 943,  
Pg. 730

GENERAL NOTES:

- SEE SHEET 02C-07 FOR EROSION CONTROL NOTES AND PHASE 2 CONSTRUCTION SEQUENCE.
- SEE SHEETS 02C-02 - 02C-06 FOR PHASE 1 EROSION CONTROL.

LEGEND

- LIMITS OF DISTURBANCE
- SF — SILT FENCE. SEE DTL 1/02C-13
- TREE PROTECTION
- BAFFLES. SEE DTL 1/02C-15
- DIVERSION DITCH. SEE DTL 6/02C-13
- ROCK CHECK DAM. SEE DTL 3/02C-13
- CLASS I RIP-RAP DROP-DOWN

MATCHLINE 02C-12

EROSION AND SEDIMENTATION  
CONTROL PLAN - PHASE 2  
PLAN 3



FILENAME | 02C-10.dwg  
SCALE | 1"=100'

SHEET  
02C-10



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Charlotte, NC 28202-2075  
704.338.6700  
N.C.B.E.L.S. License Number F-0116

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BRICKHAVEN No. 2 MINE TRACT "A" MINE  
STRUCTURAL FILL  
MONCURE, NC

D  
C  
B  
A



MATCHLINE 02C-11

S.R. 1916 (60' Public RM)  
Cornth Road  
MB 2009, Pg. 90

Gas Line  
Marker

50' ± 2' 104" W

WETLAND/STREAM  
BUFFER (TYP)

PROPERTY LINE (TYP)

50' PROPERTY LINE BUFFER (TYP)

RIP-RAP OUTLET  
PROTECTION (TYP)  
DTL 5/02C-13



A

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MATCHLINE 02C-09



MATCHLINE 02C-10

MATCHLINE 02C-12

- GENERAL NOTES:
- SEE SHEET 02C-07 FOR EROSION CONTROL NOTES AND PHASE 2 CONSTRUCTION SEQUENCE.
  - SEE SHEETS 02C-02 - 02C-06 FOR PHASE 1 EROSION CONTROL.
  - SHADED AREA INDICATES STRUCTURAL FILL AREA REQUIRED TO BE VEGETATE/STABILIZED PRIOR TO ACTIVE DISTURBANCE/GRADING NORTH OF BISECTING POWER LINES. SEE PHASE 2 CONSTRUCTION SEQUENCE.

**LEGEND**

- LIMITS OF DISTURBANCE
- SF — SILT FENCE. SEE DTL 1/02C-13
- TREE PROTECTION
- BAFFLES. SEE DTL 1/02C-15
- DIVERSION DITCH. SEE DTL 6/02C-13
- ROCK CHECK DAM. SEE DTL 3/02C-13
- CLASS 1 RIP-RAP DROP-DOWN
- SEE NOTE 3

ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT  
BEFORE YOU DIG! CONTACT ONE-CALL CENTER 1-800-632-4949



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MONCURE, NC



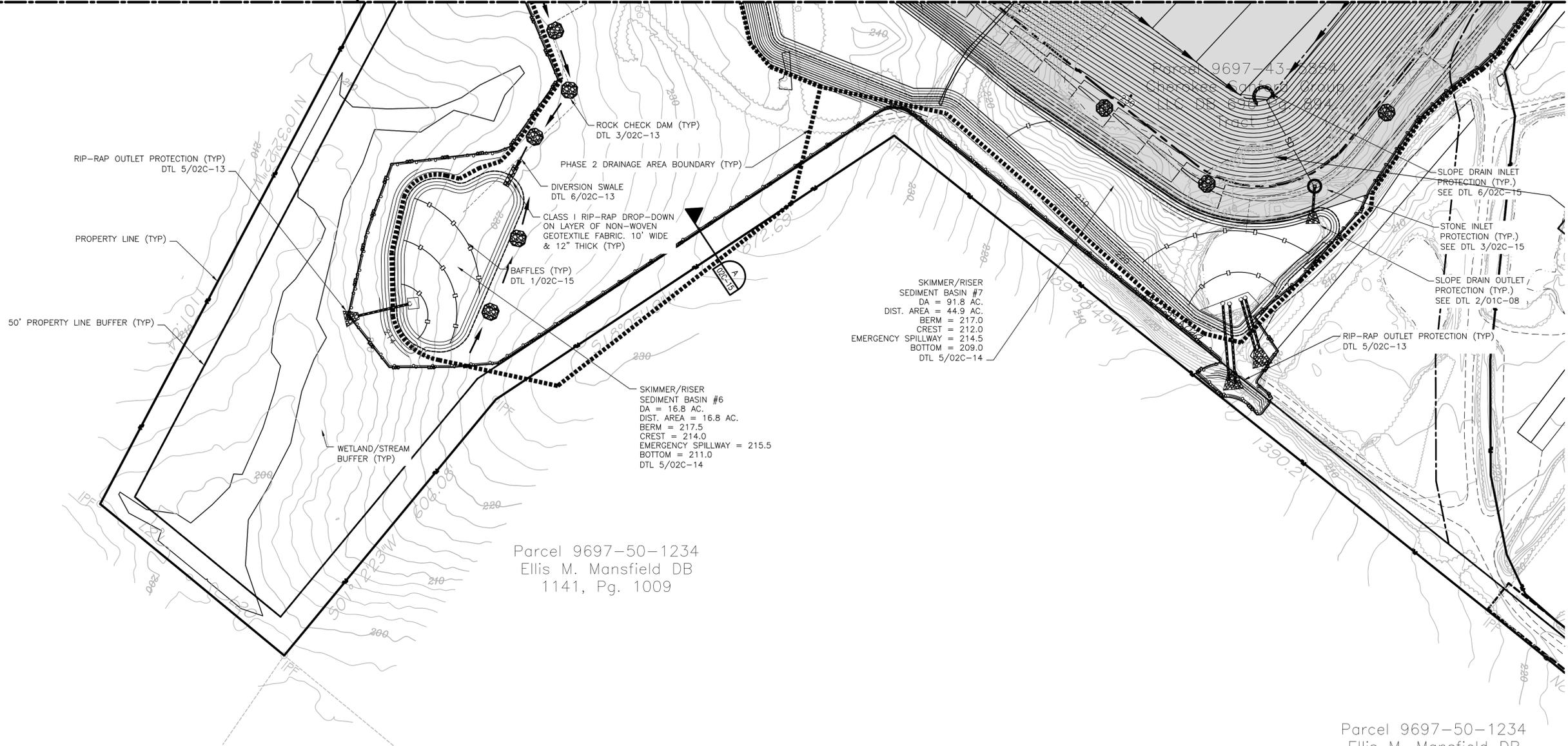
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SHEET  
02C-11

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MATCHLINE 02C-10

MATCHLINE 02C-11



Parcel 9696-49-2317  
Shawn J. Ray DB 663,  
Pg. 1032

Parcel 9697-50-1234  
Ellis M. Mansfield DB  
1141, Pg. 1009

Parcel 9697-50-1234  
Ellis M. Mansfield DB  
1141, Pg. 1009

GENERAL NOTES:

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- SEE SHEETS 02C-02 - 02C-06 FOR PHASE 1 EROSION CONTROL.
- SHADED AREA INDICATES STRUCTURAL FILL AREA REQUIRED TO BE VEGETATE/STABILIZED PRIOR TO ACTIVE DISTURBANCE/GRADING NORTH OF BISECTING POWER LINES. SEE PHASE 2 CONSTRUCTION SEQUENCE.

LEGEND

- LIMITS OF DISTURBANCE
- SF — SILT FENCE. SEE DTL 1/02C-13
- TREE PROTECTION
- BAFFLES. SEE DTL 1/02C-15
- DIVERSION DITCH. SEE DTL 6/02C-13
- ROCK CHECK DAM. SEE DTL 3/02C-13
- CLASS I RIP-RAP DROP-DOWN
- SEE NOTE 3

300' WELL OFFSET



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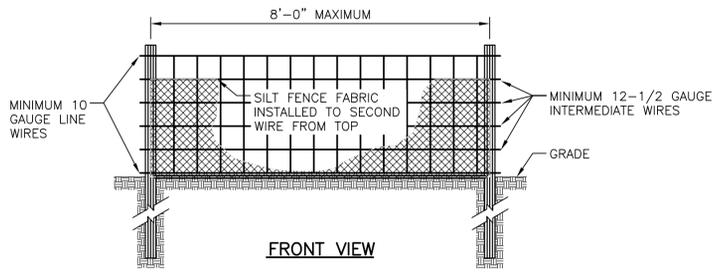
BRICKHAVEN No. 2 MINE TRACT "A" MINE  
STRUCTURAL FILL  
MONCURE, NC

EROSION AND SEDIMENTATION  
CONTROL PLAN - PHASE 2  
PLAN 5

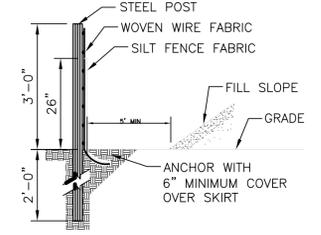


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SCALE | 1"=100'

SHEET  
02C-12



FRONT VIEW



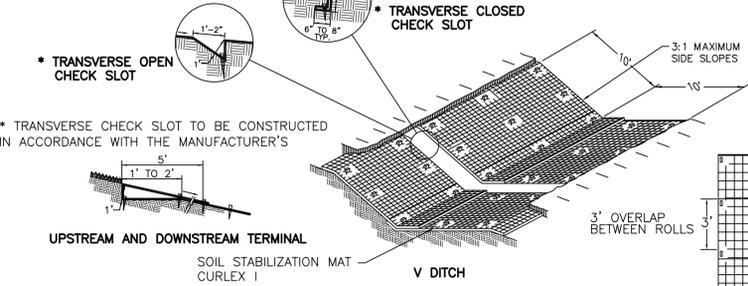
SIDE VIEW

- NOTE:**
1. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.
  2. SILT FENCE IS TO BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
  3. INSPECT FREQUENTLY AND REPAIR OR REPLACE PROMPTLY AS NEEDED.
  4. REMOVE SEDIMENT DEPOSITED AS NEEDED TO PROVIDE STORAGE VOLUME FOR THE NEXT RAIN AND TO REMOVE PRESSURE ON THE SILT FENCE. UNIFORMLY DISTRIBUTE ON THE SOURCE AREA PRIOR TO TOPSOILING.

**TEMPORARY SILT FENCE DETAIL**

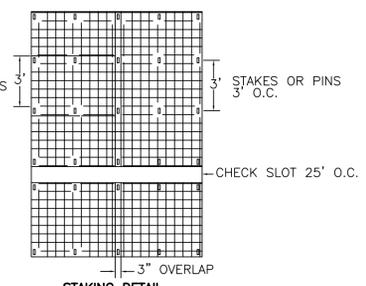
NOT TO SCALE

RECOMMENDATION FOR PREFERRED INSTALLATION



UPSTREAM AND DOWNSTREAM TERMINAL

SOIL STABILIZATION MAT CURLEX I  
LINING SHALL EXTEND 10' UP SIDE SLOPES OF LINED AREAS. LINING SHALL BE CURLEX I OR EQUAL. SIDE SLOPES SHALL BE A MAXIMUM SLOPE OF 3 TO 1. LINING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION PROCEDURES.



STAKING DETAIL

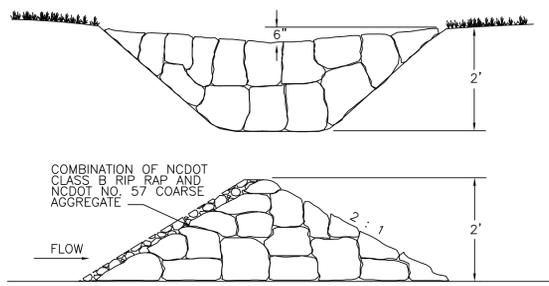
NOTE: STAKES SHALL BE WOOD OR METAL AS RECOMMENDED BY MANUFACTURER AND SHALL BE AT LEAST 12" IN LENGTH.

**SLOPE INSTALLATION-EROSION CONTROL BLANKET NOTES:**

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP x 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS DOWN OR HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED BY PLACING STAPLES/STAKES IN APPROXIMATE LOCATIONS, SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

**TYPICAL SECTION FOR SOIL STABILIZATION MAT LINED AREAS (TYP.)**

NTS

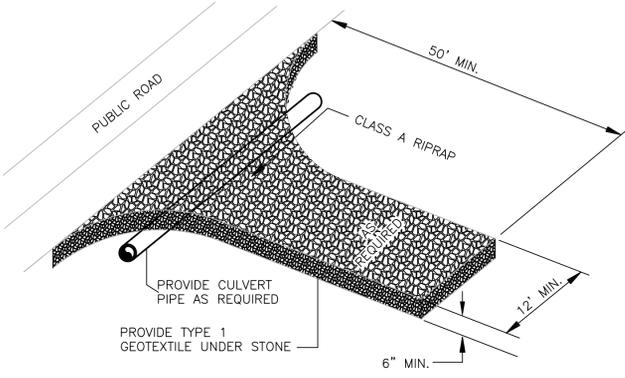


COMBINATION OF NCDOT CLASS B RIP RAP AND NCDOT NO. 57 COARSE AGGREGATE

NOTE: PLACE EVERY 100' ALONG FLOW PATH.

**ROCK CHECK DAM**

NTS



**TEMPORARY GRAVEL CONSTRUCTION ENTRANCE DETAIL**

NOT TO SCALE

NCDENR 6.06

NOTES:

CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE SHOWN ON PLANS.

RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.

THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.

THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1

ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.

THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.

NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON UNLESS OTHERWISE SHOWN.

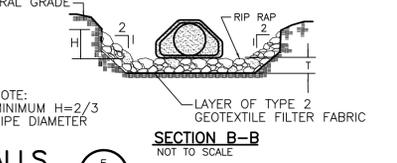
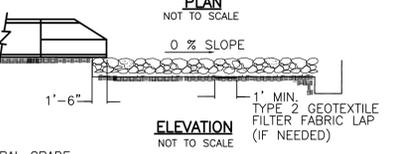
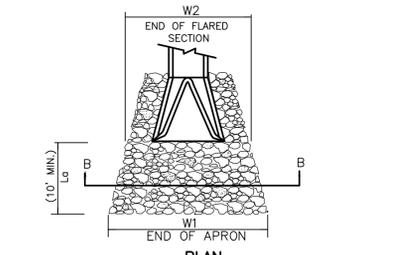
TYPE 2 GEOTEXTILE FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.

ANY DISTURBED AREA FROM END OF APRON TO RECEIVING CHANNEL MUST BE STABILIZED.

$T = 1.5 \times d_{max}$

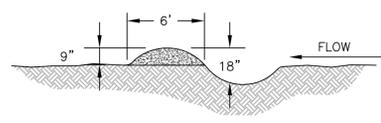
ID	W1	W2	L <sub>a</sub>	D50	D <sub>max</sub>	T
B1	30'	12'	26'	11"	16"	24"
B2	37'	15'	32'	12"	18"	24"
B3	23'	9'	20'	7"	10.5"	12"
B4	26'	10.5'	22'	8.5"	13"	18"
B5	30'	12'	26'	9"	13.5"	18"
B6	30'	12'	26'	11"	16"	24"
* B7	37'	15'	32'	12"	18"	24"

\* FOR EACH OF TWO DISCHARGE POINTS



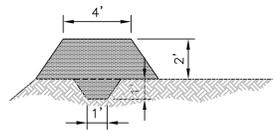
**RIPRAP APRON AT PIPE OUTFALLS**

NTS



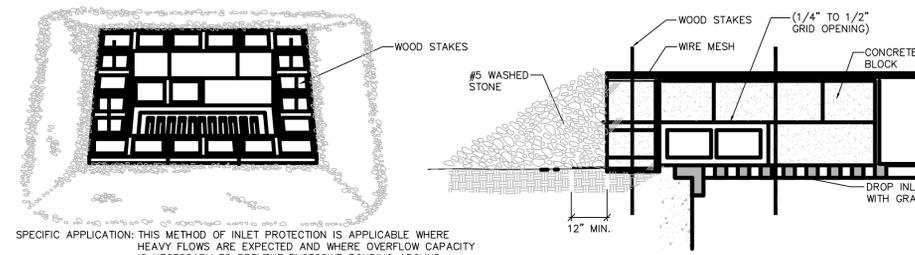
**TEMPORARY DIVERSION SWALE**

N.T.S.



**DIVERSION DIKE**

N.T.S.



SPECIFIC APPLICATION: THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

**BLOCK AND GRAVEL STONE INLET SEDIMENT FILTER**

NOT TO SCALE



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ISSUE	DATE	DESCRIPTION
A	11/2014	ISSUED FOR APPROVAL

PROJECT MANAGER	M.D. PLUMMER, P.E.
DESIGNED BY	R. BAYSDEN, P.E.
DRAWN BY	R. BAYSDEN, P.E.
CHECKED BY	J. READLING, P.E.
PROJECT NUMBER	453925-237673-018



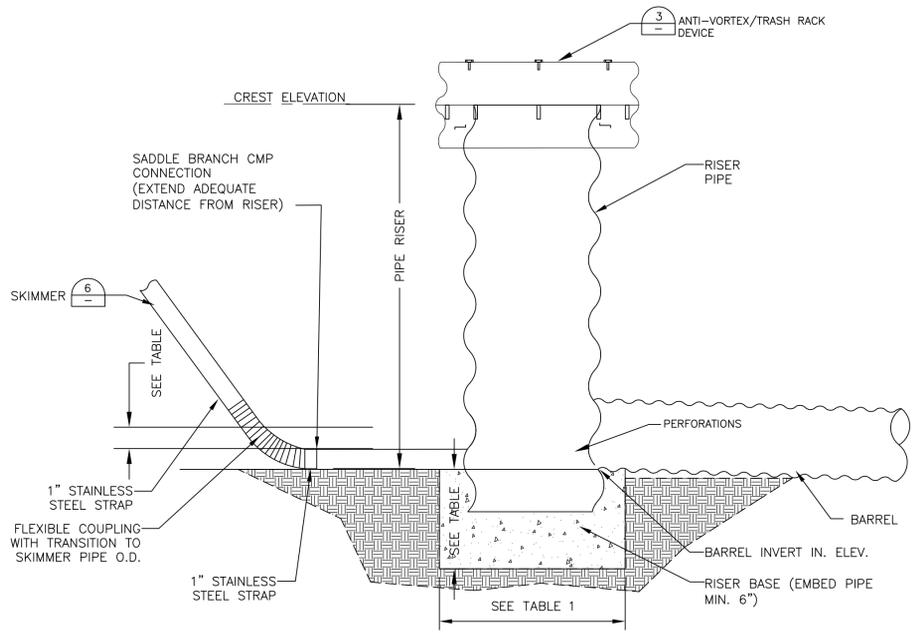
BRICKHAVEN No. 2 MINE TRACT "A" MINE  
STRUCTURAL FILL  
MONCURE, NC

**EROSION AND SEDIMENTATION CONTROL DETAILS (1 OF 3)**

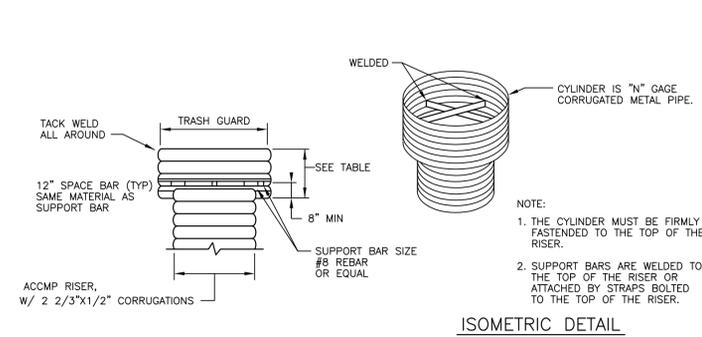


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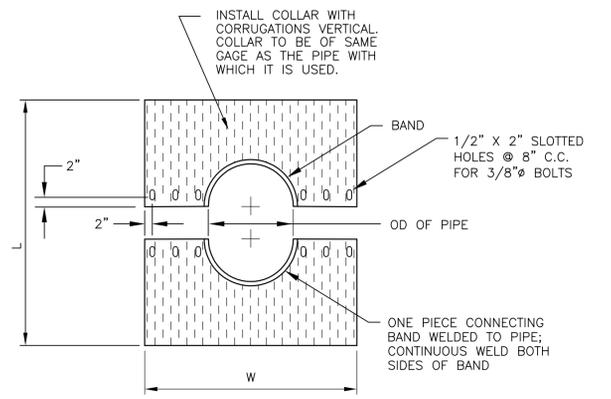
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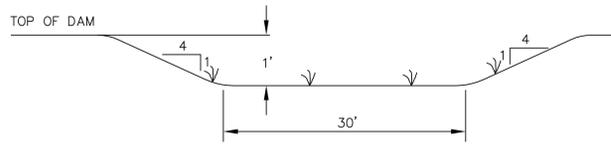
**OUTLET STRUCTURE ENLARGEMENT**  
N.T.S.



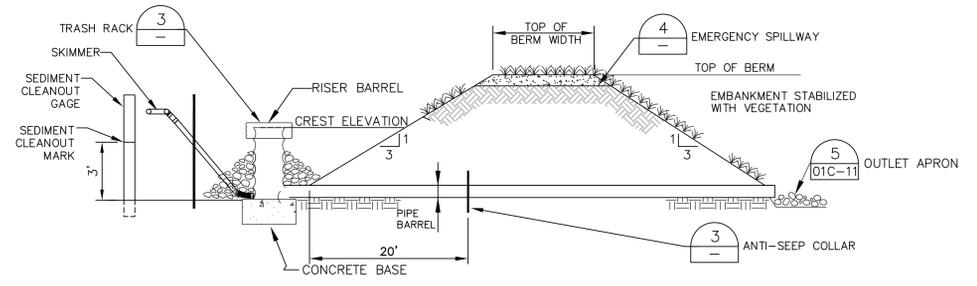
**TRASH RACK DETAIL**  
N.T.S.



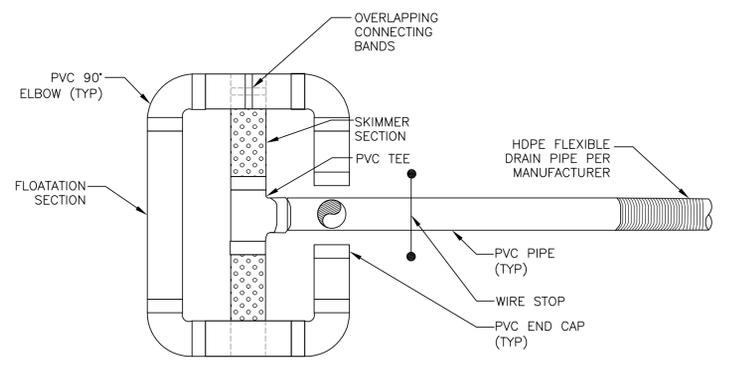
**ANTI-SEEP COLLAR DETAIL**  
N.T.S.



**EMERGENCY SPILLWAY TYPICAL**  
N.T.S.



**SEDIMENT BASIN SCHEDULE DETAIL**  
N.T.S.



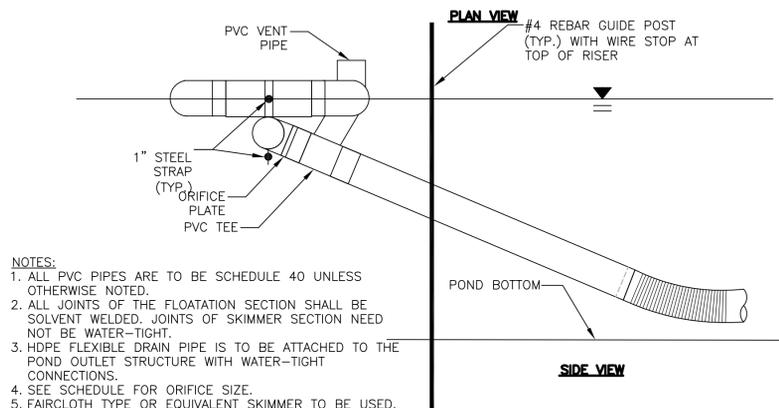
**FAIRCLOTH SKIMMER DETAIL**  
N.T.S.

**TABLE 1 - SEDIMENT POND DATA (SEE NOTE 6)**

SEDIMENT BASIN #	BOTTOM ELEVATION (MSL)	TOP OF BERM ELEVATION (MSL)	TOP OF BERM WIDTH (FT)	EMERGENCY SPILLWAY		CONCRETE BASE DIMENSIONS (FT.)	PIPE RISER			PIPE BARREL		ANTISEEP COLLAR		SKIMMER		STORAGE		SURFACE AREA		
				ELEV. (MSL)	WIDTH (FT.)		DIAMETER (IN.)	CREST ELEVATION (MSL)	TRASH GUARD DIAMETER (IN.)	DIAMETER (IN.)	INVERT IN ELEV. (MSL)	INVERT OUT ELEV. (MSL)	L (FT)	W (FT)	SIZE (IN)	ORIFICE (IN)	SEDIMENT STORAGE REQUIRED (CF)	SEDIMENT STORAGE PROVIDED (CF)	SURFACE AREA REQUIRED (SF)	SURFACE AREA PROVIDED (SF)
1	213	219	12	216	8	7x7x2	60	216	72	48	213	211.8	6	6	4	2.75	72774	210866	90532.2	92621
2	193	200	12	196	52	8x8x2.5	72	196	84	60	193	190.44	7	7	5	3.5	98296	218326	153990	166212
3	190	196	12	193	10	6x6x2	54	193	66	36	190	189.4	5	5	4	1.75	13950	44586	18470.1	19042
4	219	226	12	222	11	6.5x6.5x2	60	222	72	42	219	218.45	5.5	5.5	4	2	53460	148313	62626.95	63739
5	229	236	12	232	12	6.5x6.5x2	60	232	72	42	229	228.25	5.5	5.5	3	2.5	43812	150738	62970.6	66075
6	211	218	12	214	10	7x7x2	60	214	72	48	211	209.75	6	6	4	2.5	30312	104740	43534.8	44814
7 PH 1	209	217	12	212	51	7x7x2.5	72	212	84	60	209	207.56	7	7	4	3.75	167544	384590	241425	159919
7 PH 2	209																			

NOTES:  
1. MSL = MEAN SEA LEVEL  
2. ALL PIPES ARE ASPHALT COATED 16GA OR HEAVIER

- MAINTENANCE AND INSPECTION**
- INSPECT SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY.
  - REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH. PLACED REMOVED SEDIMENT IN AN AREA WITH SEDIMENT CONTROLS.
  - CHECK EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE RISER AND POOL AREA.
  - ALL CMP SHALL BE FULLY ASPHALT COATED, 16 GA OR HEAVIER.
  - DO NOT PLACE STONE OVER SKIMMER CONNECTION AND FLEXIBLE PIPING.
  - POND DIMENSIONS SHOWN ARE FOR THE CONTROLLING PHASE.
  - BASIN #7 UTILIZES THE EXISTING SETTLING POND, BECAUSE OF ITS LARGE DRAINAGE AREA 1/2 OF ITS DRAINAGE AREA MUST BE STABILIZED IN PHASE II TO CONSTRUCT A BASIN.



NOTES:  
1. ALL PVC PIPES ARE TO BE SCHEDULE 40 UNLESS OTHERWISE NOTED.  
2. ALL JOINTS OF THE FLOATATION SECTION SHALL BE SOLVENT WELDED. JOINTS OF SKIMMER SECTION NEED NOT BE WATER-TIGHT.  
3. HDPE FLEXIBLE DRAIN PIPE IS TO BE ATTACHED TO THE POND OUTLET STRUCTURE WITH WATER-TIGHT CONNECTIONS.  
4. SEE SCHEDULE FOR ORIFICE SIZE.  
5. FAIRCLOTH TYPE OR EQUIVALENT SKIMMER TO BE USED.



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DRAWN BY	R. BAYSDEN, P.E.
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A 11/2014	ISSUED FOR APPROVAL
PROJECT NUMBER	453925-237673-018

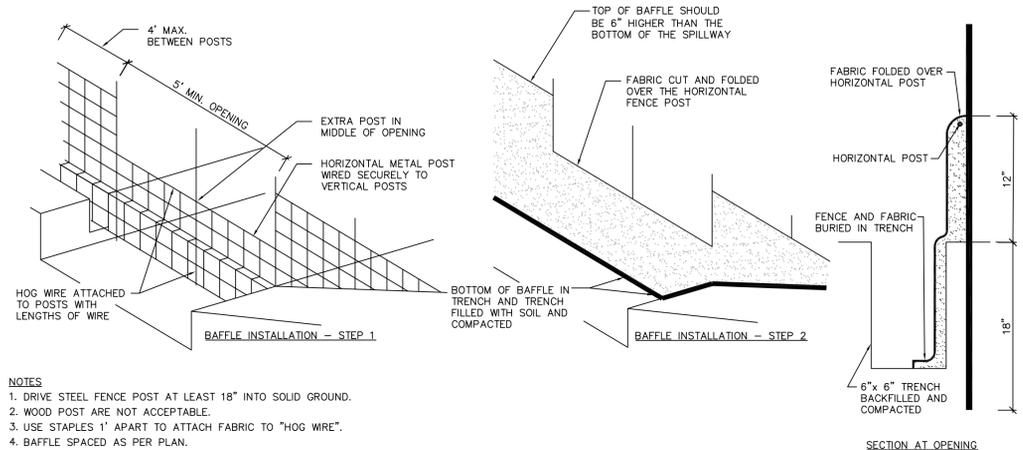


BRICKHAVEN No. 2 MINE TRACT "A" MINE  
STRUCTURAL FILL  
MONCURE, NC



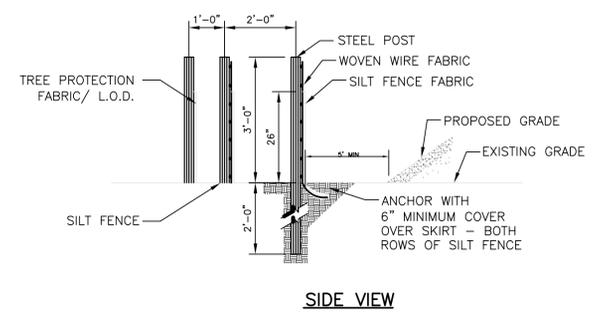
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**02C-14**

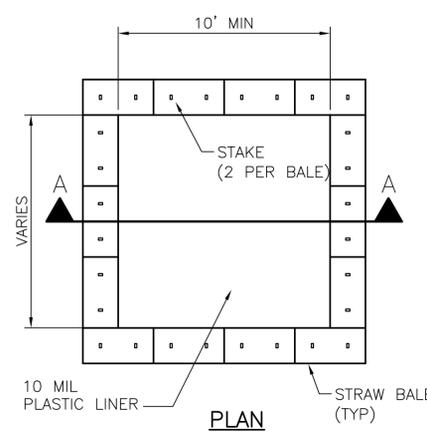


- NOTES**
1. DRIVE STEEL FENCE POST AT LEAST 18" INTO SOLID GROUND.
  2. WOOD POST ARE NOT ACCEPTABLE.
  3. USE STAPLES 1" APART TO ATTACH FABRIC TO "HOG WIRE".
  4. BAFFLE SPACED AS PER PLAN.

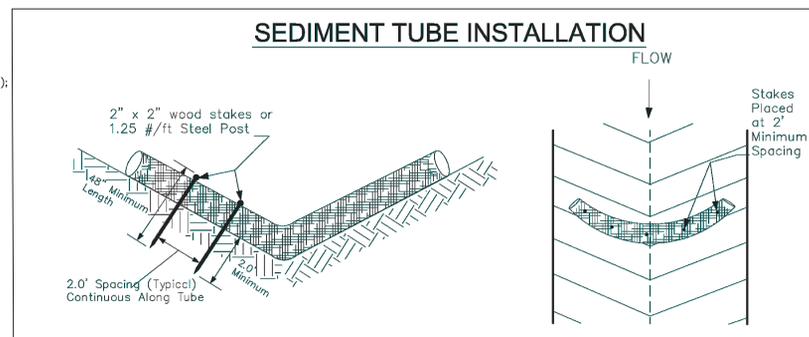
**SEDIMENT BAFFLES**  
NO TO SCALE



**SECTION**  
NO TO SCALE

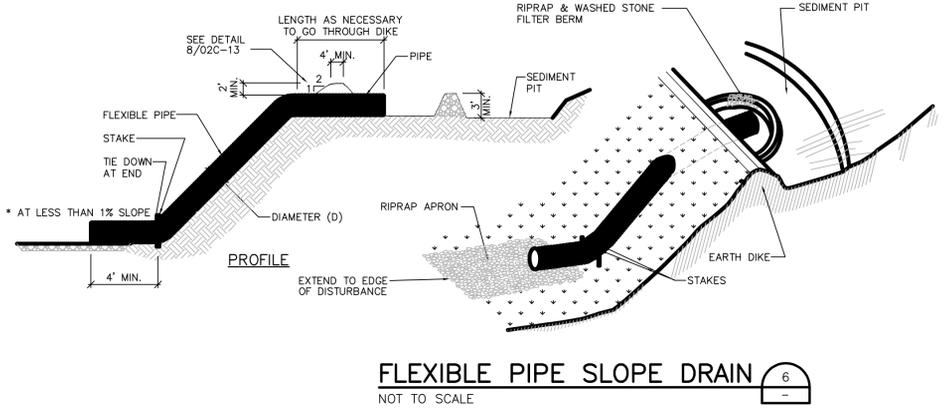


**CONCRETE WASHOUT AREA DETAIL**  
NOT TO SCALE



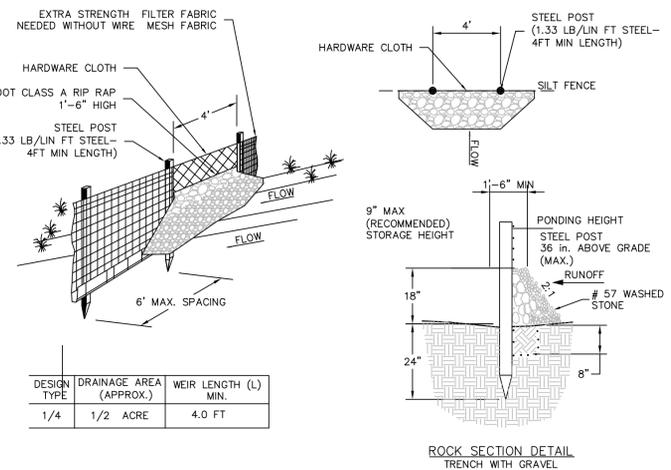
**SEDIMENT TUBE SPACING**

SLOPE	MAX. SEDIMENT TUBE SPACING
LESS THAN 2%	150- FEET
2%	100- FEET
3%	75- FEET
4%	50- FEET
5%	40- FEET
6%	30- FEET
GREATER THAN 6%	25- FEET



**FLEXIBLE PIPE SLOPE DRAIN**  
NOT TO SCALE

- CONSTRUCTION SPECIFICATIONS:**
1. THE TOP OF THE EARTH DIKE OVER THE INLET PIPE AND THOSE DIKES CARRYING WATER TO THE PIPE SHALL BE AT LEAST 1.5 FEET HIGHER AT ALL POINTS THAN THE TOP OF THE INLET PIPE.
  2. THE PIPE SHALL BE FLEXIBLE WITH WATER TIGHT CONNECTING BANDS. FLEXIBLE PIPE SHOULD BE STAKED ON EITHER SIDE.
  3. A RIP RAP APRON SHALL BE PROVIDED AT THE OUTLET, IF EMPTYING INTO A DISTURBED AREA.
  4. THE SOIL AROUND AND UNDER THE INLET PIPE AND ENTRANCE SECTION SHALL BE HAND TAMPED IN 4" LIFTS TO THE TOP OF THE EARTH DIKE.
  5. FOLLOW-UP INSPECTION AND ANY NEEDED MAINTENANCE SHALL BE PERFORMED AFTER EACH STORM BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS/HER AGENT.
  6. OUTLET PIPE SHOULD BE TAKEN OVER OR THROUGH ANY SILT FENCE, TAKING CARE NOT TO VOID THE EFFECTIVENESS OF THE SILT FENCE.



**SILT FENCE W/ ROCK OUTLET**  
N.T.S.

FOR SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1):

DATE	TYPE	PLANTING RATE
AUG 15 - NOV 1	TALL FESCUE	300 LBS/ACRE
NOV 1 - MAR 1	TALL FESCUE & ABRUZZI RYE	300 LBS/ACRE
MAR 1 - APR 15	HULLED COMMON BERMUDAGRASS	300 LBS/ACRE
APR 15 - JUN 30	TALL FESCUE AND BROWNTOP MILLET OR SORGHUM-SUDAN HYBRIDS***	300 LBS/ACRE
APR 15 - JUN 30	TALL FESCUE AND BROWNTOP MILLET OR SORGHUM-SUDAN HYBRIDS***	300 LBS/ACRE

FOR SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1 TO 2:1):

DATE	TYPE	PLANTING RATE
MAR 1 - JUN 1	SERICEA LESPEDEZA (SCARIFIED) AND USE THE FOLLOWING COMBINATIONS:	50 LBS/ACRE (SERICEA LESPEDEZA);
MAR 1 - APR 15	ADD TALL FESCUE	120 LBS/ACRE
MAR 1 - JUN 30	OR ADD WEEPING LOVE GRASS	10 LBS/ACRE
MAR 1 - JUN 30	OR ADD HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
SEPT 1 - MAR 1	SERICEA LESPEDEZA (UNHULLED UNSCARIFIED) AND TALL FESCUE	70 LBS/ACRE (SERICEA LESPEDEZA); 120 LBS/ACRE (TALL FESCUE)
NOV 1 - MAR 1	AND ABRUZZI RYE	25 LBS/ACRE

IF SOIL CONDITIONS ARE NOT KNOWN, APPLY LIME AT A RATE OF 1 TO 1.5 TONS/ACRE ON COARSE TEXTURED SOILS AND 2-3 TONS/ACRE ON FINE-TEXTURED SOILS. APPLY LIMESTONE UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL. APPLY 10-10-10 FERTILIZER AT 700-1000 LBS/ACRE MIXED INTO THE TOP 4-6 INCHES OF SOIL.

- SEEDBED PREPARATION NOTES**
1. SURFACE WATER CONTROL MEASURES TO BE INSTALLED ACCORDING TO PLAN.
  2. AREAS TO BE SEEDED SHALL BE RIPPED AND SPREAD WITH AVAILABLE TOPSOIL 3" DEEP. TOTAL SEEDBED PREPARED DEPTH SHALL BE 4" TO 6" DEEP.
  3. LOOSE ROCKS, ROOTS AND OTHER OBSTRUCTIONS SHALL BE REMOVED FROM THE SURFACE SO THAT THEY WILL NOT INTERFERE WITH ESTABLISHMENT AND MAINTENANCE OF VEGETATION. SURFACE FOR FINAL SEEDBED PREPARATION AT FINISHED GRADES SHOWN SHALL BE REASONABLY SMOOTH AND UNIFORM.
  4. IF NO SOIL TEST IS TAKEN, FERTILIZER AND LIME TO BE ACCORDING TO SEEDING SPECIFICATIONS BELOW. IN ADDITION, PROVIDE 15 LBS/1000 S.F. OF SUPERPHOSPHATE.
  5. IF SOIL TEST IS TAKEN, PROVIDE LIME AND FERTILIZER ACCORDING TO SOIL TEST REPORT.
  6. LIME AND FERTILIZER SHALL BE APPLIED UNIFORMLY AND MIXED WITH THE SOIL DURING SEEDBED PREPARATION. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDING ON FIELD CONDITION.
  7. MULCH TO BE TACKED OR MECHANICALLY TIED DOWN IMMEDIATELY AFTER MULCH IS SPREAD.
  8. ALL SLOPES GREATER THAN 2.5:1 SHALL BE STABILIZED WITH JUTE MESH.

**SEEDING**  
N.T.S.

- SEDIMENT TUBES - GENERAL NOTES**
1. Sediment tubes may be installed along contours, in drainage conveyance channels, and around inlets to help prevent off-site discharge of sediment-laden stormwater runoff.
  2. Sediment tubes are elongated tubes of compacted geotextiles, curled excelsior wood, natural coconut fiber, or hardwood mulch. Straw, pine needle, and leaf mulch-filled sediment tubes are not permitted.
  3. The outer netting of the sediment tube should consist of seamless, high-density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high-density polyethylene non-degradable material.
  4. Sediment tubes, when used as checks within channels, should range between 18-inches and 24-inches depending on channel dimensions. Diameters outside this range may be allowed where necessary when approved.
  5. Curled excelsior wood, or natural coconut products that are rolled up to create a sediment tube are not allowed.
  6. Sediment tubes should be staked using wooden stakes (2-inch X 2-inch) or steel posts (standard "U" or "T" sections with a minimum weight of 1.25 pounds per foot) at a minimum of 48-inches in length placed on 2-foot centers.
  7. Install all sediment tubes to ensure that no gaps exist between the soil and the bottom of the tube. Manufacturer's recommendations should always be consulted before installation.
  8. The ends of adjacent sediment tubes should be overlapped 6-inches to prevent flow and sediment from passing through the field joint.
  9. Sediment tubes should not be stacked on top of one another, unless recommended by manufacturer.
  10. Each sediment tube should be installed in a trench with a depth equal to 1/5 the diameter of the sediment tube.
  11. Sediment tubes should continue up the side slopes a minimum of 1-foot above the design flow depth of the channel.
  12. Install stakes at a diagonal facing incoming runoff.
- SEDIMENT TUBES - INSPECTION & MAINTENANCE**
1. The key to functional sediment tubes is weekly inspections, routine maintenance, and regular sediment removal.
  2. Regular inspections of sediment tubes shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
  3. Attention to sediment accumulations in front of the sediment tube is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
  4. Remove accumulated sediment when it reaches 1/3 the height of the sediment tube.
  5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
  6. Large debris, trash, and leaves should be removed from in front of tubes when found.
  7. If erosion causes the edges to fall to a height equal to or below the height of the sediment tube, repairs should be made immediately to prevent runoff from bypassing tube.
  8. Sediment tubes should be removed after the contributing drainage area has been completely stabilized. Permanent vegetation should replace areas from which sediment tubes have been removed.

**WATTLE INSTALLATION**  
NOT TO SCALE



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SCALE | AS SHOWN

SHEET  
**02C-15**