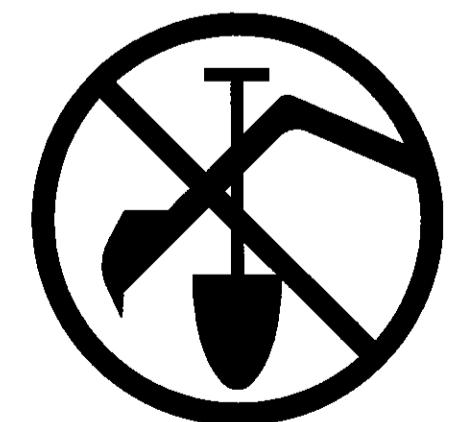





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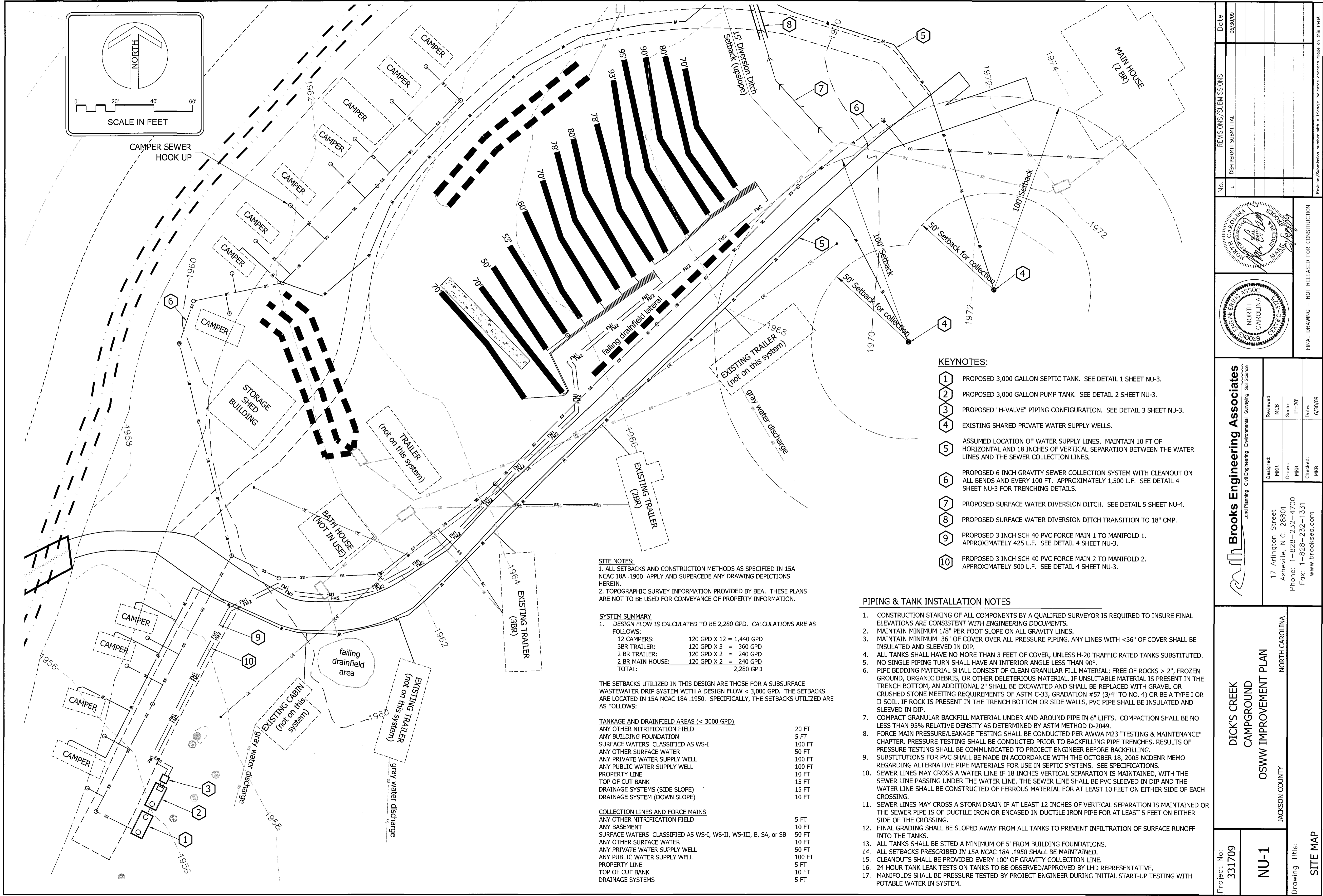
<i>SHEET</i>	<i>TITLE</i>
<i>NU-0</i>	<i>COVER SHEET</i>
<i>NU-1</i>	<i>SITE MAP</i>
<i>NU-2</i>	<i>DRAINFIELD LAYOUT</i>
<i>NU-3</i>	<i>SYSTEM DETAILS</i>
<i>NU-4</i>	<i>DRAINFIELD DETAILS</i>

E. FINAL INSPECTION CHECKLIST SHALL BE PROVIDED TO CONTRACTOR AND DEH REPRESENTATIVE.

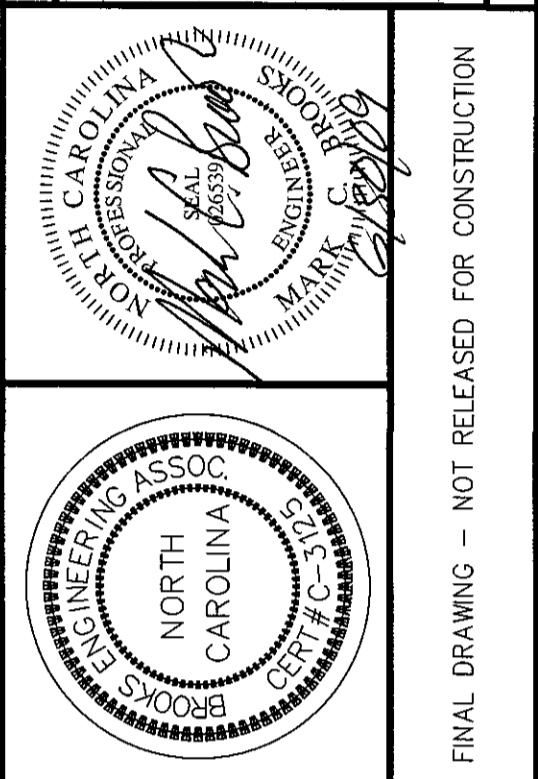


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Project No: 331709		DICK'S CREEK CAMPGROUND		JACKSON COUNTY		NORTH CAROLINA	
NU-0		OSWW IMPROVEMENT PLAN					
Drawing Title:		COVER SHEET					
 <b>Brooks Engineering Associates</b> <small>Land Planning   Civil Engineering   Environmental   Surveying   Soil Science</small>		Designed: MKR		Reviewed: MCB			
17 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 <a href="http://www.brooksead.com">www.brooksead.com</a>		Drawn: MKR		Scale: 1"=500'			
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						Date 06/30/09	
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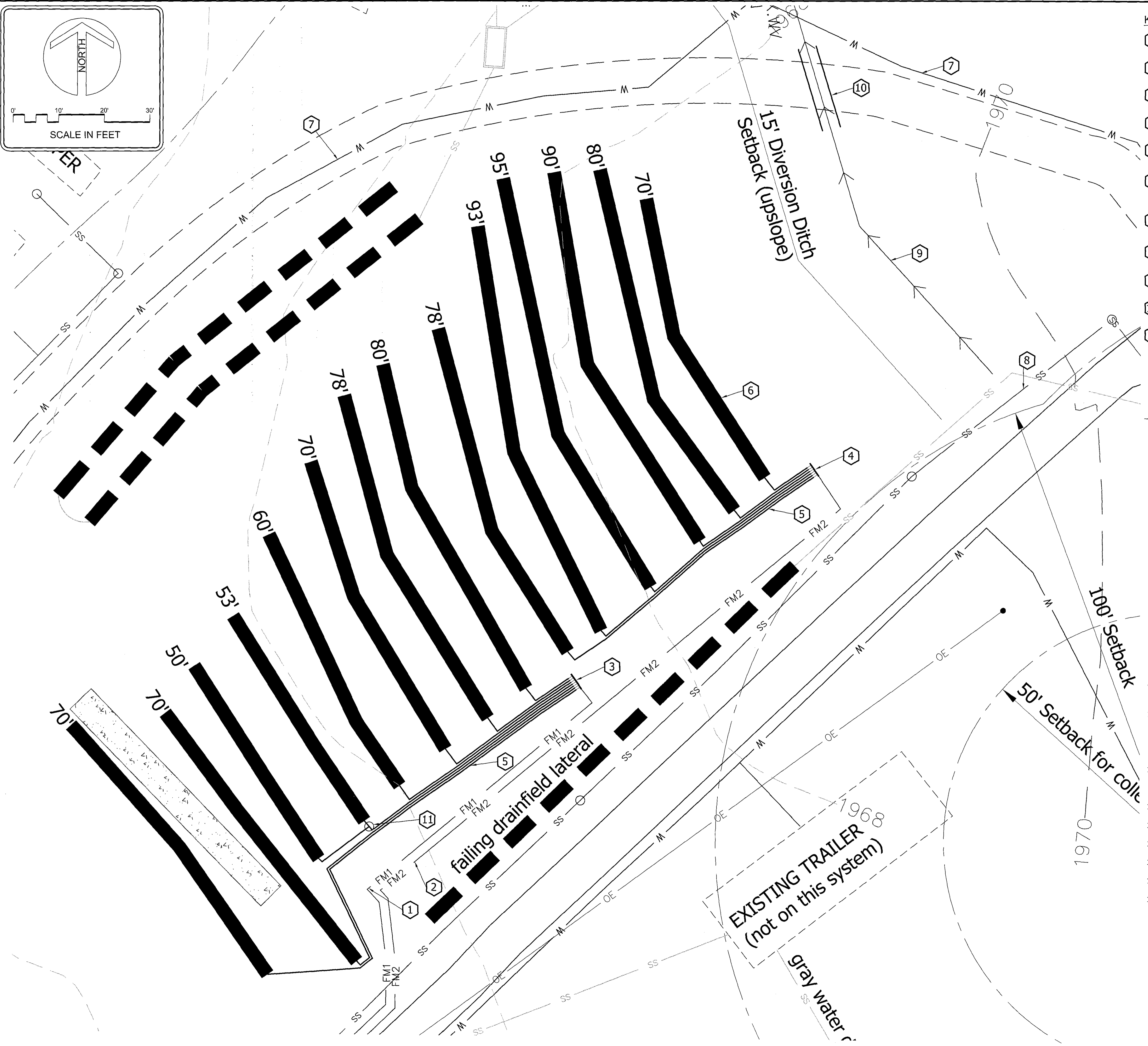
DICK'S CREEK  
CAMPGROUND  
OSWW IMPROVEMENT PLAN

JACKSON COUNTY  
NORTH CAROLINA

Project No:  
**331709**




**NU-1**

Drawing Title:  
**SITE MAP**



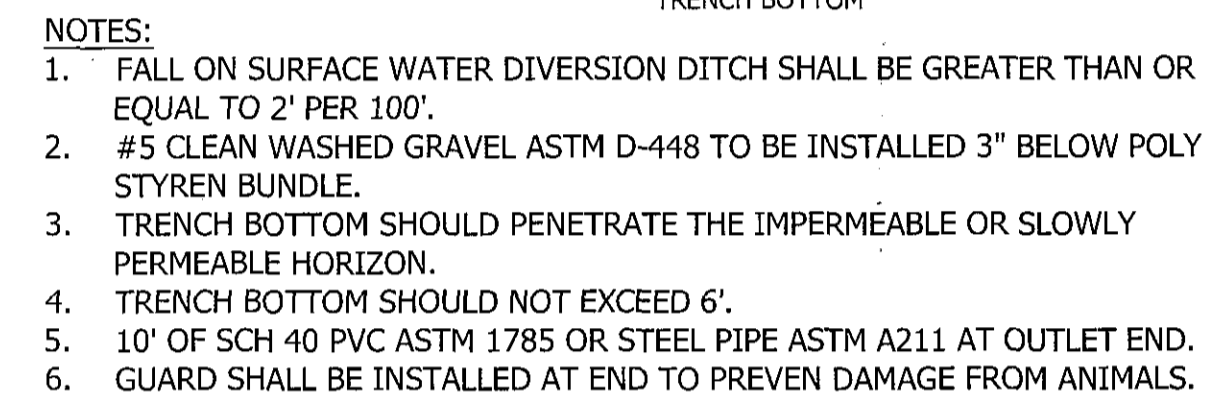
## PIPING & TANK INSTALLATION NOTES

1. CONSTRUCTION STAKING OF ALL COMPONENTS BY A QUALIFIED SURVEYOR IS REQUIRED TO INSURE FINAL ELEVATIONS ARE CONSISTENT WITH ENGINEERING DOCUMENTS.
2. MAINTAIN MINIMUM 1/8" PER FOOT SLOPE ON ALL GRAVITY LINES.
3. MAINTAIN MINIMUM 36" OF COVER OVER ALL PRESSURE PIPING. ANY LINES WITH <36" OF COVER SHALL BE INSULATED AND SLEEVED IN DIP.
4. ALL TANKS SHALL HAVE NO MORE THAN 3 FEET OF COVER, UNLESS H-20 TRAFFIC RATED TANKS SUBSTITUTED.
5. NO SINGLE PIPING TURN SHALL HAVE AN INTERIOR ANGLE LESS THAN 90°.
6. PIPE BEDDING MATERIAL SHALL CONSIST OF CLEAN GRANULAR FILL MATERIAL; FREE OF ROCKS > 2", FROZEN GROUND, ORGANIC DEBRIS, OR OTHER DELETERIOUS MATERIAL. IF UNSUITABLE MATERIAL IS PRESENT IN THE TRENCH BOTTOM, AN ADDITIONAL 2" SHALL BE EXCAVATED AND SHALL BE REPLACED WITH GRAVEL OR CRUSHED STONE MEETING REQUIREMENTS OF ASTM C-33, GRADATION #57 (3/4" TO NO. 4) OR BE A TYPE I OR II S-01. IF ROCK IS PRESENT IN THE TRENCH BOTTOM OR SIDE WALLS, PVC PIPE SHALL BE INSULATED AND SLEEVED IN DIP.
7. COMPACT GRANULAR BACKFILL MATERIAL UNDER AND AROUND PIPE IN 6" LIFTS. COMPACTION SHALL BE NO LESS THAN 95% RELATIVE DENSITY AS DETERMINED BY ASTM METHOD D-2049.
8. FORCE MAIN PRESSURE/LEAKAGE TESTING SHALL BE CONDUCTED PER AWWA M23 "TESTING & MAINTENANCE" CHAPTER. PRESSURE TESTING SHALL BE CONDUCTED PRIOR TO BACKFILLING PIPE TRENCHES. RESULTS OF PRESSURE TESTING SHALL BE COMMUNICATED TO PROJECT ENGINEER BEFORE BACKFILLING.
9. SUBSTITUTIONS FOR PVC SHALL BE MADE IN ACCORDANCE WITH THE OCTOBER 18, 2005 NCDENR MEMO REGARDING ALTERNATIVE PIPE MATERIALS FOR USE IN SEPTIC SYSTEMS. SEE SPECIFICATIONS.
10. SEWER LINES MAY CROSS A WATER LINE IF 18 INCHES VERTICAL SEPARATION IS MAINTAINED, WITH THE SEWER LINE PASSING UNDER THE WATER LINE. THE SEWER LINE SHALL BE PVC SLEEVED IN DIP AND THE WATER LINE SHALL BE CONSTRUCTED OF FERROUS MATERIAL FOR AT LEAST 10 FEET ON EITHER SIDE OF EACH CROSSING.
11. SEWER LINES MAY CROSS A STORM DRAIN IF AT LEAST 18 INCHES OF VERTICAL SEPARATION IS MAINTAINED OR THE SEWER PIPE IS OF DUCTILE IRON OR ENCASED IN DUCTILE IRON PIPE FOR AT LEAST 5 FEET ON EITHER SIDE OF THE CROSSING.
12. FINAL GRADING SHALL BE SLOPED AWAY FROM ALL TANKS TO PREVENT INFILTRATION OF SURFACE RUNOFF INTO THE TANKS.
13. ALL TANKS SHALL BE SITED A MINIMUM OF 5' FROM BUILDING FOUNDATIONS.
14. ALL SETBACKS PRESCRIBED IN 15A NCAC 18A .1950 SHALL BE MAINTAINED.
15. CLEANOUTS SHALL BE PROVIDED EVERY 100' OF GRAVITY COLLECTION LINE.
16. 24 HOUR TANK LEAK TESTS ON TANKS TO BE OBSERVED/APPROVED BY LHD REPRESENTATIVE.
17. MANIFOLDS SHALL BE PRESSURE TESTED BY PROJECT ENGINEER DURING INITIAL START-UP TESTING WITH POTABLE WATER IN SYSTEM.

Project No: 331709	DICK'S CREEK CAMPGROUND		JACKSON COUNTY NORTH CAROLINA		Drawing Title:  DRAINFIELD LAYOUT
NU-2	OSWW IMPROVEMENT PLAN				
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17 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 <a href="http://www.brooksea.com">www.brooksea.com</a>			Designed: MKR Drawn: MKR Checked: MKR	Reviewed: MCB Scale: 1"=10' Date: 6/30/09	
			 		
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**MANIFOLD PROFILE**

MANIFOLD PLAN VIEW

OBSERVATION PORT: 3" "T" WITH EXTENSION TO GRADE AND REMOVABLE THREADED CAP

1/2" TO 3" PVC BUSHING

1/2" GATE VALVE WITH 2 DISCONNECT UNIONS

1/2" SCH 40 (0.622" ID) THREADED TAP & 1/2" THREADED COUPLING

THREADED CLEANOUT PLUG

12"

6"

6'0" MINIMUM

3" SCH. 80 PVC

12" MIN.

6"

3" GATE VALVE

3" PVC FORCE MAIN

INTERNAL VAULT DRAIN

4"

SEAL OPENINGS

GRAVITY LINES TO EXISTING DRAINFIELD LATERALS

CONCRETE-MINIMUM 6"X6"X10 GAUGE W/ BOTTOM, SIDES AND

OBSERVATION PORT: 3" "T" WITH EXTENSION TO GRADE AND REMOVABLE THREADED CAP

1/2" TO 3" PVC BUSHING

1/2" GATE VALVE WITH 2 DISCONNECT UNIONS

1/2" SCH 40 (0.622 ID) THREADED TAP & 1/2" SCH 40 THREADED COUPLING

THREADED CLEANOUT PLUG

12"

3" SCH. 80 PVC

5'6" MINIMUM

3" GRAVITY SUPPLY LINES TO LPP NITRIFICATION LATERALS

SEAL OPENINGS

12" MIN.

3" GATE VALVE

3" PVC FORCE MAIN




INTERNAL VAULT DRAIN

[illegible]

NOTE:

1. QUANICS GDS-ZS300 FLOW DIVIDER SHOWN.
2. FLOW DIVIDER MUST BE INSTALLED LEVEL.



Project No: 331709		DICK'S CREEK CAMPGROUND		JACKSON COUNTY NORTH CAROLINA		 <b>Brooks Engineering Associates</b> Land Planning   Civil Engineering   Environmental   Surveying   Soil Science		 		No. 1 REVISIONS/SUBMISSIONS DEH PERMIT SUBMITTAL		Date 06/30/09
NU-4		OSWW IMPROVEMENT PLAN				17 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com		Designed: MKR Reviewed: MCB Drawn: MKR Scale: NTS Checked: MKR Date: 6/30/09				
Drawing Title: DRAINFIELD DETAILS						FINAL DRAWING – NOT RELEASED FOR CONSTRUCTION Revision/Submission number with a triangle indicates changes made on this sheet						